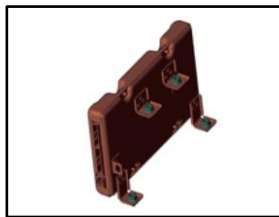|	GROUP	MODEL
![Kia logo]	ELE	2023-2024MY Niro HEV (SG2 HEV) and 2023-2024MY Sportage HEV (NQ5 HEV)
	NUMBER	DATE
	318	November 2023

TECHNICAL SERVICE BULLETIN

SUBJECT:

SERVICE ACTION: BMS SOFTWARE LOGIC IMPROVEMENT FOR DTC P1BB2 (SA553)

This bulletin provides information to upgrade the Battery Management System (BMS) software logic on certain 2023-2024MY Niro HEV (SG2 HEV) vehicles produced from June 21, 2022 through February 6, 2023, and 2023-2024MY Sportage HEV (NQ5 HEV) vehicles produced from February 15, 2022 to October 28, 2023, which may exhibit a "Check Hybrid System" message displayed on the instrument cluster with DTC P1BB2 stored. This condition may occur when the vehicle is exposed to high heat/hot weather environments. Follow the procedure outlined in this publication to upgrade the BMS software judgement and improve the 12V charging logic for DTC P1BB2 to correct this concern on the applicable vehicle. Before conducting the procedure, verify that the vehicle is included in the list of affected VINs.

DTC Description:
P1BB2 - 12V Lithium Battery Cell Voltage High

> 📄 **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 KDealer+ (Service → Warranty Coverage → Warranty Coverage Inquiry → Campaign Information). Not completed Recall / Service Action reports are available on KDealer+ (Consumer Affairs → Not Completed Recall → Recall VIN → Select Report), which includes a list of affected vehicles.**
>
> **This issue number is SA553.**

SUBJECT: SERVICE ACTION: BMS S/W LOGIC IMPROVEMENT FOR DTC P1BB2 (SA553)

ECU Upgrade Procedure:

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

Upgrade Event Name
698.SG2 HEV BMS DTC Judgment Logic Improvement (P1BB2)
700.NQ5 HEV BMS DTC Judgment Logic Improvement (P1BB2)

> 📄 **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: SA553 Niro HEV (SG2 HEV), Sportage HEV (NQ5 HEV) November 2023

SUBJECT: SERVICE ACTION: BMS S/W LOGIC IMPROVEMENT FOR DTC P1BB2 (SA553)

📄 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 #698 (Niro HEV) <u>or</u> #700 (Sportage HEV)

Model	System	Type	IMMO 🚗	ECU P/No.	ROM ID Previous	ROM ID New
SG2 HEV	BMS	12V Lithium Battery	Yes	37513 AT000	6000	6020
NQ5 HEV				37513 CH000	6100	6120

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.

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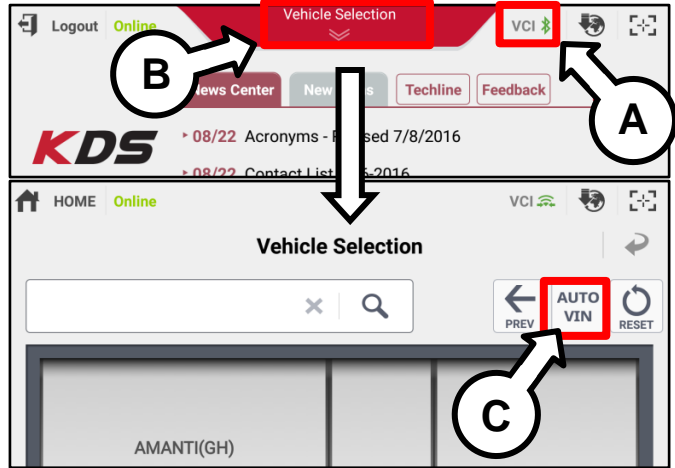
📄 NOTICE

The ECU upgrade function on KDS operates wirelessly. It is not necessary to perform the upgrade via USB cable.
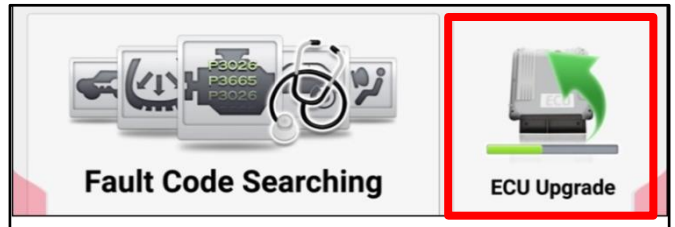
SUBJECT: SERVICE ACTION: BMS S/W LOGIC IMPROVEMENT FOR DTC P1BB2 (SA553)

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 #698 (Niro HEV) or #700 (Sportage HEV)**.

   📄 **NOTICE**

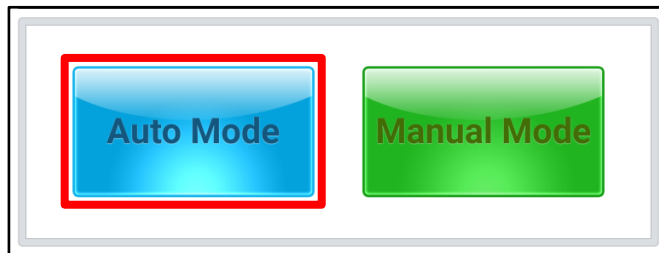   **The vehicle must be identified in Vehicle Selection to download an Event for that vehicle.**

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

SUBJECT: SERVICE ACTION: BMS S/W LOGIC IMPROVEMENT FOR DTC P1BB2 (SA553)

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.**
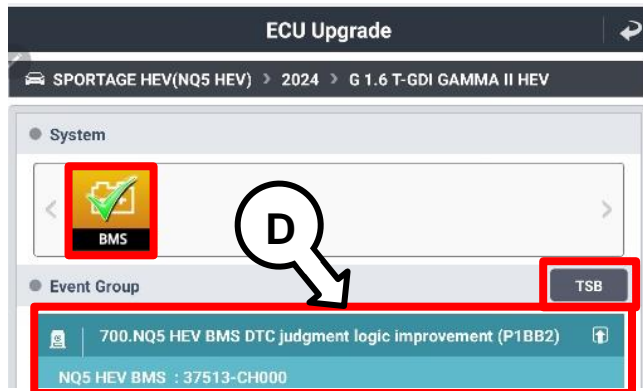

7. Select **'BMS'** system and applicable **'Event Group'** (D) for the vehicle:

   Niro HEV: 698.SG2 HEV BMS DTC Judgment Logic Improvement (P1BB2)
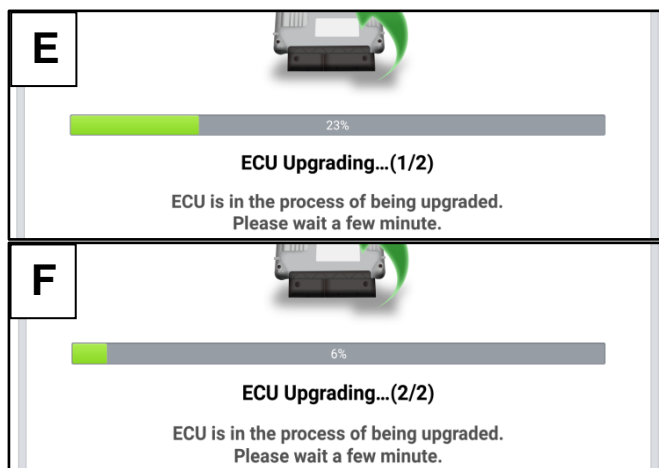   or
   Sportage HEV: 700.NQ5 HEV BMS DTC Judgment Logic Improvement (P1BB2)

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-ll. Upgrade part (2/2) (F) will upgrade the ECU.
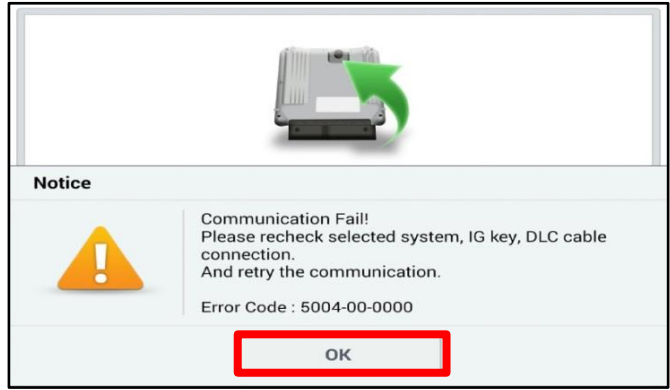
> ⚠️ **CAUTION**
>
> **Do not touch the system buttons (like 'Back', 'Home', 'etc.') while performing ECU Upgrade.**

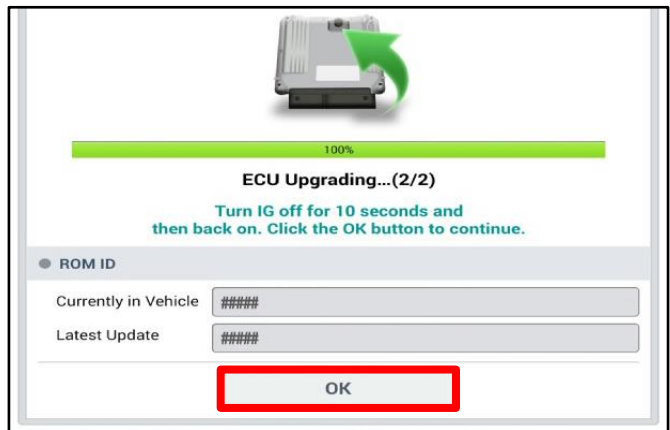**SUBJECT:** SERVICE ACTION: BMS S/W LOGIC IMPROVEMENT FOR DTC P1BB2 (SA553)

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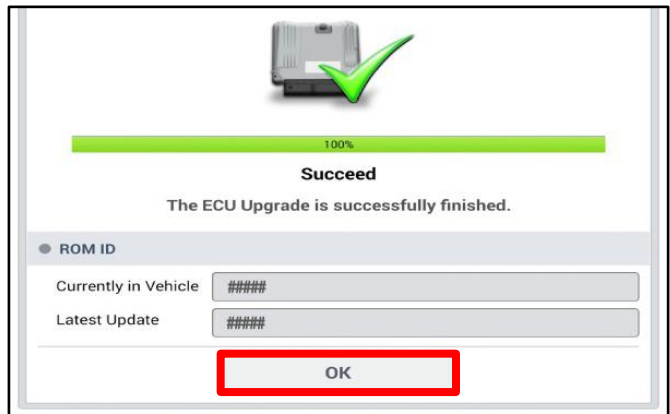
> 📄 **NOTICE**
>
> **If an error notice continues to appear or if the upgrade cannot be performed, DO NOT disconnect the KDS/VCI-II. Contact GIT America Help Desk at (888) 542-4371 or Techline.**
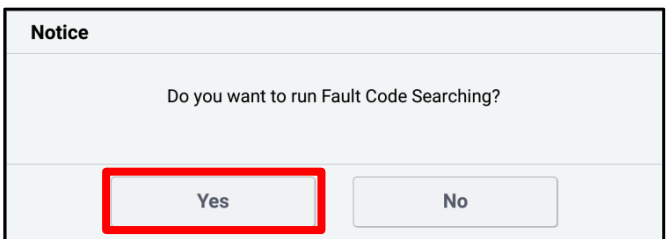
Notice

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.

SUBJECT: SERVICE ACTION: BMS S/W LOGIC IMPROVEMENT FOR DTC P1BB2 (SA553)

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
SG2 HEV BMS: 37513-AT000	3157
NQ5 HEV BMS: 37513-CH000	4540

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

2. Select the **'BMS'** system under the System selection menu. Select **Upgrade Event #698 (SG2 HEV)** or **#700 (NQ5 HEV)** 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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TSB: SA553 Niro HEV (SG2 HEV), Sportage HEV (NQ5 HEV) November 2023

SUBJECT: SERVICE ACTION: BMS S/W LOGIC IMPROVEMENT FOR DTC P1BB2 (SA553)

AFFECTED VEHICLE RANGE:

Model	Production Date Range
Niro HEV (SG2 HEV)	June 21, 2022 to February 6, 2023
Sportage HEV (NQ5 HEV)	February 15, 2022 to October 28, 2023

REQUIRED TOOL:

Tool Name	Figure	Comments
KDS		Kia Diagnostic System

WARRANTY INFORMATION:

N Code: I3A   C Code: ZZ3

Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
NQ5 HEV	V	37513 CH000	0	(SA553) BMS Software Logic Upgrade	230117R0	0.3 M/H	N/A	0
SG2 HEV		37513 AT000			230117R1			

> 📄 **NOTICE**
>
> **VIN inquiry data for this repair is provided for tracking purposes only. Kia retailers should reference SA553 when accessing the KDealer+ system.**