



TECHNICAL SERVICE BULLETIN

Illuminated MIL With DTC P0420 And/Or P0430

22-2137
20 June 2022

This bulletin supersedes 21-2381.

Model:

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

Summary

This article supersedes 21-2381 to update the vehicles affected and the Service Procedure.

Issue: Some 2018-2020 F-150 vehicles equipped with a 2.7L EcoBoost and 2020-2021 Expedition/Navigator 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 convertors.

Action: Follow the service procedure steps to correct the condition 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

Expedition/Navigator - only if directed by the Repair Procedure

Service Part Number	Quantity	Description
JL7Z-5E212-R	1	Left Catalytic Converter
JL7Z-5E212-U	1	Right Catalytic Converter

Parts

F-150 - only if directed by the Repair Procedure

Service Part Number	Quantity	Description	Unit of Issue	Piece Quantity
JL3Z-5E212-C	1	Left Catalytic Converter	1	1
JL3Z-5E212-K	1	Right Catalytic Converter	1	1
FL3Z-5C226-A	2	Gasket	1	2
W520514-S440	4	Catalytic Converter Nut	1	4

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.

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	MT222137	Actual Time

Repair/Claim Coding

Causal Part:	5E212
Condition Code:	55

Service Procedure

1. Perform pinpoint test 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 the 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 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.