


|   |                            |  |
|---|----------------------------|--|
|  | GROUP<br><b>Electrical</b> | MODEL<br><b>2015-2018MY<br/>Soul EV (PSEV)</b> |
|   | NUMBER<br><b>PS548</b>     | DATE<br><b>March 2018</b>                      |



## TECHNICAL OPERATIONS

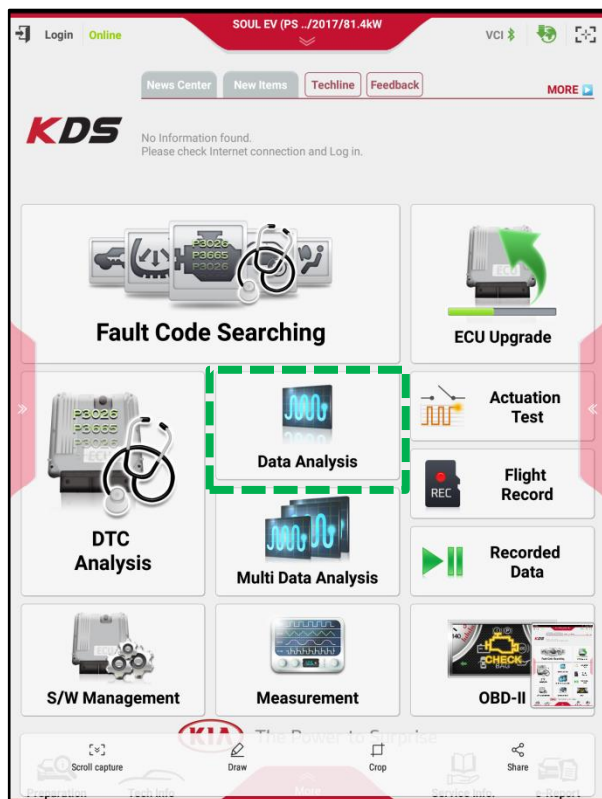
**EXTRACTING BMS DATA FOR RANGE CONCERNS  
PRIOR TO PERFORMING UPDATES**

**SUBJECT:**

For any customers experiencing a range concern with their vehicle, all Battery Management System (BMS) current data should be extracted and reviewed to verify the current battery State of Health (SOH) before performing any updates. Applying updates may clear current data requiring multiple drive cycles to re-learn and view accurate battery health.

To extract this data, use the KDS, select Data Analysis, select BMS and click OK to view and save current data. See KDS screen shots below for reference.

Verify that the battery SOH is above 70%. If you find that the HV battery SOH is below 70%, a Techline case will need to be created for HV battery replacement approval. Attach all captured screenshots to the techline case, per instructions on page 2.



| Sensor Name(143)             | Value | Unit | Link Up |
|------------------------------|-------|------|---------|
| SOC (State of Charge)        | 82.0  | %    |         |
| SOH (State of Health)        | 100.0 | %    |         |
| Battery DC Voltage           | 385.9 | V    |         |
| Max Cell Voltage             | 4.02  | V    |         |
| Min Cell Voltage             | 4.00  | V    |         |
| Battery DC Current           | 0.8   | A    |         |
| Available Charge Power       | 89.60 | KW   |         |
| Available Discharge Power    | 90.00 | KW   |         |
| Auxiliary Battery Voltage    | 13.0  | V    |         |
| Battery Module 1 Temperature | 26    | °C   |         |
| Battery Module 2 Temperature | 25    | °C   |         |
| Battery Module 3 Temperature | 24    | °C   |         |
| Battery Module 4 Temperature | 24    | °C   |         |
| Battery Module 5 Temperature | 24    | °C   |         |
| Battery Module 6 Temperature | 24    | °C   |         |
| Battery Module 7 Temperature | 25    | °C   |         |
| Battery Module 8 Temperature |       |      |         |
| BMS Main Relay ON Status     |       |      |         |
| BMS Controllable State       |       |      |         |

Review the Battery Management System (BMS) “Data Analysis” result screen as additional information will be displayed by scrolling down to the bottom.

At the beginning of the data section, the State of Health (SOH) will be displayed. It is important that this percentage (%) value is captured prior to performing any updates to the system. Results may vary per vehicle.

|                         |      |   |  |
|-------------------------|------|---|--|
| Battery Cell Voltage 6  | 4.02 | V |  |
| Battery Cell Voltage 7  | 4.02 | V |  |
| Battery Cell Voltage 8  | 4.02 | V |  |
| Battery Cell Voltage 9  | 4.00 | V |  |
| Battery Cell Voltage 10 | 4.02 | V |  |
| Battery Cell Voltage 11 | 4.02 | V |  |
| Battery Cell Voltage 12 | 4.02 | V |  |
| Battery Cell Voltage 13 | 4.00 | V |  |
| Battery Cell Voltage 14 | 4.00 | V |  |
| Battery Cell Voltage 15 |      |   |  |
| Battery Cell Voltage 16 |      |   |  |
| Battery Cell Voltage 17 |      |   |  |
| Battery Cell Voltage 18 |      |   |  |

Intermediate screenshot images to the left for reference only.

|                                |      |    |  |
|--------------------------------|------|----|--|
| Battery Cell Voltage 90        | 4.02 | V  |  |
| Battery Cell Voltage 91        | 4.02 | V  |  |
| Battery Cell Voltage 92        | 4.02 | V  |  |
| Battery Cell Voltage 93        | 4.02 | V  |  |
| Battery Cell Voltage 94        | 4.02 | V  |  |
| Battery Cell Voltage 95        | 4.02 | V  |  |
| Battery Cell Voltage 96        | 4.02 | V  |  |
| Battery Cell Voltage Deviation | 0.00 | V  |  |
| Quick Charging Normal Status   | OK   | -  |  |
| Airbag H/wire Duty             | 85   | %  |  |
| Heat 1 Temperature             | -50  | °C |  |
| Heat 2 Temperature             | -50  | °C |  |
| Display SOC                    | 86.0 | %  |  |

**NOTE: It may take multiple screenshots to capture all the screen data.** The screenshot images are saved onto KDS photo gallery (screenshots) folder for viewing.