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

ODI RESUME

INVESTIGATION:	EA97-001	DATE OPENED: 13-JAN-97
SUBJECT:	Brake Rotor Separation	DATE CLOSED: 9-JAN-98
PROMPTED BY:	PE96-053	

MANUFACTURER:	Chrysler
MODEL(S)/MODEL YEAR(S):	1993 Jeep Grand Cherokee 1990-1993 Cherokee, Wrangler, and Comanche 1988-1991 Eagle Premier and Dodge Monaco
VEHICLE POPULATION:	1,328,921* * 225,000 vehicles in fifteen salt belt states and the District of Columbia are involved in the recall. See the Summary below.

PROBLEM DESCRIPTION: Corrosion of the brake rotors in certain "salt belt" states has caused separation of the brake disc from the hub resulting in brake failure denoted by loud grinding noises and "pull" when the brakes are applied. This results in a dramatic increase in stopping distance in spite of the fact that the driver continues to have a solid, firm pedal with no warning light.

FAILURE REPORT SUMMARY

	ODI	MANUFACTURER	TOTAL
COMPLAINTS:	20	52	72
CRASHES:	0	0	0
INJ INCIDENTS:	0	0	0
# INJURIES:	0	0	0
FAT CRASHES:	0	0	0
# FATALS:	0	0	0
SURVEY:	10	11	21
OTHER:	n/a	750	750

DESCRIPTION OF SURVEYS: ODI surveyed 1993 Jeep Cherokees and Grand Cherokees. Chrysler surveyed 1989-1991 Premier/Monaco and 1990-1991 Cherokee, Wrangler, and Comanche owners.
DESCRIPTION OF OTHER: Warranty claims on rusted/corroded and broken/cracked brake rotors.

ACTION: Close this Engineering Analysis. Recall Number 98V-005.

ENGINEER: _____ DATE: 1/8/98

DIV CHF: Richard Boyd DATE: 1/8/98

OFC DIR: _____ DATE: 1/9/98

SUMMARY:
Chrysler notified ODI that they are conducting a recall to replace front disc brake rotors on the following vehicles in 15 salt belt states and the District of Columbia:

- ◆1993 Jeep Grand Cherokee vehicles built between July 1992 and July 1993
- ◆1990 and 1991 Jeep Cherokee, Wrangler, and Comanche vehicles built between July 1989 and July 1991
- ◆1989 through 1991 Eagle Premier and Dodge Monaco vehicles built between July 1988 and July 1991

Approximately 186,000 Jeep vehicles and 39,000 Dodge and Eagle vehicles are potentially affected.

Chrysler acknowledges that the front disc brake rotors of the subject vehicles may experience severe corrosion if operated for extensive periods in states that utilize large amounts of salt on their roads. The front brake rotors are a composite of both iron and steel. With time and use, the brake rotor corrodes at the joint between the steel center "hat" section and the iron outer disc rendering the metal at the joint thin and weak such that separation of the brake rotor can occur.

Of the vehicles under investigation, the only vehicles excluded from this "salt belt" recall are the 1992-1993 Jeep Cherokee, Wrangler, and Comanche. Thus, although there are 2 complainants and 3 survey respondents that had similar brake rotor separations on the 1992-93 Jeep Cherokee vehicles, the numbers are low when viewed as an overall percent of the remaining population, in spite of the fact that these vehicles have even more field exposure than the 1993 Grand Cherokee. Specifically, there were 5 known separations on a population of 354,714 1992-1993 Jeep Cherokee, Wrangler, and Comanche vehicles and 22 known separations on a population of 223,435 1993 Jeep Grand Cherokees.

Prior to 1992, the rotors exhibited bare metal; however, in 1992, Chrysler began coating the rotors with a corrosion resistant coating called Dacromet. Chrysler has found that the Dacromet coating breaks down when exposed to temperatures over 800 degrees Fahrenheit. Chrysler believes that the Grand Cherokee vehicles are more susceptible to separations than either the Cherokee, Wrangler, or Comanche vehicles because the Grand Cherokee brake rotors get much hotter and are more likely to experience a break down of the Dacromet coating.

ODI will continue to monitor the remaining population of 1992-1993 Jeep Cherokee, Wrangler, and Comanche vehicles, and if there are indications that the problem is becoming more pronounced on the non-recalled models, the appropriate action will be taken.

Owners in Connecticut, Illinois, Indiana, Maine, Maryland, Michigan, Minnesota, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, Wisconsin, and the District of Columbia will receive replacement rotors that are coated with a corrosion protection. This Engineering Analysis is closed. Recall 98V-005 is attached.