



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

ODI RESUME

OFFICE OF DEFECTS INVESTIGATION



Investigation: RQ24005
Prompted By: VOQ Review
Date Opened: 03/27/2024
Investigator: Joseph Geissler **Reviewer:** Peter Kivett
Approver: Tanya Topka
Subject: Unexpected Transmission Downshift

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: Ford Motor Company
Products: Model Year 2014 Ford F-150
Population: 540,086 (Estimated)

Problem Description: Vehicles unexpectedly downshift to a lower gear without input from the driver causing the vehicle to abruptly slow down without any warning. The unexpected downshift can also result in rear wheel lock-up and/or skidding, increasing the risk of a crash and/or injury.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	EWR D&I	Other	Total	EWR Field Reports
All Incidents:	86	0	0	0	86	0
Crashes/Fires:	1	0	0	0	0	0
Injury Incidents:	2	0	0	0	0	0
Number of Injuries:	2	0	0	0	0	0
Fatality Incidents:	0	0	0	0	0	0
Number of Fatalities:	0	0	0	0	0	0

ACTION/SUMMARY INFORMATION

Action: Open a Recall Query to investigate the scope of Recalls 19V-075 and 19V-433.

Summary:

On September 1, 2016, Ford Motor Company issued a safety recall (NHTSA Recall 16V-248) which included model year 2011-2012 Ford F-150 vehicles equipped with 6-speed (6R80) automatic transmissions. This recall addressed an intermittent loss of the Transmission Output Speed Sensor signal to the Powertrain Control Module, potentially resulting a temporary, unintended downshift into a lower gear. The abrupt downshifting could result in temporary rear wheel lock-up, loss of vehicle control, and increased risk of a crash and/or injury. The Remedy Program for Recall 16V-248 involved reprogramming of the Powertrain Control Module.

On December 25, 2017, the Office of Defects Investigation (ODI) opened a Recall Query (RQ 17-010) to assess the scope and remedy effectiveness of NHTSA Recall 16V-248. This resulted in a safety recall (NHTSA Recall 19V-075) issued on February 11, 2019, which expanded the scope of 16V-248 to include model year 2011-2013 Ford F-150 vehicles equipped with 6-speed (6R80) automatic transmissions. On June 10, 2019, Ford Motor Company issued a safety recall (NHTSA Recall 19V-433) for model year 2013 Ford F-150 vehicles equipped with 5.0L and 6.2L gasoline engines that had been serviced under NHTSA Recall 19V-075 due to a remedy issue within this population of F-150 vehicles.

ODI has received 86 consumer complaints for model year 2014 Ford F-150 vehicles alleging events similar to those described in NHTSA Recalls 16V-248, 19V-075, and 19V-433. These consumer complaints described that vehicles suddenly and unexpectedly downshift to a lower gear without warning, often accompanied by temporary rear wheel lock-up. One consumer described that his vehicle experienced an unexpected downshift causing his vehicle to crash into a concrete barrier and another vehicle, injuring both him and the driver of the other vehicle. This Recall Query has been opened to investigate the scope of NHTSA Recall 19V-075.

To review the reports cited in the attached Opening Resume ODI Report Identification Number document, go to NHTSA.gov.



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Administration**

OPENING RESUME ODI REPORT IDENTIFICATION NUMBERS

Investigation ID: RQ24005

Date Opened: 03/27/2024

Subject: Unexpected Transmission Downshift

List of 86 ODI Report reference numbers:

11433061, 11433992, 11435311, 11438273, 11438884, 11439665, 11440804, 11445414, 11448209, 11448228, 11449541, 11449581, 11449594, 11449596, 11452200, 11452799, 11453422, 11453595, 11454393, 11454808, 11455364, 11459828, 11460660, 11461980, 11464403, 11471822, 11472442, 11474212, 11481498, 11483101, 11485687, 11485823, 11486259, 11487607, 11492951, 11494581, 11495205, 11495847, 11496165, 11498608, 11498943, 11500101, 11500338, 11500431, 11501579, 11502412, 11506508, 11506618, 11508065, 11509709, 11510216, 11510288, 11511395, 11512142, 11512322, 11514803, 11515038, 11516366, 11516528, 11516918, 11517363, 11517638, 11518290, 11518734, 11520284, 11527252, 11527701, 11527984, 11531291, 11531655, 11531837, 11533839, 11536529, 11537227, 11537328, 11539477, 11540730, 11541696, 11542688, 11543424, 11547164, 11548321, 11554189, 11571169, 11572035, 11572124

Part 573 Safety Recall Report

16V-248

Manufacturer Name : Ford Motor Company**Submission Date :** SEP 01, 2016**NHTSA Recall No. :** 16V-248**Manufacturer Recall No. :** 16S19**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 : 153,581

Estimated percentage with defect : NR

Vehicle Information :

Vehicle 1 : 2011-2012 Ford F-150

Vehicle Type : LIGHT VEHICLES

Body Style : PICKUP TRUCK

Power Train : GAS

Descriptive Information : Affected vehicles are equipped with a 6R80 automatic transmission. 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 11, 2011 - JAN 31, 2013

VIN Range 1 : Begin : NR End : NR

 Not sequential

Vehicle 2 : 2012-2012 Ford Expedition

Vehicle Type : LIGHT VEHICLES

Body Style : SUV

Power Train : GAS

Descriptive Information : Affected vehicles are equipped with a 6R80 automatic transmission.

Production Dates : AUG 26, 2011 - SEP 10, 2012

VIN Range 1 : Begin : NR End : NR

 Not sequential

Vehicle 3 : 2012-2012 Lincoln Navigator

Vehicle Type : LIGHT VEHICLES

Body Style : SUV

Power Train : GAS

Descriptive Information : Affected vehicles are equipped with a 6R80 automatic transmission.

Production Dates : AUG 26, 2011 - FEB 29, 2012

VIN Range 1 : Begin : NR End : NR

 Not sequential

Vehicle 4 : 2012-2012 Ford Mustang

Vehicle Type : LIGHT VEHICLES

Body Style : ALL

Power Train : GAS

Descriptive Information : Affected vehicles are equipped with a 6R80 automatic transmission.

Production Dates : AUG 09, 2011 - JUN 11, 2012

VIN Range 1 : Begin :

NR

End : NR

Not sequential

Description of Defect :

Description of the Defect : Some vehicles may experience an intermittent loss of the Transmission Output Speed Sensor (OSS) signal to the Powertrain Control Module, potentially resulting in a temporary, unintended downshift into first gear. In some cases, the OSS signal could recover while driving and the vehicle will resume normal function; in other cases the vehicle may need to be stopped and restarted to regain normal transmission operation.

Ford is aware of three reports of accidents and no injuries related to this condition on the affected vehicles.

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk : Depending on vehicle speed at the time of the downshift, an unintended downshift into first gear may occur causing the rear tires to slide or lock up until the vehicle slows. This may result in a loss of vehicle control without warning, increasing the risk of a crash.

Description of the Cause : NR

Identification of Any Warning
that can Occur : NR

Supplier Identification :

Component Manufacturer

Name : Continental Automotive Systems

Address : Luis Bleriot 6720 Parque IND

Juarez FOREIGN STATES 32695

Country : Mexico

Chronology :

see attached

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 Powertrain Control Module reprogrammed with updated software. There will be no charge for this service.
Ford is excluding reimbursement for costs because the original warranty program would provide for a free repair for this concern.
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 April 26, 2016. Mailing of owner notification letters is expected to begin May 23, 2016 and is expected to be completed by May 27, 2016.

Planned Dealer Notification Date : APR 26, 2016 - APR 26, 2016

Planned Owner Notification Date : MAY 23, 2016 - MAY 27, 2016

* NR - Not Reported



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

ODI RESUME

Investigation: RQ 17-010
Date Opened: 12/25/2017
Investigator: Evan Frings **Reviewer:** Paul Simmons
Approver: Stephen Ridella
Subject: Unexpected Transmission Downshift

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: Ford Motor Company
Products: 2011-2013 Ford F-150, Ford Expedition and Lincoln Navigator
Population: 1,375,577 (Estimated)
Problem Description: Vehicle unexpectedly downshifts to a lower gear without input from the driver causing the vehicle to slow down suddenly without warning. The downshift can also cause the rear tires to skid or lock up.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	123	TBD	123
Crashes/Fires:	2	TBD	2
Injury Incidents:	0	TBD	0
Fatality Incidents:	0	TBD	0

ACTION / SUMMARY INFORMATION

Action: Open a Recall Query to assess the scope and remedy effectiveness of Recall 16V-248.

Summary:

In March of 2016 Ford Motor Company launched safety recall 16V-248 to address unexpected transmission downshifts to 1st gear occurring on certain model year 2011-2012 Ford F-150, Ford Expedition, Lincoln Navigator and Ford Mustang vehicles. An unexpected downshift to 1st gear can cause the vehicle to slow down suddenly and without warning. This can also cause the rear tires to skid or lock up, increasing the risk of a crash. Ford recalled vehicles built between certain production dates to address this defect.

The Office of Defects Investigation (ODI) has received 123 reports concerning the automatic transmission unexpectedly downshifting into a lower gear without input since the launch of 16V-248 on model year 2011-2013 Ford F-150, Expedition and Lincoln Navigator vehicles. Many reports claim the vehicle was not covered under 16V-248 despite having the same symptoms. Additionally, some reports indicate that the remedy was not effective. ODI has received 2 reports of crashes and no injuries.

ODI has opened this investigation to further analyze the scope, frequency and consequence of the alleged incidents.

ODI reports cited above;10985839, 10984844, 10984829, 10984426, 10983242, 10983195, 10983171, 10980493, 10979225, 10970894, 10970779, 10970618, 10970367, 10969421, 10967885, 10967731, 10967335, 10966131, 10965919, 10959119, 10958303, 10955579, 10955297, 10954555, 10954325, 10950179, 10946888, 10945269, 10945166, 10939947, 10937069, 10935277, 10934597, 10930140, 10926970, 10926609, 10926348, 10925536, 10925009, 10924132, 10919888, 10910520, 10910111, 10909999, 10908680, 10907083, 10907076, 10905181, 10904824, 10897934, 10896601, 10895347, 10895139, 10893392, 10891736, 10889119, 10885784, 11020890, 11020725, 11020285, 11019546, 11019060, 10885074, 10885033, 10884366, 10883292, 10882963, 10876551, 10876186, 10874800, 10874667, 10871047, 10865343, 10864491, 10863708, 10861924, 10854025, 10822202, 10822171, 10817534, 11015958, 11012765, 11012591, 11006233, 11005369, 11003409, 11002952, 10992753, 10992209, 10992082, 10991757, 10991261, 10991073, 10990710, 10986288, 10986234, 11041671, 11040520,

11042154, 11043007, 11044364, 11042874, 11042517, 11045622, 11046046, 11044490, 11047456, 11047815,
11048079, 11047664, 11052341, 11051305, 11051285, 11051173, 11051534, 11051358, 11051507, 11052165,
11051712, 11052608, 11054001, 11053459, 11053733

Part 573 Safety Recall Report

19V-075

Manufacturer Name : Ford Motor Company

Submission Date : FEB 11, 2019

NHTSA Recall No. : 19V-075

Manufacturer Recall No. : 19S07



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 : 1,263,051

Estimated percentage with defect : 1 %

Vehicle Information :

Vehicle 1 : 2011-2013 Ford F-150

Vehicle Type : LIGHT VEHICLES

Body Style : ALL

Power Train : GAS

Descriptive Information : Affected 2011-2013 model year vehicles are equipped with 6-speed (6R80) automatic transmission. This includes 1,263,051 F-150 vehicles (2011=311,382, 2012=315,215, 2013=636,454) vehicles.

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 : APR 28, 2010 - NOV 18, 2013

VIN Range 1 : Begin :

NR

End : NR

Not sequential

Description of Defect :

Description of the Defect : Some vehicles may experience an intermittent loss of the Transmission Output Speed Sensor (OSS) signal to the Powertrain Control Module, potentially resulting in a temporary, unintended downshift into first gear.

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk : Depending on the vehicle speed at the time of an intermittent OSS failure, an abrupt transmission downshift to first gear could occur. A downshift to first gear without warning could result in a loss of vehicle control, increasing the risk of a crash.

Description of the Cause : Ford has identified various causal factors of an intermittent OSS signal in this

population of vehicles, including contamination, power short to ground, connector corrosion, connector pin swaging, and incorrect outputs from the OSS sensor.

Identification of Any Warning that can Occur : A downshift to first gear may illuminate a Malfunction Indicator Light (MIL). In some cases, the OSS signal could recover while driving and the vehicle will resume normal function; in other cases the vehicle may need to be stopped and restarted to regain normal transmission operation.

Supplier Identification :

Component Manufacturer

Name : Continental Automotive Systems US Inc
Address : Luis Bleriot 6720 Parque IND
 Juarez FOREIGN STATES 32695
Country : Mexico

Chronology :

See attached.

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 Powertrain Control Module reprogrammed. There will be no charge for this service.

Ford is excluding reimbursement for costs because the original warranty program would provide for a free repair for this concern.

Ford will forward a copy of the notification letters to dealers to the agency when available.

How Remedy Component Differs from Recalled Component : The dealers will reprogram the Powertrain Control Module with software that will prevent an unintended downshift into first gear and illuminate the Malfunction Indicator Light (MIL) in the event of an intermittent OSS signal.

Identify How/When Recall Condition was Corrected in Production : Several production and system reliability robustness actions were implemented by the supplier of the leadframe which improved warranty significantly starting with vehicles built after the 16S19 population.

Recall Schedule :

Description of Recall Schedule : Notification to dealers is expected to occur on February 12, 2019.
Mailing of owner notification letters is expected to begin March 4, 2019 and is expected to be completed by March 8, 2019.

Planned Dealer Notification Date : FEB 12, 2019 - FEB 12, 2019

Planned Owner Notification Date : MAR 04, 2019 - MAR 08, 2019

* NR - Not Reported

Part 573 Safety Recall Report

19V-433

Manufacturer Name : Ford Motor Company**Submission Date :** JUN 10, 2019**NHTSA Recall No. :** 19V-433**Manufacturer Recall No. :** 19S19**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 : 107,857

Estimated percentage with defect : 100 %

Vehicle Information :

Vehicle 1 : 2013-2013 Ford F-150

Vehicle Type : LIGHT VEHICLES

Body Style : PICKUP TRUCK

Power Train : GAS

Descriptive Information : This action includes all 2013MY F-150's equipped with 5.0L and 6.2L gasoline engines that had their powertrain control module software reprogrammed as part of recall 19S07.

Vehicles that have not had 19S07 performed are not affected by this action and will receive updated software under the existing 19S07 program.

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 : APR 18, 2012 - NOV 18, 2013

VIN Range 1 : Begin :

NR

End : NR

 Not sequential**Description of Defect :**

Description of the Defect : The powertrain control module (PCM) software used to service 2013MY F-150 5.0L and 6.2L vehicles in accordance with recall 19S07 did not have the updates necessary to prevent a potential unintended downshift into first gear and illuminate the Malfunction Indicator Light (MIL) in the event of an intermittent Transmission Output Speed Sensor (OSS) signal.

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk : A vehicle without the intended 19S07 calibration remains at risk for

Description of the Safety Risk : unintended transmission downshift due to an intermittent OSS failure. Depending on vehicle speed, an abrupt transmission downshift to first gear without warning could result in a loss of vehicle control, increasing the risk of a crash.

Description of the Cause : The updated software calibration that was intended to be installed in 2013MY 5.0L & 6.2L F-150 vehicles in accordance with safety recall 19S07 was not properly released into service.

Identification of Any Warning that can Occur : A downshift to first gear may illuminate a Malfunction Indicator Light (MIL). In some cases, the OSS signal could recover while driving and the vehicle will resume normal function; in other cases, the vehicle may need to be stopped and restarted to regain normal transmission operation.

Supplier Identification :

Component Manufacturer

Name : NR

Address : NR

NR

Country : NR

Chronology :

On May 16, 2019, a report from a technician servicing a 2013MY 6.2L F-150 for recall 19S07 was brought to Ford's Critical Concern Review Group (CCRG) for review. The technician had indicated that no new powertrain control module (PCM) software was available to service that vehicle for the recall.

Upon investigation, Ford identified that PCM calibrations used to service both 2013MY 6.2L & 5.0L engine applications for 19S07 were not updated and did not include the software intended to prevent a potential unintended downshift into first gear in the event of an intermittent Transmission Output Speed Sensor (OSS) signal.

On June 3, 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.

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 Powertrain Control Module reprogrammed with the appropriate software calibration. There will be no charge for this service.

Ford is excluding reimbursement for costs because the original warranty program would provide for a free repair for this concern.

Ford will forward a copy of the notification letters to dealers to the agency when available.

How Remedy Component Differs from Recalled Component : A new software calibration to update 2013MY 5.0L & 6.2L F-150 vehicles is expected to be released for service concurrent with Ford's planned June 11, 2019 dealer notifications for this action.

Identify How/When Recall Condition was Corrected in Production : This issue does not affect current production vehicles.

Recall Schedule :

Description of Recall Schedule : Notification to dealers is expected to occur on June 11, 2019. Mailing of owner notification letters is expected to begin June 24, 2019 and is expected to be completed by June 28, 2019.

Planned Dealer Notification Date : JUN 11, 2019 - JUN 11, 2019

Planned Owner Notification Date : JUN 24, 2019 - JUN 28, 2019

* NR - Not Reported