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U.S. DEPARTMENT OF TRANSPORTATION • NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

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CASE OF THE MONTH

FRONT WHEEL BEARING AND SPINDLE FAILURE ON GM V-8's

(Case No. C8-23)

The NHTSA recently opened an investigation of alleged front wheel bearing and spindle failure due to excessive front brake heat in the 1975 Chevrolet Monza V-8, Oldsmobile Starfire and Buick Skyhawk. The case is based on 11 consumer complaints on front wheel bearing problems involving three broken spindles and three other damaged spindles. Two of the spindle failures resulted in near accidents.

The 1975 Monzas, Starfires and Skyhawks are basically similar vehicles which utilize the same frame, suspension, brakes and body. The Starfires and Skyhawks have a V-6 engine, whereas the Monza utilizes the same four cylinder engine as the Chevrolet Vega or the optional 262 C.I.D. V-8 engine. All of these vehicles utilize the same front spindles, wheel bearings and brakes as the Chevrolet Vega. Drum brakes are used at the rear; and disc brakes with solid, unvented motors are used at the front. The spindle supports the front wheel and wheel bearing. The wheel becomes detached if the spindle breaks.

Allegedly, the front brakes develop excessive heat due to front suspension weight and design of the front

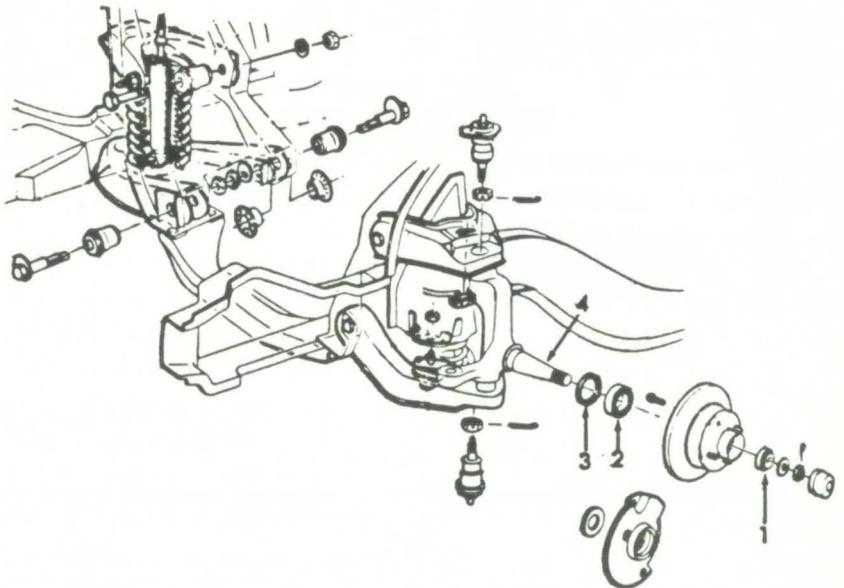
disc brake rotors. Heat from the brake rotor is transferred to the wheel bearing, causing wheel bearing grease to be heated to a liquid stage. Loss of the lubricant can cause wheel bearing and ultimately spindle failure.

In opening this investigation, the NHTSA notes that in some cases, wheel bearing failure can result in a loss of vehicle control if the driver

is not sufficiently alert or knowledgeable to respond to the noise which usually precedes a complete bearing failure.

PRP Telephone Number:

Have some interesting information?
Need more materials? CALL US
COLLECT (703) 527-4500.



Typical Knuckle & Hub Assembly

PINTO DISC BRAKE CORROSION REPORTED

RITE-WAY GARAGE, Harrisburg, Pennsylvania, has submitted the left front brake caliper, rotor and pads taken from a 1974 Ford Pinto with 23,995 miles. The piston is frozen in the caliper bore, as shown in the photo (below right).

According to the shop, the failure caused the brake pads to deteriorate completely. The condition reportedly resulted in an accident when the vehicle pulled to the right during an attempted braking and ran down an embankment.



The shop also states that this is the fourth or fifth Pinto they have seen with the same piston problem.

The photo at the left below shows corrosion on another piston forwarded to the PRP. This piston had also frozen in the caliper bore. It was removed from the left front of a 1974 Pinto with 45,000 miles.

Our thanks to RITE-WAY for forwarding this part. Information on similar brake problems from other program members would be appreciated.



Corroded Pinto Pistons

TO CATCH A THIEF

Stolen cars are involved in one out of every 350 accidents and account for approximately 5,000 disabling injuries and 130 fatalities annually.

To protect car owners against theft, the NHTSA is proposing to amend its safety standard #114 on theft protection. Some of the changes would be to require that the ignition key be different from the

door key, the door lock buttons be modified to prevent lifting by external devices and that ignition wires be protected to reduce hot wiring.

Such requirements would be effective with the 1981 model year passenger cars. Comments on the proposed change should be submitted by July 31, 1978 to the Docket Section, NHTSA, 400 Seventh Street, SW., Washington, D.C.

ALLEGED FIRES

The NHTSA has received some reports of engine compartment fires in V-8 equipped Ford Granadas and Mercury Monarchs. If any PRP member has encountered a fuel leak or fire in these vehicles, let us know what you found.

DEFECT INVESTIGATIONS CHECKLIST

- C8-26: Alleged Failure of Wiring Harness Connecting Rear Wheel Speed Sensor to Anti-Lock Computer Module on Ford Series B, C, F, L, W and CL, 1975 to March 6, 1978.
- C8-24: Alleged Failure of Certain 13 and 14 inch Chrome Trailer Wheels Manufactured by Broad Wheels Company.
- C8-23: Alleged Front Wheel Bearing and Sindle Failure Due to Excessive Front Brake Heat, 1975 Chevrolet Monza V-8, Oldsmobile Starfire and Buick Skyhawk Vehicles.
- C8-19: Alleged Breakage of the Manual Transmission, Floor-Mounted Gear Shift Levers in 1971-1978 Mercury Capris.
- C8-20: Alleged Malfunction of Power Steering Control Valve in 1975-1977 Ford Granadas and Mercury Monarchs.
- C8-04: Alleged Sticking of Idler Arm Bushing in 1968 to 1974 Fords, Lincolns and Mercurys, Full-Size and Intermediate.
- C8-02: Alleged Jumping Into Reverse from the "Park" Position of Certain 1973-78 Ford, Lincoln and Mercury Vehicles Equipped With C-6 or FMX Transmissions.

Have an interesting problem? . . . Need more materials? . . .
CALL US COLLECT: (703) 527-4500

THE FORUM

SEQUOIA AUTOMOTIVE INSTITUTE, Sunnyvale, California, reports fuel leakage in the Carter YF single barrel carburetor. They recently removed one from a 1971 Maverick with 76,000 miles. The throttle shaft was loose, and fuel was leaking on to the exhaust manifold. This is reportedly the third Carter YF single barrel carburetor they have seen with this problem. Two were new, one rebuilt.

A steering problem has been reported in Ford E-100 vans by the CHESTER BODY AND REPAIR

COMPANY of Cleveland, Ohio. The vehicles in question are owned and operated as emergency vehicles by the American Red Cross. The problem involves the drag link assembly on two 1976 Ford E-100s, one with 21,000 miles, the other with 24,471 miles. The shop claims that the ball stud socket ends on each were loose, causing steering difficulty.

FRANK'S FRONT END SERVICE, Manchester, New Hampshire, reports a potential problem with the emergency brake cable on a 1978 Dodge Magnum XE with 2,649 miles.

While balancing the wheels the shop noted that the cable was caught on the bracket which holds the anti-sway bar, causing the right rear wheel to lock. Pulling on the brake release would not, according to the shop, unlock the wheel. Allegedly, if there is enough slack in the cable, there is a possibility of it becoming snagged on the bracket when traveling on a rough road. The vehicle was still under warranty and was therefore returned to the dealership for service.

FMVSS 121 ANTI-LOCK BRAKE INVESTIGATION OPENED

An investigation was recently opened by the NHTSA on alleged failures in the wiring harness used to connect the rear wheel speed sensor to the FMVSS anti-lock computer module on certain Ford trucks. The vehicles in question are all Ford Motor Company vehicle series B, C, F, L, W and CL for model years 1975 through March 6, 1978. The case (ODI Case No. C8-26) was opened based upon a petition by the Palmer Transportation Company and information furnished by the Wilson Freight Company.

The wiring harness transmits electrical voltage signals from the wheel speed sensors to the brake anti-lock

computer module. Allegedly, the manufacturer's design does not secure the harness to keep it from flexing during vehicle movement. Flexing apparently causes the wire in the harness to fail. Complete failure or an intermittent open circuit could cause the anti-lock system to be inoperative on the affected axle.

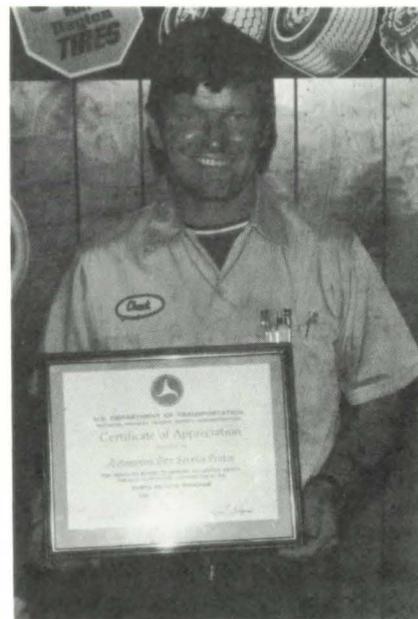
A malfunction should cause the anti-lock warning light to illuminate, warning the driver. This type of malfunction could cause erratic operation of the brake system due to irregular electrical signals from the wheel speed sensor. This could, in turn, cause the driver to have problems with vehicle control.

Propane Fuel Systems

The NHTSA is seeking information relating to failure and/or malfunction of propane fuel systems used in motorcoaches, normally operated by municipalities or transit districts, that have caused fires, accidents, injuries or property damage.

LEVERS

The NHTSA has received three reports of the turn signal/dimmer switch/cruise control lever breaking off on 1978 Chevrolet Caprices. Reports of similar failures on late model GM vehicles with cruise control would be of interest.



Chuck Broderick of AUTOMOTIVE CITY SERVICE CENTER, San Francisco, holds his first Certificate of Appreciation as an outstanding participant in the Parts Return Program. Said Broderick, "We at Automotive City are proud to be a part of this worthwhile program and will continue to contribute."

OUTSTANDING PARTICIPANTS

Our outstanding participants are those that have sent to the PRP at least one component or item of information during the current month. The number in parentheses before a participant's name identifies the number of consecutive months the participant has sent in components and information. New members who have just become active in the PRP for this year (July 1977 to June 1978) are identified with an asterisk before their name. This month, 13 members became new active participants and five have sent in components or information in consecutive months. We need more active participants. Put your establishment on the map today!

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- * DESERT HILLS PHILLIPS 66
Las Vegas, NV
- * DOC'S AUTO REPAIR
Mesa, AZ
- DUNCAN'S AUTO REPAIR
Phoenix, AZ
- (2) JOHN'S GARAGE
Nampa, ID

REGION 9

- (3) CHUCK AND WAYNE'S GARAGE
Eugene, OR
- L.A.D. AUTO ELECTRIC
Spokane, WA

REGION 9a

- AUTOMOTIVE CITY SERVICE CENTER
San Francisco, CA
- * JASON'S AUTO PARTS
Van Nuys, CA

REGION 5

- FELD GARAGE, INC.
Kenosha, WI
- * FRENCHY'S SERVICE STATION
Duluth, MN
- * MINNESOTA GAS COMPANY
Minneapolis, MN
- WISCONSIN DEPARTMENT OF
TRANSPORTATION
Madison, WI

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Colonie, NY
- * KOLESNIK'S SERVICE STATION
Rochester, NY

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- (10) AUTO BRAKE CORPORATION
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- * UNIVERSAL IMPORTS
Rockville, MD

REGION 3

- * IKE'S AUTOMOTIVE MAINTENANCE
Montgomery, AL

REGION 6

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Chicago, IL
- * HIGHLAND CREST 66
Kansas City, KS
- * STEEL'S GARAGE
Rockford, IL
- * TIM'S IMPORT SALES AND SERVICE
Hutchinson, KS

REGION 7

- * MOONEY'S WHEEL ALIGNMENT AND
BRAKE SERVICE
Oklahoma City, OK

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