



TECHNICAL SERVICE BULLETIN

2.7L EcoBoost - Oil Consumption, Rough Idle, Misfire With Or Without Blue Exhaust Smoke - Built On 1-Apr-2016 And Through 1-Jan-2017

19-2384
18
December
2019

This bulletin supersedes 18-2237. Reason for update: Incorrect or Incomplete Symptom

Model:

Ford 2016-2017 F-150	Engine: 2.7L EcoBoost
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Summary

This article supersedes TSB 18-2237 to update the Title, Issue, Action, Service Procedure and Part List.

Issue: Some 2016-2017 F-150 vehicles equipped with a 2.7L EcoBoost engine and built on 1-Apr-2016 and through 1-Jan-2017 may exhibit a rough idle in neutral or park at normal operating temperature with oil consumption greater than 1 liter (1 quart) in less than 4,800 km (3,000 miles). This may be due to a concern with the cylinder head valve guides. Vehicles with this condition may also exhibit an illuminated malfunction indicator lamp (MIL) and diagnostic trouble codes (DTCs) P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0316, P0524 and/or P06DD with the excessive oil consumption. Blue smoke may also be present from the exhaust only after a hot restart. To correct the condition, follow the Service Procedure to replace the cylinder heads.

Action: Follow the Service Procedure steps to correct this condition on vehicles that meet all of the following criteria:

- 2016-2017 F-150
- 2.7L EcoBoost engine
- Built on 1-Apr-2016 and through 1-Jan-2017
- Customer concern includes rough idle and oil consumption with or without an illuminated MIL or blue smoke from the exhaust

Parts

Part Number		Description	Quantity
FL3Z-6049-J	-	Left Cylinder Head Assembly	1
FL3Z-6049-K	-	Right Cylinder Head Assembly	1
FL3Z-6675-B	-	Oil Pan	1
FL3Z-6079-H	-	Cylinder Head Gasket Kit	1
9L8Z-6G004-E	-	Cylinder Head Temperature Sensor	1
FT4Z-6731-A	-	Oil Filter	1

CYFS-12Y-PT	Package Contains 1 Piece, 6 Pieces Required	Spark Plug	6
BL3Z-9229-C	Package Contains 1 Piece, 2 Pieces Required	Fuel Injector O-ring Kit	2
CP9Z-6279-C	Package Contains 1 Piece, 4 Pieces Required	Variable Camshaft Timing Unit Bolt	4
FT4Z-6A340-A	-	Crankshaft Pulley Bolt	1
FL3Z-5C226-A	Package Contains 1 Piece, 2 Pieces Required	Turbo Exhaust Flange Gasket	2
W716383-S437	Package Contains 4 Pieces, 2 Pieces Required	Turbo Mounting Stud	1
W714870-S430	Package Contains 4 Pieces, 2 Pieces Required	Turbo Mounting Nut	1
W716117-S437	Package Contains 1 Piece, 2 Pieces Required	Turbo Mounting Bolt	2
FT4Z-9J323-A	-	High Pressure Fuel Tube, Right Side	1
FT4Z-9J323-B	-	High Pressure Fuel Tube, Left Side	1
W520514-S440	Package Contains 1 Piece, 4 Pieces Required	Turbo Exhaust Flange Nuts	4
W707753-S900	Package Contains 4 Pieces, 4 Pieces Required	Turbo Exhaust Flange Studbolts	1
CU7Z-19B508-A	-	Flange Sealant	As Needed
TA-357	-	Motorcraft® High Performance Engine RTV Silicone	As Needed
ZC-30-A	-	Motorcraft® Silicone Gasket Remover	As Needed
ZC-31-B	-	Motorcraft® Metal Surface Prep Wipes	As Needed
VC-3-B	-	Motorcraft® Orange Concentrated Antifreeze/Coolant (All Markets Except Canada)	As Needed
CVC-3-B2	-	Motorcraft® Orange Concentrated Antifreeze/Coolant (Canada Only)	As Needed
XO-5W30-Q1SP	-	Motorcraft® SAE 5W-30 Synthetic Blend Motor Oil (All Markets Except Canada)	6
CXO-5W30-LSP6	-	Motorcraft® SAE 5W-30 Super Premium Motor Oil (Canada Only)	6

PM-4-A	-	Motorcraft® Metal Brake Parts Cleaner (Compliant With Low Volatile Organic Compound Requirements As Required In Some USA States)	As Needed
PM-4-B	-	Motorcraft® Metal Brake Parts Cleaner (Not Compliant With Volatile Organic Compound Requirements)	As Needed
TA-24-B	-	Motorcraft® Thread Sealant with PTFE	As Needed
XL-2	-	Motorcraft® High Temperature Nickel Anti-Seize Lubricant	As Needed
ZC-20	-	Motorcraft® Engine Shampoo and Degreaser (All Markets Except Canada)	As Needed
CXC-66-A	-	Motorcraft® Engine Shampoo (Canada Only)	As Needed

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
2016-2017 F-150 4X2 2.7L GTDI: Retrieve DTCs And Replace Both (2) Cylinder Heads Includes Time To Perform Road Tests (Do Not Use With Any Other Labor Operations)	192384A	23.3 Hrs.
2016-2017 F-150 4X4 2.7L GTDI: Retrieve DTCs And Replace Both (2) Cylinder Heads Includes Time To Perform Road Tests (Do Not Use With Any Other Labor Operations)	192384B	24.2 Hrs.

Repair/Claim Coding

Causal Part:	6049
Condition Code:	42

Service Procedure

- Does the vehicle exhibit blue smoke from the exhaust only after a cold soak with no additional symptoms such as excessive oil consumption and/or runs rough?
 - (1). Yes - this article does not apply. Refer to other applicable articles or the Powertrain Control/Emissions Diagnosis (PC/ED) Manual for normal diagnostics.
 - (2). No - proceed to Step 2.
- Replace both left and right cylinder heads. Refer to Workshop Manual (WSM), Section 303-01.
 - (1). **NOTE: During service and repair, achieving proper torque of the crankshaft pulley bolt is critical. Incorrect torque may allow the bolt to loosen resulting in the timing gear breaking and engine damage. Replacement of the bolt is also critical to the repair. The bolt requires a 4 stage torque procedure:**
 - Hold the pulley using a universal holding tool OTC 4754 or equivalent.
 - Stage 1: 225 Nm (166 lb.ft)
 - Stage 2: Loosen 360°
 - Stage 3: 35 Nm (26 lb.ft)

- Stage 4: Tighten 270°

(2). Refer to WSM, Section 303-01. The bolt torque procedure can be found in the crankshaft front seal removal and installation procedure or in the engine assembly procedure.

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