



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

## ODI RESUME

Investigation: RQ 03-002  
 Prompted By: CONSUMER COMPLAINTS, RECALL 98V-322  
 Date Opened: 01/03/2003 Date Closed: 06/03/2003  
 Principal Investigator: BRUCE YORK-B  
 Subject: BALL JOINT SEPARATION

Manufacturer: FORD MOTOR COMPANY  
 Products: MY 1995-97 CROWN VICTORIA, TOWN CAR, GRAND MARQUIS  
 Population: 860857

Problem Description: OWNERS ALLEGE THAT A LOWER CONTROL ARM BALL JOINT BROKE WHILE DRIVING, RESULTING IN SUSPENSION COLLAPSE. THIS BREAKAGE COULD RESULT IN LOSS OF VEHICLE CONTROL.

### FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	24	62	86
Crashes/Fires:	0	0	0
Injury Incidents:	0	0	0
# Injuries:	0	0	0
Fatality Incidents:	0	0	0
# Fatalities:	0	0	0
Other*:	0	88	88

\*Description of Other: \* WARRANTY CLAIMS

Action: THIS RECALL QUERY HAS BEEN CLOSED.

Engineer: Bruce York

Date: 06/03/2003

Div. Chief: Jeffrey L. Quandt

Date: 06/03/2003

Office Dir.: Kathleen C. DeMeter

Date: 06/03/2003

Summary: SEE ATTACHED REPORT.

V103  
6-6-03

**SUMMARY REPORT**

This investigation was opened based on 24 complaints of failed or separated ball joints. When the ball joints separate, the front end of the vehicles drop to the ground and complainants allege a loss of vehicle control. These complaints are similar to complaints that led to the recall (98V-322) of approximately 160,000 Crown Victoria, Town Car, and Grand Marquis police and commercial fleet vehicles. The one-piece bearing within these recalled vehicles lower control arm ball joints can weaken slowly during use and eventually crack. This could result in separation of the ball and cap of the joint, allowing the control arm to drop to the ground.

Analysis of ODI and Ford data has identified 86 complaints and 88 warranty claims that are related to the alleged defect condition in the subject vehicles. The data indicate that the alleged defect condition has occurred at low rates for a population of vehicles that is now more than six years old. There has been less than one ball joint separation complaint per ten thousand vehicle years. There have been no reports of injuries, deaths or crashes.

Not all of the subject vehicles are equipped with the one-piece bearing addressed by 98V-322. Approximately 380,000 vehicles were equipped with the one-piece ball joint, which was implemented in production in March 1996. Vehicles manufactured prior to this date were equipped with a two-piece bearing design ball joint. Analysis of the ball joint complaint and warranty claims data furnished by Ford shows that the rate of separation failures on vehicles build after March 1996 is lower than the rate for vehicles produced earlier with the two-piece bearing.

According to Ford, looseness in the steering and noise from the front end of the vehicle precede a failure of the one piece bearing assembly ball joint and that these symptoms will persist for some length of time prior to the failure. Ford also believes that, along with the warning signs of potential failure, the low incident report rate and lack of alleged collision or injuries indicate that there is no pattern of a safety defect related to ball joint separation.

The age-adjusted failure rate of the subject ball joints is low in comparison with prior ODI ball joint failure investigations that resulted in recalls. Based on the relatively low complaint rate, the lack of any crashes or injuries, and the age of the subject vehicle population, a safety-related defect trend has not been identified at this time. Further use of agency resources does not appear to be warranted. Accordingly, this investigation is closed. The closing of this investigation does not constitute a finding by NHTSA that a safety-related defect does not exist in the subject vehicles. The agency will take further action if warranted by the circumstances.

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