



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

ODI RESUME

Investigation: EA 23-001
Prompted by: Upgrade PE21-021
Date Opened: 03/17/2023
Investigator: Daniel Pinero **Reviewer:** Bruce York-B
Approver: Stephen Ridella
Subject: High pressure fuel pump failure

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: Chrysler (FCA US, LLC), BMW of North America, LLC, Robert Bosch, LLC
Products: Various make, model, model years
Population: 490,000 (Estimated)

Problem Description: High pressure fuel pump failure leading to stall/loss of motive power.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	62	732	794**
Crashes/Fires:	0	0	0
Injury Incidents:	0	0	0
Fatality Incidents:	0	0	0
Other*:	0	7,704	7,704

*Description of Other: Manufacturer warranty claims and field reports

** Total eliminates duplicates received by ODI and manufacturer.

ACTION / SUMMARY INFORMATION

Action: Upgrade PE21-021 to an Engineering Analysis (EA) to include the tier-one supplier and any manufacturers who installed subject fuel pumps having experienced similar failures to the recall population.

Summary:

The Office of Defects Investigation (ODI) opened PE21-021 on October 14, 2021, to investigate incidents alleging a stall/loss of motive power as a result of high-pressure fuel pump failures in certain model year (MY) 2019-2020 Ram 2500, 3500, 4500, and 5500 heavy duty trucks equipped with 6.7L Cummins turbodiesel engines. During the investigation, ODI sought to determine if the related defect allegation was limited in scope to the recalled population. After review of information request response materials from both FCA and BMW, NHTSA determined that sufficient information to identify a comprehensive recall population could not be produced by FCA and BMW.

During the investigation FCA filed recalls 22V406, 22E048, 22V767, and 22E087 which include vehicles not identified in the initial subject population by ODI. ODI also received recall 21V586, involving loss of motive power due to failed CP4 fuel pumps on certain BMW manufactured vehicles. An information request letter response received from BMW indicated that failed pumps on their vehicles were caused by an interaction between pump internal components and US market diesel fuel, leading to increased slip and eventual particle-generating wear surface. Additional work will be done to identify whether a similar root cause is associated with the FCA recalled population and if similar wear dynamics occur on pumps supplied to vehicle manufacturers other than those included in the recalled population.

ODI has upgraded this investigation to an EA in order to 1) determine engineering specifications of internal pump components that are correlated with pump failure leading to loss of motive power or other safety related hazards, 2) identify vehicle populations equipped with alleged defective pump variants, 3) assess if vehicles equipped with alleged defective pump variants result in an unreasonable risk to motor vehicle safety and 4) gather and review any other relevant information related to high pressure fuel pump failure associated with the subject populations of recalls

21V586, 21V880, 21E094, 22V406, 22E048, 22V767, and 22E087.

Review of the above information will allow NHTSA to confirm root cause and recall remedy viability, and identify and evaluate vehicle populations equipped with pump components that may pose an unreasonable risk to motor vehicle safety.

The ODI reports cited above can be reviewed at:

<http://www-odi.nhtsa.dot.gov/owners/SearchNHTSAID>

using the following complaint identification numbers: 11257550, 11351441, 11361603, 11361616, 11365300, 11365426, 11365858, 11366401, 11372337, 11373793, 11374797, 11376793, 11377871, 11378173, 11384377, 11386063, 11387018, 11399710, 11402550, 11415339, 11418868, 11418870, 11427075, 11434276, 11436807, 11437226, 11437249, 11437273, 11437292, 11437294, 11437394, 11437399, 11437403, 11437405, 11437423, 11437528, 11437565, 11437579, 11437580, 11437590, 11437679, 11437744, 11437781, 11437842, 11437993, 11438006, 11438008, 11438121, 11438138, 11438155, 11438392, 11438629, 11439359, 11439879, 11440397, 11443030, 11446542, 11448163, 11453556, 11458918, 11460558, 11469337