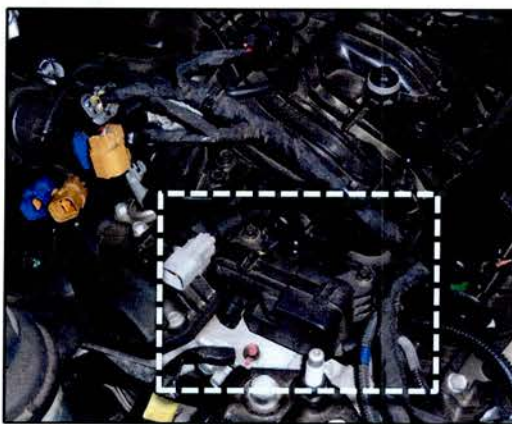
	GROUP Engine	MODEL 2011-2013MY Sorento (XMa)
	NUMBER 139	DATE September 2013
TECHNICAL SERVICE BULLETIN		
SUBJECT: VCMA DIAGNOSIS - MIL ON WITH DTC P200A		

This bulletin provides information for some 2011-2013MY Sorento (XMa) vehicles, equipped with a 3.5L MPI engine, which may exhibit a Malfunction Indicator Lamp (MIL) with DTC P200A, after engine startup. DTC P200A may be caused by an inoperative VCM actuator, or by an inoperative valve linkage inside the intake manifold assembly. If the VCMA or the valve linkage is inoperative, the ECM may not be able to correctly control the intake path of air into the engine. Follow the procedures outlined in this bulletin to diagnose and correct the concern.

DTC P200A Intake Manifold Runner Performance



Variable Charge Motion Actuator (VCMA)

File Under: <Engine>

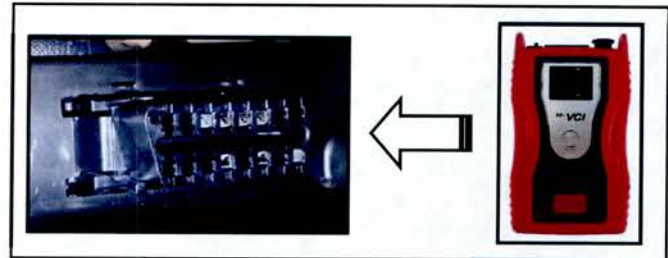
-
- Circulate To: General Manager Service Manager Parts Manager
- Service Advisor(s) Technician(s) Body Shop Manager Fleet Repair

SUBJECT: VCMA DIAGNOSIS - MIL ON WITH DTC P200A

SERVICE PROCEDURE:

1. Open the hood and remove the engine cover.
2. Turn the ignition "ON" and check for the presence of the Malfunction Indicator Lamp (MIL) illuminated on the dash.
3. Connect the power supply cable to the GDS tool.
4. Connect the USB cable between the VCI and the GDS tool.
5. Connect the Main 16-pin DLC cable (GHDM – 241000) to the VCI.

6. Connect the Main 16-pin DLC cable (GHDM – 241000) to the OBD-II connector, located under the driver's side of the instrument panel.



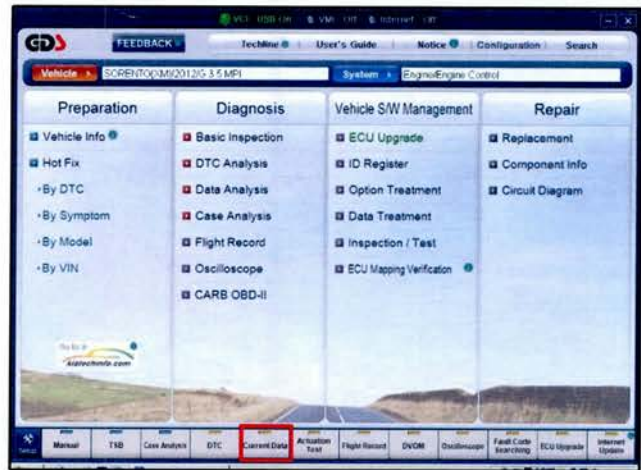
7. With the ignition key ON, turn "ON" the VCI and GDS tool. Access the GDS vehicle identification number (VIN) screen and configure the vehicle using the **VIN AUTO DETECT** Function.
8. Select **ENGINE** system and click **OK**.



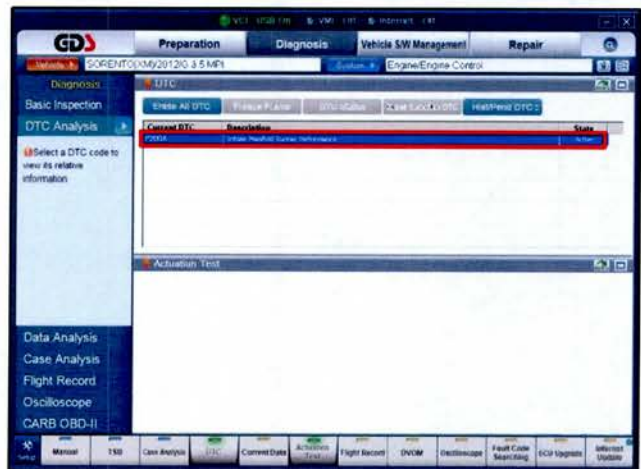
SUBJECT:

VCMA DIAGNOSIS - MIL ON WITH DTC P200A

9. Click on **Current Data**.

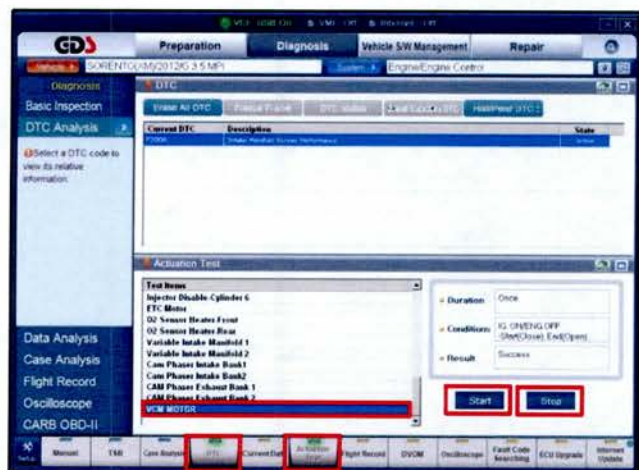


10. Click on **DTC Analysis** and check for the presence of DTC P200A.



11. Select **Current Data > Actuation Test > VCM Motor**.

- Use the **START** and **STOP** buttons to activate the VCMA.
- Visually check VCMA activation under the hood.



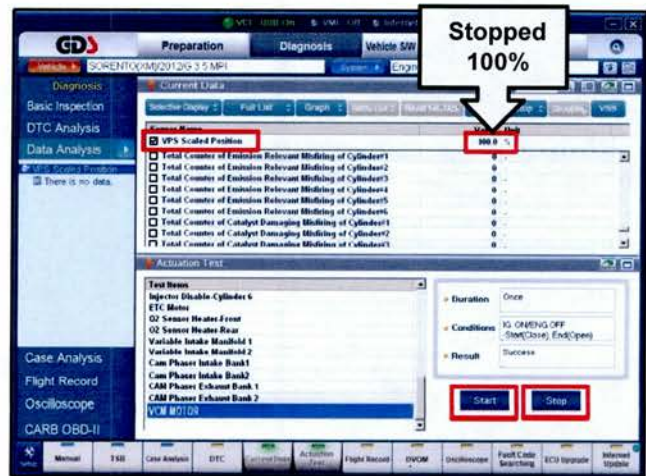
12. If the VCMA activates, no further action on the VCMA is required. Proceed to step 14.

13. If the VCMA does not activate, replace it by referring to the applicable Service Manual on KGIS. Proceed to step 14 for additional testing of the valve linkage.

SUBJECT: VCMA DIAGNOSIS - MIL ON WITH DTC P200A

- After successfully testing the actuation of the VCMA, or replacing the VCMA, select **Data Analysis > Current Data > Actuation Test** to actuate the valve linkage.
- Check the box for **VPS Scaled Position** and click on the **Start** and **Stop** buttons.

*** NOTICE**
 Displayed values for the valve linkage test will vary from vehicle to vehicle.



- Perform the valve linkage actuation test a total of three (3) times. Record and compare the actual values displayed to the specification values shown in the table below.

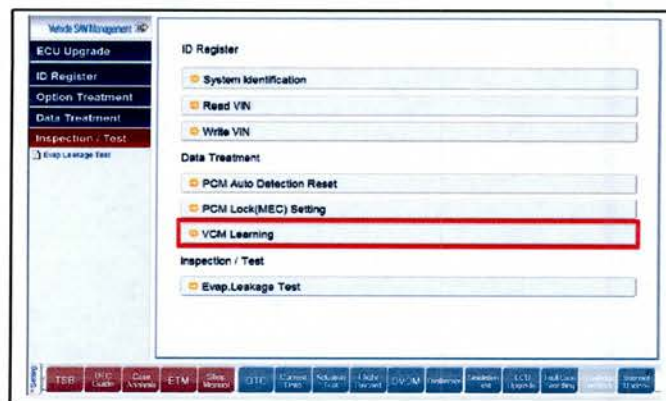
Specification Values	
Stopped	Active
90% (±10%)	25% (±10%)



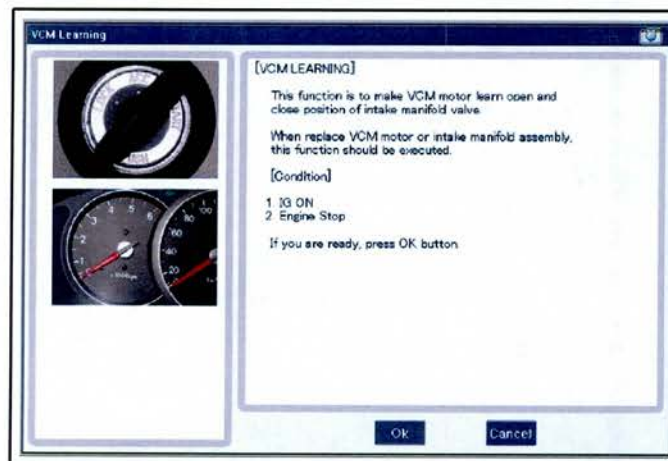
- If the values are within specification, no further action is required. If there is no change in the values, replace the lower intake manifold assembly by referring to the applicable Service Manual on KGIS.
- Reinstall all other removed components.

SUBJECT: VCMA DIAGNOSIS - MIL ON WITH DTC P200A

19. Perform a VCMA relearn procedure as outlined below, otherwise, DTC P200A may recur.
- Turn OFF the ignition switch
 - Connect GDS to the Data Link Connector (DLC)
 - Turn the ignition switch ON
 - Select the "Vehicle", "Model year", "Engine" and "System"
 - Select the "Vehicle S/W Management"
 - Select "Inspection/Test"
 - Select "Inspection/Test"



- Perform the VCM learning procedure according to the message on the GDS screen.



- Follow the on-screen instructions to finalize the test.



20. Clear DTC(s) if present.



21. Test drive the vehicle for two drive cycles in order to verify normal operation and no recurrence of MIL on.

SUBJECT:**VCMA DIAGNOSIS - MIL ON WITH DTC P200A**

AFFECTED VEHICLE PRODUCTION RANGE:

Model	Production Date Range
Sorento (XMa)	2011-2013MY

PART INFORMATION:

Part Name	Part Number	Figure
VCMA Assembly	28320 3C000	
Intake Manifold Assembly	28310 3CAA0	

WARRANTY INFORMATION:

Claim Type	Causal P/N	Qty.	N Code	C Code	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
W	28320 3C000	0	N69	C06	(TSB ENG 139) DTC Inspection for Stored Codes	28320F04	0.3 M/H	N/A	0
W	28320 3C000	1	N69	C06	(TSB ENG 139) VCM Replacement and DTC Inspect	28320F05	0.3 M/H	N/A	0
W	28320 3CAA0	1	N69	C06	(TSB ENG 139) Intake Manifold Replacement and DTC Inspect	28320F06	0.8 M/H	N/A	0
W	28310 3CAA0	1	N69	C06	(TSB ENG 139) VCM and Intake Manifold Replacement, with DTC Inspection *	28320F07	0.9 M/H	28320 3C000	1

* Scan tool screen captures must be printed and attached to the RO, failure to attach printed screen capture may result in chargeback.

Note: Only one (1) labor operation maybe submitted with claim, all labor operations include scan tool diagnostic time.