



May 24, 2010

Mr. Daniel C. Smith  
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. Smith:

The following information is submitted pursuant to the requirements of 49 CFR 573.6 as it applies to a determination by General Motors of a safety defect involving certain 2010 model year Cadillac SRX vehicles equipped with a HFV6 Turbocharged 2.8L (LAU) engine.

573.6(c)(1): Cadillac 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 a defect, which NHTSA feels may relate to motor vehicle safety, exists in certain 2010 model year Cadillac SRX vehicles equipped with a HFV6 Turbocharged 2.8L (LAU) engine. If customers use low octane (regular) fuel instead of the required high octane (premium) fuel as stated in the Owner Manual and on the fuel filler door, the combination of regular fuel usage and aggressive driving maneuvers may induce pre-ignition. If pre-ignition occurs, the customer may hear a pinging or knocking sound from the engine. If the vehicle continues to be driven after the onset of this noise, a connecting rod or piston may break, resulting in engine damage, and perhaps engine failure.

573.6(c)(6): On March 10, 2010, a Product Investigation Engineer was assigned to investigate engine failures due to bent/broken connecting rods on 2010 model year SRX with the LAU engine. Incidents had occurred on December 12, 2009, December 29, 2009, February 27, 2010 and March 10, 2010 (all four of these were in GM-owned vehicles), and then on March 12 and 24, 2010 (1 retail customer and 1 dealer-driven vehicle).

The current ECM calibration algorithm increases the turbo boost pressure in response to retarded spark timing (due to low octane regular fuel). The increased boost pressure combined with retarded spark can result in engine pre-ignition. The resulting peak cylinder chamber compression pressure may exceed the design limits of the connecting rod.



Premium fuel is specified as required for the HFV6 Turbocharged 2.8L (LAU) engine (VIN code 4) in the owner manual. The owner manual instructs that regular fuel can be used in an emergency and advises not to perform aggressive driving maneuvers and to refill with premium fuel as soon as possible to avoid engine damage. Additionally, the fuel door on vehicles with this engine is labeled "Premium Fuel Required".

It is the combination of regular fuel usage and aggressive driving maneuvers that may induce pre-ignition which can damage the connecting rod or break a piston leading to engine damage and possibly engine failure. If pre-ignition occurs, the customer may hear a pinging or knocking sound from the engine compartment.

On April 1, 2010, GM decided to conduct a customer satisfaction program in order to quickly address the potential for this issue to occur if the vehicle is misfueled. Misfueling is defined as the use of regular fuel instead of the required premium fuel as stated in the owner's manual and on the fuel filler door label. A bulletin was sent to the dealers and GM began gathering customer phone records to prepare the customer assistance centers to make direct contact with customers to advise them to not use regular fuel and to contact their dealer to schedule an appointment to have their ECM re-flashed with a revised calibration.

On April 2, 2010, GM contacted the NHTSA to advise them of this action. NHTSA provided a list of questions.

On April 5, 2010, GM responded to the NHTSA's questions and discussions with the agency continued. GM's customer assistance centers began executing the customer satisfaction program by contacting customers via phone. As of May 24, 2010, 60% of the vehicles have been serviced with the revised calibration.

On April 9, 2010, the NHTSA requested GM to change the customer satisfaction program to a safety recall. This was based on NHTSA's assessment that the failure mode resulted in a loss of motive power. The NHTSA provided input that it was foreseeable that owners may not use premium gasoline. The NHTSA's input was reviewed by the GM Field Performance Evaluation Review Committee (FPERC) which scheduled the topic to the Executive Field Action Decision Committee (EFADC) for a decision.

On April 15, 2010, the Executive Field Action Decision Committee (EFADC) held a first review of the NHTSA request. The EFADC concluded that this issue does not represent an unreasonable risk to motor vehicle safety since misfueling is required for this condition to exist.

On April 21, 2010, the GM Director of Product Investigations met with the NHTSA to discuss. The EFADC reviewed the topic again following GM's discussion with the agency and concluded that this issue does not represent an unreasonable risk to motor vehicle safety since misfueling is required for this condition to exist. A request to escalate the discussion within the agency was made.

From April 22 to May 17, 2010, discussions continued with GM's Vice President of Environment, Energy and Safety Policy and the agency.

On May 19, 2010, despite GM's position that given this set of facts (customer misfueling and operation of the vehicle contrary to owner's manual instructions, and no crashes or injuries associated with this condition) the issue is most appropriately handled as a customer satisfaction program, General Motors has agreed to reclassify the existing customer satisfaction program as a safety recall to comply with the request from the NHTSA.

573.6(c)(8): Dealers are to reprogram the engine control module (ECM).

It is anticipated that the dealer bulletin will be sent on June 4, 2010 and owner letters will be mailed on June 11, 2010.

Pursuant to 577.11(e), GM does not plan to provide notice about reimbursement to owners because all involved vehicles are covered under the new vehicle warranty.

573.6(c)(10): GM will provide the dealer bulletin and owner letter when available.

Sincerely,

A handwritten signature in black ink, appearing to read "G. Kent", with a stylized flourish extending to the right.

Gay P. Kent,  
Director, Product Investigations  
and Safety Regulations

N100093  
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	E Truck	2010	547	09/2009 03/2010	SRX	*
GM Total:			547			

\* All involved vehicles will be corrected as necessary.

573.6(c)(2)(iv): N/A

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