



U.S. Department  
of Transportation

**National Highway  
Traffic Safety  
Administration**

# ODI RESUME

**Investigation:** DP 21-003  
**Prompted by:** VOQ requesting a Defect Petition  
**Date Opened:** 11/12/2021 **Date Closed:** 06/20/2023  
**Investigator:** Jianqing Xue **Reviewer:** Peter Kivett  
**Approver:** Tanya Topka  
**Subject:** Throttle control system vulnerabilities

## MANUFACTURER & PRODUCT INFORMATION

**Manufacturer:** Hyundai Motor America, Kia America, Inc.  
**Products:** Various Model/Model Year Hyundai and Kia Vehicles  
**Population:** 6,000,000 (Estimated)  
**Problem Description:** Petitioners alleged throttle control system defects produce sudden uncommanded acceleration, runaway throttle conditions, surging, stalling and/or loss of motive power.

## FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
<b>Complaints:</b>	1	0	1
<b>Crashes/Fires:</b>	0	0	0
<b>Injury Incidents:</b>	0	0	0
<b>Fatality Incidents:</b>	0	0	0

## ACTION / SUMMARY INFORMATION

**Action:** This defect petition has been denied.

### Summary:

The Office of Defects Investigation (ODI) of the National Highway Traffic Safety Administration (NHTSA) received a petition letter dated October 10, 2021, requesting an investigation of possible defects in the electronic throttle control (ETC) system on certain Kia vehicles resulting in the opening of DP21-003. Accordingly, Model Year (MY) 2005-2016 Kia Optima/K5, MY 2006-2015 Kia Sorento, MY 2007-2016 Hyundai Elantra, MY 2007-2016 Hyundai Santa Fe, MY 2006-2015 Hyundai Sonatas are all part of the subject population. The petition was originally filed as a Vehicle Owner Questionnaire that can be reviewed at [NHTSA.gov](http://NHTSA.gov) under reference (ODI) number 11439675.

On November 12, 2021, ODI opened Defect Petition DP21-003 to evaluate the petitioner's request. ODI performed trend analyses of the VOQs related to vehicle speed control issues for all the subject vehicles and found that none of the 52 Model/Model Year Hyundai/Kia vehicles demonstrated any actionable trend that warranted an investigation.

Petitioners submitted 1119 VOQs and non-VOQ cases in which sudden uncommanded acceleration (SUA) or loss of motive power (LOMP) incidents were alleged. For the 1119 reports, 220 were incidents involving crashes, from which 69 subject Hyundai-Kia vehicles were inspected by Hyundai/Kia dealer technicians, Hyundai/Kia engineers, and/or third-party representatives. ODI found the inspections identified no vehicle defects related to the ETC system. Of the 220 crash-involved reports, 13 Event Data Recorder (EDR) records were downloaded successfully and 11 of those indicated driver error: (i.e.) pedal misapplication. A condition where the accelerator pedal is mistakenly applied instead of the brake pedal when the driver wants to stop the vehicle.

In addition, ODI reviewed a scientific journal paper published in Forensic Science International in 2016 by Mr. Park et al., as well as related test videos. ODI does not believe there is any evidence of uncontrollable SUA occurrences in any of the tests reviewed.

NHTSA's Office of Vehicle Safety Compliance (OVSC) reviewed the allegations regarding the potential noncompliance with Federal Motor Vehicle Safety Standard No. 124. Based on the information provided, the Agency concludes there

is insufficient information for us to determine if a possible non-compliance exists.

Finally, both Hyundai and Kia informed ODI that all their vehicles manufactured after 2012 were equipped with an ETC management system, in which the engine speed will go to idle when the system sees signals from both the brake pedal and accelerator pedal at the same time; this is commonly known as the brake-throttle override system.

After thoroughly assessing the material submitted by the petitioner, information already in NHTSA's possession, information submitted by Hyundai and Kia in response to an Information Request letter, and the potential risks to safety implicated by the petitioner's allegation, NHTSA does not believe that a formal investigation is warranted. After full consideration of appropriate factors, the petition is denied. A Federal Register Notice (FRN) further detailing NHTSA's reasons for denial of the petition will be published.