

**Submission Date: 04/08/2019**

**Chronology of Defect / Noncompliance Determination for Ford Motor Company Recall #19S11**

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

February 2019: On February 28, 2019, a report of a 2017 F-150 underhood fire in the U.S. was brought to Ford's Critical Concern Review Group (CCRG) for review. The fire occurred while the vehicle's engine block heater was plugged into a wall outlet. Three days prior to the fire, the vehicle had recall 18S45 completed. The repair for 18S45 involved inspecting the vehicle's engine block heater cable splice connector for damage or corrosion, and had passed the inspection in accordance with the 18S45 procedure, the connector was greased, reconnected and returned for use. A subsequent vehicle inspection found the fire origin to likely be the engine block heater cable, as a separated male pin was found in the splice connector.

CCRG requested x-ray scans of new production and warranty-returned block heater cable connectors for signs of potential damage in the splice connector. X-ray scans of cable connectors that had been returned to Ford, new production connectors prior to shipment to Ford's assembly plant for vehicle production, and new cables that had already been shipped to a vehicle assembly plant were reviewed. Scans of the new cables used for vehicle production found that pins were properly crimped with no signs of damage. Scans of the returned warranty connectors were inconclusive.

March 2019: Further review of technician reports and photos found some technicians reporting completely broken connector pins in the splice connector when performing the 18S45 service procedure. Review of field-returned parts found that connector pins could become partially or completely broken when the connector ends are manipulated in a lateral bending or twisting motion during connector separation. Further analysis found that twisting or flexing the two connector ends could potentially fracture one or more of the three male terminals below the line of sight inside the molded connector. This may or may not be visible to the technician, and may be aggravated by pre-existing debris and or corrosion.

On April 1, 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 issue. Ford is aware of one fire in the U.S. and one in Canada that may relate to block heater usage following successful completion of 18S45. Ford is aware of one report of fire in Canada that had failed the 18S45 inspection procedure. Vehicle inspection after the fire was unable to determine whether that incident was related to this subject. Ford will provide replacement block heater cords at no charge to the customer under program 19G01 once parts become available.