



TECHNICAL SERVICE BULLETIN

Illuminated MIL With DTC P0420 And/Or P0430

22-226023 January
2023

This bulletin supersedes 22-2137.

Model:

Ford 2020-2021 Expedition	
2018-2020 F-150	Engine: 2.7L EcoBoost
Lincoln 2020-2021 Navigator	

Summary

This article supersedes TSB 22-2137 to update the Parts List and Service Procedure.

Issue: Some 2018-2020 F-150 vehicles equipped with a 2.7L EcoBoost and 2020-2021 Expedition/Navigator vehicles may exhibit an illuminated malfunction indicator lamp (MIL) with diagnostic trouble codes (DTCs) P0420 and/or P0430 stored in the powertrain control module (PCM). This may be due to high sulfur content in the fuel. To correct the condition, follow the Service Procedure to de-sulfate the catalytic converters.

Action: Follow the service procedure to correct the condition on vehicles that meet all of the following criteria:

- One of the following vehicles
 - 2018-2020 F-150 equipped with 2.7L engine
 - 2020-2021 Expedition/Navigator
- Illuminated MIL with DTCs P0420 and/or P0430 stored in the PCM

Parts**All Vehicles**

Service Part Number	Quantity	Description	Unit of Issue	Piece Quantity
W520514-S440	1	Catalytic Converter Nuts	4	4
W520114-S442	1	Transmission Support Crossmember Nuts	4	4
W714418-S439	1	Transmission Support Crossmember Bolts	4	4
W709771-S440	2	Transmission Mount Nuts	1	2
W711140-S901	3	Transmission Support Insulator Bolts (Rear Wheel Drive Only)	1	3
W718353-S900	1	Transmission Support Insulator Bolts (4x4/All-Wheel Drive Only)	4	4

Parts**Expedition/Navigator Parts**

Service Part Number	Quantity	Description	Unit of Issue	Piece Quantity
JL7Z-5E212-R	1	Left Catalytic Converter Assembly	1	1
JL7Z-5E212-U	1	Right Catalytic Converter Assembly (Navigator)	1	1
JL1Z-5E212-G	1	Right Catalytic Converter Assembly (Expedition)	1	1
W715131-S437	1	Transmission Fluid Cooler Tube Bolts	4	2

Parts

F-150 Parts

Service Part Number	Quantity	Description	Unit of Issue	Piece Quantity
W715131-S442	1	Transmission Fluid Cooler Tube Bolts	4	2
FL3Z-5C226-A	2	Catalytic Converter Gasket	1	2
JL3Z-5E212-C	1	Left Catalytic Converter Assembly	1	1
JL3Z-5E212-K	1	Right Catalytic Converter Assembly	1	1
FL3Z-6775-D	1	Self-Adhesive Heat Shield Material	1	1

Parts

Parts To Inspect And Replace Only If Necessary

Service Part Number	Quantity	Description	Unit of Issue	Piece Quantity
LX6Z-7D285-A	If Needed	Transmission Fluid Band Seal	1	2
5L7Z-7J324-A	If Needed	Transmission Fluid Backing Ring	2	2
XT-12-QULV	If Needed	Motorcraft® MERCON® ULV Automatic Transmission Fluid		
VC-13-G	If Needed	Motorcraft® Yellow Concentrated Antifreeze/Coolant (All Markets Except Canada)		
CVC-13-G	If Needed	Motorcraft® Yellow Concentrated Antifreeze/Coolant (Canada Only)		

Quantity refers to the amount of the service part number required to repair the vehicle.

Unit of Issue refers to the number of individual pieces included in a service part number package.

Piece Quantity refers to the total number of individual pieces required to repair the vehicle.

As Needed indicates the amount of the part may vary and/or is not a whole number. Parts can be billed out as non-whole numbers, including less than 1.

If Needed indicates the part is not mandatory.

Warranty Status: Eligible under provisions of New Vehicle Limited Warranty (NVLW)/Emissions Warranty/Service Part Warranty (SPW)/Special Service Part (SSP)/Extended Service Plan (ESP) coverage. Limits/policies/prior approvals are not altered by a TSB. NVLW/Emissions Warranty/SPW/SSP/ESP coverage limits are determined by the identified causal part and verified using the OASIS part coverage tool.

Labor Times

Description	Operation No.	Time
2018-2020 F-150 Equipped With 2.7L, 2020-2021 Expedition/Navigator: Diagnose And Repair Following The Service Procedure	MT222260	Actual Time

Repair/Claim Coding

Causal Part:	5E212
Condition Code:	55

Service Procedure

NOTE: Perform the de-sulfate procedure one time only. If the vehicle exhibit this condition again, proceed with the replacement of the catalytic converter(s).

1. Perform pinpoint tests steps HF1-HF6.

- (1). For 2018-2020 vehicles, refer to the Powertrain Control/Emissions Diagnosis (PC/ED) Manual.
 - (2). For 2021 vehicles, refer to Workshop Manual (WSM) Section 309-00 > Diagnosis and Testing > PC/ED Pinpoint Test HF.
- 2.** Is the concern still present?
- (1). Yes - proceed to Step 3.
 - (2). No - this article does not apply.
- 3.** Retrieve onboard diagnostics (OBD) Mode 6 Data from the Ford Diagnosis and Repair System (FDRS) and record oxygen storage values from both banks.
- 4.** Perform the following sulfur removal cycle.
- (1). Warm up the engine to its normal operating temperature.
 - (2). Identify an appropriate route to allow speeds around 65 mph (105 km/h).
 - (3). From 30 mph (48 km/h) or slower, accelerate at wide open throttle (WOT) until the vehicle reaches 65 mph (105 km/h).
 - (4). Perform periodic light acceleration/deceleration events for 5 minutes, driving alternately between 50 mph and 65 mph (80 km/h and 105 km/h).
 - (5). Reduce speed to under 30 mph (48 km/h).
 - (6). Repeat the WOT with periodic acceleration/deceleration events 3-4 times.
 - (7). Park the vehicle and let the engine idle for 1 hour.
- 5.** Clear DTCs P0420 and/or P0430 stored in the PCM. This resets the Mode 6 data to zero.
- 6.** Drive the vehicle at 55-65 mph (88-105 km/h) for 15 minutes.
- 7.** Run a catalyst monitor drive cycle. Refer to pinpoint test HF11 > On Board Diagnostics (OBD) Drive Cycle.
- 8.** Retrieve OBD Mode 6 Data after the catalyst oxygen storage values have been populated. Have the oxygen storage values decreased from what was recorded in Step 3 and are they less than 0.5 on either bank?
- (1). Yes - repair is complete.
 - (2). No - replace the catalytic converter(s) on the affected bank(s). Refer to the WSM, Section 309-00 > Exhaust System > Removal and Installation > Catalytic Converter.

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NOTE: The information in Technical Service Bulletins is intended for use by trained, professional technicians with the knowledge, tools, and equipment to do the job properly and safely. It informs these technicians of conditions that may occur on some vehicles, or provides information that could assist in proper vehicle service. The procedures should not be performed by "do-it-yourselfers". Do not assume that a condition described affects your car or truck. Contact a Ford or Lincoln dealership to determine whether the Bulletin applies to your vehicle. Warranty Policy and Extended Service Plan documentation determine Warranty and/or Extended Service Plan coverage unless stated otherwise in the TSB article. The information in this Technical Service Bulletin (TSB) was current at the time of printing. Ford Motor Company reserves the right to supersede this information with updates. The most recent information is available through Ford Motor Company's on-line technical resources.