

April 2014

**Subject:**

2004-2005 MY Chrysler Vehicles w/ 3.3L or 3.8L Engine - O2 Sensor (Correct Usage &amp; Re-flash)

**Vehicles / Models Affected:**

- 2004-2005 Dodge Caravan / Grand Caravan (3.3L /3.8L engines)
- 2004-2005 Chrysler Town & Country (3.3L /3.8L engines)
- 2005 Pacifica (3.8L engine)

**Terms / Abbreviations Used in Technical Bulletin:**

<b>B1S1</b>	Bank 1 Sensor 1	<b>O2 Sensor</b>	Oxygen Sensor
<b>DTC</b>	Diagnostic Trouble Code	<b>PCM</b>	Powertrain Control Module
<b>HO2S</b>	Heated Oxygen Sensor	<b>TSB</b>	Technical Service Bulletin
<b>MIL</b>	Malfunction Indicator Lamp	<b>VECI</b>	Vehicle Emission Control Information
<b>MY</b>	Model Year	<b>VIN</b>	Vehicle Identification Number

**Issue:**

MIL illumination after replacement of B1S1 O2 sensor. Diagnosis may reveal the following DTC(s):

- **P0135** – HO2S Heater Performance Bank 1 Sensor 1
- **P0132** – HO2S Circuit High Voltage Bank 1 Sensor 1

**Synopsis:**

There are 2 key factors (each covered by mfr. TSBs) concerning the aforementioned vehicles that if overlooked will lead to repeated DTCs and part swapping, without addressing root cause(s).

1. **Correct B1S1 Sensor Selection (ref. Chrysler TSB # 08-008-05)**  
Due to a mid-MY change, vehicles will be equipped with one of 2 very different B1S1 oxygen sensor and PCM heater circuit strategies.
2. **PCM Re-flash Calibration (ref. Chrysler TSB # 18-010-05 Rev. A)**  
Mandatory PCM re-flash required to adjust vehicle calibrations, avoiding future DTCs.

**Background:**

Midway through the 2005 MY, Chrysler introduced a host of engine / emission systems changes (XZZ sales / option code) utilizing revised vehicle components, such as a different EGR valve and B1S1 O2 sensor. In particular, Chrysler began using a 7-10 ohm upstream O2 sensor with a heater control strategy which runs at 100% duty cycle all the time. This was in direct contrast to the early MY upstream O2 sensor with a 2-4 ohm heater requiring special pulse width modulation.

*\*\*Please note that heater resistance values (ohms) given are for the purpose of differentiation and are only representative of new sensors at ambient room temperature, as there may be significant variation in resistance as sensors age.\*\**

**Solution:**

1. **Verify Correct Sensor Needed for the Vehicle.**

While the manufacturer's TSB cites specific build date splits (before / after July 8, 2004) to identify the correct B1S1 sensor, NGK has encountered discrepancies with this information and therefore only recommends the following methods to accurately identify correct sensor usage:

- a) Contact authorized Chrysler dealer (through VIN, vehicle options can be determined).
- b) Visual part identification – verify OE part # (as stamped on oxygen sensor body).

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**Solution (Cont'd from Previous pg):**

Vehicle MY Split	Stamping # on Sensor	NGK Part #	Heater Resistance	Sales / Option Code (determined through VIN by dealer)
Early 05MY split	56029052AA	23051	2 - 4 ohm (@ 20°C)	Except XZZ option code
Late 05MY split	56029085AA	23566	7 - 10 ohm (@ 20°C)	XZZ option code

Selecting the correct sensor (based on vehicle options) is critical to ensure proper vehicle performance. Differences between part #s 23051 & 23566 will be enough to trigger a MIL with code(s) shown above.

**2. Perform Manufacturer's PCM Flash**

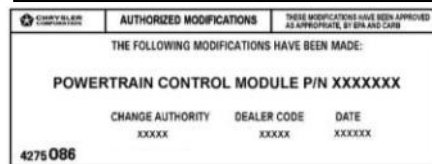
Regardless of correct sensor chosen, failure to re-flash PCM with the revised calibration per the manufacturer's recommendation could result in further DTCs (immediately or following mode 6 readiness).

To verify if the dealer has already performed this procedure, locate the VECI (Vehicle Emission Control Information) label in the engine compartment – there will be another sticker, affixed nearby marked as **“Authorized Modification Label”** with the P/N 04275086AB on it (see examples below).

Sample VECI Label



Sample Authorized Modification Label



**Additional Information:**

For further information or assistance, please call NGK Technical Support (toll free) at:

**USA: 877-4Sensor (877-473-6767)**

**Canada: 877-2Sparky (877-277-2759)**

