



Memorandum

U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

Subject:	Test Request: Evaluation of Driver Door Module	Date:	July 16, 2012
From:	Frank Borris, Director Office of Defects Investigation	Reply to Attn of:	NVS-212eer EA12-004
To:	Roger Saul, Director Vehicle Research and Test Center		

This memorandum requests the Vehicle Research and Test Center (VRTC) to conduct the testing and evaluation as described below.

BACKGROUND: The Office of Defects Investigation (ODI) is conducting an Engineering Analysis (EA12-004) concerning the Driver Door Module (DDM) in MY 2006-2007 Chevrolet Trailblazer vehicles. The DDM consists of power window switches, the power door lock switch, heated front seats (with option), and supporting circuitry. The module also processes the mirror switches and memory seat switches if applicable.

During October of 2006, a production quality issue was detected by an increase in warranty returns on the GMT360 DDM. It was indicated that the modules were malfunctioning due to corroded B+ terminals and ground traces on the printed circuit board (PCB). As an interim action the supplier, Sollectron Invotronics, applied a localized, conformal coating on the affected area of the circuit board. This was completed in November of 2006. For preventative action the supplier modified the DDM by adding a levy to the top of the housing to decrease the likelihood of fluid intrusion, which was implemented in March 2007. Sollectron Invotronics also revised the PCB layout to move all potential vias and traces further inboard from the edge of the PCB. This change was put into production on May 14, 2007.

It has been noted that the scope of vehicles involved in the investigation may extend to all models within the GMT360 platform.

ALLEGED DEFECT¹: any failure, or other condition, of the DDM that results in a fire and/or thermal event as defined in 49 CFR 579.4.

OBJECTIVES: The objectives of this test program are to evaluate and/or determine: 1) any potential root causes of the alleged defect, 2) possible failure mode(s) and mechanism(s), 3) any

¹ Alleged defect as described in PE12-003 Information Request letter to GM.

erratic operation of the DDM that may occur either before, during, or after a failure, and 4) the likely severity of the fire risk (including whether the window being open or closed affects fire progression).

TEST SAMPLE DDM: ODI has provided two field samples and one exemplar DDM to VRTC. The field samples were obtained from two complainants. Switch 1 (P/N 15829905) involved a complaint in which the window switch became inoperative, but no smoke or heat damage was detected. Switch 2 (P/N 1587716) began to smoke and melt while the vehicle was in operation by the complainant. Heat damage is visible on this module. The exemplar DDM was provided by GM in response to the Information Request sent on 2/21/2012. This part is a new sample of the DDM (part number 25867000), since many of the design versions installed in the subject vehicles were no longer available. It contains the updated PCB, which was described in the background information.

RECOMMENDED APPROACH: VRTC will prepare a test plan designed to meet the above test objective. A flexible approach may be taken, but the ODI principal investigator, Ms. Emily Reichard, shall be kept informed of any significant developments that may require substantive changes to the original test plan. Emily can be reached at emily.reichard@dot.gov or (202) 366-4925.

REPORTS: A test report shall be provided upon completion of testing.

SCHEDULE: Timing to be determined with VRTC.