

James C. Owens, Acting Administrator National Highway Traffic Safety Administration 1200 New Jersey Avenue, S.E. Washington, DC 20590

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March 23, 2022 Date

Subject: Chronology for Audi Recall 21H7

Dear Mr. Owens:

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

Volkswagen hereby submits the following chronology associated with the subject recall.

## **Chronology of Defect**

May 31, 2014: As part of regular field monitoring and quality assurance processes, analysis of claimed field parts was started by Audi and the supplier of the turbocharger. The claims could not be directly connected to the turbocharger as the root cause. Field monitoring continued.

August 2014 – January 2017: Investigation regarding root cause and failure resolution process initiated based on additional turbo charger failures in the field. Start of the development and testing of process for an optimized oil strainer including release procedure on test benches and by endurance runs. At that point there was no indication that a turbo charger failure may cause an engine stall while driving and the topic was handled as a regular quality topic. Analysis revealed that, depending on the conditions in which the vehicle is used, deposits may accumulate in the engine oil system and over time these may clog up the oil strainer, which could lead to an insufficient supply of oil to the turbochargers. A new oil strainer with a larger mesh size was developed for the oil supply for both turbochargers.

February-April 2017: Technical Service Bulletin regarding turbocharger replacement, including replacing the oil strainer, was issued to address engine performance and other quality issues on vehicles in the field. On March 30, 2017 an optimized oil strainer with increased mesh size was introduced in production as a result of the quality improvement processes. In addition, Audi issued a parts-related special notice to remove obsolete oil strainer from parts inventory.

Field monitoring continued.

July 18, 2019: Upon request of NHTSA, Audi AG presented the field situation, indicator types, and field monitoring process to NHTSA. Analysis and monitoring of field cases worldwide did not indicate a likelihood of stalling upon a turbo charger failure due to a clogged oil strainer.

May 13, 2020: Upon request of NHTSA, Audi AG presented the updated field situation. Field monitoring continued.

March 29, 2021: NHTSA ODI opened up investigation PE21-009.

April 2, 2021: NHTSA ODI sent an Information Request letter related to PE21-009.

May 28, 2021 and June 08, 2021: Submission to NHTSA of responses to PE21-009 Information Request letter. Durability test initiated with high load driving cycle and defined stopping times in an attempt to reproduce the customer claims. Comprehensive data evaluation and assessment of VOQ and customer complaints regarding customer experience. During internal testing on test bench and track to reproduce the defect and vehicle behavior a turbo charger failure did not result in an engine stall while driving.

June – August 2021: Additional analysis and testing did not show stalling conditions without prior indications. The tests have shown that due to a turbocharger failure, the engine may run rough, experience reduced performance, idle poorly and may show long cranking times. There are also certain DTCs that may occur and will illuminate the EPC and/or the MIL.

September 08, 2021: Updated Technical Service Bulletin was published including a special customer survey to gather detailed information on customer experience and collect blocked oil strainer for further analyses.

September 21, 2021: The topic was presented at the quarterly meeting between NHTSA and VWGoA. The presentation included results of durability testing in a car running 20,000 km with a clogged oil strainer and not experiencing turbocharger failure.

November 12, 2021: Audi AG presented the current status of technical and field analyses to NHTSA including data logger and video documentation of different driving situation in relation to a turbocharger failure on the vehicle. Furthermore, the steps of disassembling the relevant engine parts and the analyses of those were presented and explained.

December 09, 2021: Audi AG presented the current status of evaluation and results of the customer survey that was started in September to NHTSA.

February 22, 2022: A warranty extension for 10 years / 120,000 miles was launched to address and improve customer experience.

March 10, 2022: The topic was presented and discussed again in a meeting with ODI leadership. During that meeting NHTSA voiced concerns that unusual behavior such as rough idle, reduced performance, long cranking times or warning lights indicating a turbo charger failure may not be sufficient to warn the driver.

March 16, 2022: The Audi Product Safety Committee decides a voluntary worldwide safety recall.

Between April 2017 and the date of determination, Audi received 1,889 claims and 47 field reports in the U.S. related to oil strainer replacement.

Please contact me if you require any additional information or have any questions related to this information.

Sincerely,

Christopher T. Sandvig

Director, Group Customer Protection

**Group Quality**