



GROUP
Engine

MODEL
Sorento (XM)
2011 - 2013MY

NUMBER
PS271

DATE
April 2013

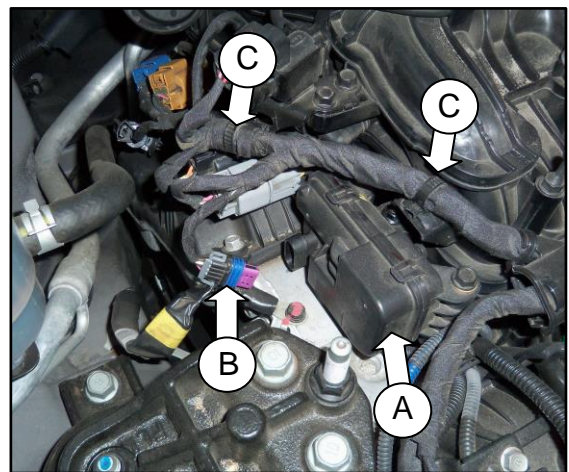


TECHNICAL OPERATIONS

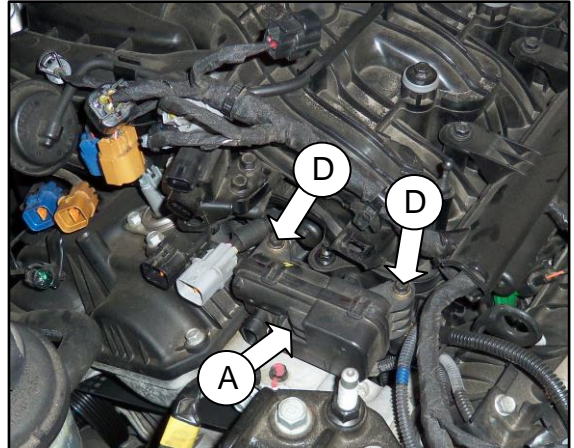
SUBJECT: SERVICE PROCEDURE: VCMA ACTUATOR REPLACEMENT

This article provides the replacement procedure for the VCMA (Variable Charge Motion Actuator) on some 2011-2013 Sorento vehicles, equipped with a 3.5L V6 engine, which may experience an illuminated Malfunction Indicator Lamp (MIL) and drivability concerns. Follow the procedure outlined below to correct the concern.

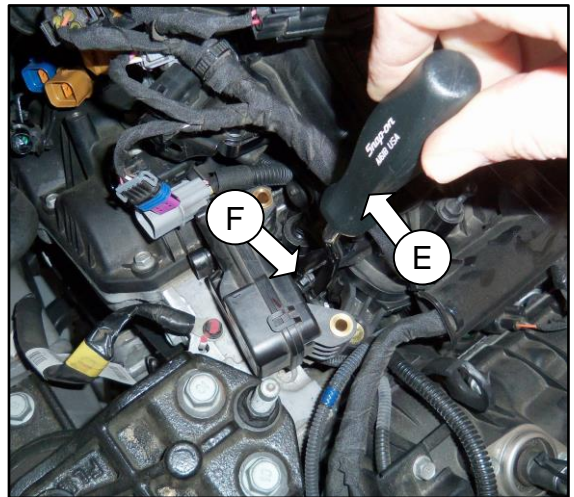
1. Verify the customer complaint and diagnose following KGIS information, using specific DTC information and trouble trees as appropriate.
2. If diagnosis indicates that VCMA needs to be replaced, **ONLY** replace the actuator itself as described below; do **NOT** remove/replace the intake manifold.
3. Remove the engine cover.
4. Remove harness connector (B) from the VCMA (A) and all other associated connectors and retaining clips (C). Also, move the harness away from the VCMA.



5. Remove two mounting bolts (D) securing the VCMA (A) to the intake manifold.



6. Using a trim clip removal tool (E), apply pressure to separate the control arm (F) from the attachment point on the VCMA control lever.



7. Remove the VCMA from the vehicle.

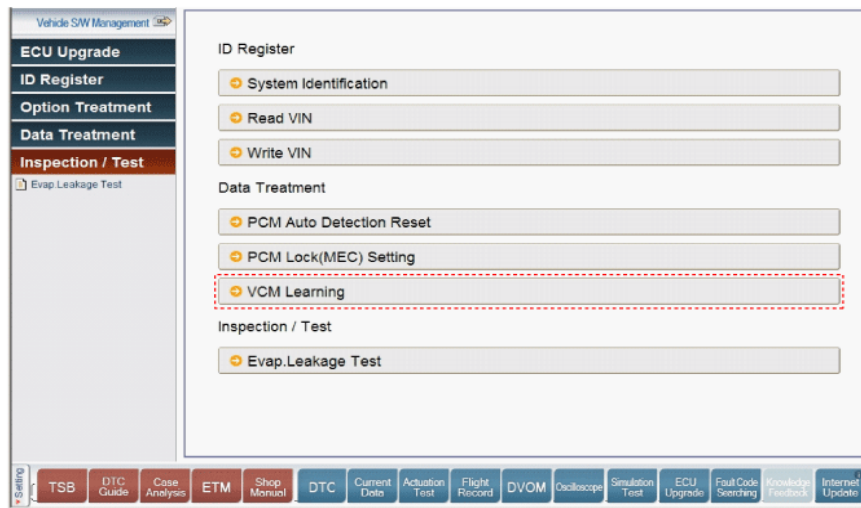
8. Install the new VCMA and re-attach the control arm.

Variable charge motion actuator bolt torque: 8.0 ~ 11.0 Nm (5.9 ~ 8.1 lb-ft).

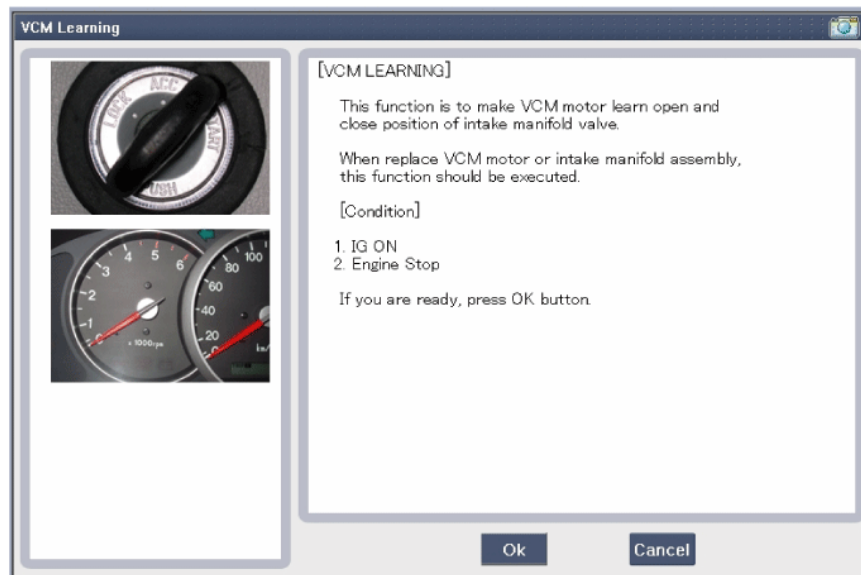
9. Re-install all other components by reversing the removal process.

10. Perform a relearn procedure as outlined below, otherwise a performance related concern may reoccur resulting in a repeat repair.

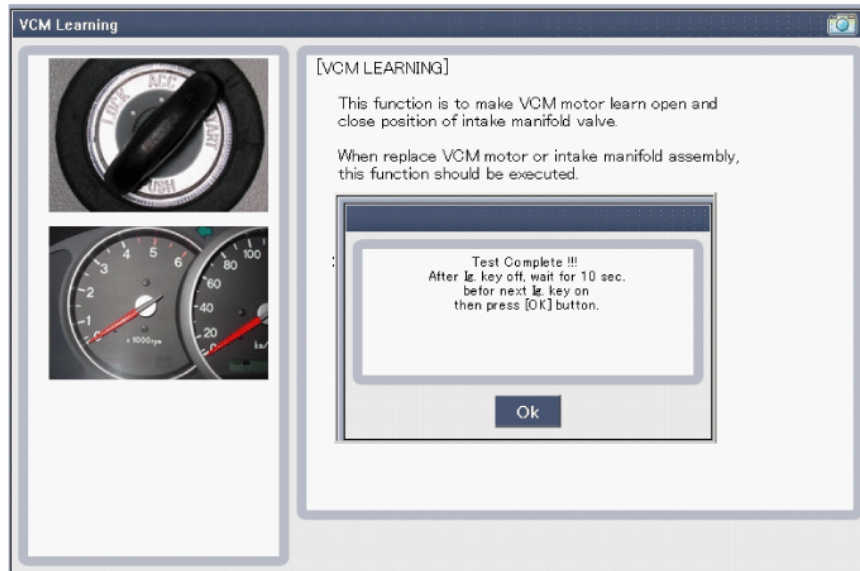
- Turn OFF the ignition switch
- Connect GDS to the Data Link Connector (DLC)
- Turn the ignition switch ON
- Select the “Vehicle”, “Model year”, “Engine” and “System”
- Select the “Vehicle S/W Management”
- Select “Inspection/Test”
- Select “Inspection/Test”



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



- Follow the on screen instructions to finalize the test.



11. Test drive the vehicle to verify normal operation and no recurrence of MIL on.

12. Submit a warranty claim using the new Op Code for VCMA replacement and GDS operation, as shown below.

Op Code	Desc .	Time
28325R1L	VCM(Lambda Engine), R&R	0.3
28325RQ0	Diagnostic Tool Operation - VCM motor	0.3