



U.S. Department
of Transportation
**National Highway
Traffic Safety
Administration**

ODI RESUME

OFFICE OF DEFECTS INVESTIGATION



Investigation: DP22002

Prompted By: Defect Petition

Date Opened: 09/12/2022

Date Closed: 02/27/2024

Investigator: Tariq Bond

Reviewer: Gregory Magno

Approver: Tanya Topka

Subject: C300 Wrist-pin allegation

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: Mercedes-Benz USA, LLC

Products: 2015 Mercedes-Benz C300

Population: 72,156

Problem Description: Improper wrist pin used in the M274 engine may cause engine failure

FAILURE REPORT SUMMARY

	ODI	Manufacturer	EWR D&I	Other	Total	EWR Field Reports
All Incidents:	0	0	0	1	1	0
Crashes/Fires:	0	0	0	0	0	0
Injury Incidents:	0	0	0	0	0	0
Number of Injuries:	0	0	0	0	0	0
Fatality Incidents:	0	0	0	0	0	0
Number of Fatalities:	0	0	0	0	0	0

Description of Other: Defect petition

ACTION/SUMMARY INFORMATION

Action: Petition is denied; close this Defect Petition.

Summary:

In a letter dated April 29, 2022, Mr. Sergio Betancourt (the petitioner) submitted a petition attributing engine failure of his 2015 Mercedes-Benz C300 to “wrong sized wrist-pins” and asserted that these were prevalent on all Mercedes-Benz models (including the Metris minivan, GLC300, and C300) equipped with a version of the M274 engine. The petition cited Mercedes Technical Service Bulletin (TSB) LI03.10-P-060916 (meant for the 2015 C300) and postulated that the “wrong-sized wrist pin” would allow the piston to “wiggle in the cylinder as it would move up and down”. In addition to the Mercedes-Benz TSB, the petitioner enclosed a service center repair estimate and images of other online submissions discussing the M274 engine.

In the incident that prompted the petition, the petitioner reported that the vehicle lost power and shook in response to accelerator application during highway driving, followed by white smoke from the exhaust pipe. The petitioner stated that the subsequent service center visit led to a cracked piston diagnosis. The service record from this visit prescribed an engine teardown to localize the failure and characterize any resulting engine damage and listed a number of repair options that included replacement of one piston, four pistons, or the entire engine long block (depending on the level of damage suffered).

TSB LI03.10-P-060916 ("TSB") was first released on February 27, 2015 and pertained to Engine Code 274.920. It cited the following complaint condition: "Clattering/rattling or knocking noise from the crank assembly of the engine when cold at oil temperatures up to approximately 50°C mostly heard on engine deceleration" and listed the cause as under analysis. The TSB gave further instructions on the collection of information and discouraged the replacement of any components.

On September 21, 2015, TSB Version 4 introduced engine build clean points (March 27, 2015 or April 20, 2015 depending on the engine plant); cause: unfavorable tolerance of the piston wrist pin resulting in enlarge end float of the connecting rod in the piston; and remedy: compare the complaint vehicle sound to an enclosed sound file under various operating conditions and then if verified, replace the pistons, connecting rods, and bearings, using updated pistons that include updated wrist pins. A review of the petitioner's vehicle service history indicates that this labor operation was performed in March of 2016.

In its November 22, 2022 response to ODI's September 28, 2022 Information Request (IR) letter, Mercedes stated that the limited number of potentially affected wrist pins could contribute to an unintended noise, but pose no motor vehicle safety risk.

ODI's analysis of the field data furnished with the Mercedes IR response and within its own Vehicle Owners Questionnaire (VOQ) database support this assertion, finding no relationship between wrist-pin conditions cited in the TSB and engine failure or loss of motive power. Broader searches of both data sources for engine stalling related to engine durability identified no trends meriting further investigation.

After conducting a technical review of the petitioner's submissions, the vehicle history of the petitioner's vehicle, Mercedes TSB—LI03.10-P-060916, information provided by Mercedes-Benz in response to the Agency's Information Request, and data within its own files; NHTSA has concluded that there is insufficient evidence to pursue a formal investigation. Accordingly, the Agency has denied the petition. NHTSA will continue to review any new information or incidents as they are submitted to the Agency.

A Federal Register Notice (FRN) further detailing NHTSA's reasons for denial of the petition will be published in the future. The petition and its attachments can be reviewed at [NHTSA.gov](https://www.nhtsa.gov) under reference ODI number 11450360.