



TECHNICAL SERVICE BULLETIN

2.7L EcoBoost - Illuminated MIL With DTC P0420 And/Or P0430

24-2184
06 June 2024

This bulletin supersedes 24-2115. Reason for update: revised Service Procedure

Model:

Ford 2018-2020 F-150	Engine: 2.7L EcoBoost
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Markets: North American markets only

Issue: Some 2018-2020 F-150 vehicles equipped with a 2.7L EcoBoost may exhibit an illuminated MIL with DTC P0420 and/or P0430 stored in the PCM. This may be due to calibration and controls sensitivity. To correct the condition, follow the Service Procedure to perform the catalyst stabilization drive cycle.

Action: Follow the Service Procedure to correct the condition if the vehicle meets the following criteria:

- 2018-2020 F-150
- 2.7L engine
- Illuminated MIL with DTCs P0420 and/or P0430 stored in the PCM

Parts

Service Part Number	Claim Quantity	Package Order Quantity	Number in Package	Description
W520514-S440	4	1	4	Catalytic Converter Nuts
W520114-S442	4	1	4	Transmission Support Crossmember Nuts
W714418-S439	4	1	4	Transmission Support Crossmember Bolts
W709771-S440	2	2	1	Transmission Mount Nuts
W711140-S901	3	3	1	Transmission Support Insulator Bolts (Rear Wheel Drive Only)
W718353-S900	4	1	4	Transmission Support Insulator Bolts (4x4/All-Wheel Drive Only)
W715131-S442	2	1	4	Transmission Fluid Cooler Tube Bolts
FL3Z-5C226-A	2	2	1	Catalytic Converter Gasket
JL3Z-5E212-C	1	1	1	Left Catalytic Converter Assembly
JL3Z-5E212-K	1	1	1	Right Catalytic Converter Assembly
FL3Z-6775-D	1	1	1	Self-Adhesive Heat Shield Material

Parts - Parts To Inspect And Replace Only If Necessary

Service Part Number	Claim Quantity	Package Order Quantity	Number in Package	Description
LX6Z-7D285-A	Only If Necessary (2 Possible)	Only If Necessary (2 Possible)	1	Transmission Fluid Band Seal
5L7Z-7J324-A	Only If Necessary (2 Possible)	Only If Necessary (1 Possible)	2	Transmission Fluid Backing Ring
XT-12-QULV	Only If Necessary	Only If Necessary		Motorcraft® MERCON® ULV Automatic Transmission Fluid
VC-13-G	Only If Necessary	Only If Necessary		Motorcraft® Yellow Concentrated Antifreeze/Coolant (All Markets Except

			Canada)
CVC-13-G	Only If Necessary	Only If Necessary	Motorcraft® Yellow Concentrated Antifreeze/Coolant (Canada Only)

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

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

Number In Package refers to the number of individual pieces included in a service part number package.

Only If Necessary indicates the part is not mandatory.

Warranty Status: Eligible under provisions of New Vehicle Limited Warranty (NVLW)/Emissions Warranty/Service Part Warranty (SPW)/Service Part New Vehicle (SPNV)/Extended Service Plan (ESP) coverage. Limits/policies/prior approvals are not altered by a TSB. NVLW/Emissions Warranty/SPW/SPNV/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: Diagnose And Repair Following The Service Procedure	MT242184	Actual Time

Repair/Claim Coding

Causal Part:	5E212
Condition Code:	55

Service Procedure

NOTE: Perform the catalyst stabilization drive cycle one time only. If the vehicle exhibit this condition again, proceed with the replacement of the catalytic converter(s).

1. Perform pinpoint test steps HF1-HF6. Refer to the PC/ED Manual.
2. Is the concern still present?
 - (1). Yes - proceed to Step 3.
 - (2). No - this article does not apply.
3. Retrieve OBD Mode 6 Data from the FDRS and record oxygen storage values from both banks.
4. Perform the following catalyst stabilization drive cycle.
 - (1). Warm up the engine to its normal operating temperature.
 - (2). Identify an appropriate route to allow speeds around 70 mph (113 km/h).
 - (3). From 30 mph (48 km/h) or slower, accelerate at WOT until the vehicle reaches 65 mph (105 km/h).
 - (4). Place the transmission into manual (M).
 - (5). Select 4th gear.
 - (6). For at least 45 minutes, perform periodic, repeated medium (25%-50% throttle) acceleration / closed pedal (foot off throttle) deceleration events driving alternately between 60 mph and 70 mph (97 km/h and 113 km/h).
5. Take the transmission out of manual mode (M). Take the vehicle on a road test and drive the vehicle normally at 55-65 mph (88-105 km/h) for 15 minutes.
6. Clear DTCs P0420 and/or P0430 stored in the PCM. This resets the Mode 6 data to zero.
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 2.7L EcoBoost > Removal and Installation > Catalytic Converter. Refer to the Parts Catalog for the VIN

specific application.

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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.