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By Recall Management Division at 9:42 am, Oct 03, 2011

11V-490  
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# VOLKSWAGEN

GROUP OF AMERICA

Mr. Claude H. Harris  
Acting Associate Administrator for Enforcement  
National Highway Traffic Safety Administration  
Attention: Recall Management Division (NVS-215)  
1200 New Jersey Avenue, S.E.  
Washington, DC 20590

CHRISTOPHER T. SANDVIG NAME  
GENERAL MANAGER COMPLIANCE/TREAD TITLE  
PRODUCT COMPLIANCE DEPARTMENT  
248-754-5000 PHONE  
248-754-5093 FAX  
SEPTEMBER 30, 2011 DATE

Subject: Notification of Voluntary Recall  
2009 – 2012 Model Year Volkswagen Jetta & Jetta SportWagen  
2010 – 2012 Model Year Volkswagen Golf  
2010 – 2012 Model Year Audi A3  
Diesel Fuel Injection Lines

VOLKSWAGEN GROUP OF AMERICA, INC.  
3800 HAMLIN ROAD  
AUBURN HILLS, MI 48326  
PHONE +1 248 754 5000

Dear Mr. Harris:

This information is submitted in accordance with the requirements of Part 573 of Title 49 of the Code of Federal Regulations (49 CFR 573 (2011)).

573.6 (c) (1) **Manufacturer's Name**  
Volkswagen de Mexico, A.A. de C.V.  
Volkswagen AG  
Audi AG

**Importer**  
Volkswagen Group of America, Inc. (VWGoA)

573.6 (c) (2) **Identification of Vehicles**

Make	: Volkswagen, Audi
Line	: Volkswagen Jetta (5 <sup>th</sup> and 6 <sup>th</sup> Generation) Volkswagen Jetta SportWagen Volkswagen Golf (6 <sup>th</sup> Generation) Audi A3
Model Year	: 2009 – 2012 Volkswagen Jetta and Jetta SportWagen 2010 – 2012 Volkswagen Golf 2010 – 2012 Audi A3
Month/Year of Manufacture	: Jetta/Jetta SportWagen - May 2008 through September 2011 Golf - May 2009 through September 2011 A3 - September 2009 through September 2011

VIN Numbers

of Affected Vehicles: Jetta/Jetta SportWagen: 3VW\_\_\_1K\_9M000027 – 3VW\_\_\_1K\_9M366373  
and 3VW\_\_\_AJ\_AM004684 – 3VW\_\_\_AJ\_CM63015  
Golf: WWW\_\_\_AJ\_AW000338 – WWW\_\_\_AJ\_CW103700  
A3: WAU\_\_\_FM\_AA044013 – WAU\_\_\_FM\_CA058055

Other Identification: Vehicles equipped with a 2.0l TDI Common Rail Diesel engine / Clean Diesel engine (codes CJAA and CBEA)

573.6 (c) (3) **Number of Vehicles Potentially Containing the Defect**

Approximately 161,144 Volkswagen and 7,131 Audi vehicles equipped with a 2.0l TDI Common Rail Diesel engine / Clean Diesel engine are affected by this recall in the United States.

573.6 (c) (4) **Percentage of Vehicles Actually Containing the Defect**

Volkswagen is unable to determine an exact percentage of vehicles affected by the defect; however the overall affected rate is expected to be less than 1%.

Approximately 20% of the vehicles affected by this recall, built during certain production months, were equipped with fuel injection lines that have material contributory to a potential failure.

573.6 (c) (5) **Description of Defect**

In U.S. specific application of the 2.0L TDI Common Rail Diesel engine/ Clean Diesel engine (engine codes CJAA and CBEA; emissions related de-NOx and de-SOx regeneration cycles) the fuel injection pulses could coincide with the natural frequency of the injector line #2 in specific load and RPM conditions. This resonance creates additional stress on the fuel line which a small number of parts (based on the statistic spread of line strength) cannot withstand over lifetime.

As a contributory factor, one supplier has used tube material with scratch marks from a grinding process during certain production periods which were installed in vehicles during the following production months: December 2008, January-February 2009, April 2010 and October-December 2010. Injector lines using this material exhibit a significantly higher failure rate.

Due to the possible resonance condition, single fuel injection lines could develop small cracks which could lead to fuel leakage. Leaking fuel, in the presence of an ignition source, may lead to a fire.

Volkswagen is not aware on any fire, crash or injury caused by this issue.

573.6 (c) (6) **Basis for Determination**

- In February/March 2010, Volkswagen conducted a warranty return parts analysis based on single reports on fuel leakage incidents. Analysis concluded that the lines were not leaking when being pressure tested on a test bench and suspected leakage coming from loose fittings. Analysis of the fastening torque in the field confirmed the fittings to be properly secured. Analysis was terminated with no trouble found.
- As no cause was found, but field failures continued, Volkswagen Group of America, Inc. informed Volkswagen AG in February 2011 about fuel leakage at fuel injector lines at the 2.0L TDI Clean Diesel engine.
- In March/April 2011, a hypothesis was established that mechanical stress could have caused fatigue fractures of the affected fuel line. The cause for the mechanical stress however could not be found at that time. Material analysis revealed certain contributory microscopically scratch marks on failed parts with tube material from one

specific sub-supplier. However, all fatigue measurements and evaluations showed that the fuel injector line also from that one sub-supplier was built fatigue endurable

- In June/July 2011, Volkswagen identified certain U.S. application specific emissions related regeneration modes for the NOx storage catalyst as being causal for the possible resonance on fuel injection line #2.
- During August and September of 2011, additional analyses and engine testing confirmed that only injector line #2 was actually affected (and not the lines 1, 3 and 4) because the natural frequency of line #2 is within the range of the frequency created by fuel injection pulses during U.S. application specific operating modes (de-NOx and de-SOx regeneration cycles) and within a specific RPM range.
- Based on this information, on September 23, 2011 the matter was presented to the product safety committee at Volkswagen AG for assessment and determination. The committee decided to conduct a recall.

**Date of Determination:** September 23, 2011

573.6 (c) (7) **Noncompliance Test Result**

Not applicable

573.6 (c) (8) **Proposed Remedial Program**

When sufficient quantities of vibration dampers and #2 fuel injection lines are available, Volkswagen and Audi plan to notify all owners of affected vehicles and will instruct them to arrange for an appointment with an authorized dealer.

On vehicles produced during December 2008, January and February 2009, April, October, November and December 2010, the #2 fuel injection line will be replaced. In addition, on all four fuel injection lines on these vehicles, vibration dampers will be installed as a precautionary measure.

All fatigue measurements and evaluations showed that the fuel injector lines 1, 3 and 4 are built fatigue endurable. However, because the vehicles will be in the workshop for this recall and the additional installation of the vibration dampeners on lines 1, 3 and 4 can easily be done, Volkswagen has decided to apply this measure to all four fuel injection lines. This approach will make sure that cylinder 2 gets vibration dampeners installed, avoiding potential misunderstandings by workshop personnel in identifying line #2.

All vehicles produced in other production months are equipped with fuel injection lines with proper fuel line material. These vehicles will get vibration dampeners installed on all four fuel injection lines.

Pending parts availability, mailing dates are anticipated as follows:

**Dealers:** November 2011

**Owners:** November 2011

573.6 (c) (9) **Submission of Communications**

A representative copy of all bulletins and other communications sent to dealers and owners will be submitted within five (5) days of dealer/owner notification.

573.6 (c) (10) **Proposed Owner Letter**

A draft owner's letter will be submitted to the agency for review and approval.

573.6 (c) (11) **Manufacturer's Recall Code**

Volkswagen has assigned the code 23J9/V5 for Volkswagen vehicles affected by this recall and 23J8/K5 for Audi vehicles affected by this recall.

Sincerely,



Christopher T. Sandvig  
General Manager Compliance/TREAD