



U.S. Department  
of Transportation  
**National Highway  
Traffic Safety  
Administration**

# ODI RESUME

INVESTIGATION: EA02-022  
DATE OPENED: 09 September 2002  
BASIS: PE02-040  
SUBJECT: Engine Stalling  
PRINCIPAL ENGINEER: Nate Seymour

MANUFACTURER: Ford Motor Company  
MODEL: Focus  
MODEL YEARS: 2000-02  
VEHICLE POPULATION: 573,585 (2000-2001 only)

PROBLEM DESCRIPTION: *Vehicle stalls at any speed due to contamination blocking the intake mesh on the Fuel Delivery Module, located in the fuel tank.*

## FAILURE REPORT SUMMARY

	ODI	MFR	TOTAL
COMPLAINTS:	201	3274	3475
CRASHES:	9	11	18*
INJ CRASHES:	1	4	4
# INJURIES:	1	4	4
FAT CRASHES	0	0	0
# FATALS:	0	0	0

\*Duplicate Crashes

ACTION: An Engineering Analysis has been opened.

ENGINEER: Nate Seymour DIV CHF: Richard Boyd OFC DIR: K. DeMeter

DATE: 9/6/02 DATE: 9/6/02 DATE: 9/9/02

### SUMMARY:

PE02-040 Ford Focus Stalling is being upgraded to an EA. The data analysis conducted during the PE indicates the Focus will stall at all speeds without notice. Current data indicates that the stalling condition is caused by contamination in the plastic fuel tank, which clogs the Fuel Delivery Module (FDM). Present information does not indicate where this contamination is coming from, although the source is believed to be internal to the fuel tank and fuel filler system.

Ford investigated the issue and introduced an interim fix in June 2001 and then a final fix in December 2001. However, reports indicate that neither the interim, nor the final fix solved the problem. The interim fix involves a coarser mesh on the inlet side of the FDM, which allows larger particles to pass through. The final modification involves a different FDM filtering design and fuel tank, which is not interchangeable with earlier models.

ODI continues to receive complains on 2000 and 2001 Focus vehicles. Additionally, eleven (11) stalling complaints have been received for 2002 Focus. Therefore, MY 2002 will be included in the upgrade.

### INVESTIGATION STATISTICS:

ODI currently has 201 VOQs (MY 2000-2002) that specifically relate to stalling. Ford's initial response included 3274 owner complaints. Of these, there are eighteen (18) individual crash reports. Four (4) crashes included minor injuries.

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Ford reported a total of 7,595 warranty claims that meet the criteria agreed upon by ODI. After manually sorting all claims, 7,429 were assigned to eight categories. This yields a 1.3% warranty claim rate.

Part sales for the original FDM total 26,831. This entire amount is attributed to the Focus. The part was withdrawn from sales when the interim was made available. Therefore, this correlates to 4.7% of the total 2000-2001 population.

ODI compared stalling complaints on eight-peer vehicles to the Focus. All of the peers had significantly less (ODI) reports than the Focus.

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#### **FORD'S OPINION:**

Ford does not believe that engine stalling in the subject vehicles presents an unreasonable risk to motor vehicle safety. They refer to NHTSA's position when closing PE98-057 Crown Victoria Stalling. NHTSA believes that PE98-057 is not an applicable comparison for the following reasons. The Ford Focus is a small passenger vehicle and stalls unpredictably. The subject vehicles of PE98-057 were Crown Victoria Police Cruisers, which are much larger, specially equipped for law enforcement duties, and stalled due to a predictable input. The Crown Victoria weighs 3,946 pounds compared to the Focus 2,707 pounds, measures 37 inches longer than the Focus, and uses a full-length frame opposed to the Focus uni-body. Crash test conducted by NHTSA and the Insurance Institute of Highway Safety (IIHS) indicates that the occupants of a Focus are more vulnerable in crashes than Crown Victoria occupants. The Police cruisers are also equipped with traffic warning lights that maybe used to increase visibility in the event that the car is disabled. Lastly, the Police cruisers were found to only be stalling when the roll over switch was activated. This was most often caused by the cruiser crossing over a set of "no dose rumble strips" on the highway, usually giving the officer an adequate place to move away from traffic. Once the switch was reset, the car would restart. The Focus will not always restart. Many times, it must be towed for repair.

ODI has multiple concerns and therefore has upgraded the preliminary evaluation. Those concerns include, but are not limited to:

- a. The life expectancy of the Ford Focus will keep the vehicles on the highway for many years to come, increasing the likelihood of crashes and injuries as stalling events occur in the future.
- b. ODI is receiving complaints on vehicles, which have received the interim fix. ODI believes these complaints will increase in the future as the vehicles accumulate mileage.
- c. ODI is receiving complaints on 2002 vehicles. We need to determine whether these complaints are on the latest version FDM, or the earlier interim fix FDM
- d. To date, there are sixteen (16) crashes and three (3) injuries. ODI intends to obtain a full understanding of the crashes.