



**Countries:** CANADA, UNITED STATES  
**Availability:** ISIS, Bus ISIS, FleetISIS, Body Builder  
**Major System:** ENGINES  
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Coding Information

|                      |                               |                                                          |                             |                  |                             |                         |                             |
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**Title:** Diagnostics for SPN 3251 FMI 21 DPFDP excessively LOW (Sensor/circuit fault or missing DPF)

**Applies To:** 2013 HD-OBD V-8 Engine

### CHANGE LOG

**NOTE: DO NOT delete this Change Log. If this iKnow Article is being revised, please type in the text box below what has changed in the article. The change log is meant for Dealers to be able to see what has updated/changed in the article.**

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

8/21/2014 - Initial Article Release  
 10/21/2014 - Snap Throttle note added.  
 10/30/2014 - Added instruction to cap off BCS inlet & Breather inlet ports on the ITV.

### DESCRIPTION

Diagnostics for active SPN 3251 FMI 21 **ONLY** with ECM calibration LRD/LRE/LR1 or newer.

### SYMPTOM(s)

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

CEL SPN 3251 FMI 21

**Customer Complaint(s):**

Check engine light on.

### SPECIAL TOOL(s) or SOFTWARE

1. ServiceMaxx
2. ZTSE 4341 CAC Pressure Test Kit
3. ZTSE 6031 Restrictor Plate Tool
4. Tool Number: 09-925-01 Charge Air Cooler (CAC) Adapter Flushing Kit

### DIAGNOSTIC STEP(s)

**Note:** The Snap Throttle Test detailed in [IK0700032](#) should be performed before any other steps. If smoke is present proceed per that article.

| Step | Action             | Decision                                                                       |
|------|--------------------|--------------------------------------------------------------------------------|
| 1    | Verify calibration | Yes: Proceed to Step 2<br>No: Update ECM calibration and retest for the issue. |

|  |                                              |  |
|--|----------------------------------------------|--|
|  | Is the ECM calibration LRD/LRE/LR1 or newer? |  |
|--|----------------------------------------------|--|

| Step | Action                                                                 | Decision                                |
|------|------------------------------------------------------------------------|-----------------------------------------|
| 2    | Verify the DPFDp tubes are secure.<br><br>Any defects or issues found? | Yes: Correct then retest for the issue. |
|      |                                                                        | No: Proceed to step 3                   |

| Step | Action                                                                                | Decision                                |
|------|---------------------------------------------------------------------------------------|-----------------------------------------|
| 3    | Visually inspect for major exhaust leaks.<br><br>Are any major exhaust leaks present? | Yes: Correct then retest for the issue. |
|      |                                                                                       | No: Proceed to step 4                   |

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Decision                                             |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| 4    | <p>Pressure test procedure:</p> <ol style="list-style-type: none"> <li>1. Plug off the end of the vertical restriction tool using a nut &amp; bolt <b>Figure 1</b>.</li> <li>2. Remove the exhaust diffuser and install the vertical restriction tool <b>Figure 2</b>.</li> <li>3. Cap off the BCS inlet &amp; Breather inlet ports on the ITV <b>Figure 5</b></li> <li>4. Install pressure test device <b>Figure 3</b> in the inlet to the CAC from the turbocharger outlet.</li> <li>5. If unit has extension pipe in exhaust use foil exhaust gasket material to seal DOC to turbocharger downpipe connection as shown in <b>Figure 4</b>.</li> <li>6. Pressurize the system using 5-10 PSI regulated air pressure.</li> <li>7. Spray down all of the connections with a soap water mix</li> <li>8. Inspect for leaks</li> </ol> <p>Are there any leaks present?</p> | Yes: Correct leaks and retest for the issue.         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No: Road test to see if the issue can be reproduced. |

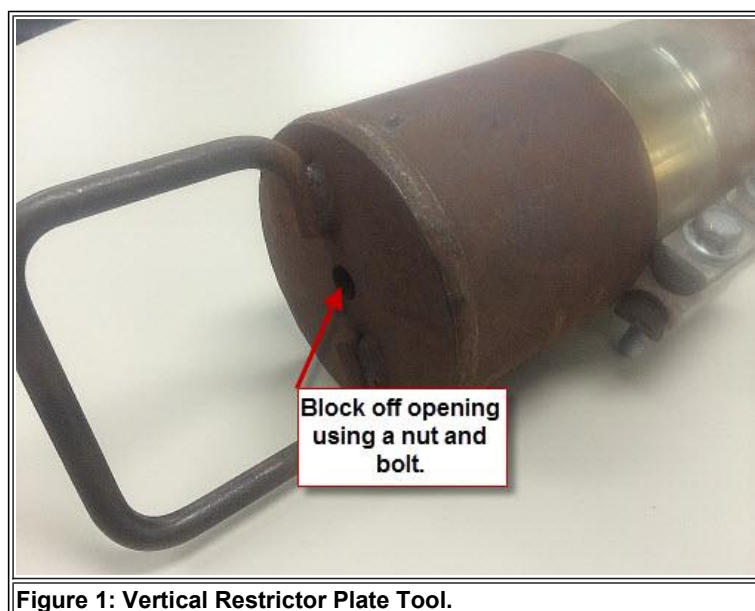




**Figure 2: Vertical Restrictor Tool Installation (Tool shown without handle).**

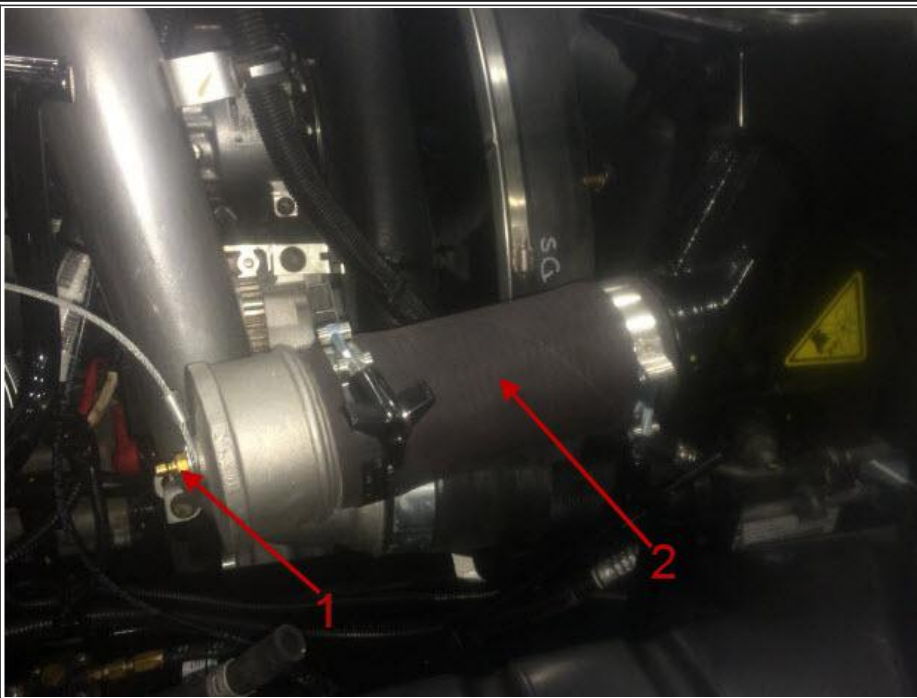


**Figure 3: CAC inlet pressure testing.**

1. Air inlet fitting
2. Adapter sleeve



**Figure 4: DOC/DPF sealing surface.**



**Figure 5: BCS inlet & Breather inlet ports on the ITV.**

#### **SERVICE PART(s) INFORMATION**

| Kit Description          | Part Number | Quantity Required | Ordering Instructions |
|--------------------------|-------------|-------------------|-----------------------|
| Gasket tape exhaust 3/4" | 2604051C91  | 1                 | Order from Navistar   |

#### **WARRANTY INFORMATION**

**Warranty Claim Coding:**

|               |                                       |
|---------------|---------------------------------------|
| <b>Group:</b> | 1200 Engine                           |
| <b>Noun:</b>  | 575 Sensor, DPF Differential Pressure |

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**Feedback Information**

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