

# STAR Case



**Case Number: S1425000008**

**Release Date: 3/12/14**

## **Symptom/Vehicle Issue:**

Persistent or Repeating P013A and / or P014C DTC

## **Diagnosis:**

Vehicles that repeatedly exhibit P013A and/or P014C faults may be the result of a “Package and Delivery” type driving cycle. Customers that do not drive on the road in a manner to create enough heat in the exhaust for a long enough period of time are more susceptible to these conditions. The vehicle may generate more soot in the Aftertreatment System and may be unable to remove excess accumulated soot due to these driving conditions.

All applicable TSB's and proper diagnostics must be performed to ensure the engine is not producing excess soot.

Service Bulletins 25-003-13 (MY11 only) and 25-004-13 (MY 10 – 12) Oxygen Sensor wiring repairs **MUST** be performed following the SB instructions exactly, including performing a proper splice; Crimp band, solder and heat shrink all splices. **Soldering alone is not acceptable and will cause faults in the future.**

Ensure PCM is flashed to the latest calibration.

Complete the Cummins Diesel Diagnostic Worksheet in TechCONNECT as explained in SB 18-022-11 (or later bulletin) completely, which will include Section 4D. Trucks that do NOT pass the Validation Test will need to be diagnosed for condition causing excessive soot accumulation and proper repairs performed before replacing O2 Sensors or other Aftertreatment components. Some contributors to excess soot accumulation (but not limited to) include;

- Improper maintenance and/or poor fuel quality which can lead to fuel contamination.
- EGR malfunctions.
- Turbocharger malfunction.
- Charge Air Cooler or other air inductions system leak(s).
- Improper oil (Low Ash required) or overfilling crankcase when serviced due to improper draining procedure. Allow oil to drain for a minimum of 30 minutes and ensure engine is warm, at least 140°F (60°C).

If all the above has been checked and validated, perform Repair Procedure.

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**[Contact the STAR Center for assistance if no solution is found](#)**

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## Parts Required:

- 2 05149263AA Sensor, Oxygen
- 1 68055582AG Module, Oxygen Sensor

## Repair Procedure:

Replacing the Oxygen Sensor Module will help clean Sensors sooted by P&D type drive cycles.

1. Replace both Oxygen Sensors. Refer to DealerCONNECT > TechCONNECT > 14 – Fuel System > Fuel Injection, 6.7L Diesel > SENSOR, Oxygen > Removal/Installation.
2. Replace Oxygen Sensor Module. Refer to DealerCONNECT > TechCONNECT > 08 – Electrical > 8E – Electronic Control Modules > MODULE, Oxygen Sensor, 6.7L Diesel > Removal/Installation.
3. Perform Verification procedure below.

## Verification:

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

1. Connect WiTECH to vehicle if not already connected.
2. 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.
3. 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 future MIL illumination.
4. Further diagnosis will be required if variance is exceeded. Refer to TechCONNECT for DTC(s) set during verification.

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