



GROUP
ELE

MODEL
**2015-2017MY
Soul EV (PSEV)**

NUMBER
155 (Rev 1, 07/16/2020)

DATE
December 2018

TECHNICAL SERVICE BULLETIN

BMS LOGIC IMPROVEMENT AFTER REPLACEMENT OF BATTERY PACK OR BMS

This bulletin provides the procedure to improve the logic of the Battery Management System (BMS) on some 2015-2017MY Soul EV (PSEV) vehicles, produced from July 15, 2014 through July 4, 2017. After replacement of the battery pack or BMS, the existing logic of the BMS may require an update based on the installed part numbers (Refer to the table below). Follow the procedure in this bulletin to apply the improved logic to the BMS using the KDS ECU Upgrade function. 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 2 of this bulletin.

Repair Scenarios		BMS Reflash Y/N?
New Battery Pack	Old BMS (ROM ID older version)	Yes
New Battery Pack	New BMS	Yes
Old Battery Pack (Previously Replaced)	New BMS	Yes
Old Battery Pack	New BMS	No
New Battery Pack	Old BMS (Previously Replaced)	No



Kia Diagnostic System (KDS)

* NOTICE

After completing BMS logic improvement, it may be required to also upgrade the Full Auto Temperature Control (FATC) system. Verify if FATC upgrade is available and upgrade to the latest version.

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

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

379.PS EV BATTERY PACK REPLACEMENT AND BMS UPGRADE AFTER REPLACEMENT

★ 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

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.

ROM ID INFORMATION TABLE:

Upgrade Event #379

Model	System	BMS Part No.	Previous		New	
			<u>HV Battery</u> Part No.	ROM ID	<u>HV Battery</u> Part No.	ROM ID
PSEV	BMS	37513-E4050	37510-E4050	4440, 4460, 4480, 4500, 4800, 4900, 5000, 5100, 5300, 5400, 5500	37510-E4250	5720
		37513-E4000	37510-E4000	4442, 4462, 4482, 4502, 4802, 4902, 5002, 5102, 5302, 5402, 5502	37510-E4200	5722

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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* 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

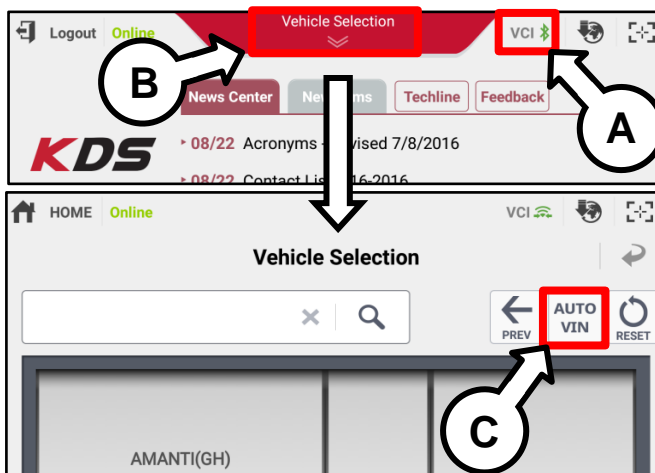
The ECU upgrade function on KDS operates wirelessly. It is not necessary to perform the upgrade via USB cable.



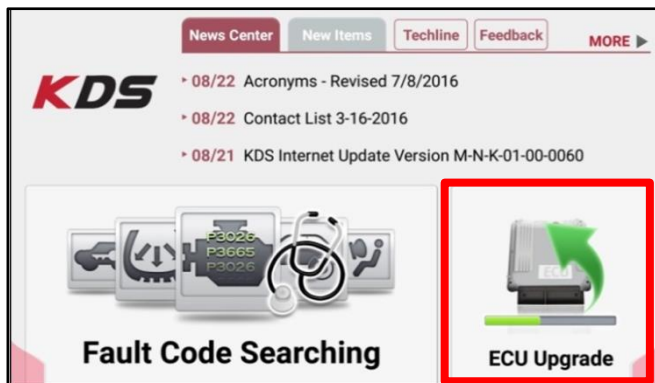
2. With the ignition ON, turn ON the KDS tablet. Select **KDS** from the home screen.



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



4. Select **ECU Upgrade**.



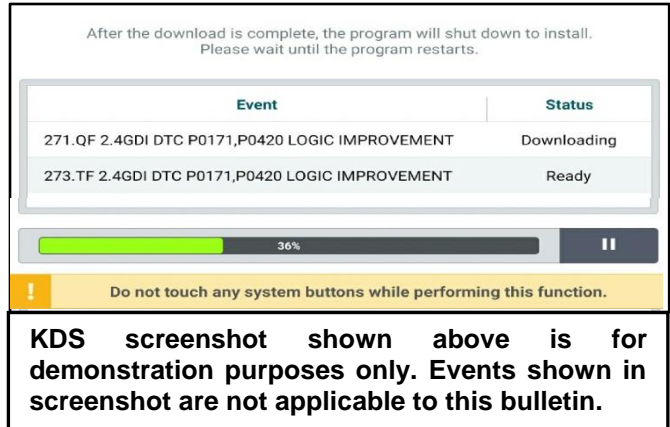
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5. The KDS will check the server for recently uploaded Events and then automatically download **Upgrade Event #379**.

★ NOTICE

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

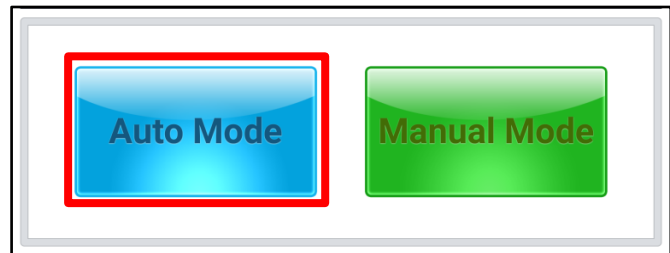


6. Select **Auto Mode**.



CAUTION

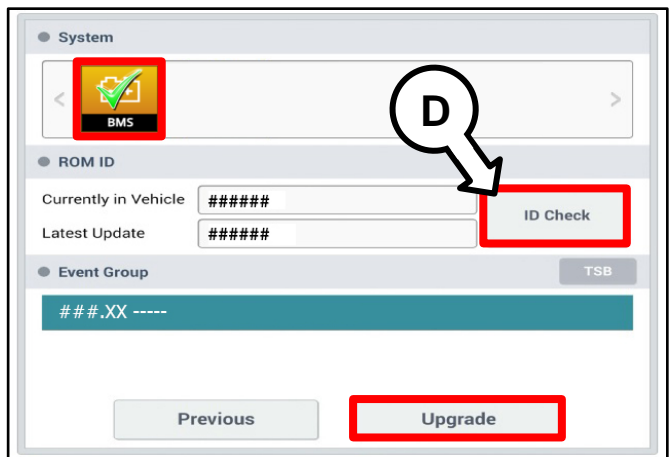
Do NOT attempt to perform a Manual Mode upgrade UNLESS Auto Mode fails. Always follow the instructions given on the KDS in either Auto or Manual mode.



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

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

Select **Upgrade Event #379** and select **Upgrade** to continue.

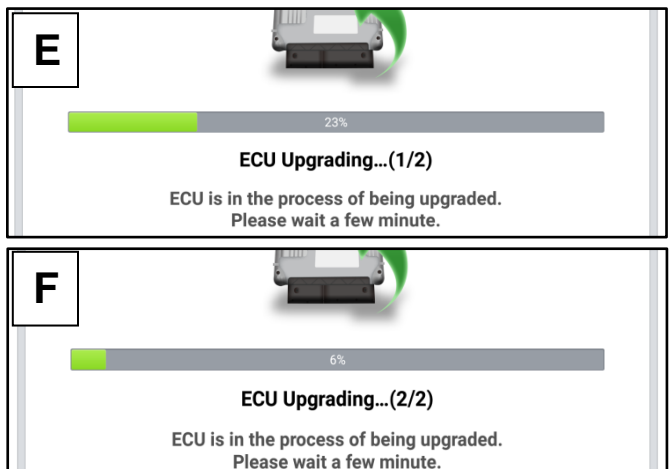


8. The ECU upgrade will begin and the progress of the upgrade will appear on the bar graph. Upgrade part (1/2) (E) will download the upgrade event to the VCI-II. Upgrade part (2/2) (F) will upgrade the ECU.



CAUTION

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



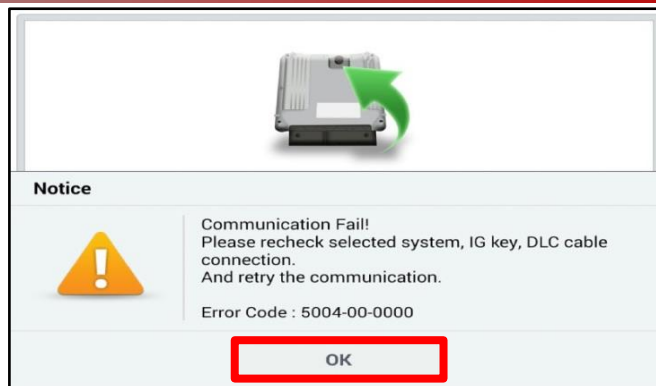
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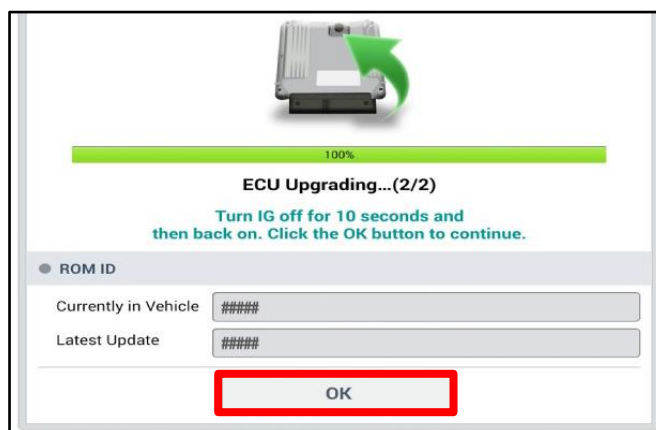
9. If a “Communication Fail” screen appears, verify that the VCI-II and KDS are communicating properly. Touch **OK** and restart the procedure from step 4.

★ NOTICE

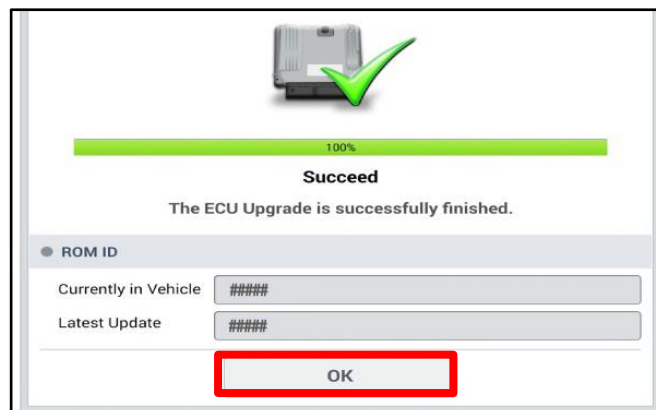
If an error notice continues to appear or if the upgrade cannot be performed, **DO NOT** disconnect the KDS/VCI-II. Contact GIT America Help Desk at (888) 542-4371 or Techline.



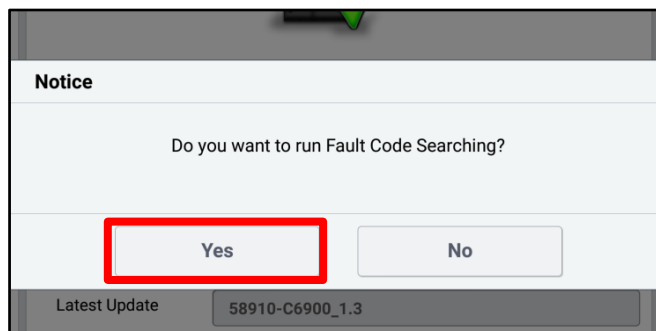
10. When instructed on the KDS, turn the ignition **OFF** for ten (10) seconds then back on. Touch **OK** to continue.



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
PS EV BMS : 37513-E4050	4050
PS EV BMS : 37513-E4000	4000

1. Within the ECU Upgrade screen displayed, select **Manual Mode**.
2. Select the **BMS** system under the System selection menu. Select **Upgrade Event #379** and select **Upgrade** to continue.
3. Select the appropriate control unit part number with reference to the ROM ID Information Table on page 2, 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
Soul EV (PSEV)	July 15, 2014 through July 4, 2017

WARRANTY INFORMATION:

N Code: B11 C Code: ZZ3

Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
W	37513 E4300	0	BMS Logic Improvement after Replacement of Battery Pack or BMS	37513F15	0.3 M/H	N/A	0

