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Update: AS Tronic shift selector modification program

Dear Mr. Van Rompuy,

In addition to our information Dec.2006 we need to inform as follows.

Following problems were realized in several coach operations:

“Cell phone and UHF/VHF radio interference with the AS Tronic shift selector”

Detail information regarding the cell phone:

It has been identified, that there is a potential for the AS Tronic shift selector to malfunction as a result of cell phone interference. 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.

In the case of receiving this interference (phone starts to ring), while the shifter is in the neutral position, the device has the potential to trigger the “D” (drive forward) button request of the Arens shifter and the “D” LED will start to flash as if the “D” button has been pushed.

This will not cause improper transmission shifting or operation as the forward gear will be engaged from neutral only if the vehicle is stopped and the brake pedal depressed.

However, if the explained situation occurs while “R” (reverse) is selected, the Arens shifter has the potential to change to “D” but the vehicle would move forward only in case of 6 major preconditions:



1. cell phone placed in the proximity of the touch pad
2. receiving a call
3. driver does not recognize the display information change “R” to “2”
4. vehicle speed below approx. 1 km/h
5. driver is pressing the gas pedal
6. driver fails to realize the wrong vehicle impulse direction (drive mode in “D” instead of soft manoeuvring mode in “R”) and does not apply the vehicle brake

Detail information regarding the UHF/VHF radio:

It has been also identified, that there is a potential for the AS Tronic shift selector to malfunction as a result of an improper radio, antenna and power supply installation causing the interference as well. Placing microphone cable on the shifter, keying the microphone, and releasing it caused D and R requests. The cause of this interference is the field strength and intensity of radio equipment. Further investigations confirmed that there were errors made during the radio installation, the radio mounting positions and components used did not meet the installation guidelines of the radio supplier:

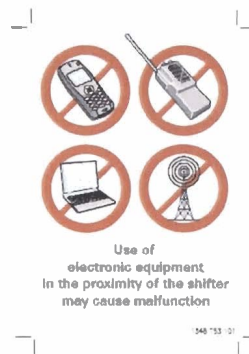


- Radio Installation not to Motorola Specs
- Wrong Antenna – meant for metal roof, not for fibreglass roof (according to Motorola, this would be the correct part no.: P/N RRA4455A-VHF)
- Very long and coiled ground and power lines
- Coiled antenna wire
- Power consumption 8amps, protected by 9amp thermal breaker with small gauge wire (parallel to cigarette lighter) Voltage drops 1 Volt when transmitter is active
- Ground wire ring terminal frayed

We do not expect a real risk of malfunction, but in order to be proactive, we have investigated this behaviour together with the shifter manufacturer Arens and we would like to propose a preventive measure herewith.

Field Action

- We would kindly like to ask you to inform your customers about this issue and request that they check and confirm that their radio installation is in accordance with the radio suppliers installation guidelines
- We believe that a warning indication by a new sticker is a usable precaution for all busses that have been delivered to your customers.



- We are prepared to send you new stickers immediately so that you are able to transfer them to your customers. More stickers are available at our ZF service station ZF S&S in Chicago
- The customers should be advised, to fix the small sticker onto the dashboard area so that the drivers will be made aware of the possible interference

Serial production

- ZFF will inform their bus application contact partners about the shifter installation guidelines in detail
- We also recommend that you install these stickers at the production line in new busses

Notification to NHTSA

According to our first information to the NHTSA, we will follow up with this information and field action as well.

Respectfully yours,

ZF Friedrichshafen AG
Customer Service

Frank Schelkle