



U.S. Department
of Transportation

Memorandum

**National Highway
Traffic Safety
Administration**

Subject: Test Request: Analysis of Failed
Front Air Bag Crash Sensors

Date: December 13, 2006

From:  Kathleen C. DeMeter, Director
Office of Defects Investigation

Reply to: NVS-212mjl
Attn of: EA06-003

To: Michael Monk, Director
Vehicle Research and Test Center

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

BACKGROUND: The Office of Defects Investigation (ODI) is conducting an Engineering Analysis (EA06-003) concerning front frame rail-mounted air bag crash sensor (aka up front sensor) failures due to corrosion on model year (MY) 2005 and 2006 DaimlerChrysler Minivans. The front crash sensor can become nonfunctional when a front-sensor fault code is set and the air bag warning lamp is illuminated. The potential safety consequences of one or both front crash sensors not functioning are no deployment or delayed deployment of the frontal air bags and improperly reduced level of air bag inflation in certain frontal crashes such frontal offset and oblique crashes.

OBJECTIVES: The objective of this test program is to evaluate the failed front crash sensors in several subject vehicles that have the air bag warning lamp illuminated and a front sensor fault code stored. The sensors should be inspected and tested to determine the failure mode, condition and functionality of the parts. Visual inspection, component/material analysis and electrical tests of the sensors can be performed. The parts should be fully documented and photographed.

SUBJECT VEHICLES: Subject vehicles for this test program include all MY 2005 Dodge Caravan, Dodge Grand Caravan, and Chrysler Town and Country vehicles. ODI requests that VRTC lease or purchase two complaint vehicles for evaluation. Select one vehicle built before January 2005 and one built after February 2005. These vehicles will be used for in-vehicle testing of the sensors.

In addition, remove and evaluate front crash sensors from at least two other complaint vehicles (the vehicles need not be leased or purchased). Select one complaint vehicle built before January 2005 and one built after February 2005.

All vehicles considered for evaluation should have the air bag warning lamp illuminated and verification of a front crash sensor(s) fault including whether the left and/or right sensor has set the fault.

TEST PROCEDURE/METHODOLOGY: VRTC should determine the test procedures and methodology necessary to meet the objectives of this test program.

ADDITIONAL INFORMATION: The project engineer at ODI is Michael Lee who will provide VRTC with a list of potential test vehicles. ODI will also assist in obtaining test parts from other subject vehicles.

SCHEDULE: We would like to have the testing completed by February 16, 2007.

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