



TECHNICAL SERVICE BULLETIN

2.0L EcoBoost - Rattle Noise And Cracked Flexplate

20-2212
24 August 2020

This bulletin supersedes 19-2236. Reason for update: Incorrect or Missing Parts

Model:

Ford 2015-2018 Edge	Assembly Plant: Oakville Assembly Plant Engine: 2.0L EcoBoost
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Summary

This article supersedes TSB 19-2236 to update the parts list.

Issue: Some 2015-2018 Edge vehicles equipped with a 2.0L EcoBoost engine may exhibit a rattle noise. This may be more noticeable at idle. This may be due to a flexplate crack around the crankshaft. To correct the condition, follow the Service Procedure steps to replace the flexplate, transmission fluid pump, and torque converter.

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

- 2015-2018 Edge
- 2.0L EcoBoost engine
- Rattle noise from the bellhousing area

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. "If Needed" indicates the part is not mandatory.

NOTE: Ball Joint Pinch Nut and Engine Mount Nut have the same service part number.

Parts

Part Number		Description	Quantity
1S7Z-6375-D	-	Flexplate	1
W712961 S450B	-	Steering Column Fastener	1
W520215- S440	Package Contains 4 Pieces, 2 Pieces Required	Tie Rod End Nut	1
W712503- S440	Package Contains 1 Piece, 2 Pieces Required	Stabilizer Bar Fastener	2
W500545- S439	Package Contains 4 Pieces, 2 Pieces Required	Ball Joint Pinch Bolt	1
W520214- S440	Package Contains 2 Pieces, 2 Pieces Required	Ball Joint Pinch Nut	1
W716457- S439	Package Contains 4 Pieces, 4 Pieces Required	Subframe Bolts	1
4S4Z-3N324- AA	-	Halfshaft Retaining Strap	1

DG9Z-7G273-B	Package Contains 1 Piece, 2 Pieces Required	Halfshaft Washer	1
W520102-S442	Package Contains 4 Pieces, 2 Pieces Required	Halfshaft Retaining Strap Nuts	1
CCPZ-3B477-B	Package Contains 1 Piece, 2 Pieces Required	Wheel Bearing Hub Nut	2
CN1Z-7H424-B	-	Intermediate Shaft Seal (AWD)	1
5F9Z-4682-AA	Package Contains 1 Piece, 3 Pieces Required	PTU Bolt And Washer Assembly (AWD)	3
F2GZ-4682-A	Package Contains 1 Piece, 3 Pieces Required	RDU Bolt And Washer Assembly (RWD)	3
W718250-S439	Package Contains 5 Pieces, 5 Pieces Required	Upper PTU Bolts (AWD)	1
CV6Z-7086-B	-	PTU Compression Seal (AWD)	1
BB5Z-4B422-C	-	Halfshaft Retaining Circlip	1
BE8Z-6731-AC	-	Oil Filter Kit	1
FB5Z-6840-A	-	Oil Filter Adaptor Gasket	1
W500313-S437	Package Contains 4 Pieces, 5 Pieces Required	Fuel Rail Fasteners	2
BG9Z-9229-A	Package Contains O-rings For 4 Injectors And Instruction Sheet	Injector O-Ring Kit	1
W716841-S900	Package Contains 4 Pieces, 2 Pieces Required	Dowel Pins	1
EJ7Z-6L612-A	-	Turbo To Catalytic Converter Gasket	1
W712154-S439	Package Contains 4 Pieces, 2 Pieces Required	Center Bearing Fastener (AWD)	1
W715618-S437	Package Contains 4 Pieces, 4 Pieces Required	Torque Converter Nuts	1
W718507-S439	Package Contains 4 Pieces, 4 Pieces Required	Transmission Support Insulator Bolts	1
W520205-S440	Package Contains 4 Pieces, 1 Piece Required	Transmission Support Insulator Nuts	1
W716200-S437	Package Contains 4 Pieces, 1 Piece Required	Transmission Fluid Cooler Tube Bolts	1
W712146-S437	Package Contains 4 Pieces, 1 Piece Required	Transmission Fluid Cooler Tube Bolts	1
9L8Z-1177-G	-	Case Side Axle Shaft Seal	1
9L8Z-1177-C	-	Converter Side Axle Shaft Seal (AWD)	1
BB5Z-1S177-C	-	Converter Side Axle Shaft Seal (FWD)	1
		Flexplate Fasteners	2

1L5Z-6379-AA	Package Contains 4 Pieces, 6 Pieces Required		
9L8Z-7A103-J	-	Transmission Fluid Pump Assembly	1
9L8Z-7A248-C	-	Large Transmission Case Seal (21 mm)	1
9L8Z-7A248-B	Package Contains 1 Piece, 4 Pieces Required	Small Transmission Case Seal (13 mm)	4
W719986-S437	Package Contains 4 Pieces, 3 Pieces Required	Transmission Fluid Pump Bolts	1
DG9Z-7A136-B	-	Transmission Fluid Pump Gasket	1
DG9Z-7902-GRM	-	Torque Converter	1
5L7Z-7D285-A	Package Contains 1 Piece, 2 Pieces Required	Transmission Fluid Cooler Line Seals	2
5L7Z-7J324-A	Package Contains 1 Piece, 2 Pieces Required	Transmission Fluid Cooler Line Ring	2
9L8Z-7048-A	-	Input Shaft Seal	1
BB5Z-7A098-E	-	Transmission Fluid Filter	1
DV6Z-7Z490-A	-	Main Control To Case Separator Plate	1
TA-26	-	Motorcraft® Threadlock 262	As Needed
ZC-31-B	-	Motorcraft® Metal Surface Prep Wipes	As Needed
TA-357	WSE-M4G323-A6	Motorcraft® High Performance Engine RTV Silicone	As Needed
XL-5-A	-	Motorcraft® Multi-Purpose Grease Spray	As Needed
XT-10-QLVC	-	Motorcraft® Mercon LV Automatic Transmission Fluid (All Markets Except Canada)	As Needed
CXT-10-LV6	-	Motorcraft® Mercon LV Automatic Transmission Fluid (Canada Only)	As Needed
XO-5W30-Q1SP	-	Motorcraft® SAE 5W-30 Synthetic Blend Motor Oil (All Markets Except Canada)	As Needed
CXO-5W30-LSP6	-	Motorcraft® SAE 5W-30 Super Premium Motor Oil (Canada Only)	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
YN-19	-	Motorcraft® R134a Refrigerant (All Markets Except Canada)	As Needed

CYN-19-R	-	R134a Refrigerant (Canada Only)	As Needed
Inspect And Replace Only If Necessary			
6009	-	Engine Short Block - Refer To The Parts Catalog For The VIN Specific Application	If Needed
AG9Z-6065-A	Package Contains 10 Pieces, 10 Pieces Required	Cylinder Head Bolt	If Needed
1S7Z-6A340-AA	-	Crankshaft Bolt	If Needed
FB5Z-6079-D	-	Engine Gasket Kit	If Needed
W713095-S403	Package Contains 4 Pieces, 4 Pieces Required	Turbo Heat Shield Nuts	If Needed
W714265-S442	Package Contains 4 Pieces, 4 Pieces Required	Catalytic Converter Fastener	If Needed
CV6Z-9450-E	-	Tailpipe Gasket	If Needed
BB5Z-6C683-A	-	Turbocharger Oil Filter	If Needed
W520214-S440	Package Contains 2 Pieces, 2 Pieces Required	Engine Mount Nut	If Needed
W710807-S442	Package Contains 4 Pieces, 1 Piece Required	Engine Mount Nut	If Needed
W717674-S439	Package Contains 4 Pieces, 2 Pieces Required	Engine Mount Bolt	If Needed
W715623-S439	Package Contains 4 Pieces, 4 Pieces Required	Front Brake Caliper Bolts	If Needed
W715295-S439	Package Contains 4 Pieces, 4 Pieces Required	Shock Mount Bolt	If Needed
W520216-S440	Package Contains 4 Pieces, 4 Pieces Required	Shock Mount Nut	If Needed
DL3Z-19B596-B	-	A/C Compressor Gasket And O-Ring	If Needed
DS7Z-19B596-A	-	A/C Compressor Gasket And O-Ring	If Needed
EJ7Z-9J323-B	-	High Pressure Fuel Tube	If Needed
W718059-S442	Package Contains 2 Pieces, 2 Pieces Required	High Pressure Fuel Pump Fasteners	If Needed
AA5Z-9E583-A	-	High Pressure Fuel Pump O-ring	If Needed
9L8Z-6G004-E	-	CHT2 Sensor	If Needed
F2GZ-63600A58-A	-	Intermediate Shaft Bushing (AWD)	If Needed
CM5Z-12029-K	Package Contains 1 Piece	Ignition Coil	If Needed
	-	High Pressure Pump Roller Tappet	If Needed

AA5Z-9C587-A			
W704474-S437	Package Contains 4 Pieces	Turbo Stud	If Needed
W712458-S900	Package Contains 4 Pieces	Turbo To Exhaust Stud	If Needed
CJ5Z-8255-A	-	Coolant Outlet Adapter O-ring	If Needed

Labor Times

Description	Operation No.	Time
2015-2018 Edge FWD 2.0L EcoBoost: Diagnose Noise, Remove Transmission And Inspect Flexplate And Crankshaft Mounting Face For Damage (Pass), Replace The Torque Converter, Flexplate, Flexplate Bolts And Transmission Front Pump (Can Be Claimed With Operation E Or F) (Do Not Use With Any Labor Operations Outside Of This Article)	202212A	9.3 Hrs.
2015-2018 Edge FWD 2.0L EcoBoost: Diagnose Noise, Remove Transmission And Inspect Flexplate And Crankshaft Mounting Face For Damage (Fail), Replace The Torque Converter, Flexplate, Flexplate Bolts, Transmission Front Pump And Engine Short Block (Can Be Claimed With Operation E Or F) (Do Not Use With Any Labor Operations Outside Of This Article)	202212B	18.5 Hrs.
2015-2018 Edge AWD 2.0L EcoBoost: Diagnose Noise, Remove Transmission And Inspect Flexplate And Crankshaft Mounting Face For Damage (Pass), Replace The Torque Converter, Flexplate, Flexplate Bolts And Transmission Front Pump (Can Be Claimed With Operation E Or F) (Do Not Use With Any Labor Operations Outside Of This Article)	202212C	10.6 Hrs.
2015-2018 Edge AWD 2.0L EcoBoost: Diagnose Noise, Remove Transmission And Inspect Flexplate And Crankshaft Mounting Face For Damage (Fail), Replace The Torque Converter, Flexplate, Flexplate Bolts, Transmission Front Pump And Engine Short Block (Can Be Claimed With Operation E Or F) (Do Not Use With Any Labor Operations Outside Of This Article)	202212D	19.7 Hrs.
Vehicles Without Lane Departure: Additional Time To Check And Correct Front Toe (Can be Claimed With Operation A-D Only)	202212E	0.6 Hrs.
Vehicles With Lane Departure: Additional Time To Check And Correct Front Toe (Can be Claimed With Operation A-D Only)	202212F	0.8 Hrs.

Repair/Claim Coding

Causal Part:	6375
Condition Code:	01

Service Procedure

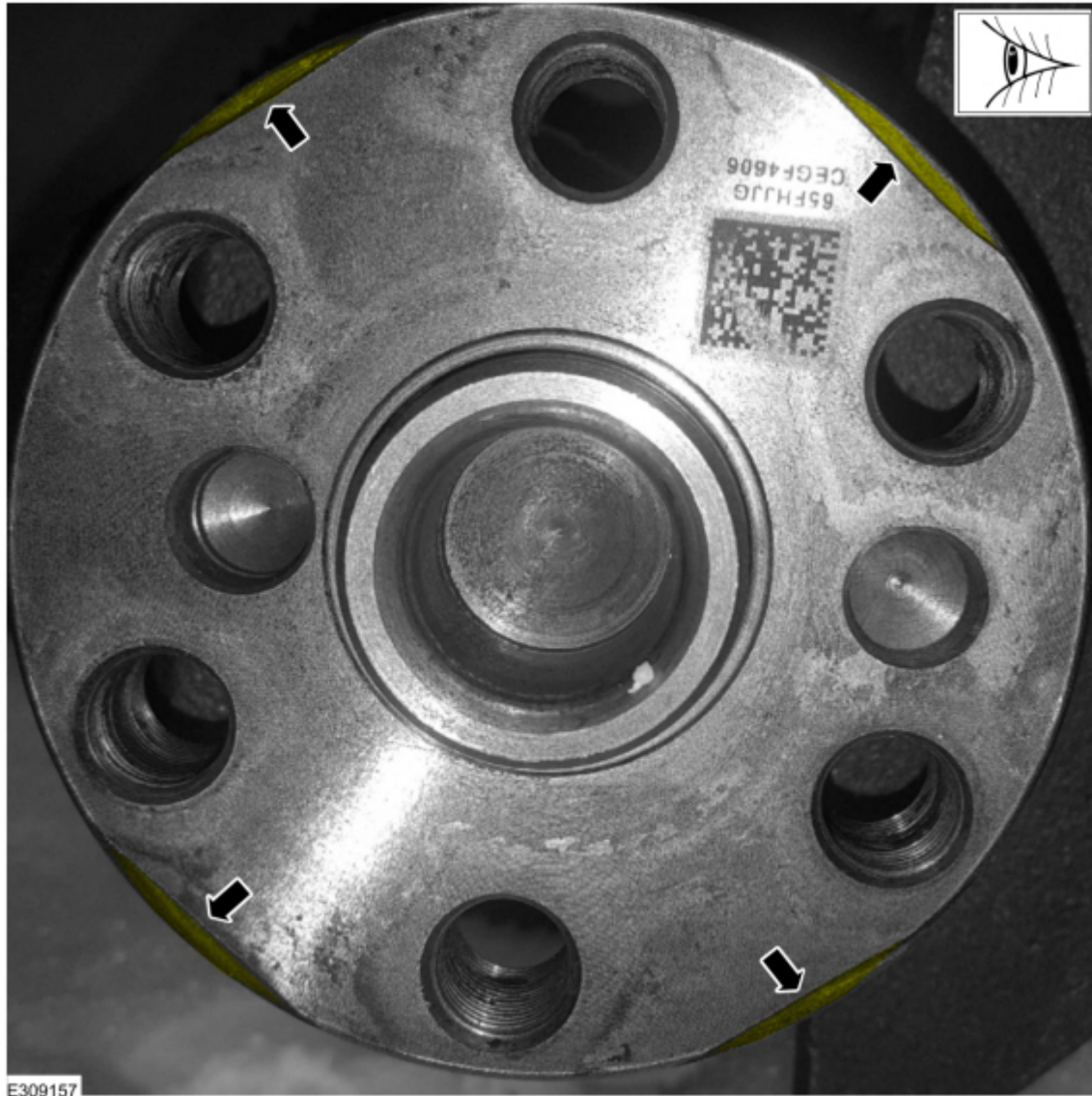
- Does the vehicle exhibit a rattle noise that has been isolated to the bellhousing?
 - Yes - proceed to Step 2.
 - No - this article does not apply. Refer to WSM, Section 100-01 for further diagnostics.
- Release the fuel system pressure. Refer to Workshop Manual (WSM), Section 310-00A.
- Remove the transmission and inspect the engine block mounting face for the presence of dowel pins. If the dowel pins are not present in the engine block, inspect the transmission. If the dowel pins are present in the transmission, remove the dowel pins and reinstall into the engine block prior to transmission installation. Refer to WSM, Section 307-01A.

4. Remove the flexplate and inspect the crankshaft mounting face for damage. Are indentations present on the edges of the crankshaft? (Figure 1)

(1). Yes - replace the torque converter, flexplate, flexplate bolts, and transmission front pump. Refer to WSM, Section 307-01A. If dowel pins are damaged or missing, replace as needed. Proceed to Step 5.

(2). No - replace the torque converter, flexplate, flexplate bolts, and transmission front pump. Refer to WSM, Section 307-01A. If dowel pins are damaged or missing, replace as needed. Proceed to Step 46.

Figure 1



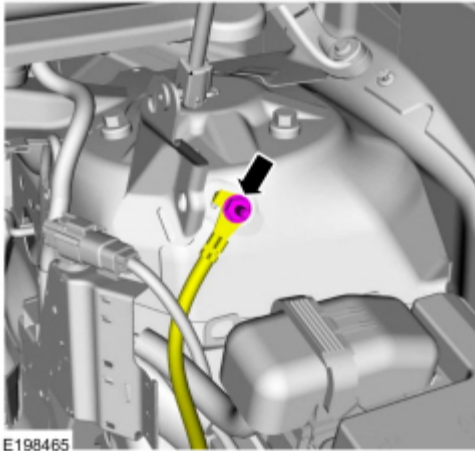
5. Evacuate the A/C system. Refer to WSM, Section 412-00.

6. Drain the cooling system. Refer to WSM, Section 303-03A.

7. Remove the degas bottle. Refer to WSM, Section 303-03A.

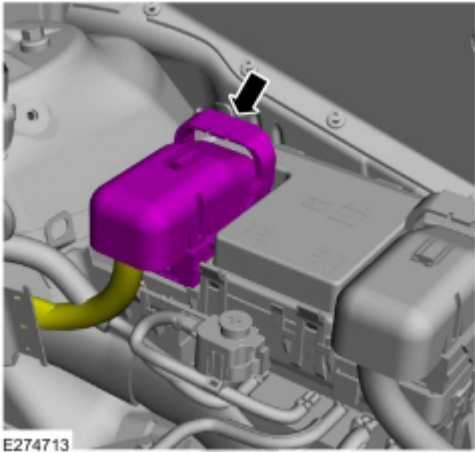
8. Remove the ground cable stud bolt. (Figure 2)

Figure 2



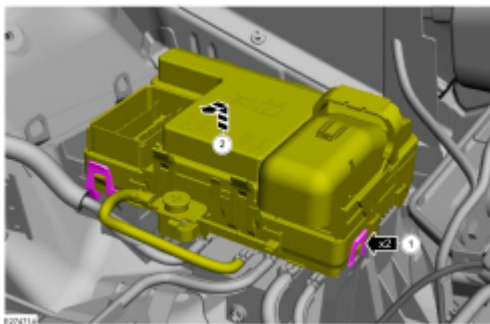
9. Disconnect the junction box electrical connector. (Figure 3)

Figure 3



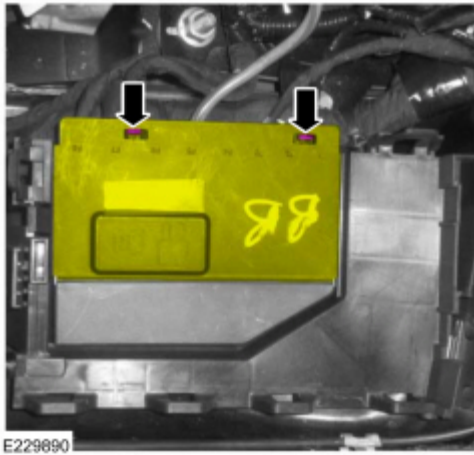
10. Release the tabs. Lift and position the top part of junction box aside. (Figure 4)

Figure 4



11. Release the tabs and open the cover. (Figure 5)

Figure 5



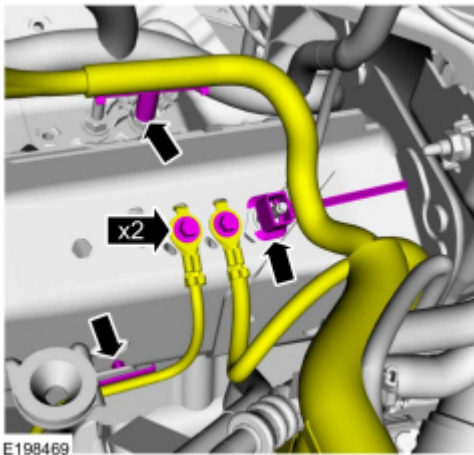
12. Remove the nuts and disconnect the wiring harness cables. (Figure 6)

Figure 6



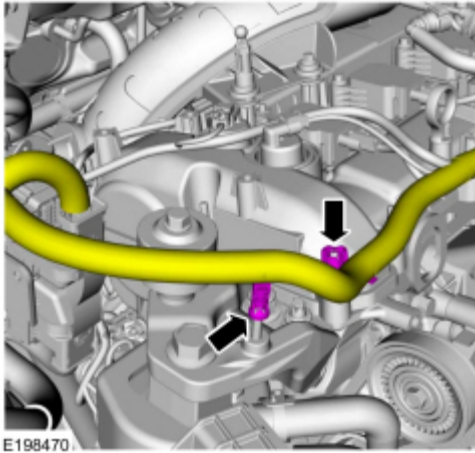
13. Remove the bolts and detach the wiring harness retainers. (Figure 7)

Figure 7



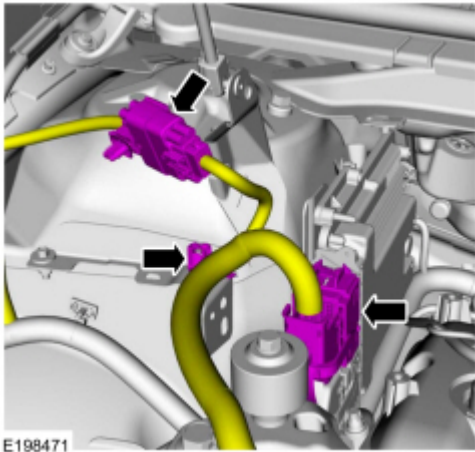
14. Detach the wiring harness retainers from the engine mount and valve cover stud bolt. (Figure 8)

Figure 8



15. Disconnect the powertrain control module (PCM) electrical connector, engine harness electrical connector and retainer. (Figure 9)

Figure 9

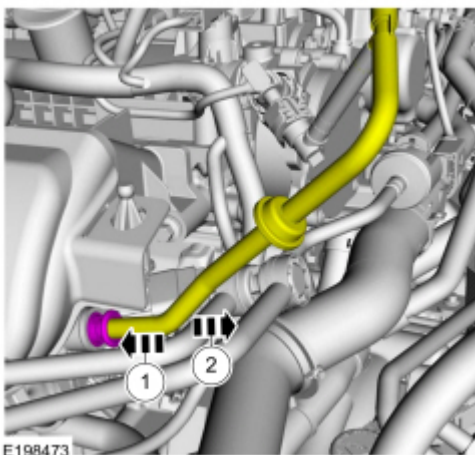


16. Detach the coolant tube return hose retainer.

(1). Disconnect the lower radiator hose from the thermostat housing.

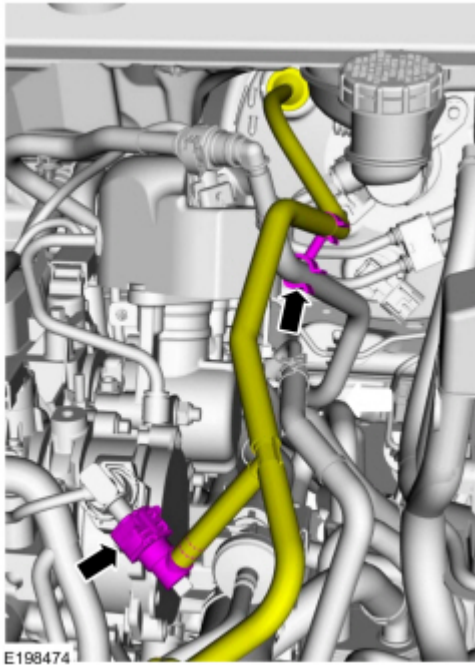
17. Push the intake manifold retainer in. Disconnect and position the brake vacuum tube aside. (Figure 10)

Figure 10



18. Disconnect the vacuum tube at the brake vacuum pump and retainer. (Figure 11)

Figure 11



19. Disconnect the coolant hoses.

- (1). For vehicles without an auxiliary heater, disconnect the coolant hose quick connect coupling. (Figure 12)
- (2). For vehicles with an auxiliary heater, detach the upper radiator hose retainer. (Figure 13)

Figure 12

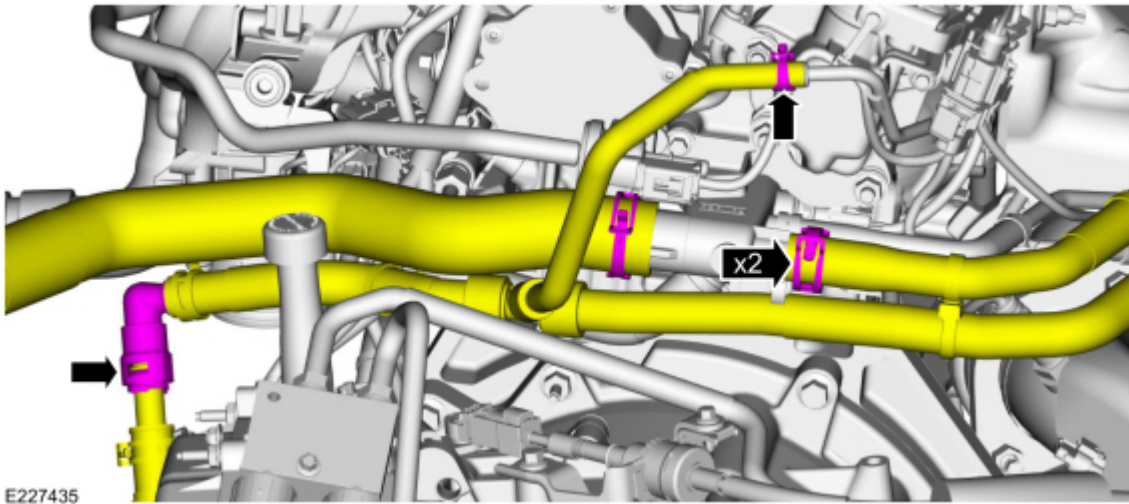
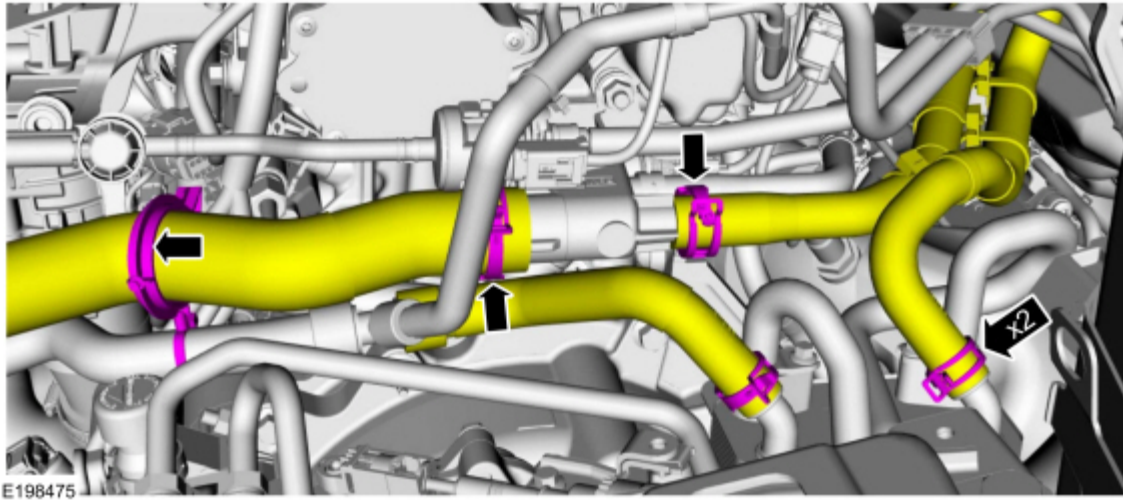
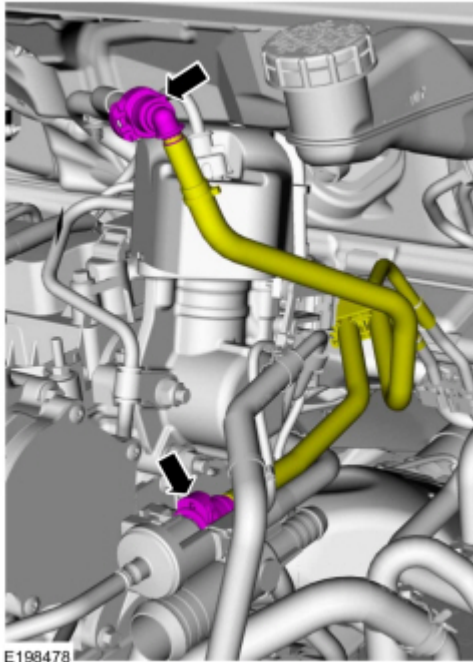


Figure 13



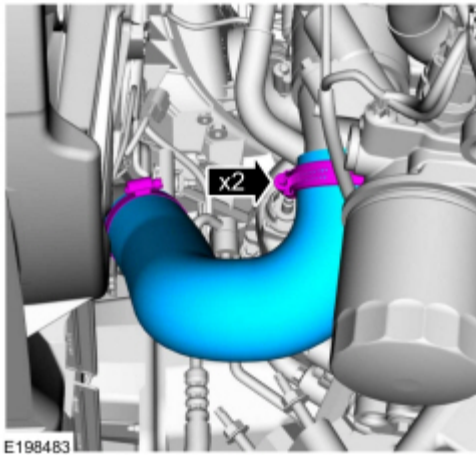
20. Disconnect the fuel tube and EVAP canister purge valve quick release couplings. (Figure 14)
Figure 14



21. Loosen the clamp and remove the charge air cooler (CAC) tube. (Figure 15)

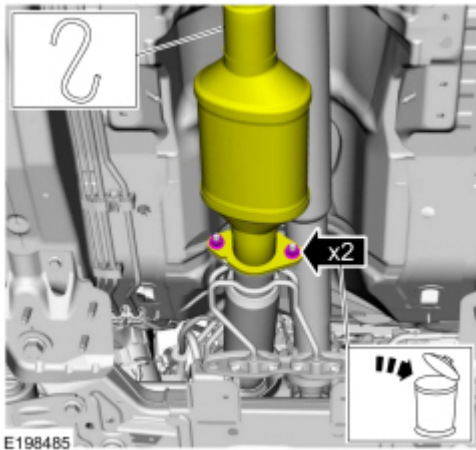
NOTE: When removing any turbocharger air intake system components, make sure to cover any open ports to prevent debris from entering the system. The turbocharger compressor vanes can be damaged by even the smallest particles. All components need to be inspected and cleaned prior to installation or reassembly.

Figure 15



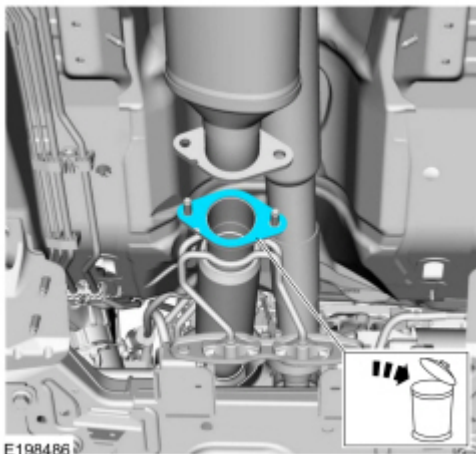
22. Disconnect the tailpipe and position aside. Discard the tailpipe fasteners. (Figure 16)

Figure 16



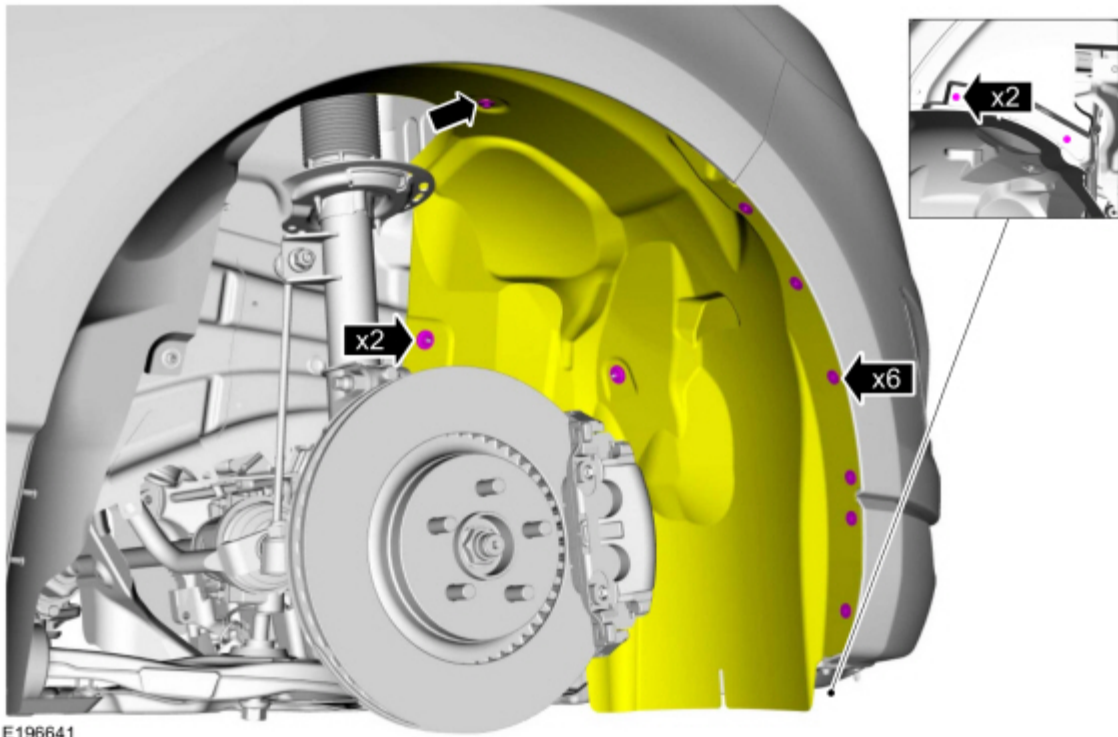
23. Remove and discard the exhaust gasket. Make sure the mating faces are clean and free of foreign material. (Figure 17)

Figure 17



24. Remove the fasteners and position the fender splash shield aside on both sides of the vehicle. (Figure 18)

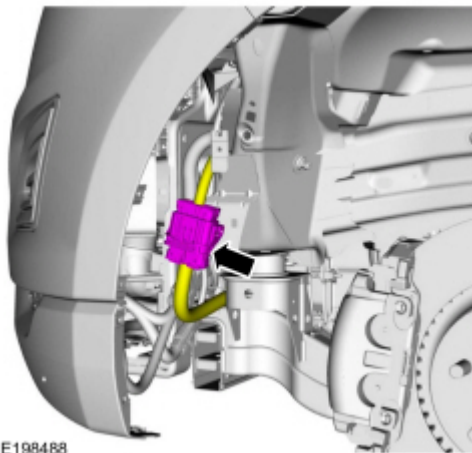
Figure 18



E196641

25. Detach and disconnect the engine harness electrical connector. (Figure 19)

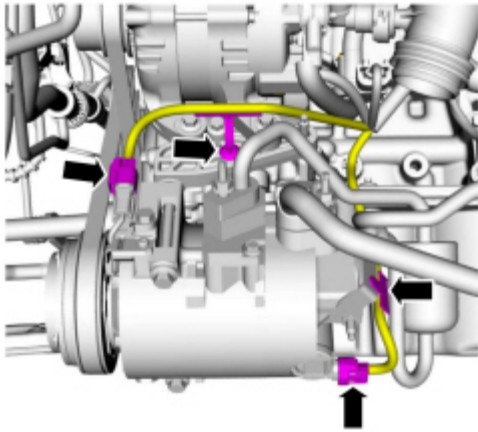
Figure 19



E198488

26. Disconnect the A/C compressor electrical connectors and wiring harness retainers. (Figure 20)

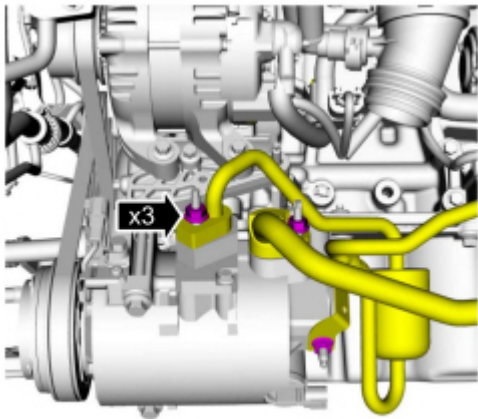
Figure 20



E198489

27. Remove the nuts and disconnect the A/C lines. (Figure 21)

Figure 21

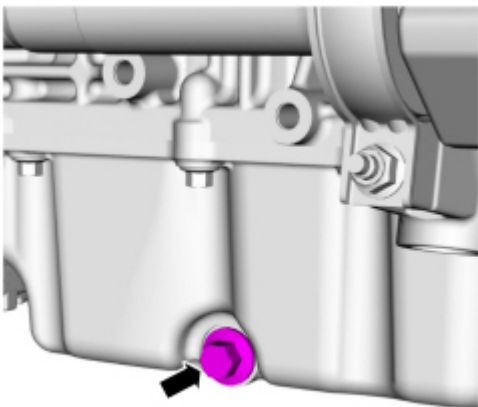


E198490

28. Remove the A/C compressor belt. Refer to WSM, Section 303-05A.

29. Drain the oil and install the drain plug. (Figure 22)

Figure 22



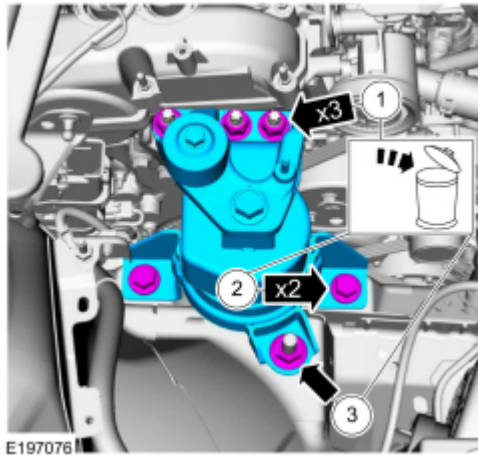
N0152467

30. Using a lifting table, support and secure the engine. Use General Equipment Powertrain Jack and wooden block as needed.

31. Disconnect special service tool 303-F070, Support Bar, Engine.

32. Remove the front engine mount. (Figure 23)

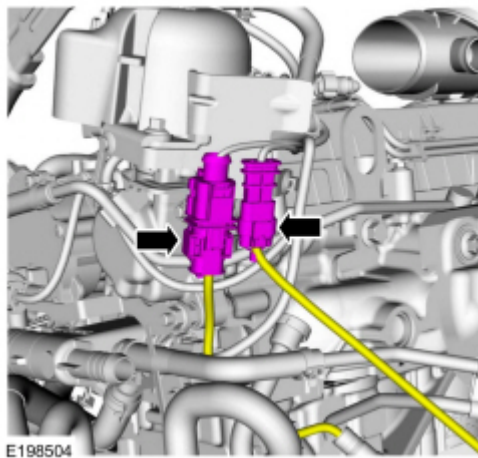
Figure 23



33. Lower the engine.

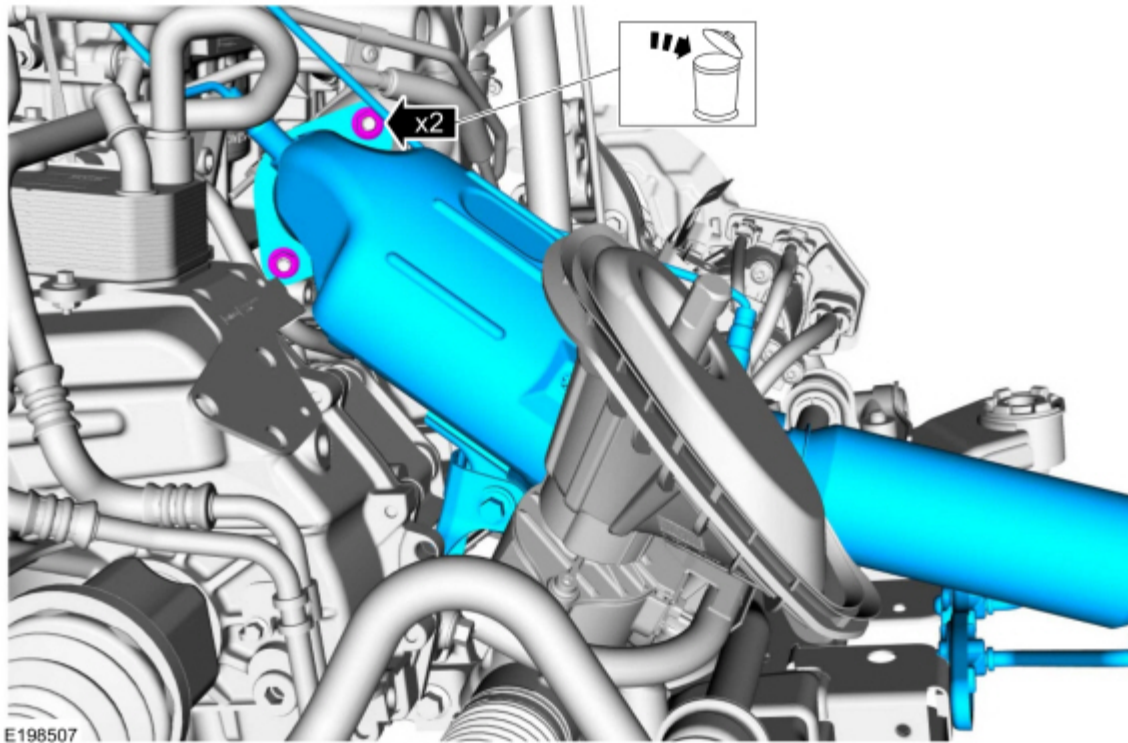
34. Disconnect the heated oxygen sensor (H02S) and catalyst monitor sensor connectors. (Figure 24)

Figure 24



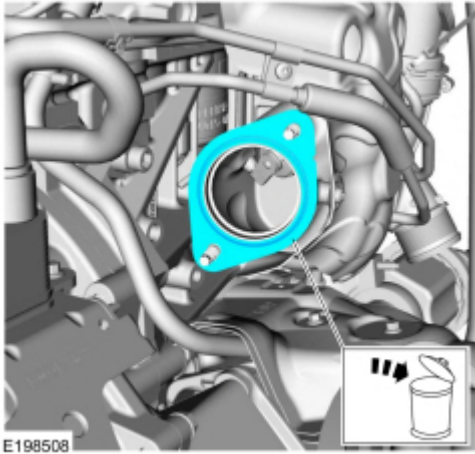
35. Remove the nuts and the catalytic converter. Discard the nuts. (Figure 25)

Figure 25



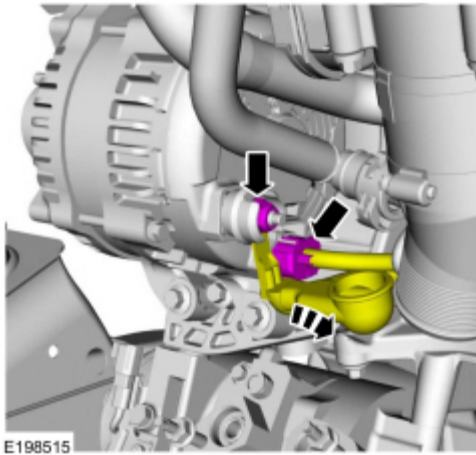
36. Discard the catalytic converter gasket. Make sure the mating faces are clean and free of foreign material. (Figure 26)

Figure 26



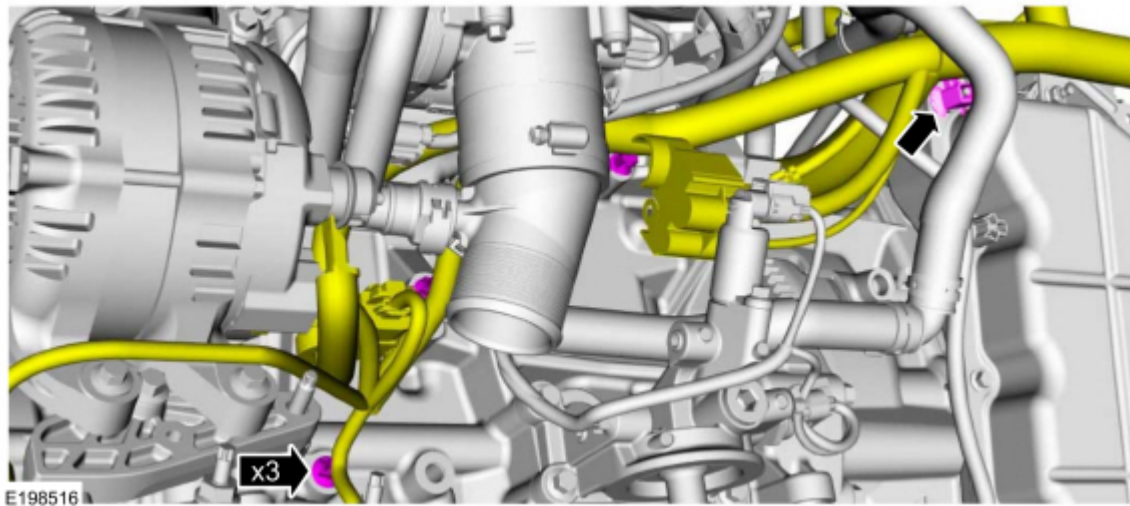
37. Position the cover aside and remove the nut and the positive battery cable. Disconnect the generator electrical connector. (Figure 27)

Figure 27



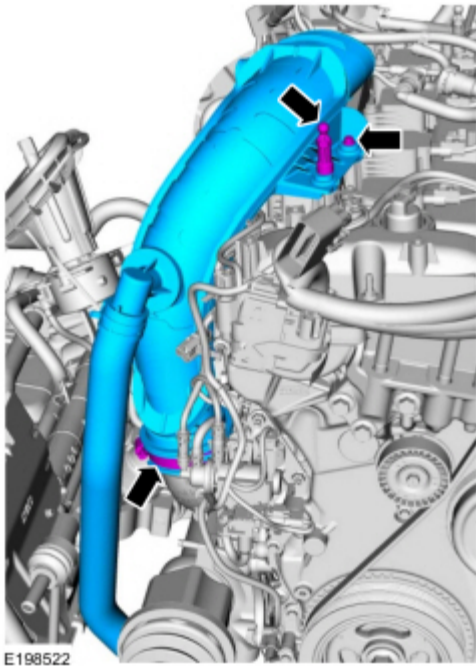
38. Detach the generator wiring harness retainers and position the harness on the transmission. (Figure 28)

Figure 28



39. Loosen the turbocharger inlet pipe clamp. Remove the engine appearance cover stud, bolt, and turbocharger inlet pipe. (Figure 29)

Figure 29



40. If necessary, install special service tool 303-050 (T70P-6000) Lifting Bracket, Engine. (Figure 30-31)
Figure 30

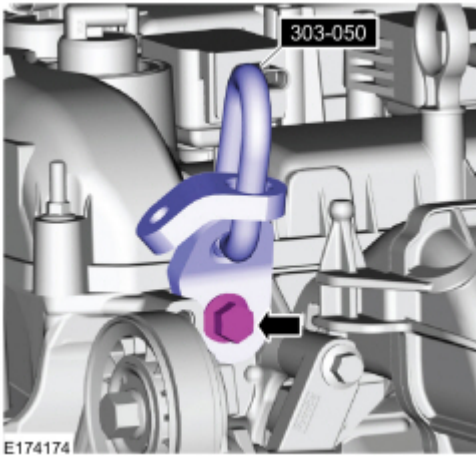
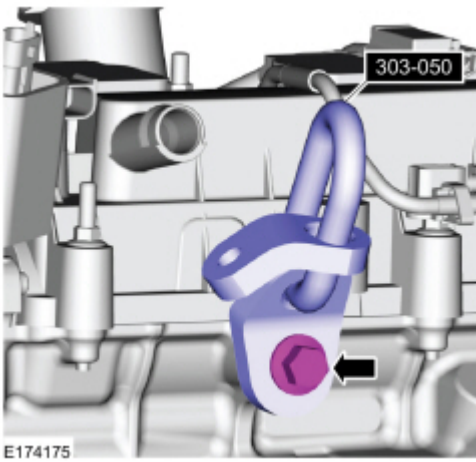


Figure 31



- 41.** Install the engine lift equipment.
- 42.** Remove the adjustable mounting arm and/or engine support if installed.
- 43.** Mount the engine to the engine stand.
- 44.** Replace the short block. Refer to WSM, Section 303-01A.
- 45.** To install the engine, reverse the removal procedure in this article. If dowel pins are damaged or missing, replace as needed.
- 46.** Apply Motorcraft® Multi-Purpose Grease Spray to the torque converter pilot hub prior to reassembly.
- 47.** Install the transmission. Refer to WSM, Section 307-01A.

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