	GROUP	MODEL
	ELE	2022MY EV6 (CV)
	NUMBER	DATE
	292	April 2023

TECHNICAL SERVICE BULLETIN

SUBJECT:

SERVICE ACTION: VCU SOFTWARE UPGRADE FOR i-PEDAL OPERATION (SA533)

This bulletin provides the procedure to update the software logic of the Vehicle Control Unit (VCU) system on certain 2022MY EV6 (CV) vehicles produced from November 17, 2021 through February 21, 2023 in order to improve the 'i-Pedal' operation logic. The regenerative braking system charges the battery when coasting or when you use the brakes to stop the vehicle. Use the paddle switches to adjust the regenerative braking level from 0 to 3 during decelerating or braking. Pull the left side paddle switch once again when the regenerative braking level is set to Level 3. The i-Pedal indicator symbol will be illuminated on the instrument cluster. The 'i-Pedal' driving feature controls the vehicle speed by the accelerator pedal, both acceleration and deceleration. In addition, some of the affected vehicles require the application of a leaflet to the owner's manual regarding operation of the Electronic Parking Brake (EPB) feature. Follow the procedure outlined in this publication to apply the improved logic to the 'VCU' system using the KDS ECU Upgrade function as described in this bulletin and if applicable, to apply the leaflet to the owner's manual. 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.

Kia Diagnostic System

📄 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 SA533.

SUBJECT: **VCU SOFTWARE UPGRADE FOR I-PEDAL OPERATION (SA533)**

ECU Upgrade Procedure:

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

Upgrade Event Name
614. CV VCU S/W UPGRADE

📄 NOTICE

- Confirm a <u>fully charged battery</u> (12.3 volts or higher is necessary) is used <u>or</u> utilize a fully charged jump starter box connected to the battery.
- Ensure the KDS GDS is sufficiently charged at 60% or higher prior to reflash.
- All ECU upgrades must be performed with the ignition set to the 'ON' position unless otherwise stated.
- Damaged VCI II units should <u>not</u> be used and promptly replaced.
- 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' <u>or</u> 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 application.

ⓘ 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.

Printed TSB copy is for reference only; information may be updated at any time. Always refer to KGIS for the latest information.

TSB: SA533 EV6 (CV) April 2023

SUBJECT:

VCU SOFTWARE UPGRADE FOR I-PEDAL OPERATION (SA533)

📄 **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.

ROM ID INFORMATION TABLE:

Upgrade Event #614

Model	System	ECU P/No.	ROM ID	
			Previous	New
CV	VCU	39751 1XCN4	CV1A N0 KB0 V200 CV1A N0 KB1 V200 CV1A N0 KB2 V200 CV1A N0 KB3 V200 CV1A N0 KD2 V200 CV1A N0 KD3 V400	CV1A N0 KB4 V200
		39751 1XCN1	CV1A N0 SB0 V400 CV1A N0 SB1 V400 CV1A N0 SB2 V400 CV1A N0 SB3 V400 CV1A N0 SD2 V400 CV1A N0 SD3 V400	CV1A N0 SB4 V400

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.

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VCU SOFTWARE UPGRADE FOR I-PEDAL OPERATION (SA533)

📄 **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 operates wirelessly. It is not necessary to perform the upgrade via USB cable.
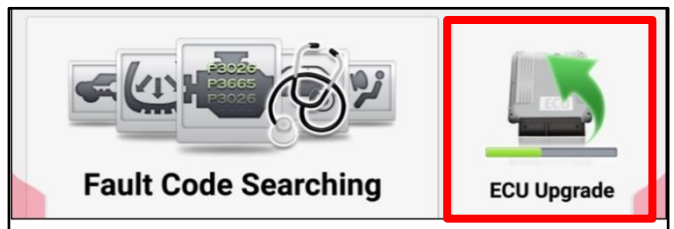

2. With the ignition **ON**, turn ON the KDS tablet. Select **'KDS'** from the home screen.

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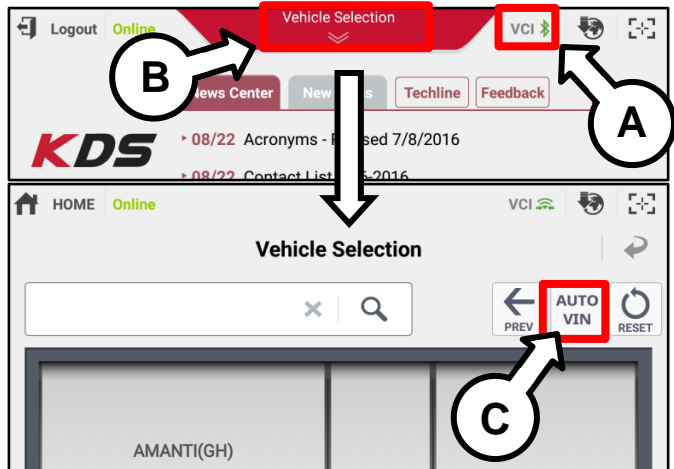
4. Select **'ECU Upgrade'**.

5. The KDS will check the server for recently uploaded Events and then automatically download **Upgrade Event #614. CV VCU S/W UPGRADE.**

📄 **NOTICE**

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

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

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

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
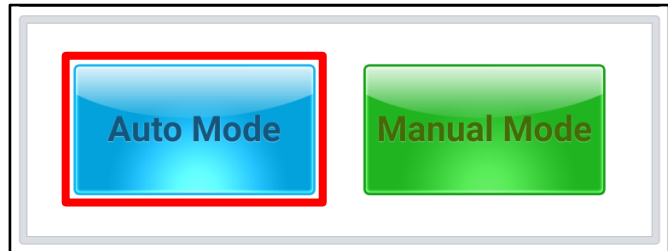
7. Select the 'VCU' system(s) under the System selection menu.

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

Select **Upgrade Event #614. CV VCU S/W UPGRADE** and select **Upgrade** to continue.

System — VCU

ROM ID
Currently in Vehicle ######
Latest Update ######   ID Check
Event Group   TSB
###.XX -----

Previous   Upgrade

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.

E 23% ECU Upgrading...(1/2) ECU is in the process of being upgraded. Please wait a few minute.
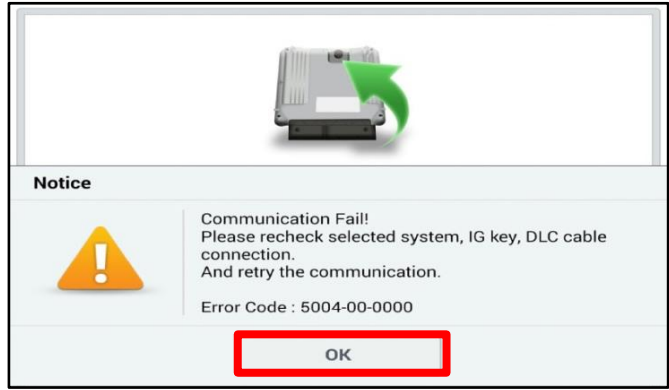
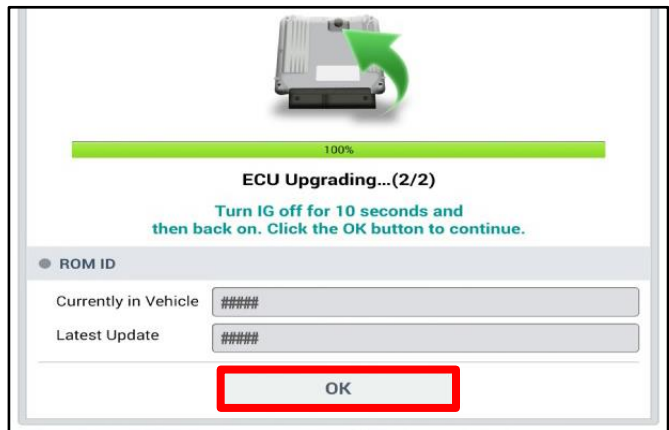**F** 6% ECU Upgrading...(2/2) ECU is in the process of being upgraded. Please wait a few minute.

9. If a "Communication Fail" screen appears, verify that the VCI-II and KDS are communicating properly. Select **'OK'** and restart the from step 4.
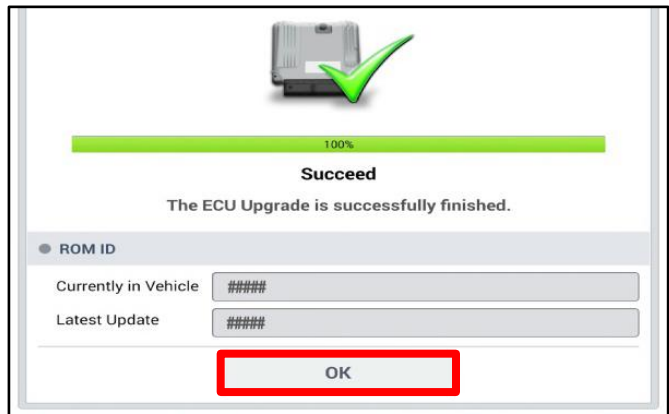
> 📄 **NOTICE**
>
> **If an error notice continues to appear or if the upgrade cannot be performed, DO NOT disconnect the KDS/VCI-II. Contact GIT America Help Desk at (888) 542-4371 or Techline.**

Notice

Communication Fail!
Please recheck selected system, IG key, DLC cable connection.
And retry the communication.

Error Code : 5004-00-0000

OK

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

100%

ECU Upgrading...(2/2)

Turn IG off for 10 seconds and then back on. Click the OK button to continue.

● ROM ID

Currently in Vehicle | ####
Latest Update | ####

OK

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

100%

Succeed

The ECU Upgrade is successfully finished.

● ROM ID

Currently in Vehicle | ####
Latest Update | ####

OK

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.

Notice

Do you want to run Fault Code Searching?

Yes | No
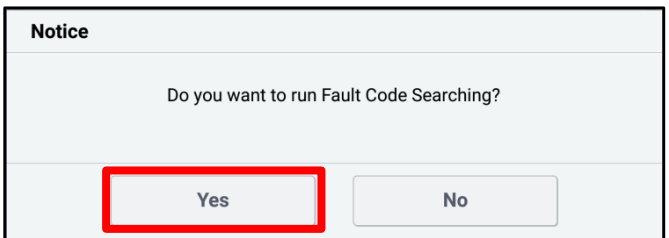
13. Start the engine to confirm normal operation of the vehicle.

14. Verify HVAC units are displayed in '**℉**', not '**℃**'. If needed, change unit in 'General Settings'.

SUBJECT:	VCU SOFTWARE UPGRADE FOR I-PEDAL OPERATION (SA533)

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
CV VCU: 39751-1XCN4	5114
CV VCU: 39751-1XCN1	5111

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

2. Select the **VCU** system under the System selection menu. Select **Upgrade Event #614** 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**.

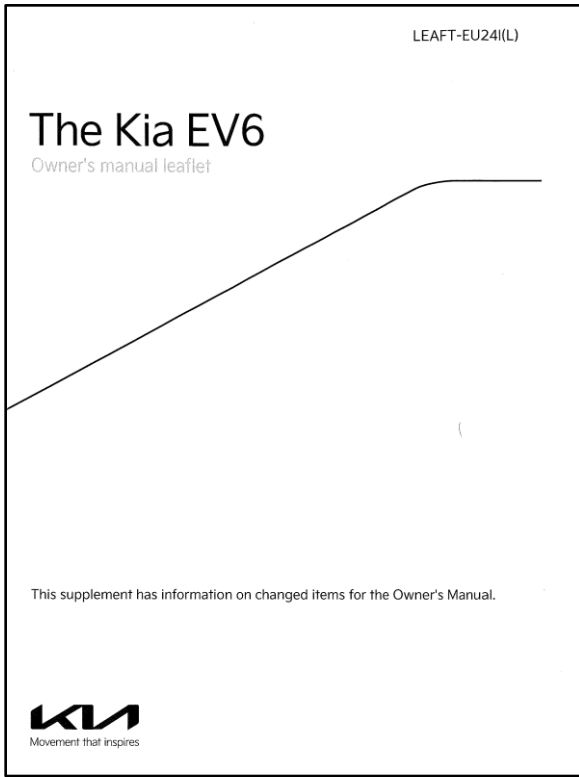5. The upgrade will begin and the progress of the upgrade will appear on the bar graph.

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

7. Once the upgrade is complete, select **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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SUBJECT: VCU SOFTWARE UPGRADE FOR I-PEDAL OPERATION (SA533)
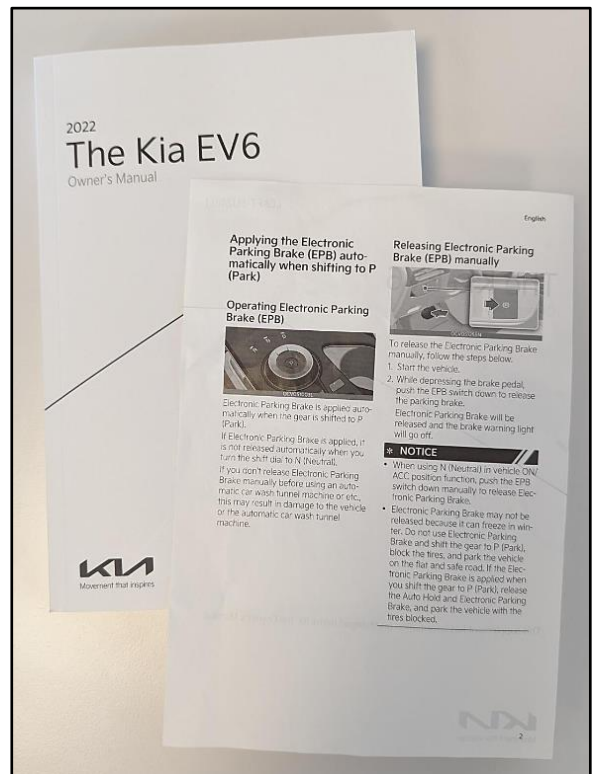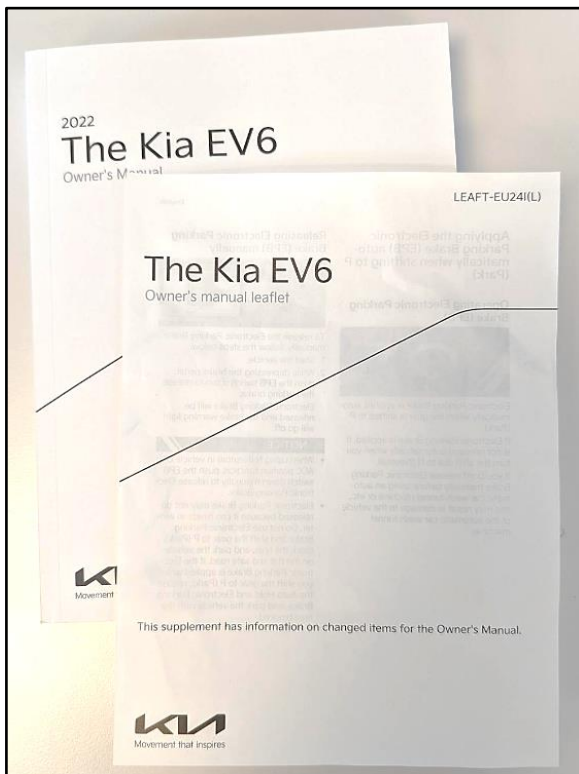
Leaflet Application Instructions:

Insert the leaftlet 'LEAFT-EU24I(L)' shown below with the owner's manual in the glove box.

LEAFT-EU24I(L)

The Kia EV6
Owner's manual leaflet

This supplement has information on changed items for the Owner's Manual.

KIA
Movement that inspires

English

Applying the Electronic Parking Brake (EPB) automatically when shifting to P (Park)

Operating Electronic Parking Brake (EPB)

OCV051003L

Electronic Parking Brake is applied automatically when the gear is shifted to P (Park).

If Electronic Parking Brake is applied, it is not released automatically when you turn the shift dial to N (Neutral).

If you don't release Electronic Parking Brake manually before using an automatic car wash tunnel machine or etc., this may result in damage to the vehicle or the automatic car wash tunnel machine.

Releasing Electronic Parking Brake (EPB) manually

OCV051255N

To release the Electronic Parking Brake manually, follow the steps below.
1. Start the vehicle.
2. While depressing the brake pedal, push the EPB switch down to release the parking brake.
   Electronic Parking Brake will be released and the brake warning light will go off.

✳ **NOTICE**
- When using N (Neutral) in vehicle ON/ACC position function, push the EPB switch down manually to release Electronic Parking Brake.
- Electronic Parking Brake may not be released because it can freeze in winter. Do not use Electronic Parking Brake and shift the gear to P (Park), block the tires, and park the vehicle on the flat and safe road. If the Electronic Parking Brake is applied when you shift the gear to P (Park), release the Auto Hold and Electronic Parking Brake, and park the vehicle with the tires blocked.

Front Side

Back Side

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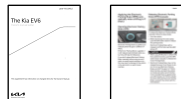
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KIA

VCU SOFTWARE UPGRADE FOR I-PEDAL OPERATION (SA533)

SUBJECT:

AFFECTED VEHICLE RANGE:

Model	Production Date Range
EV6 (CV)	November 17, 2021 to February 21, 2023

REQUIRED TOOL:

Tool Name	Figure	Comments
KDS		Kia Diagnostic System

REQUIRED PART:

Part Name	Part Number	Figure	Qty.
Leaflet	LEAFT EU24IQQK		1 (Double Sided)

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	LEAFT EU24IQQK	0	(SA533A) VCU Software Upgrade +Leaflet	230018R0	0.7 M/H	LEAFT EU24IQQK	1
			(SA533B) VCU Software Upgrade	230018R1	0.7 M/H	N/A	0

> 📄 **NOTICE**
>
> **VIN inquiry data for this repair is provided for tracking purposes only. Kia retailers should reference SA533 when accessing the WebDCS system.**

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TSB: SA533 EV6 (CV) April 2023