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 Current Language: English Last Modified: 10/21/2025  
 Other Languages: NONE Author: Brandon Heisler  
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Coding Information

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Title: A26B EGR Fuel/Soot Mixture

Applies To: A26B ESN 4600000 - 4699999

## CHANGE LOG

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

10/21/2025 - Initial Article Release

## **\*\*PLEASE COMPLETE ALL PUBLISHED DIAGNOSTICS BEFORE PERFORMING THESE STEPS\*\***

The diagnostics within this document are supplemental diagnostic steps only. This article is intended to be followed once all published diagnostics have been exhausted with no current repair direction or solution. Failure to follow published diagnostics can result in improper diagnostics being performed and can also result in extended downtime for the customer. Technical Service Support teams have created this article for a short-term solution while pending published diagnostics are enhanced and updated. Once those diagnostics have been updated, this article will be retired. Always reference published manuals, FCAPs, and GUIDE sessions before performing the steps below.

## DESCRIPTION

This document will guide the user through diagnosing the fuel/soot mixture found in the EGR system.

## SYMPTOM(s)

- Fuel/Soot mixture in the EGR system.
- Misfire and rough running.
- Valve bridge falling off.

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

DTC/Light	Description

<a href="#">SPN 2659 FMI 10</a>	Engine Exhaust Gas Recirculation 1 Mass Flow Rate: Abnormal Rate of Change
<a href="#">SPN 2659 FMI 16</a>	Engine Exhaust Gas Recirculation 1 Mass Flow Rate: Data Valid But Above Normal Operating Range - Moderately Severe Level
<a href="#">SPN 2659 FMI 18</a>	Engine Exhaust Gas Recirculation 1 Mass Flow Rate: Data Valid But Below Normal Operating Range - Moderately Severe Level
<a href="#">SPN 132 FMI 0</a>	Engine Intake Air Mass Flow Rate: Data Valid But Above Normal Operational Range - Most Severe Level
<a href="#">SPN 132 FMI 16</a>	Engine Intake Air Mass Flow Rate: Data Valid But Above Normal Operating Range - Moderately Severe Level
<a href="#">SPN 132 FMI 18</a>	Engine Intake Air Mass Flow Rate: Data Valid But Below Normal Operating Range - Moderately Severe Level
<a href="#">SPN 1323 FMI 31</a>	Engine Cylinder 1 Misfire Rate: Condition Exists
<a href="#">SPN 1324 FMI 31</a>	Engine Cylinder 2 Misfire Rate: Condition Exists
<a href="#">SPN 1325 FMI 31</a>	Engine Cylinder 3 Misfire Rate: Condition Exists
<a href="#">SPN 1326 FMI 31</a>	Engine Cylinder 4 Misfire Rate: Condition Exists
<a href="#">SPN 1327 FMI 31</a>	Engine Cylinder 5 Misfire Rate: Condition Exists
<a href="#">SPN 1328 FMI 31</a>	Engine Cylinder 6 Misfire Rate: Condition Exists

## **SERVICE PARTS INFORMATION**

Please consult the dealer parts department for current service part information.

- **NOTE:** If a resonator requires replacement and can not be sourced, please follow [IK1201526](#).

## **DIAGNOSTIC STEP(s)**

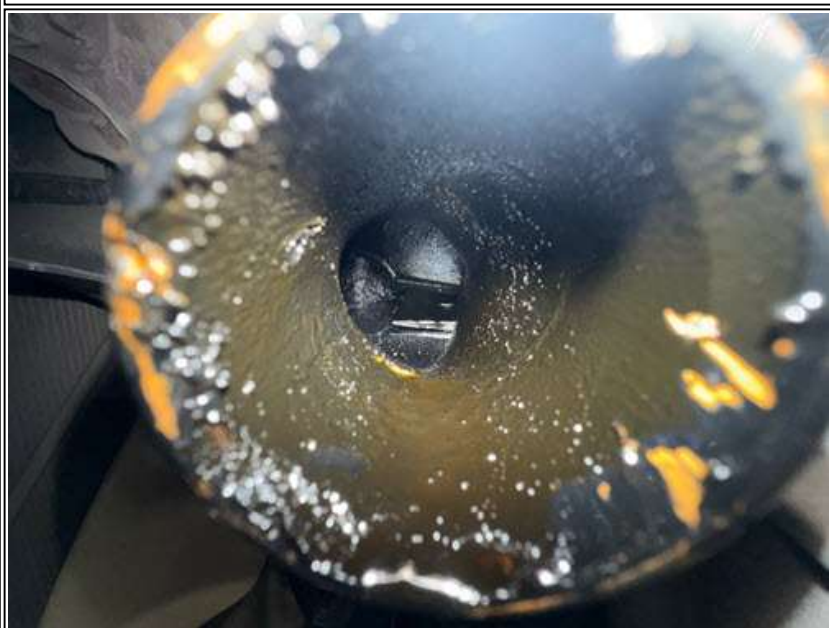
Step	Confirm the Article Applies	Decision
#1	<p>Remove the EGR piping and inspect for fuel/soot mixture. See <a href="#">Figure #1</a> and <a href="#">Figure #2</a> for examples:</p> <p>Is the EGR system free of the fuel/soot mixture?</p> <p><b>NOTE: If EGR repairs have been performed recently, and a valve bridge has fallen off, proceed to step 3.</b></p>	<p><b>Yes.</b></p> <p>End diagnostics. Ensure base diagnostics have been completed.</p>
		<p><b>No.</b></p> <p>Proceed to step 2.</p>

Figure #1



Example of an EGR cooler with soot/fuel mixture

**Figure #2**



Example of EGR cooler outlet pipe with soot/fuel mixture

Step	Inspect the Valve Train	Decision
#2	<p>Perform a thorough inspection of the valve train as outlined in the <a href="#">A26B Service and Diagnostic Manual</a>.            Ensure all valve bridges are properly seated, and none have fallen off. Slowly bar the engine over while observing valve movement to identify any sticking valves. Pay close attention to all components for signs of wear, damage, or misalignment:</p> <p>Does the valve train pass inspection with no issues noted in testing?</p> <p><b>NOTE: A valve bridge falling off can be an indication of a sticking valve.</b></p>	<p><b>Yes.</b></p> <p>Replace the EGR cooler and EGR valve. Clean and inspect the EGR Resonator to confirm it can be reused. Clean the EGR piping.</p> <p>Once repairs are completed, proceed to step 4.</p>
		<p><b>No.</b></p> <p>Proceed to step 3.</p>

Step	Remove and Inspect the Cylinder Head	Decision
#3	<p>Remove the cylinder head.            Inspect the cylinder head thoroughly to ensure it meets the reuse criteria outlined in <a href="#">IK1201476</a>:</p> <p>Does the cylinder head meet reuse guidelines?</p>	<p><b>Yes.</b></p> <p>Have the cylinder head rebuilt. Replace the EGR cooler, EGR valve, and clean and inspect the EGR Resonator. Clean the EGR piping.</p> <p>Once repairs are completed, proceed to step 4.</p>
		<p><b>No.</b></p> <p>Replace the cylinder head, EGR cooler, and EGR valve, and clean and inspect the EGR Resonator. Clean the EGR piping.</p> <p>Once repairs are completed, proceed to step 4.</p>

Step	Determine Root Cause	Decision
#4	<p>Review the engine hours compared to engine mileage (Engine hours X 33 should roughly equal current engine mileage +/- a few thousand miles). Review recent repair history and health reports for signs of frequent regens and/or misfire faults:</p> <p>Is there any history of frequent regens, extended idle times, or misfire fault(s)?</p> <p><b>NOTE: If there are signs of excessive idle times, a conversation should be had with the customer about the vehicle application and use.</b></p>	<p><b>Yes.</b></p> <p>If diagnostics for the frequent regens or misfire(s) have not already been performed, diagnostics should be performed at this time to ensure repeat failure is not likely.</p> <p>Frequent regens should have a <a href="#">DPF Regeneration</a> performed. If the regen fails to complete properly, then the <a href="#">DPF Regeneration Fails</a> section of the</p>

		<p>engine diagnostic manual should be reviewed and followed.</p> <p>If a misfire has been present in recent health reports, and diagnostics have not been performed, then diagnostics for the fault code should be followed.</p>
		<p><b>No.</b></p> <p>Proceed to step 5.</p>

Step	Verify ECM Calibration	Decision
#5	<p><b>Connect to the vehicle with SDS.</b>  <b>Confirm ECM calibration update is not available:</b></p> <p>Is an ECM calibration update available?</p>	<p><b>Yes.</b></p> <p>Update the ECM to the latest calibration, and then proceed to step 6.</p>
		<p><b>No.</b></p> <p>Proceed to step 6.</p>

Step	Verify Base Engine Performance	Decision
#6	<p>Perform an <a href="#">Air Management Test</a> (AMT) and review results per the engine diagnostic manual guidelines.  Perform a <a href="#">DPF Regeneration</a> and review the results per the engine diagnostic manual guidelines.  Perform KOEO Signal Monitor Session in SDS to check for a biased DPFD and/or EBP sensor:</p> <p>Does the unit pass AMT and Regeneration testing, and no biased sensors identified?</p>	<p><b>Yes.</b></p> <p>End diagnostics.</p>
		<p><b>No, the unit does not pass AMT and/or Regen Testing.</b></p> <p>Follow the guidelines for repairs and next steps from the engine diagnostic manual. Once repairs are completed, re-test for the symptom/issue identified.</p>
		<p><b>No, the unit has a biased EBP and/or DPFD sensor.</b></p> <p>Replace the biased sensor as needed, and ensure the pressure sensor tube is blown out with shop air and free of damage. Once repairs are completed, re-test for the symptom/issue identified.</p>

## **Diagnostic considerations section:**

The black sticky substance found in the EGR system is typically a mixture of fuel and soot accumulation caused by excessive fuel entering the EGR system. Typically, any amount of overfueling can cause this symptom. The main reasons for overfueling are:

- Frequent regens
  - The A26B engine uses in-cylinder dosing during regenerations, so the fuel going to the aftertreatment can make its way into the EGR system.
  - If a unit is experiencing frequent regen requests, the in-cylinder dosing can induce the fuel/soot mixture.
  - Excessive idle times can cause soot accumulation more frequently, thus inducing a need for frequent regenerations.
- DPFDP and/or EBP sensor failure.
  - Soot load is a calculated amount that the ECM uses multiple sensors to calculate and validate. A failed DPFDP sensor or EBP sensor can induce the soot load calculation to rise unrealistically and rapidly.
- Engine cylinder misfires.
  - One or more over-fueling injectors can cause the excessive fuel to accumulate in the EGR system, causing the black sticky substance.

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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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