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|-------------------------|--------------------|
| GROUP | MODEL |
| ELE | 2022MY EV6 (CV) |
| NUMBER | DATE |
| 291 (Rev 1, 06/15/2023) | April 2023 |

TECHNICAL SERVICE BULLETIN

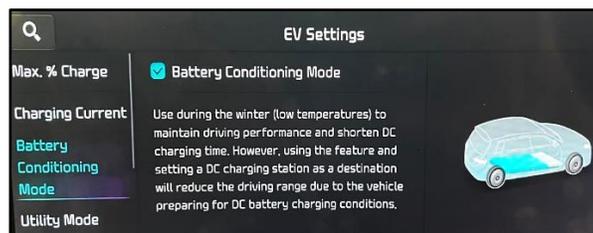
SUBJECT: **BMS UPGRADE FOR BATTERY CONDITIONING MODE**

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 install the Battery Conditioning Mode function on some 2022MY EV6 (CV) vehicles produced from November 17, 2021 through October 21, 2022 by updating the software logic of the Battery Management System (BMS). This procedure should only be performed if specifically requested by the customer and should be clearly documented on the RO that it is being performed “per customer request.” The battery conditioning mode will optimize the Direct Current (DC) charging performance of the electric vehicle (EV) battery in low outdoor temperatures, by allowing the EV battery to preheat prior to arriving at a DC charger site. The software requires that the owner selects a DC charger site as a point of interest (POI) via the vehicle’s navigation system to enable the battery conditioning heating when EV battery temperature is below 68°F. Battery heating impact on DC charging may vary depending on initial EV battery temperature and the estimated time to arrive at the POI. It may be possible to enable battery conditioning mode for a longer time prior to departure, as it can help to achieve the longer battery heating time needed in very low temperatures. Enabling the battery conditioning mode will use battery power and temporarily reduce the driving range until the vehicle is charged. Follow the procedure outlined in this publication to apply the improved logic to the ‘BMS’ system using the KDS ECU Upgrade function as described in this bulletin. Some 2022MY vehicles may already have the software installed. 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.

Note: If the software is installed and ‘Winter Mode’ is displayed under ‘EV Settings’, confirm that [ELE292/SA533](#) has been completed **and** that the latest ‘MapCare’ version is updated on the vehicle by referring to [ELE208](#) for the ‘Battery Condition Mode’ to become available.



A printed copy is for reference only; publication information can be updated at any time. Always refer to KGIS for the latest information. After logging in kdealer.com, the newest technical publications are listed in ‘Service Releases’ and has the latest service information that has been released.

ECU Upgrade Procedure:

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

Upgrade Event Name**657. CV BMS UPGRADE FOR BATTERY CONDITIONING FUNCTION****NOTICE**

- Confirm a fully charged battery (12.3 volts or higher is necessary) is used or 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 not 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' 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 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.

SUBJECT:

BMS UPGRADE FOR BATTERY CONDITIONING MODE**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 #657

| Model | System | ECU P/No. | ROM ID | |
|-------|--------|-------------|--------------|------|
| | | | Previous | New |
| CV | BMS | 375A0 CV150 | 5100 5200 | 5500 |
| | | 375A0 CV050 | 5108 5208 | 5508 |

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

The customer must request in the opening RO that the 'Battery Conditioning Mode' software be installed. Failure to follow the procedure outlined in this bulletin can result in a warranty claim chargeback for unnecessary software upgrade if the 'new' ROM ID is already installed on the vehicle. **Refer to the table above.**

If the software was previously installed and 'Winter Mode' is displayed under 'EV Settings', confirm that [ELE292/SA533](#) has been completed and that the latest 'MapCare' version is updated on the vehicle by referring to [ELE208](#) for the 'Battery Condition Mode' to become available.



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

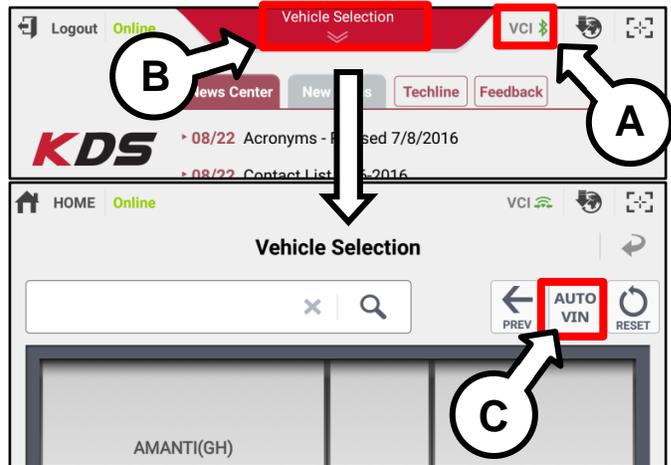
The ECU upgrade function on KDS operates wirelessly. It is not necessary to perform the upgrade via USB cable.



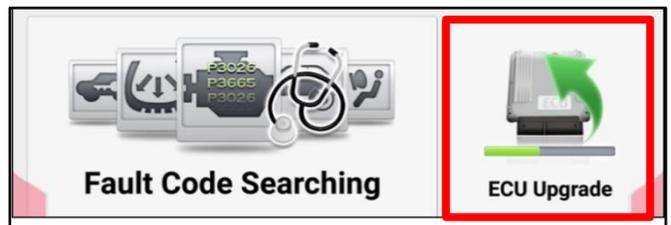
2. With the ignition ON, turn ON the KDS tablet. Select 'KDS' from the home screen.



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



4. Select 'ECU Upgrade'.



SUBJECT:

BMS UPGRADE FOR BATTERY CONDITIONING MODE

- The KDS will check the server for recently uploaded Events and then automatically download Upgrade Event #657. CV BMS UPGRADE FOR BATTERY CONDITIONING FUNCTION.

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.

- 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.

- Select the 'BMS' system under the System selection menu.

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

Select Upgrade Event #657 and select Upgrade to continue.

- 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

ECU Upgrading...(1/2)
ECU is in the process of being upgraded. Please wait a few minute.

F

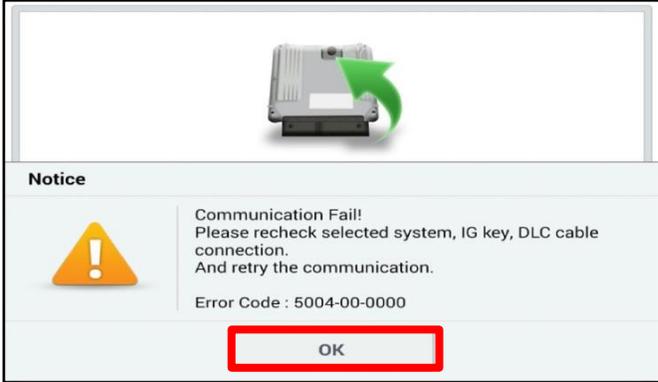
ECU Upgrading...(2/2)
ECU is in the process of being upgraded. Please wait a few minute.

SUBJECT: **BMS UPGRADE FOR BATTERY CONDITIONING MODE**

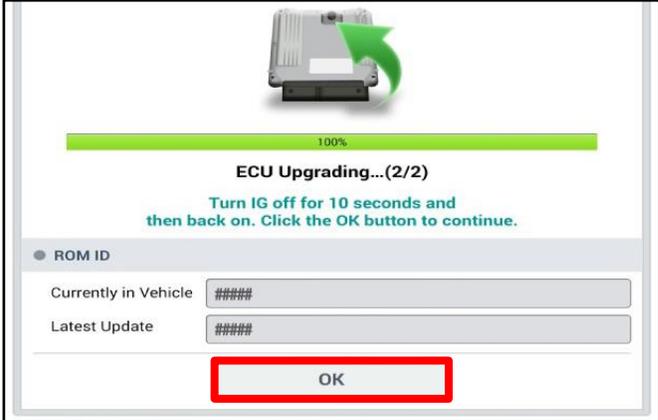
- If a "Communication Fail" screen appears, verify that the VCI-II and KDS are communicating properly. Select 'OK' and restart the from step 4.

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.



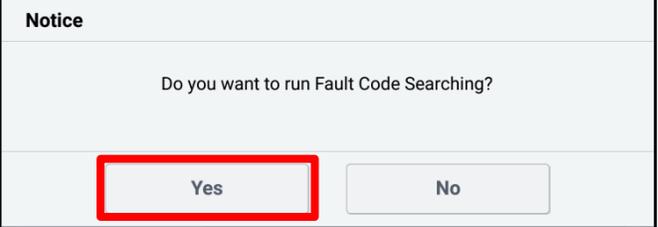
- When instructed on the KDS, turn the ignition OFF for ten (10) seconds then back on. Select 'OK' to continue.



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



- 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.



- Start the engine to confirm normal operation of the vehicle.



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 BMS: 375AO-CV150 | 7100 |
| CV BMS: 375AO-CV050 | 7008 |

1. Within the ECU Upgrade screen displayed, select **Manual Mode**.
2. Select the **BMS** system under the System selection menu. Select **Upgrade Event #657** 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.

SUBJECT:

BMS UPGRADE FOR BATTERY CONDITIONING MODE**AFFECTED VEHICLE RANGE:**

| Model | Production Date Range |
|----------|---------------------------------------|
| EV6 (CV) | November 17, 2021 to October 21, 2022 |

REQUIRED TOOL:

| Tool Name | Figure | Comments |
|-----------|---|-----------------------|
| KDS |  | Kia Diagnostic System |

WARRANTY INFORMATION:**N Code: I3N C Code: ZZ3**

| Claim Type | Causal P/N | Qty. | Repair Description | Labor Op Code | Op Time | Replacement P/N | Qty. |
|------------|-------------|------|---|---------------|------------|-----------------|------|
| G | 375A0 CV150 | 0 | CV BMS Software Logic Improvement | J23750F0 | 0.3 M/H | N/A | 0 |

Note: Note: All claims will be routed to DPSMs for approval. Goodwill warranty code G60 is to be used if the vehicle is within (5 years/60,000 miles) basic warranty. Goodwill warranty code G99 is to be used if the vehicle has exceeded (5 years/60,000 miles) basic warranty.