U.S. Department of Transportation

National Highway Traffic Safety Administration

ODI RESUME

OFFICE OF DEFECTS INVESTIGATION

NHTSA

Authentic US Government Information
National Highway Traffic Safety Administration
uses a *digital certificate* to ensure
the content has remained unchanged

Investigation: RQ 14-005
Date Opened: 01/13/2015 **Date Closed:** 03/15/2016
Investigator: Kyle Bowker **Reviewer:** Bruce York-B
Approver: Otto Matheke
Subject: Vehicle Commanded Engine Shutdown

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: Ford Motor Company
Products: 2011-2015 Ford F-250/350/450/550 with 6.7L Diesel Engines
Population: 555,985 (Estimated)

Problem Description: Loss of sensing function of one or more exhaust gas temperature (EGT) sensors resulting in power reduction (limp) mode and a vehicle commanded engine shutdown (engine stall) with no immediate restart capability.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	77	376	433
Crashes/Fires:	0	0	0
Injury Incidents:	0	0	0
Fatality Incidents:	0	0	0
Other*:	0	21,226	21,226

***Description of Other:** Subject vehicles with one or more warranty claims paid by the manufacturer to address the alleged defect condition.

ACTION / SUMMARY INFORMATION

Action: This Recall Query (RQ) has been closed.

Summary:

The Office of Defects Investigation (ODI) opened this RQ to investigate allegations that the scope and remedy of safety recall 13V-535 were inadequate. Recall 13V-535 was limited to a relatively small population of "Ambulance Package" vehicles and ODI received complaints of pickup trucks and "Fire Engine Prep Package" vehicles being affected by the same defect.

Ford manufactured approximately 555,985 subject vehicles between February 22, 2010 and January 30, 2015 that may be affected by defective EGT sensors and Powertrain Control Module (PCM) software calibration. The subject vehicles are equipped with four (4) EGT sensors to monitor engine operating conditions. An EGT sensor fault may produce false exhaust over-temperature signals. If these signals are produced, the Powertrain Control Module (PCM) implements a Failure Management Effects Mode (FMEM) and the driver receives a "Stop Safely Now" (SSN) system warning on the instrument cluster message center. The FMEM triggers a 70% reduction in available engine power over a period of no more than 45 seconds, during which it may not be possible to accelerate or maintain vehicle speed. The PCM then commands the engine to shut down when vehicle speed reaches approximately 1 mph. There is no immediate restart capability. Depending on the PCM software calibration, ignition key position and ambient temperature conditions, the engine may not restart until the end of a 10-60 minute "cool down" period.

Ford and its component supplier(s) made numerous changes to the PCM software calibration and the design, material and manufacture of the EGT sensors over the period of subject vehicle production. This continuous product improvement affected vehicle performance regarding the alleged defect.

Ford acknowledges the defect condition in the subject vehicles but argues that an unreasonable risk to motor vehicle safety is limited to "Ambulance Package" and "Fire Engine Prep Package" vehicles where commanded shutdown could impact emergency response and patient care. Ford also argues that the defect trend is in decline. Ford also initiated a new safety recall (15V-175) to address the 13V-535 remedy concerns in the "Ambulance Package" vehicles and "Fire Engine Prep Package" vehicles. The 15V-175 remedy reprograms the PCM with a new software calibration that stops a single EGT sensor fault to cause the vehicle to enter the FMEM shutdown mode. Ford also initiated an EPA emissions recall (14E03) for all subject vehicles that reprograms the PCM with the software calibration employed in safety recall 15V-175. Finally, Ford initiated a Customer Satisfaction Program (15M01) providing extended warranty coverage of 8 years or 80,000 miles for the the EGT sensors on certain MY2011-2012 subject vehicles.

Due to the EPA emissions recall, that had a 66.6% completion rate in Ford's December 2015 progress report to the EPA, the defect trend is in decline. ODI is not aware of any crashes, deaths or injuries related to the alleged defect. ODI believes the alleged defect poses a safety risk but notes that the EPA emissions recall is addressing the safety problem. Compelling issuance of a duplicate recall would not represent a wise use of agency resources. Accordingly, this Recall Query is closed. This action is not a finding that no defect exists and NHTSA will take further action if such action is warranted.

The ODI reports cited above can be reviewed online at http://www-odi.nhtsa.dot.gov/owners/SearchNHTSAID under the following identification numbers:

10503634, 10503797, 10513931, 10525208, 10537308, 10541865, 10543027, 10545116, 10547999, 10556889, 10557234, 10564510, 10567144, 10567290, 10567358, 10568674, 10572839, 10574838, 10579219, 10606677, 10610312, 10621711, 10627957, 10631970, 10632229, 10638930, 10640978, 10644338, 10644488, 10649756, 10652139, 10652400, 10654810, 10654813, 10658643, 10661398, 10662021, 10667388, 10669465, 10676278, 10676377, 10676468, 10676478, 10676483, 10676567, 10676921, 10677010, 10677089, 10677094, 10678250, 10678282, 10679092, 10679121, 10679764, 10680146, 10680240, 10680286, 10680848, 10680946, 10682016, 10682653, 10682753, 10689813, 10690508, 10694120, 10695536, 10700628, 10701274, 10703107, 10704414, 10705436, 10712578, 10714699, 10716238, 10716922, 10790402, 10790406, 10817468, 10824166.