	GROUP	MODEL
	ENG	**2016MY Optima (JFa) Sorento (UMa), w/2.4L GDI**
	NUMBER	DATE
	158 (Rev 2, 11/18/2016)	**July 2016**

TECHNICAL SERVICE BULLETIN

SUBJECT: VCM LOGIC IMPROVEMENT - DTC P200A00 (SA240A)

✶ NOTICE

This bulletin has been revised to include additional information. New/revised sections of this bulletin are indicated by a black bar in the margin area.

This bulletin provides information related to the ECM software upgrade and **inspection of the VCM motor (Actuation Test)** of some 2016MY Optima (JFa) vehicles, produced from August 28, 2015 through February 15, 2016, and some 2016MY Sorento (UMa) vehicles, produced from November 17, 2014 through February 3, 2016, which may experience a malfunction indicator lamp (MIL) illuminated with the Electronic Control Module (ECM) system-related DTC: P200A00. To correct this condition, the ECM should be reprogrammed using the GDS/KDS download, as described in this bulletin, and, if necessary, replacement of the Variable Charge Motion Actuator (VCMA). Do not replace the intake manifold for this concern. Before performing this procedure, verify that the VIN falls within the production ranges by consulting the table on page 9. For confirmation that the latest reflash has been performed to the vehicle you are working on, verify ROM ID using the tables in this TSB.

DTC P200A00 - Intake Manifold Runner Performance

✶ NOTICE

A Service Action is a repair program without customer notification that is performed during the warranty period. Any dealer requesting to perform this repair outside the warranty period will require DPSM approval.

Repair status for a VIN is provided on WebDCS (Service> Warranty Coverage> Warranty Coverage Inquiry> Campaign Information). Not completed Recall / Service Action reports are available on WebDCS (Consumer Affairs> Not Completed Recall> Recall VIN> Select Report), which includes a list of affected vehicles.

This issue number is SA240A.

File Under: <Engine>

Circulate To: ☒ **General Manager** ☒ **Service Manager** ☒ **Parts Manager** ☒ **Service Advisors** ☒ **Technicians** ☒ **Body Shop Manager** ☒ **Fleet Repair**

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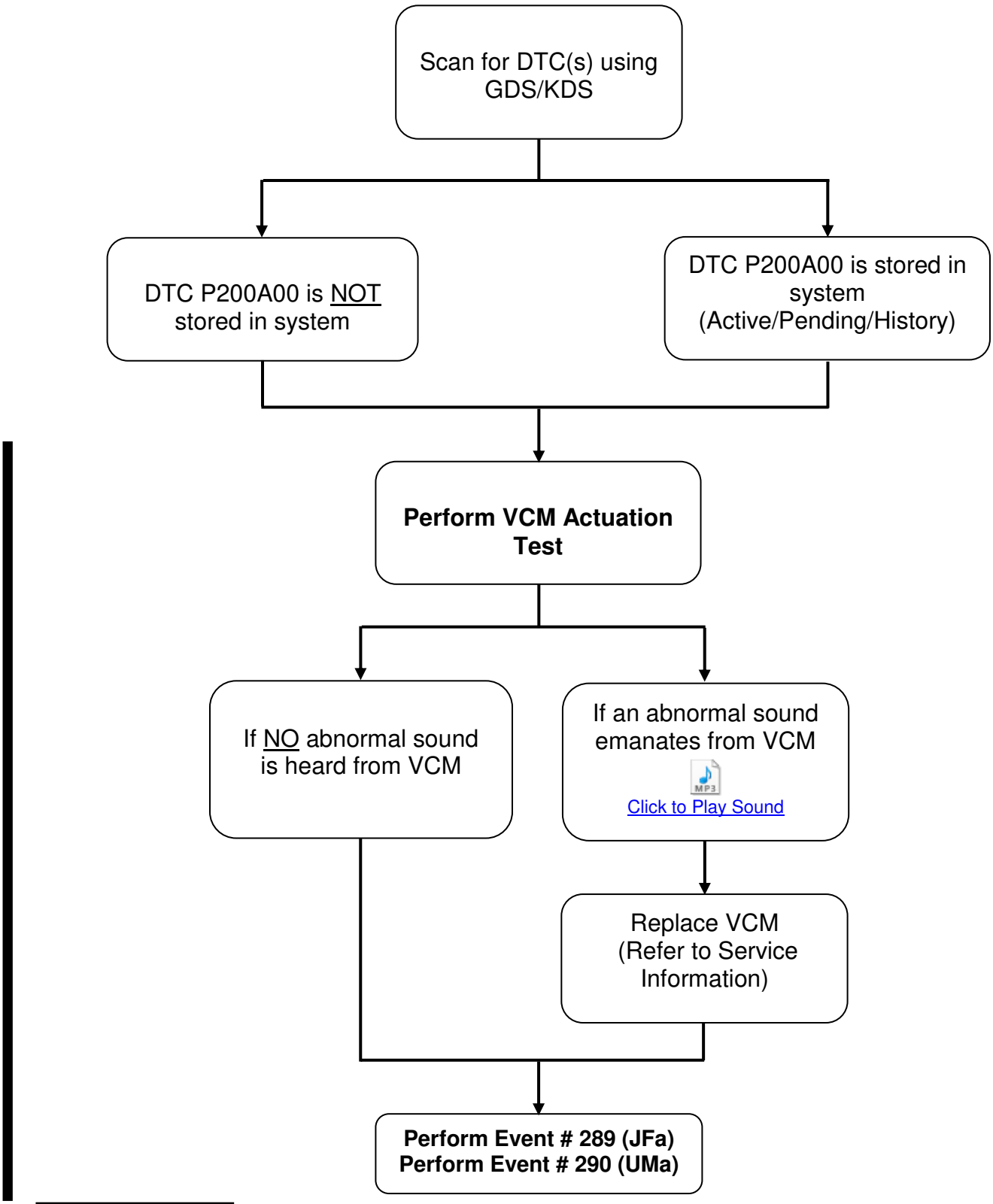
* NOTICE

This Service Action supersedes SA220. For UMa models, the Flexray Noise Improvement Reflash (Event 277), previously included in SA220, is not included in this new Service Action (SA240A).

For Optima models, this Service Action applies to JFa only!
JFa models are produced in the United States (VIN begins with "5").
JF models are produced in Korea (VIN begins with "K").

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Diagnostic Flowchart:



✶ NOTICE

Do not replace the intake manifold for this concern. Any associated claims for intake manifold replacement are subject to review and chargeback.

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ECM Upgrade Procedure:

To correct this condition, the ECM should be reprogrammed using the GDS/KDS download, as described in this bulletin.

UPGRADE EVENT NAME
289.JFA 2.4GDI VCM LOGIC IMPROVEMENT
290.UMA 2.4GDI VCM LOGIC IMPROVEMENT

*** NOTICE**

- **A fully charged battery is necessary before ECM upgrade can take place. It is recommended that the Midtronics GR8-1299 system be used in ECM mode during charging. DO NOT connect any other battery charger to the vehicle during ECM upgrade.**
- **All ECM upgrades must be done with the ignition key in the 'ON' position.**
- **Be careful not to disconnect any cables connected to the vehicle or GDS during the ECM upgrade procedure.**
- **DO NOT start the engine during ECM upgrade.**
- **DO NOT turn the ignition key 'OFF' or interrupt the power supply during ECM upgrade.**
- **When the ECM upgrade is completed, turn the ignition 'OFF' and wait 10 seconds before starting the engine.**
- **ONLY use approved ECM upgrade software designated for the correct model, year.**

CAUTION

Before attempting an ECM upgrade on any Kia model, make sure to first determine whether the particular model is equipped with an immobilizer security system. Failure to follow proper procedures may cause the PCM to become inoperative after the upgrade and any claims associated with this repair may be subject to chargeback.

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ROM ID INFORMATION TABLES :

Upgrade event #289 (JFa)

MODEL	TM	IMMO	ECM P/NO	ROM ID	
				PREVIOUS	NEW
JFA 2.4 ULEV	6AT	IMMO	39108-2GGC5	JFAGNC4ERB0A JFAGNC4ERB0B	**JFAGNC4ERC0A**
		NON IMMO	39108-2GGC0	JFAGNC4EMB0A JFAGNC4EMB0B	**JFAGNC4EMC0A**
JFA 2.4 SULEV	6AT	IMMO	39108-2GGD5	JFAGNS4ERB0A JFAGNS4ERB0B	**JFAGNS4ERC0A**
		NON IMMO	39108-2GGD0	JFAGNS4EMB0A JFAGNS4EMB0B	**JFAGNS4EMC0A**

Upgrade event #290 (UMa)

MODEL	TM	IMMO	ECM P/NO	ROM ID	
				PREVIOUS	NEW
UMA 2.4 GDI	6AT	IMMO	39100-2GGF5 39100-2GGH5	UMAFNC4ER91A UMAFNC4ER92A UMAGNC4ERA31 UMAFNC4ERA51	**UMAFNC4ERA52**
			39100-2GGF6 39100-2GGH6	UMAFNC4ERA3A UMAFNC4ERA5A UMAFNC4ERA5B	**UMAFNC4ERA5C**
		NON-IMMO	39100-2GGF0 39100-2GGH0	UMAFNC4EM91A UMAFNC4EM92A UMAGNC4EMA31 UMAFNC4EMA51	**UMAFNC4EMA52**
			39100-2GGF1 39100-2GGH1	UMAFNC4EMA3A UMAFNC4EMA5A UMAFNC4EMA5B	**UMAFNC4EMA5C**

To verify the vehicle is affected, be sure to check the Calibration Identification of the vehicle's ECM ROM ID and reference the Information Table as necessary.

★ NOTICE

If performing this TSB using KDS, refer to TSB SST 037 for detailed information.

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1. Connect the power supply cable to the GDS.

*** NOTICE**

If attempting to perform the ECM upgrade with the power supply cable disconnected from the GDS, be sure to check that the GDS is fully charged before ECM upgrade. If the GDS is not fully charged, failure to perform the ECM upgrade may occur. Therefore, it is strongly recommended that the power supply connector be connected to the GDS.

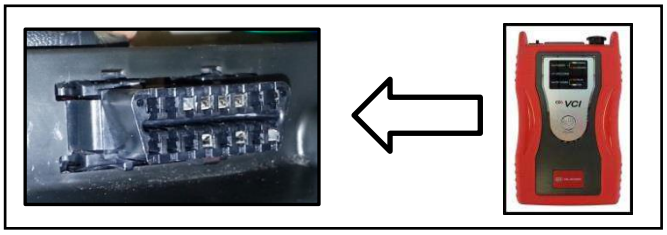
2. Connect the USB cable between the VCI and the GDS.

*** NOTICE**

When performing the ECM upgrade using the GDS, wireless communication between the VCI and GDS is not available. Therefore, be sure to connect the USB cable between the VCI and the GDS.

3. Connect the Main 16-pin DLC cable (GHDM – 241000) to the VCI.

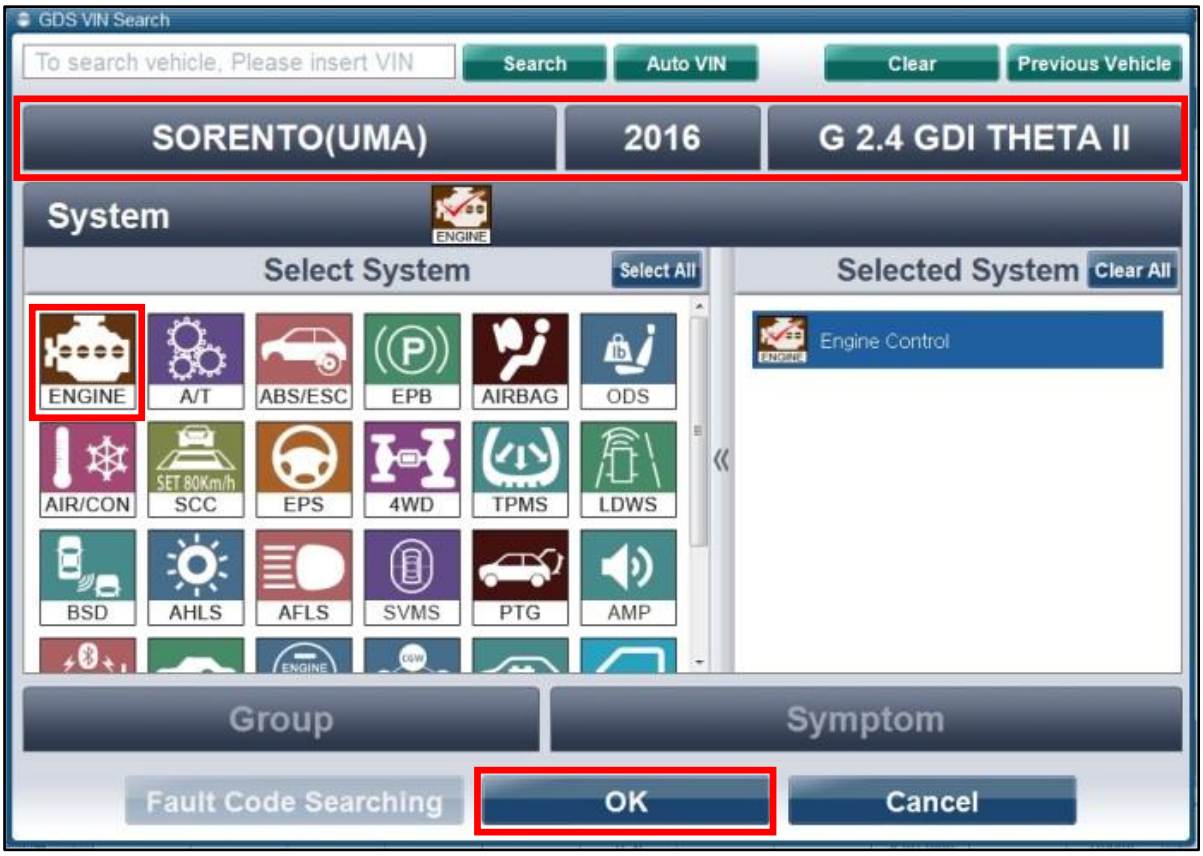
4. Connect the Main 16-pin DLC cable (GHDM – 241000) to the OBD-II connector, located under the driver's side of the instrument panel.



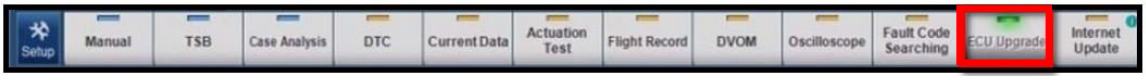
5. With the ignition key ON, turn ON the VCI and GDS. Access the GDS vehicle identification number (VIN) screen and configure the vehicle using the **VIN AUTO DETECT** Function.

6. Select **ENGINE** system, and click **OK**.

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7. Select **ECU Upgrade** from the bottom right-hand corner. Next, select **Auto Mode**, and then **Engine**. Perform event #289(JFa) / #290(UMa) in accordance with normal GDS upgrade procedures.



9. Check for Diagnostic Trouble Codes using the GDS and erase any DTCs stored such as EPS, ESC, and TPMS that may have been set during reprogramming.

10. Start the engine to confirm proper operation of the vehicle

⚠ CAUTION

Before attempting an ECM upgrade on any Kia model, make sure to first determine whether the particular model is equipped with an immobilizer security system. Failure to follow proper procedures may cause the PCM to become inoperative after the upgrade and any claims associated with this repair may be subject to chargeback.

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★ NOTICE

Do NOT attempt to perform a Manual Mode upgrade unless Auto Mode fails. Always follow the instructions given on the GDS in either Auto or Manual mode. See table for Manual Mode passwords.

***MANUAL MODE ECM UPGRADE PASSWORDS:**

***<u>Do NOT perform Manual Mode ECM upgrade unless Auto Mode fails</u>.**

Upgrade event #289 (JFa)

Event #	System	Menu	Password
289	ECU	JFA 2.4 ULEV A/T -IMMO : 39108-2GGC0	**0820**
		JFA 2.4 SULEV A/T -IMMO : 39108-2GGD0	**0821**
		JFA 2.4 ULEV A/T +IMMO/SMK : 39108-2GGC5	**0825**
		JFA 2.4 SULEV A/T +IMMO/SMK : 39108-2GGD5	**0826**

Upgrade event #290 (UMa)

Event #	System	Menu	Password
290	ECU	UMA 2.4GDI A/T -IMMO : 39100-2GGF0/H0	**0200**
		UMA 2.4GDI A/T -IMMO : 39100-2GGF1/H1	**0211**
		UMA 2.4GDI A/T +IMMO/SMK : 39100-2GGF5/H5	**0255**
		UMA 2.4GDI A/T +IMMO/SMK : 39100-2GGF6/H6	**0266**

1. Within the ECM Upgrade screen, select **Manual Mode** in the left column, select **Engine** and then select **Upgrade Event #289(JFa) / #290(UMa).** Select the appropriate control unit part number by referring to the ROM ID Information Table on Page 4, and click **OK**.
2. Enter the appropriate password from the table above, and click **OK**.
3. Upgrade will begin and the progress of the upgrade will appear on the bar graph.
4. When the GDS reports that the ECM upgrade has been successfully completed, click **OK**, turn OFF the ignition key, and wait at least 10 seconds before attempting to start the engine.
5. Check for Diagnostic Trouble Codes using the GDS and erase any DTCs stored such as EPS, ESC, and TPMS that may have been set during reprogramming.
6. Start the engine to confirm proper operation of the vehicle.

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PARTS INFORMATION:

Part Name	Part Number	Qty.
Motor Assy-VCM	28323 2GGA1	1

AFFECTED VEHICLE PRODUCTION RANGE:

Model	Production Date Range
Optima (JFa)	From August 28, 2015 through February 15, 2016
Sorento (UMa)	From November 17, 2014 through February 3, 2016

WARRANTY CLAIM INFORMATION:

Model	Claim Type	Causal P/N	Qty.	N Code	C Code	Repair Description	Labor Op Code	Time	Related Parts	Qty.
Optima (JFa)	V	39108 2GGC0	0	N99	C99	(SA 240A) ECM Upgrade	160A27R0	0.5 M/H	N/A	0
						(SA 240A) ECM Upgrade and VCM Replace	160A27R1	0.9 M/H	28323 2GGA1	1
Sorento (UMa)		39100 2GGF0				(SA 240A) ECM Upgrade	160A26R0	0.5 M/H	N/A	0
						(SA 240A) ECM Upgrade and VCM Replace	160A26R1	0.9 M/H	28323 2GGA1	1

★ NOTICE

VIN inquiry data for this repair is provided for tracking purposes only. KIA retailers should reference SA 240A when accessing the WebDCS system.

★ NOTICE

<u>For Optima models, this Service Action applies to JFa only!</u>
JFa models are produced in the United States (VIN begins with "5").
JF models are produced in Korea (VIN begins with "K").