

Chronology of Defect / Noncompliance Determination

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

June 2018: A Ford data analysis group informed the North American Critical Concerns Review Group (CCRG) of a low rate of reports alleging doors that would not close and doors that opened while driving. None of these reports alleged any accidents, injuries or loss of vehicle contents as a result. Engineering initiated a request to recover the electronic door latch system components from complaint vehicles for supplier analysis.

July – August 2018: Part returns from the field were inspected and found to contain a Diagnostic Trouble Code (DTC) indicating out of position parts. The customer concern could not be duplicated when the same parts were subsequently tested on a bench or in vehicle. Efforts were undertaken to duplicate the latch performance concerns under various system and electrical conditions. Investigation of other potential causes was also undertaken, including component assembly, vehicle level assembly, cable interaction and door alignment. Additional component testing was initiated in an effort to reproduce the customer allegations and resulting DTC's, including high and low temperature soaking and cycling.

September – November 2018: Material lab analysis of a field return part identified small amounts of silicon dioxide on the latch motor commutator. Subsequent analysis identified silicon within the potting material on the printed circuit board of a door latch. Ford continued its assessment of silicon dioxide contamination on system function. Ongoing review of field data indicated a decreasing warranty trend from July to August.

December 2018 - January 2019: Engineering analysis, while only theoretical, was that it was possible that a pawl motor contaminated with silicon dioxide could stop its rotation in a specific range that could allow the pawl to partially engage the latch striker. Ongoing review of field data found an increase in door latch repairs from September – December 2018.

Ford initiated efforts to contact dealers and customers to better understand the nature of these repairs and customer experiences. Based on a detailed engineering review of the design and performance of the latch assembly, Ford believes that if any key component of the latch system was out of position, the driver would receive overt door ajar warnings and notifications, including a door that was perceived to be closed but was unlatched or in a partial latch condition.

On February 4, 2019, Ford's Field Review Committee reviewed the concern and approved a field action.

Ford is not aware of any reports of accident or injury related to this condition.