

# Part 573 Safety Recall Report

# 16V-345

**Manufacturer Name :** Ford Motor Company

**Submission Date :** MAY 23, 2016

**NHTSA Recall No. :** 16V-345

**Manufacturer Recall No. :** 16S24



## 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 :** 225,012

**Estimated percentage with defect :** NR

## Vehicle Information :

**Vehicle 1 :** 2013-2014 Ford F-150

**Vehicle Type :** LIGHT VEHICLES

**Body Style :**

**Power Train :** NR

**Descriptive Information :** Certain 2013-2014 model year Ford F-150 vehicles equipped with 3.5L 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 :** AUG 01, 2013 - AUG 31, 2014

**VIN Range 1 : Begin :**

NR

**End :** NR

Not sequential

## Description of Defect :

**Description of the Defect :** Some vehicles may experience a loss of brake fluid from the brake master cylinder reservoir into the brake booster. Loss of brake fluid can lead to visual and audible warnings of low brake fluid level to the operator and may lead to a change in brake pedal travel and feel.

Ford is aware of nine accident allegations on the affected vehicles that might relate to this condition, with no injuries; and one alleged injury not related to the accidents.

**FMVSS 1 :** NR

**FMVSS 2 :** NR

**Description of the Safety Risk :** Depending on the amount of brake fluid loss from the brake master cylinder into the brake booster, the driver will experience an audible chime, message

center alert, red brake warning light in the instrument cluster and may begin to experience a change in brake pedal travel and feel. In the event that a loss of brake fluid is substantial enough to reduce brake function to the front wheels, the driver may experience longer pedal travel, increased pedal effort, and extended stopping distance, increasing the risk of a crash. Full braking function would remain in the rear wheel brake circuit.

**Description of the Cause :** Ford's engineering analysis and investigation identified the cause of reports of brake fluid leaking into the brake booster as a rolling of the rearmost cup seal in the brake master cylinder.

**Identification of Any Warning that can Occur :** In the event that a sufficient loss of brake fluid occurs, the driver will receive an audible chime, a full screen message center alert, and a red brake light in the instrument cluster – all indicating that brake system service is required. These indicators are activated when the brake fluid in the reservoir is depleted to a pre-determined level.

**Supplier Identification :**

**Component Manufacturer**

Name : Hitachi Automotive Systems Americas, Inc

Address : 34500 Grand River Avenue  
Farmington Hills MICHIGAN 48335

Country : United States

## Chronology :

January – February 2016: Ford's routine analysis of warranty and field data identified reports of reduced braking effectiveness beginning on 2013 model year F-150 vehicles equipped with 3.5L engines. This issue was introduced to Ford's Critical Concern Review Group (CCRG) for review on January 21, 2016.

On February 29, 2016: NHTSA opened PE16-003 regarding reports of reduced brake effectiveness due to brake fluid leaking from the brake master cylinder into the brake booster in 2013-2014 model year F-150 vehicles equipped with 3.5L engines.

March – April 2016: Ford conducted part return analysis, extensive supplier process and supply chain reviews with a change in supplier manufacturing facilities, ongoing bench testing of subject components, vehicle test drive evaluations, comprehensive data analysis. The field data indicated an elevated rate of reports for F-150 vehicles with 3.5L engines built during certain months of production. In addition, Ford's vehicle drive evaluations using a returned field part confirmed the brake warnings, progressive change in pedal feel and travel as brake fluid levels changed, and that the rear brakes remained fully operational.

On April 20, 2016: Ford responded to the NHTSA inquiry.

April – May 2016: Ford continued its analysis of field data and review of supplier's records. In addition, while continuing to analyze brake master cylinders returned from the field, Ford initiated efforts to recover brake fluid samples from brake boosters for analysis.

On May 16, 2016: Ford's Field Review Committee (FRC) reviewed the concern, and a field action was approved.

## 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 brake master cylinder replaced following workshop manual procedures. Additionally, the brake booster will be replaced if the brake master cylinder is leaking. 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 May 24, 2016. Mailing of owner notification letters is expected to begin July 11, 2016 and is expected to be completed by July 15, 2016.

Planned Dealer Notification Date : MAY 24, 2016 - MAY 24, 2016

Planned Owner Notification Date : JUL 11, 2016 - JUL 15, 2016

\* NR - Not Reported