	GROUP	MODEL
KIA	ENG	2016MY Optima (JFa) 2.4L
	NUMBER	DATE
	168 (Rev 1, 6/9/2017)	May 2017

TECHNICAL SERVICE BULLETIN

SUBJECT: COMBINATION TSB / SERVICE ACTION: IDLE STABILITY & SHIFT QUALITY IMPROVEMENT (SA294A)

★ 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 the procedure to improve the logic of the Electronic Control Unit (ECU) and the Transmission Control Unit (TCU) on some 2016MY Optima (JFa) vehicles, produced from September 3, 2015 through October 6, 2016, which may experience a vibration and/or hesitation when releasing the brake pedal after coming to stop, and/or 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.

★ NOTICE

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.

This Service Action (SA294A) supersedes SA294 and includes a new Service Action labor op code.

★ 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 <u>SA294A</u>.

File Under: <Engine>

Circulate To: ☒ **General Manager**   ☒ **Service Manager**   ☒ **Parts Manager**

☒ **Service Advisors**   ☒ **Technicians**   ☒ **Body Shop Manager**   ☒ **Fleet Repair**

SUBJECT:	IDLE STABILITY & SHIFT QUALITY IMPROVEMENT (SA294A)

ECU Upgrade Procedure:

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

Upgrade Event Name
327. JFA 16MY 2.4GDI GEAR SHIFT LOGIC IMPROVEMENT (ECU)
328. JFA 16MY 2.4GDI GEAR SHIFT LOGIC IMPROVEMENT (TCU)

✱ 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 327 (JFa ECU)

Model	ENG	TM	IMMO	ECU P/No.	ROM ID	
					Previous	New
JFa	2.4L	AT	Yes (+) 🖰	39108-2GGC5	JFAGNC4ERB0A JFAGNC4ERB0B JFAGNC4ERC0A JFAGNC4ERC3A	JFAGNC4ERD11
			No (-)	39108-2GGC0	JFAGNC4EMB0A JFAGNC4EMB0B JFAGNC4EMC0A JFAGNC4EMC3A	JFAGNC4EMD11

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Upgrade Event 327 (JFa ECU) Continued…

Model	ENG	TM	IMMO	ECU P/No.	ROM ID	
					Previous	New
JFa	2.4L	AT	Yes (+) 🗝	39108-2GGD5	JFAGNS4ERB0A JFAGNS4ERB0B JFAGNS4ERC0A JFAGNS4ERC3A	JFAGNS4ERD11
			No (-)	39108-2GGD0	JFAGNS4EMB0A JFAGNS4EMB0B JFAGNS4EMC0A JFAGNS4EMC3A	JFAGNS4EMD11

Upgrade Event 328 (JFa TCU)

Model	ENG	TM	ECU P/No.	ROM ID	
				Previous	New
JFA 16MY	2.4L	A/T	39108-2GGC0	TJF0G24NSB TJF0G24NSA TJF0G24NS0	TJF0G24NSC
			39108-2GGC5	TJF0G24NSB TJF0G24NSA TJF0G24NS0	
			39108-2GGD0	TJF0G24SSB TJF0G24SSA TJF0G24SS0	TJF0G24SSC
			39108-2GGD5	TJF0G24SSB TJF0G24SSA TJF0G24SS0	

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.
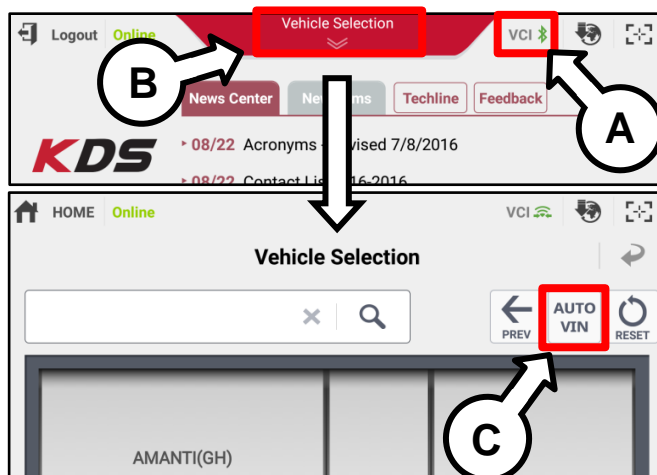
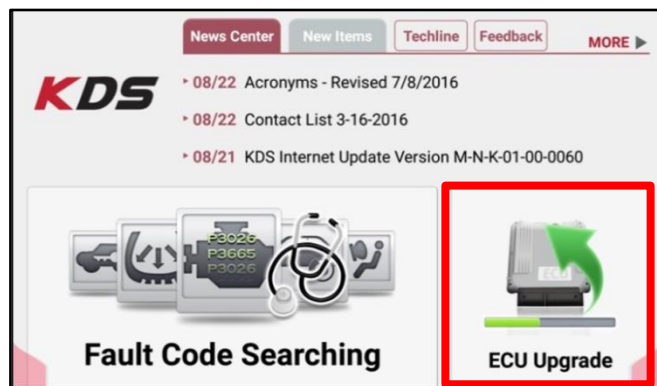**SUBJECT:** IDLE STABILITY & SHIFT QUALITY IMPROVEMENT (SA294A)

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.
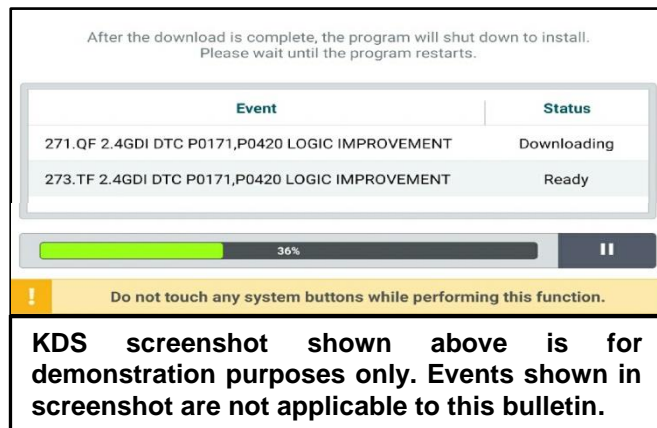
4. Select **ECU Upgrade**.

5. The KDS will check the server for recently uploaded Events and then automatically download **Upgrade Event (327 and 328).**

   ┌─────────────────────────────┐
   │ **★ NOTICE**   │
   ├─────────────────────────────┤
   │ **The vehicle must be identified in** │
   │ **Vehicle Selection to download** │
   │ **an Event for that vehicle.** │
   └─────────────────────────────┘

KDS screenshot shown above is for demonstration purposes only. Events shown in screenshot are not applicable to this bulletin.
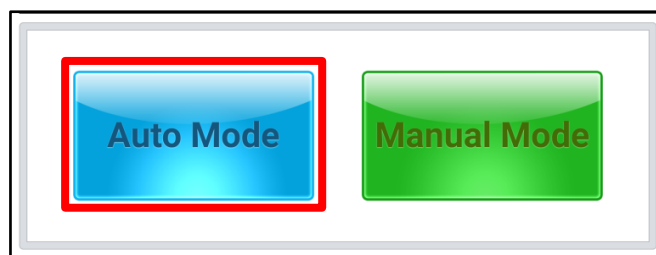
SUBJECT: IDLE STABILITY & SHIFT QUALITY IMPROVEMENT (SA294A)

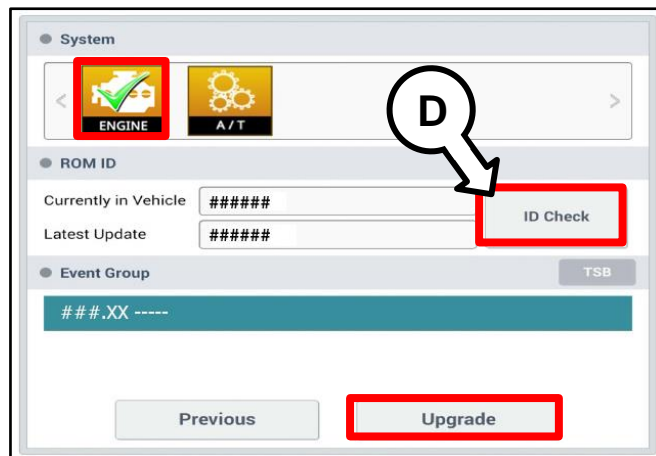6. Select **Auto Mode**.

> ⚠ **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.
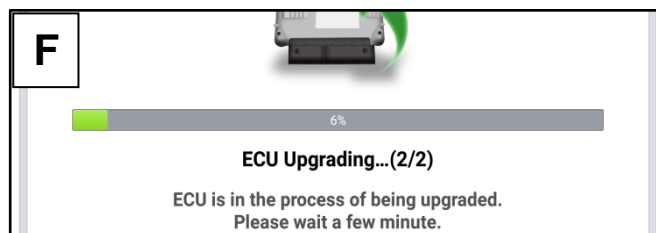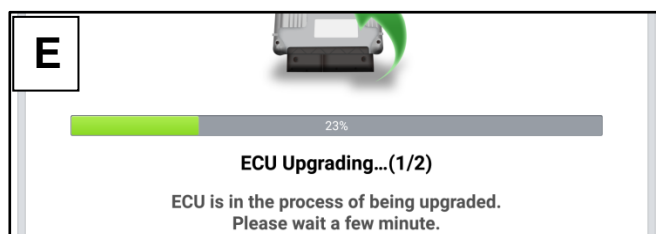
   Select **Upgrade Event (327)** and select **Upgrade** to continue.

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.
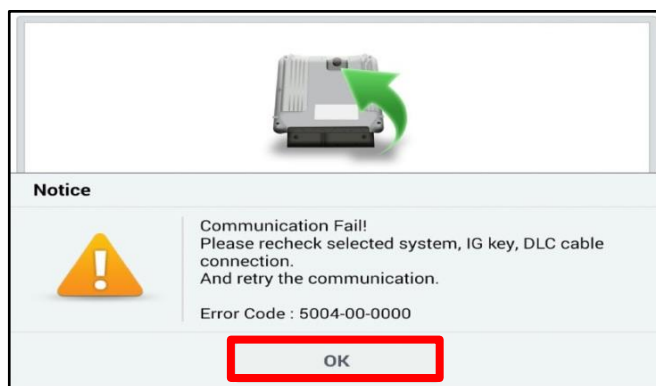
> ⚠ **CAUTION**
>
> **Do not touch the system buttons (like 'Back', 'Home', 'etc.') while performing ECU Upgrade.**

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.
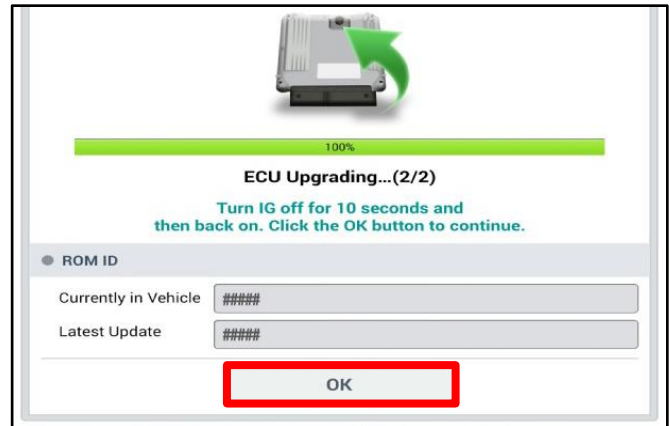
> ✱ **NOTICE**
>
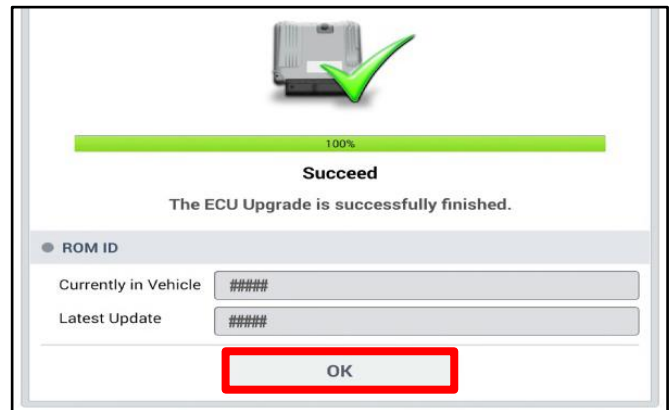> **If an error notice continues to appear or if the upgrade cannot be performed, contact Techline or GIT America Help Desk.**
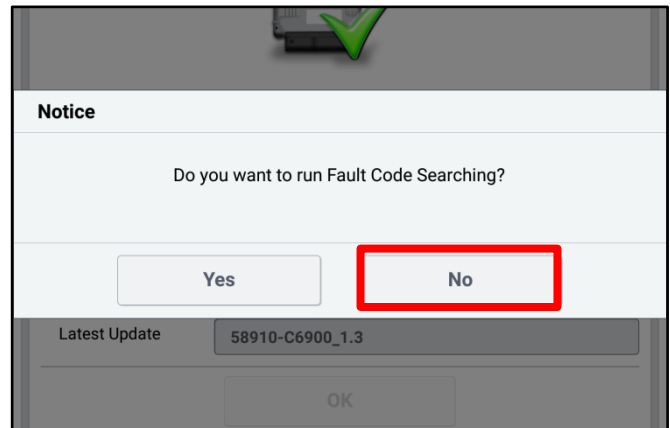
10. When instructed on the KDS, turn the ignition **OFF** for ten (10) seconds then back on. Touch **OK** to continue.

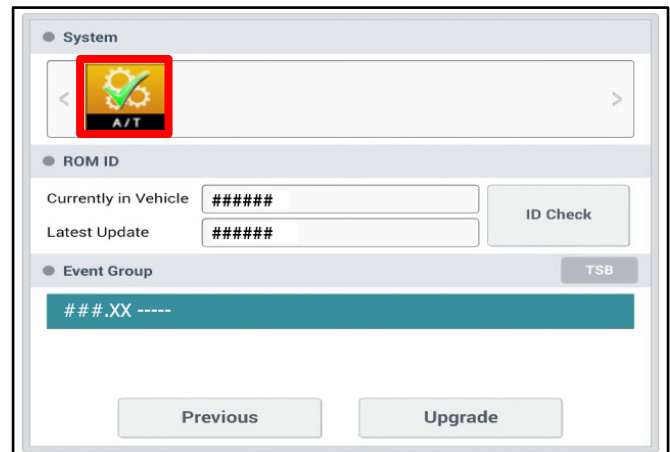11. Once the upgrade is complete, touch **OK** to finalize the procedure.

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 (328)** 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
327	JFa 2.4L	ECU	JFA 16MY 2.4 ULEV 6AT -IMMO (ECU) : 39108-2GGC0	**0820**
			JFA 16MY 2.4 ULEV 6AT +IMMO/SMK (ECU) : 39108-2GGC5 🖙	**0825**
			JFA 16MY 2.4 SULEV 6AT -IMMO (ECU) : 39108-2GGD0	**0821**
			JFA 16MY 2.4 SULEV 6AT +IMMO/SMK (ECU) : 39108-2GGD5 🖙	**0826**
328		TCU	JFA 16MY 2.4GDI (TCU) : 39108-2GGC0/C5	**8205**
			JFA 16MY 2.4GDI (TCU) : 39108-2GGD0/D5	**8206**

1. Within the ECU Upgrade screen displayed, select **Manual Mode**, select **ENGINE**, then select **Upgrade Event (327).**

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 (328)** 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
Optima (JFa) 2.4L	September 3, 2015 through October 6, 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.
JFa 2.4L	V	39108 2GTK5	0	(SA294A) Idle Stability & Shift Quality Improvement	170A36R0	0.5 M/H	N/A	0

★ NOTICE

VIN inquiry data for this repair is provided for tracking purposes only. Kia retailers should reference <u>SA294A</u> when accessing the WebDCS system.

STANDARD WARRANTY CLAIM INFORMATION:
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 294A.
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.
JFa 2.4L	W	39108 2GTK5	0	Idle Stability & Shift Quality Improvement	39110FD6	0.5 M/H	N/A	0