# TECHNICAL SERVICE BULLETIN 17-2235

## 2.7L/3.0L - Oil Consumption With DTC P0524 And/Or P06DD, Rough Idle, Misfire And/Or White Or Blue Exhaust Smoke - Built On 1-Apr-2016 And Through 1-Jan-2017

17 November 2017

**Model:**

| |
|---|
| **Ford**<br>2016-2017 Edge |
| **Lincoln**<br>2016-2017 MKX |
| 2017 Continental |
| 2017 Fusion |
| 2017 MKZ |

**Issue:** Some 2016-2017 Edge/MKX, 2017 Continental, and 2017 Fusion/MKZ vehicles equipped with a 2.7L or 3.0L gasoline turbocharged direct injection (GTDI) engine and built on 1-Apr-2016 and through 1-Jan-2017 may exhibit white or blue smoke from the exhaust, rough idle in neutral or park at normal operating temperature or after a hot restart. The vehicle may also exhibit an illuminated malfunction indicator lamp (MIL) with diagnostic trouble codes (DTCs) P0300, P0301, P0302, P0303, P0304, P0305, P0306 and/or P0316, P0524 and/or P06DD with excessive oil consumption. Oil consumption may be 1 Liter (1 quart) in less than 4,800 km (3,000 miles).

**Action:** Follow the Service Procedure steps to correct the condition.

**Parts**

| Part Number | Description | Quantity |
|---|---|---|
| FT4Z-6006-B | 2.7L Engine Assembly | 1 |
| GB8Z-6006-A | 3.0L Engine Assembly | 1 |
| FT4Z-6049-E | 2.7L Cylinder Head Assembly | 1 |
| FT4Z-6049-F | 2.7L Cylinder Head Assembly | 1 |
| FL3Z-6079-D | 2.7L Cylinder Head Gasket Kit | 1 |
| GB8Z-6079-A | 3.0L Cylinder Head Gasket Kit | 1 |
| FT4Z-6675-C | Engine Oil Pan Assembly, 2.7L and 3.0L | 1 |
| FT4Z-6731-A | Filter Engine Oil Assembly | 1 |
| W712961-S442 | Steering Shaft Bolt | 1 |
| W712503-S440 | Sway Bar Mount Nut | 2 |
| W714265-S442 | Catalytic Converter Nut | 1 |
| BL3Z-9450-A | Catalytic Converter Gasket | 2 |
| F2GZ-4682-A | Driveshaft to PTU Bolt and Washer Assembly | 3 |
| W790063-S900 | Driveshaft to RDU Bolt and Washer Assembly | 1 |
| W712154-S439 | Center Bearing Bolts | 1 |
| W715295-S439 | Strut to Knuckle Bolt (package of 4) | 1 |
| W520216-S440 | Strut to Knuckle Nut (package of 4) | 1 |

| | | |
|---|---|---|
| W717674-S439 | Engine Mount And Bracket Bolt (package of 2) | 1 |
| W712334-S442 | Engine Mount And Bracket Nut (package of 4) | 1 |
| W710807-S442 | Engine Mount and Bracket Nut | 1 |
| W716779-S439 | Transmission Mount Bolt (package of 4) | 1 |
| FT4Z-6A340-A | Crank Pulley Bolt | 1 |
| FT4Z-9J323-A | High Pressure Fuel Rail | 1 |
| CP9Z-6279-C | Variable Camshaft Timing Bolt | 1 |
| W716383-S437 | Turbo Mounting Stud | 1 |
| FT4Z-9J323-B | High Pressure Fuel Rail | 1 |
| W520215-S440 | Outer Tie Rod End Nut | 1 |
| CCPZ-3B477-B | Wheel Hub Nut | 1 |
| W500545-S439 | Ball Joint Pinch Bolt | 1 |
| W520214-S440 | Ball Joint Pinch Bolt Nut | 1 |
| 4S4Z-3N324-AA | Halfshaft Retaining Strap | 1 |
| W520102-S442 | Halfshaft Retaining Strap Nut (package of 2) | 1 |
| W715618-S437 | Torque Converter Nut | 2 |
| 9L8Z-6G004-F | Cylinder Head Temp Sensor Assembly | 1 |
| CYFS-092-YPT | Spark Plug SP542 | 6 |
| CU7Z-19B508-A | Flange Sealant | 1 |
| VC-3-B | Motorcraft® Orange Concentrated Antifreeze/Coolant | 1 |
| XO-5W30-QSP | Motorcraft® SAE 5W-30 Premium Synthetic Blend Motor | 1 |
| ZC-30-A | Motorcraft® Silicone Gasket Remover | 1 |
| PM-4-A | Motorcraft® Metal Brake Parts Cleaner | 1 |
| ZC-31-B | Motorcraft® Metal Surface Prep Wipes | 1 |
| TA-357 | Motorcraft® High Performance Engine RTV Silicone | 1 |
| TA-24-B | Motorcraft® Thread Sealant With PTFE | 1 |
| ZC-37-A | Motorcraft® Wheel And Tire Cleaner | 1 |
| XL-2 | Motorcraft® High Temperature Nickel Anti-Seize Lubricant | 1 |
| W716457-S439 | Subframe Bolt (package of 4) | 1 |
| 7T4Z-1177-C | Right Side Intermediate Shaft Seal Kit (FWD) | 1 |
| F2GZ-7H469-B | Right Side Intermediate Shaft Seal Kit (AWD) | 1 |
| 9W7Z-19B596-A | A/C O-ring Kit | 1 |
| DS7Z-19B596-A | A/C O-ring Kit | 1 |
| BL3Z-9C995-A | Fuel Injector Clip With O-ring | 6 |
| BL3Z-9229-C | Fuel Injector O-ring Kit | 2 |

**Warranty Status:** Eligible Under Provisions Of New Vehicle Limited Warranty Coverage Warranty/ESP coverage limits/policies/prior approvals are not altered by a TSB. Warranty/ESP coverage limits are determined by the identified causal part and verified using the OASIS part coverage tool.

**Labor Times**

| Description | Operation No. | Time |
|---|---|---|
| 2017 MKZ FWD 3.0L GTDI: Diagnose And Replace The Long Block Engine Assembly (Can Be Claimed With Operations R Or S) (Do Not Use With Any Labor Operations Outside Of This Article) | 172235A | 15.1 |
| 2017 MKZ AWD 3.0L GTDI: Diagnose And Replace The Long Block Engine Assembly (Can Be Claimed With Operations R Or S) (Do Not Use With Any Labor Operations Outside Of This Article) | 172235B | 15.6 |
| 2017 MKZ AWD 3.0L GTDI: Diagnose And Replace Both Cylinder Head Assemblies (Can Be Claimed With Operations R Or S) (Do Not Use With Any Labor Operations Outside Of This Article) | 172235C | 20.5 |
| 2017 MKZ FWD 3.0L GTDI: Diagnose And Replace Both Cylinder Head Assemblies (Can Be Claimed With Operations R Or S) (Do Not Use With Any Labor Operations Outside Of This Article) | 172235D | 20.3 |
| 2016-2017 MKX/Edge AWD 2.7L GTDI: Diagnose And Replace The Long Block Engine Assembly (Can Be Claimed With Operations R Or S And T) (Do Not Use With Any Labor Operations Outside Of This Article) | 172235E | 15.7 |
| 2016-2017 MKX/Edge AWD 2.7L GTDI: Diagnose And Replace Replace Both Cylinder Head Assemblies (Can Be Claimed With Operations R Or S And T) (Do Not Use With Any Labor Operations Outside Of This Article) | 172235F | 21 |
| 2016-2017 MKX/Edge FWD 2.7L GTDI: Diagnose And Replace The Long Block Engine Assembly (Can Be Claimed With Operations R Or S And T) (Do Not Use With Any Labor Operations Outside Of This Article) | 172235G | 15.3 |
| 2016-2017 MKX/Edge FWD 2.7L GTDI: Diagnose And Replace The Cylinder Head Assemblies (Can Be Claimed With Operations R Or S And T) (Do Not Use With Any Labor Operations Outside Of This Article) | 172235H | 20.9 |
| 2017 Fusion AWD 2.7L GTDI: Diagnose And Replace The Long Block Engine Assembly (Can Be Claimed With Operations R Or S) (Do Not Use With Any Labor Operations Outside Of This Article) | 172235J | 15.1 |
| 2017 Fusion AWD 2.7L GTDI: Diagnose And Replace Both Cylinder Head Assemblies (Can Be Claimed With Operations R Or S) (Do Not Use With Any Labor Operations Outside Of This Article) | 172235K | 20.1 |
| 2017 Continental FWD 2.7L GTDI: Diagnose And Replace The Long Block Engine Assembly (Can Be Claimed With Operations R Or S) (Do Not Use With Any Labor Operations Outside Of This Article) | 172235L | 14.3 |
| 2017 Continental AWD 2.7L GTDI: Diagnose And Replace The Long Block Engine Assembly (Can Be Claimed With Operations R Or S) (Do Not Use With Any Labor Operations Outside Of This Article) | 172235M | 15 |
| 2017 Continental AWD 2.7L GTDI: Diagnose And Replace Both Cylinder Head Assemblies (Can Be Claimed With Operations R Or S) (Do Not Use With Any Labor Operations Outside Of This Article) | 172235N | 19.9 |
| 2017 Continental FWD 2.7L GTDI: Diagnose And Replace Both Cylinder Head Assemblies (Can Be Claimed With Operations R Or S) (Do Not Use With Any Labor Operations Outside Of This Article) | 172235O | 19.6 |
| 2017 Continental AWD 3.0L GTDI: Diagnose And Replace The Long Block Engine Assembly (Can Be Claimed With Operations R Or S) (Do Not Use With Any Labor Operations Outside Of This Article) | 172235P | 15.5 |
| 2017 Continental AWD 3.0L GTDI: Diagnose And Replace Both Cylinder Head Assemblies (Can Be Claimed With Operations R Or S) (Do Not Use With Any Labor Operations Outside Of This Article) | 172235Q | 20.3 |

| | | |
|---|---|---|
| Additional Time To Check And Correct Toe Vehicles Without Lane Departure. | 172235R | 0.6 |
| Additional Time To Check And Correct Toe Vehicles With Lane Departure. | 172235S | 0.8 |
| 2016-2017 MKX: Additional Time When 360 Degree Camera Alignment Is Necessary. | 172235T | 0.5 |

**Repair/Claim Coding**

| | |
|---|---|
| Causal Part: | 6049 |
| Condition Code: | 42 |

| Drive | Tool |
|---|---|
| 1/4" | 6 mm Deep Well Socket |
| 1/4" | 7 mm Deep Well Socket |
| 1/4" | 8 mm Deep Well Socket |
| 1/4" | 10 mm Deep Well Socket |
| 1/4" | 11 mm Deep Well Socket |
| 1/4" | 13 mm Deep Well Socket |
| 1/4" | 15 mm Deep Well Socket |
| 1/4" | 5 mm Short Socket |
| 1/4" | 10 mm Flex Socket |
| 1/4" | 10 mm Mid Length Socket |
| 1/4" | 13 mm Mid Length Socket |
| 1/4" | 15 mm Mid Length Socket |
| 1/4" | 1.5" Extension |
| 1/4" | 2" Extension |
| 1/4" | 4" Extension |
| 1/4" | 6" Extension |
| 1/4" | 11" Extension |
| 1/4" | 14" Extension |
| 1/4" | Long Handle Ratchet |
| 1/4" | Air Ratchet |
| 1/4" | Torque Wrench |
| 3/8" | 8 mm Deep Well Socket |
| 3/8" | 10 mm Deep Well Socket |
| 3/8" | 11 mm Deep Well Socket |
| 3/8" | 13 mm Deep Well Socket |
| 3/8" | 15 mm Deep Well Socket |
| 3/8" | 2" Extension |
| 3/8" | 4" Extension |
| 3/8" | 6" Extension |
| 3/8" | 11" Extension |

| | |
|---|---|
| 3/8" | 14" Extension |
| 3/8" | Long Handle Ratchet |
| 3/8" | 6 mm Allen Socket |
| 3/8" | Air Ratchet |
| 3/8" | 17 mm Crows Foot |
| 3/8" | 15 mm 12-Point Deep Well Socket |
| 3/8" | E8 Torx Socket |
| 1/2" | 13 mm Deep Well Impact Socket |
| 1/2" | 15 mm Deep Well Impact Socket |
| 1/2" | 18 mm Deep Well Impact Socket |
| 1/2" | 21 mm Deep Well Impact Socket |
| 1/2" | 32 mm Deep Well Impact Socket |
| 1/2" | 24 mm Short Socket |
| 1/2" | Long Handle Ratchet |
| 1/2" | Impact Wrench |
| 1/2" | Torque Wrench |
| 1/2" | Long Breaker Bar |
| | 10 mm Combination Wrench |
| | 13 mm Combination Wrench |
| | 15 mm Combination Wrench |
| | 17 mm Combination Wrench |
| | 18 mm Combination Wrench |
| | 19 mm Combination Wrench |
| | 7 mm Ratchet Wrench |
| | 8 mm Ratchet Wrench |
| | 10 mm Ratchet Wrench |
| | 13 mm Ratchet Wrench |
| | 15 mm Ratchet Wrench |
| | 18 mm Ratchet Wrench |
| | Small Trim Tool |
| | Large Trim Tool |
| | Hose Clamp Pliers |
| | Pliers |
| | Long Pry Bar |
| | 17" Punch |
| | 20 Ounce Hammer |
| | Steering Wheel Tool |
| | Magnet |
| | |

| |
|---|
| Bungee Cords |
| Seal Pick |
| Marker |
| 2" Roloc Disc |
| 1/2" Drill |
| Plastic Scraper |
| Air Blow Gun |
| Phillips Screwdriver |
| Engine Spreader Bar 303-1246 |
| Lift Eyes 313-1634 |
| Torque Converter Retainer 307-346 |
| Disconnect Tool 307-569 |
| Installer Halfshaft 204-161 |
| Front Wheel Hub Remover 205D070 |

## Service Procedure

**1.** Check the vehicle build date. Was the vehicle built on 1-Apr-2016 and through 1-Jan-2017?

(1). Yes - proceed to Step 2.

(2). No - this article does not apply. Refer to the Powertrain Controls/Emissions Diagnosis (PC/ED) manual for normal diagnostics.

**2.** Connect the Ford Integrated Diagnostic System (IDS) or Ford J2534 Diagnostic Software (FJDS) to the data link connector (DLC) and check for DTCs. Are DTCs P0524 and/or P06DD stored in the powertrain control module (PCM) memory?

(1). Yes - continue to Step 3.

(2). No - replace the cylinder heads. Refer to Workshop Manual (WSM), Section 303-01. The repair is complete.

**3.** Check the engine oil level on the engine oil level indicator. Refer to WSM, Section 303-01. Is the oil level within the minimum and maximum marks on the indicator?

(1). Yes - proceed to Step 4.

(2). No - add engine oil as needed to achieve the correct oil level on the indicator. Proceed to Step 4.

**4.** Run the engine until it reaches normal operating temperature. Using IDS or FJDS monitor the engine oil pressure. Refer to WSM, Section 303-01. Is the oil pressure within specification?

(1). Yes - replace the cylinder heads. Refer to WSM, Section 303-01.

(2). No - replace the long block engine assembly. Refer to WSM, Section 303-01.

Prior approval and cost cap must be completed as required; however, follow the diagnostics repair procedure in this article to determine correct repair.

© 2017 Ford Motor Company
All rights reserved.
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.