U.S. Department of Transportation

National Highway Traffic Safety Administration

ODI RESUME

OFFICE OF DEFECTS INVESTIGATION

NHTSA

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Investigation: PE 11-033
Date Opened: 09/13/2011
Date Closed: 12/07/2012
Investigator: Lawrence Hershman
Reviewer: Scott Yon
Approver: Frank Borris
Subject: Service Jack Failure

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: Ford Motor Company
Products: MY 2004-2005 Ford Freestar & Mercury Monterey
Population: 205,252

Problem Description: The service jack used for changing a tire fails at its pivot joints.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	6	26	32
Crashes/Fires:	0	0	0
Injury Incidents:	3	5	7**
Number of Injuries:	3	5	7**
Fatality Incidents:	1	1	1**
Number of Fatalities:	1	1	1**
Other*:	0	140	140

***Description of Other:** Warranty reports that may have involved the alleged defect.

** Total eliminates duplicates received by ODI and manufacturer.

ACTION / SUMMARY INFORMATION

Action: This Preliminary Evaluation has been closed.

Summary:

The subject vehicles (SV) are all automatic transmission, front wheel drive vehicles with hand actuated mechanical park brakes. The investigation focused on allegations that the service jack failed and caused the vehicles to fall. The subject scissors-type jack appears to fail at the slotted hinge joints where the jack screw is located (bends at mid-point). The failures occur while the jack is in use, and vehicle movement (forward or backward) is typically reported coincident with the failure. Ford reported that most MY 2003 Windstar and all MY 2006-2007 Freestar/Monterey also use the subject jack, an additional 223,246 vehicles.

NHTSA has received six consumer complaints (VOQs) involving three injury incidents and a fatality. Ford reported 26 complaints for the SVs involving an additional 4 injuries. In the fatal incident, the van fell on a person working on the engine under the otherwise unsupported vehicle; ODI was unable to determine whether the vehicle was adequately chocked or the park brake was properly set. Reported injuries include a broken arm, head and hand injuries, arm and rib bruises, and muscle strains. NHTSA has received just one new report since opening this investigation. The complaint trend in ODI and Ford data is flat if not declining.

Ford provides instructions and warnings in the owner's manual, on a placard placed with the jack, and on the jack itself. These instruct consumers to put the vehicle gear selector in Park, properly set the parking brake, chock the opposite wheel, use the jack only for changing a tire, loosen the lug nuts prior to jacking, and to not get under a vehicle supported by the jack only (NHTSA also recommends that jacks only be used for tire changing).

In the VOQs, roughly half the consumers were using the jack for something other than tire changing, half had not chocked a wheel, and half had not properly set the parking brake. ODI notes that since the front wheels are drive wheels (with an open center differential) the Park gear cannot provide vehicle stability (longitudinally) when a front wheel is raised. All NHTSA complaints and most of the complaints to Ford involved failures while a front wheel was raised.

In response to ODI's inquiry, Ford conducted testing on a 2004 Freestar. Ford's tests showed that when a front tire was raised the service jack held without failing under various scenarios except when a rocking force was applied and the parking brake was not properly set. Based on its testing and its analysis of field data, Ford concluded that the type of jack failure evidenced in this investigation (bending at mid-point) was likely caused by vehicle movement due to an improperly secured vehicle, or other misuse of the jack. Ford notes that rates in this investigation were similar to those in another investigation (EA91-049) which ODI closed.
ODI also analyzed jack data for MY 2003 and newer vehicles to compare to the SV population. To assist with this analysis, ODI requested data from the jack manufacturer (actually its successor company) who provided limited data but did identify other models using the same design jack. ODI was unable to identify a significant difference in the incidence of jack failures (including those involving bending failures) between the SVs, other vehicles which used the same jack, or other vehicles where the jack type was unknown or different.

A safety-related defect has not been identified at this time and further use of agency resources does not appear to be warranted. Accordingly, investigation PE11-033 is closed. The closing of this investigation does not constitute a finding by NHTSA that a safety-related defect does not exist and ODI reserves the right to take further action if warranted by the circumstances.

The ODI reports cited above can be reviewed at www-odi.nhtsa.dot.gov/complaints under the following identification (ODI) numbers: 10247506, 10330290, 10389720, 10398164, 10423688 and 10437970.