

**2015-2019MY Soul EV
Gear Drive Unit
Basis of Safety Defect Determination 573.6(c)(6)**

July 2, 2020	Kia files recall of 2015-2016MY Soul EV to address unintended vehicle movement which can occur if parking mechanism is damaged and vehicle is left unattended without the parking brake engaged. (20V389). Kia dealers instructed to update the Electronic Control Unit software for the Electronic Parking Brake (EPB) logic so that the EPB automatically activates if the POWER button is turned OFF when the gear shift lever is in the “P” (Park) position. Same updated EPB logic applied beginning with 2017MY Soul EV production.
June 21, 2023—July 12, 2023	NHTSA’s Office of Defect Investigation (ODI) contacts Kia North America (Kia NA) Safety Office to request information regarding two VOQ complaints submitted by same 2017MY Soul EV owner alleging unintended vehicle movement while in Park (Vehicle #1). Kia NA Safety Office responds to ODI with requested information and meets with ODI separately to discuss topic. Kia NA Safety Office begins to monitor and investigate potential issue.
August 16, 2023— August 17, 2023	ODI contacts Kia NA Safety Office to identify VOQ complaint alleging unintended vehicle movement in a 2018MY Soul EV (Vehicle #2). Kia NA Safety Office requests additional information from ODI and works on scheduling inspection.
September 10, 2023	NHTSA issues opening resume for 2015-2019MY Kia Soul EV to investigate complaints of unintended vehicle movement when vehicle shifted to Park and parking brake not engaged (RQ23-005).
September 11, 2023	Kia NA identifies complaint regarding unintended vehicle movement while in Park involving a 2017MY Soul EV (Vehicle #3). Kia NA works with dealer to schedule inspection.
September 13, 2023	Kia NA Safety Office meets with ODI to provide update. Kia NA Safety Office and ODI conduct joint inspection of 2018MY Soul EV (Vehicle #2). Kia engineer able to reproduce vehicle roll while in Park in one (1) of approximately 50 attempts when vehicle is in POWER ON condition. Electronic Parking Brake (EPB) operates normally when manually activated and automatically activates when vehicle is in POWER OFF condition while in Park. Kia NA Safety Office begins efforts to collect vehicle’s Gear Drive Unit (GDU) for further analysis.

September 14, 2023	Kia NA Safety Office inspects 2017MY Soul EV (Vehicle #1). Kia engineer attempts to duplicate vehicle roll while in Park approximately 100 times with vehicle in the POWER ON condition. Roll condition could not be duplicated. EPB operates normally when manually activated and automatically activates when vehicle is in POWER OFF condition while in Park.
September 29, 2023	Kia NA Safety Office receives GDU from dealer for 2018MY Soul EV (Vehicle #2).
October 3, 2023	Kia NA Safety Office inspects 2017MY Soul EV (Vehicle #3). Kia engineer able to reproduce vehicle roll while in Park in one (1) of approximately 200 attempts when vehicle is in POWER ON condition (rolled approx. 4 feet and parking pawl engaged stopping vehicle). EPB operates normally when manually activated and automatically activates when vehicle is in POWER OFF condition while in Park.
October 6, 2023	Kia NA Safety Office conducts teardown inspection of GDU from 2018MY Soul EV (Vehicle #2) with Vehicle Research and Test Center (VRTC) engineer in attendance. GDU operates normally.
October 10, 2023	Kia NA Safety Office installs reassembled GDU from 2018MY Soul EV (Vehicle #2) into an exemplar vehicle. Roll condition could not be duplicated.
October 11, 2023	Kia NA Safety Office inspects 2016MY Soul EV with complaint of unintended vehicle movement while in Park (Vehicle #4). Kia engineer able to reproduce vehicle roll while in Park in three (3) of approximately 100 attempts when vehicle is in POWER ON condition. EPB operates normally when manually activated and automatically activates when vehicle is in POWER OFF condition while in Park. Kia NA Safety Office begins process to repurchase vehicle for further evaluation.
October 12, 2023	Kia NA Safety Office continues to evaluate operation of reassembled GDU from 2018MY Soul EV (Vehicle #2) in exemplar vehicle. Vehicle roll is duplicated while in Park when vehicle is in POWER ON condition.
October 18, 2023	Kia NA Safety Office updates field data analysis and identifies 12 unintended vehicle movement incidents confirmed by Kia or a Kia dealer among 2015-2016MY Soul EV after completion of recall 20V389 and 2017-2019MY Soul EV vehicles (dates of receipt 6/25/2019—10/10/2023).

<p>October 19, 2023</p>	<p>Kia NA Safety Office meets with ODI and provides investigation update. Kia NA Safety Office identifies although root cause of the intermittent unintended vehicle movement condition has not yet been confirmed, it suspects cause of parking pawl's intermittent failure to engage to parking gear is damage to parking mechanism within GDU.</p> <p>Kia NA decides to recall 2015-2019MY Soul EV vehicles to address intermittent condition. Two (2) confirmed crashes, no injuries or deaths.</p>
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