

Chronology of Defect / Noncompliance Determination for Ford Motor Company Recall #18S27.

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

April 2017- October 2017: An issue concerning four reports of localized post-crash interior fires in the B-pillar area on 2015 and 2016 model year vehicles was investigated by Ford's Critical Concern Review Group (CCRG). The investigation focused on B-pillar area components including front seat belt pretensioners (both retractor and lap anchor), electrical wiring, insulation and carpeting.

Ford's investigation included inspection of all four complaint vehicles; three were subsequently obtained for further analysis. No concerns were identified with the retractor or lap anchor pretensioners obtained from these vehicles. The investigation found that surrounding components, including carpet and insulation material, met Ford's specifications. Component and subsystem testing was not able to re-create a fire. A complete and thorough review of Ford's internal product development testing, including complete vehicle tests involving retractor and lap anchor pretensioner deployments, did not find signs of a fire after deployments or performance anomalies.

November - December 2017: Transport Canada contacted Ford on November 17, 2017, regarding a B-pillar area fire on a 2015 model year vehicle. Ford and Transport Canada conducted a joint vehicle inspection on December 14, 2017. Analysis of parts from the vehicle, including the retractor pretensioner, lap anchor pretensioner and wiring, was not able to identify the ignition source.

January 2018 - March 2018: Ford received five reports of B-pillar area fires, including three on 2018 model year vehicles. The front seat belt retractor and lap anchor pretensioners in 2018 model year vehicles are from a different supplier than those installed in 2015-2017 model year vehicles. Analysis of returned components from these vehicles was not able to identify the ignition source. Evaluation of the design and deployment differences between the retractor and lap anchor pretensioner systems from the two suppliers (2015-2017 model year vs. 2018 model year) did not identify potential contributory factors.

Efforts were initiated to inspect the B-pillar area (including pretensioners, carpet, insulation and wiring) in local 2015-2018 F-series vehicles involved in crashes for any post-deployment evidence of charring, melting or fire.

April 2018 - June 2018: Ford received six reports of B-pillar area fires in 2015 (1), 2017 (2), and 2018 (3) model year vehicles. Evidence from inspection of these vehicles indicated that the ignition source was not electrical in nature. Refined subsystem testing was conducted and identified the potential for excessive sparks during deployment of certain pretensioners. An analysis of the pretensioner exhaust gas constituents and their potential combustibility within the B-pillar was initiated. NHTSA contacted Ford regarding three reports they had received. Ford and NHTSA conducted a joint inspection of one of these vehicles on June 28, 2018.

July 2018 - August 2018: An inspection of vehicles, both during assembly and in-service, was conducted to assess potential build variation contributors. Factors evaluated included insulation and carpet proximity to pretensioners, insulation and carpet edge characteristics, and presence of other potentially combustible material (e.g. wiring harness bundling tape) in the B-pillar area.

A comprehensive series of vehicle level tests was performed. During these tests, Ford observed interaction between pretensioner deployment sparks and exhaust gasses, resulting in momentary combustion, and in some cases, igniting material in the B-pillar area. Testing confirmed this potential on both 2015-2017 and 2018 model year systems.

On August 24, 2018, Ford's Field Review Committee reviewed the concern and approved a field action.