



GROUP	MODEL
ELE	2015-2017MY Soul EV (PS EV)
NUMBER	DATE
310 (Rev 1, 05/07/2024)	October 2023

TECHNICAL SERVICE BULLETIN

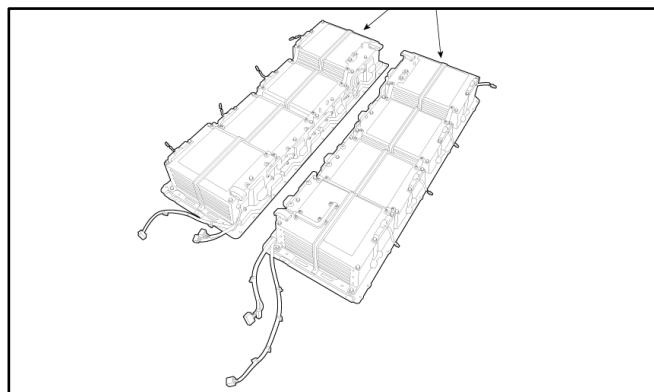
HIGH-VOLTAGE BATTERY PACK AND BATTERY MANAGEMENT SYSTEM

SUBJECT:

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.

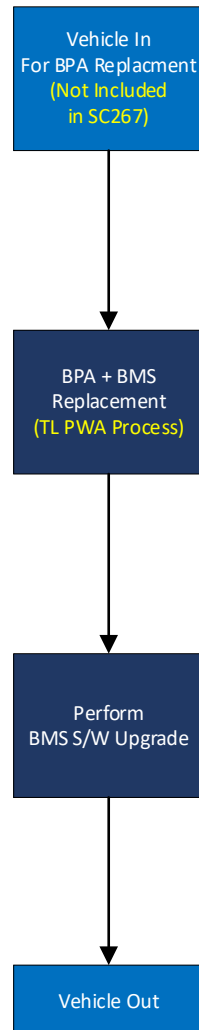
This bulletin provides information regarding the replacement of the High-Voltage Battery Pack Assembly (HV BPA) on some 2015-2017MY SOUL EV (PS EV) produced from July 15, 2014 through June 30, 2017 which were not included in SC267 Safety Recall Campaign. The Battery Management System (BMS) will need to be replaced along with the 'new' HV BPA, when replacing an 'originally' equipped HV BPA on the applicable vehicles. In addition, the 'BMS' system software will also need to be upgraded to complete the repair. Follow the procedure outlined in this publication to replace the BPA, BMS, and upgrade the BMS software on the applicable vehicle.



NOTICE

A Technical Service Bulletin is a field fix repair program without customer notification that may be performed during the warranty period. Any dealer requesting to perform this repair outside the warranty period will require DPSM approval.

Flowchart:

**ⓘ IMPORTANT**

The new **BPA** is equipped with a “new” type harness. Techline PWA is required for HV BPA replacement. Dealer should follow the process included in TSB ELE044 and obtain TL PWA . Claim submission concerns WILL occur if the dealer does not obtain TL PWA for HV BPA replacement.

Operation Descriptions:

- BMS Software (BMS S/W)
- High Voltage Battery Pack Assembly (HV BPA)
- Battery Management System (BMS)

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HV BATTERY PACK AND BATTERY MANAGEMENT SYSTEM

WARNING

Be sure to read and follow the 'General Safety Information and Caution', the 'High Voltage Shut-Off Procedures' and 'High Voltage Battery Handling Guide' instructions outlined on KGIS before doing any work related with the high voltage system. Failure to follow the safety instructions may result in serious electrical injuries.

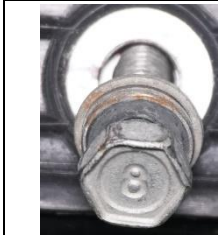
BMS ECU Replacement Procedure:

1. Remove the BPA upper case (A) by referring to "EV Battery System → High Voltage Battery System → Case → Repair procedures (Removal)" in the applicable Shop Manual on KGIS. Refer to KGIS for bolt/nut torque specs.

**TECH TIP**

Mark the six (6) 'ground' bolts and their location to prevent mixing with regular bolt prior to reassembly.

Regular Bolt (8)

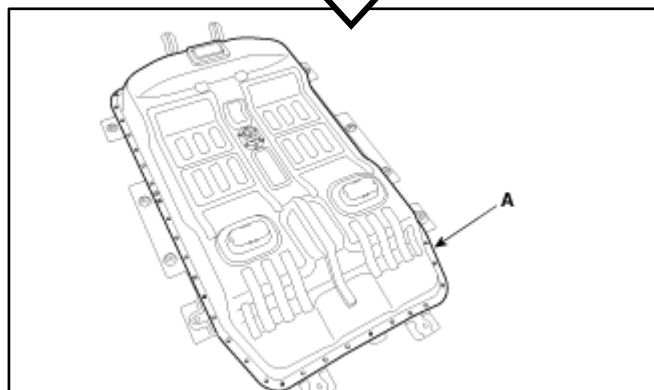


Ground Bolt (E)



Ground Bolt (E): 6 ea.

Regular Bolt (8): 35 ea.



2. Replace the BMS ECU by referring to "EV Battery System → High Voltage Battery Control System → Battery Management System (BMS) ECU → Repair procedures (Removal)" in the applicable Shop Manual on KGIS.
3. Proceed to the 'BPA and Voltage & Temperature Sensor Wiring Harness (VTSWH) Replacement Procedure' on page 10.



⚠ WARNING

Be sure to read and follow the 'General Safety Information and Caution', the 'High Voltage Shut-Off Procedures' and 'High Voltage Battery Handling Guide' instructions outlined on KGIS before doing any work related with the high voltage system. Failure to follow the safety instructions may result in serious electrical injuries.

BPA Replacement Procedure:

1. Replace the HV BPA(s) by referring to "EV Battery System → High Voltage Battery System → Battery Pack Assembly → Repair procedures (Removal)" in the applicable Shop Manual on KGIS.

ⓘ IMPORTANT

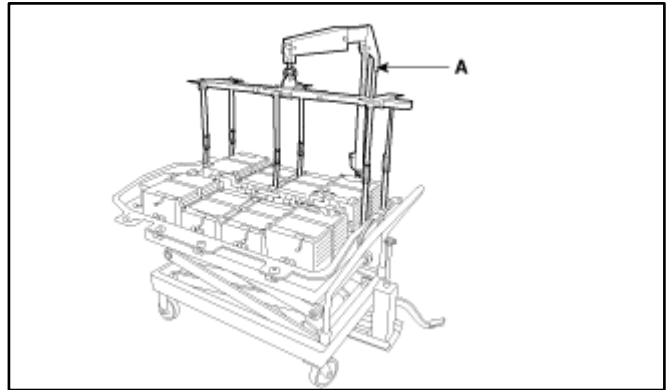
15-17MY ONLY new PN BPA is equipped with a "new" type harness. **(Rev 1) removed swap harness.**



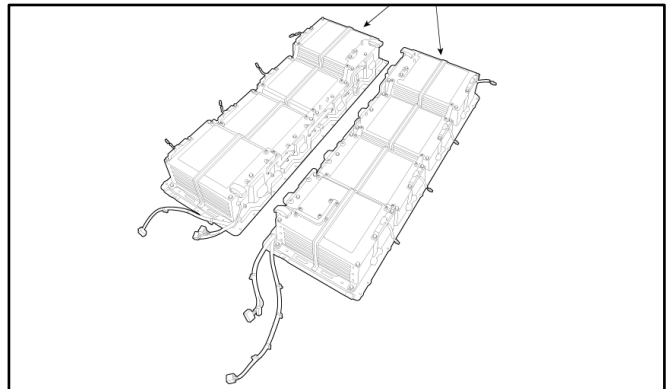
Note: SST OK375 E4300 BPA lifting jig and crane jack (A) are required.

📄 NOTICE

Place the removed BPA on a clean flat surface. Dealer should follow the process included in TSB ELE044 and obtain TL PWA.



Note: The battery pack assembly (BPA) consists of two (2) (left and right) battery packs.



2. Perform the BCM Software Upgrade as outlined on page 6, in 'Manual Mode' only.
3. Confirm normal vehicle operation.

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ECU Upgrade Procedure:

To correct this condition, the ECU should be reprogrammed using the KDS download, as described in TSB [SST081](#).

Upgrade Event Name

*728. 15-17MY PS EV BMS Diagnostic Logic Enhancement Touch - 3rd

***Note:** Event #728 for 15-17MY PS EV will not appear in the upgrade events list as it needs to be performed in 'Manual Mode' only after BMS replacement.

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.

NOTICE

If a 'Communication Fail' error notice appears or the upgrade cannot be performed, DO NOT disconnect the KDS/VCI-II. Contact GIT America Help Desk at (888) 542-4371 or Techline.

NOTICE

Before attempting an ECU upgrade on any Kia model, make sure to first determine whether the applicable model is equipped with an immobilizer  (IMMO) 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.

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ROM ID INFORMATION TABLE:

Upgrade Event #728 (15-17MY)

Model	SYSTEM	IMMO		ECU P/No.	ROM ID	
					Previous	New
PS EV 15-17MY*	BMS	Yes		37513 E4251	4604 4704	4804 4904/24 4944*
				37513 E4201	4606 4706	4806 4906/26 4946*

Note: *Perform Event #728 in 'Manual Mode' only.

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.

Refer to [TSB SST081](#) for instructions to upgrade the 'BMS' system:

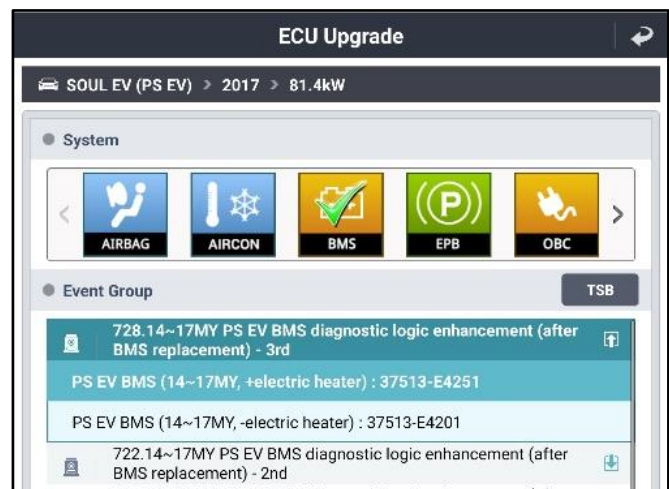
UPGRADE EVENT:

Note: Event #728 for 15-17MY PS EV **will not appear in the upgrade events list** as it needs to be performed in 'Manual Mode' only.

Confirm if 'Heated' or 'Non-Heated' type.

NOTICE

Prior to performing the ECU upgrade, be sure to check that the KDS is fully charged.



Manual Mode ECU Upgrade Passwords

Menu	Password
PS EV BMS (15~17MY, +electric heater): 37513-E4251	4251
PS EV BMS (15~17MY, -electric heater): 37513-E4201	4201

Note: *Perform Event #728 in 'Manual Mode' only.




SUBJECT:


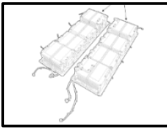
HV BATTERY PACK AND BATTERY MANAGEMENT SYSTEM**AFFECTED VEHICLE RANGE:**

Model	Production Date Range
15-17MY Soul EV (PS EV)	July 15, 2014 to June 30, 2017

REQUIRED TOOL:

Tool Name	Part Number	Figure	Comments
BPA Lifting Jig	OK375 E4300		To be used along with an engine crane/hoist.

REQUIRED PART:

Part Name	Part Number	Figure	Qty.	Comment
Battery Management System (BMS) (15-17MY only)	37513 E4201FFF		1	Non-Heated
	37513 E4251FFF			Heated
Battery Pack Assembly (BPA)* (15-17MY only are equipped with an original/old VTSWH)	37510 E4203R*		1	Non-heated
	37510 E4253R*			Heated

***Note:** The replacement part numbers will require a VIN entry for parts ordering. DO NOT order these parts for stocking purposes, related to this Campaign. Supply is very limited. Until supply stabilizes, please confirm part availability before scheduling customers. New BPA PN's now have the 'new' type wiring harness.

IMPORTANT: The parts listed below DO NOT required replacement unless damaged or lost during removal.

Case Gasket (15-19MY)	37528 E4000FFF	N/A	1	Replace <u>only</u> if damaged

WARRANTY INFORMATION:

N Code: W11 C Code: ZZ4

MY	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
15-17MY	W	37510 E4000	0	BPA+BMS Replacement + BMS S/W Upgrade <u>Rev 1: (No VTSWH Swap Required with 'new' BPA)</u>	37510F06	3.0 M/H	37510 E4203R or 37510 E4253R	1
							37513 E4201FFF or 37513 E4251FFF	1
							37528 E4000FFF*	1

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