



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

ODI RESUME

Investigation: EA 22-001

Prompted by:

Date Opened: 04/04/2022

Investigator: Lemeola Kamanya

Approver: Stephen Ridella

Subject: Engine Stall - Turbo Failure

Date Closed: 05/26/2023

Reviewer: Sharon Yukevich

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: Volkswagen Group of America, Inc.

Products: 2013-2016 Audi A8, S6, S7, S8, RS7

Population: 23,347 (Estimated)

Problem Description: The complaints allege that the vehicle stalls suddenly with no prior warning while driving on the highway or in city traffic. Several complaints attribute the failure to oil starvation of the turbocharger due to clogging of the oil strainer

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	100	762	709**
Crashes/Fires:	0	0	0
Injury Incidents:	0	0	0
Fatality Incidents:	0	0	0
Other*:	0	Confidential	Confidential

***Description of Other:** Early Warning Reporting (EWR) Field Report

**** Total eliminates duplicates received by ODI and manufacturer.**

ACTION / SUMMARY INFORMATION

Action: Close Engineering Analysis (EA)

Summary:

On March 29, 2021, the Office of Defects Investigation (ODI) opened a Preliminary Evaluation (PE 21-009) after the agency received 58 reports alleging engine stalling in 2013-2016MY Audi vehicle models A8, S6, S7, S8 & RS7 equipped with the 4.0L, twin-turbocharged engine. Complainants reported the vehicles would stall with no warning while driving at highway or city traffic speeds. Several of the complainants alleged an inability to restart. The complaints alleged the major contributing factor to the engine stalling was the failure of the turbochargers. The complaints cited the turbocharger failure was a result of oil starvation due to a clogged oil strainer in the turbocharger oil supply line.

The location of the oil strainer in the turbocharger oil supply line is in the inner valley of the engine. It is not easily accessible, making servicing the component difficult. The oil strainer removes particles and carbon deposits from the oil before lubricating the turbochargers. Over time, if the debris is not removed from the oil strainer, it becomes clogged and prevents oil from flowing to the turbochargers. This causes the turbine bushings to run dry and overheat resulting in turbine shaft failure due to thermal stress.

On April 04, 2022, PE21-009 was upgraded to an Engineering Analysis (EA22-001) to further assess the scope, frequency, and potential safety related consequences of the alleged defect. Volkswagen filed recall 22V-178 to replace the 30µm mesh oil strainer with a 90µm mesh oil strainer in the subject vehicles. VW introduced the larger mesh oil strainer into production in March of 2017 effecting the 2017-2018MY vehicles.

ODI reviewed information from VW for vehicles that had the larger mesh installed in production. The data received showed, since the new oil strainer size of 90µm went into production for the 2017-2018MY, there has not been any reported incidents of turbocharger failures due to oil starvation or other failures that could be related to the larger screen mesh.

In view of the recall being conducted by VW and lack of any detrimental side effect to the turbocharger caused by the larger mesh, ODI is closing this Engineering Analysis (EA). The agency reserves the right to take additional action if warranted by future circumstances.

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