12V-571 (6 pages) Amended





January 9, 2013

Nancy Lewis Associate Administrator for Enforcement National Highway Traffic Safety Administration Attention: Recall Management Division (NVS–215) 1200 New Jersey Ave, SE Washington DC 20590

# <u>Subject: Jaguar Recall Number J028 – Certain 2013 Model Year Jaguar XF Gasoline Engine</u> <u>Vehicles - Engine Cut-out -- Amended</u>

Dear Ms. Lewis:

Pursuant to 49 CFR 573, Defect and Noncompliance Responsibility and Reports, Jaguar Land Rover North America, LLC, is submitting amended information concerning Jaguar Recall J028 (NHTSA 12V571). After further investigation, the actual number of vehicles involved was determined to be nine.

### Summary

- <u>Action</u> Jaguar is conducting a voluntary safety recall involving certain 2013 Model Year Jaguar XF gasoline engine vehicles built at the Castle Bromwich (UK) Assembly Plant from October 3, 2012 to October 12, 2012 to install an in tank fuel pump overlay harness.
- <u>Number of Vehicles Involved</u> 9 -- 2013 MY XF vehicles in the United States and Federalized Territories.
- <u>Affect on Vehicle Operation</u> A concern has been identified at the introduction of Jaguar XF 2013 Model Year, where the engine of the vehicle can be started and continue to operate as normal for a variable period of time until the engine fuel demand exceeds the ability for the high pressure fuel pump to supply fuel. The vehicle will experience fuel starvation and can then cut out without any detectable warning signs. Once the vehicle has cut out, the brake vacuum reservoir will be depleted and the vehicle will lose brake power assistance, however foundation brakes continue to operate. Power Assisted Steering (PAS) will also be lost once the vehicle speed drops below the torque converter speed threshold; however the vehicle steering will remain functional with increased steering effort required. After engine cut out it may take up to 20 minutes before the engine can be re-started.

Fuel starvation to the engine leads to engine stumble followed by engine cut out with minimal warning and could potentially cause a crash.

• Service Program – Dealers will install an in tank fuel pump overlay harness.

There will be no charge to owners for this repair.

Attached is the detailed information required by the applicable portions of 49 CFR Part 573 - Defect and Non-Compliance Information Report.

Please contact me for further information.

Sincerely,

AT est

James C. Patterson Automotive Safety Office Jaguar Land Rover North America, LLC

Attachment

#### ATTACHMENT

### <u>49 CFR Part 573 - DEFECT INFORMATION REPORT RECALL J028</u> CERTAIN 2013 MODEL YEAR JAGUAR XF GASOLINE ENGINE VEHICLES

#### 573.6 (c) (1) - Manufacturer Identification

Manufacturer Corporate Name Jaguar Cars Ltd Abbey Road Whitley Coventry England CV3 4LF

Affiliated U.S. Importing Company Jaguar Land Rover North America, LLC 555 MacArthur Boulevard Mahwah New Jersey 07430

#### 573.6 (c) (2) - Potentially Affected Vehicles

Certain 2013 Model Year Jaguar XF vehicles built at the Castle Bromwich (UK) Assembly Plant from October 3, 2012 to October 12, 2012 to install an overlay harness incorporating a relay.

VIN SAJWA0E71D8S62664 to SAJWA0E71D8S63295 is potentially affected.

573.6(c) (2) (iv) - Part Numbers, Components affected and Components Final Country of Manufacture

Part Number Smart Junction Box - C2Z23345

Part Number In tank fuel pump overlay harness - C2Z26797

Yazaki Coventry Office Binley Coventry CV3 2NT

Quality manager: Pam Randhawa, Tel: 02476 658607

The UK is the final country of manufacture.

#### 573.6 (c) (3) - Estimated Population of Vehicles Potentially Affected

9 -- 2013 MY Jaguar XF gasoline engine vehicles located in the United States and Federalized Territories.

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# 573.6 (c) (4) - Estimated Percentage of Affected Vehicles with the Condition

100%

# 573.6 (c) (5) - Description of the Defect

The in tank fuel pump is controlled by the Engine Control Module (ECM) via a Fuel Pump Driver Module (FPDM). The FPDM sources its power supply from an intelligent rear fuse box known as the Body Control Module - Back (BCMB). The BCMB supplies power to the FPDM through a power Field Effect Transistor (FET). Investigation has shown that the in rush current drawn by the FPDM can on occasions reach 185 amps as opposed to a design specification of 30 amps. The FET has a 150 amps in rush current limit and should this limit be reached, the FET will shut off to prevent it from becoming damaged. The FET will reactivate over a number of cycles until the temperature of the FET eventually rises to a level that causes thermal shut down. Shutting down of the FET will cause the FPDM to shut down and the in tank fuel pump will stop, causing fuel starvation to the engine.

If the vehicle experiences fuel starvation, it will cut out minimal warning signs. Once the vehicle has cut out, the brake vacuum reservoir will be depleted and the vehicle will lose brake power assistance, however foundation brakes continue to operate. Power Assisted Steering (PAS) will also be lost once the vehicle speed drops below the torque converter speed threshold; however the vehicle steering will remain functional with increased steering effort required. The vehicle may take up to 20 minutes before the engine can be restarted.

Fuel starvation to the engine leads to engine cut out with minimal warning and could potentially cause a crash.

### 573.6 (c) (6) - Chronology of Events

On October 15, 2012, Jaguar opened a Critical Concerns Review Group (CCRG) investigation to review data in relation to a stop shipment notice issued by Jaguar's Castle Bromwich manufacturing plant on the October 4, 2012. The concern involved the introduction of a revised Body Control Module Back (BCMB) into Jaguar XF 2013 Model Year gasoline engine vehicles.

The Investigation identified the in rush current drawn by the fuel pump driver module can on occasions reach 185 amps against a design specification of 30 amps. The FET has a 150 amps in rush current limit and should this limit be reached the FET will shut off to prevent it from becoming damaged. The FET will reactivate over a number of cycles until the temperature of the FET eventually rises to a level that causes thermal shut down. The shutting down of the fuel pump driver to will cause fuel starvation to the engine which may lead to the vehicle's engine cutting out, with an extended period of time before engine restart is possible. The CCRG concluded that this condition be progressed to the Jaguar Technical Review (TRG).

The issue was reviewed at the Jaguar TRG on November 26, 2012 where the full failure mode and the scope of vehicle population were reviewed. The TRG recommended the issue be progressed to the Jaguar Field Review committee (FRC).

The FRC convened on the November 29, 2012 and concluded that the concern represented an unreasonable risk to safety and that a voluntarily recall be conducted.

There have been no reports of accidents or injuries as a result of this concern.

### 573.6 (c) (8) (i) Manufacturer's Remedy Program and Reimbursement Plan

Owners will be notified and instructed to take their vehicles to a Jaguar authorized repairer to have an overlay wiring harness fitted. The overlay wiring harness reconfigures the electrical distribution to the FPDM to utilize a relay, to supply the fuel pump power feed. The relay is not affected by the in rush current drawn by the fuel pump and so ensures robust operation.

There will be no charge to owners for this repair.

# 573.6 (c) (8) (ii) Estimated Notification Date to Owners and Dealers

Mailing of owner notification letter will occur on or before January 18, 2013. Notifications to dealers will occur on December 11, 2012.

# 573.6 (c) (10) - Notices, Bulletins, and Other Communications Related to the Defect

Jaguar does not plan to make a public statement concerning the subject matter of this action. A copy of the notification letters to dealers and owners from Jaguar will be forwarded when available.

### 573.6 (c) (11) - Recall Number

Jaguar has assigned recall number J028 to this recall action.