



Service Bulletin No. 308

| | | | |
|---|-------------------------------------|---|------|
| MODEL D / E / J Series Coaches | TYPE Field Change Program | SECTION/GROUP 13-Transmission | DATE |
| SUBJECT ZF SOFTWARE UPDATE CAMPAIGN FOR CELL PHONE & RADIO INTERFERENCE | | | |
| CONDITIONS | | | |

DRAFT

Ref. ZF NHTSA Recall No.: 06E-100
 Ref. NHTSA MCI Recall No.: 08-TBA
 Ref. Transport Canada MCI Recall No.: 08-TBA

Description:

ZF Friedrichshafen AG ("ZF") has reported to Motor Coach Industries ("MCI") that there is a potential for the ZF ASTRONIC shift selector to malfunction as the result of cellular phone, PDA, radio interference, improper radio antenna or power supply installation. When this happens, the ZF shift selector may move into reverse without driver knowledge. ZF has created a software update that protects against the potential for transient analog or digital signal interference that can cause the transmission shift selector to move into the reverse gear without driver knowledge.

Refer to attached ZF Service Information Bulletin No. 08_19 for additional details.

Corrective Action for unit numbers 54360 to 56558 and 61564 to 63068:

MCI strongly encourages owners of (1) D model coaches equipped with a ZF transmission between the range of, and including, unit numbers 54360 to 56558, and (2) E / J model coaches equipped with a ZF transmission between the range of, and including, unit numbers 61564 to 63068, to contact their MCI Product Support Specialists (PSS) or their local MCI Service Center at the earliest opportunity to schedule an appointment to have the neutral safety switch removed, if required. Upon removal of the neutral safety switch, MCI will download the new ZF software program and apply a decal beside the touch pad shift selector warning that cellular phones, PDAs, radios capable of transmitting, antennas or power supplies must be kept a minimum of 20 inches/50 cm away from the touch pad shift selector. (AS Tronic manual - 1337.758101)

To ensure successful downloading of the new ZF software program, the neutral safety switch must first be removed. (N.B. - The neutral safety removal is unrelated to the defect. It is required to allow the software upgrade to work correctly. The function of the neutral safety switch is now controlled by the ZF software.)

Corrective Action for unit numbers 56559 to 58713 and 63069 to 64987:

MCI strongly encourages owners of (1) D model coaches equipped with a ZF transmission between the range of, and including, 56559 to 58713 and (2) E / J model coaches equipped with a ZF transmission between the range of, and including, unit numbers 63069 to 64987 contact their local authorized ZF Service Facility or MCI Service Center to download the new ZF software program and have a decal applied beside the touch pad shift selector warning that cellular phones, PDAs, radios capable of transmitting, antennas or power supplies must be kept a minimum of 20 inches/50 cm away from the touch pad shift selector. (AS Tronic manual - 1337.758101)

Parts

| Qty. | New P/N | Description |
|------|------------|----------------------|
| 1 | 07-08-2789 | Decal, No Cell Phone |

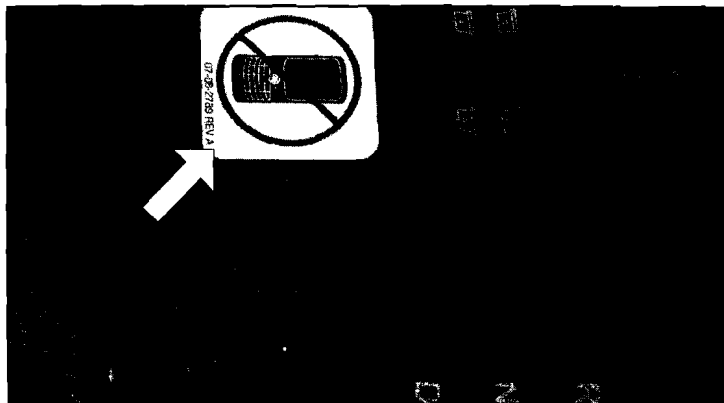


Figure 1. NO cellular phone decal.

Authorized ZF Service Facilities to perform MCI FCP Service Bulletin 308

| ZF Dealer | Street | City | St./Pr. | Phone |
|--|---------------------------|--------------|---------|----------------|
| Harbor Diesel & Equipment, Inc. | 537 West Anaheim Street | Long Beach | CA | (562) 591-5665 |
| Cummins Rocky Mountain, LLC. | 8211 East 96th Avenue | Henderson | CO | (303) 927-2220 |
| Precision Transmission, Inc. | 4821 Waycross Road | Ft. Myers | FL | (239) 693-7477 |
| Republic Diesel | 865 Nandino Boulevard | Lexington | KY | (659) 255-2366 |
| Frontier Truck Parts | 2019 Chicago Drive | Wyoming | MI | (616) 241-2110 |
| Foley Inc. | 833 Centennial Avenue | Piscataway | NJ | (732) 885-8254 |
| Cleveland Brothers Equipment Co., Inc. | 100 Smith Drive | Cranberry | PA | (724) 776-1400 |
| Precision Transmission, Inc. | 159 Discovery Drive | Colmar | PA | (215) 822-8300 |
| Camerota Truck | 166 Universal Drive | North Haven | CT | (203) 782-0360 |
| Camerota Truck | 565 Route 3A | Bow | NH | (603) 228-9343 |
| Camerota Truck | 35 Washington Street | Westborough | MA | (508) 366-2079 |
| Cummins Southern Plains, Ltd. | 7045 N. Loop East | Houston | TX | (713) 679-2220 |
| Cummins Southern Plains, Ltd. | 2615 Big Town Blvd. | Mesquite | TX | (214) 321-5555 |
| Cummins Southern Plains, Ltd. | 6226 Pan Am Expressway N. | San Antonio | TX | (210) 655-5420 |
| Bowers Driveline | 22221 70th Avenue South | Kent | WA | (253) 872-7800 |
| ZF Sales & Service | 777 Hickory Hill Drive | Vernon Hills | IL | (847) 478-6868 |
| ZF Sales & Service | 777 Hickory Hill Drive | Vernon Hills | IL | (847) 478-6868 |
| The Gear Centre, Ltd. | 7170 Blackfoot Trail S.E. | Calgary | AB | (403) 252-3880 |
| The Gear Centre, Ltd. | 14805 -116 Avenue | Edmonton | AB | (780) 452-6933 |
| Tarten Equipment, Ltd. | 6199 Shawson Drive | Mississauga | ON | (905) 670-1704 |

Authorized MCI Fleet Support Service Centers to perform MCI FCP Service Bulletin 308

| MCI FLEET SUPPORT SERVICE CENTERS | |
|--|--|
| <p>Illinois 10 E. Golf Road Des Plaines, IL 60016 800-743-3624</p> | <p>Tennessee 215 Maddox Simpson Pkwy Lebanon, TN 37090 800-927-5041</p> |
| <p>Ohio/ Major Repair Center 219 West Campbell Street Loudonville, OH 44842 877-754-4404</p> | <p>Florida 3718 LB McLeod Road Orlando, FL 32805 800-390-0287</p> |
| <p>New Jersey 14 Harmon Drive Blackwood, NJ 08012 800-262-1287</p> | <p>California 10850 Portal Drive Los Alamitos, CA 90720 800-777-4101</p> |
| <p>New Jersey 1599 Albany Avenue Atlantic City, NJ 08401 800-263-1041</p> | <p>CANADA 1400 Barre Street Montreal, QC H3C 1N4 800-663-3328</p> |
| <p>Texas 9787 Clifford Drive Dallas, TX 75220 800-248-4942</p> | <p>MCI PRO SUPPORT STANDING BESIDE YOU. ALL THE WAY.</p> |

Procedure complete.

Any questions concerning FCP 308 should be directed to the MCI Fleet Support Technical Center at 1-800-241-2947 or your local MCI Product Support Specialists (PSS)

Field Change Program Conditions:

The only part required for this change is the 07-08-2789 Decal.

Labor will be provided by ZF or MCI at no charge, as specialized programming equipment is required to perform this campaign.

Motor Coach apologizes for any inconvenience resulting from this campaign, but urges you to implement this change as soon as possible.

Sincerely,

Motor Coach Industries
U.S. and Canadian Service Departments.



SERVICE INFORMATION

No. 08_19

Date: 2008-07-01

Page 1 of 3

ASTRONIC
Product Transmission/Auxiliary Unit

1337,1348
Model

Software
Assembly group

All ZF Services
MCI OEM/Customer

Software Update campaign because of cell phone and radio interference (NHTSA no.06E100)

It has been identified, that there is a potential for the ASTRONIC shift selector to malfunction as a result of cell phone or radio interference, improper radio, antenna and power supply installation beyond the automotive requirements. For this malfunction to occur, a GSM network cell phone or a Blackberry (PDA) must be placed on or in the proximity of the touch pad of the Arens shifter.

Sources of interference

radio installation

wrong antenna means for metal roof instead for fibreglass roof

use of Cell phone in the proximity of the shifter

cooled antenna wire and ground/power lines

Ground wiring terminal frayed

Motorola radio is fused with 15 amp and the wire to the cigarette lighter is fused with 10 amp thermal breaker. The radio is connected parallel to the cigarette lighter. Voltage drops 1Volt when transmitter is active

Author W. Ammann

Dept. LKS-T ☎ ++49 7541 - 77 55 52 Fax ++49 7541 - 77 90 55 52 Email: wolfgang.ammann@zf.com

Customer Service / After Sales Technical Service for Truck and Bus Driveline Technology
Delivery Address: ZF Friedrichshafen AG, Zeppelin-Werftgelände 70, 88045 Friedrichshafen, Germany



Engine – Transmission – Software Overview:

| Current Spec. List *) | NEW Spec. List *) | Current Software number | NEW Software number | Engine |
|-----------------------|-------------------|-------------------------|---------------------|--------------------|
| 1337 030 005 | 1348 035 007 | 6009 374 517 | 6009 374 771 | CAT C-13 |
| | 1348 035 002 | | 6009 397 127 | CAT C-13 |
| 1337 030 004 | 1348 035 008 | 6009 374 268 | 6009 374 789 | CAT C-12 |
| 1337 030 001 | 1348 035 006 | 6009 374 503 | 6009 374 770 | DDV S60 |
| 1337 030 001 | 1348 035 006 | 6009 374 248 | 6009 374 770 | DDV S60 |
| 1337 030 001 | 1348 035 006 | 6009 374 583 | 6009 374 770 | DDV S60 |
| | 1348 035 003 | | 6009 397 126 | DDECVI and Cummins |

*) no exchange of the type plate required, spec. lists are electronically replaced in the ZF data system)

Damage coding:

| Damaged part | | Damage *) | | |
|--------------|--------------|-----------|------------------|----------------------------------|
| Designation | Item number | Location | Type | Cause |
| Software | 6008 298 029 | 000 | 536 (re-work) | 083 (preventive modification) |

*) = acc. catalog "Damage coding" no. 1200 754 101b (English)

Necessary action: Reprogramming of the ASTRONIC Software, update on all MCI coaches in the field prior to ZF transmission serial no.: **515993**

- Software modification:**
- a) Default to N for false D or R request - to avoid the potential for unintentional change in vehicle direction
 - b) 10 speed to 12 speed (for pre 2007 emission engines) - to improve vehicle start availability
 - c) Upgrade existing 12 speed (for 2007 emission engines)
 - d) Engine over-speed protection in manual mode - to prevent engine damage
 - e) Avoid possibility to be stuck in 7th gear due to "gear butting"

Additional information: Neutral switch campaign → MCI
- a rework of the MUX program and rewiring of the coach may be necessary to accept the new transmission software → MCI
(before reprogramming get in touch with MCI)

**Exchange of approx. 20 upper parts of the GS3 → ZF S&S**

- due to software compatibility issues
- old TCU no. (on the WABCO type plate): 6009 274 054
(needs to be replaced by 6009 098 001)
- new TCU no (on the WABCO type plate): 6009 274 069/080
(no change required)

Exchange of approx. 300 shifters → ZF S&S

- due to software compatibility issues because of 2 and 3 digit error code identification → ZF S&S
- bus production date: 2001 - 2004 (old shifter) 0501 212 979
(needs to be replaced by 0501 214 599)
- bus production date: 2004 - present (new shifter) 0501 214 599
(no change required)

Installation of a warning sticker onto the dashboard area

- to avoid any malfunction due to the use of electronic equipment (ZF part no.: 1348 753 101)

| | |
|---------------------------|--|
| Volume of busses: | Approx. 2500 |
| Country: | North America |
| Start of campaign: | July 2008 |
| End of campaign: | open |
| Responsibility: | MCI in cooperation with the ZF S&S network |
| Reporting: | MCI will support with coach and fleet location overview, this overview must be exchanged once a month to report to the NHTSA |

Validity: This Service Information is valid from 2008-07-25 for an unlimited period

AS Tronic Operating Manual (for end customers) 1337 758.10i

New chapter

Installation instructions and use of senders/transmitters (mobile phones, transceivers, etc.)

With regard to electromagnetic compatibility (EMC), we would like to draw your attention to the risks of functional disruptions of electronic systems which may be caused by improper installation and/or improper handling of senders (mobile phones, transceivers, etc.).

Regarding the transmission system, the installation instructions and instructions for use of the affected senders/transmitters and transmitting antennae must be complied with, especially near the ZF-AS Tronic speed range selector.

Recommendations for the use of senders (mobile phones, transceivers,...)

- Keep at least 50cm distance to the ZF-AS Tronic speed range selector.

Also refer to chapter "Electromagnetic Compatibility (EMC)" in the ZF Technical Manual 1348.765.020 and TC1 6006.739.003.