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May 14, 2013

Nancy L. Lewis
Associate Administrator for Enforcement
National Highway Traffic Safety Administration
1200 New Jersey Ave., S.E.
Washington, DC 20590

Dear Ms. Lewis:

IMPCO Technologies, Inc., IMPCO Automotive Division, has decided that certain compressed natural gas (CNG) fuel systems installed as original equipment on vehicles of one OEM customer (General Motors) may contain a safety-related defect. The following information is submitted in accordance with the National Highway Traffic Safety Administration's defect reporting regulations, 49 CFR Part 573.6. (Pursuant to Part 573.3(e), this report is being submitted on behalf of itself and GM.)

1. Product identification and customer channels.

This notice involves certain IMPCO Automotive CNG fuel systems (GM RPO Code FHZ) manufactured from February 14, 2011 through February 20, 2013 equipped with shut-off solenoid Part # 691A113A357. These fuel systems were supplied exclusively to General Motors and installed on 2011, 2012 and 2013 model year Chevrolet Express/GMC Savana Cargo vans that were converted to mono-fuel compressed natural gas (CNG) (GM RPO Code FHZ), with vehicle production dates from September 10, 2010 through January 30, 2013. The shut-off solenoid electrically actuates to open the CNG fuel flow to supply the engine during operation and to close the flow of gas when the engine is off. This solenoid is found on each storage cylinder and on the high pressure regulator.

Only the underbody fuel systems/shut-off solenoids in this vehicle application are covered by this notice. A total of 1791 fuel systems/vehicles are involved. Each fuel system utilizes four shut-off solenoids underbody.

The defective shut-off solenoids were supplied by:

OMB Saleri S.p.A.
Via Rose di Sotto, 38/C
25126 Brescia (Italy)
Tel. +39 030 3195801
Fax. +39 030 3732872

IMPCO Automotive
7100 15 Mile Road, Sterling Heights, MI, 48312
Tel: 586-264-1200, Fax: 586-264-2344
www.impcoautomotive.com



2. Percentage of Population Estimated to Contain Defect.

IMPCO cannot estimate the percentage of the recall population that may actually contain the defect, but IMPCO, in cooperation with General Motors, will pursue a 100% recall and replacement of the underbody shut-off solenoids within the recall population.

3. Description of defect.

The underbody shut-off solenoid connector to a CNG fuel tank may corrode and could form a high-resistance short in the connector, potentially causing overheating or, in rare circumstances, a self-extinguishing flame. If there is a fuel leak or other combustible material in the vicinity, there is a risk of ignition.

4. Chronology of events.

On February 19, 2013, GM notified IMPCO that a customer in Massachusetts observed a flame under a vehicle equipped with the subject fuel system.

On February 25, 2013, a team from IMPCO, GM and IMPCO's solenoid supplier, OMB Saleri S.p.A, visited the customer site to investigate the issue. The team observed that the front aft-tank solenoid had melted.

On March 6, 2013, GM notified IMPCO that a customer in Vermont reported a gas leak. Upon further investigation, it was discovered that the fuel leak vehicle and an additional vehicle in the fleet had a partially melted solenoid connector.

On March 15, 2013, IMPCO initiated testing to attempt to replicate the failure in laboratory testing and determine root cause.

From approximately April 9, 2013 through May 2, 2013, GM and IMPCO conducted a field survey of 13 randomly selected vehicles to further assist in the evaluation of the root cause and potential scope of the issue. No like conditions were found in the sampling. However, GM reported that a vehicle in Wisconsin that was not part of the field survey was found to have 2 solenoids with a similar defect.

On May 7, 2013, based upon the joint root cause investigation and field inspections, IMPCO decided to initiate a Safety recall to replace the underbody solenoids on the subject vehicles. IMPCO communicated this decision to GM the same day.

To date, IMPCO is not aware of any injuries, fatalities, accidents/crashes related to this condition.



5. Remedy program.

IMPCO will work with General Motors to identify and notify affected dealers and owners/fleets of this recall. The remedy involves replacing the solenoid assemblies and securing nuts for all exterior tanks and the regulator with a new solenoid (OMB Part# 691E113A357) and securing nuts. As a further protective measure, the existing 30 amp gas fuel pump fuse will be replaced with a 7.5 amp fuse for the four tank configuration or a 5.0 amp fuse for the three tank configuration. In addition, the wiring routing will be adjusted, if necessary, to eliminate any undue tension on the connector, and anti-corrosion sealing plugs will be installed into the valve body. The measures will be implemented following official acceptance from General Motors Engineering.

6. Part 577 notice letter; dealer bulletins.

A draft owner letter will be submitted for your review and approval shortly. To facilitate timely notification and remedy of the involved vehicles, GM has agreed to issue a dealer bulletin related to this campaign. A copy of GM's dealer bulletin will be submitted within five working days after it is issued.

7. Owner and Dealer Notification Schedule

Notification of customers/owners will be conducted in cooperation between IMPCO and GM. A dealer and owner notification schedule will be submitted shortly.

8. Pre-Notification Remedy Reimbursement.

Pursuant to 49 CFR §577.11(e), IMPCO requests that it be exempt from providing notification of a reimbursement plan. Any pre-notification product failure would have been replaced under the manufacturer's limited warranty. Accordingly, no person would be eligible for reimbursement pursuant to §573.13.

* * *

Please advise the undersigned of the recall campaign number assigned by the Office of Defects Investigation to this recall. IMPCO's campaign code for this recall will be FA13GM001

Sincerely yours,

A handwritten signature in black ink, appearing to read "Gianpietro Meggiolaro".

Gianpietro Meggiolaro
General Manager
IMPCO AUTOMOTIVE

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