U.S. Department of Transportation

National Highway Traffic Safety Administration

ODI RESUME

OFFICE OF DEFECTS INVESTIGATION

NHTSA

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Investigation: PE 14-017
Date Opened: 06/16/2014 **Date Closed:** 12/23/2014
Investigator: Michael Lee **Reviewer:** Scott Yon
Approver: Frank Borris
Subject: Air Bag Non-deployment

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: Chrysler Group LLC
Products: 2006-2007 Jeep Commander and 2005-2007 Jeep Grand Cherokee
Population: 643,618

Problem Description: Unintended ignition key rotation (due to interaction with the driver's leg) while driving which may result in loss of engine power and disabling of frontal air bags.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	65	119	184
Crashes/Fires:	1	0	1
Injury Incidents:	0	0	0
Fatality Incidents:	0	0	0

ACTION / SUMMARY INFORMATION

Action: Close this Preliminary Evaluation; NHTSA recall 14V-438.

Summary:

Chrysler is conducting a safety recall of approximately 643,618 model year 2006-2007 Jeep Commander and model year 2005-2007 Jeep Grand Cherokee vehicles to address the problem of ignition turning off while driving (see NHTSA recall 14V-438 for more information). According to Chrysler, these vehicles may experience an unintended change in ignition switch position while driving, which may result in loss of engine power, power steering, and braking assist, increasing the risk of a crash and disabling one or more of the vehicle's safety features including the frontal air bags. Most of the reported incidents occurred as a result of driver interaction with the ignition key.

Based on the recall action taken by Chrysler, this Preliminary Evaluation is closed. Additional information on this closing resume, and the investigation are in the PE14-017 public file available online at SaferCar.gov.

The ODI reports cited above can be reviewed online at http://www-odi.nhtsa.dot.gov/owners/SearchNHTSAID under the following identification numbers:
10101116 10103300 10106060 10112589 10116788 10126986 10128093 10130780 10145501 10146213 10153018 10155291 10156396 10158165 10162933 10166746 10178559 10183305 10186545 10189530 10192237 10193106 10194092 10199552 10199986 10221500 10222283 10227253 10231011 10328609 10358324 10392364 10577532 10585326 10585976 10599142 10604990 10605091 10605209 10606494 10606610 10607043 10607614 10607785 10608196 10615565 10615671 10615761 10616124 10633266 10633313 10633724 10639371 10640010 10644827 10652526 10653000 10653382 10654009 10654139 10654809 10655095 10659448 10662220 10662703

PE14-017 Close Resume

Additional Information

In June 2014, the Office of Defects Investigation (ODI) opened this investigation based on 32 Vehicle Owner Questionnaire (VOQ) reports that alleged the driver's knee or leg can inadvertently contact the ignition key fob/chain causing the ignition switch to move from the RUN position to the OFF or ACC position in model year (MY) 2006-2007 Jeep Commander and MY 2005-2006 Jeep Grand Cherokee vehicles. The ignition switch is mounted in the instrument panel to the right of the steering column, just forward of the driver's right leg and knee, such that the key is inserted horizontally (and longitudinally).

In its July and August 2014 responses to ODI's information request, Chrysler provided 119 reports that could be related to ignition switch inadvertently moving out of the RUN position in the subject vehicles. For the vast majority of the reports, both ODI and Chrysler found the reported incidents occurred as a result of driver interaction with the ignition key. Chrysler provided no reports of crashes or injuries related to ignition turning off. However, ODI has received one VOQ that alleged a crash (no injury).

In its July 18, 2014 letter to NHTSA, Chrysler stated that it will conduct a safety recall (14V-438) to address the ignition switch problem in MY 2006-2007 Commander and MY 2005-2007 Grand Cherokee vehicles (subject vehicles). According to Chrysler, these vehicles may experience unintended ignition key rotation (i.e., a change in switch position) while driving, which may result in loss of engine power, power steering, and braking assist, increasing the risk of a crash and disabling one or more of the vehicle's safety features including the frontal air bags. Chrysler also stated that it believes driver/ignition key interaction occurs due to a combination of occupant packaging relative to the ignition key, real-world operator positioning and operator movements. Chrysler notes that the ignition key packaging is unique to the subject vehicles.

Chrysler also provided data on over 200 reports of air bag non-deployment on the subject vehicles. ODI reviewed the available data surrounding each non-deployment incident such as photographs of the vehicles involved, police accident report, seat belt usage, injury information, and air bag and crash data contained in the air bag control module. In its review, ODI did not identify any non-deployment incidents that were caused by the ignition switch problem. ODI did find several moderate-to-severe crashes with damage severity indicating frontal air bag deployment may have been warranted. However the cause of the non-deployment could not be determined in many cases. Of the remaining cases with sufficient information, ODI determined the crashes likely did not meet the requirements for air bag deployment.

ODI found one VOQ alleging the vehicle stalled while driving at 25 mph and caused a crash with a utility pole in which the air bags did not deploy. The driver reportedly suffered a neck injury and bruises in the pelvic area. Based on the available information, there is no indication that the stalling was due to ignition turning off or that the air bags should have deployed in the crash. In addition, ODI is aware of a VOQ reporting a non-deployment crash in which the driver died and the front passenger was injured. Stalling was not alleged and no other information was provided in the VOQ.

Finally, in December 2014, Chrysler informed ODI that it will begin fixing the defective ignition switches in the subject vehicles starting in May 2015. A new ignition switch assembly is to be designed with a new feature that requires the ignition key/mechanism to be pushed inward (toward the instrument panel) to rotate the key from the RUN to ACC position. It will also require a higher turning effort from the RUN to ACC position.