SERVICE BULLETIN

NUMBER: 25-004-12

GROUP: Emissions Control

DATE: December 18, 2012

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SUBJECT:

Malfunction Indicator Lamp Illumination Due To Oxygen Sensor

OVERVIEW:

This bulletin involves replacement of the Oxygen Sensor Connectors for any Oxygen Sensor related DTC. Do NOT replace any parts prior to performing this bulletin and the Verifications test below.

MODELS:

2010 - 2012	(DJ)	Ram Pick Up (2500)
2010 - 2012	(D2)	Ram Pick Up (3500)

NOTE: This bulletin applies to vehicles equipped with a Cummins 6.7L engine (sales code ETJ) built before October 4, 2012 (1004XX).

SYMPTOM/CONDITION:

If the vehicle has any of the following DTC's for O2 Sensors, Stored, Pending or Active, perform the Repair Procedure.

- P013A O2 Sensor 1/2 Slow Response - Rich To Lean (Soot related code, see note)*
- P013B O2 Sensor 1/2 Slow Response - Lean To Rich (Soot related code, see note)*
- P014C O2 Sensor 1/1 Slow Response - Rich To Lean (Soot related code, see note)*
- P014D O2 Sensor 1/1 Slow Response - Lean To Rich (Soot related code, see note)*
- P0030 O2 Sensor 1/1 Heater Circuit
- P0031 O2 Sensor 1/1 Heater Circuit Low
- P0032 O2 Sensor 1/1 Heater Circuit High
- P0036 O2 Sensor 1/2 Heater Circuit Malfunction
- P0037 O2 Sensor Heater Circuit Low 1/2
- P0038 O2 Sensor Heater Circuit High 1/2
- P0053 O2 Sensor Heater 1/1 Resistance
- P0054 O2 Sensor Heater 1/2 Resistance
- P064D Internal Control Module 02 Sensors Processor Performance - Bank 1
- P0131 1/1 02 Sensor Shorted To Ground
- P0132 1/1 02 Sensor Shorted To Voltage
- P0135 O2 Sensor 1/1 Heater Performance
- P0137 1/2 02 Sensor Shorted To Ground
- P0138 1/2 02 Sensor Shorted To Voltage
- P0141 O2 Sensor 1/2 Heater Performance
- P113C O2 Sensor Power Supply Circuit Performance
- P2195 O2 Sensor 1/1 Out Of Range High
- P2196 O2 Sensor 1/1 Out Of Range Low
- P22AB O2 Sensor Positive Current Control Circuit/Open - Bank 1 Sensor 2
- P22AE O2 Sensor Reference Voltage Circuit/Open - Bank 1 Sensor 2
- P22B2 O2 Sensor Negative Current Control Circuit/Open - Bank 1
- P22B5 O2 Sensor 1/2 Pump Cell Current Trim Circuit Open
- P2237 O2 Sensor 1/1 Pump Cell Current Circuit Low
- P2243 O2 Sensor 1/1 Reference Voltage Circuit Open
- P2251 O2 Sensor 1/1 Negative Current Control Circuit/Open
- P2270 O2 Sensor 1/2 Out Of Range High
- P2271 O2 Sensor 1/2 Out Of Range Low
- P241A O2 Sensor 1/1 And 1/2 Oxygen Concentration Mismatch
- P2626 O2 Sensor 1/1 Pump Cell Current Trim Circuit/Open
- P2A00 O2 Sensor 1/1 Circuit Performance
- P2A01 O2 Sensor 1/2 Circuit Performance
- U011A Lost Communication With Exhaust Gas Sensor Module

NOTE: Soot related codes noted above with an asterisk (*) may be the result of other system(s) and must be validated as described on the Diesel Diagnostic Worksheet, Section 4D. Vehicles that DO NOT pass the Validation Test require further diagnosis to determine the cause of excess soot build up.

DIAGNOSIS:
Complete a Diesel Diagnostic Worksheet per instructions in Service Bulletin 18-045-11 Dated October 19, 2011 and U. S. Warranty Bulletin D-11-55 Dated October, 2011. All DTC's need to be recorded on the WRO and DTC's other than the ones listed above may require additional diagnosis and repair after completing this Bulletin.

Vehicles that exhibit **ANY DTC('s)** (Stored or Active), pertaining to Oxygen Sensors or Oxygen Sensor related components must have this Repair Procedure completed **BEFORE** any parts are replaced.

SPECIAL TOOLS / EQUIPMENT REQUIRED:

NPN	Soldering Iron
1	0105019912AA Mopar (Miller Tool # 10042)

PARTS REQUIRED:

Qty.	Part No.	Description
1	68202815AA	Wire Repair Kit (1 Kit contains two Oxygen Sensor Connectors, heat shrink tubing)
12	NPN	Splice bands (05073034AA / bag of 50 pieces) (Dealer Inventory) (1 pkg will service more than 4 vehicles) Dealer Allotment $2.15 per vehicle

NOTE: Prior to replacing any parts, (Oxygen Sensors, Oxygen Sensor Module, Transmission Wiring Harness or PCM) perform the Repair Procedure below and also perform an Oxygen Sensor Verification test drive also described below.

NOTE: Vehicles experiencing P013X or P014X DTC's must have the Aftertreatment Validation Test (Section 4D of the Diesel Diagnostic Worksheet) performed to ensure excess soot is not causing the DTC(s). IF excess soot is found during Aftertreatment Validation Test, perform appropriate repairs to eliminate soot accumulation. The repair procedure below should be performed regardless of outcome or repairs performed for other issues.

REPAIR PROCEDURE:

Both Oxygen Sensor connectors should be removed and new connectors with pigtails installed. The pigtail splice points should be staggered to eliminate bulk in the harness.

1. Open hood.
2. Disconnect and isolate both negative battery cables.
3. Raise and support vehicle on a suitable hoist.
4. Disconnect the **Front Oxygen Sensor Connector** and remove the protective tape and plastic convoluted tubing near the sensor connector.
5. Replace the front Oxygen Sensor Connector;

a. Cut and splice each wire, (one at a time) in a staggered manner to prevent excess bulk accumulation in the harness.
b. Using Mopar splice band tool and heat shrink with glue, splice and seal each wire individually. Refer to DealerCONNECT > TechCONNECT > 29 - Non-DTC Diagnostics > Circuit Testing Procedures > Standard Procedure > WIRE SPLICING.

6. Tape wires together then install and tape the removed convolute adjacent to the connector body.
7. Clean (with shop air) Oxygen Sensor connector and secure connector to the vehicle harness.
8. Secure all wiring to proper anchors
9. Repeat Step #4 through Step #8 for the **Rear Oxygen Sensor Connector**.
10. Lower vehicle, reconnect batteries.
11. Perform Verification below.

Verification:

Verification will ensure Oxygen Sensors are properly "relearned" and functioning as desired.

1. Ensure PCM software is current. If software is not current, please update software using appropriate Service Bulletin.
2. Connect WiTECH to vehicle if not already connected.
3. Operate the vehicle until warm and then drive the vehicle at 50 MPH. Perform a zero fueling event (deceleration condition for 10 seconds, with foot off of accelerator pedal). Repeat 3-5 times.
4. Monitor Oxygen Sensor percent in WiTECH, Data Display; percent should not vary more than 4.0% from each other during any of the drive events. Variance of greater than 4% will result in MIL illumination.
5. Further diagnosis will be required if variance is exceeded. Refer to TechCONNECT for DTC(s) set during verification.

POLICY:
Reimbursable within the provisions of the warranty.

TIME ALLOWANCE:

Labor Operation No:	Description	Amount
25-01-70-9C	MY 2010 Connectors, Oxygen Sensor, Replace, Includes Verification Road Test (Skill Level = B; Training Level = 3)	1.1 Hrs.
25-01-70-9D	MY 2011 Connectors, Oxygen Sensor, Replace, Includes Verification Road Test (Skill Level = B; Training Level = 3)	1.1 Hrs.
25-01-70-9E	MY 2012 Connectors, Oxygen Sensor, Replace, Includes Verification Road Test (Skill Level = B; Training Level = 3)	1.1 Hrs.

FAILURE CODE:

ZZ	Service Action