



TECHNICAL SERVICE BULLETIN

3.5L EcoBoost - Long Block Replacement With One Piece Oil Pan - Built On Or Before 19-Mar-2018

20-2306
19 October
2020

Model:

Ford 2017-2018 F-150	Engine: 3.5L EcoBoost
2018 Expedition	
Lincoln 2018 Navigator	

Issue: The service part long block for 2017-2018 F-150 vehicles equipped with a 3.5L EcoBoost engine built at Kansas City Assembly Plant on or before 23-Feb-2018 or Dearborn Truck Plant on or before 26-Feb-2018 and 2018 Expedition/Navigator vehicles built on or before 19-Mar-2018 has been changed to a one piece oil pan design. To make sure there is proper fitment of the new long block with the one piece oil pan, replacement of the transmission cooler coolant lines and an engine harness modification will be necessary. To correctly install, follow the Service Procedure steps to complete the repair.

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

- One of the following vehicle lines:
 - 2017-2018 F-150 built at Kansas City Assembly Plant on or before 23-Feb-2018
 - 2017-2018 F-150 built at Dearborn Truck Plant on or before 26-Feb-2018
 - 2018 Expedition/Navigator built on or before 19-Mar-2018
- 3.5L EcoBoost engine
- Replacing long block engine assembly equipped with one piece oil pan

NOTE: Part quantity refers to the number of that service part number required, which may be different than the number of individual pieces. Service part numbers contain 1 piece unless otherwise stated. "As Needed" indicates the part is required but the number may vary or is not a whole number; parts can be billed out as non-whole numbers, including less than 1.

Parts

Part Number		Description	Quantity
JL3Z-7A031-D	-	Left Transmission Oil Cooler Hose	1
JL3Z-7890-C	-	Right Transmission Oil Cooler Hose	1
W500214-S437	Package Contains 4 Pieces, 1 Piece Required	Cooler Line Bracket Bolt	1
W720340-S450	Package Contains 4 Pieces, 1 Piece Required	Oil Pan Stud Bolt	1
W520102-S450	Package Contains 4 Pieces, 1 Piece Required	Ground Retainer Nut	1
	-	Harness Retainer	1

GU5Z-14A163-C			
NAI837X	-	Coroplast Tape	As Needed
HU5Z-14A163-C	Package Contains 1 Piece, 2 Pieces Required	Zip Tie	2

Warranty Status: Eligible under provisions of New Vehicle Limited Warranty (NVLW)/Service Part Warranty (SPW)/Special Service Part (SSP)/Extended Service Plan (ESP) coverage. Limits/policies/prior approvals are not altered by a TSB. NVLW/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
2017-2018 F150 3.5L EcoBoost, 2018 Expedition/Navigator: Update The Vehicle As Required Following The Service Procedure	MT202306	Actual Time

Repair/Claim Coding

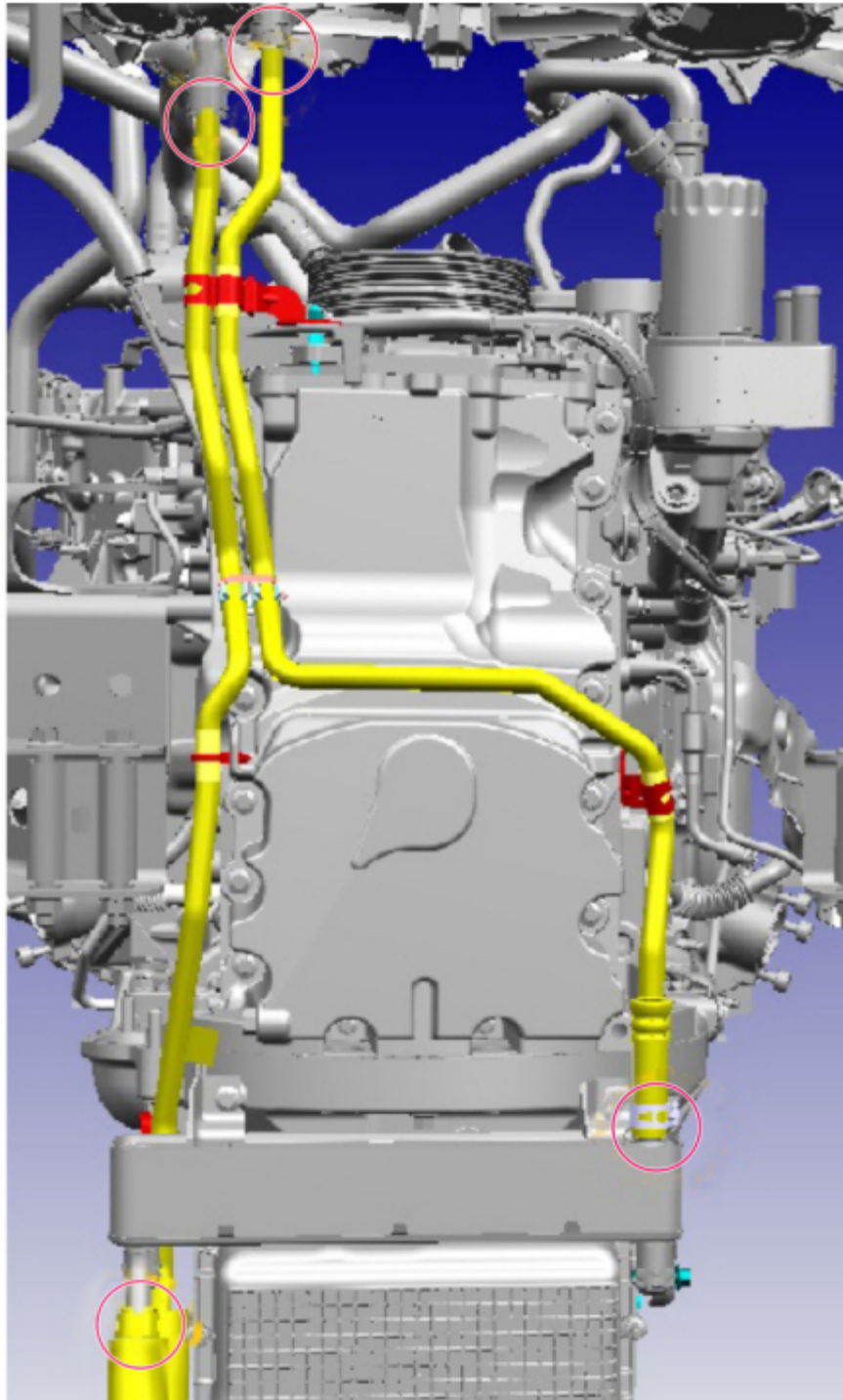
Causal Part:	6006
Condition Code:	12

Service Procedure

NOTE: This repair is to be used if the engine is being replaced with service long block equipped with a one piece oil pan, during the repair, with the engine removed.

- Is the vehicle a 2017 F-150?
 - Yes - proceed to Step 5.
 - No - proceed to Step 2.
- Remove both transmission cooler coolant lines by disconnecting the 3 quick connects and one pinch clamp. Refer to Workshop Manual (WSM), Section 310-00C Fuel System > General Information > General Procedures > Quick Release Coupling. (Figure 1)

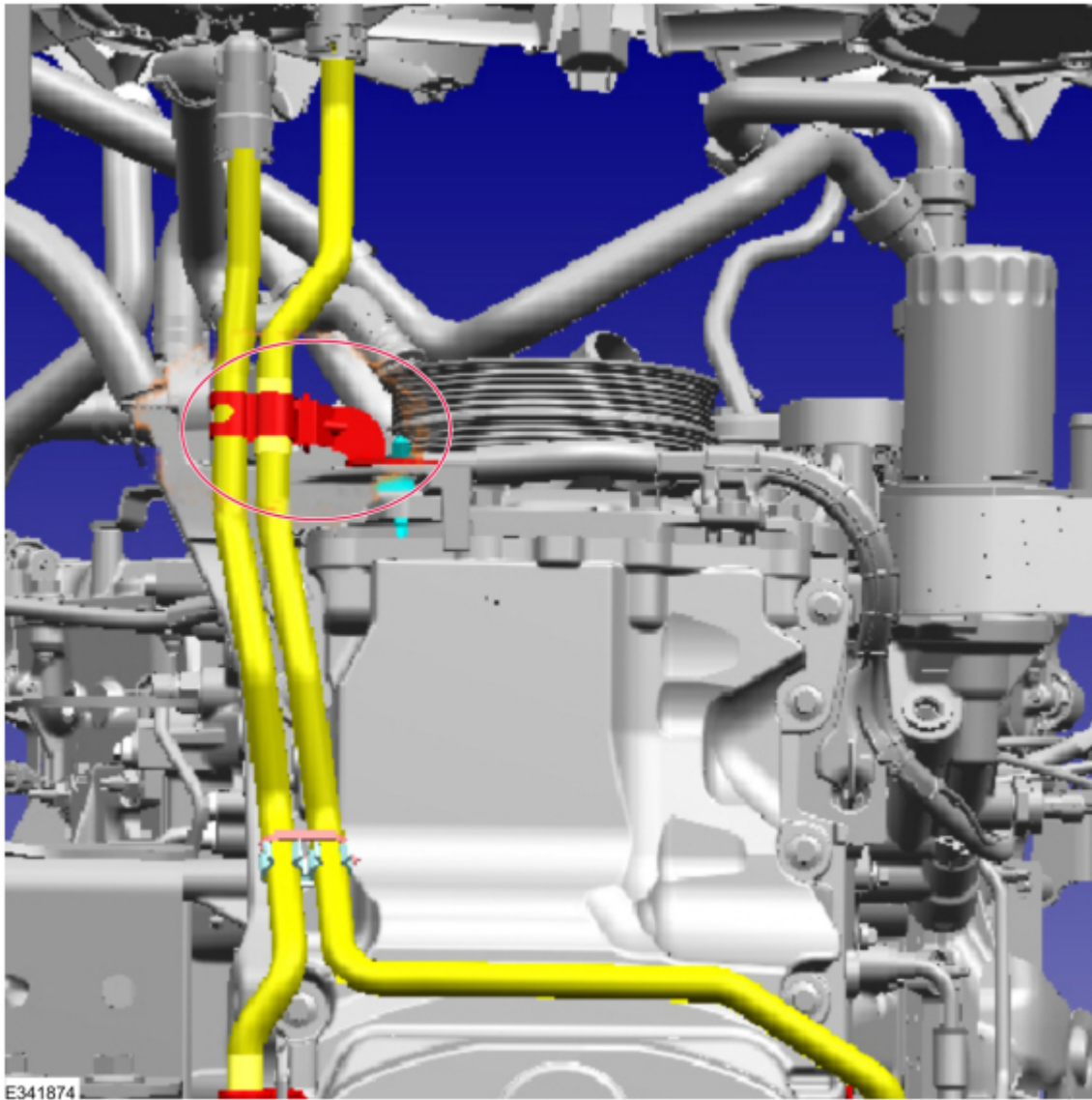
Figure 1



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3. Transfer the transmission cooler line bracket from the old lines to the new lines. (Figure 2)

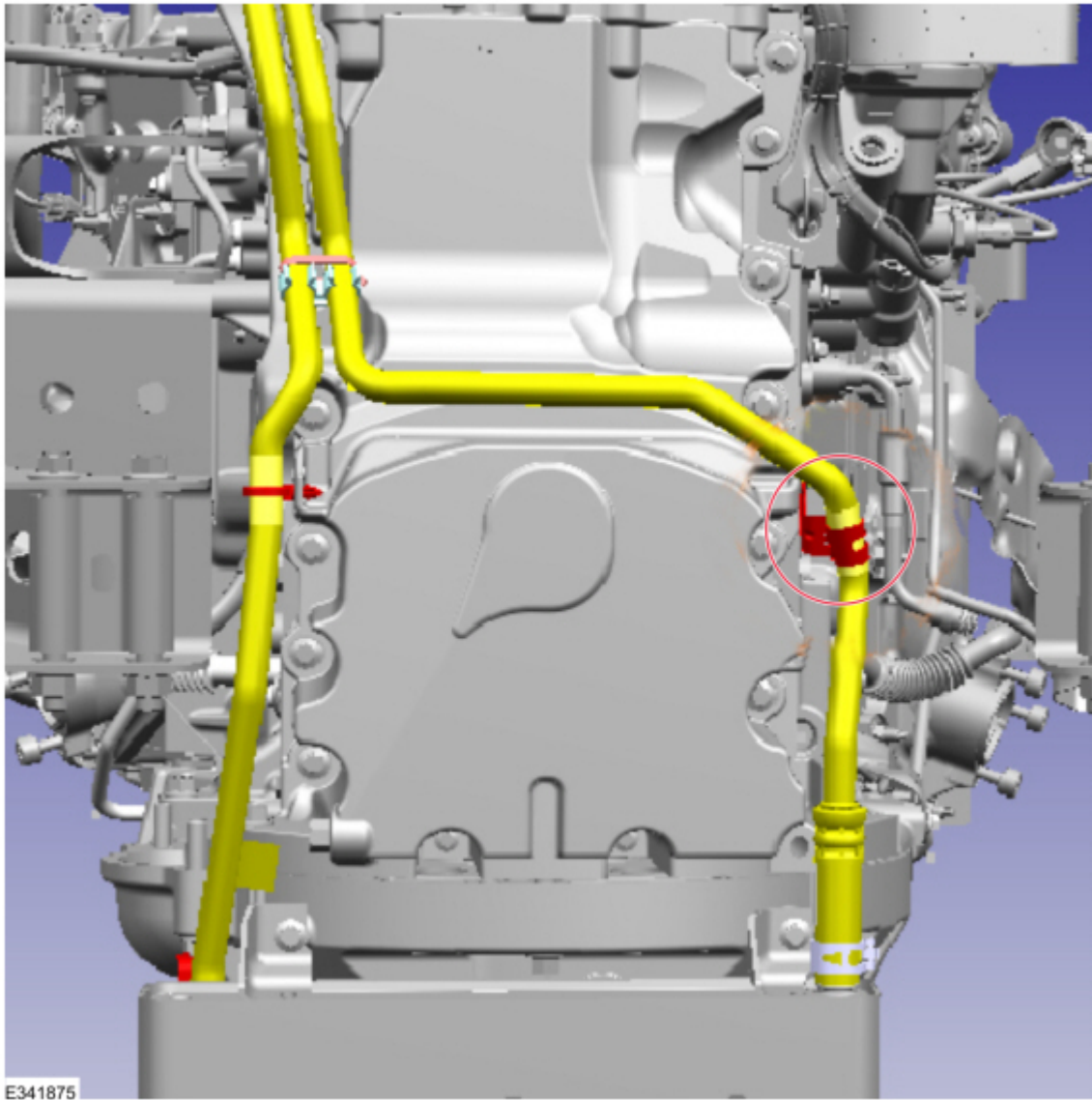
Figure 2



4. Install the new transmission cooler lines.

(1). When the engine is installed, the transmission cooler line bracket requires a new bolt to secure to the one piece oil pan. Tighten to $10 \text{ Nm} \pm 1.5 \text{ Nm}$ ($88.5 \text{ lb-in} \pm 13.3 \text{ lb-in}$). (Figure 3)

Figure 3



5. Remove approximately 15 cm (6 in.) of electrical tape from the engine harness so 5 cm (2 inches) of the conduit is exposed as indicated in Figure 4.

Figure 4



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6. Pull back the conduit approximately 5 cm (2 inches). (Figure 5)

Figure 5



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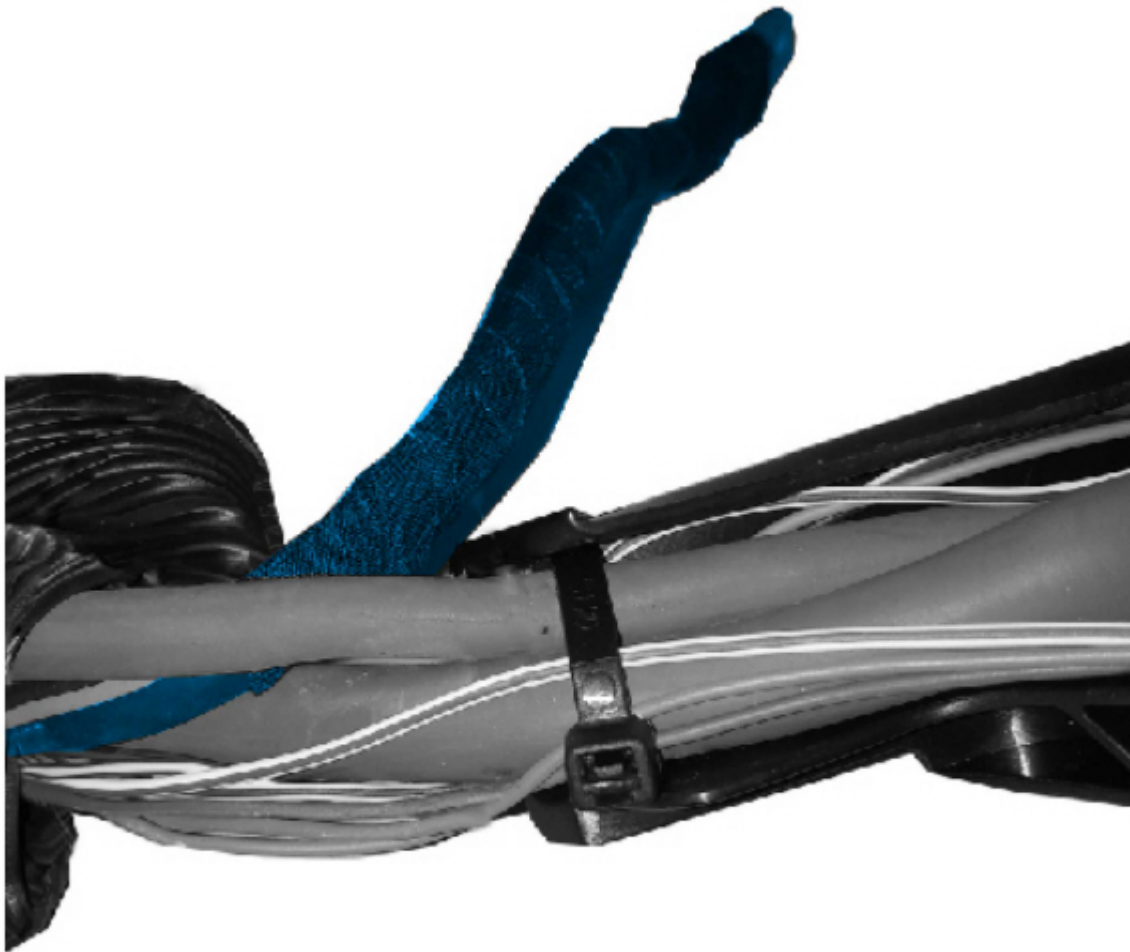
7. Remove and discard the 2 tie straps retaining the harness to the harness bracket. (Figure 6)

Figure 6



8. Reroute the engine ground cable outward by pulling it between the 2 red battery cables before the bracket. (Figure 7)

Figure 7



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9. Separate the ground G105 wire outside the harness/bracket.
10. Secure the harness to the bracket with 2 new tie straps. (Figure 6)
11. Using Coroplast tape, wrap the ground cable from the eyelet back to the harness. (Figure 8)

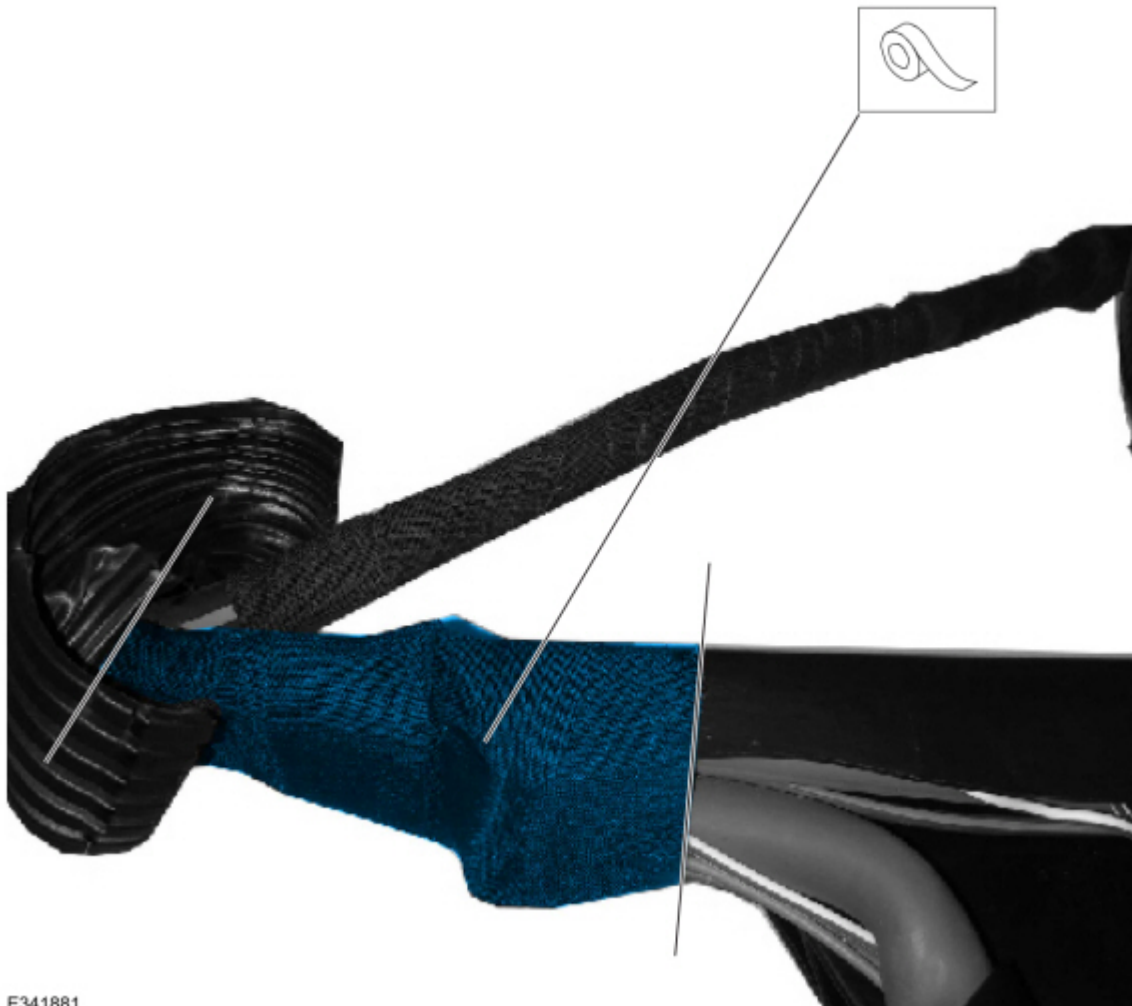
Figure 8



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12. Using Coroplast tape, wrap approximately 2.5 cm (1 in.) from the ground cable onto the plastic harness guard. (Figure 9)

Figure 9



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13. Reposition the conduit pulled back in Step 6.

14. Using Coroplast tape, wrap approximately 12.5 cm (5 in.) from the opened conduit, including the ground take out, up to the split in the harness guard. (Figure 10)

Figure 10



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15. Route the engine ground cable G105 so it crosses back over the harness after the split in the harness guard. (Figure 10)

16. The original gray pushpin will no longer be in position to secure the bracket to the new one piece oil pan. Loosely install the harness retainer onto the harness and secure after the engine installation. Refer to Figures 11-12 for proper installation.

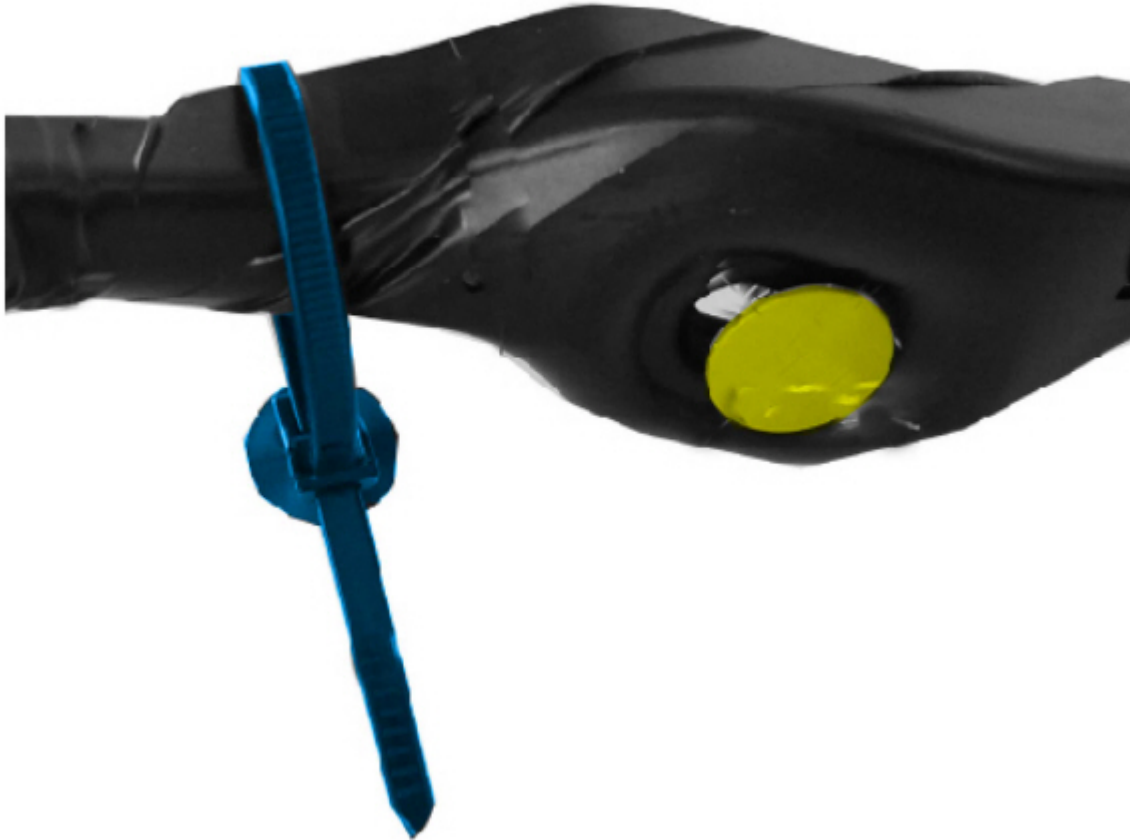
(1). After engine install, insert a new retainer into this location on the oil pan and secure the tie strap.

Figure 11



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Figure 12

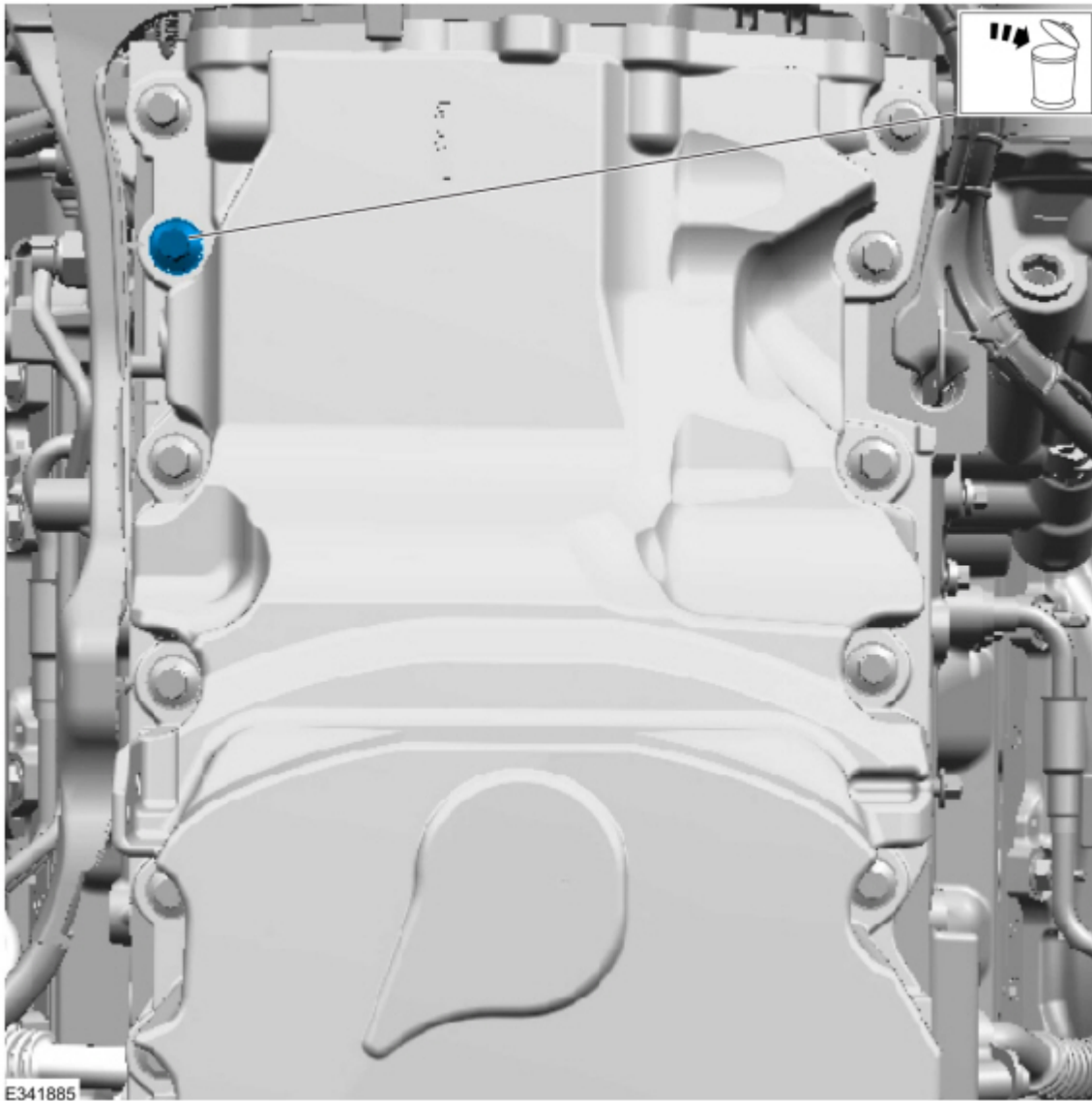


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17. Remove the bolt highlighted in Figure 13 on the right side of the engine oil pan and install stud bolt. Tighten to 20 Nm (14.75 lb-ft) + 45°. (Figure 13)

(1). After engine install, secure ground G105 stud bolt using a nut. Tighten to 27.5 Nm (20.3 lb-ft) ± 4.2Nm (37 lb-in).

Figure 13



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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.