Part 573 Safety Recall Report 16V-777

Manufacturer Name : Ford Motor Company
Submission Date : OCT 24, 2016
NHTSA Recall No. : 16V-777
Manufacturer Recall No. : 16S41

Manufacturer Information :

Manufacturer Name : Ford Motor Company
Address : 330 Town Center Drive
Suite 500 Dearborn MI 48126-2738
Company phone : 1-866-436-7332

Population :

Number of potentially involved : 329,265
Estimated percentage with defect : NR

Vehicle Information :

Vehicle 1 : 2010-2012 Ford Escape
Vehicle Type : LIGHT VEHICLES
Body Style :
Power Train : NR
Descriptive Information : Certain 2010-2012 Ford Escape and 2010-2011 Mercury Mariner vehicles equipped with a 3.0L engines.

These vehicles are not produced in VIN order. Information as to the applicability of this action to specific vehicles can best be obtained by either calling Ford's toll-free line (1-866-436-7332) or by contacting a local Ford or Lincoln dealer who can obtain specific information regarding the vehicles from the Ford On-line Automotive Service Information System (OASIS) database.

Production Dates : FEB 26, 2009 - APR 29, 2012
VIN Range 1 : Begin : NR End : NR ☐ Not sequential

Vehicle 2 : 2010-2012 Mercury Mariner
Vehicle Type : LIGHT VEHICLES
Body Style :
Power Train : NR
Descriptive Information : Certain 2010-2012 model year Ford Escape and 2010-2011 model year Mercury Mariner vehicles equipped with 3.0L engines.

These vehicles are not produced in VIN order. Information as to the applicability of this action to specific vehicles can best be obtained by either calling Ford's toll-free line (1-866-436-7332) or by contacting a local Ford or Lincoln dealer who can obtain specific information regarding the vehicles from the Ford On-line Automotive Service Information System (OASIS) database.

Production Dates : FEB 25, 2009 - DEC 12, 2010
VIN Range 1 : Begin : NR End : NR ☐ Not sequential

Description of Defect :

Description of the Defect :	On certain vehicles, the Fuel Delivery Module (FDM) may develop a crack in the vertical portion of the fuel supply port that could result in a fuel leak. Ford is not aware of any reports of fires, accidents, or injuries related to this condition.
FMVSS 1 :	NR
FMVSS 2 :	NR
Description of the Safety Risk :	A fuel leak in the presence of an ignition source may increase the risk of a fire.
Description of the Cause :	The FDM fuel supply port wall thickness for this vehicle/engine combination is thinner than for other similar FDM applications. As a result, the supply port in these vehicles is susceptible to creep fatigue cracking. The field data shows a strong correlation between FDM fuel port cracking and states with higher ambient temperatures.
Identification of Any Warning that can Occur :	A fuel leak from the FDM may cause fuel odor or visible fuel on the ground under the fuel tank.

Supplier Identification :

Component Manufacturer

Name :	Robert Bosch
Address :	Calle Robert Bosch 405 Toluca FOREIGN STATES 50071
Country :	Mexico

Chronology :

April-May 2016: Engineering identified an elevated rate of warranty claims pertaining to Fuel Delivery Module (FDM) replacement on certain 2010-2012 Escape and Mariner vehicles and brought the concern to Ford's Critical Concern Review Group (CCRG) for review. Ford's CCRG requested further component and material analysis of field return parts from the supplier. It was found that the FDM flange material, which is POM acetal, was exhibiting signs of creep fatigue. Engineering noted that the wall thickness of the fuel supply port on the suspect FDM was thinner than the wall thickness of other supplier-designed FDMs for similar applications. Ford requested additional design information from the supplier to understand this observation better.

June-July 2016: Ford'sreview of supplier data indicated that there were no manufacturing changes made to the FDM flange fuel supply port during this timeframe. Supplier material test data indicated that POM acetal can be susceptible to creep fatigue when exposed to high temperatures, pressure, and time. Ford requested that the supplier conduct a study on production representative FDMs and field return parts to further assess the effects of temperatures and pressures that the suspect FDMs are exposed to in this vehicle application.

August-September 2016: Ford continued to receive reports of FDM replacement consistent with prior data analysis; customers continued to report fuel odor. The vast majority of FDM replacements were from vehicles in Arizona, California, Florida, Nevada, and Texas. Initial test results from the supplier on production parts were inconclusive; Engineering requested that the supplier conduct additional tests with updated durability parameters

October 2016: After extensive component, material, and data analysis, Engineering concluded the fuel supply port wall appears to be susceptible to creep fatigue cracking in this vehicle/engine combination because of the port wall thickness as designed by

Description of Remedy :

Description of Remedy Program :	Owners will be notified by mail and instructed to take their vehicle to a Ford or Lincoln dealer to have the FDM flange replaced with a flange with a redesigned fuel supply port. There will be no charge for this service. Ford provided the general reimbursement plan for the cost of remedies paid for by vehicle owners prior to notification of a safety recall in February 2015. The ending date for reimbursement eligibility is June 30, 2017. Ford will forward a copy of the notification letters to dealers to the agency when available.
How Remedy Component Differs from Recalled Component :	NR
Identify How/When Recall Condition was Corrected in Production :	NR

Recall Schedule :

Description of Recall Schedule :	Notification to dealers is expected to occur on 10/25/2016. Mailing of owner notification letters is expected to begin 12/12/2016 and is expected to be completed by 12/16/2016.
Planned Dealer Notification Date :	OCT 25, 2016 - OCT 25, 2016
Planned Owner Notification Date :	DEC 12, 2016 - DEC 16, 2016

* NR - Not Reported