	GROUP	MODEL
	ENG	**2019MY Forte (BDM) w/Nu 2.0L MPI SULEV**
	NUMBER	DATE
	226	**January 2021**

TECHNICAL SERVICE BULLETIN

SUBJECT:

SERVICE ACTION: NU 2.0L MPI SULEV LOGIC IMPROVEMENT (SA462)

This bulletin provides the procedure to improve the logic of the Engine Control Module (ECM) on some 2019MY Forte (BDm) vehicles equipped with NU 2.0L MPI Atkinson SULEV engines, produced from July 3, 2018 through July 16, 2019, for the fuel system readiness software logic in order to increase diagnosis ratios. Vehicles will not experience drivability concerns related to this improvement. To correct this concern, 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 page 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 <u>SA462</u>.

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

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ECU Upgrade Procedure:

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

Upgrade Event Name
499. BDm NU 2.0MPI ATKINSON IN USE MONITORING PERFORMANCE RATIO LOGIC IMPROVEMENT

✱ NOTICE

- **A <u>fully charged battery</u> is necessary before the ECU upgrade can take place. It is recommended that a battery charger is used in ECU mode during the reflash or the use of a fully charged jump starter box connected to the battery.**
- **Ensure the KDS or GDS is sufficiently charged at 50% or higher prior to reflash.**
- **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 and model year.**

ⓘ IMPORTANT

It is recommended to ALWAYS check the Electronic Parts Catalog (EPC) to locate the ECU Part Number respective to Auto/Manual Mode ROM IDs. DO NOT reference the parts label affixed to the ECU.

✱ NOTICE

Before attempting an ECU upgrade on any Kia model, make sure to first determine whether the applicable 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 TABLE:

Upgrade Event #499

Model	EM	TM	IMMO 🚗	ECU P/No.	ROM ID	
					Previous	New
BDm (NU 2.0L MPI)	SULEV	CVT	Yes	39173 2ECD0	BD9SP2US696A BD9SP2US696B BD9SP2US696C BD9SP2US696D BD9SP2US6B1A BD9SP2US6B1B	BD9SP2US6B5A
			No	39171 2ECD0	BD9SP2AS696A BD9SP2AS696B BD9SP2AS696C BD9SP2AS696D BD9SP2AS6B1A BD9SP2AS6B1B	BD9SP2AS6B5A

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.

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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 operates wirelessly. It is not necessary to perform the upgrade via USB cable.
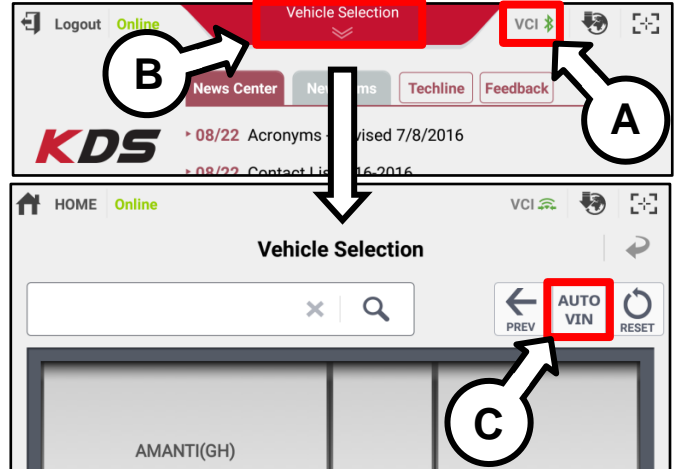
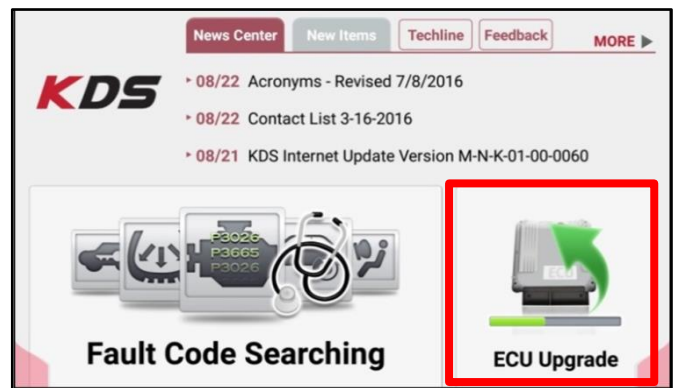2. With the ignition ON, turn ON the KDS tablet. Select **KDS** from the home screen.

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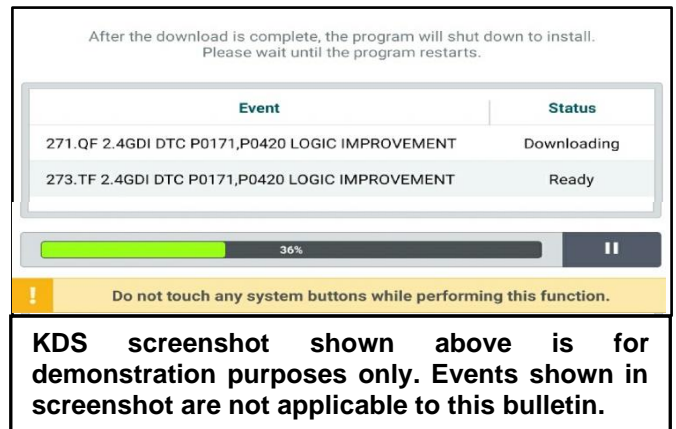| SUBJECT:	SERVICE ACTION: NU 2.0L MPI SULEV LOGIC IMPROVEMENT (SA462)

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 #499.**

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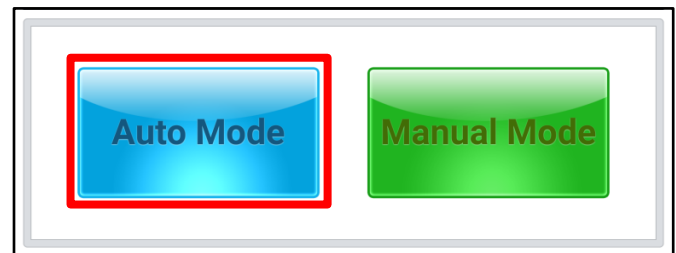
> ⚠️ **CAUTION**
>
> **Do NOT attempt to perform a Manual Mode upgrade UNLESS Auto Mode fails. Always follow the instructions given on the KDS in either Auto or Manual mode.**
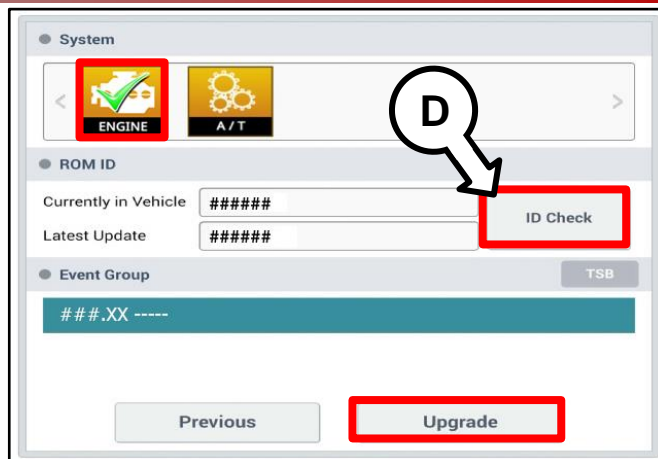
Auto Mode   Manual Mode

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

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

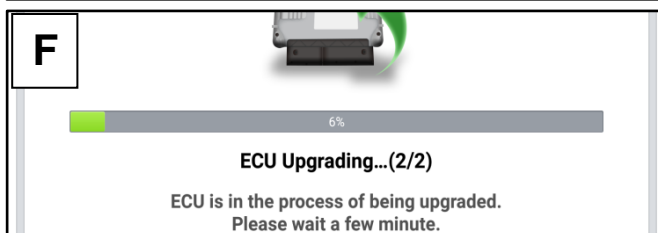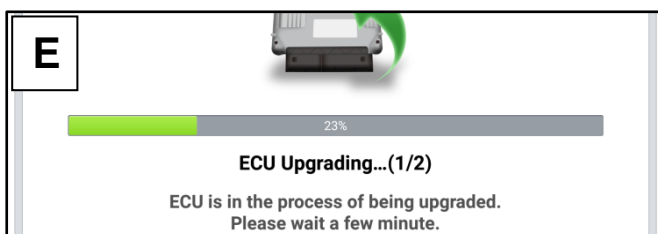   Select **Upgrade Event #499** and select **Upgrade** to continue.

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**

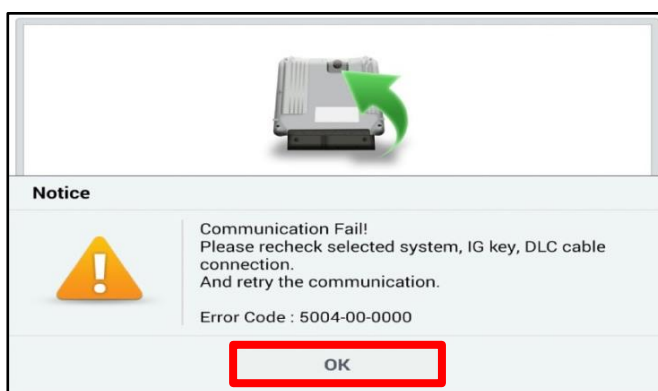   **Do not touch the system buttons (like 'Back', 'Home', 'etc.') while performing ECU Upgrade.**

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.
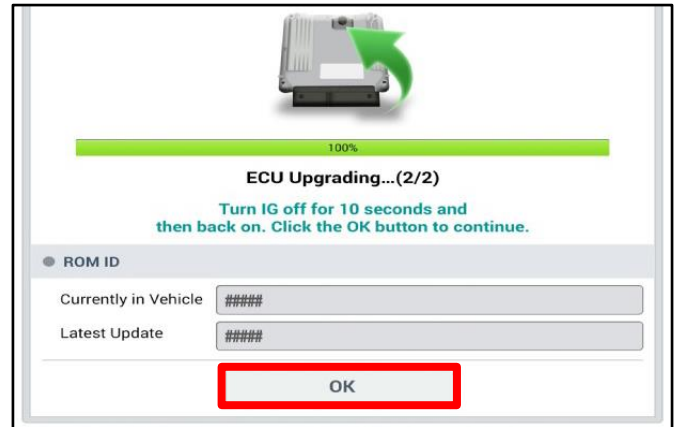
   ＊ **NOTICE**

   If an error notice continues to appear or if the upgrade cannot be performed, DO NOT disconnect the KDS/VCI-II. Contact GIT America Help Desk at (888) 542-4371 or Techline.
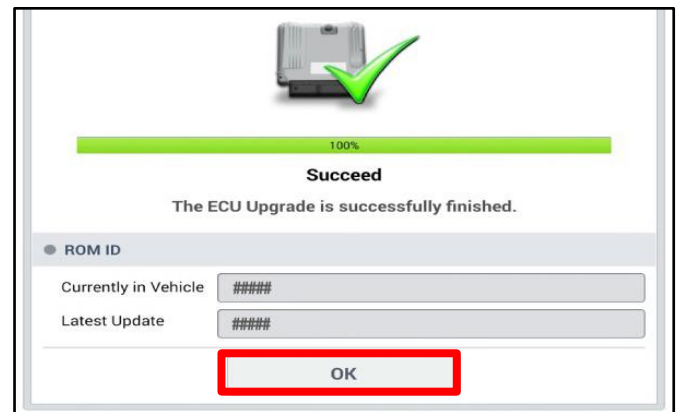

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10. When instructed on the KDS, turn the ignition **OFF** for ten (10) seconds then back on. Touch **OK** to continue.

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

12. When prompted, select **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.

13. 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

Menu	Password
BDm Nu 2.0 ATK SULEV CVT - IMMO: 39173-2ECD0	9173
BDm Nu 2.0 ATK ULEV CVT - IMMO: 39173-2ECE0	9174

1. Within the ECU Upgrade screen displayed, select **Manual Mode**.

2. Select the **Engine** system under the System selection menu. Select **Upgrade Event #499** and select **Upgrade** to continue.

3. Select the appropriate control unit part number with reference to the ROM ID Information Table on page 3 and select **OK**.

4. Enter the appropriate password from the Manual Mode password table above and select **OK**.

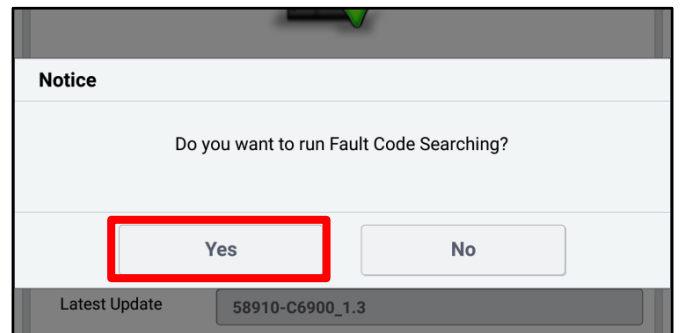5. The upgrade will begin and the progress of the upgrade will appear on the bar graph.

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.

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AFFECTED VEHICLE RANGE:

Model	Production Date Range
Forte (BDm)	July 3, 2018 to July 16, 2019

WARRANTY INFORMATION:

N Code: N99   C Code: C99

Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
V	39173 2ECD0	0	(SA462) ECM Logic Improvement	200M12R0	0.3 M/H	N/A	0

> ★ **NOTICE**
>
> **VIN inquiry data for this repair is provided for tracking purposes only. Kia retailers should reference SA462 when accessing the WebDCS system.**

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