

**2015-2019MY Soul EV
High Voltage Battery
Basis of Safety Defect Determination 573.6(c)(6)**

May 31, 2022	Kia North America (Kia NA) receives Techline case from dealer to report smoke from battery vents located under passenger seat during diagnosis of a 2017 Kia Soul EV (Vehicle #1). Heat damage limited to within the battery case assembly. Kia record shows vehicle's high voltage battery previously replaced under warranty.
June 13, 2022	Kia NA Safety Office requests Kia Customer Care repurchase subject 2017 Soul EV for further evaluation.
October 5-7, 2022	Kia Canada informs Kia NA Safety Office of thermal damage incident involving the high voltage battery in a 2018 Soul EV (Vehicle #2) where customer reported vehicle began to smoke and slowed to a stop. Dealer inspection noted heat damage limited to within the battery case assembly. Kia NA Safety Office notifies Kia Corporation (Kia HQ) of thermal damage battery incidents and requests investigation assistance.
October 22, 2022	Repurchased Vehicle #1 arrives at Kia NA for further investigation.
October 25-28, 2022	Kia HQ and supplier inspect Vehicle #2. Inspection confirms prior dealer inspection of heat damage limited to within the battery case assembly.
October 31- November 3, 2022	Kia NA Safety Office, Kia HQ and supplier conduct partial teardown of Vehicle #1. Preliminary investigation results are inconclusive. Battery sent to supplier for CT scan and additional tear down analysis.
December 1, 2022	Kia NA receives customer complaint of popping noise and smoke coming from cupholders of a 2018 Soul EV in Hawaii (Vehicle #3).
February 2-6, 2023	Kia NA Safety Office and Kia HQ meet with supplier to review investigation results from CT scans & tear down analysis for Vehicles #1 and #2. CT scans and tear down analysis are inconclusive due to thermal damage and water intrusion from fire suppression (i.e., flooding of high voltage battery).
March 1, 2023	Kia NA Safety Office informs NHTSA of Soul EV high voltage battery investigation.

<p>March 13-17, 2023</p>	<p>Kia NA Safety Office, Kia HQ and supplier inspect Vehicle #3 in Hawaii & perform tear down analysis. Heat damage limited to within the battery case assembly. Preliminary investigation results are inconclusive. Kia NA Safety Office ships high voltage battery to supplier for further evaluation.</p>
<p>March 20, 2023</p>	<p>Kia NA Safety Office conducts field data review and confirms no other potentially related incidents.</p>
<p>March 21, 2023</p>	<p>Kia HQ informs Kia NA Safety Office of its analysis that an electrical short circuit between the anode and cathode of battery cells can occur with the high-voltage battery pack assembly case. Cause of electrical short circuit unknown but believed to be caused by abnormally excessive precipitate within the battery cells.</p>
<p>March 22, 2023</p>	<p>Although cause of electrical short circuit is unknown, Kia NA decides to recall all 2018-2019MY Soul EV vehicles equipped with an E400 battery and certain 2015-2017MY Soul EV vehicles that had the high voltage battery replaced under warranty with E400 battery. Three (3) thermal incidents limited to battery case assembly (two (2) from U.S.; one (1) from Canada), no injuries, no crashes and no fatalities.</p>