Chronology of Defect / Noncompliance Determination

22S12 - Certain 2021 model year F-150 vehicles with a potentially poor performing / inoperative wiper motor

<u>March – April 2021</u> Reports of inoperative F-150 wiper motors were brought to Ford's Critical Concern Review Group (CCRG) for review in March, 2021. The wiper motor supplier informed Ford's Supplier Technical Assistance (STA) group that twelve wiper motors had been returned between 17-Dec-2020 and 20-Mar-2021 exhibiting substandard brush-plate weld quality. The supplier reported that corrective actions had been implemented in November and December, 2020. CCRG analyzed the field data and began to monitor the performance of motors in the field.

<u>May – November 2021</u> CCRG identified additional inoperative wiper motor reports unrelated to the brush-plate spot welding topic. The supplier provided feedback that additional causes for inoperative wiper motors had been identified, including loose magnets and a loose motor nut. The supplier reported that containment actions had been implemented in December 2020 and in March 2021 for each topic respectively. CCRG continued its investigation and update of field data, which continued to indicate a low rate of reports. CCRG also reviewed one (1) VOQ received by NHTSA in August, 2021.

<u>December 2021 – February 2022</u> Through 4Q2021, reports of inoperative wipers continued to be identified. To better understand the field data and trends, CCRG utilized a variety of analytical techniques that took into account the multiple failure causes, disparate failure populations and multiple containment actions taken at various times by the supplier. As of February 14, 2022, there have been 758 warranty reports for intermittent or inoperative functioning windshield wiper motors on vehicles affected by this action. This represents an overall rate of 3.9R/1000, with a spike of reports for vehicles built in November, 2020 of 9R/1000 at 12 months-in-service. Based on the variety of analytical tools used to evaluate the performance of these motors in the field, reports of inoperative motors are expected to continue.

A field action was approved by Ford's Field Review Committee on March 4, 2022.

There are no accidents or injuries associated with this concern.