



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

ODI RESUME

Investigation: PE 10-024
Date Opened: 07/19/2010
Investigator: Peter Kivett
Approver: Richard Boyd
Subject: Rear Hatch Strut Support Failure

Date Closed: 11/24/2010
Reviewer: Bruce York-B

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: CHRYSLER GROUP LLC
Products: MY 2005 Dodge Magnum
Population: 79,411

Problem Description: The rear hatch can close without warning due to failure of the support struts

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	7	43	50
Crashes/Fires:	0	0	0
Injury Incidents:	1	4	5
Number of Injuries:	1	4	5
Fatality Incidents:	0	0	0
Other*:	0	0	0

*Description of Other:

ACTION / SUMMARY INFORMATION

Action: This Preliminary Evaluation is closed

Summary:

See Attached Closing Report.

On July 19, 2010 the Office of Defects Investigations (ODI) opened a Preliminary Evaluation to investigate allegations of rear hatches that close without warning during normal use due to failure of the support struts in Model Year (MY) 2005 Dodge Magnum vehicles. The investigation was opened based on seven owner complaints with one consumer alleging injury to head and neck (no additional information could be obtained to support this claim). Other ODI complaints alleged that they were aware that the rear hatches were not staying up on their own and it was too heavy to keep up while trying to use the space in the back of the vehicle. ODI also identified from talking to complainants that this phenomena of failing strut supports typically occur during the cold season. The support struts are alleged to lose their internal gas pressure and allow the rear hatch to inadvertently close on the consumer.

Information provided by Chrysler in response to ODI's information request letter for PE10-024 indicates that they are aware of 41 consumer complaints with a 1.2% warranty rate for a population of 79,411 subject vehicles. Chrysler identified that there was four design changes to the support strut on the 2005 Dodge Magnum vehicle. These four designs change part numbers were denoted as: AA, AC, AD and AE (Figure 1). Twenty seven of the Chrysler complaints were related to the first three designs that only incorporated 17,932 vehicles of the subject population. The remaining 43,560 vehicles had the later design (AE model support strut) with a significantly reduced complaint and warranty rate.

Part No	Complaints	Production
05065600AA	1	238
05065600AC	8	381
05065600AD	18	17313
05065600AE	22	61492

The total rate for the 2005 Dodge magnum normalized is 9.2 per 100K per years in service. This same support strut is on the 2006 model Dodge Magnum with an even lower complaint rate at 0.9 per 100K per years in service normalized. ODI compared the rates of this investigation PE10-024 to previous investigations related to rear hatch failures to further understand how the subject vehicle failure rates compared to peer vehicles that have been the subject of rear hatch strut failures.

The warranty provided by Chrysler for the Dodge Magnum vehicles is also represented in the table below. Chrysler's data for their Dodge Magnum for both the subject population (MY 2005) and peer population (MY 2006) yielded a much lower percentage by build than the previous ODI investigations for the same failure mode. It is to be noted that the normalized warranty rate for the subject vehicles are on an order of four times lower than that of the recalled population. The voluntary recalls from EA06-020 (2004-06 Toyota Sienna vehicles), EA08-015 (2005 Honda Odyssey vehicles) represent a normalized warranty percent over one percent with a normalized injury rate over one as well.

(Figure 2)

Model	Model Year	Vehicle Population	YIS	C	CR	NCR	I	IR	NIR	W	WR	NWR
Freestar/Monterey 2005	2005	8037	3	37	460.4	153.5	5	62.2	20.7	376	4.7	1.6
Odyssey 2005	2005	25227	3	36	142.7	47.6	3	11.9	4	1413	5.6	1.9
Sienna 2006	2006	82870	3.67	105	126.7	34.5	15	18.1	4.9	5839	7	2.3
Quest 2004	2004	57055	4	40	70.1	17.5	1	1.8	0.4	69	0.1	0
Dodge Magnum 2005	2005	79424	6	44	55.4	9.2	4	5	0.8	967	1.2	0.4
Quest 2005	2005	23683	3	12	50.8	16.9	0	-	0	358	1.5	0.5
Sienna 2005	2005	59548	2.67	13	21.8	8.2	1	1.7	0.6	2175	3.7	1.4
Odyssey 2006	2006	23982	2	5	20.8	10.4	1	4.2	2.1	123	0.5	0.3
Dodge Magnum 2006	2006	46551	5	2	4.3	0.9	1	2.1	0.4	550	1.2	0.4
Caravan/T&C 2005	2005	236368	3	2	4.2	1.4	0	-	0	859	0.4	0.1

C = Number of Complaints
CR = Complaint Rate (per 100,000 vehicles)
I = Number of Injuries
IR = Injury Rate (per 100,000 vehicles)
W = Number of Warranty Claims
WR = Warranty Rate (per 100 vehicles)
YIS = Years in service (field)
NCR = Normalized Complaint Rate (per 100,000 vehicle years)
NIR = Normalized Injury Rate (per 100,000 vehicle years)
NWR = Normalized Warranty Rate (per 100 vehicle years ... 3 YIS correction factor used for Dodge Magnum vehicles)

In past ODI was very critical of electrically assisted rear hatches that fail due to lack of warning to the occupant. However, the same failure for a manual rear hatch that requires an assist from the consumer and causes fewer injuries. This is likely due to the warning the occupant gets while pushing up and releasing the rear hatch. In essence the technique required to open the rear hatch gives a warning to the operator that this hatch is not going to stay up, the support struts are slowly failing. This source of warning was widely expressed in many of the consumer interview ODI completed.

The incident rate normalized compared to other rear hatch ODI investigation was lower than that of prior investigations (EA06-020 and EA08-015) that resulted in safety recalls. The lack of serious injuries and a lack of recent complaints (one in the last eight months) also suggest that at this time, this issue does not represent an unreasonable risk to motor vehicle safety. Accordingly, this investigation has been closed. The closing of this investigation does not constitute a finding by NHTSA that a safety-related defect does not exist. The agency will continue to monitor complaints and other information related to the alleged defect in the subject vehicles and take further action in the future if warranted.