



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

ODI RESUME

INVESTIGATION: EA01-009
 SUBJECT: Steering Sector Shaft Fracture
 PROMPTED BY: SQ00-018, Service Message 99-08-001
 PRINCIPAL ENGINEER: John Ridgley

DATE OPENED: 3-2-01

MANUFACTURER: Ford Motor Company
 MODEL(S): Super Duty F-Series
 MODEL YEAR(S): 1999-2000
 VEHICLE POPULATION: 887,000

PROBLEM DESCRIPTION: The steering sector shaft may fracture causing complete loss of steering control.

FAILURE REPORT SUMMARY

	ODI	MANUFACTURER	TOTAL
COMPLAINTS:	11	39*	50
CRASHES:	11	30*	41
INJ CRASHES:	4	7*	11
# INJURIES:	5	8*	13
FAT CRASHES:	0	0	0
# FATALS:	0	0	0
OTHER:	0	36*	36

DESCRIPTION OF OTHER: Warranty claims.

* 1999 Model Year only

ACTION: Open an EA.

ENGINEER: *John Ridgley*
 3/1/01
 DATE

DIV CHF: *J. White*
 3/1/01
 DATE

OFC DIR: *[Signature]*
 3/2/01
 DATE

SUMMARY: In response to an Information Request, Ford stated that it had recalled similar vehicles in Mexico and Brazil for fracture of the steering gear sector shaft caused by front-wheel shimmy which was attributed to bias-ply tires and vehicles not equipped with steering dampers. The U.S. vehicles are not equipped with bias-ply tires. Ford also reported that a 1999 F-550 truck had experienced a sector shaft fracture during a durability test in March 1999. Ford contends that of all the sector shaft fractures it inspected, all of them were the result, not the cause, of the crashes.

ODI has received nine reports of fractured steering sector shafts on 1999 F-Super Duty vehicles; seven with 4x4 drive, and two with 4x2 drive. All of these reports allege crashes occurred because of broken sector shafts, and include three injuries. ODI has also received two reports of sector shaft fracture on 2000 model year F-Super Duty vehicles, including two crashes, and two injuries. ODI's consumer data system reveals that steering gear sector shaft fracture is an extremely rare occurrence, with or without crashes, except for the subject vehicles. It is recommended that an Engineering Analysis be opened.