



**VEHICLE FACTORS GROUP CHAIRMAN'S  
FACTUAL REPORT**

**Vehicle Attachment – Daimler Detroit Assurance Report**

**Mount Pleasant, Pennsylvania**

**HWY20MH002**

(2 pages)

## Detroit Assurance Report to the National Transportation Safety Board

### Mt. Pleasant, Pennsylvania Crash

This document is a supplementary report to the NTSB in-person visit to Daimler Trucks North America (DTNA) in Portland, Oregon on February 20<sup>th</sup>, 2020 by Mr. Jerome Cantrell, Vehicle Investigator.

During this visit three extractions were performed for the three Detroit Assurance systems that were involved in this crash with the last digits of the vehicles below:

1. KB7773 - Detroit Assurance 4.0
2. JG8209 - Detroit Assurance 2.0
3. JX7288 - Detroit Assurance 2.0

Please note that the ability to extract information from Detroit Assurance cannot be guaranteed as there is a dependency on the crash scenario itself and operating conditions. The following briefly describes the results of the analysis that was conducted by DTNA active safety system experts. Accordingly, Detroit Assurance is a driver assistance safety system and the driver must be in control of the dynamic driving task at all times. The system is contingent on vehicle, traffic, and environmental factors so it cannot be expected to engage in all perceived crash, potential crash, or actual crash scenarios.

1. KB7773

Result: The Detroit Assurance 4.0 system was determined to be operating within the proper expected level of performance at the time of the crash.

2. JG8209

Result: The Detroit Assurance 2.0 system was determined to have an active forward radar sensor misalignment fault at the time of the crash on January 5, 2020. The collision mitigation system as a result, would be disabled and a message indicating unavailability of the AEB system would have been presented in the instrument cluster display at startup with a telltale shown for the duration of this fault.

Description	Number	Mode	Status	Troubleshooting Type
<b>[UDS-42] RDF01T - Radar Frontend</b>				
ECU Misaligned EL monitoring	523006	13	active	Engineering
ECU HW Malfunction	523000	12	previously active	Engineering
Radar Unit HW Malfunction	523002	12	previously active	Engineering
Gyro Unit HW Malfunction	523003	12	previously active	Engineering
<b>[J1939-232] J1939-232-32 - Headway Controller</b>				
- Out of Calibration	523007	13	active	Refer to OEM

This active forward radar sensor fault was determined to occur on June 6, 2019 which results in an accumulated time of 1092 hours where the misalignment was active.

Optional Environment data Most Recent Year	2019	
Optional Environment data Most Recent Month	6	
Optional Environment data Most Recent Day	2	
Optional Environment data Most Recent Hour	17	
Optional Environment data Most Recent Time within Operation Cycle	51802	sec
Optional Environment data Accumulated Time	65535	minutes

3. JX7288

Result: The Detroit Assurance 2.0 system was determined to be operating within the proper expected level of performance at the time of the crash.