



TECHNICAL SERVICE BULLETIN

2.7L EcoBoost - Oil Pan Leaking

19-2205
06 August 2019

Model:

| |
|--------------------------------|
| Ford 2015-2017 F-150 |
|--------------------------------|

Issue: Some 2015-2017 F-150 vehicles equipped with a 2.7L EcoBoost engine may exhibit an oil leak from the engine oil pan RTV seal. This may be due to a lack of RTV adhesion. This article includes detailed steps to achieve proper RTV adhesion. To correct the condition, follow the Service Procedure steps to replace the oil pan.

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

- 2015-2017 F-150
- 2.7L engine
- Oil leak from the oil pan RTV seal

Parts

| Part Number | Description | Quantity |
|---------------|---|----------|
| FL3Z-6675-B | Oil Pan | 1 |
| FT4Z-6626-A | Oil Pump Seal | 1 |
| FT4Z-6731-A | Oil Filter | 1 |
| W520113-S440 | Stabilizer Bar Bracket Nuts | 4 |
| W715211-S439 | Left Engine Mount Bolt | 1 |
| W716530-S440 | Right Engine Mount Nuts | 2 |
| W715798-S437 | Transmission Cooler Bracket Stud Bolt | 1 |
| 7L1Z-7J227-A | Trans Fluid Cooler O-rings | 2 |
| W712743-S439 | Axle Mounting Bolt | 1 |
| W712724-S439 | Axle Mounting Bolt | 1 |
| W716700-S442 | Axle Mounting Nut | 1 |
| W712723-S441 | Axle Mounting Nut | 1 |
| ZC-30-A | Motorcraft® Silicone Gasket Remover | 1 |
| ZC-31-B | Motorcraft® Metal Surface Prep Wipes | 1 |
| TA-357 | Motorcraft® High Performance Engine RTV Silicone | 1 |
| 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 (All Markets Except Canada) | 1 |

| | | |
|----------|--|---|
| PM-4-B | Motorcraft® Metal Brake Parts Cleaner (Canada Only) | 1 |
| ZC-20 | Motorcraft® Engine Shampoo and Degreaser (All Markets Except Canada) | 1 |
| CXC-66-A | Motorcraft® Engine Shampoo (Canada Only) | 1 |

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 |
|---|---------------|----------|
| 2015-2017 F150 4X2 2.7L EcoBoost: Inspect And Replace The Engine Oil Pan (Do Not Use With Any Other Labor Operations) | 192205A | 3.2 Hrs. |
| 2015-2017 F150 4X4 2.7L EcoBoost: Inspect And Replace The Engine Oil Pan (Do Not Use With Any Other Labor Operations) | 192205B | 4.1 Hrs. |

Repair/Claim Coding

| | |
|-----------------|------|
| Causal Part: | 6675 |
| Condition Code: | D8 |

Service Procedure



CAUTION: 2015-2017 model year vehicles are not compatible with the press-in-place gasket oil pan. Installation of the press-in-place gasket oil pan will result in engine damage.

1. Remove and discard the oil pan and oil pump seal. It is recommended to allow the crankcase to drain overnight to prevent contamination of the engine sealing surface. Refer to the Workshop Manual (WSM), Section 303-01.

NOTE: Cleaning and preparation of the engine sealing surface is absolutely critical for proper adhesion of the new oil pan. Improperly cleaned and prepared sealing surfaces will result in an oil leak.

2. Thoroughly clean the engine sealing surface using Motorcraft® Silicone Gasket Remover and a plastic scraper. Allow the gasket remover to set for several minutes after application to aid in removal of the RTV sealant.

(1). The engine block skirt stiffener sealing surface must be clean and free of any residual RTV. Do not use metal scrapers, wire brushes, or rotary tools of any type on the engine sealing surface. These tools will cause damage to the sealing surface including scratches or gouges that will create leak paths. A second application of Motorcraft® Silicone Gasket Remover may be required.

NOTE: When cleaning the engine sealing surface it must be wiped clean using a lint free cloth. Spraying the surface with brake cleaner and air drying will not adequately remove the oil and other contaminants from the surface and may leave residue from the brake cleaner behind that may interfere with RTV adhesion.

3. Use a lint free towel and Motorcraft® Metal Brake Parts Cleaner to remove all residual sealant and oil from the engine sealing surface until a clean lint free towel no longer shows any residual oil when wiping the surface. (Figures 1-2)

(1). Use only Motorcraft® Metal Brake Parts Cleaner to clean the engine sealing surface. Some unapproved brake parts cleaners contain chemicals that will inhibit RTV adhesion or may evaporate without removing all of the residual oil from the sealing surface which will result in a repeat leak condition.

Figure 1



Figure 2



NOTE: Motorcraft® Engine Shampoo and Degreaser is used to remove residual brake cleaner which can cause RTV failure and prepare the surface for the Motorcraft® Metal Surface Prep Wipes. The use of any other brand engine shampoo or engine cleaner can compromise the sealing surface and could lead to failure of the RTV seal and a fluid leak.

4. Use Motorcraft® Engine Shampoo and Degreaser to clean the surface of any remaining oil contamination and prepare the surface for the Motorcraft® Metal Surface Prep Wipes. After Motorcraft® Engine Shampoo and Degreaser, dry the surface with a lint free towel.

NOTE: Do not use Motorcraft® Metal Surface Prep Wipes on the replacement oil pan. Using Motorcraft® Metal Surface Prep Wipes on the oil pan will contaminate the treated oil pan sealing surface causing reduced RTV adhesion and a potential oil leak.

5. Wipe the metal engine block skirt stiffener sealing surface using Motorcraft® Metal Surface Prep Wipes. Thoroughly coat the surface with the fluid. Discard wipes after a single use.

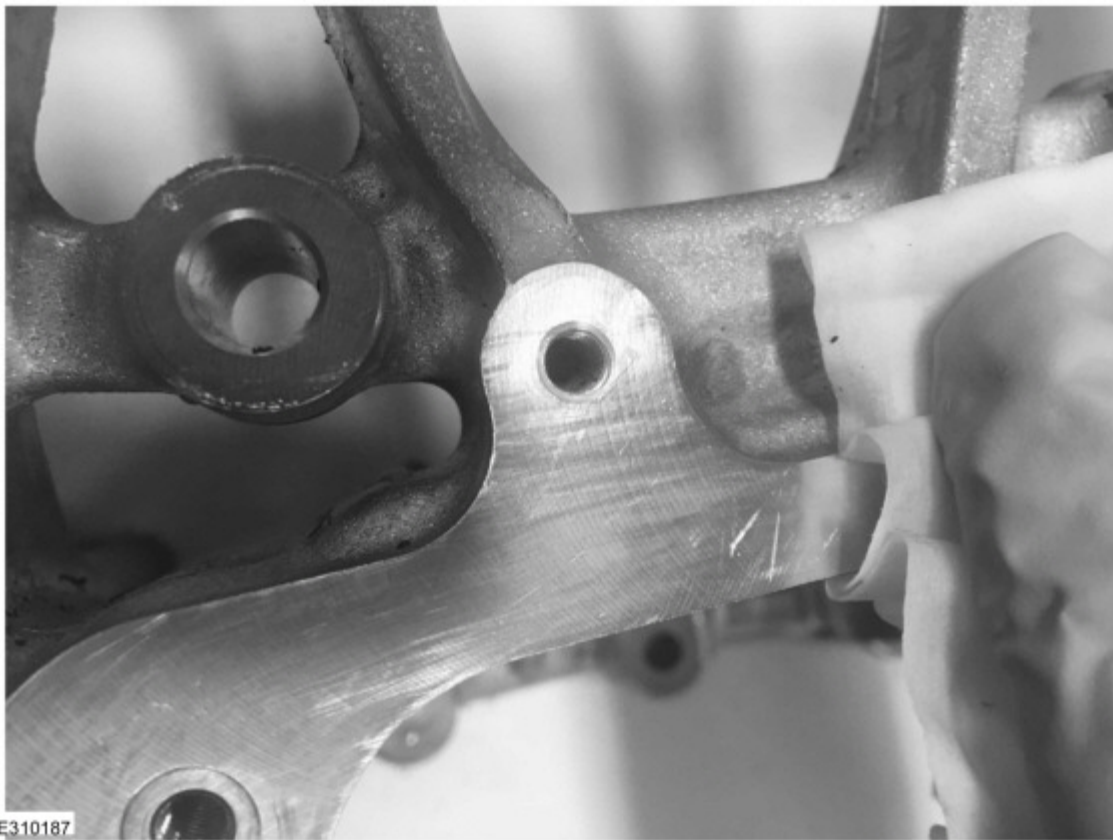
(1). Motorcraft® Metal Surface Prep Wipes create a conversion coating providing an improved base for RTV sealing. The fluid is a water-based, slightly acidic solution that will etch and bond to the metal to provide a microscopic layer to which the RTV can adhere. If the surface is oily, the solution will bead and the surface will not be treated properly. If the solution beads when applied to the sealing surface, the surface must be cleaned again and then the Motorcraft® Metal Surface Prep Wipes reapplied. (Figures 3-4)

NOTE: If the sealing surface or an area of the sealing surface becomes contaminated after it has been prepared, use a lint-free towel soaked in isopropyl alcohol to clean the area. Prepare the area again using Motorcraft® Metal Surface Prep Wipes.

Figure 3



Figure 4



6. Allow the surface to air dry for approximately 2 minutes.

(1). Do not dry the surface using any other method. Attempting to dry the surface may result in sealing surface contamination that may cause oil leaks.

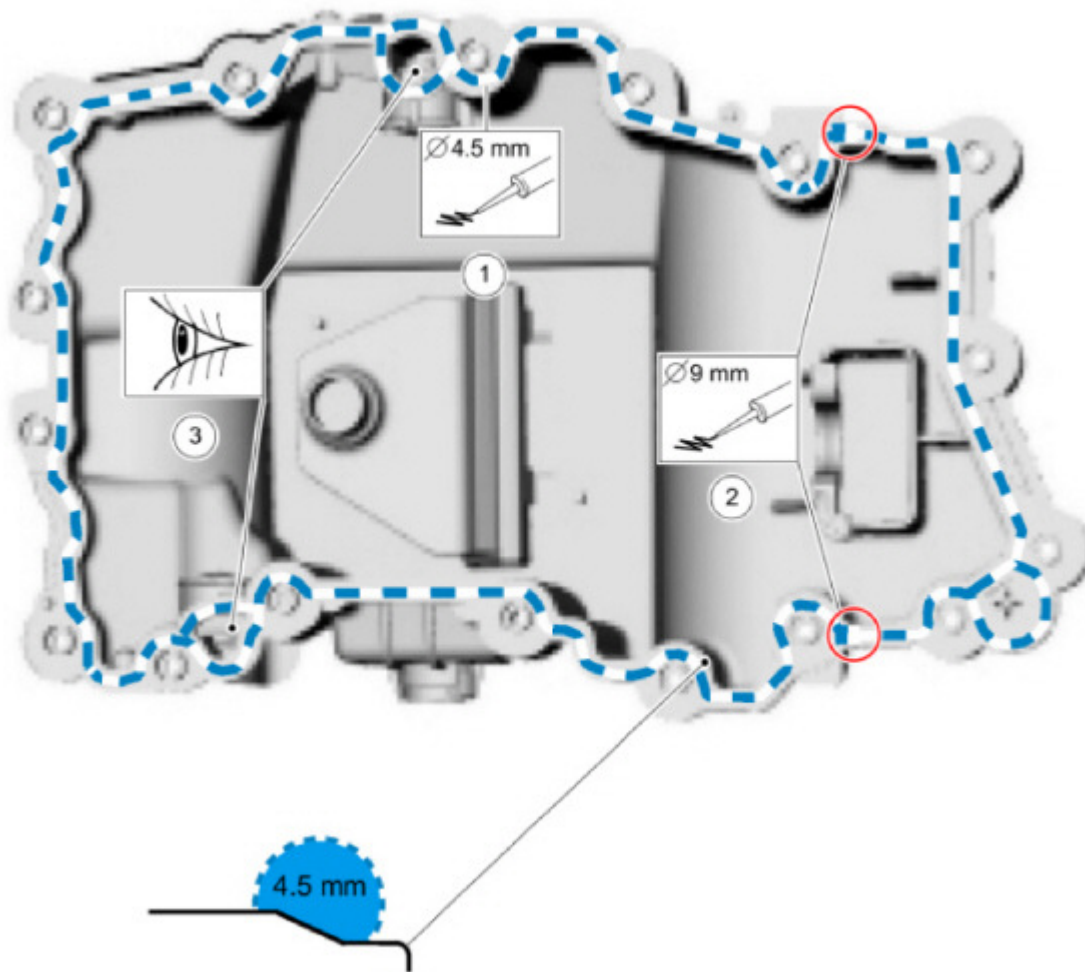
7. Install the new oil pump seal. Refer to the WSM, Section 303-01.

NOTE: The oil pan must be installed within 10 minutes of applying the RTV.

8. Apply a 4.5 mm (0.18 in) bead of Motorcraft® High Performance Engine RTV Silicone to the new oil pan. The RTV bead must be applied to straddle the step chamfer and sealing face. (Figures 5-6)

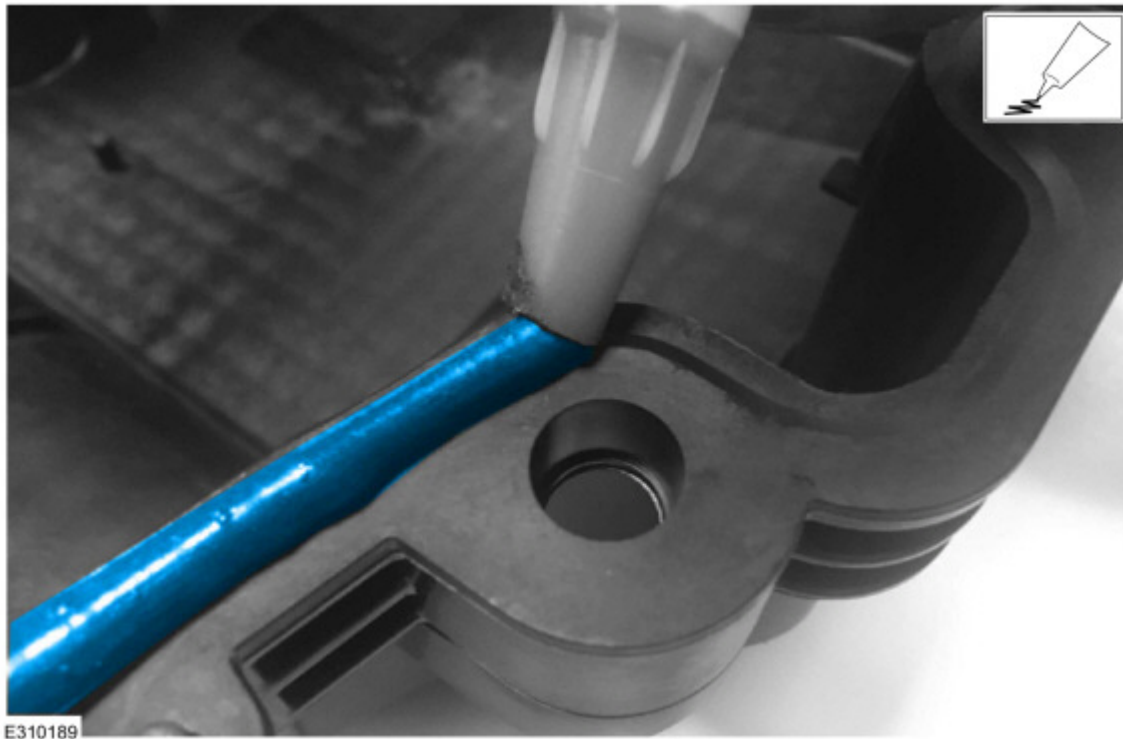
(1). Using too little sealant may result in oil leaks and using too much sealant may result in oil contamination and engine damage.

Figure 5



E310188

Figure 6



9. Apply a 9 mm (0.35 in) bead of Motorcraft® High Performance Engine RTV Silicone to the engine front cover-to-cylinder block joint areas on the new oil pan as shown in Figure 5.
10. Install the new oil pan. Refer to the WSM, Section 303-01.

© 2019 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.