



July 16, 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-394

Dear Ms. Lewis:

This letter supersedes General Motors' letter of July 2, 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 involving certain 2003-2014 model year (MY) Cadillac CTS and 2004-2006 MY Cadillac SRX vehicles. Specifically, the information submitted pursuant to 49 CFR 573.6(c)(6) below supersedes information included in General Motors' letter of July 2, 2014.

573.6(c)(1): Cadillac Brand of General Motors Company.

573.6(c)(2)(3)(4): This information is shown on the attached sheet.

573.6(c)(5): General Motors has decided that a defect which relates to motor vehicle safety exists in certain 2003-2014 MY Cadillac CTS and 2004-2006 MY Cadillac SRX vehicles. If the key ring is carrying added weight and the vehicle goes off road or experiences some other jarring event, or if the driver unintentionally bumps the key ring or items attached to the key ring with their knee, the key may unintentionally move away from the "run" position. If this occurs, engine power, power steering and power braking may be affected, increasing the risk of a crash. The timing of the key movement out of the "run" position, relative to the activation of the sensing algorithm of the crash event, may result in the airbags not deploying, increasing the potential for occupant injury in certain kinds of crashes.

Customers should remove all items from their key rings, including the key fob, leaving only the ignition key. In addition it is very important that drivers adjust their seat and steering column to allow clearance between their knee and the ignition key.

573.6(c)(6): As permitted by the provisions of 49 C.F.R. 573.6(b), and pursuant to the requirements of 49 C.F.R. 573.6(c)(6), General Motors now submits the chronology of principal events that were the basis for the determination that the defect related to motor vehicle safety.



2002-2003

The Cadillac CTS was introduced in 2002 as a 2003 MY vehicle. Generation I of the CTS was produced in 2003-2007 MYs. The Generation I CTS used a Delphi ignition switch (P/N 12450257).

2004

The Cadillac SRX was introduced in 2003 as a 2004 MY vehicle. 2004-2006 MY Cadillac SRX used a Delphi ignition switch (P/N 1240257).

2006

In 2006, the Delphi ignition switch for the Cadillac SRX 2007 MY was redesigned with a stronger detent plunger. The part number was changed (new P/N 15261531) and this part was used in the 2007-2009 MY Cadillac SRX. In a letter to NHTSA dated April 11, 2014, Delphi informed NHTSA that Delphi's records reflected that this change was made at GM's request following some test driver reports that they turned the vehicles off with their knees while driving "competitively."

2007-2008

The Generation II Cadillac CTS was introduced in 2007 as a 2008 MY vehicle. Generation II Cadillac CTS uses an ignition switch manufactured by Dalian Alps Electronics Company LTD (P/N 92184907).

2010

In January 2010, Engineering Work Order (EWO) DYKMHB was issued to change the key ring opening on the Cadillac CTS key from a slot to a hole. Although the EWO states that the change was made to prevent accidental ignition shut off for customers with heavy key chains, this was not the purpose of the change. This language appears to have been inadvertently included from an earlier EWO relating to non-Cadillac models. The purpose of the key ring opening design change for the CTS was to reduce an observed nuisance of the key fob contacting the driver's leg. The new key design was introduced in December 2010. This design was used on Cadillac CTS vehicles from December 2010 through 2014 MY.

2011

In October 2011, a GM employee assigned a 2012 MY Cadillac CTS vehicle, which employed a key designed with a hole rather than a slot, reported a potential safety issue through the GM Company Vehicle Evaluation Program (CVEP) reporting system. The employee reported that contact between the key fob and his knee had resulted in an unintentional switching off of the ignition. The issue was reviewed by the CTS Current Product Improvement Team (CPIT). The CPIT decided not to seek a change in design unless the company received additional complaints about the condition.

2012

In April 2012, a GM employee assigned a 2012 MY Cadillac CTS, which employed a key designed with a hole rather than a slot, experienced stalls while driving on two occasions. The employee brought the vehicle into the GM Service and Parts Operations at the GM Technical Center in Warren, Michigan. A member of GM's Red X Team test drove the vehicle, but was unable to replicate the event. She then met with the GM employee, who demonstrated that the key inadvertently moved out of run when he hit the key with his knee. The GM employee was over six feet tall and sat with his seat moved forward while driving so that he sat very close to the wheel and his knee was very close to the key. The employee demonstrated the event while the vehicle was stationary and not while moving. The Red X employee drafted a Red X Problem Resolution Tracking System (PRTS) report (PRTS 1271912) and proposed that the CTS keys with holes be replaced by keys with slots. A Current Production PRTS (PRTS 1276454) was opened in May 2012 and it was assigned to GM Engineering for review. PRTS 1276454 was closed in June 2013. No key design change was implemented on the basis that the "hole" design was consistent with a document called Human Vehicle Interface (HVI) 266. HVI 266 provided that the location of the ignition cylinder should ensure that a remote keyless entry fob, hanging from the key ring, will not contact the 95th percentile upper or lower legs with the key inserted. The Red X Team member who opened the PRTS noted on the document that she did not believe that the action taken in response to the PRTS resolved the problem observed.

2014

In response to the ignition switch issues relating to the Cobalt and related vehicles, the company undertook a "read across" to determine whether there may be similar issues with other ignition switches on other vehicles. On April 3, 2014, a Product Investigations Engineer was assigned to investigate ignition switches used on the Cadillac CTS vehicles; the investigation expanded to include SRX vehicles. Between April 3, 2014 and May 20, 2014, the investigator worked with GM subject matter experts to gather and analyze data relating to the ignition switches used on the Cadillac CTS and SRX vehicles. GM also collected and reviewed information from GM's databases, including its TREAD, warranty, customer satisfaction, and Engineering Analysis databases, and NHTSA's Vehicle Owners' Questionnaire (VOQ) database relating to vehicles using the ignition switch parts under review. On May 20, 2014, the investigator presented the matter to the Investigation Status Review committee (ISR). Following the May 20 ISR, as part of the rigorous lab and road testing that was being conducted at the Milford Proving Grounds in June 2014, CTS and SRX vehicles were evaluated. The road testing of the pre-2008 Cadillac CTS and the pre-2007 MY Cadillac SRX indicated that when a slotted key on a key ring is carrying added weight the torque performance of the ignition system may be insufficient to resist energy generated when a vehicle goes off road or experiences some other jarring event, potentially resulting in the unintentional movement of the key away from the "run" position. The road testing indicated 2008 MY and later Cadillac CTS and 2007 and later Cadillac SRX vehicles did not experience this condition. The testing at the Milford Proving Grounds also included evaluation regarding potential "knee to key" related inadvertent key rotation. This testing indicated that the Cadillac CTS vehicles with keys with a hole and a single key ring between

key and fob were potentially subject to inadvertent key rotation when the driver's knee came into contact with the vehicle's key. This testing was completed on June 23, 2014.

On June 25, 2014, the investigator made a presentation to the SFADA, which decided to conduct a Safety Recall of 2003-2014 Model Year (MY) Cadillac CTS and 2004-2006 MY Cadillac SRX vehicles. GM submitted a 573 letter to NHTSA on July 2, 2014. The letter stated in part: "Customers should remove all items from their key rings, including the key fob, leaving only the ignition key. In addition it is very important that drivers adjust their seat and steering column to allow clearance between their knee and the ignition key."

The issue was presented during an Investigation Status Review (ISR) on May 20, 2014, and on June 25, 2014, the Safety and Field Action Decision Authority (SFADA) decided to conduct a safety recall.

573.6(c)(8): Dealers are to provide two replacement key rings. Vehicles with slotted keys will also receive key inserts.

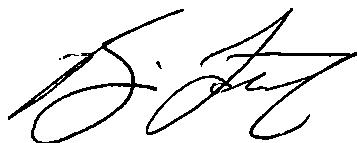
General Motors will provide the dealer bulletin and owner letter mail dates when available.

Pursuant to 577.11, General Motors does not plan to provide notice about reimbursement to owners because the provided repair has not previously been available.

573.6(c)(10): General Motors will provide the dealer bulletin and owner letter under separate cover.

573.6(c)(11): General Motors' assigned recall number is 14172.

Sincerely,

A handwritten signature in black ink, appearing to read "B. Latouf", written in a cursive style.

Brian Latouf, Director
Field Product Investigations & Evaluations

Attachment

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>
Cadillac	D	2003	68,326	08/16/2001	06/06/2003	CTS	*
Cadillac	D	2004	55,998	03/05/2003	05/17/2004	CTS	"
Cadillac	D	2005	61,362	02/18/2004	06/03/2005	CTS	"
Cadillac	D	2006	55,092	03/14/2005	05/05/2006	CTS	"
Cadillac	D	2007	53,363	03/07/2006	06/27/2007	CTS	"
Cadillac	D	2008	40,723	05/01/2007	06/06/2008	CTS	"
Cadillac	D	2009	32,227	03/31/2008	06/26/2009	CTS	"
Cadillac	D	2010	29,292	02/12/2009	06/07/2010	CTS	"
Cadillac	D	2011	31,586	04/20/2010	06/02/2011	CTS	"
Cadillac	D	2012	28,434	03/03/2011	06/08/2012	CTS	"
Cadillac	D	2013	18,604	04/04/2012	07/29/2013	CTS	"
Cadillac	D	2014	258	03/22/2013	04/28/2014	CTS	"
Cadillac	E	2004	31,051	03/20/2003	05/17/2004	SRX	"
Cadillac	E	2005	23,563	03/09/2004	06/03/2005	SRX	"
Cadillac	E	2006	24,449	03/30/2005	08/11/2006	SRX	"
GM Total:			554,328				

* All involved vehicles will be corrected as necessary.

573.6(c)(2)(iv): The ignition switch supplier for 2003 - 2007 MY CTS and 2004 - 2006 MY SRX is:

Delphi Packard Electrical/Electronic Architecture
 5725 Delphi Drive
 M/C 483.400.301
 Troy, Michigan 48098
 Phone: 248-813-2334

The country of origin was Mexico.