	GROUP <b>ELE</b>	MODEL <b>2015-2017MY Soul EV (PSEV)</b>
	NUMBER <b>155</b>	DATE <b>December 2018</b>
<b>TECHNICAL SERVICE BULLETIN</b>		
<b>SUBJECT: BMS LOGIC IMPROVEMENT AFTER REPLACEMENT OF BATTERY PACK OR BMS</b>		

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. 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.



Kia Diagnostic System (KDS)

**\* IMPORTANT**

This logic improvement must be conducted to optimize the BMS logic only after battery pack or BMS replacement. Please verify the part numbers of replaced components and perform the logic improvement if necessary, according to the ROM ID table on page 2.

File Under: <Electrical>

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

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## BMS LOGIC IMPROVEMENT AFTER REPLACEMENT OF BATTERY PACK OR BMS

### 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

Before attempting an ECU upgrade on any Kia model, make sure to first determine whether the particular 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 #379

Model	System	BMS Part No.	Previous		New	
			HV Battery Part No.	ROM ID	HV Battery Part No.	ROM ID
PSEV	BMS	37513-E4050	37510-E4050	4440, 4460, 4480, 4500, 4800, 4900, 5000, 5100, 5300, 5400, 5500	37510-E4250	5700
		37513-E4000	37510-E4000	4442, 4462, 4482, 4502, 4802, 4902, 5002, 5102, 5302, 5402, 5502	37510-E4200	5702

*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.*

SUBJECT:

## BMS LOGIC IMPROVEMENT AFTER REPLACEMENT OF BATTERY PACK OR BMS

### \* 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

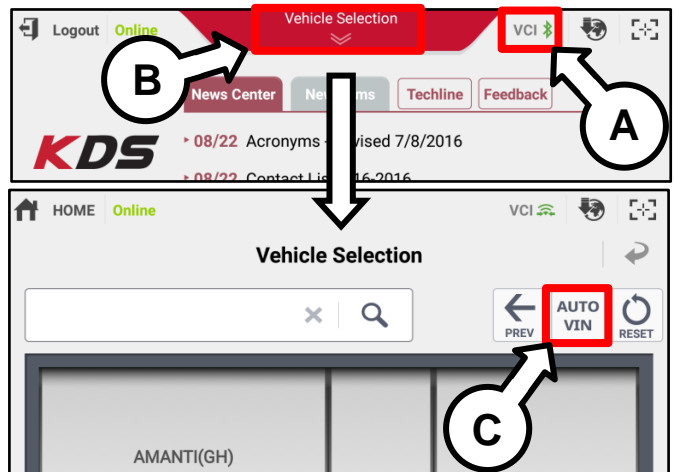
The ECU upgrade function on KDS operates wirelessly. It is not necessary to perform the upgrade via USB cable.



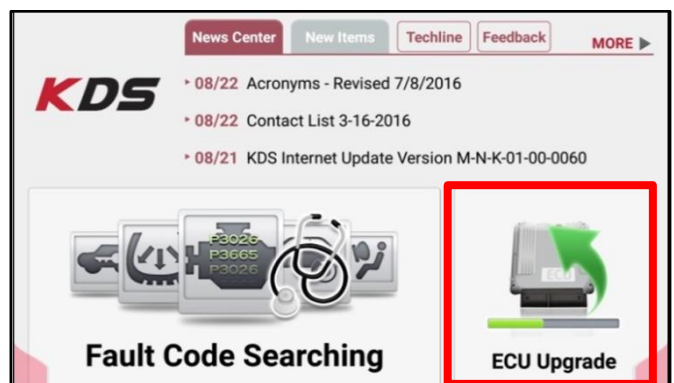
2. With the ignition ON, turn ON the KDS tablet. Select **KDS** from the home screen.



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



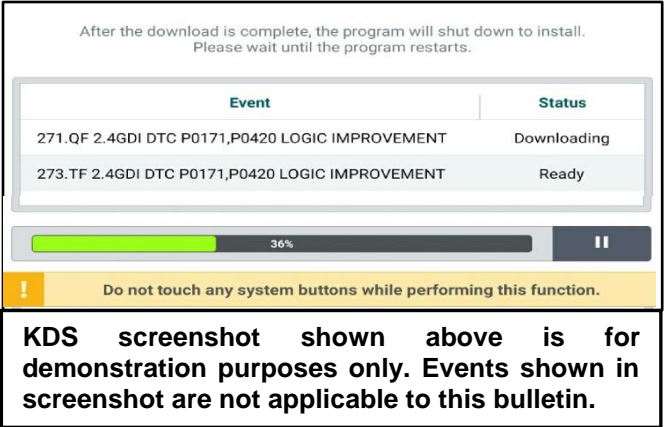
4. Select **ECU Upgrade**.



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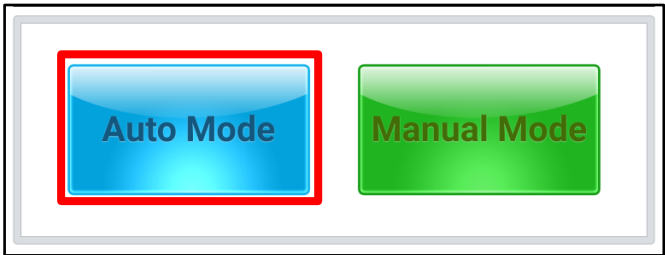
- The KDS will check the server for recently uploaded Events and then automatically download **Upgrade Event #379**.

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



- Select **Auto Mode**.

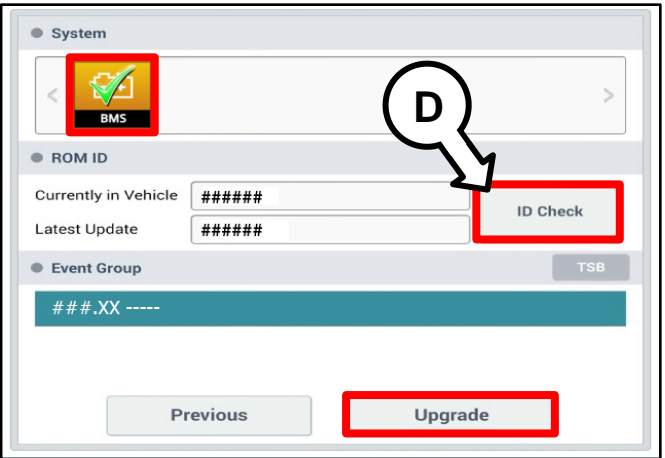
**CAUTION**  
 Do NOT attempt to perform a Manual Mode upgrade **UNLESS Auto Mode fails**. Always follow the instructions given on the KDS in either Auto or Manual mode.



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

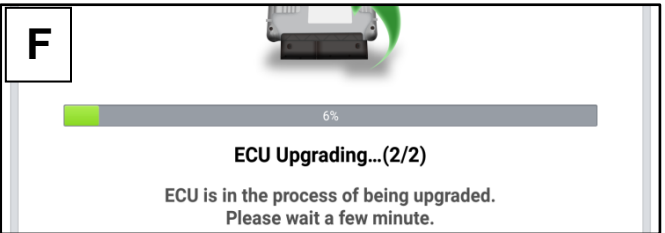
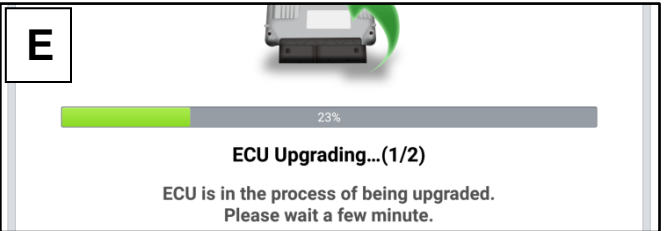
Touch **ID Check** (D) and confirm that the latest update is available.

Select **Upgrade Event #379** 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.



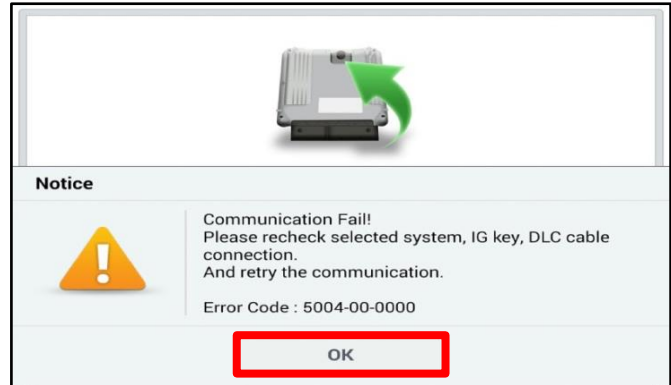
SUBJECT:

## BMS LOGIC IMPROVEMENT AFTER REPLACEMENT OF BATTERY PACK OR BMS

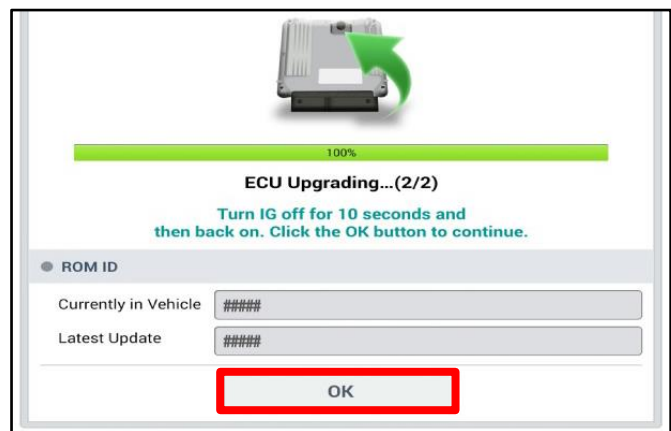
9. If a “Communication Fail” screen appears, verify that the VCI-II and KDS are communicating properly. Touch **OK** and restart the procedure from step 4.

### \* NOTICE

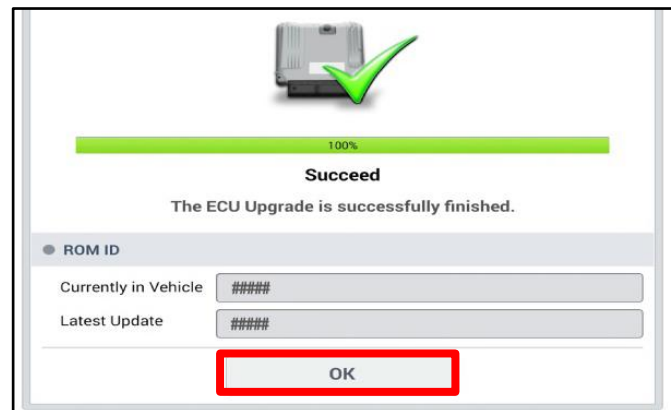
**If an error notice continues to appear or if the upgrade cannot be performed, DO NOT disconnect the KDS/VCI-II. Contact GIT America Help Desk at (888) 542-4371 or Techline.**



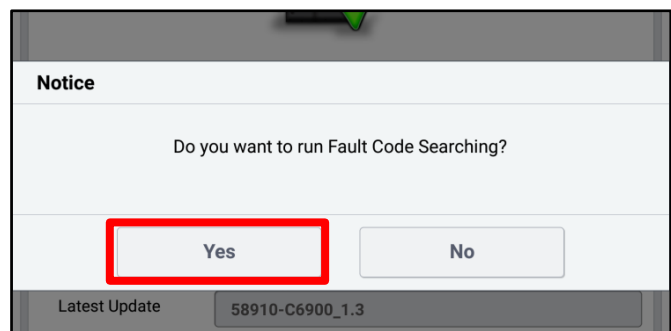
10. When instructed on the KDS, turn the ignition **OFF** for ten (10) seconds then back on. Touch **OK** to continue.



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.

**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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## BMS LOGIC IMPROVEMENT AFTER REPLACEMENT OF BATTERY PACK OR BMS

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