## Mr. Claude Harris

Acting Associate Administrator for Enforcement
National Highway Traffic Safety Administration
Recall Management Division (NVS-215)
1200 New Jersey Avenue, SE - Room W45-306
Washington, DC 20590

Dear Mr. Harris:
The following information is submitted pursuant to the requirements of 49 CFR 573.7 as it applies to a determination by General Motors of a noncompliance involving certain 2008-2009 model year Pontiac G8 vehicles.

## 573.6(c)(1): Pontiac Brand of General Motors LLC

573.6(c)(2)(3)(4): This information is shown on the attached sheet.
573.6(c)(5): General Motors has decided that all 2008-2009 model year Pontiac G8 vehicles do not comply with Federal Motor Vehicle Safety Standard 208, Occupant Crash Protection. A 5th percentile female anthropomorphic test device (ATD) in a 30 mph frontal barrier test exceeded the Head Injury Criteria (HIC) requirements of the Standard. With the front passenger seat positioned full forward, the seat position sensor will cause a 30 milliseconds deployment delay between the first and second stages of the dual-stage frontal passenger airbag. In the event of a crash severe enough to command deployment of the front passenger airbag, this delay may result in increased head injury to certain ( 5 th percentile) front seat occupants.
573.6(c)(7): GM's determination is based on:

In the process of validating the 2012 Chevrolet Caprice Police Patrol Vehicle (CCPPV) GM Holden (Holden) conducted a $56 \mathrm{~km} / \mathrm{h}$ Full Frontal FMVSS 208 test with belted 5 th percentile occupants. The passenger ATD HIC15 test results were measured to be $116 \%$ of the FMVSS 208 limit. The root cause of the unexpectedly high HIC values was found to be a RH seat position switch that was present on the CCPPV test vehicle. The switch was not required for the safety strategy plan for this vehicle, and had not been used in analysis assessments that had preceded the test. Holden concluded that the passenger seat position switch was forcing a low level deployment on the 5th percentile occupant and affected the HIC results.

A January 19, 2011, read-across investigation revealed that the 2008-2009 G8's had also been produced with a RH seat position switch. Because the G8 has a different restraint system and different sensing system than the 2012 CCPPV, Holden refined the G8 Computer Aided Engineering (CAE) models to improve CAE-to-sled delta and sled-to-barrier delta correlation from January 20 to March 25, 2011. As the CAE results were marginally above the FMVSS 208 (HIC 15) limit, from March 25 to June 2, 2011, Holden procured new test material for a 5 th $48 \mathrm{~km} / \mathrm{h}$ passenger sled test. A new Hyge sled pin was required for accurate representation of the sled pulse.

On June 14 a G848km/h 5th passenger sled test was carried out and the results were reviewed from June 17 through July 27 2011, by Holden with GMNA counterparts. CAE and sled test results appeared to confirm the CAE results; however the seat belt retractor performance during the sled test was questioned. Accordingly, from August 9 through August 29, 2011, Holden reviewed retractor performance with the seat belt supplier. The supplier provided Holden with analysis feedback to explain the observed performance.

From August 29 through September 28, 2011, Holden engineering reviewed facts regarding the issue with GMNA leadership, and it was decided that a barrier test should be conducted to confirm the sled test results. On October 20, 2011, GM performed a FMVSS 208 30mph frontal barrier test with a 5th percentile female belted passenger ATD. The test showed 840 HIC15, which exceeds the requirement of 700 HIC15.
The issue was presented to the Field Performance Evaluation Review Committee and on October 27, 2011, the GMNA Executive Field Action Decision Committee decided to conduct a noncompliance recall.
573.6(c)(8): Dealers are to reprogram the Sensing and Diagnostic Module.

GM will provide dealer bulletin and owner letter mail dates when available.
Pursuant to 577.11 (e), GM does not plan to provide notice about reimbursement to owners because owners would not be aware of the situation to have had it repaired prior to the recall.
573.6(c)(10): GM will provide the dealer bulletin and owner letter when available.

Sincerely,



M. Carmen Benavides, Director<br>Product Investigations and Safety Regulations

| VEHICLES POTENTIALLY AFFECTED BY MAKE, MODEL, AND MODEL YEAR |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | PLUS INCLUSIVE DATES OF MANUFACTURE |  |  |  |  |



GM Total:

* All involved vehicles will be corrected as necessary.
573.6(c)(2)(iv): N/A - Vehicle Integration Issue
11306

