	GROUP <b>ENG</b>	MODEL <b>2016MY Sorento (UMa) 2.4L</b>
	NUMBER <b>169</b>	DATE <b>May 2017</b>
<b>TECHNICAL SERVICE BULLETIN</b>		
<b>SUBJECT:</b> COMBINATION TSB / SERVICE ACTION: SHIFT QUALITY IMPROVEMENT (SA295)		

This bulletin provides the procedure to improve the logic of the Electronic Control Unit (ECU) and the Transmission Control Unit (TCU) on some 2016MY Sorento (UMa) 2.4L vehicles, produced from October 29, 2014 through December 15, 2016, which may experience a shift quality concern, such as a harsh downshift, upshift, and/or shift delay. To correct this concern, apply the improved logic to the ECU and TCU using KDS download 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 2-3 of this bulletin. Before conducting the procedure, verify that the vehicle is included in the list of affected VINs.



Kia Diagnostic System (KDS)

### ★ 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 **SA295**.

File Under: <Engine>

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

**ECU Upgrade Procedure:**

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

Upgrade Event Name
330. UMA 16MY 2.4GDI GEAR SHIFT LOGIC IMPROVEMENT (TCU)
331. UMA 16MY 2.4GDI GEAR SHIFT LOGIC IMPROVEMENT (ECU)

**★ NOTICE**

- 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.

**★ NOTICE**

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 330 (UMa TCU)**

Model	ENG	TM	ECU P/No.	ROM ID	
				Previous	New
UMa	2.4L	A/T	39100-2GGF0 39100-2GGF5	TUM2G24NB1 TUM2G24NB0	TUM2G24NB3
			39100-2GGF1 39100-2GGF6	TUM2G24NB2	
			39100-2GGH0 39100-2GGH5	TUM4G24NB1 TUM4G24NB0	TUM4G24NB3
			39100-2GGH1 39100-2GGH6	TUM4G24NB2	

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## Upgrade Event 331 (UMa ECU)

Model	ENG	TM	IMMO	ECU P/No.	ROM ID	
					Previous	New
UMa	2.4L	AT	Yes (+) 	39100-2GGF6 39100-2GGH6	UMAFNC4ERA3A UMAFNC4ERA5A UMAFNC4ERA5B	UMAHNC4ERA6B
			No (-)	39100-2GGF1 39100-2GGH1	UMAFNC4EMA3A UMAFNC4EMA5A UMAFNC4EMA5B	UMAHNC4EMA6B

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

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.

### \* NOTICE

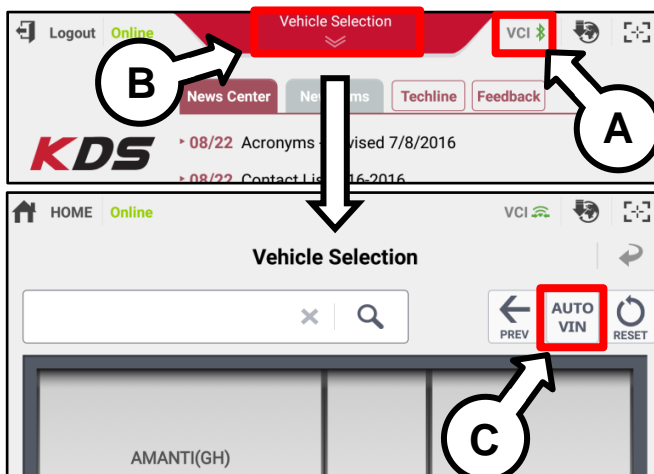
The ECU upgrade function on KDS is operating wirelessly. It is not necessary to perform the upgrade via USB cable.



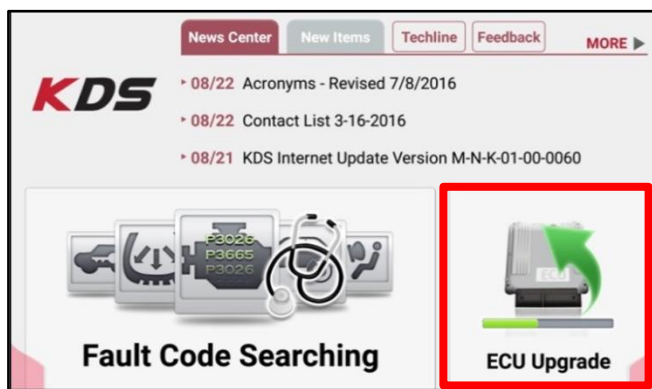
2. With the ignition ON, turn ON the KDS tablet. Select **KDS** from the home screen.



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



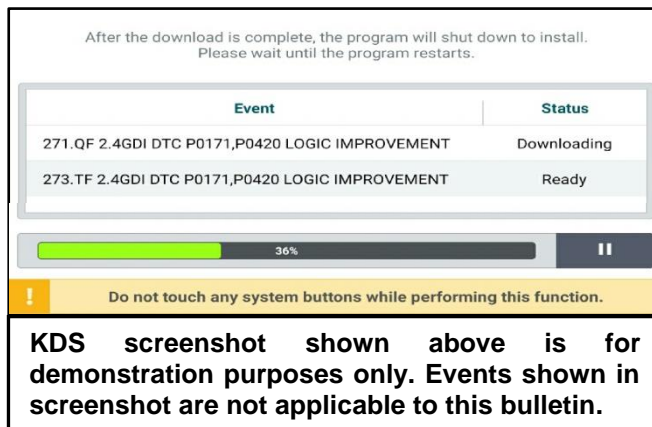
4. Select **ECU Upgrade**.



5. The KDS will check the server for recently uploaded Events and then automatically download **Upgrade Events (330 and 331)**.

### ★ NOTICE

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

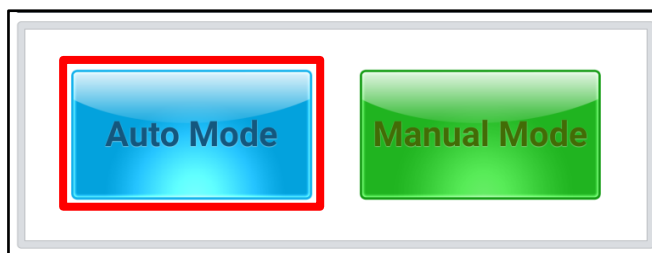


6. Select **Auto Mode**.



### CAUTION

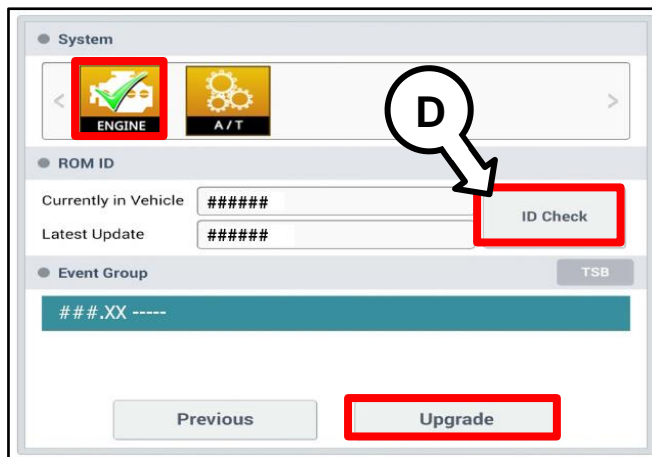
Do NOT attempt to perform a Manual Mode upgrade UNLESS Auto Mode fails. Always follow the instructions given on the KDS in either Auto or Manual mode.



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 (331)** and select **Upgrade** to continue.



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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.') while performing ECU Upgrade.

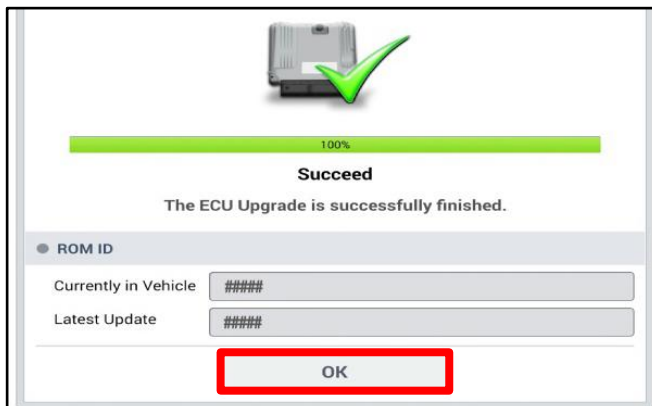
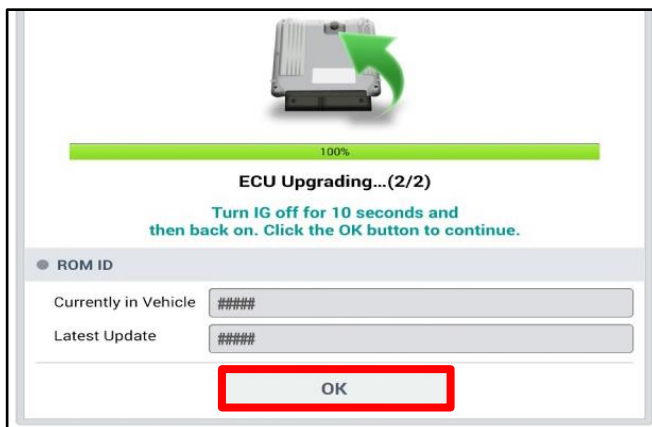
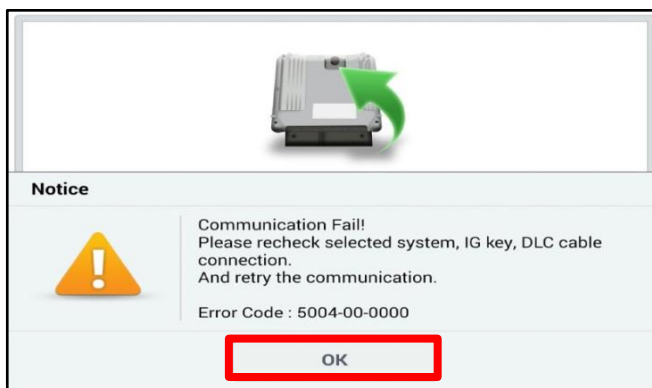
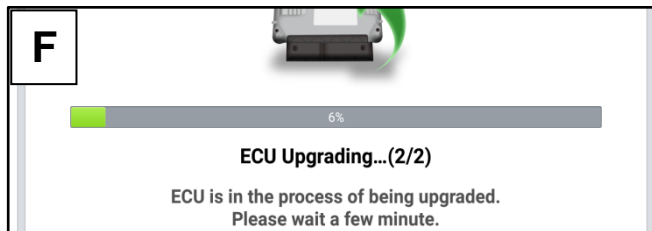
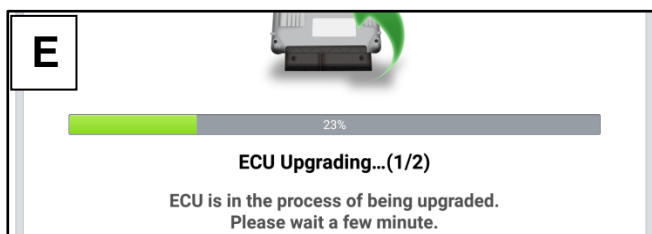
9. If a "Communication Fail" screen appears, verify that the VCI-II and KDS are communicating properly. Touch **OK** and restart the procedure from step 4.

**\* NOTICE**

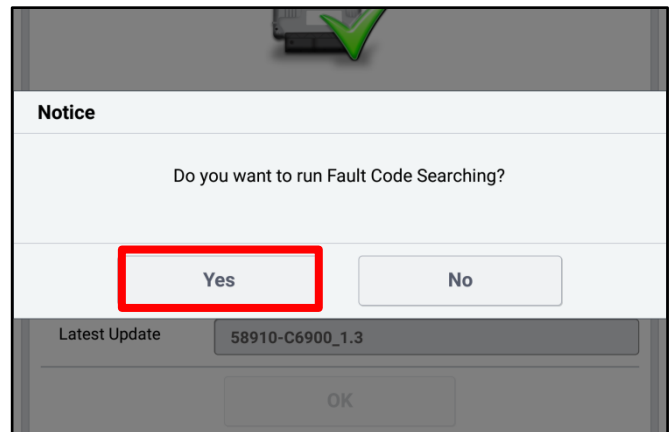
If an error notice continues to appear or if the upgrade cannot be performed, contact Techline or GIT America Help Desk.

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

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

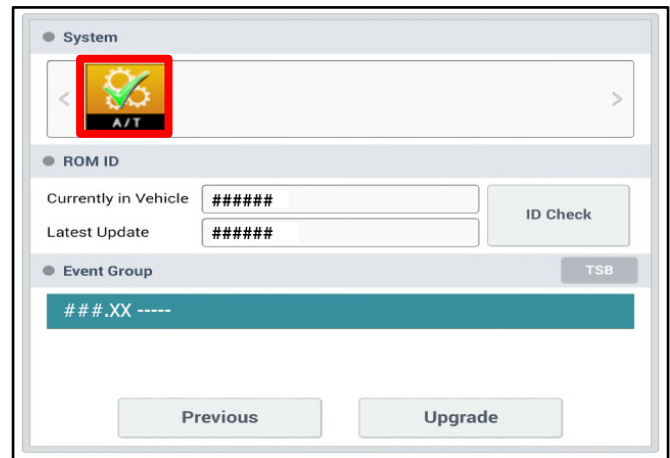


12. When prompted, select **No** for the Diagnostic Trouble Codes (DTC) check, then return to the KDS Home Page.



13. Repeat steps 4-11 and perform **Upgrade Event (330)** with the **A/T** system selected under the System selection menu.

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.



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

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## Manual Upgrade Procedure:


## ★ NOTICE

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

Event	Model	System	Menu	Password
330	UMa 2.4L	TCU	UMA 16MY 2.4GDI (TCU) : 39100-2GGF0/F1/F5/F6	<b>0028</b>
			UMA 16MY 2.4GDI (TCU) : 39100-2GGH0/H1/H5/H6	<b>0029</b>
331		ECU	UMA 16MY 2.4GDI -IMMO (ECU) : 39100-2GGF1/H1	<b>0211</b>
			UMA 16MY 2.4GDI +IMMO/SMK (ECU) : 39100-2GGF6/H6 	<b>0266</b>

1. Within the ECU Upgrade screen displayed, select **Manual Mode**, select **ENGINE**, then select **Upgrade Event (331)**.
2. Select the appropriate control unit part number with reference to the ROM ID Information Table on pages 2-3, and select **OK**.
3. Enter the appropriate password from the Manual Mode password table above and select **OK**.
4. The upgrade will begin and the progress of the upgrade will appear on the bar graph.
5. When instructed on the KDS, turn the ignition **OFF** for ten (10) seconds then back on. Touch **OK** to continue.
6. Once the upgrade is complete, touch **OK** to finalize the procedure.
7. When prompted, select **No** for the Diagnostic Trouble Codes (DTC) check, then return to the KDS Home Page.
8. Repeat steps 1-6 and perform **Upgrade Event (330)** with the **A/T** system selected under the System selection menu.
9. 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.
10. Start the engine to confirm proper operation of the vehicle.



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## AFFECTED VEHICLE RANGE:

Model	Production Date Range
Sorento (UMa)	October 29, 2014 through December 15, 2016

## 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.
UMa 2.4L	V	39100 2GTC1	0	(SA295) Shift Quality Improvement	170A15R0	0.5 M/H	N/A	0

**\* NOTICE**

VIN inquiry data for this repair is provided for tracking purposes only. Kia retailers should reference SA295 when accessing the WebDCS system.

## STANDARD WARRANTY CLAIM INFORMATION:

Use this information only to file a warranty claim for vehicles for which:

1. A customer complains of the same concern, as described on page 1.
2. The VIN does not appear on the affected vehicles list for Service Action 295.
3. The vehicle model year and production date range are as identified in this bulletin.

**N Code: D34 C Code: ZZ3**

Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
UMa 2.4L	W	39100 2GTC1	0	Shift Quality Improvement	39110FD6	0.5 M/H	N/A	0