

## Ford Motor Company (Ford) Recall No. 24S78 Chronology

### CERTAIN 2020, 2021 and 2022 6.7L FORD SUPER DUTY AND MEDIUM TRUCK VEHICLES - HIGH PRESSURE FUEL PUMP PERFORMANCE, LOSS OF MOTIVE POWER

**Date of Submission:** December 20, 2024

#### **Chronology of Defect / Noncompliance Determination**

**Provide the chronology of events leading up to the defect decision or test data for the noncompliance decision.**

#### September 2021 – January 2022

On September 16, 2021, the Internal Combustion Engines Propulsion and Thermal Systems Engineering (IPTSE) team introduced a concern pertaining to an increase in warranty reports for High Pressure Fuel Pump (HPFP) failures on Super Duty and Medium Truck vehicles equipped with 6.7L Scorpion diesel engines to Ford's Critical Concern Review Group (CCRG). The initial investigation attributed the increase in warranty rates for Super Duty and Medium Truck vehicles equipped with the Bosch CP4 RP7 diesel HPFP to aged biodiesel resulting from COVID pandemic shutdowns. The RP7 HPFP was introduced during 2020 model year (MY) Super Duty and 2021MY Medium Truck production on all diesel-powered powertrain variants.

On August 23, 2021, the RP7 pump was replaced in production with the RP8 variant, which implemented a design robustness action that increased the pump's roller shoe and tappet body clearances for improved fuel flow to increase cooling in the tappet area.

On December 30, 2021, the National Highway and Traffic Administration (NHTSA) reached out to Ford's Automotive Safety Office (ASO) regarding competitor safety recalls on products built with a version of Bosch's CP4 HPFP. NHTSA's intention was to make Ford aware of these recall decisions and to understand if Ford planned to file a corresponding recall for product built with Bosch's CP4 HPFP. On January 7, 2022, Ford responded to NHTSA describing specific HPFP component and general fuel system design differences that differentiate the performance in Ford vehicles compared to other OEMs. Ford indicated that it had not identified an unreasonable risk to motor vehicle safety and would continue to monitor performance of vehicles with CP4 pumps.

#### February 2022 – October 2022

Between February 2022 and October 2022, Ford continued to evaluate warranty data trends, review returned parts from the field, interview customers and analyze connected vehicle data. Based on this analysis, Ford determined that the failed pumps were a result of aged biodiesel caused by fuel sitting for extended periods of time during COVID shutdowns. Ford also further assessed the warning progression through connected vehicle data and customer interviews. Ford concluded there was no trend of vehicle stall at this time.

#### November 2022 – December 2023

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Ford continued to monitor field data as the population continued to mature. Ford determined that there was no trend of vehicle stalls and the primary customer effect was vehicle no-start based on available data.

### January 2024 – November 2024

The CCRG continued to assess field performance in 2024. Ford's investigation involved analyzing updated connected vehicle data and studying conditions that could result in pump failure and loss of motive power. Ford conducted teardown analyses of returned parts that showed evidence of aged biodiesel deposits. Assessments related to geographic bio-diesel availability were conducted in September 2024, which showed a positive correlation between bio-mass diesel specifications and average temperatures within a state and the incidence of failures.

As of November 13, 2024, Ford is aware of 3,070 warranty reports, 498 field reports and 58 customer service reports associated with this concern, received from October 18, 2019, through November 12, 2024.

On **December 13, 2024**, Ford's Field Review Committee reviewed the concern and approved a field action.

Ford is not aware of any reports of accidents, injuries, or fires attributed to this condition.