



HYUNDAI Technical Service Bulletin

Group	ENGINE ELECTRICAL
Number	07-36-005
Date	JULY, 2007
Model	3.3L SANTA FE AND SONATA, 3.8L ENTOURAGE AND AZERA

Subject	P0300-P0306 AND/OR FRONT OXYGEN SENSOR DTC
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CIRCULATE TO:	<input type="checkbox"/> GENERAL MANAGER	<input checked="" type="checkbox"/> PARTS MANAGER	<input checked="" type="checkbox"/> TECHNICIAN
<input checked="" type="checkbox"/> SERVICE ADVISOR	<input checked="" type="checkbox"/> SERVICE MANAGER	<input checked="" type="checkbox"/> WARRANTY MGR	<input type="checkbox"/> SALES MANAGER

DESCRIPTION:

This bulletin provides diagnostic procedures for 2006-2007 vehicles with 3.3L/3.8L engines and the following DTC stored:

P0300-P0306 and Freeze Frame Data Fuel Trim of at least - 20%

or any of the following DTC:

- P0132/P0152 - Front O2 sensor high voltage
- P0133/P0153 - Front O2 sensor slow response
- P0134/P0154 - Front O2 sensor no activity detected
- P2196/P2197 - Front O2 sensor stuck rich
- P2A00/P2A03 - Front O2 sensor no activity

NOTE: The vehicle may also exhibit an intermittent mild hesitation when the engine is at operating temperature.

SERVICE PROCEDURE:

1. DTC P0300-P0306 Misfire but no O2 sensor DTC stored:

Inspect the Freeze Frame Data for either the Long Term or Short Term Fuel Trim shifted -20% or more at a particular bank. The following example illustrates the fuel trim of -20% or more occurred at Bank-1 only:

The screenshot displays a diagnostic software interface with the following sections:

- DTC Analysis:** A table listing three DTCs: P0300 (Random/Multiple Cylinder Misfire Detected), P0301 (Cylinder 1-Misfire Detected), and P0303 (Cylinder 3-Misfire Detected). These entries are highlighted with a red dashed box.
- Freeze Frame:** A table showing sensor data for the cause of the system error (P0300). The data is as follows:

Sensor Name	Value	Unit
Fuel System Status-Bank1	CLOSE	-
Calculated Load Value	25.9	%
Engine Coolant Temperature Sensor	126	°F
Short Term Fuel Trim-Bank1	-20.3	%
Long Term Fuel Trim-Bank1	-25.0	%
Short Term Fuel Trim-Bank2	0.0	%
Long Term Fuel Trim-Bank2	5.5	%
Manifold Absolute Pressure Sensor	41.0	kPa

The values for Short Term Fuel Trim-Bank1 (-20.3%) and Long Term Fuel Trim-Bank1 (-25.0%) are highlighted with red dashed boxes.

2. Inspect for any of the following Front O2 sensor DTC stored:

- Bank-1 Front O2 Sensor DTC:
 - P0132 - Front O2 sensor high voltage
 - P0133 - Front O2 sensor slow response
 - P0134 - Front O2 sensor no activity detected
 - P2196 - Front O2 sensor stuck rich
 - P2A00 - Front O2 sensor no activity



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- Bank-2 Front O2 Sensor DTC:
 - P0152 - Front O2 sensor high voltage
 - P0153 - Front O2 sensor slow response
 - P0154 - Front O2 sensor no activity detected
 - P2197 - Front O2 sensor stuck rich
 - P2A03 - Front O2 sensor no activity
- 3. Should either #1 or #2 condition be present, replace the related Front O2 sensor at the applicable bank:

NOTE: The following Rear O2 sensor DTC may have set as a result of the Front O2 sensor:

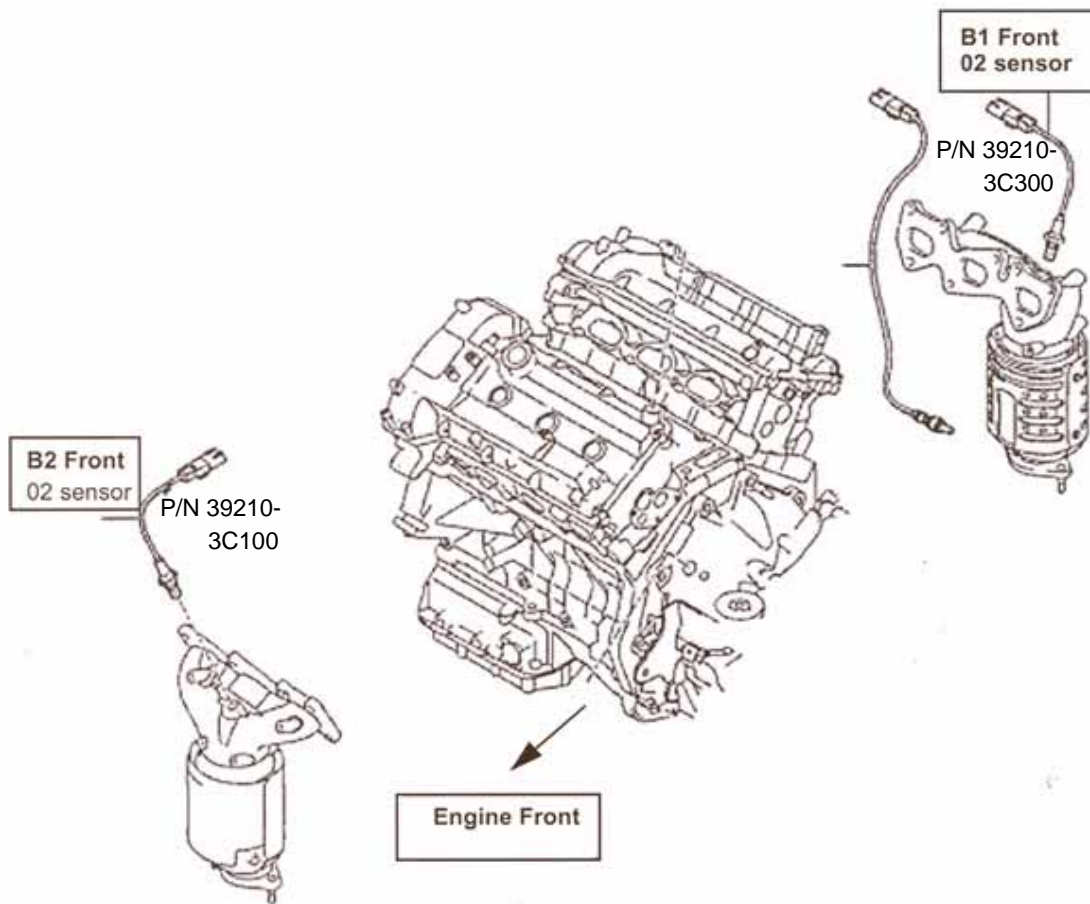
- P2270 Rear O2 sensor stuck lean (bank-1)
- P2272 Rear O2 sensor stuck lean (bank-2)

Do not replace the rear O2 sensor

4. Erase all DTC.

PARTS INFORMATION:

Sensor Location	Model	Part Number
Bank-1	Santa Fe	39210-3C300
	Azera, Entourage, Sonata	39210-3C400
Bank-2	All	39210-3C100





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WARRANTY INFORMATION:

BANK-1 RH (UP) SENSOR:

MODEL	OP CODE	OP NAME	OP TIME	CODES	
				NATURE	CAUSE
AZERA (TG)	39214R00	SENSOR ASSY-OXYGEN RH (UP)	0.8M/H	N69	C06
ENTOURAGE (EP)	39214R00	SENSOR ASSY-OXYGEN RH (UP)	0.8M/H	N69	C06
SANTA FE (CM)	39214R00	SENSOR ASSY-OXYGEN RH (UP)	0.9M/H	N69	C06
SONATA (NF)	39214R00	SENSOR ASSY-OXYGEN RH (UP)	0.8M/H	N69	C06

BANK-2 LH (UP) SENSOR:

MODEL	OP CODE	OP NAME	OP TIME	CODES	
				NATURE	CAUSE
AZERA (TG)	39213R00	SENSOR ASSY-OXYGEN RH (UP)	0.4M/H	N69	C06
ENTOURAGE (EP)	39213R00	SENSOR ASSY-OXYGEN RH (UP)	0.5M/H	N69	C06
SANTA FE (CM)	39213R00	SENSOR ASSY-OXYGEN RH (UP)	0.5M/H	N69	C06
SONATA (NF)	39213R00	SENSOR ASSY-OXYGEN RH (UP)	0.4M/H	N69	C06