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OFFICE OF
DEFECTS INVESTIGATION

Timothy A. Blubaugh
Director
Government Technical Affairs

Freightliner LLC
4747 N. Channel Avenue
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September 2, 2005

Ron Medford
Sr. Associate Administrator for Vehicle Safety
National Highway Traffic Safety Administration
400 Seventh Street, S.W.
Washington, D.C. 20590

05V-408
(13 pages)

Re: Defect Information Report FL-452, ZF Steering Shaft

Mr. Medford:

In accordance with Part 573 of Title 49 of the Code of Federal Regulations, Freightliner LLC herewith reports a safety campaign to recall approximately 33,000 Freightliner Century, Columbia, and Coronado trucks; and Freightliner Custom Chassis XC motorhome chassis manufactured April 1, 2004 to approximately November 30, 2004 that may contain a defect in the steering shaft assembly.

Attached are Freightliner's Defect Information Report and the Part 573 Notification to NHTSA submitted by ZF Sales and Service North America, LLC

Please contact me if you have any questions.

Sincerely yours,

Timothy Blubaugh

Cc: Michael Mason, CAL-OSHA
DOSH, Legal Unit
10th Floor
455 Golden Gate Avenue
San Francisco, CA 94102

Enclosure

Certified Mail Article Number:

7003 2260 0001 3403 3639



A DaimlerChrysler Company

Defect Information Report

(Section 573.6)

September 2, 2005

(c)(1) Manufacturer: Freightliner LLC
P.O. BOX 3849
Portland, Oregon 97208
(503) 745-5219

Brands: Freightliner Trucks and Freightliner Custom Chassis

(c)(2) Vehicles identification:

Model(s) affected: Freightliner Trucks – Century, Columbia, Coronado, and FLD
Freightliner Custom Chassis – XC motorhome chassis

Manufacture Dates: April 1, 2004 to approximately November 30, 2004

Basis for determining population: Vehicles built with steering shafts manufactured by ZF identified in the Part 573 Notification to NHTSA

Component manufacturer if other than the vehicle manufacturer:

ZF Group NAO
15811 Centennial Drive
Northville, MI 48167
See attached ZF Defect Information Report for more information.

(c)(3) Total number of vehicles potentially affected: Approximately 33,000

(c)(4) Percentage of vehicles estimated to contain the defect: See attached ZF Defect Information Report

(c)(5) Description of the defect:

The lower yoke on the steering shaft may have been incorrectly machined by a sub-supplier which can affect the quality of the connection to the steering shaft. If the splines of the steering shaft push through the lower yoke, the steering wheel will be free to turn without any response from the vehicle.

(c)(6) Chronology of principal events:

Freightliner has had two reports of the splines of the steering shaft pushed through the lower yoke. One was on a FLD D2 in the plant in Santiago; the other vehicle was being driven in Canada. See attached ZF Defect Information Report. ZF has been working with Freightliner to develop and validate the proposed field repair. Several proposals have been evaluated and dismissed as inadequate.

(c)(7) Noncompliance-test or other data: not applicable

(c)(8) Remedial program: Repairs will be performed by Freightliner dealerships and Direct Warranty customers, i.e., customers approved by Freightliner to do their own warranty repairs. A tension collar will be attached to the steering shaft to secure the connection to the yoke.

Estimated Owner Notification Date: Customer notification will be by first class mail using Freightliner records to determine the customers affected. This will be completed approximately September 29, 2005.

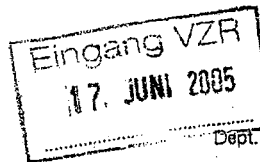
Reimbursement Plan: All prior repairs, if any were made, would be covered by warranty.

(c)(9) Communications sent to dealers and owners: Copies will be submitted as a supplemental report when available.

(c)(10) Copy of proposed owner notification letter: A draft will be sent for ODI review when available.

(c)(11) Manufacturer's campaign number: FL-452

Ø Hr. Ranger



ZF Group NAO - 15811 Centennial Drive
Northville, MI 48167

Kenneth N. Weinstein, Associate Administrator
for Enforcement
National Highway Traffic Safety Administration
400 Seventh Street, S.W. (NSA-01)
Washington, D.C. 20590

Dept.

From

Phone

Fax

E-mail

Your Ref.

Our Ref.

Corporate

Beth Walker

734-207-2823

734-454-1063

elizabeth.walker@zf.com

Date

June 10, 2005

Part 573 Notification to NHTSA

Dear Mr. Weinstein,

On June 6th, 2005, ZF decided that a defect which relates to motor vehicle safety exists in items of motor vehicle equipment listed below, and is furnishing notification to the National Highway Traffic Safety Administration in accordance with 49 CFR Part 573 Defect and Noncompliance Reports.

573.6 (c)(1): Manufacturer's Name of the item of equipment

ZF Lenksysteme GmbH, plant Berlin, Lange Enden 1, 13437 Berlin, Germany

ZF Heavy Duty Steering Inc., 50 Harwill Road, St. Thomas ON N5P 4M6, Canada

Contact person for both:

Dave Peno,
Business Unit Manager - Steering Technology,
ZF Sales & Service North America, LLC
777 Hickory Hill Drive
Vernon Hills, IL 60061
Tel: 847-478-6754
Mobile: 847-997-0964
Fax: 847-478-6774

President: Julio Caspari
www.zf.com

ZF Group NAO
15811 Centennial Drive
Northville, MI 48167 · USA
Phone 1-734-416-6200
Fax 1-734-416-8331



573.6 (c)(2)(iii): Identification of Items of Motor Vehicle Equipment

Generic Name of item	Model
Shaft	I-Shaft

Supplier	Customer	Part number	Date of supply
ZF Lenksysteme	Newell Coach Cooperation	7025974718 7025974729	Mar 19, 2004 - Oct 04, 2004
ZF Lenksysteme	Freightliner LLC Portland	7025974743	Apr 20, 2004 - Jun 23, 2004
ZF Lenksysteme	Motor Coach Industries Winnipeg	7025974759 7025974765 7025974774 7025974775	Mar 24, 2004 - Aug 09, 2004
ZF Heavy Duty	Sterling Truck St. Thomas, Canada	7025974685	May 12, 2004 - Sep 09, 2004
ZF Heavy Duty	Freightliner Daimler Chrysler Vehiculos, Santiago, Mexico	7025974730 7025974731 7025974724 7025974726	May 11, 2004 - Aug 17, 2004 Apr 14, 2004 - Oct 13, 2004 Apr 20, 2004 - Oct 15, 2004 Apr 06, 2004 - Oct 15, 2004
ZF Heavy Duty	Freightliner Corp. Cleveland	7025974730 7025974731 7025974724 7025974703 7025974704	Apr 08, 2004 - Oct 13, 2004 Apr 06, 2004 - Oct 15, 2004 Apr 13, 2004 Apr 16, 2004 - Oct 01, 2004 Apr 19, 2004 - Oct 04, 2004
ZF Heavy Duty	Freightliner Corp. Portland	7025974730 7025974731 7025974732	Sep 16, 2004 Apr 14, 2004 - Oct 14, 2004 Apr 27, 2004 - Oct 15, 2004



Supplier	Customer	Part number	Date of supply
ZF Heavy Duty	Freightliner (FCCC), Gaffney	7025974741 7025974742 7025974752	Apr 20, 2004 - Oct 07, 2004 Apr 27, 2004 - Oct 18, 2004 Apr 06, 2004 - Oct 08, 2004
ZF Heavy Duty	Workhorse (Autocar LLC, Hagerstown)	7025974723	May 05, 2004 - Sep 29, 2004
ZF Heavy Duty	Workhorse Protopshop, Indiana	7025974723	Jul 30, 2004
ZF Heavy Duty	Trolley Boats Holly Hill	7025974723	May 13, 2004 - Aug 20, 2004
ZF Heavy Duty	Spartan Motors Inc, Charlotte	7025974744 7025974747	Apr 01, 2004 - Jul 30, 2004 Apr 13, 2004
ZF Heavy Duty	Motor Coach Industries Winnipeg	7025974759 7025974765	Jul 21, 2004 - Oct 13, 2004 Jul 21, 2004 - Oct 13, 2004

573.6 (c)(2)(v) Manufacturer that purchase the component

- Newell Coach Cooperation, North Highway 69, Miami OK 74355, USA
- Freightliner LLC Cooperate II Test Center, 4300 N. Commerce, 97217 Portland, OR, USA
- Motor Coach Industries, Fort Gary Warehouse, 1475 Clarence Av., Winnipeg, Manitoba R3T 1T5, Canada
- Sterling Truck, 350 South Edgeware Road, St. Thomas, Ontario, N5P 4C4, Canada



- Freightliner / Daimler Chrysler Vehiculos, Comerciales Mexico, KM 23.7, Location 065, Carretera, Lamarquesa, CP 52600 , Santiago, Mexico
- Freightliner Corp, 1150 Statesville Street, Cleveland, NC, 27013, USA
- Freightliner Corp, 6936 North Fathom Street, Portland, Oregon, 97217. USA
- Freightliner (FCCC), 552 Hyatt Street, Gaffney, SC, 29341, USA
- Workhorse (Autocar LLC, 551 East Main Street, Hagerstown Indiana, 47346, USA)
- Workhorse Protoshop, 2741 North Arba Pike, Union City, Indiana, 47390, USA
- Trolley Boats, 406 Walker Street, Holly Hill, Florida, 32117, USA
- Spartan Motors Inc, 1549 Mikesell Road, Charlotte, Michigan, 48813, USA

573.6 (c)(3): Total Number of Parts Containing the Defect

Supplier	Customer	Part number	Number of parts potentially involved
ZF Lenksysteme	Newell Coach Cooperation	7025974718	28
		7025974729	28
ZF Lenksysteme	Freightliner LLC Portland	7025974743	8
ZF Lenksysteme	Motor Coach Industries Winnipeg	7025974759	32
		7025974765	32
		7025974774	2
		7025974775	2
ZF Heavy Duty	Sterling Truck St. Thomas, Canada	7025974685	173
ZF Heavy Duty	Freightliner Daimler Chrysler	7025974730	300
		7025974731	3750



Supplier	Customer	Part number	Number of parts potentially involved
	Vehiculos, Santiago, Mexico	7025974724 7025974726	1190 999
ZF Heavy Duty	Freightliner Corp. Cleveland	7025974730 7025974731 7025974724 7025974703 7025974704	1000 26100 2 142 219
ZF Heavy Duty	Freightliner Corp. Portland	7025974730 7025974731 7025974732	50 1700 450
ZF Heavy Duty	Freightliner (FCCC), Gaffney	7025974741 7025974742 7025974752	1050 647 357
ZF Heavy Duty	Workhorse (Autocar LLC, Hagerstown)	7025974723	58
ZF Heavy Duty	Workhorse Protoshop, Indiana	7025974723	4
ZF Heavy Duty	Trolley Boats Holly Hill	7025974723	2
ZF Heavy Duty	Spartan Motors Inc, Charlotte	7025974744 7025974747	127 4
ZF Heavy Duty	Motor Coach Industries Winnipeg	7025974759 7025974765	156 156

573.6 (c)(4): Percentage of parts estimated to contain the defect

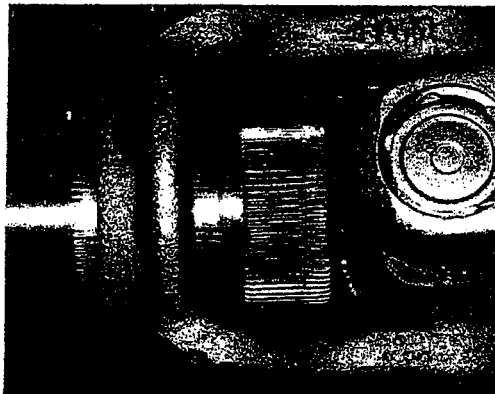
Approximately 52 ppm of the Parts (0.0052 %) identified pursuant to 573.6 (c) (3)



573.6 (c)(5): Description of the Defect

- Defect

The I-Shaft is the mechanical linkage between steering wheel and the steering gear. At the non welded side of the I-Shaft there is the universal joint. There are possibilities that the fork / shaft connection may get lost.



- Causes

Employee failure: The Fork was broached twice. Consequently the press fit connection between the Fork and the Shaft may get lost.

- Consequences

In case of fork / shaft connections get lost the steering ability of the vehicle gets lost.



- Any warning?

With increasing damage of the I-Shaft an increasing clearance at the steering wheel can be felt. This clearance can also be felt by shaking the I-Shaft manually (accessibility depending on mounting position in the vehicle).

- Supplier of the Defect component

Bohn Gesellschaft für mechanische Fertigung mbH, Motzener Straße 24, 12277 Berlin, Germany, Mr. Wolfgang Scheer

573.6 (c)(6) Chronology of all principal events

October 18th, 2004: 0-mileage failure at customer, corrective actions implemented

April 21st, 2005: Field failure / breakdown of a Highway tractor; no injuries

573.6 (c)(8)(i) Remedy Program:

Correction in Production line:

100% control of force and stroke during press fit connection fork / shaft, starting October 20th, 2004.

Field:

Verification of parts with special created tool (parts with less than 13kN pull-of force will be clearly identified as beyond specification and automatically destroyed).



573.6 (c)(8)(ii) Schedule

-Notification to the customers

Begin of notification: June 3rd 2005

End of notification: June 6th 2005

-Schedule for recall is not determined, yet.

573.6 (c)(9) Copy of all notices bulletins and communications

See attachment (presentation; notification letters to customers)

If you or your staff has any questions, please feel free to contact me.

Sincerely,

A handwritten signature in cursive script that reads 'Beth Walker'.

Beth Walker



Description of case

Monday April 25th, 2005 we received the information from the breakdown of a Highway tractor on April 21th, 2005.

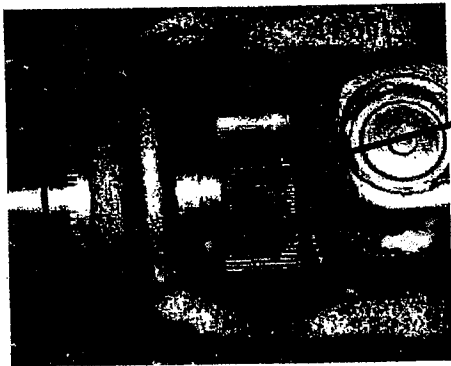
The steering wheel was suddenly free to turn while breaking the vehicle had a collision with the road shoulder guard rail.

This was a single vehicle collision and there were no injuries.



Description of case

The driver lost the steering control because the shaft of the I-shaft unit slit into the press-on fork.





Findings

The serration of the press-on fork has been broached twice caused by a handling failure of the operator at the machining centre (sub-supplier).

Consequently the press fit connection between the Fork and the Shaft got loose.

