



March 31, 2014

Ms. Nancy Lewis
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

Re: NHTSA Notification Campaign No. 14V-118

Dear Ms. Lewis:

This letter supersedes General Motors' letter of March 17, 2014, and is submitted pursuant to the requirements of 49 CFR 573.6 as it applies to a determination by General Motors to conduct a safety-related recall for some 2008 - 2009 and all 2010 - 2013 model year Buick Enclave, GMC Acadia vehicles, some 2009 and all 2010 - 2013 model year Chevrolet Traverse vehicles, and some 2008 - 2009 and all 2010 model year Saturn Outlook vehicles. Vehicles repaired as part of Customer Satisfaction Campaign 10085 and Special Coverage 10335 have already had the subject condition repaired and therefore are not included in the safety recall. Specifically, the information submitted pursuant to 49 CFR 573.6(c)(6), 573.6(c)(8) and 573.6(c)(10) below supersedes information included in General Motors' letter of March 17, 2014.

573.6(c)(1): General Motors Company: Buick, Chevrolet, GMC and Saturn Brands

573.6(c)(2)(3)(4): This information is shown on on Attachment A.

573.6(c)(5): General Motors has decided that a defect which relates to motor vehicle safety exists in some 2008 - 2009 and all 2010 - 2013 model year Buick Enclave, GMC Acadia vehicles, some 2009 and all 2010 - 2013 model year Chevrolet Traverse vehicles, and some 2008 - 2009 and all 2010 model year Saturn Outlook vehicles..

Corrosion and/or loose crimps in the driver and passenger seat mounted side impact airbag (SIAB) wiring harness connectors can cause an increase in resistance. The airbag sensing system will interpret an increase in resistance as a fault. A fault will illuminate the airbag readiness light on the instrument cluster and a "SERVICE AIR BAG" message in the Driver Information Center (DIC), and set a Diagnostic Trouble Code (DTC). At first, at lower levels of resistance, the light and DIC message may be intermittent and the airbags and pretensioners will still deploy. Over time, the resistance may reach a level where the SIABs, front center side airbag, if equipped, and pretensioners will not deploy in a crash.



573.6(c)(6): The issue was presented to the Field Performance Evaluation Review Committee, and on March 14 and March 16, 2014, the Executive Field Action Decision Committee decided to conduct a safety recall. See Attachment B. General Motors now submits the attached chronology of principal events that were the basis for the determination that the defect related to motor vehicle safety. Upon request, General Motors is prepared to share with NHTSA, additional documentation related to this recall.

573.6(c)(8): Dealers will remove the driver and passenger SIAB wiring harness connectors and splice and solder the wires together.

GM sent the dealer bulletin on March 25, 2014., and anticipates mailing owner letters in April 2014.

Pursuant to 577.11, GM will provide reimbursement to owners for repairs completed on or before ten days after the owner mailing is completed, according to the plan submitted on May 23, 2013.

573.6(c)(10): GM will provide copies of the dealer bulletin and owner letter under separate cover.

573.6(c)(11): GM's assigned recall number is 14030.

Sincerely,

A handwritten signature in black ink, appearing to read "M. Carmen Benavides". The signature is fluid and cursive, with the first name "M." and last name "Benavides" clearly distinguishable.

M. Carmen Benavides, Director
Product Investigations and Safety Regulations

14030
Attachment

Attachment A - 573.6(c)(2),(3),(4)

**VEHICLES POTENTIALLY AFFECTED BY MAKE, MODEL, AND MODEL YEAR
 PLUS INCLUSIVE DATES OF MANUFACTURE**

<u>MAKE</u>	<u>MODEL SERIES</u>	<u>MODEL YEAR</u>	<u>NUMBER INVOLVED</u>	<u>INCLUSIVE MANUFACTURING DATES (FROM) (TO)</u>		<u>DESCRIPTIVE INFO. TO PROPERLY IDENT. VEH.</u>	<u>EST. NO. W/CONDITION</u>
Chevrolet	RV	2009	74,332	06/06/2008	07/30/2009	Traverse	*
Chevrolet	RV	2010	82,719	05/01/2009	06/04/2010	Traverse	"
Chevrolet	RV	2011	128,819	04/15/2010	06/24/2011	Traverse	"
Chevrolet	RV	2012	117,452	04/12/2011	10/04/2012	Traverse	"
Chevrolet	RV	2013	62,891	08/06/2012	05/30/2013	Traverse	"
Buick	RV	2008	30,292	01/23/2007	07/18/2008	Enclave	"
Buick	RV	2009	37,028	04/14/2008	06/19/2009	Enclave	"
Buick	RV	2010	48,102	04/22/2009	06/04/2010	Enclave	"
Buick	RV	2011	69,869	04/15/2010	06/24/2011	Enclave	"
Buick	RV	2012	70,051	04/20/2011	10/04/2012	Enclave	"
Buick	RV	2013	38,531	08/07/2012	05/30/2013	Enclave	"
GMC	RV	2008	37,603	04/19/2007	07/18/2008	Acadia	"
GMC	RV	2009	44,644	04/15/2008	06/19/2009	Acadia	"
GMC	RV	2010	56,769	04/22/2009	06/04/2010	Acadia	"
GMC	RV	2011	87,546	04/15/2010	06/24/2011	Acadia	"
GMC	RV	2012	102,991	04/12/2011	10/04/2012	Acadia	"
GMC	RV	2013	53,598	08/08/2012	05/30/2013	Acadia	"
Saturn	RV	2008	15,075	04/10/2007	07/18/2008	Outlook	"
Saturn	RV	2009	14,461	04/14/2008	06/19/2009	Outlook	"
Saturn	RV	2010	3,634	04/22/2009	03/18/2010	Outlook	"
GM Total:			1,176,407				

* All involved vehicles will be corrected as necessary.

Vehicles repaired as part of Customer Satisfaction Campaign 10085 and special coverage 10335 have already had the subject condition repaired and therefore are not included in the safety recall.

573.6(c)(2)(iv):

The manufacturers of the subject wiring harness are:

Model years 2008 - 2012

Hamlin Electronics
612 East Lake St.
Lake Mills, WI 53551
(920) 648-2311
Country of origin: Mexico.

Model year 2013

Yazaki North America Inc.
6801 Haggerty Rd.
Canton, MI 48187
(734) 983-4234
Country of origin: Nicaragua.

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Updated 3-21-14 to add Country of origin for Hamlin Electronics

ATTACHMENT B – 573.6(c)(6)

From October 2013 to March 2014, a Field Performance Evaluation (“FPE”) investigator analyzed issues related to side impact airbag (SIAB) connectors in certain GM vehicles built on the Lambda platform: the Buick Enclave, GMC Acadia, Chevrolet Traverse, and Saturn Outlook. That review resulted in a Safety Recall on March 17, 2014 for certain 2008–13 model year (“MY”) vehicles. The chronology below describes the principal events that led to the determination to issue a Safety Recall.

2006 - 2007

In 2006, GM launched two models on the Lambda platform,¹ the 2007 Saturn Outlook and the GMC Acadia. The following year, GM launched an additional model on the Lambda platform, the 2008 MY Buick Enclave.

The Lambda vehicles initially used a non-sealed Delphi 2-way connector with a gold-gold terminal interface to connect the seat wire harness to the front occupant SIAB. In July 2007, GM began using a non-sealed JST 2-way connector with a tin-tin terminal interface for the SIAB connection to the wire harness, rather than the Delphi connector.

2008

In 2008, GM launched a fourth vehicle on the Lambda platform, the 2009 Chevrolet Traverse, and continued to manufacture the Buick Enclave, Saturn Outlook, and GMC Acadia.

As early as June 2008, GM became aware of a significant increase in warranty claims for an illuminated airbag service light in 2008 MY Lambda vehicles. GM reviewed warranty claim data between June 2008 and the fall of 2008 and determined that airbag service lights in the 2008 MY vehicles illuminated due to increased resistance in the airbag wiring. An increase in resistance above a certain level, measured in ohms, triggers the airbag service light; an increase in resistance significantly above that level could lead to the possible non-deployment of a SIAB in the event of an above deployment threshold side impact crash.

In September 2008, GM directed its connector supplier, JST, to analyze the connectors. JST found that the primary cause of high resistance was wear and fretting corrosion on contact surfaces. JST recommended a change to gold plated terminals from tin to help prevent corrosion. GM engineers confirmed the condition as analyzed by JST on September 26, 2008.

In October 2008, GM initiated an FPE investigation. The investigation indicated that the volume of warranty claims could be addressed by the regular program warranty. In addition, the condition would “self declare” with the illumination of the “SERVICE AIR BAG” light, notifying the customer to report for service. GM issued a Technical Service Bulletin on November 25, 2008 for 2008-09 Buick Enclaves, 2009 Chevrolet Traverse, 2008-09 GMC Acadia, and 2008-09 Saturn

¹ The Lambda platform is comprised of 2007–10 Saturn Outlook, 2008-14 GMC Acadia, 2008-14 Buick Enclave, and 2009-14 Chevrolet Traverse. The Saturn Outlook was not produced after model year 2010, and the Chevrolet Traverse was launched with model year 2009.

Outlook vehicles, and supplemented it on January 15, 2009. The Bulletin directed dealers to repair vehicles reporting certain diagnostic codes associated with the condition by using Nyogel grease, securing the connectors, and adding slack to the line. In addition, GM had begun a transition from tin to gold terminals.

The investigation was then closed without further action.

2009

In 2009, GM continued to monitor warranty data and dealer feedback on the Lambda vehicles. In November 2009, GM's Service Operations received reports of 2010 Chevrolet Malibu and Pontiac G6² captive fleet vehicles also presenting with illuminated "SERVICE AIR BAG" lights. GM conducted a review to understand the root cause of the condition in the Malibu and Pontiac G6 and found corrosion consistent with terminal wear. The 2010 Malibu and Pontiac G6 used at least two connectors, including a JST connector that had also been used in Lambda vehicles built in 2008.

2010

In January 2010, an FPE investigation was initiated to review the 2010 Malibu and Pontiac G6 airbag connector issues. The FPE investigation concluded that in certain vehicles the airbag connector terminal pins showed signs of wear that could lead to corrosion. Over time, the corrosion could cause system resistance that would result in a "SERVICE AIR BAG" light illuminating. If a customer ignored the light, the resistance could rise to the level that a SIAB might not deploy in a side impact crash.

On May 11, 2010, GM's Executive Field Action Decision Committee ("EFADC"), upon the recommendation of the Field Performance Evaluation Review Committee ("FPERC"), made a determination to issue a Customer Satisfaction Bulletin (#10085) for Malibu and G6 vehicles. Dealers were instructed to secure both front seat-mounted side impact airbag wire harnesses, and if necessary, reroute the wire harness.³

During the same early- to mid-2010 period, GM examined warranty data for the 2008-09 Buick Enclave, GMC Acadia, and Saturn Outlook and the 2009 Chevrolet Traverse.⁴ That review took

² The Malibu and Pontiac are not built on the Lambda platform.

³ GM subsequently opened a second FPE investigation relating to 2010 Malibu and Pontiac G6 vehicles in September 2010. GM had received reports of vehicles with illuminated airbag service lights, notwithstanding that those vehicles were repaired pursuant to the prior field action (#10085). Per #10085, certain Malibu vehicles had wiring re-routed, but did not have the connector replaced. In March 2011, GM issued a Customer Satisfaction Bulletin (#11034). Dealers were instructed to inspect and determine if the repair under #10085 included the replacement of the two connectors. If the connectors were replaced, no further action was required on these vehicles. If they were not replaced, dealers were instructed to install the new connectors.

⁴ The Lambda vehicles were not included in the 2010 Malibu/Pontiac G6 FPE investigation in January 2010 because a bulletin addressing the Lambda connector issues had been released in November 2008, and so as not to delay the Malibu/Pontiac G6 investigation in order to compile the information needed to include Lambda vehicles.

place from February through May 2010. The analysis indicated another increase in the volume of warranty claims on these Lambda vehicles.

In July 2010, the FPE investigator involved in the 2010 Malibu/Pontiac G6 investigation was also assigned to review the Lambda airbag connectors. In August 2010, the investigator analyzed warranty claim data for model years 2008-09 to determine how many Lambda vehicles had repeat warranty claims after being repaired pursuant to the bulletin issued in 2008. The investigator prepared a presentation that included data from vehicle owner questionnaires regarding repeat repairs and buybacks related to the airbag service light. Warranty data reflected more than 6,800 repeat repairs, indicating that the bulletin issued in November 2008 and supplemented in January 2009, was not entirely effective in correcting the condition. The investigator found that movement of the connector may result in corrosion or tin plating wear. The investigator noted that corrosion or plating wear could affect system resistance.

The issue was presented to the FPERC on October 15, 2010 and to the EFADC on October 27, 2010. On November 23, 2010, GM issued a Customer Satisfaction bulletin (#10085C) for certain 2008 Buick Enclave, 2008 Saturn Outlook, 2008 GMC Acadia vehicles built from October 2007 to March 2008. This bulletin updated a prior bulletin (#10085B) issued in July 2010 that covered repairs for 2010 Malibu and Pontiac G6 vehicles. The bulletin instructed dealers to secure front SIAB wire harnesses and, if necessary, re-route or replace the SIAB connectors. GM also issued a Special Coverage Program (#10335) for the rest of the population of these model years.

2011

On February 3, 2011, GM issued a revised Customer Satisfaction Bulletin (#10085D). Bulletin #10085D revised the service procedure previously announced in November 2010 (#10085C), requiring the replacement of the front seat-mounted side impact airbag connectors in all vehicles. Bulletin #10085D covered the same model vehicles as Bulletin #10085C. As of 2014, GM understands that more than 90% of Lambda vehicles and Malibu and Pontiac G6 vehicles covered by the Customer Satisfaction actions have been repaired.

On March 14, 2011, GM issued a revised Special Coverage Bulletin (#10335B), providing extended warranty coverage for 2008-09 Buick Enclave, 2009 Chevrolet Traverse, 2008-09 GMC Acadia, and 2008-09 Saturn Outlook vehicles with respect to the airbag connectors. Bulletin #10335B specified that two parts should be used to replace the front-seat mounted SIAB connectors without charge to customers.

In July 2011, GM replaced the JST connector with a Tyco 4-way silver-silver sealed connector for 2012 MY vehicles. The silver-silver connector was an improvement because silver-silver terminals are not susceptible to fretting corrosion.

2012

In 2012, GM continued to monitor warranty data and observed another significant increase in warranty claims relating to the SIAB connectors for vehicles built in the second half of 2011. GM and one of its seat airbag wiring suppliers, Yazaki, conducted further testing of the airbag connectors. In July 2012, Yazaki reported to GM that in its analysis of a connector from a 2012 MY Traverse, which had an illuminated airbag service light, it found voids and other issues with the crimping of the connector terminal, which could cause increased system resistance. In October 2012, GM engineers analyzed several Tyco connectors and found no fretting corrosion, but did find inadequate crimping.

On November 8, 2012, GM issued an internal bulletin for the 2011-12 Buick Enclave, Chevrolet Traverse, and GMC Acadia. The bulletin recommended that dealers respond to customer complaints of illuminated airbag service lights, or airbag service lights that illuminate intermittently, by replacing the original connector with a new sealed connector.

2013

In 2013, call volume to GM's Technical Assistance Center increased, as did buyback activity due to illuminated airbag service lights. In September 2013, GM drafted a proposed technical service bulletin regarding airbag connectors in 2011-13 Buick Enclave, Chevrolet Traverse, and GMC Acadia vehicles.

Upon review of the proposed bulletin and in light of the prior significant warranty activity, GM opened an FPE investigation on October 4, 2013 regarding airbag connector issues in 2011-13 Enclave, Acadia, and Traverse vehicles. The last model year of the Saturn Outlook was 2010, so at the time the investigation was opened, Outlook was not included. As compared to the 2010 FPE process regarding Lambda vehicles, this investigation focused on model years 2011-13, which had been built in the periods after the #10085D Customer Satisfaction and #10335B Special Coverage programs were released.

From October 2013 to December 2013, GM reviewed and analyzed extensive warranty data for vehicles built from 2010 to 2014. The data reflected an increase in warranty claims for vehicles built in late 2011 and early 2012.

2014

On February 10, 2014, the FPE investigator made a presentation to the FPERC. The presentation described fretting corrosion and crimping issues as technical root causes of the condition.⁵ In addition to a summary of warranty data regarding 2010-14 MY Acadia, Traverse, Outlook, and Enclave vehicles, the presentation included an analysis of the levels of resistance at which the "SERVICE AIR BAG" light would illuminate (3.67 ohms) and at which the airbags might not deploy (12.2 ohms).

The proposed field action as of the FPERC meeting on February 10, 2014 was Special Coverage. During the February 10 FPERC meeting, model year 2010 vehicles were added to the proposed Special Coverage, raising the number of vehicles covered from approximately 742,000 to 912,000.

Through February 2014, the FPE investigator continued to analyze and refine warranty data by month of build. The presentation to the FPERC on February 17 included warranty data shown both by month of build and months in service over a 24-month period. On February 18, 2014, the investigator made a similar presentation to the EFADC.

On March 10 and 11, 2014, the investigator presented again to the FPERC and the EFADC, this time including other manufacturer information regarding customer satisfaction and warranty coverage and recalls related to airbag connector issues. As of these meetings, the proposed field action was a Customer Satisfaction Program covering 2010-13 model year vehicles.

On March 13, 2014, the EFADC recommended a Customer Satisfaction Program for 2010-13 Saturn Outlook, Buick Enclave, GMC Acadia, and Chevrolet Traverse vehicles.

On March 14, 2014, GM contacted NHTSA regarding the proposed Customer Satisfaction Program. The same day, following the call with NHTSA, the EFADC met via telephone and made a determination to issue a Safety Recall instead of a Customer Satisfaction Program.

On March 16, 2014, EFADC members held multiple telephonic meetings to determine the scope of the proposed Safety Recall. The FPE investigator made a presentation to the EFADC that included discussion of vehicles previously covered by the February 3 and March 14, 2011 Customer Satisfaction and Special Coverage Bulletins. The population previously proposed for coverage, model years 2010-13, was expanded to include 2008-09 vehicles that were not repaired as part of the previous Customer Satisfaction or Special Coverage Programs. Vehicles from mid-to late-2013 were also included. The proposed Safety Recall, therefore, covered certain vehicles from 2008 through 2013, for a total of approximately 1.18 million vehicles.

On March 17, 2014, GM issued a Safety Recall for certain Buick Enclave, GMC Acadia, Chevrolet Traverse, and Saturn Outlook vehicles. GM's Safety Recall letter instructs dealers to remove driver and passenger SIAB connectors and splice and solder the wires together. *See* GM N140030 573 Letter dated March 17, 2014.

⁵ Initially, the presentation indicated that shorting bar damage could also be a root cause of the condition. The shorting bar issue was ruled out as a root cause in February 2014 based on information from GM's plant, as well as information from a November 2010 JST report.