



U.S. Department
of Transportation
**National Highway
Traffic Safety
Administration**

ODI RESUME

Investigation: PE07-027
Date Opened: 05/29/2007 Date Closed: 08/02/2007
Principal Investigator: Christopher Lash
Subject: Engine Stalling and Electric Power Loss

Manufacturer: DaimlerChrysler Corporation
Products: 2007 Jeep Wrangler and Dodge Nitro
Population: 80,894

Problem Description: The engine may stall while driving, sometimes with a simultaneous loss of electrical power.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	230	279	368
Crashes/Fires:	2	0	2
Injury Incidents:	1	0	1
# Injuries:	1	0	1
Fatality Incidents:	0	0	0
# Fatalities:	0	0	0
Other*:	0	0	0

*Description Of Other:

Action: This Preliminary Evaluation is closed. Recall 07V-291.

Engineer: Christopher Lash *ml*

Date: 08/02/2007

Div. Chief: Jeffrey L. Quandt

Date: 08/02/2007

Office Dir.: Kathleen C. DeMeter

Date: 08/02/2007

Summary: On July 3, 2007, DaimlerChrysler Corporation (DCC) submitted a Defect Information report to NHTSA describing a defect that could result in engine stall while driving in approximately 80,894 model year (MY) 2007 Jeep Wrangler and Dodge Nitro vehicles manufactured between January 30, 2006 and January 22, 2007 (NHTSA Recall 07V-291, DCC Recall G25). According to DCC, the totally integrated power module (TIPM) in these vehicles was programmed with software that may allow the engine to stall under certain conditions. DCC will re-program the TIPM in the recalled vehicles with revised software.

ODI opened PE07-027 on May 29, 2007, based on 53 complaints alleging engine stall and/or loss of electrical power in MY 2007 Jeep Wrangler vehicles. ODI was also monitoring similar complaints in MY 2007 Dodge Nitro vehicles. DCC's analysis of complaints to DCC and NHTSA found that many described events with a momentary loss of electrical power inside the vehicle and a corresponding loss of engine power. Many of the reports also indicated that the instrument cluster telltale lamps momentarily illuminated during the event.

DCC's Engineering Analysis determined that the TIPM could initiate an internal reset cycle lasting approximately 75 ms in response to error messages on the communication bus. The "key on" signal from the TIPM to the Power train control module (PCM) is lost during a TIPM reset. If the PCM loses the "key on" signal for longer than 40 ms, it interprets it as the vehicle ignition being turned off and begins a power down routine. After the TIPM reset, the "key on" signal is restored and the PCM powers back up. If the rotating components of the engine contain sufficient inertia, the vehicle may restart with no input from the operator as reported in some of the complaints. If the engine does not restart in this manner, it can be restarted by the operator. A revision to the TIPM software on January 22, 2007 changed the TIPM reset time to 17 ms, removing the potential for PCM power down and engine stall.

ODI has received 178 complaints potentially related to the alleged defect in MY 2007 Jeep Wrangler vehicles and 52 complaints involving MY 2007 Dodge Nitro vehicles. Two of the Nitro complaints allege that a crash resulted from an engine stall incident, one of which caused minor injuries to a passenger. As of June 1, 2007, DCC identified 151 Wrangler complaints and 128 Nitro complaints.

This investigation has been closed with DCC's recall.