

Part 573 Safety Recall Report

17V-170

Manufacturer Name : Roush CleanTech, LLC

Submission Date : MAR 13, 2017

NHTSA Recall No. : 17V-170

Manufacturer Recall No. : VR



Manufacturer Information :

Manufacturer Name : Roush CleanTech, LLC

Address : 12170 Globe Street

Livonia MI 48150

Company phone : 800-597-6874

Population :

Number of potentially involved : 434

Estimated percentage with defect : NR

Vehicle Information :

Vehicle 1 : 2015-2017 Ford (altered) E450, F59 and F-650/750

Vehicle Type : BUSES, MEDIUM & HEAVY VEHICLES

Body Style :

Power Train : NR

Descriptive Information : Roush altered new Ford vehicles prior to first sale by installing propane conversion kits.

Production Dates : AUG 01, 2015 - FEB 28, 2017

VIN Range 1 : Begin :

NR

End : NR

Not sequential

Description of Defect :

Description of the Defect : The fuel control valve solenoid coils on certain LPG fuel control valves have exhibited over-current / short to ground behavior, which resulted in high temperatures and damage to the non-conductive encapsulant material that houses the coil wire windings. If this occurs, the valve closes, stopping the flow of propane to the engine, which will cause the engine to shut off.

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk : If the engine shuts off while the vehicle is in motion, it could increase the risk of a crash.

Description of the Cause : Based on its investigation and in consultation with Parker Hannifin Corporation, the manufacturer of the fuel control valve solenoid coils at issue, Roush believes that there were exposed metal wires on each of the three reported failed solenoids that became part of a conductive, low resistance path from ignition to power, through the positive terminal on the solenoid coil to a metal case around the coil and back to vehicle ground. This allowed sufficient electrical current to flow through the path to melt/burn the overmold material surrounding the wire coil and connector of the coil.

From examination of other solenoid coils in Parker's inventory, Roush believes that during Parker's coil winding manufacturing process, a defectively molded plastic bobbin would not allow the coil wire to be properly placed. The feed and return wire to the coil are supposed to be routed from the pins to the coils via a molded channel in the bobbin. Some examined inventory bobbins at Parker have an insufficient molded channel that allows the wire on the coils to sit out of the channel and be very close to, and occasionally protrude from, the coil after the overmolding process. The parts all passed Parker's manufacturing inspection process because there was still sufficient distance between the exposed wire and the metal coil casing.

The three failures occurred after the vehicles were in the field. It is possible that snow and road salt in northern climates (as well as potential part contraction from cold temperatures) might have contributed to the electrical arcing effect between the exposed wires and the adjacent metal coil casing.

Identification of Any Warning
that can Occur : NR

Supplier Identification :

Component Manufacturer

Name : Parker Hannifin Corporation

Address : Fluid Control Division

95 Edgewood Avenue New Britain CONNECTICUT 06051

Country : United States

Chronology :

In December 2016, three separate solenoid failures were reported on units in the field. Two of the incidents involved supply valve solenoids and one incident involved a return valve solenoid. Roush CleanTech notified its fuel control valve supplier (Parker and its distributor Exotic) of the three incidents. Roush promptly began its investigation of the issue, in consultation with the manufacturer of the valves.

Following its investigation, on March 8, 2017 Roush decided to conduct a safety recall to address the issue.

Description of Remedy :

Description of Remedy Program : Roush will replace the defective fuel control valve solenoid at no cost to the customer.

How Remedy Component Differs
from Recalled Component : NR

Identify How/When Recall Condition was Corrected in Production : NR

Recall Schedule :

Description of Recall Schedule : NR

Planned Dealer Notification Date : MAR 14, 2017 - MAR 14, 2017

Planned Owner Notification Date : MAR 31, 2017 - APR 30, 2017

* NR - Not Reported