Part 573 Safety Recall Report 21V-536

Manufacturer Name : Ford Motor Company
Submission Date : AUG 04, 2021
NHTSA Recall No. : 21V-536
Manufacturer Recall No. : 21S31

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 : 27,604
Estimated percentage with defect : 100 %

Vehicle Information :

Vehicle 1 : 2020-2021 Ford F-350 Super Duty Pickup
Vehicle Type : LIGHT VEHICLES
Body Style : PICKUP TRUCK
Power Train : DIESEL
Descriptive Information : Ford's team reviewed plant records to determine the population of affected vehicles.

The recalled part was introduced into production on 08/06/2020 and was taken out of production on 05/15/2021. The affected vehicles are F-350 SRW pickup trucks equipped with the 6.7L diesel engine and the Dana Model 275 rear axle.

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 06, 2020 - MAY 15, 2021
VIN Range 1 : Begin : NR End : NR ☐ Not sequential

Description of Defect :

Description of the Defect : Reduced axle tube wall thickness in the spring seat area, in combination with two spring seat attachment side weld locations, may be insufficient to support the design load capacity requirements for the F-350 SRW 6.7L diesel pickup applications. Compromised welds may cause axle lube leak. Should the spring seat attachment loosen, the rear axle may shift rearward, potentially resulting in driveshaft separation from the rear axle.

FMVSS 1 : NR

FMVSS 2 :	NR
Description of the Safety Risk :	In the event of driveshaft disconnection, customers may experience loss of motive power while driving and loss of transmission park function if the parking brake is not applied, increasing the risk of a crash.
Description of the Cause :	An improperly validated axle design change by the supplier
Identification of Any Warning that can Occur :	Customer may experience vibration and/or shaking while driving at highway speeds, and/or shuddering upon acceleration.

Involved Components :

Component Name 1 :	Caliper Bolts
Component Description :	NR
Component Part Number :	HC3Z-00812-B

Component Name 2 :	Collapsible Spacer
Component Description :	NR
Component Part Number :	HC3Z-4662-C

Component Name 3 :	Head bearing cone
Component Description :	NR
Component Part Number :	HC3Z-4630-A

Component Name 4 :	Head bearing cup
Component Description :	NR
Component Part Number :	HC3Z-4628-A

Component Name 5 :	Housing (ELD)
Component Description :	NR
Component Part Number :	HC3Z-4010-H

Component Name 6 :	Housing (STD)
Component Description :	NR
Component Part Number :	HC3Z-4010-G

Component Name 7 :	Hub seal
Component Description :	NR
Component Part Number :	HC3Z-1S175-A

Component Name 8 :	Lube
Component Description :	NR
Component Part Number :	XY-75W140-QL

Component Name 9 :	Pinion Flange Bolts
Component Description :	NR
Component Part Number :	F1HZ-4N272-A

Component Name 10 :	Pinion Flange Straps
Component Description :	NR
Component Part Number :	E4HZ-4A254-A

Component Name 11 :	Pinion Nut
Component Description :	NR
Component Part Number :	HC3Z-00811-A

Component Name 12 :	Pinion Nut Washer
Component Description :	NR
Component Part Number :	HC3Z-383609-A

Component Name 13 :	Pinion Seal
Component Description :	NR
Component Part Number :	HC3Z-4676-A

Component Name 14 :	Pinion bearing shim
Component Description :	NR
Component Part Number :	LC3Z-4663-A

Component Name 15 :	Pinion deflector
Component Description :	NR
Component Part Number :	HC3Z-00810-A

Component Name 16 :	RTV
Component Description :	NR
Component Part Number :	TA-29

Component Name 17 :	Shaft bolt
Component Description :	NR
Component Part Number :	HC3Z-00813-A

Component Name 18 :	Shaft o-ring
Component Description :	NR
Component Part Number :	F81Z-1001-AA

Component Name 19 :	Shock Bolts
Component Description :	NR
Component Part Number :	W500764-S439

Component Name 20 :	Shock Nuts
Component Description :	NR
Component Part Number :	W520115-S440

Component Name 21 :	Sway Bar Bracket Bolts
Component Description :	NR
Component Part Number :	W500634-S439

Component Name 22 :	Tail bearing cone
Component Description :	NR
Component Part Number :	HC3Z-4561-B

Component Name 23 :	Tail bearing cup
Component Description :	NR
Component Part Number :	HC3Z-4616-A

Component Name 24 :	U Bolt Nuts
Component Description :	NR
Component Part Number :	N620485-S441

Component Name 25 :	U Bolts
Component Description :	NR
Component Part Number :	HC3Z 5705 E

Supplier Identification :

Component Manufacturer

Name :	Dana International
Address :	3939 Technology Drive Maumee Ohio 43537

Country : United States

Chronology :

On May 13th, 2021, an issue pertaining to rear axle housing deformation on certain F-350 pickup trucks was brought to Ford's Critical Concerns Review Group (CCRG) for review. Twelve reports from January through May, 2021, were received alleging rear axle tube deformation and corresponding weld separation at the spring seat interface on certain 2020-2021 Super Duty SRW trucks with the 6.7L engine and the Dana Model 275 rear axle. Four of these reports involved driveshaft disconnection from the rear axle.

Review of supplier records found that a design change that reduced the axle wall thickness in the spring seat area had been incorporated for the Model 275 rear axle beginning August 6, 2020.

Axle torsional impactor component testing and vehicle level testing was conducted and reproduced the field concerns. Further analysis found that the 6.7L F350 SRW pickup vehicle configuration is uniquely susceptible to subsequent axle deformation based on the higher torsional impact loading and GCWR associated with the F350 diesel engine variant. Analysis has found that other vehicle configurations equipped with this axle are not susceptible to tube deformation based on lower engine torque output and/or lower payload and towing capacity.

On July 8th, 2021, 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 Dealers inspect rear axle to determine if deformation is present. If the axle housing is deformed, the housing will be replaced. If the axle housing is not deformed, the dealer will perform a weld repair on the spring seats. 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 :	If the customer's axle housing is found deformed, the axle housing will be replaced with one that has a constant wall thickness, vs the recalled variable wall thickness housing. Remedy housing service part numbers: HC3Z-4010-G (STD), HC3Z-4010-H (ELD) If customer's axle housing is found not deformed, additional welding to each spring seat at the axle housing in all areas without existing weld will

	be performed and the axle will be reinstalled.
Identify How/When Recall Condition was Corrected in Production :	Corrective actions were implemented on May 15th, 2021 at the vehicle assembly facility. Existing rear axle housing stock was corrected via weld repair on the spring seats. New rear axle housing stock with an increased wall thickness design at the spring seats were introduced as the permenant corrective action.

Recall Schedule :

Description of Recall Schedule :	Notification to dealers is expected to occur on 07/16/2021. Mailing of owner notification letters is expected to begin 08/16/2021 and is expected to be completed by 09/07/2021.
Planned Dealer Notification Date :	JUL 16, 2021 - AUG 31, 2021
Planned Owner Notification Date :	AUG 16, 2021 - SEP 07, 2021

* NR - Not Reported