

# Part 573 Safety Recall Report

# 23V-128

**Manufacturer Name :** Ford Motor Company**Submission Date :** MAR 02, 2023**NHTSA Recall No. :** 23V-128**Manufacturer Recall No. :** 23S07**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 : 240

Estimated percentage with defect : 57 %

**Vehicle Information :**

Vehicle 1 : 2023-2023 Ford F-150

Vehicle Type : LIGHT VEHICLES

Body Style :

Power Train : NR

**Descriptive Information :** Ford's team reviewed front axle assembly manufacturing process and maintenance records to determine the population of affected parts. The Ford process is capable of tracing front axle assembly production to the vehicle in which the front axle assembly is installed. Ford is able to provide the specific VIN list – see attachment VINS.

Affected vehicles are equipped with a suspect front axle pinion assembly.

227 Ford F-150 vehicles are affected.

Production Dates : JAN 15, 2023 - JAN 24, 2023

VIN Range 1 : Begin :

NR

End : NR

 Not sequential

Vehicle 2 : 2023-2023 Ford Expedition

Vehicle Type : LIGHT VEHICLES

Body Style :

Power Train : NR

**Descriptive Information :** Ford's team reviewed front axle assembly manufacturing process and maintenance records to determine the population of affected parts. The Ford process is capable of tracing front axle assembly production to the vehicle in which the front axle assembly is installed. Ford is able to provide the specific VIN list – see attachment VINs.

Affected vehicles are equipped with a suspect front axle pinion assembly.

4 Ford Expedition vehicles are affected.

Production Dates : JAN 15, 2023 - JAN 26, 2023

VIN Range 1 : Begin :

NR

End : NR

Not sequential

Vehicle 3 : 2023-2023 Lincoln Navigator

Vehicle Type : LIGHT VEHICLES

Body Style :

Power Train : NR

**Descriptive Information :** Ford's team reviewed front axle assembly manufacturing process and maintenance records to determine the population of affected parts. The Ford process is capable of tracing front axle assembly production to the vehicle in which the front axle assembly is installed. Ford is able to provide the specific VIN list – see attachment VINs.

Affected vehicles are equipped with a suspect front axle pinion assembly.

9 Lincoln Navigator vehicles are affected.

Production Dates : JAN 12, 2023 - JAN 20, 2023

VIN Range 1 : Begin :

NR

End : NR

Not sequential

## Description of Defect :

**Description of the Defect :** The front axle pinion may not have been heat-treated, which can cause it to fracture.

FMVSS 1 : NR

FMVSS 2 : NR

**Description of the Safety Risk :** Pinions that did not receive proper heat treatment may fracture, which may lead to the loss of the 4x4 application with the potential of the front wheels locking up, increasing the risk of a crash.

**Description of the Cause :** Certain front axle pinions bypassed the heat treat process at the axle manufacturing plant.

**Identification of Any Warning that can Occur :** The driver may hear a loud noise when the pinion breaks or as the drive shaft and flange hit the frame cross member and stability bar after pinion fracture. The failure mode could occur at any time in 4x4 application but is expected to occur primarily while in reverse as the pinion is subject to higher loads.

## Involved Components :

**Component Name 1 :** Gear Set Front Axle Pinion 3.73

**Component Description :** Front Axle Pinion Gear Set

**Component Part Number :** CL3W-3A410-BB

## Supplier Identification :

### Component Manufacturer

**Name :** Ford Motor Company

**Address :** 1 American Road

Dearborn Michigan 48126

**Country :** United States

## Chronology :

January – February 2023

On January 26, 2023, Ford's Critical Concern Review Group (CCRG) opened an investigation into reports of front axle pinion fracture on three (3) 2023 model year 4x4 F150 vehicles as they were being backed onto a vehicle transporter. Ford Engineering performed a read-across and determined that, in addition to the F-150 4x4 vehicles, the pinions are also installed on 4x4 Expedition and Lincoln Navigator vehicles.

Initial investigation discovered that the fractured pinions did not go through the required heat treat (annealing) process at Ford's axle manufacturing plant to reduce hardness and brittleness of the pinion stem threads. A team was immediately dispatched to conduct eddy current hardness checks of all available stock at affected assembly plants. Testing of axle assemblies determined this condition is limited to pinions in 3.73:1 gear ratio axles. The CCRG investigative team reviewed plant process records to determine a build population of suspect dates to derive the population of axles with pinions that may have bypassed the heat treat process.

As of February 13, 2023, Ford is not aware of any warranty, field reports or customer complaints related to this subject.

On February 17, 2023, 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 condition.

## 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 front axle pinion gear set replaced. Vehicles with a broken front axle pinion will have the entire axle assembly replaced. 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 May 2021. The ending date for reimbursement eligibility is estimated to be December 31, 2023.

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

**How Remedy Component Differs from Recalled Component :** The replacement front axle pinion gear set (CL3Z-3222-D) has the required heat treatment process (annealing).

**Identify How/When Recall Condition was Corrected in Production :** Not required per 49 Part 573.

## Recall Schedule :

**Description of Recall Schedule :** Notification to dealers is expected to occur on March 01, 2023. Mailing of owner notification letters is expected to begin April 10, 2023 and is expected to be completed by April 14, 2023.

**Planned Dealer Notification Date :** MAR 01, 2023 - MAR 01, 2023

**Planned Owner Notification Date :** APR 10, 2023 - APR 14, 2023

\* NR - Not Reported