

SERVICE ACTION: AIR INTAKE HOSE REPLACEMENT & ECU UPGRADE (SA303)

TECHNICAL SERVICE BULLETIN

Reference Number(s): ENG174, Date of Issue: October, 2017

KIA: 2016-2017 Optima (JFa) Sorento (UMa) With 2.0T-GDI

GROUP: Engine

SERVICE INFORMATION

This bulletin provides the procedure to replace the air intake hose and/or improve the logic of the Electronic Control Unit (ECU) on some 2016-2017MY Optima (JFa), produced from September 4, 2015 through April 14, 2017, and some 2016-2017MY Sorento (UMa) vehicles, produced from November 19, 2014 through May 1, 2017, equipped with a 2.0T engine, which may exhibit an impaired air intake hose. See table below for more details. To correct this concern, replace the air intake hose and/or apply the improved logic to the ECU using the KDS ECU Upgrade function as described in this bulletin. For confirmation that the latest reflash has been applied to a vehicle you are working on, verify the ROM ID using the table on pages 3-4 of this bulletin. Before conducting the procedure, verify that the vehicle is included in the list of affected VINs.

Service Action No.	Model	Production Range	Action	Pages
SA303A	Optima (JFa)	September 4, 2015 through July 1, 2016	Air Intake Hose & ECU Upgrade	2 - 8
	Sorento (UMa)	November 19, 2014 through March 31, 2016		
SA303B	Optima (JFa)	June 1, 2016 through April 14, 2017	Air Intake Hose Only	2
SA303C	Sorento (UMa)	April 1, 2016 through May 1, 2017	ECU Upgrade Only	3 - 8

NOTE: 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

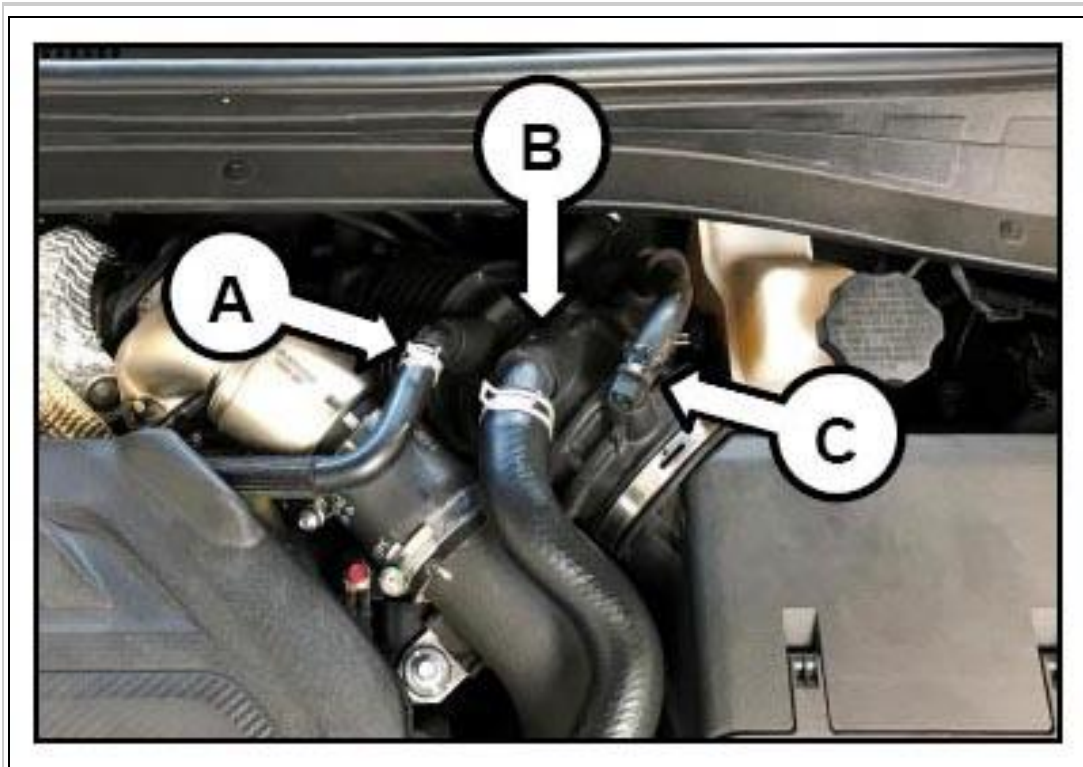
Completed Recall → Recall VIN → Select Report), which includes a list of affected vehicles.

This issue number is **SA303** .

NOTE: For **Optima** models included in this TSB: VINs that start with 5XX are designated Optima (JFa) and produced in the United States. This TSB applies to Optima (JFa) that is produced in United States only.

REPLACEMENT PROCEDURE

1. Disconnect the breather hose (A), the recirculation hose (B), and the vacuum hose (C).

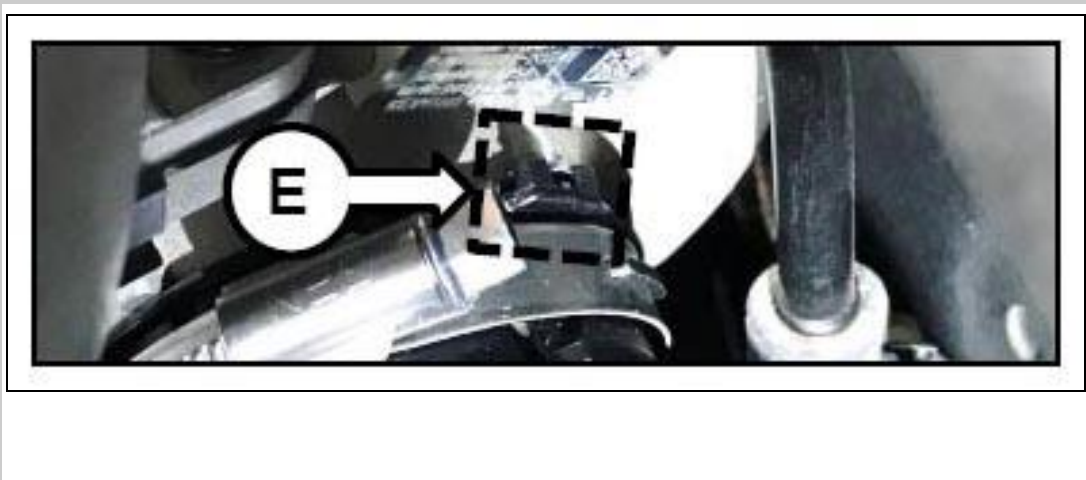


2. Disconnect and remove the air cleaner hose (D).



3. Install the new improved air cleaner hose and ensure proper installation of the hose. Verify alignment of the hose with the turbo (E) and air intake box (F).

Reinstall all three removed hoses from step 1.





4. Proceed to the next procedure to perform the ECU logic improvement.

ECU UPGRADE PROCEDURE

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

Upgrade Event Name
339. JFa THETA 2.0TGDI ECU COOLING FAN LOGIC IMPROVEMENT
341. UMa THETA 2.0TGDI ECU COOLING FAN LOGIC IMPROVEMENT

NOTE:

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

NOTE: Before attempting an ECU 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.

ROM ID INFORMATION TABLE

Upgrade Event #339 (ECU)

Model	EM	TM	IMMO	ECU P/No.	ROM ID	
					Previous	New
JFa	2.0T ULEV	A/T	No	39108 2GTK0	JFAGNC0EMB0A	JFAGNC0EMB0B
			Yes	39108 2GTK5	JFAGNC0ERB0A	JFAGNC0ERB0B

Upgrade Event #341 (ECU)

Model	EM	TM	IMMO	ECU P/No.	ROM ID	
					Previous	New
UMa	2.0T ULEV	A/T	No	39100-2GTC2 39100-2GTD2	UMAHNC0EMA5A UMAHNC0EMA6A	UMAHNC0EMA6B
			Yes	39100-2GTC7 39100-2GTD7	UMAHNC0ERA5A UMAHNC0ERA6A	UMAHNC0ERA6B
			No	39100-2GTC1 39100-2GTD1	UMAGNC0EMA3A UMAGNC0EMA5A	UMAGNC0EMA61
			Yes	39100-2GTC6 39100-2GTD6	UMAGNC0ERA3A UMAGNC0ERA5A	UMAGNC0ERA61
			No	39100-2GTC0 39100-2GTD0	UMAFNC0EM92A	UMAFNC0EM921
			Yes	39100-2GTC5 39100-2GTD5	UMAFNC0ER92A	UMAFNC0ER921

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.

NOTE: Prior to performing the ECU upgrade, be sure to check that the KDS is fully charged.

1. Connect the VCI-II to the OBD-II connector, located under the driver's side of the instrument panel.

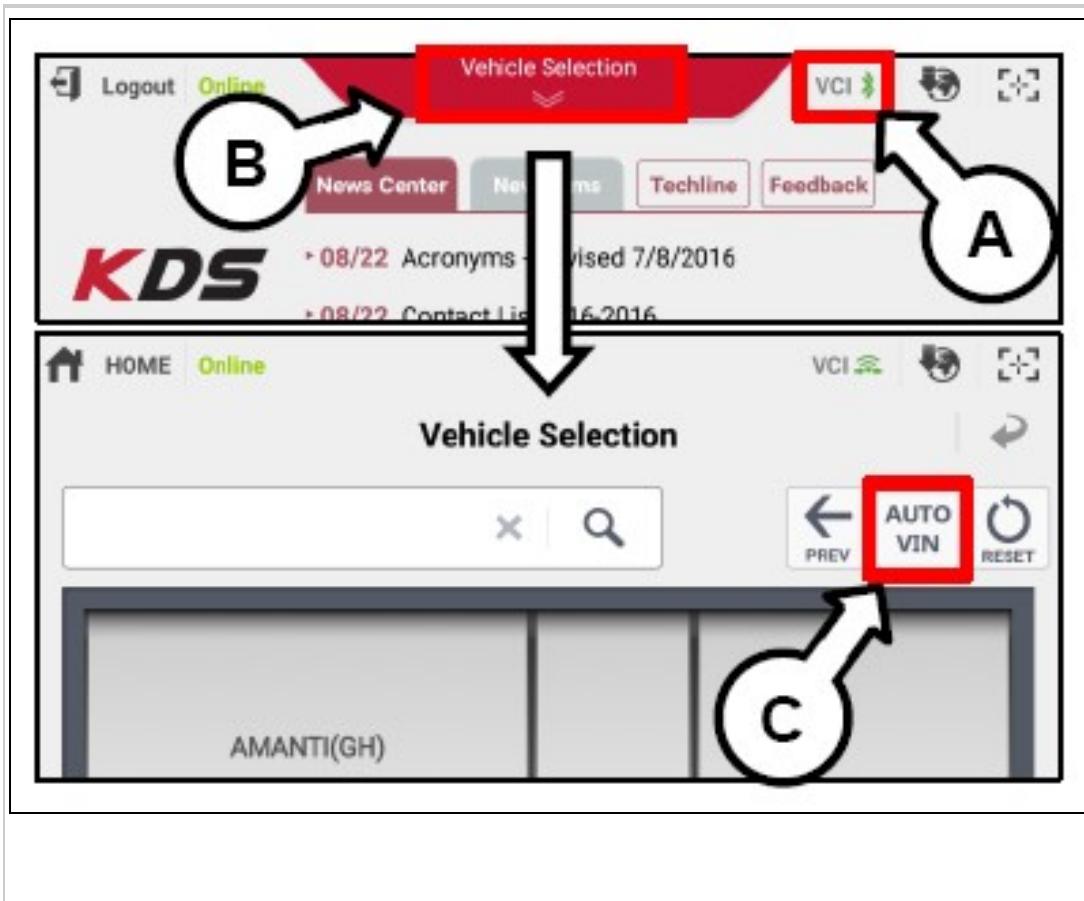
NOTE: The ECU upgrade function on KDS is operating wirelessly. It is not necessary to perform the upgrade via USB cable.



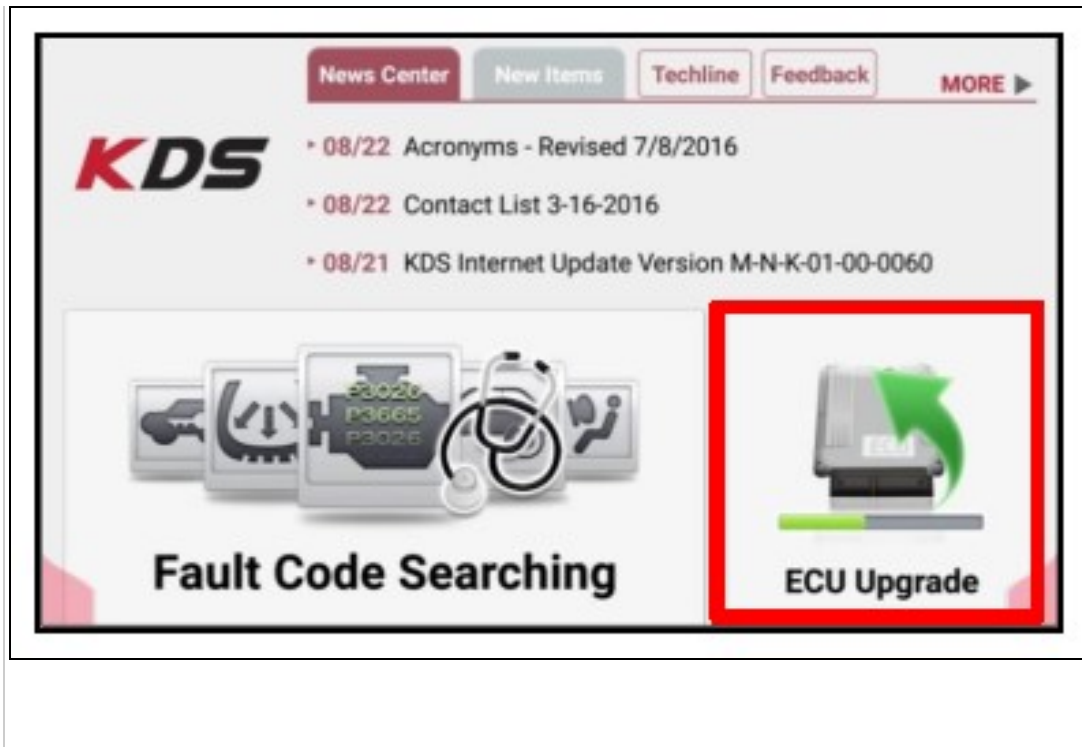
2. With the ignition ON, turn ON the KDS tablet. Select **KDS** from the home screen.



3. Confirm communication with VCI (A) and then configure the vehicle (B) using the **AUTO VIN** (C) feature.



4. Select **ECU Upgrade** .



5. The KDS will check the server for recently uploaded Events and then automatically download **Upgrade Event #339 or #341** .

NOTE: *The vehicle must be identified in Vehicle Selection to download an Event for that vehicle.*

After the download is complete, the program will shut down to install.
Please wait until the program restarts.

Event	Status
271.QF 2.4GDI DTC P0171,P0420 LOGIC IMPROVEMENT	Downloading
273.TF 2.4GDI DTC P0171,P0420 LOGIC IMPROVEMENT	Ready

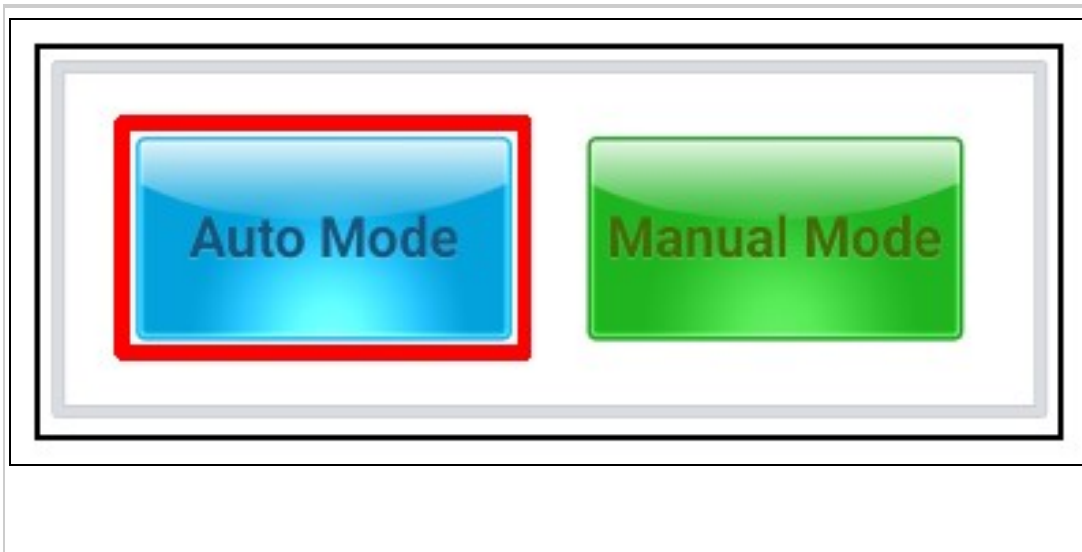
36%

Do not touch any system buttons while performing this function.

KDS screenshot shown above is for demonstration purposes only. Events shown in screenshot are not applicable to this bulletin.

6. Select **Auto Mode** .

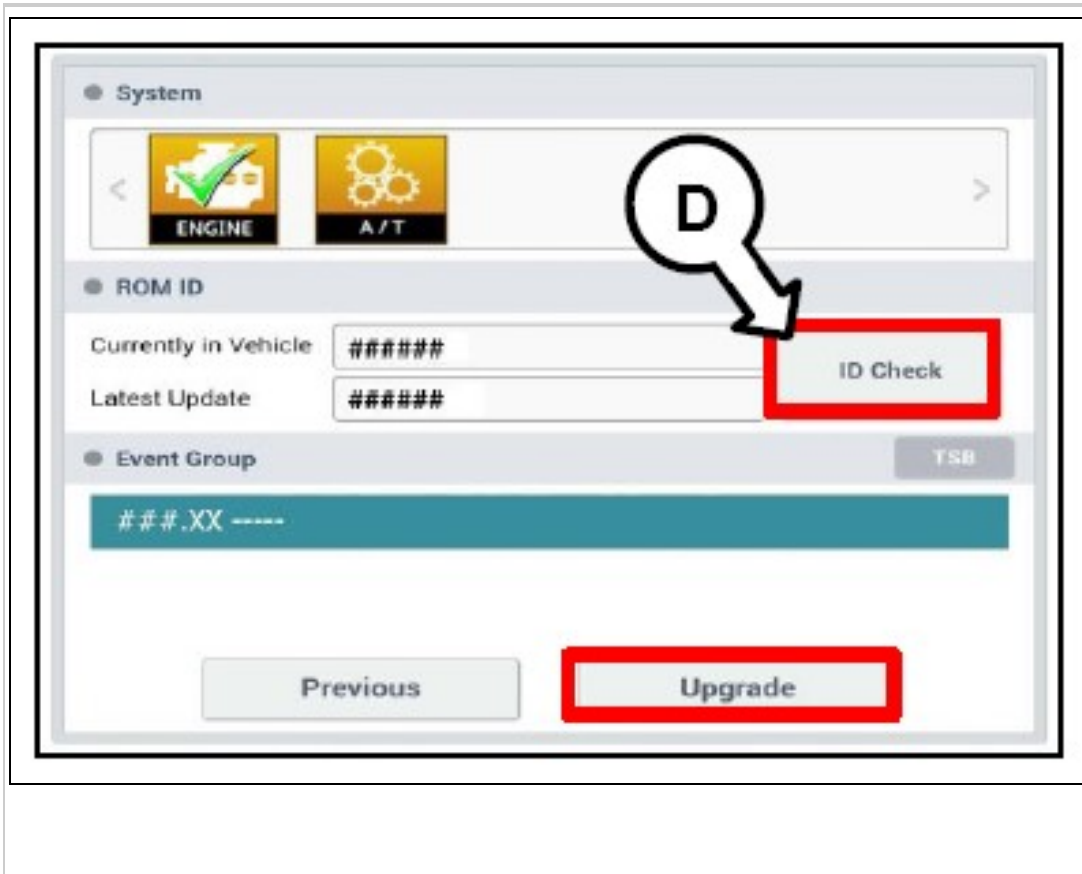
CAUTION: Do NOT attempt to perform a Manual Mode upgrade **UNLESS Auto Mode fails** . Always follow the instructions given on the KDS in either Auto or Manual mode.



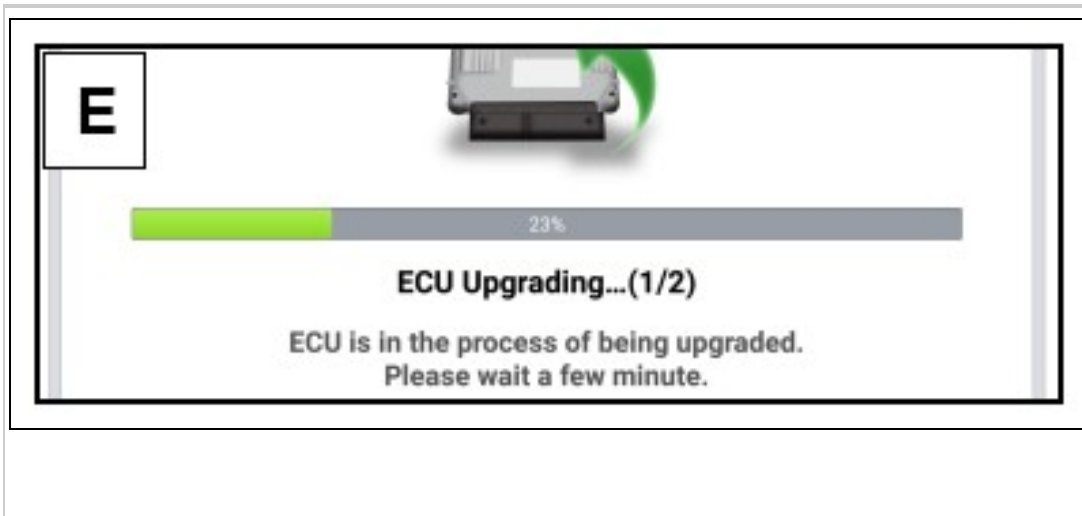
7. Select the **Engine** system under the System selection menu.

Touch **ID Check** (D) and confirm that the latest update is available.

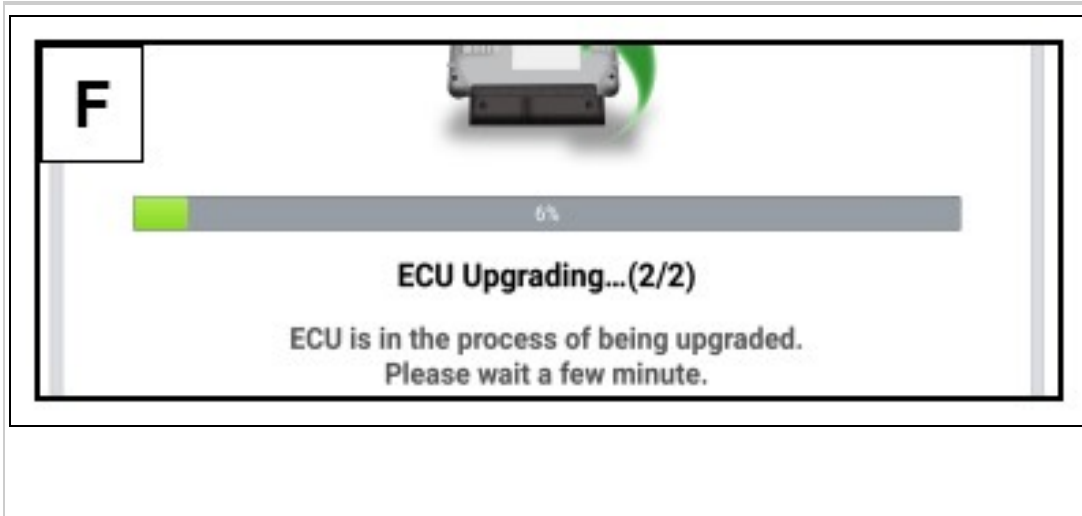
Select **Upgrade Event #339** or **#341** and select **Upgrade** to continue.



8. The ECU upgrade will begin and the progress of the upgrade will appear on the bar graph. Upgrade part (1/2) (E) will download the upgrade event to the VCI-II. Upgrade part (2/2) (F) will upgrade the ECU.

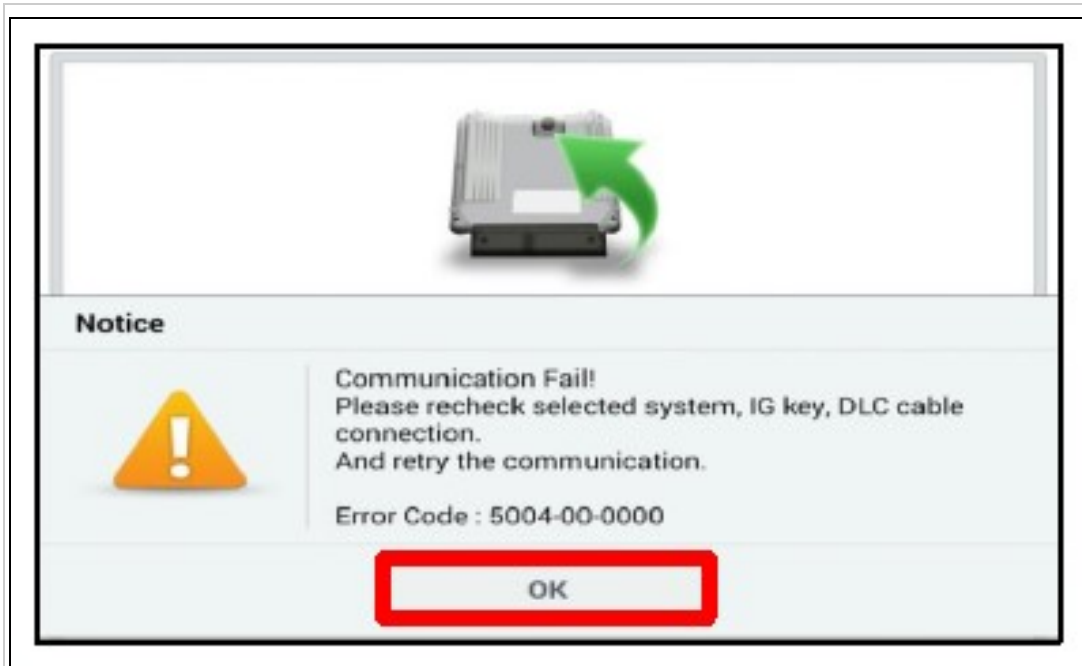


CAUTION: Do not touch the system buttons (like 'Back', 'Home', 'etc.')

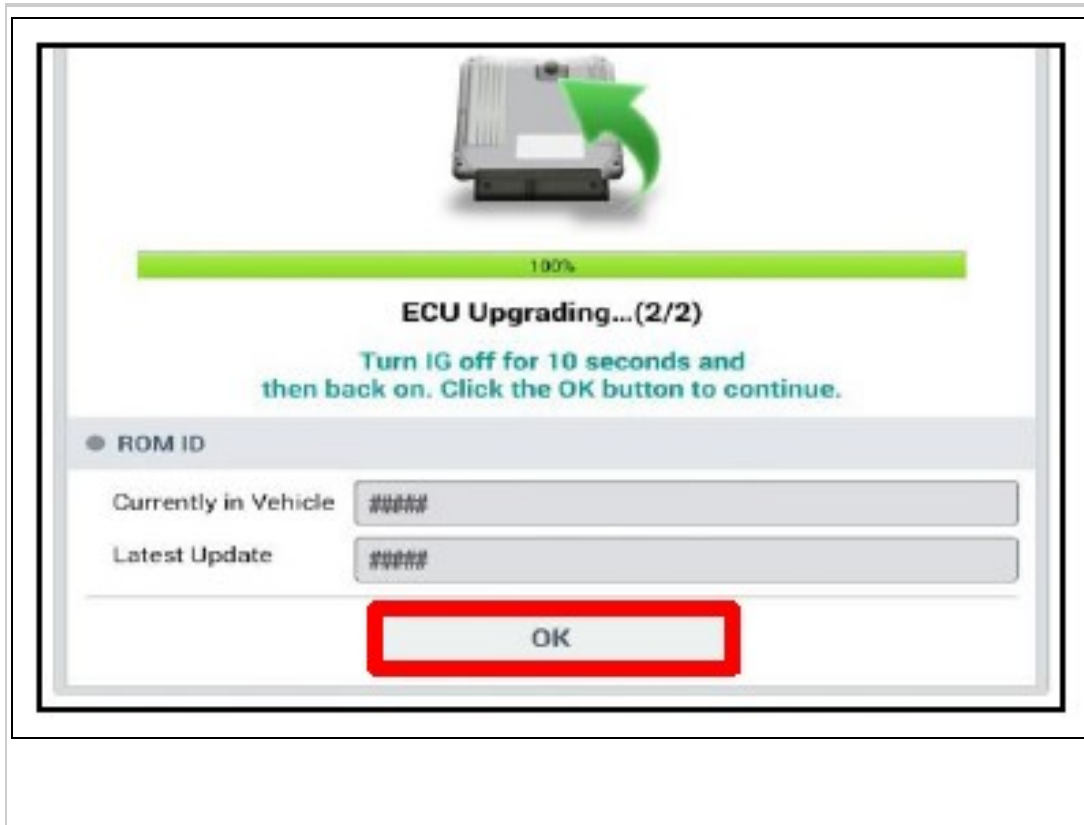


- 9. If a "Communication Fail" screen appears, verify that the VCI-II and KDS are communicating properly. Touch **OK** and restart the procedure from step 4.

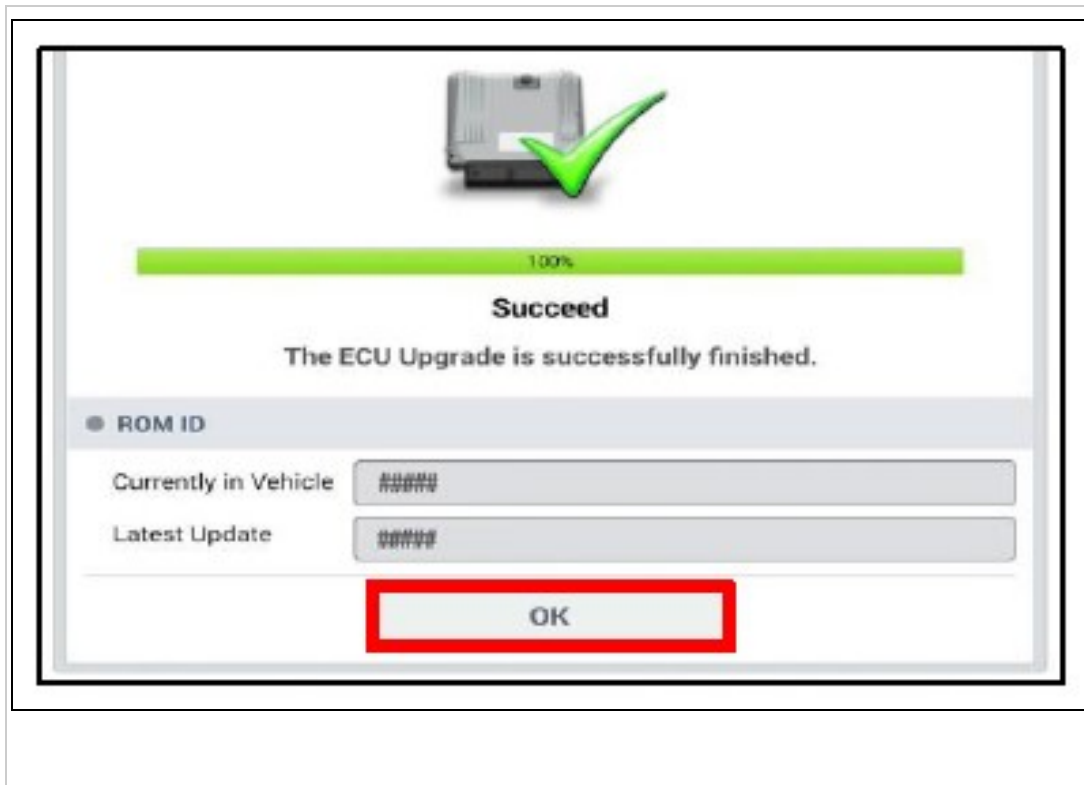
NOTE: If an error notice continues to appear or if the upgrade cannot be performed, contact Techline or GIT America Help Desk.



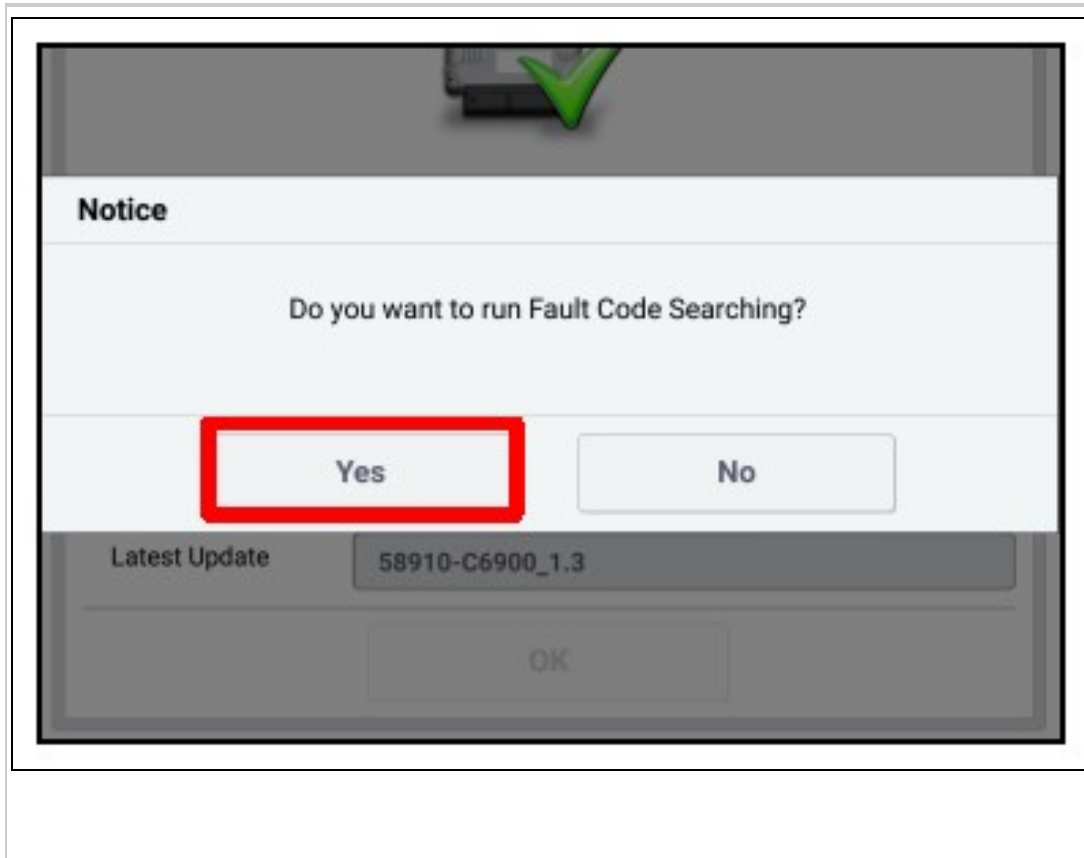
- When instructed on the KDS, turn the ignition **OFF** for ten (10) seconds then back on. Touch **OK** to continue.



- Once the upgrade is complete, touch **OK** to finalize the procedure.



- When prompted, select **YES** to check for Diagnostic Trouble Codes (DTC) and erase any DTCs stored such as EPS, ESC, and TPMS that may have been set during the upgrade.



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

MANUAL UPGRADE PROCEDURE

NOTE: *The manual upgrade should ONLY be performed if the automatic upgrade fails. If the automatic upgrade fails, turn the ignition OFF for about 10 seconds then place it back in the ON position to reset the control unit BEFORE performing manual upgrade. See table below for Manual Mode passwords.*

MANUAL MODE ECU UPGRADE PASSWORDS

Model	Menu	Password
JFa	JFA THETA 2.0TGDI 6AT ULEV -IMMO: 39108-2GTK0	0820
	JFA THETA 2.0TGDI 6AT ULEV +IMMO/SMK: 39108-2GTK5	0825

UMa	UMA 2.0TGDI AT ULEV -IMMO: 39100-2GTC2/D2	0222
	UMA 2.0TGDI AT ULEV +IMMO/SMK: 39100-2GTC7/D7	0277
	UMA 2.0TGDI AT ULEV -IMMO: 39100-2GTC1/D1	0211
	UMA 2.0TGDI AT ULEV +IMMO/SMK: 39100-2GTC6/D6	0266
	UMA 2.0TGDI AT ULEV -IMMO: 39100-2GTC0/D0	0200
	UMA 2.0TGDI AT ULEV +IMMO/SMK: 39100-2GTC5/D5	0255

1. Within the ECU Upgrade screen displayed, select **Manual Mode** .
2. Select the Engine system under the System selection menu. Select **Upgrade Event #339** or **#341** and select **Upgrade** to continue.
3. Select the appropriate control unit part number with reference to the ROM ID INFORMATION TABLE , and select **OK** .
4. Enter the appropriate password from the Manual Mode password table above and select **OK** .
5. The upgrade will begin and the progress of the upgrade will appear on the bar graph.
6. When instructed on the KDS, turn the ignition **OFF** for ten (10) seconds then back on. Touch **OK** to continue.
7. Once the upgrade is complete, touch **OK** to finalize the procedure.
8. When prompted, select **YES** to check for Diagnostic Trouble Codes (DTC) and erase any DTCs stored such as EPS, ESC, and TPMS that may have been set during the upgrade.
9. Start the engine to confirm proper operation of the vehicle.

AFFECTED VEHICLE RANGE

Model	Production Date Range
Optima (JFa) 2.0T	September 4, 2015 through April 14, 2017
Sorento (UMa) 2.0T	November 19, 2014 through May 1, 2017

REQUIRED PART

Model	Part Name	Part Number	Figure
Optima (JFa)	Air Intake Hose	28140 C1510QQK	

			
Sorento (UMa)		28140 C6420QQK	

WARRANTY INFORMATION

N Code: N99 C Code: C99

Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
JFa	V	28140 C1510	0	(SA303A) Air Intake Hose Replacement & ECU Upgrade	170A42R0	0.6 M/H	28140 C1510QQK	1
		28140 C1510		(SA303B) Air Intake Hose Replacement Only	170A44R0	0.3 M/H	28140 C1510QQK	1
UMa		28130 C5100		(SA303A) Air Intake Hose Replacement & ECU Upgrade	170A47R0	0.6 M/H	28140 C6420QQK	1
		39100 2GTC7		(SA303C) ECU Upgrade Only	170A43R0	0.3 M/H	N/A	0

NOTE: VIN inquiry data for this repair is provided for tracking purposes only. Kia retailers should reference **SA303** when accessing the WebDCS system.

