



Ford Motor Company of Canada Limited
Ford du Canada Limitée

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Ms. Melanie VanStone, Director General
Motor Vehicle Safety Directorate
Transport Canada
330 Sparks Street, Tower C
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February 09, 2024

Subject: Ford Motor Company (Ford) Recall No. **24S06** – Certain 2018-2019 model year Ford Expedition and Lincoln Navigator vehicles equipped with driver and front passenger seatbelt retractor pretensioners - inadvertent deployment.

Pursuant to the requirements set forth in Section 10 of the Motor Vehicle Safety Act and Section 15 of the Motor Vehicle Safety Regulations, Ford Motor Company of Canada, Limited is submitting information concerning a safety-related recall action that it is voluntarily initiating.

Sincerely,

A handwritten signature in black ink, appearing to read "Erin Hotrum".

Erin Hotrum
Attachment

24S06 – CERTAIN 2018-2019 FORD EXPEDITION AND LINCOLN NAVIGATOR VEHICLES –
DRIVER AND FRONT PASSENGER SEATBELT RETRACTOR PRETENSIONERS

Manufacturer: Ford Motor Company of Canada, Limited

Defect or Non-Compliance: Defect Noncompliance

Vehicle Information

Model yr Start: 2018
Model yr End: 2019
Make: Ford
Model: Expedition
Production date Begin: 10/01/2018
Production date End: 06/30/2019
Type: Multipurpose Passenger Vehicle

Model yr Start: 2018
Model yr End: 2019
Make: Lincoln
Model: Navigator
Production date Begin: 10/01/2018
Production date End: 06/30/2019
Type: Multipurpose Passenger Vehicle

Descriptive Information:

Affected vehicles are equipped with driver and front passenger seatbelt retractor pretensioners and were built between October 01, 2018, and June 30, 2019.

These vehicles are not produced in VIN order. Information as to the applicability of this action to specific vehicles can best be obtained by contacting a local Ford or Ford/Lincoln dealer who can obtain specific information regarding the vehicle from the Ford OASIS computer system, by contacting the Ford Customer Relationship Centre on their toll-free line (1-800-565-3673), or by a VIN search on Ford's website:

<https://owner.ford.com/tools/account/maintenance/recalls.html> or
<https://fr.owner.ford.ca/tools/account/maintenance/recalls.html> (French)

Number potentially involved: 2479
1557 2018-2019 Ford Expedition vehicles
922 2018-2019 Lincoln Navigator vehicles

Estimated percentage of involved with defect: 3%

Describe the defect/noncompliance: On some of the affected vehicles, the driver and/or front passenger seatbelt retractor pretensioners may deploy inadvertently. The primary seatbelt locking functions continue to function properly.

Describe the cause: Certain seatbelt retractor pretensioners may develop corroded squib pins caused by an undefined supplier manufacturing issue. After extended corrosion and with a partial separation at the weld between the squib pin and the bridge-wire (heating element of a pyrotechnic device), high resistance or open circuit may occur, and, if not resolved, may result in a retractor pretensioner inadvertent deployment. Increased humidity inside the cab, caused by water leakage after customer air-conditioning (A/C) usage in the hot temperature areas, may potentially contribute to the development of corrosion on top of the squib pins.

Describe the safety risk: Inadvertent deployment of the retractor pretensioner will result in the seatbelt being locked in position and will not retract or extend, which is noticeable to the occupant. A seatbelt that does not retract or extend may result in injury in the event of a crash.

Identify any warning which can precede or occur: An airbag malfunction light illuminates on the cluster preceding an inadvertent deployment of the seatbelt retractor pretensioner.

Does this recall only affect products in certain geographic regions N/A

Chronology of Defect / Noncompliance Determination

On September 30, 2021, Ford's Critical Concern Review Group (CCRG) opened an investigation into reports of inadvertent deployment of seatbelt retractor pretensioners on 2019 model year (MY) Expedition vehicles in Middle East regions. There were four reports of inadvertent deployment of seatbelt retractor pretensioners that occurred during July through September 2021.

Between October 2021 and January 2022, Ford and its Tier-1 supplier obtained field returned retractor pretensioners for analysis. The CCRG investigation identified that corrosion was present on the pretensioner squib pins where the bridge wire (heating element of pyro-technic device) is welded. However, no anomalies were identified during ballistic testing, helium leak testing and wiring reviews.

In February 2022, Ford conducted computer-aided-engineering (CAE) analysis and concluded that the system would meet regulatory requirements even if the retractor pretensioner did not correctly fire.

Between March and May 2022, long-term corrosion testing conducted with the Tier-2 supplier, did not recreate the corrosion observed in the squibs of field returned parts.

In monitoring the warranty data from June 2022 to October 2022, CCRG observed that the rates of inadvertent deployments remained low. CCRG noted that incidents were occurring primarily within a clearly defined window of production from October 2018 through June 2019, indicating it could be a supplier quality concern. Additionally, the inadvertent deployments occurred only during the summer months.

Between October 2022 and February 2023, Ford verified that the Restraints Control Modules (RCMs) functioned as intended and the diagnostic signals increased the current within the pre-defined range in response to a high resistance or open circuit in the seatbelt retractor pretensioner squib, which would illuminate the airbag warning light. Other data indicated that the airbag warning light was on for an average period of 5.5 weeks prior to an inadvertent deployment, should one occur.

In March 2023, Ford engaged additional engineering resources to conduct further root cause analysis of inadvertent activation of the seatbelt retractor pretensioner. Ford needed to test several hypotheses on how corrosion was developing and why only some pretensioners in warmer climates were experiencing an inadvertent deployment while others only received an illumination of the airbag warning light. Through November 2023, additional testing and analyses were conducted on returned parts, new parts, and in-vehicle testing. Through this process, CCRG learned that the main causal factors were likely (a) a byproduct of corrosion which requires a high moisture/water content sealed in the squibs and (b) partial separation at the weld between the inner pin and platinum bridge wire, whereby the RCM diagnostic signal has the ability to trigger an inadvertent deployment. However, the question remained as to how moisture could arrive inside the squibs and the team continued to test several hypotheses.

In December 2023, CCRG undertook additional work to analyze vehicle environment factors that may contribute to the corrosion in the squib pins of the seatbelt retractor pretensioner. The CCRG team reviewed a drain seal change that occurred at the Start of Production in 2019. Although unproven, the CCRG theorizes that a water leak related to a drain seal on the right front floor related to air-conditioning usage may increase humidity when Max A/C is used for extended periods and contribute to pretensioner squib pin corrosion.

As of January 12, 2024, Ford is aware of 140 reports (119 unique VINs) for all markets, received from July 05, 2021 to January 06, 2024 for inadvertent retractor pretensioner deployment, primarily in warm-weather regions. The lifetime warranty projection was updated and indicated an elevated rate for inadvertent deployment for this defined sub-population of 2018-2019 model year Expeditions and Navigators.

On February 02, 2024, Ford's Field Review Committee reviewed the concern and approved a field action.

Ford is aware of six US reports of unspecified injury and five US Vehicle Owner Questionnaires (VOQs) alleging injury pertaining to inadvertent deployment of seatbelt pretensioners. Ford is not aware of any reports of accident related to this condition.

Describe the defect/noncompliance remedy program, including the manufacturer's plan for reimbursement.

Owners will be notified by mail and instructed to take their vehicle to a Ford or Lincoln dealer to have the production date codes inspected on both front seatbelt retractors. Dealers will replace

any retractors that are within the suspect production date range. Additionally, dealers will inspect for the presence of an Heating Ventilation and Air-Conditioning (HVAC) drain tube elbow and install if not present. There will be no charge for this service.

Ford will forward a copy of the notification letters to dealers and affected owners to the Department when available.

Describe the recall schedule for notifications.

Note that these dates are estimated based on average translation times and may vary.

Planned Dealer Notification Begin Date: 02/12/2024 (Advance Notice)

Planned Dealer Notification End Date: 02/19/2024 (Dealer Bulletin)

Planned Owner Notification Date: 03/08/2024

Manufacturer's identification code for this recall (if applicable): 24S06

Manufacturer Comments to Transport Canada

National media attention is likely as with most Ford recalls when posted to Transport Canada's recall website. Ford will provide public comments when requested. A news release will not be issued. Ford will post a media statement regarding this recall on our media site (media.ford.com).

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