

## CERTAIN 2018 MODEL YEAR EXPEDITION AND NAVIGATOR VEHICLES EQUIPPED WITH R-1234YF REFRIGERANT - SPECIAL R-1234YF REFRIGERANT SERVICE INFORMATION

### OVERVIEW

This program provides special service instructions, loaner equipment, and rental assistance to expedite the repair of affected vehicles equipped with R-1234yf A/C refrigerant, which may be contaminated.

**NOTE:** DO NOT connect an A/C recovery machine or pressure gauges to the vehicle unless directed by this article, as damage to the equipment may result. If a vehicle equipped with R-1234yf refrigerant, with a build date between January 2, 2018 and February 6, 2018, exhibits a lack of A/C cooling with no associated DTCs, or requires recovery of R-1234yf A/C refrigerant to complete a service repair, dealers are to obtain the equipment from Ford Motor Company necessary to evacuate the A/C system. Once the refrigerant has been evacuated, dealers will replace the A/C components identified in this bulletin and recharge the system following the instructions in Attachment III. This includes, but is not limited to damage caused by collision or other. This service must be performed at no charge to the vehicle owner.

**NOTE:** To obtain the loaner equipment, dealers are to submit a VIN-specific contact via the Special Service Support Center (SSSC) web contact site. Follow the on-line instructions and complete the bailment agreement. The SSSC web contact site can be accessed through the Professional Technician Society (PTS) website using the SSSC link listed at the bottom of the OASIS VIN report screen or listed under the SSSC tab.

### SERVICE PROCEDURE

#### Recommended Tool List For Replacement:

General Tools	General Equipment
1/4" Drive 3 Inch Extension	Pry Bar 12"
1/4" Drive Deep Sockets 10mm and 11mm	Right Angle Pick 6"
1/4" Drive Standard Sockets 5.5mm, 7mm, 8mm	Motion Pro Torque Adapter
3/8" Drive Extensions 3", 10" and 24"	Plastic Trim Tool
3/8" Drive Deep Sockets 13mm and 15mm	Metal Push Pin Tool
3/8" Drive Swivel Socket 15mm	1/2" Breaker Bar
3/8" Drive Standard Sockets 10mm, 13mm, 15mm	
3/8" External Torx Plus 18mm	Recovery Equipment
1/2" Drive Standard Sockets 18mm and 21mm	Recharge Equipment
1/2" Drive Torx T55	
Torque Wrenches 1/4", 3/8" and 1/2" Drive	
Power Tools 1/4", 3/8" and 1/2" Drive	
Wrenches 1&1/8", 10mm, 16mm, 18mm	
Ratcheting Wrench 15mm	
Crows Foot 3/8" Drive 15mm and 19mm	
Medium Length Flat Blade Screwdriver	



**NOTICE: Keep all caps on new A/C components until time of connection, also cover up RH turbocharger housing after Charge Air Cooler (CAC) intake pipe removal.**

1. Is the vehicle equipped with R-1234yf refrigerant? Vehicle build information can be verified in PTS under vehicle Information, then click on Additional Information. If equipped, build information will equal G3FAD - A/C REFRIGERANT- HF01234YF:
  - A. No, this program does not apply.
  - B. Yes, proceed to step 2.
  
2. Does vehicle have a production build date between January 2, 2018 and February 6, 2018?
  - A. No, this program does not apply.
  - B. Yes, proceed to step 3.
  
3. Does vehicle exhibit a lack of A/C cooling with no associated DTCs, or does vehicle require recovery of R-1234yf refrigerant to complete a service repair?
  - A. No, this program does not apply.
  - B. Yes, proceed to step 4.
  
4. Obtain the equipment from Ford Motor Company necessary to evacuate the A/C system by submitting a VIN-specific contact via the SSSC web contact site the SSSC web contact site can be accessed through the PTS website using the SSSC link listed at the bottom of the OASIS VIN report screen or listed under the SSSC tab.
  
5. Once Loaner equipment has arrived, unpack the boxes and keep all boxes and packing material for return shipping.
  
6. Evacuate the A/C system.
  - A. Use one refrigerant recovery tank per vehicle, as samples from each vehicles will be needed for lab analysis.
  - B. Refer to Dealer Setup Instructions (a copy will be in the box with the equipment and is also 18N01 Attachment V).

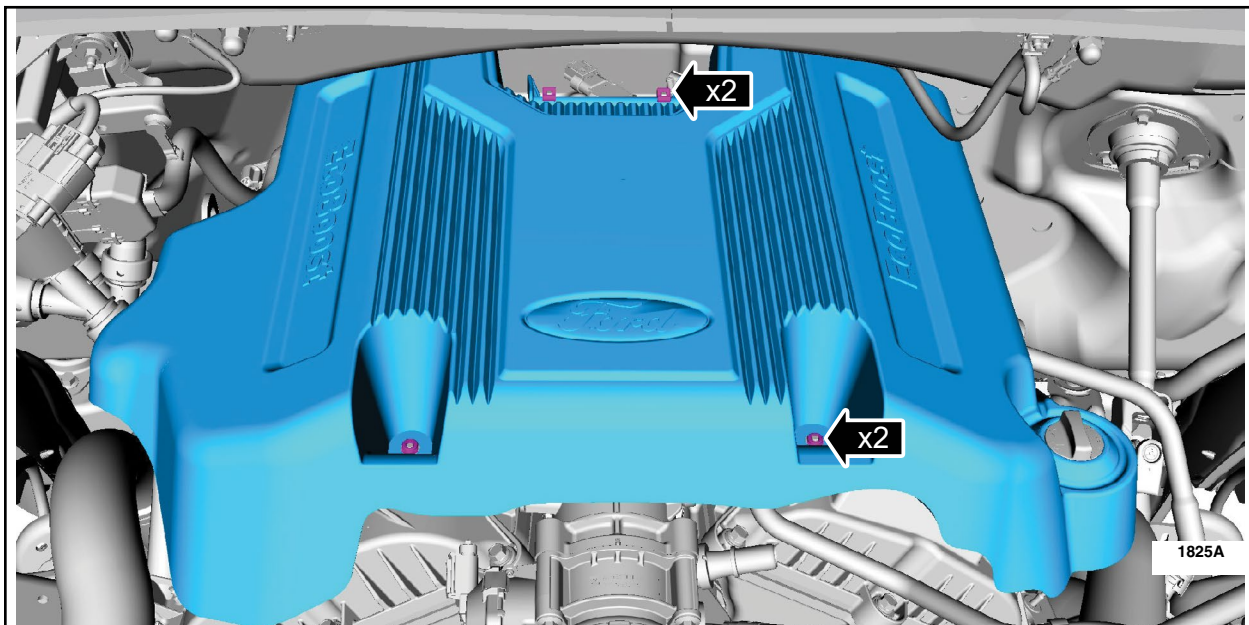


**⚠ IMPORTANT!:** Do not connect contaminated components to the new replaced components. Only connect new replaced components to other new replaced components for the A/C system.

**Underhood A/C Component Replacement All Vehicles.**

7. Position the front seats to access the front seat bolts for removal.
8. Open the liftgate.
9. Depower the Supplemental Restraint System (SRS). Please refer to Workshop Manual (WSM) procedures in section 501-20B.
10. Remove the battery and battery tray. Please refer to WSM procedures in section 414-01.
11. Remove the engine cover. See Figure 1.

**NOTE:** Expedition shown, Navigator similar.



**FIGURE 1**

12. Replace the A/C Compressor. Please refer to WSM procedures in section 412-00.
13. Replace the A/C Compressor Outlet Line. Please refer to WSM procedures in section 412-00.



14. Replace the A/C Compressor Inlet Line. Please refer to WSM procedures in section 412-00.
  - Do not connect to the Thermostatic Expansion Valve Manifold and Tube Assembly at this time.
15. Replace the A/C Condenser. Please refer to WSM procedures in section 412-00.
  - Do not connect to the Thermostatic Expansion Valve at this time.
16. Replace the Thermostatic Expansion Valve Manifold and Tube Assembly. Please refer to WSM procedures in section 412-00.
  - Do not connect the Thermostatic Expansion Valve Manifold and Tube Assembly to the thermostatic expansion valve and rear evaporator rear outlet and inlet lines at this time.
17. Remove the RH front and rear Wheels and Tires. Please refer to WSM procedures in section 204-04A.
18. Remove the RH front Fender splash shield. Please refer to WSM procedures in section 501-02.

#### Expedition Vehicles Tailpipe and Muffler Removal

19. Loosen the muffler and tailpipe clamp. See Figure 6.
20. Remove the bolts from the isolator. See Figure 6.
21. Release the locator tab releasing the muffler and tailpipe. See Figure 6.

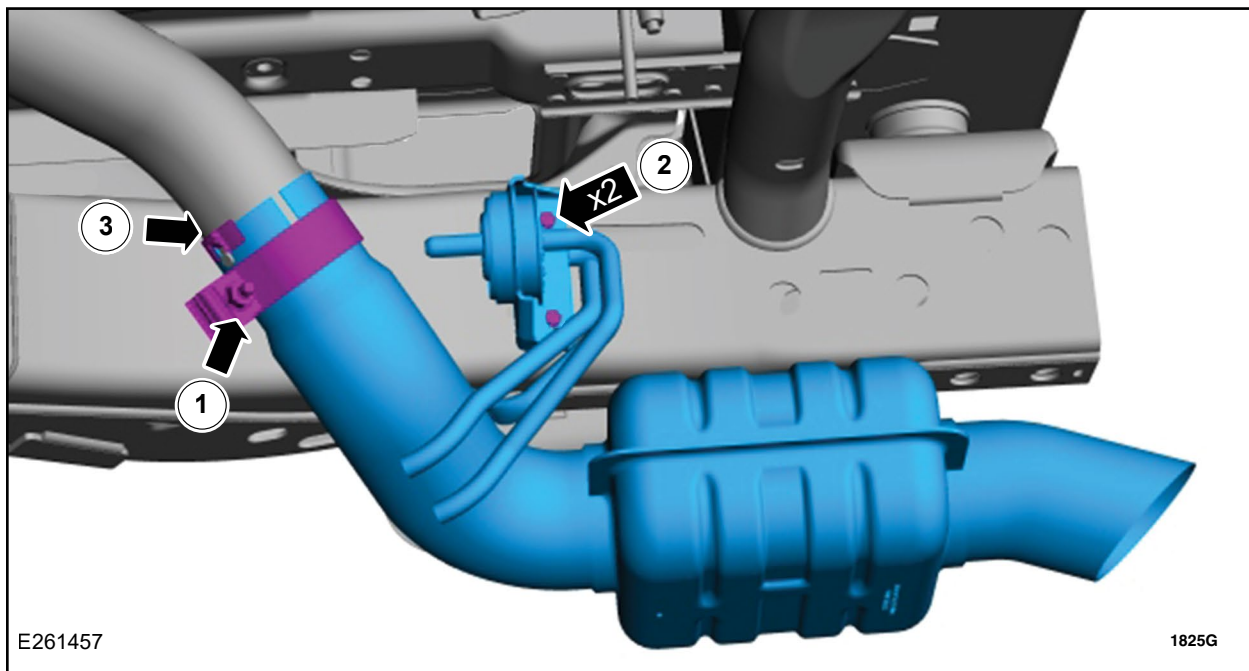
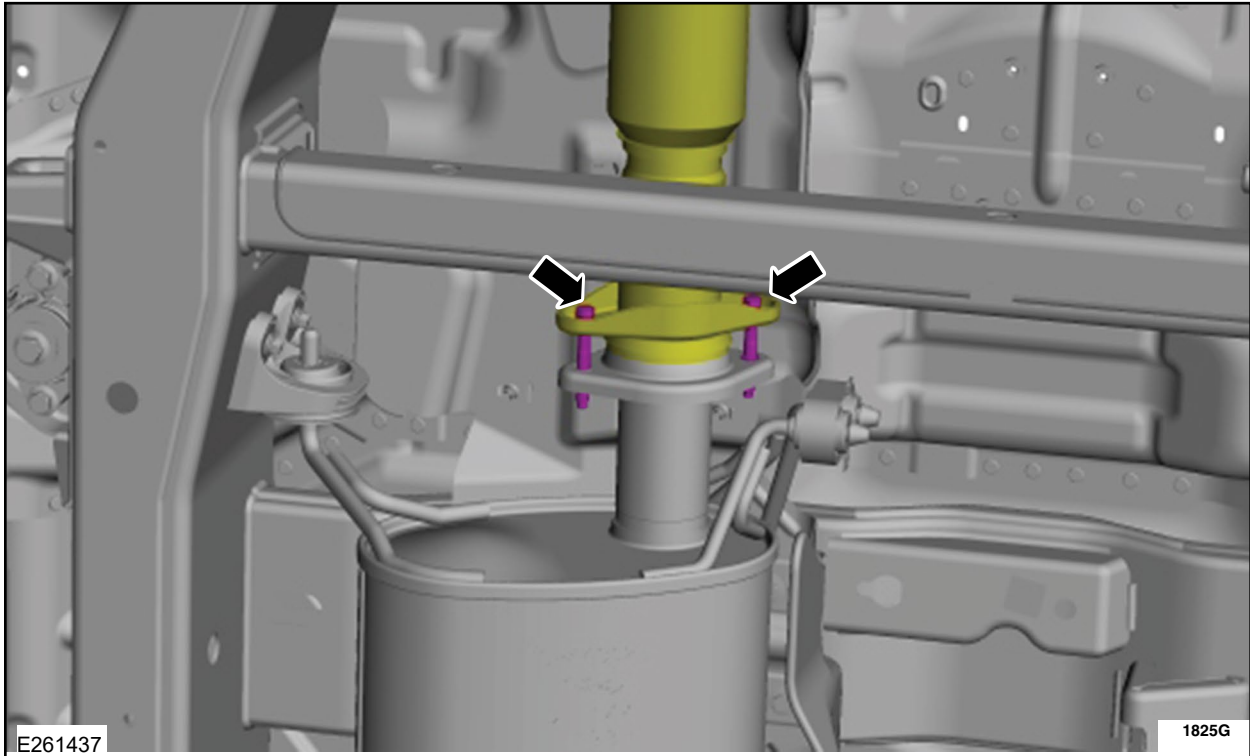


FIGURE 6

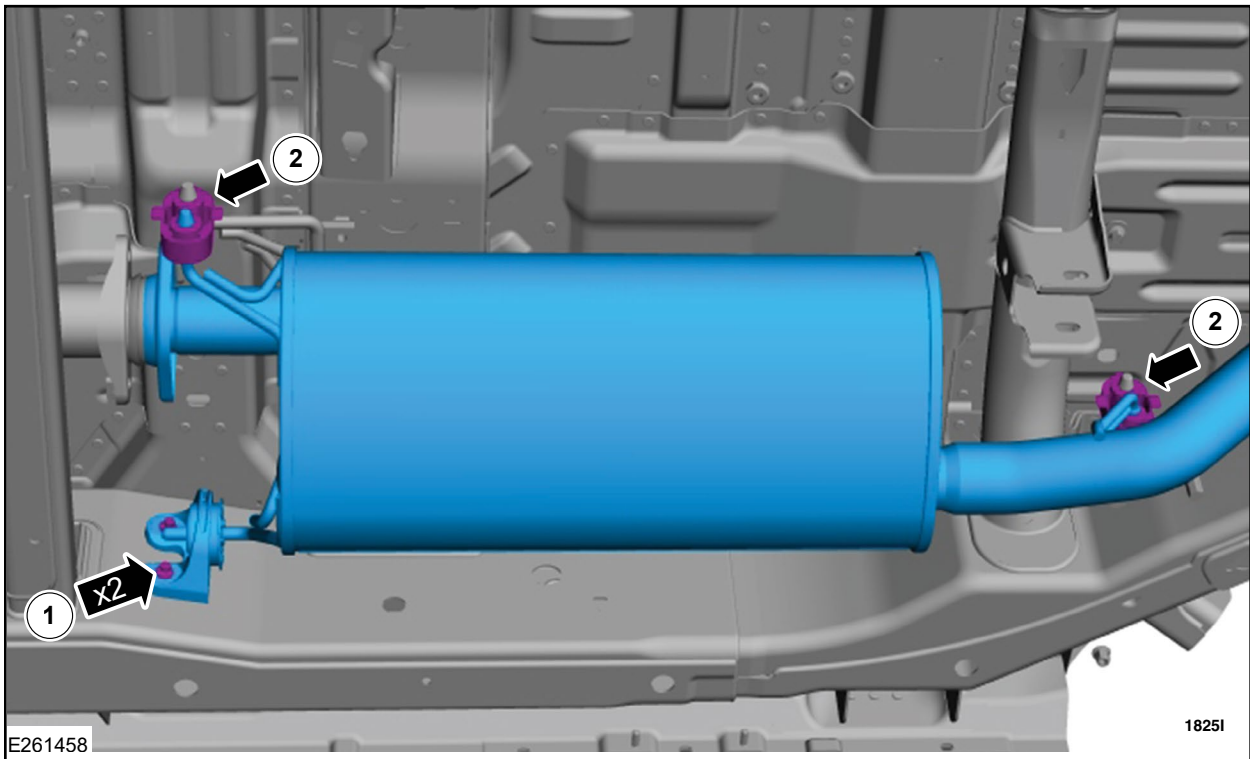


22. Remove the catalytic converter and muffler bolts. See Figure 7.



**FIGURE 7**

23. Remove the isolator bracket bolts and detach the isolators and remove the muffler. See Figure 8.



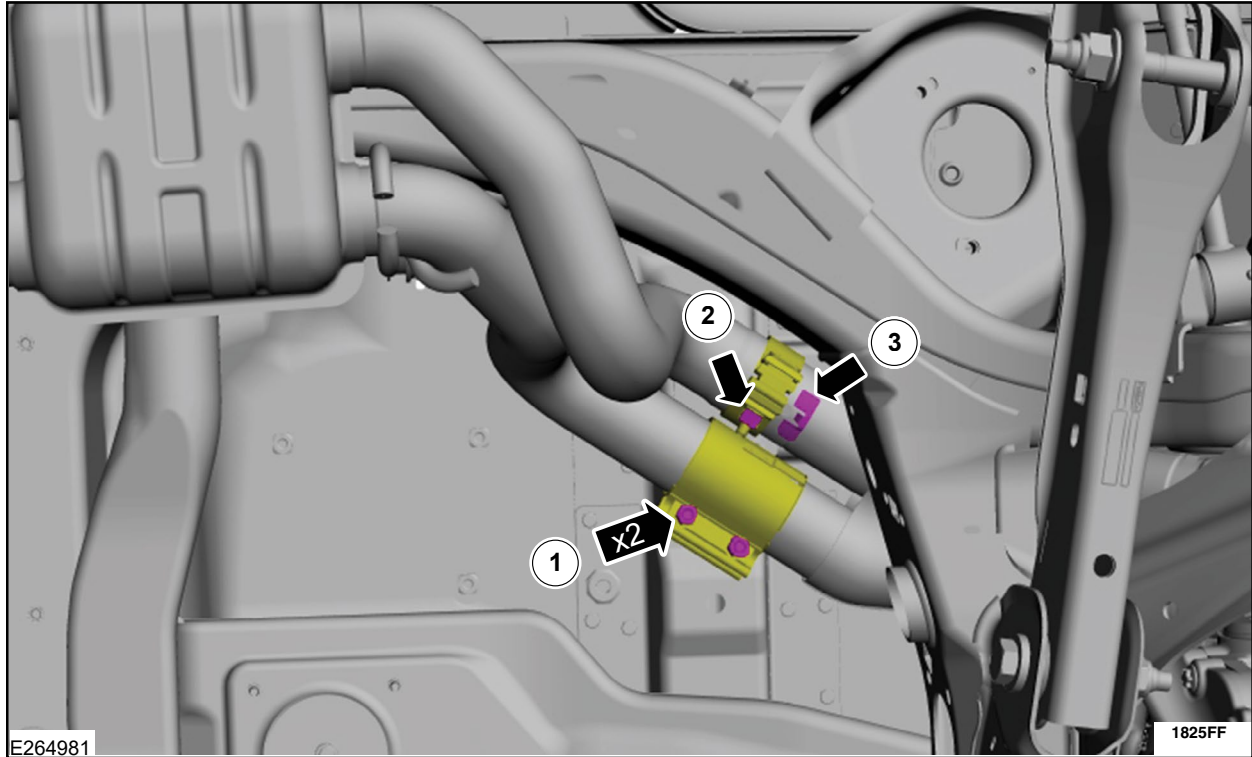
**FIGURE 8**



### Navigator Vehicles Tailpipe and Muffler Removal

24. Loosen the muffler and tailpipe clamps. See Figure 9.

25. Release the locator tabs releasing the muffler and tailpipes. See Figure 9.



**FIGURE 9**



26. Remove the bolts and remove the tailpipe. See Figure 10.

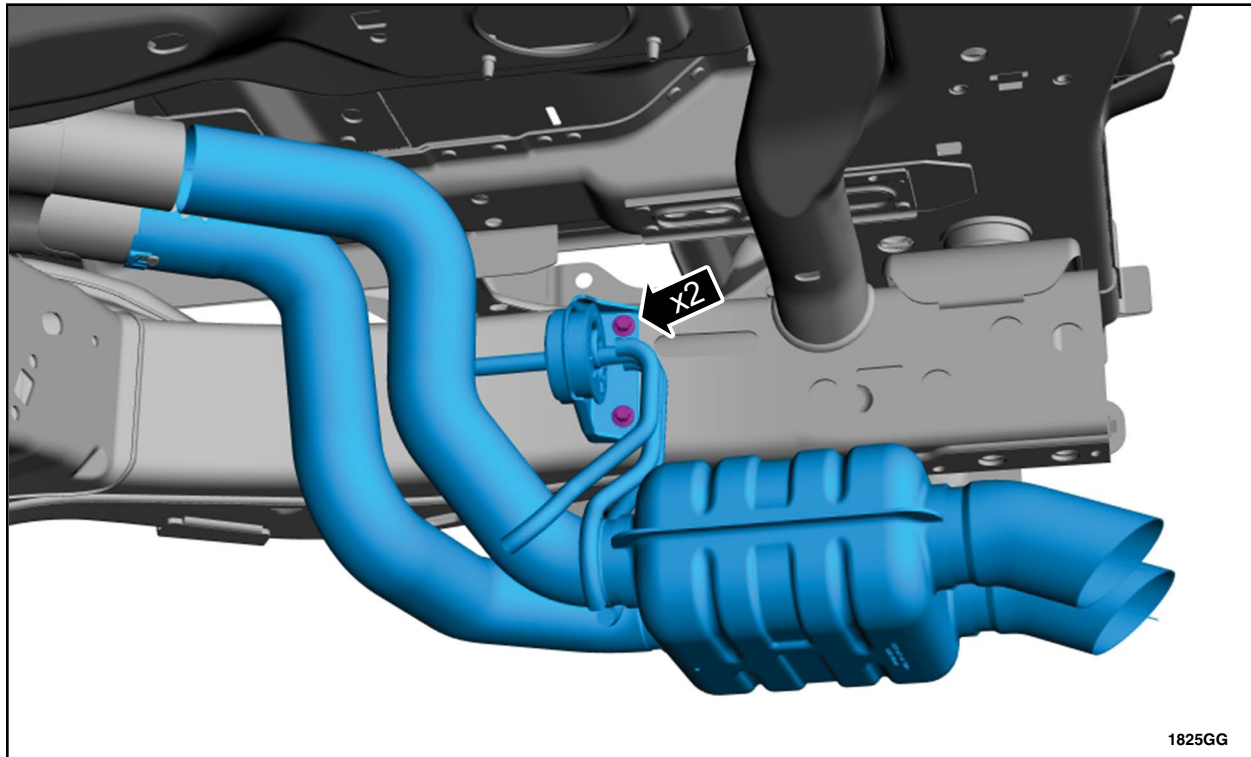


FIGURE 10



27. For Navigator vehicles loosen the clamps, release the tabs and slide the clamps back on the muffler.  
See Figure 11.

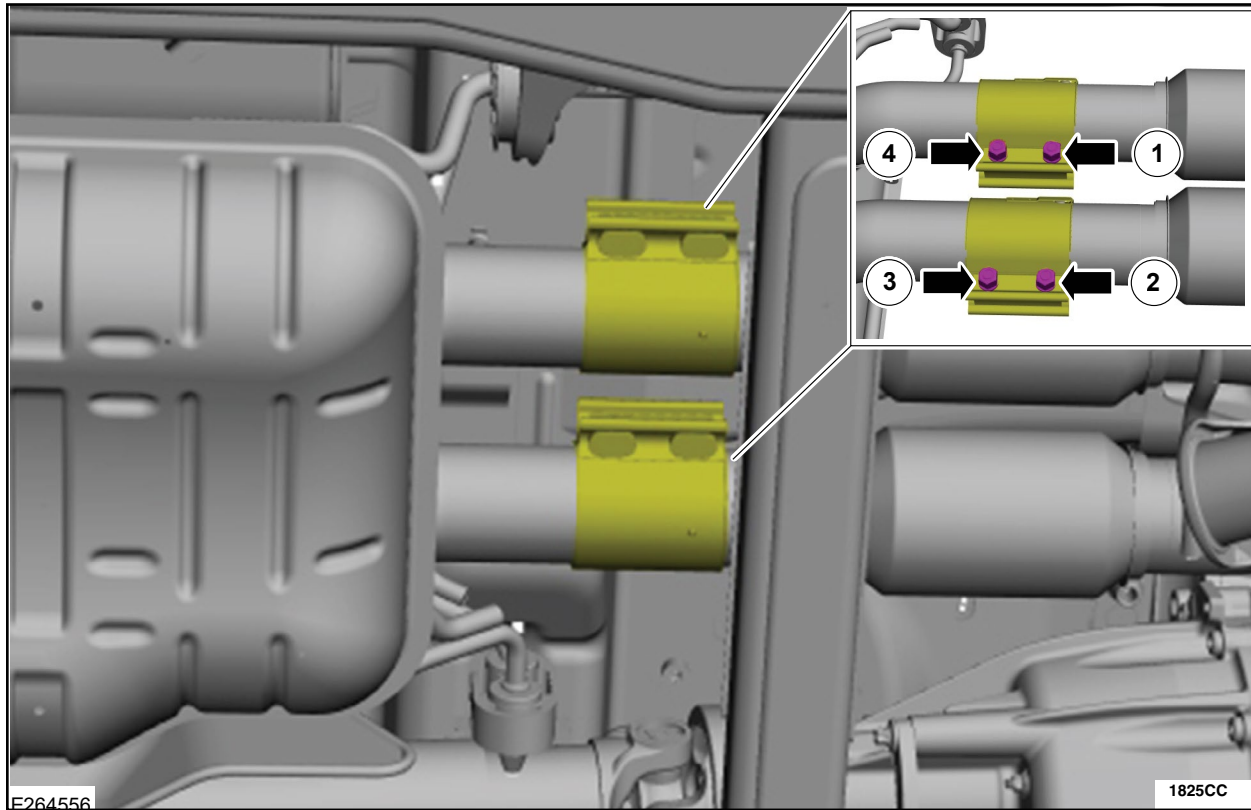
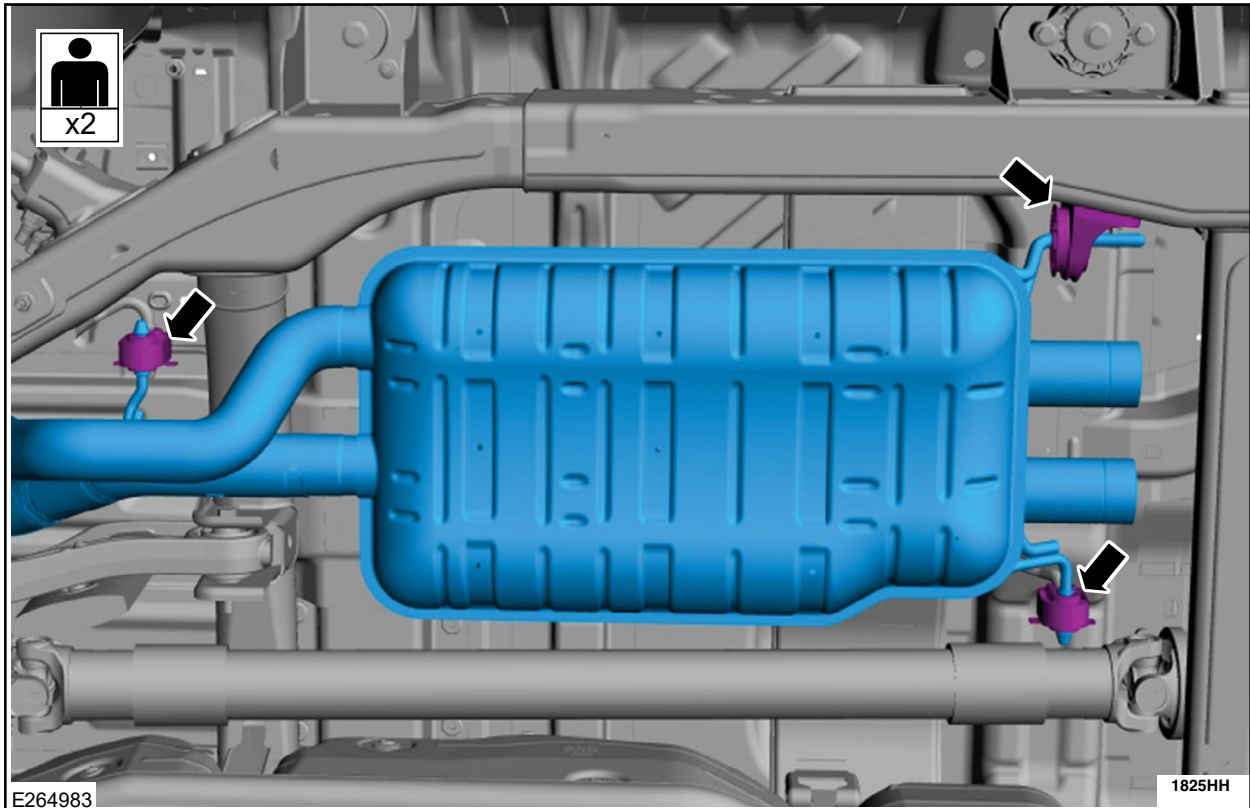


FIGURE 11



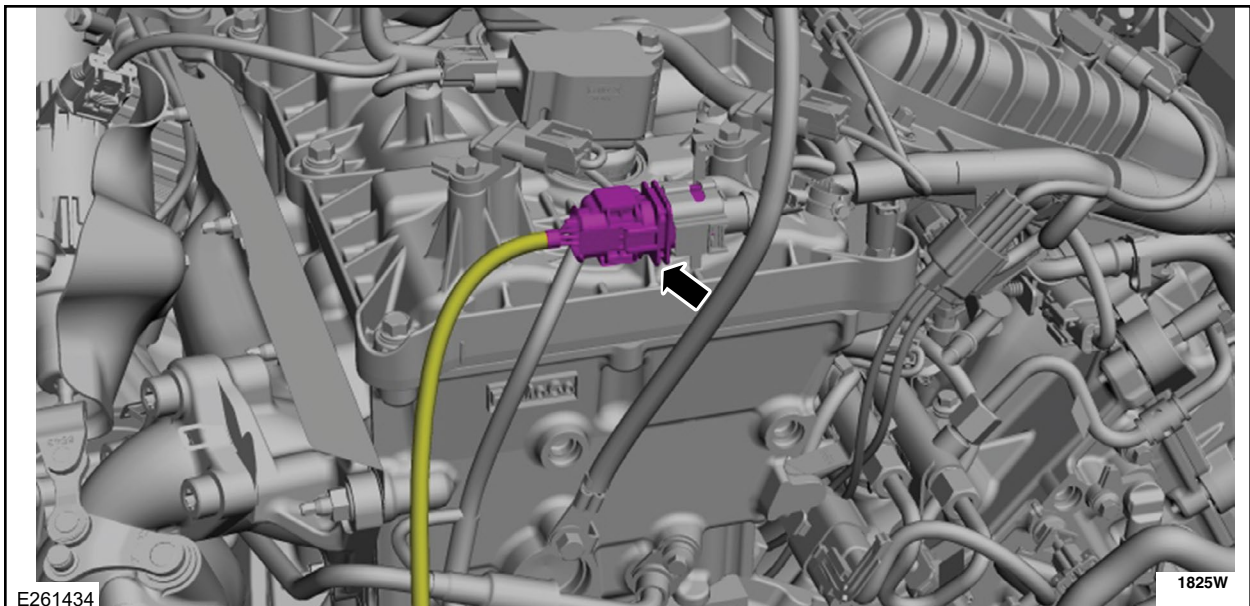
28. Detach the isolators and remove the muffler. See Figure 12.



**FIGURE 12**

**LH Catalytic Converter Removal All Vehicles**

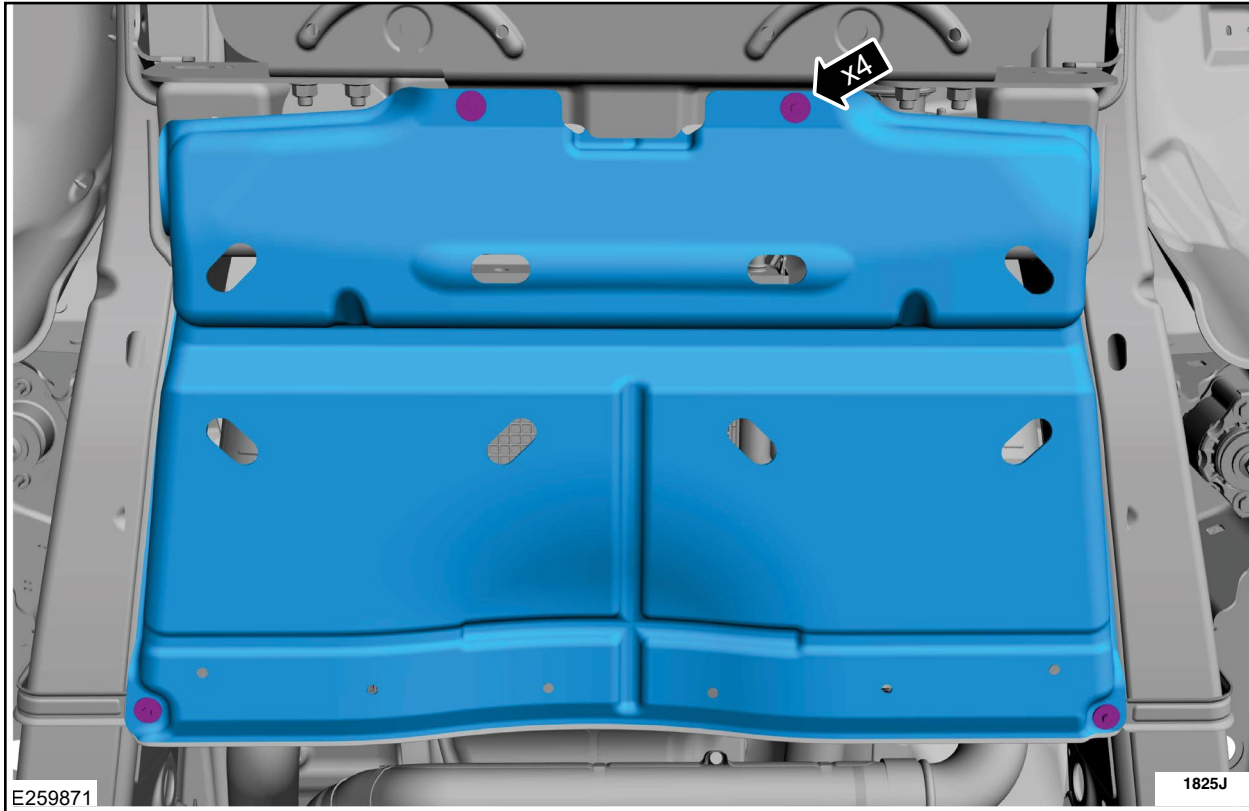
29. Disconnect the HO2S electrical connector. See Figure 13.



**FIGURE 13**

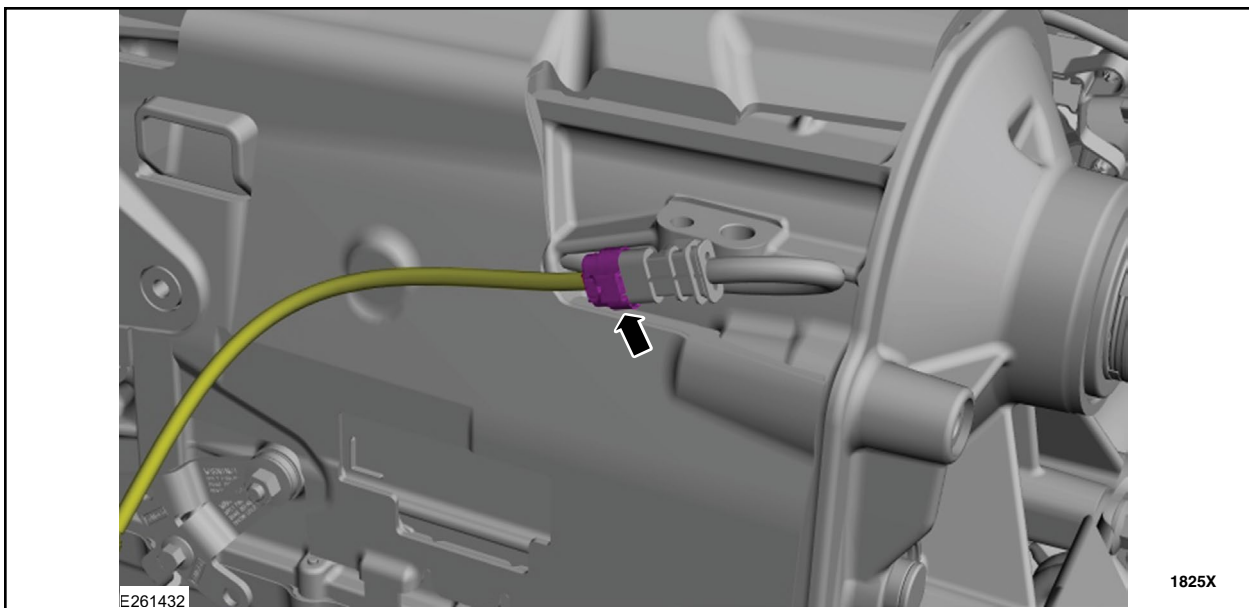


30. If equipped remove the retainers and remove the transmission housing cover. See Figure 14.



**FIGURE 14**

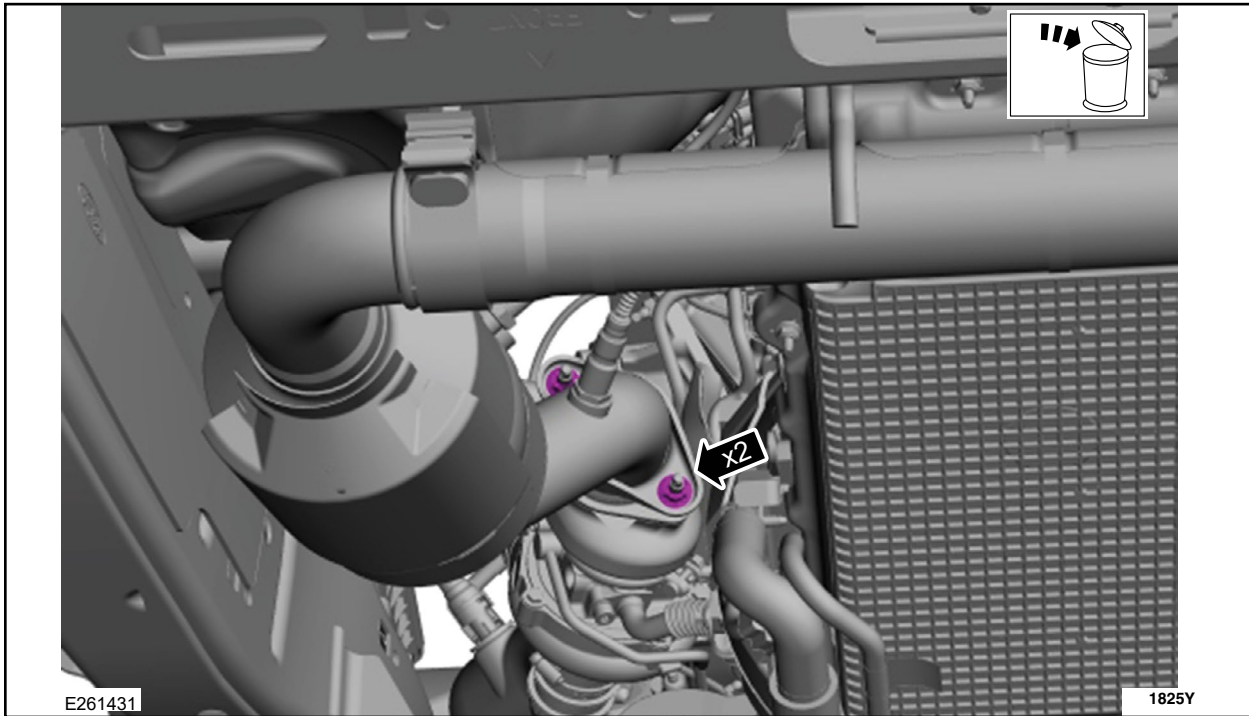
31. Disconnect the HO2S electrical connector. See Figure 15.



**FIGURE 15**

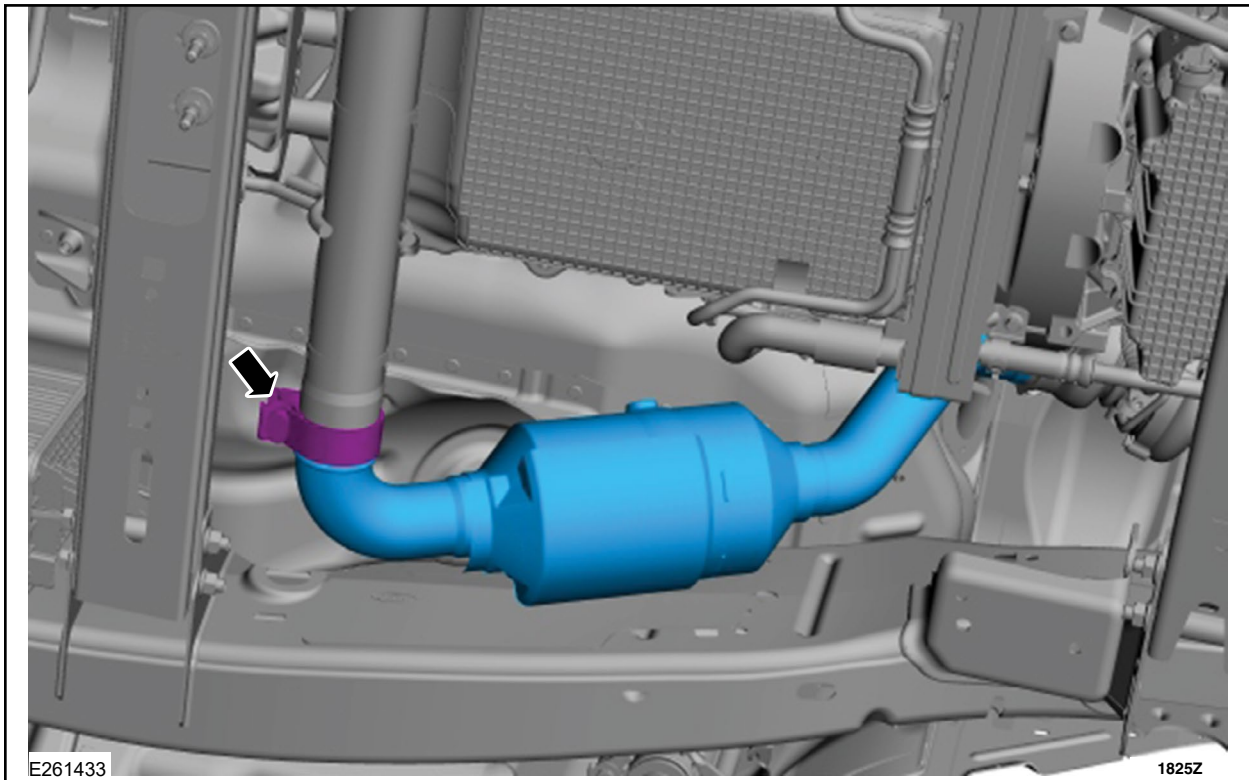


32. Remove the LH catalytic converter nuts and discard. See Figure 16.



**FIGURE 16**

33. Loosen the clamp and remove the LH catalytic converter. See Figure 17.

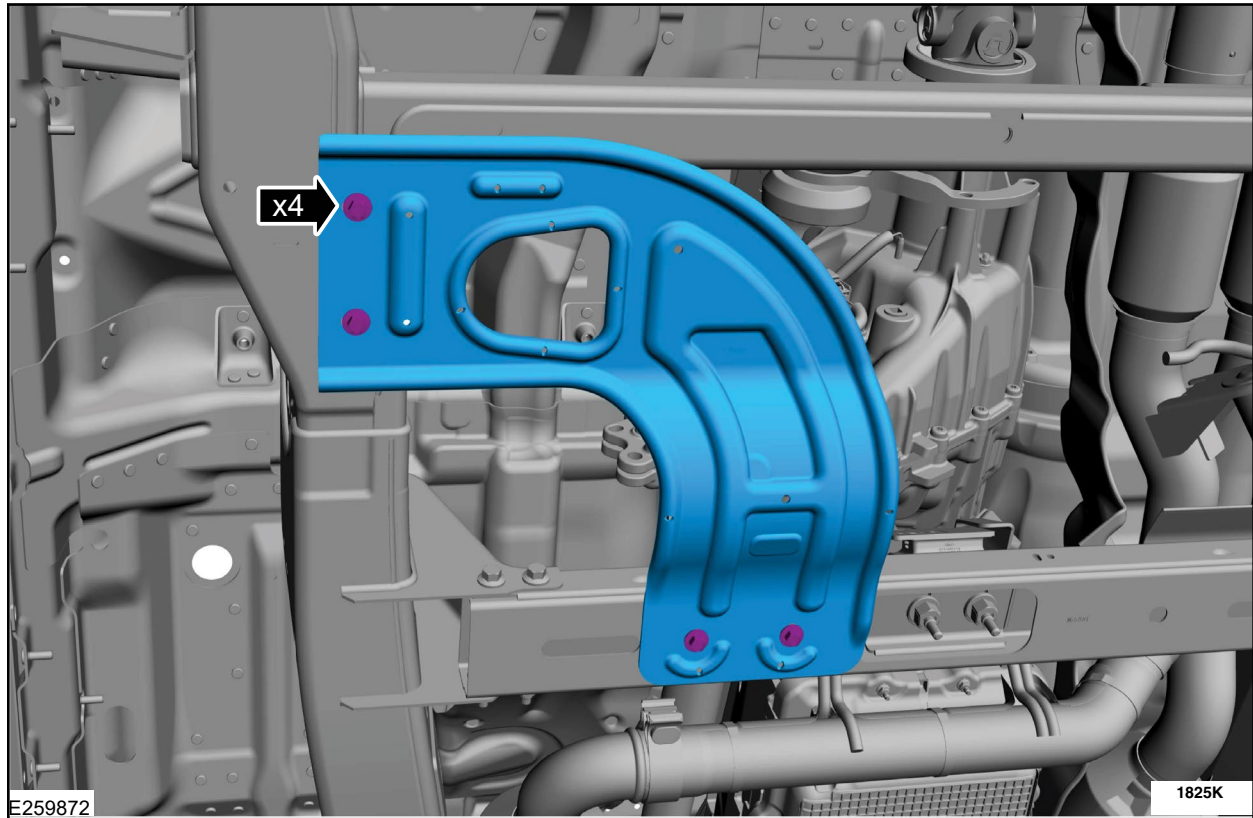


**FIGURE 17**



**Transmission Crossmember and Support Insulator Removal All Vehicles**

34. If equipped remove the skid plate bolts and remove the skid plate. See Figure 18.



**FIGURE 18**



35. Remove the LH exhaust heat shield bolt from the transmission crossmember. See Figure 19.



FIGURE 19



36. Remove the RH outboard exhaust heat shield retainers and heat shield. See Figure 20.

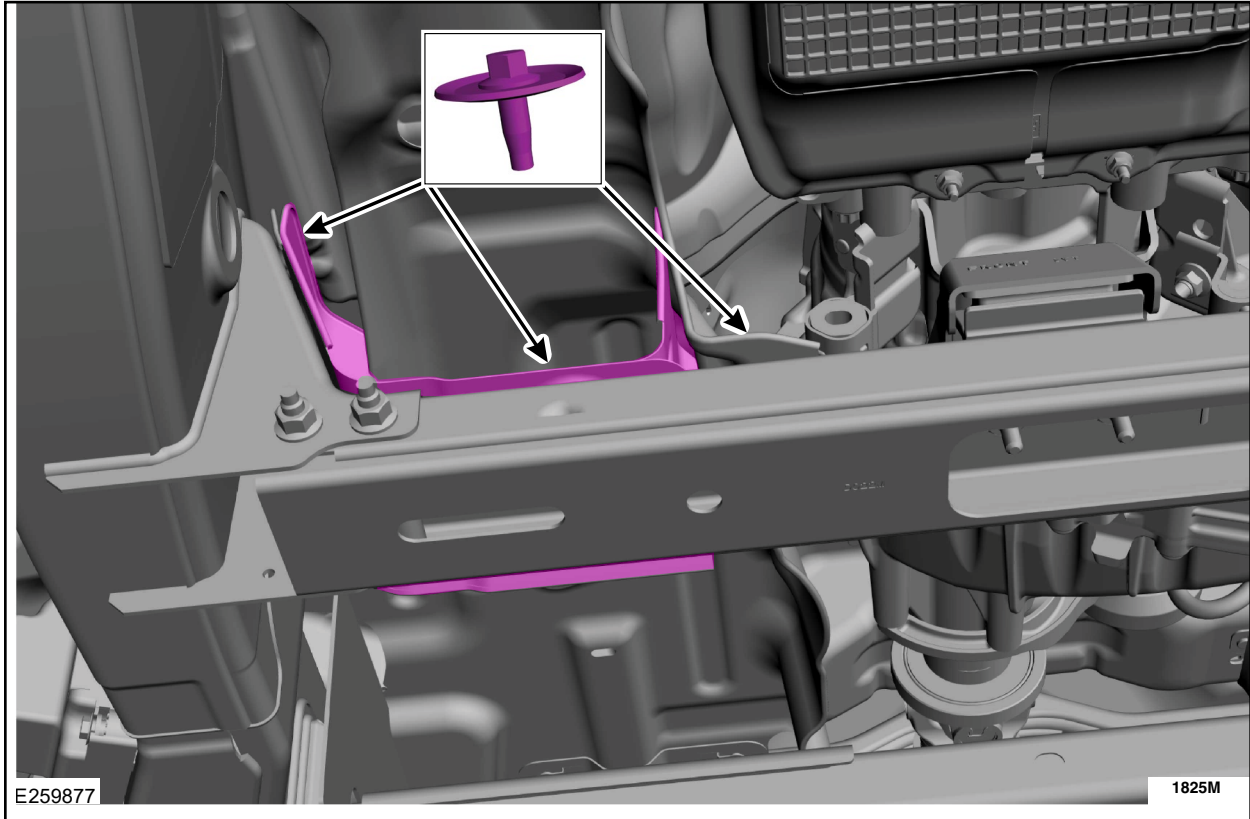
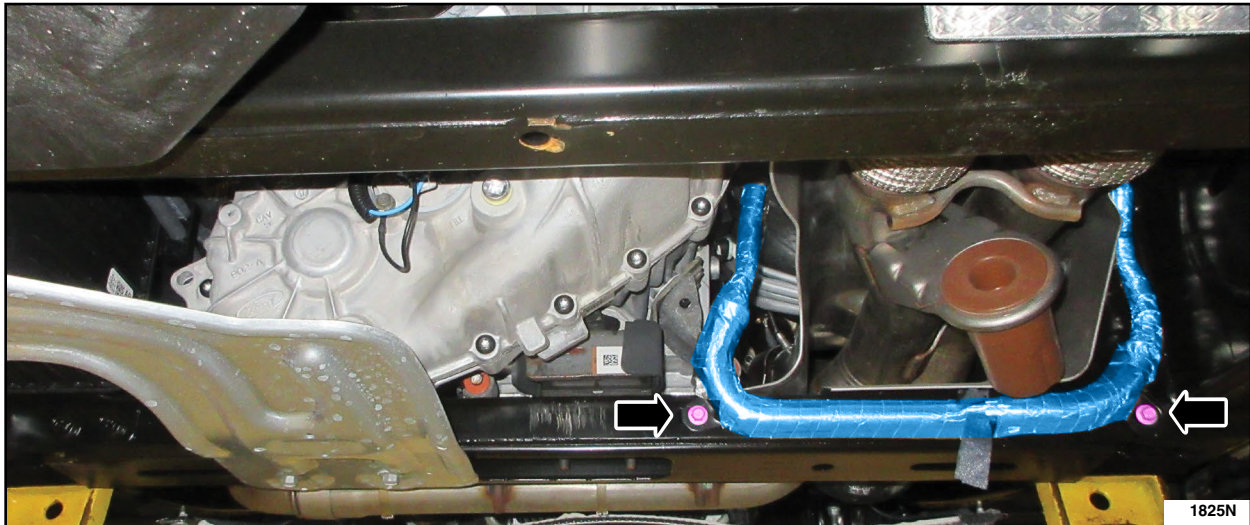


FIGURE 20

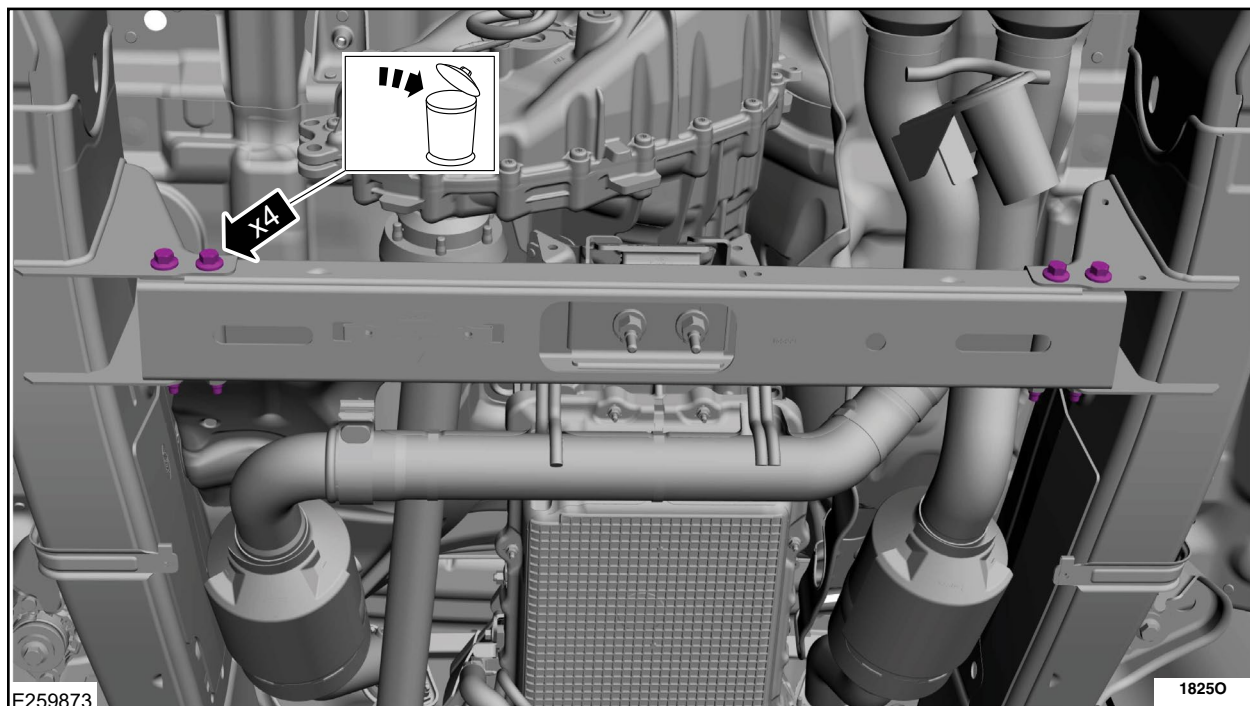


37. Using a high lift transmission jack support the transmission, be sure the jack makes contact with the outer ribs of the transmission fluid pan.
38. Remove the two transmission wiring harness bolts from the crossmember and position the wiring harness aside. See Figure 21.



**FIGURE 21**

39. Remove and discard the transmission support crossmember nuts and bolts. See Figure 22.



**FIGURE 22**



40. Remove the transmission mount nuts and the transmission support crossmember. See Figure 23.

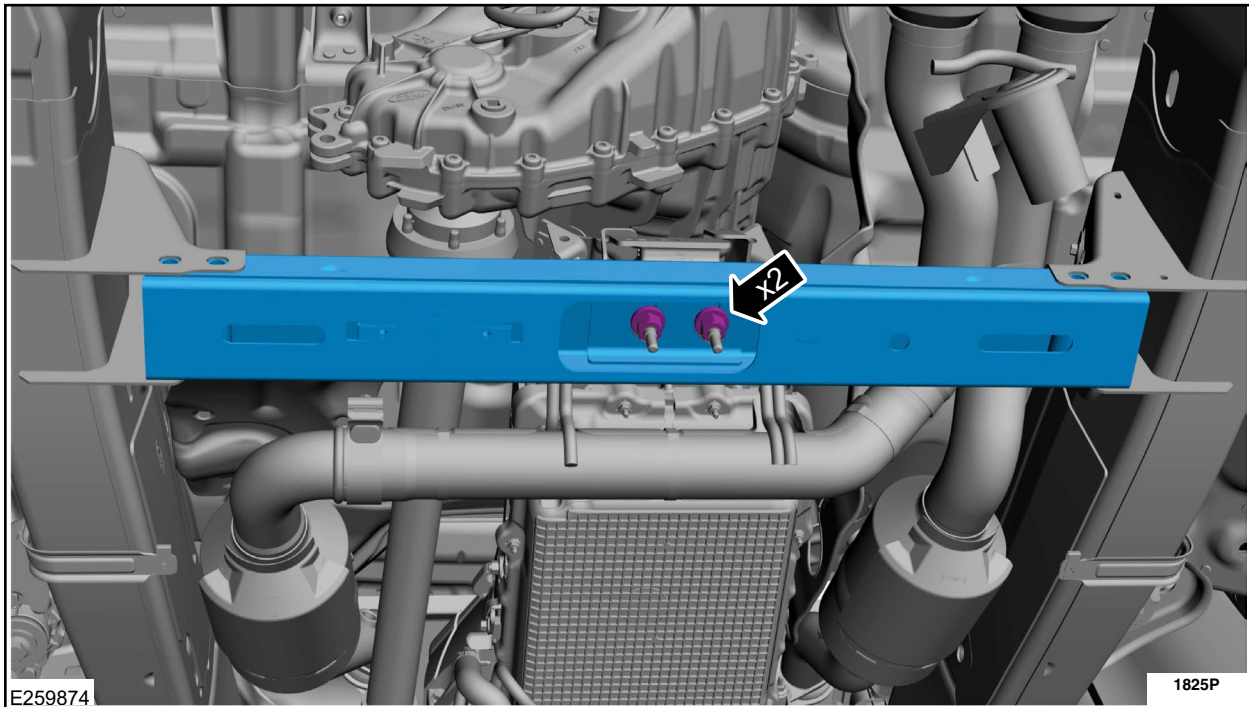
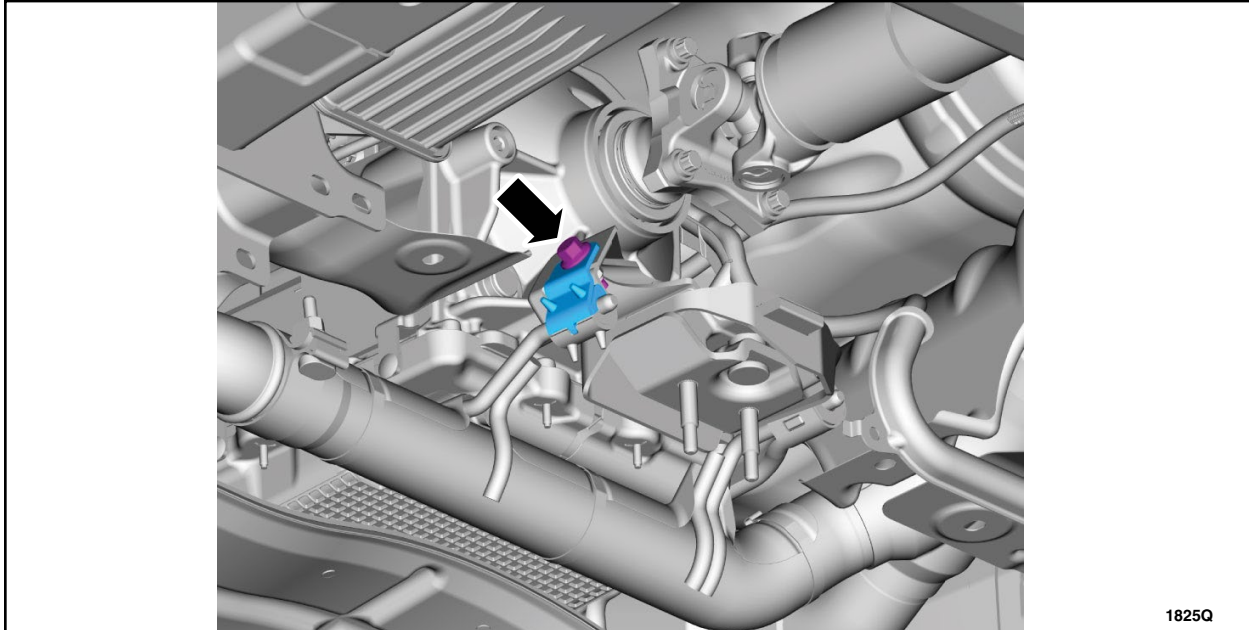


FIGURE 23



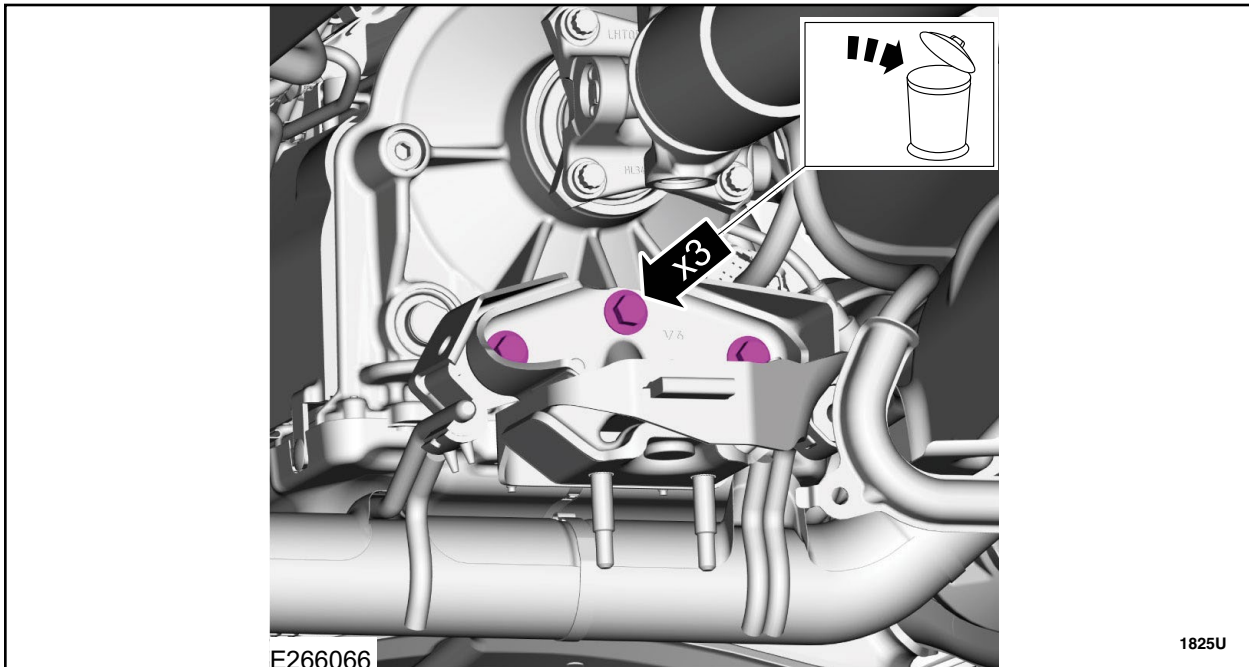
**Rear Wheel Drive (RWD) Vehicles**

41. Remove the bolt and the LH isolator cap. See Figure 24.



**FIGURE 24**

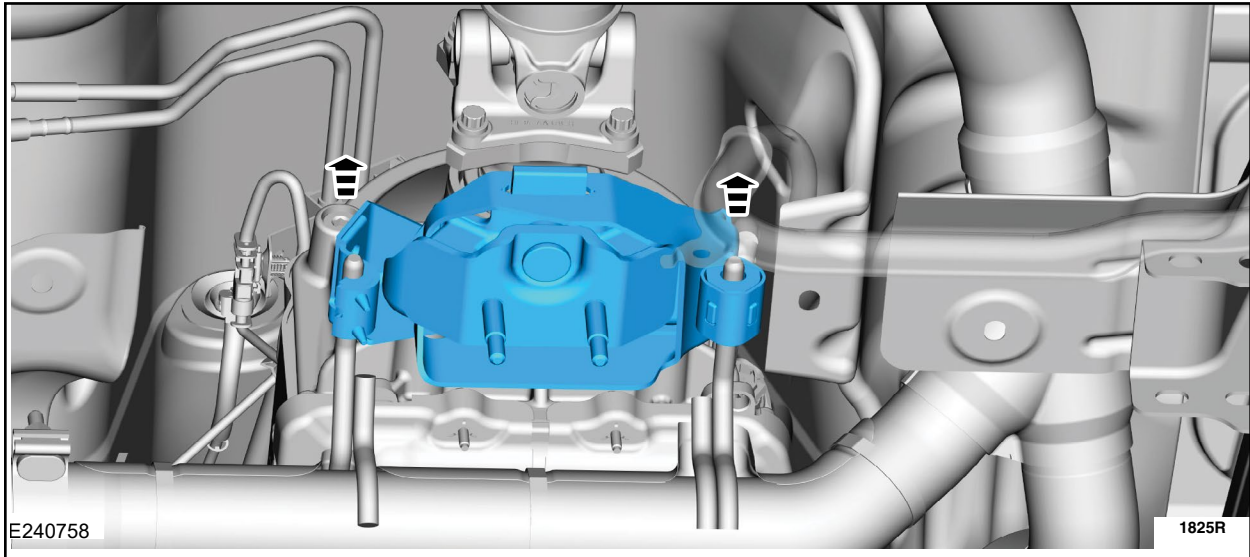
42. Remove and discard the transmission support insulator bolts and washers. See Figure 25.



**FIGURE 25**



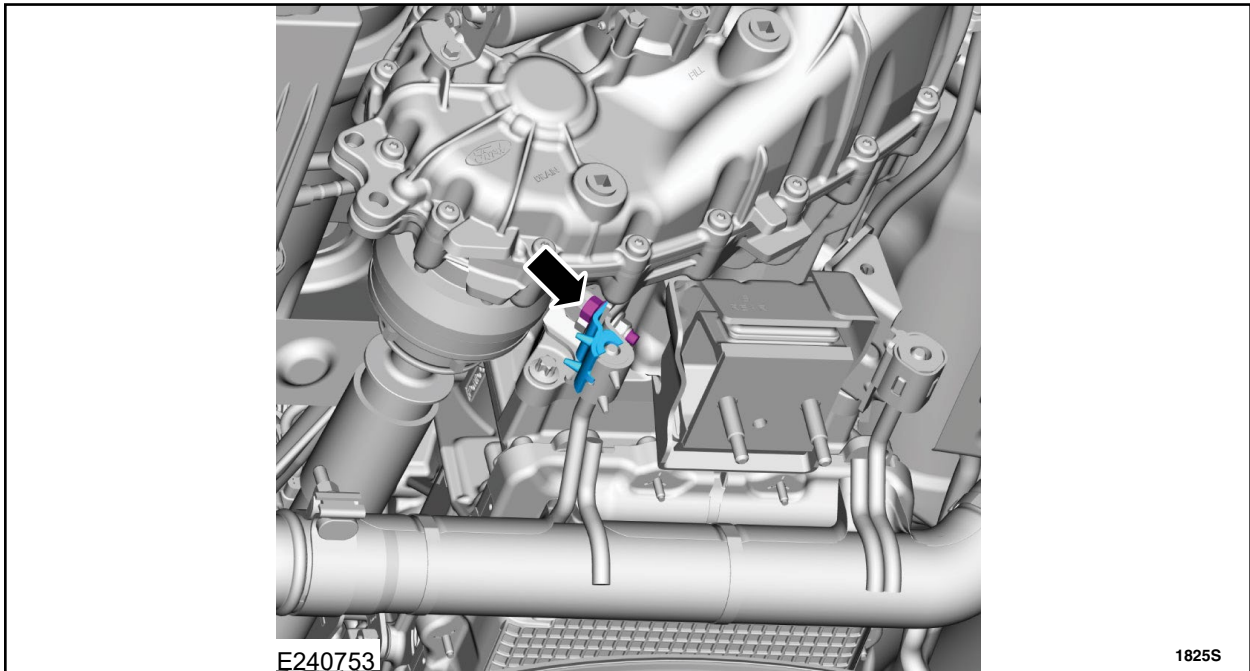
43. Remove the transmission support insulator. See Figure 26.



**FIGURE 26**

**Four-Wheel Drive (4WD) Vehicles**

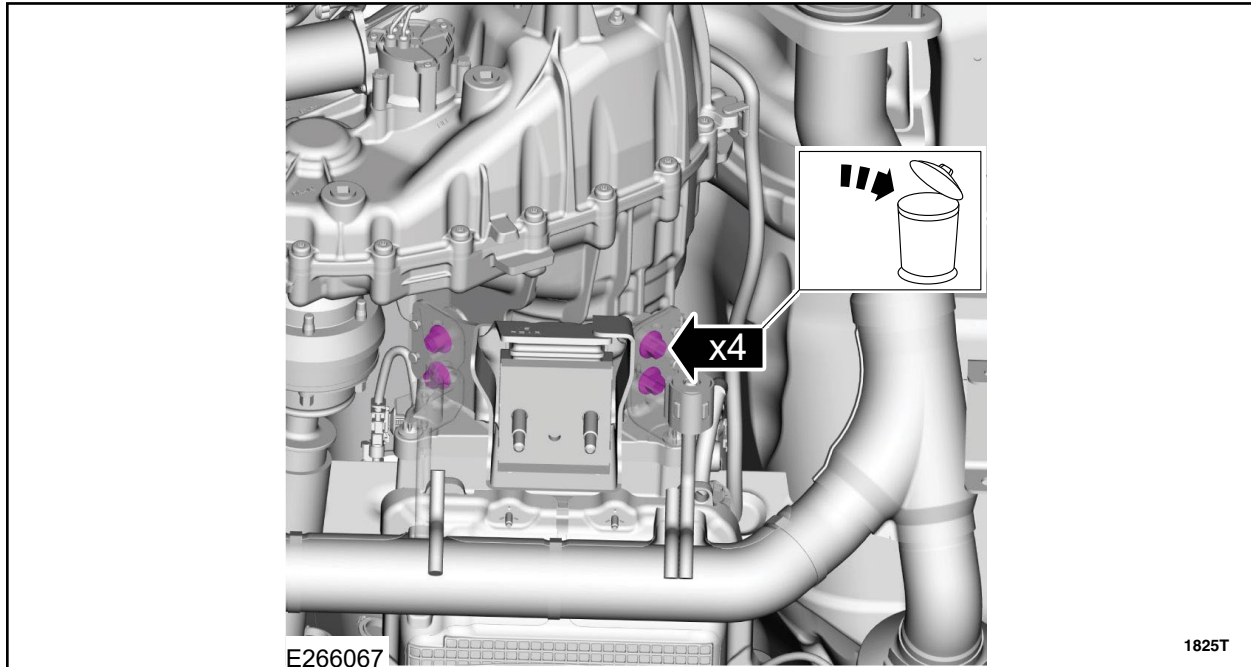
44. Remove the bolt and the LH isolator cap. See Figure 27.



**FIGURE 27**

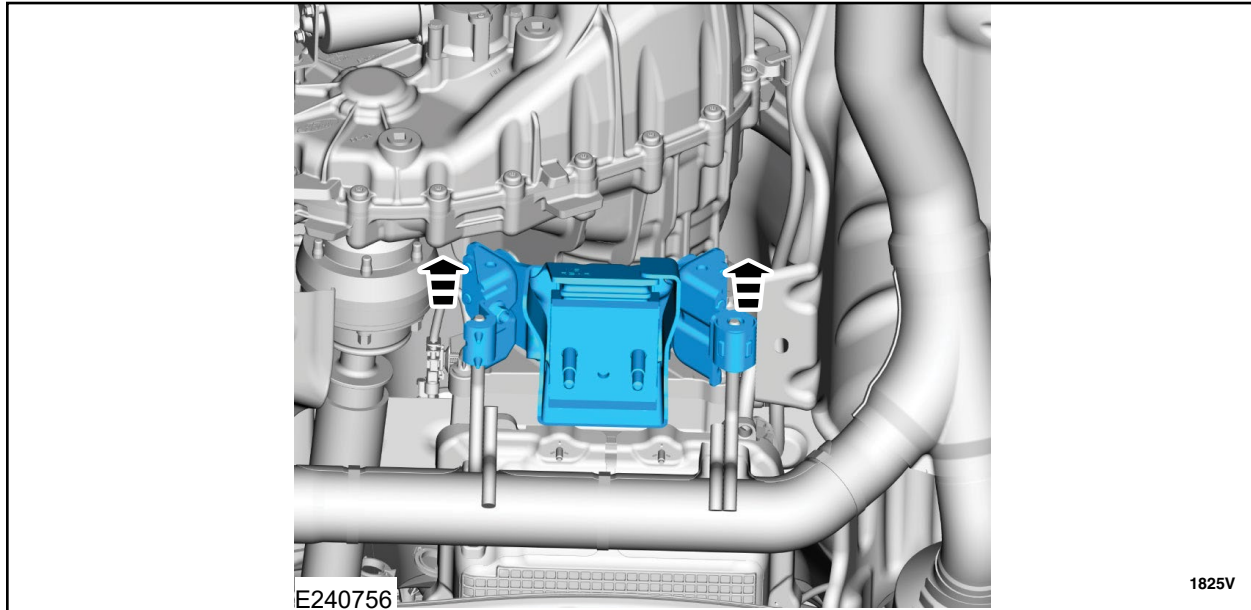


45. Remove and discard the transmission support insulator bolts and washers. See Figure 28.



**FIGURE 28**

46. Remove the transmission support insulator. See Figure 29.

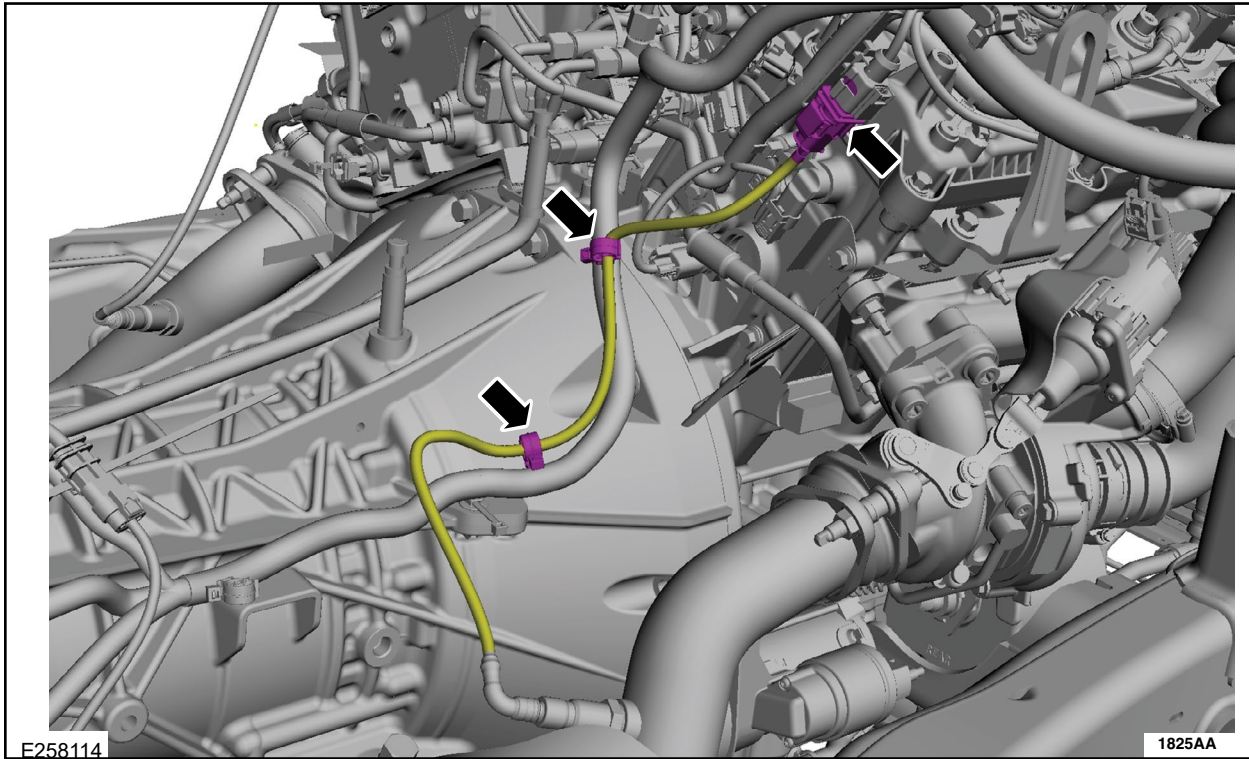


**FIGURE 29**



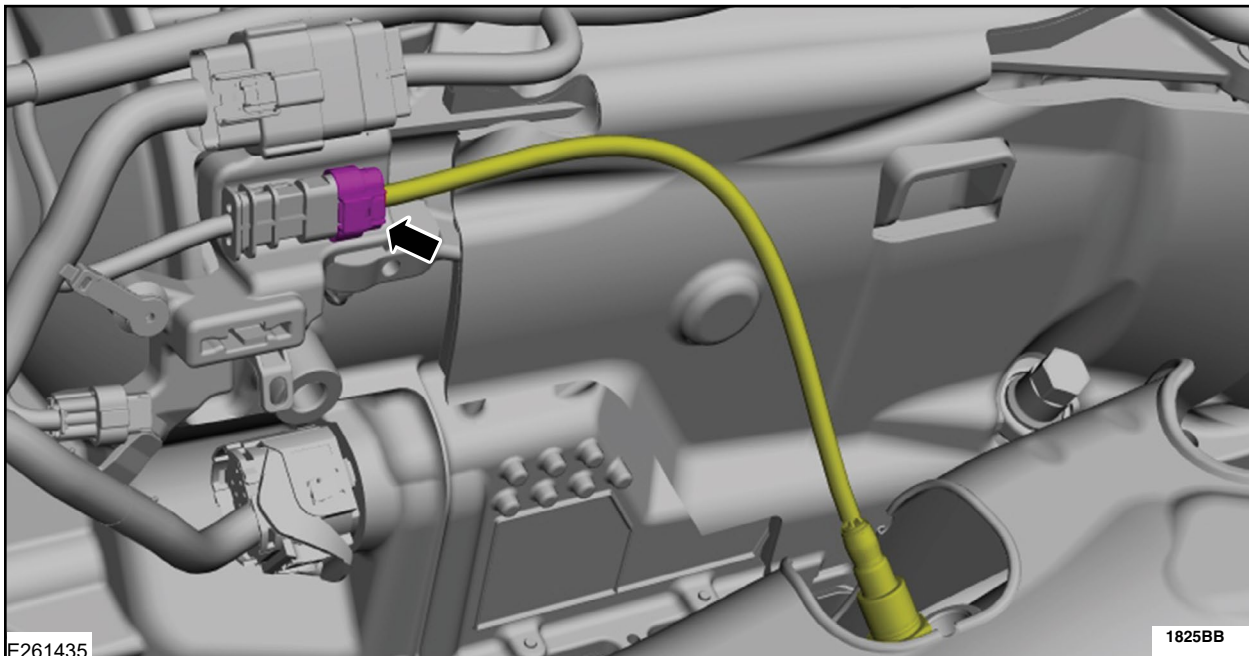
### RH Catalytic Converter Removal All Vehicles

47. Disconnect the HO2S electrical connector. See Figure 30.



**FIGURE 30**

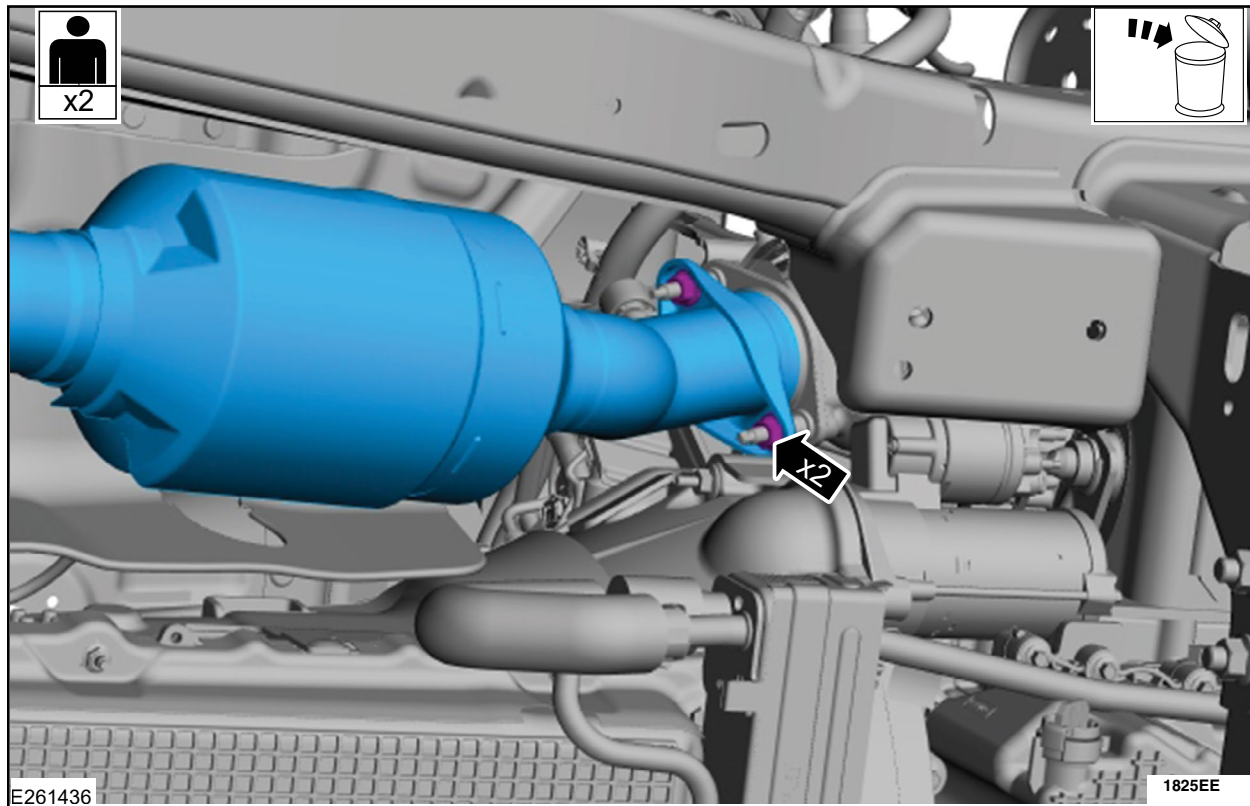
48. Disconnect the HO2S electrical connector. See Figure 31.



**FIGURE 31**



49. Remove the RH catalytic converter nuts and discard. Remove the RH catalytic converter.  
See Figure 32.



**FIGURE 32**

### Rear A/C

50. Replace the Rear Evaporator Rear Outlet and Inlet Lines. Please refer to WSM procedures in section 412-02.

**NOTE:** Be sure to only cut and remove the A/C lines not the heater core lines.

**IMPORTANT!** Do not connect the underbody lines to the rear climate control housing, doing so could contaminant the new components.



### RH Catalytic Converter Installation All Vehicles

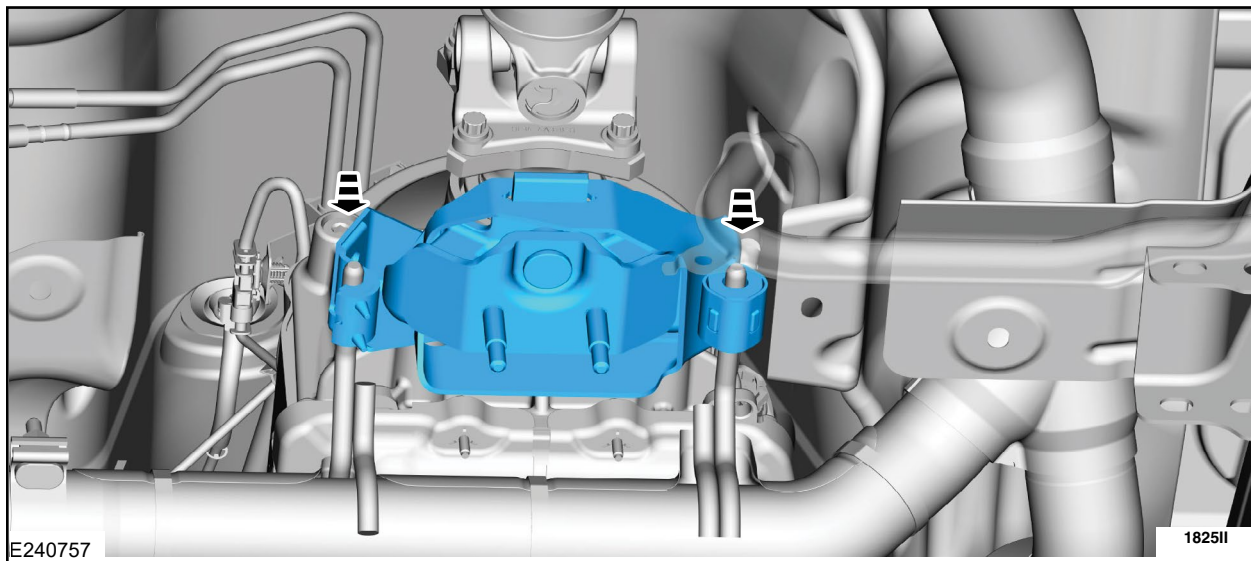
51. Install the RH catalytic converter and nuts. See Figure 32.

- Torque to 30 lb.ft (40 Nm).

52. Connect both RH HO<sub>2</sub>S electrical connectors. See Figures 30 and 31.

### Transmission Insulator Installation Rear Wheel Drive (RWD) Vehicles

53. Install the transmission support insulator. See Figure 33.

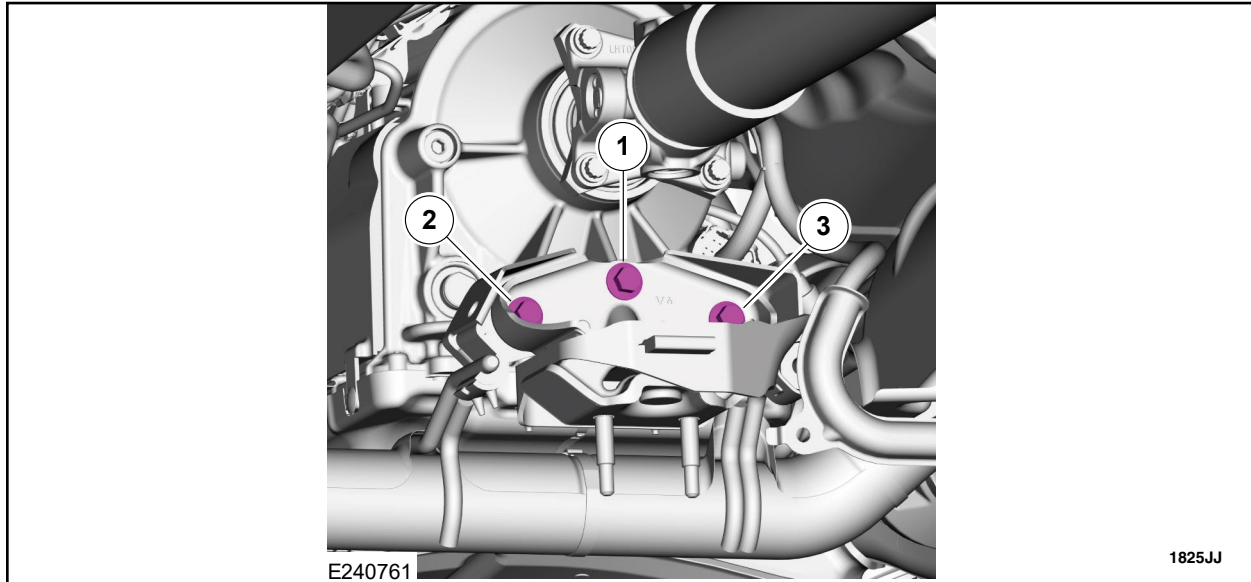


**FIGURE 33**



54. Install the transmission support insulator bolts in the sequence shown. See Figure 34.

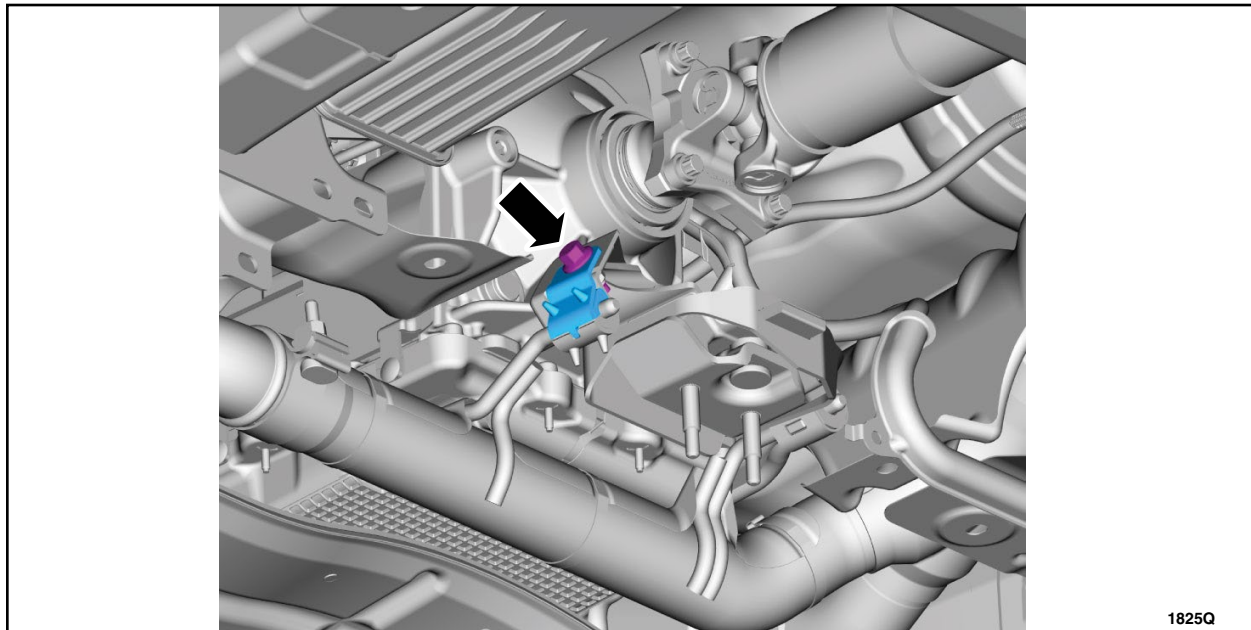
- Torque to 66 lb.ft (90 Nm).



**FIGURE 34**

55. Install the LH isolator cap and the bolt. See Figure 35.

- Torque to 41 lb.ft (55 Nm).

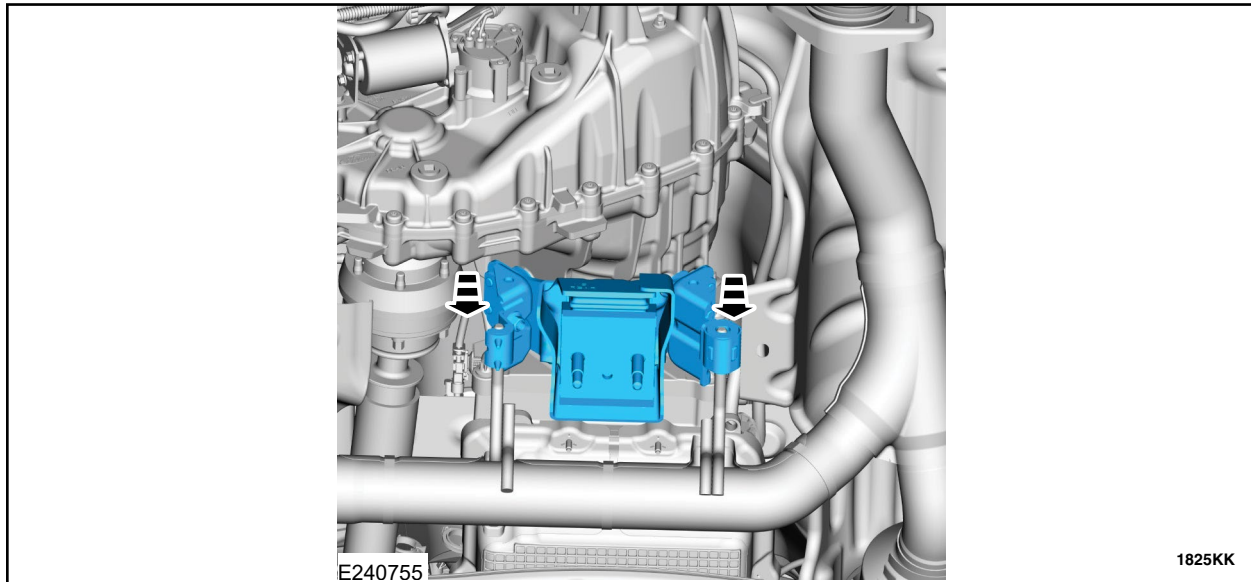


**FIGURE 35**



### Transmission Insulator Installation Four Wheel Drive (4WD) Vehicles

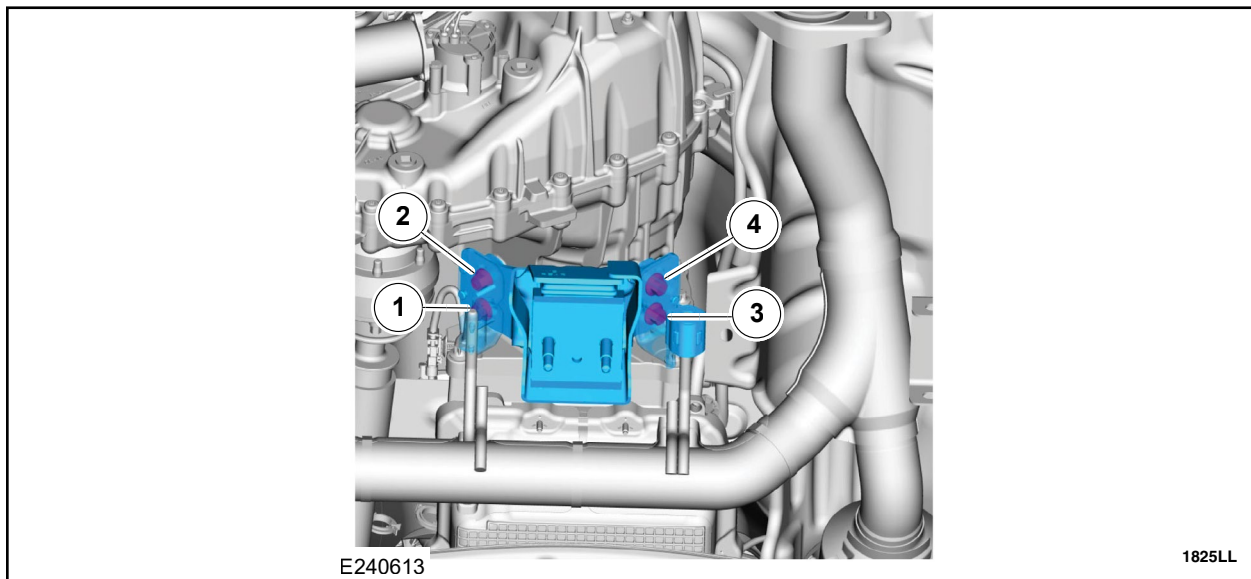
56. Install the transmission support insulator. See Figure 36.



**FIGURE 36**

57. Install the transmission support insulator bolts in the sequence shown. See Figure 37.

- Torque to 76 lb.ft (103 Nm).

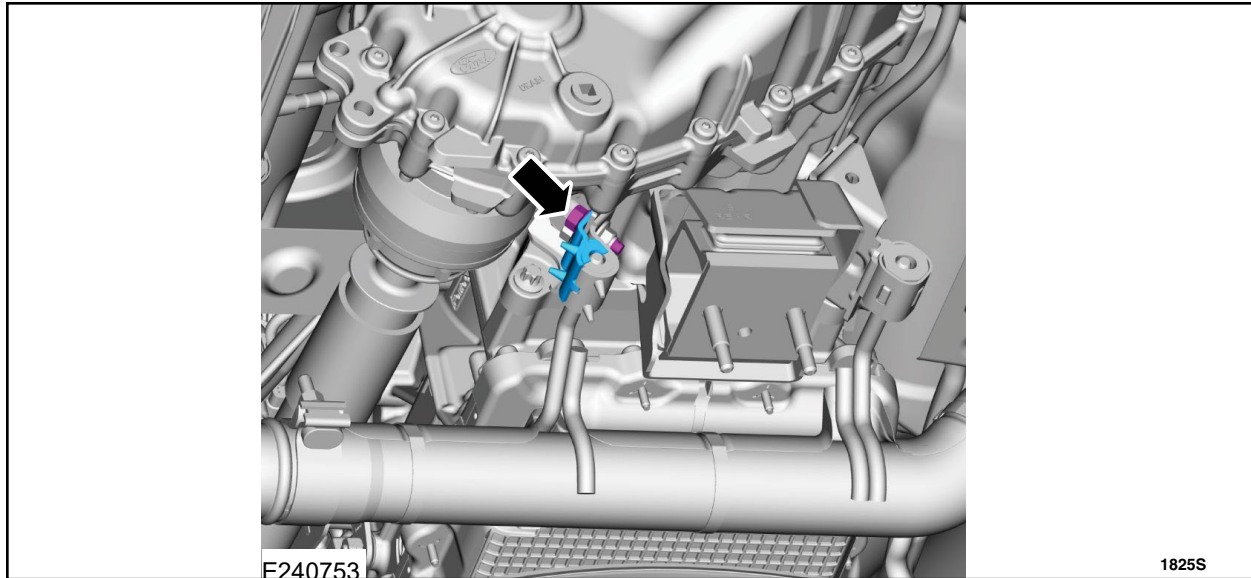


**FIGURE 37**



58. Install the LH isolator cap and the bolt. See Figure 38.

- Torque to 41 lb.ft (55 Nm).

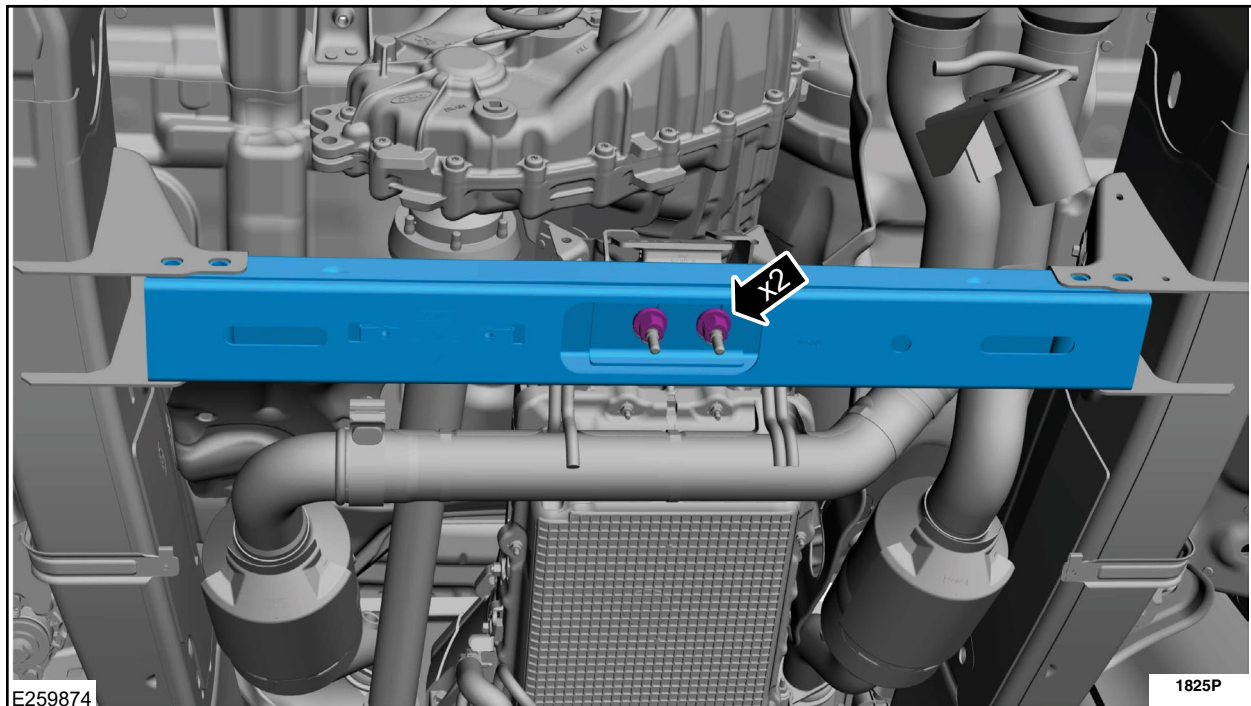


**FIGURE 38**

**Transmission Support Crossmember Installation All Vehicles**

59. Install the transmission support crossmember and the transmission mount nuts. See Figure 39.

- Torque to 85 lb.ft (115 Nm).

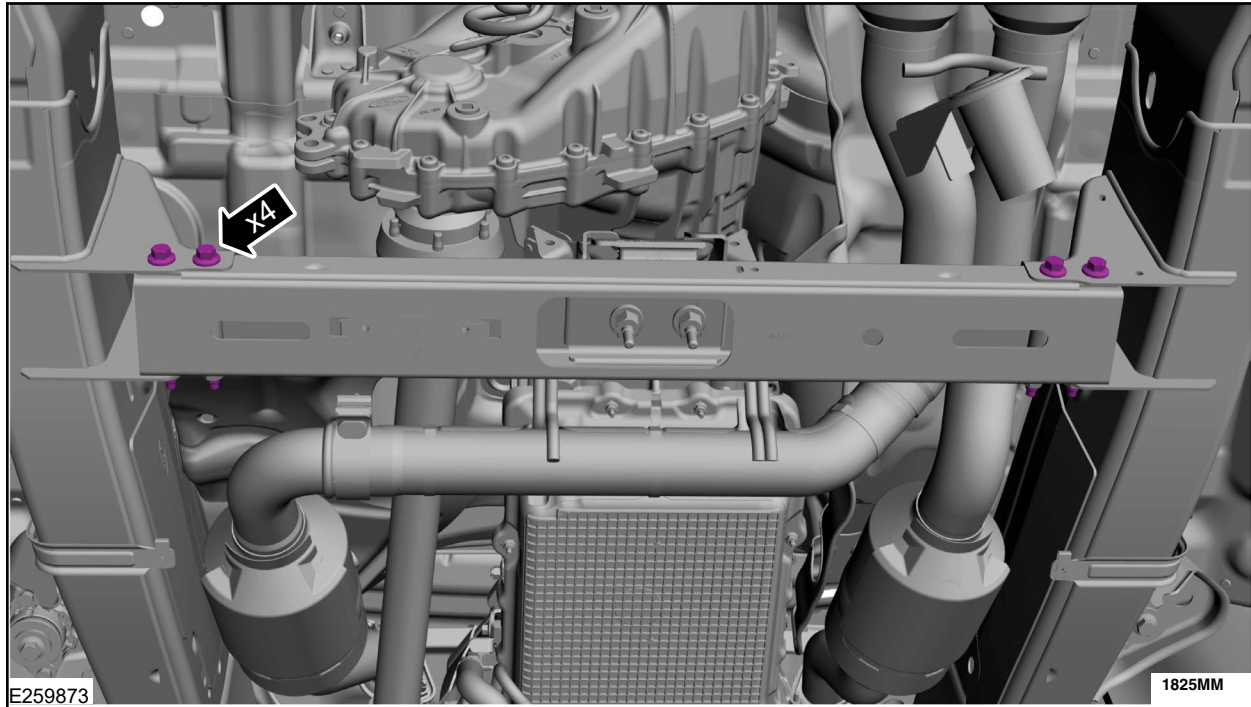


**FIGURE 39**



60. Install the transmission support crossmember nuts and bolts. See Figure 40.

- Torque to 76 lb.ft (103 Nm).



**FIGURE 40**

61. Remove the high lift transmission jack support from the transmission.

62. Install the two transmission wiring harness bolts into the transmission crossmember. See Figure 21.

63. Install the RH outboard exhaust heat shield and retainers. See Figure 20.

- Torque to 177 lb.in (20 Nm).

64. Install the LH exhaust heat shield bolt from the transmission crossmember. See Figure 19.

- Torque to 177 lb.in (20 Nm).

65. If equipped install skid plat and retainers. See Figure 18.

- Torque to 177 lb.in (20 Nm).



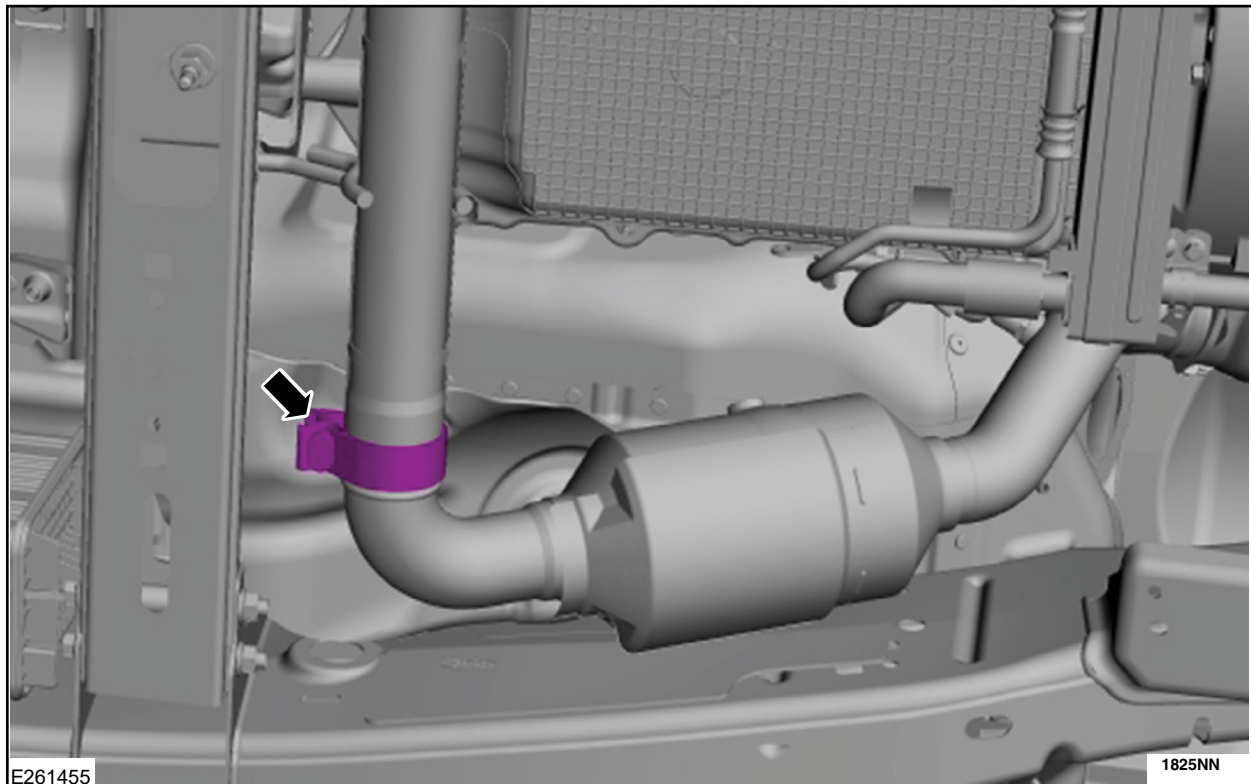
### LH Catalytic Converter Installation All Vehicles

66. Install the LH catalytic converter in vehicle. Install the LH catalytic converter nuts. See Figure 16.

- Torque to 30 lb.ft (40 Nm).

67. Tighten the clamp. See Figure 41.

- Torque to 41 lb.ft (55 Nm).



**FIGURE 41**

68. Connect both LH HO<sub>2</sub>S electrical connectors. See Figures 13 and 15.

69. If equipped install the underbody shield and bolts. See Figure 14.

- Torque to 71 lb.in (8 Nm).



### **Muffler and Tailpipe Installation Expedition Vehicles**

70. Install the muffler and attach the isolators and bracket bolts. See Figure 8.

- Torque to 18 lb.ft (25 Nm).

71. Install the catalytic converter and muffler bolts. See Figure 7.

- Torque to 46 lb.ft (63 Nm).

72. Install the muffler and tailpipe. See Figure 6.

73. Install the isolator bolts. See Figure 6.

- Torque to 18 lb.ft (25 Nm).

74. Install into position the muffler and tailpipe clamp. See Figure 6.

- Torque to 41 lb.ft (55 Nm).

### **Muffler and Tailpipe Installation Navigator Vehicles**

75. Install the muffler and attach to the isolators. See Figure 12.

76. Install the clamps into position and tighten in the sequence shown. See Figure 11.

- Torque to 35 lb.ft (48 Nm).

77. Install the muffler and tailpipe. See Figure 10.

78. Install the muffler and tailpipe clamps. See Figure 9.

- 1 Torque to 35 lb.ft (48 Nm).
- 2 Torque to 41 lb.ft (55 Nm).

### **Rear Climate Control Housing All Vehicles**

79. Remove and discard the Rear Climate Control Housing. Please refer to WSM procedures in section 412-02.

**NOTE:** Only remove the third row single seat to access the rear climate control housing.

80. Install the new Rear Climate Control Housing. Please refer to WSM procedures in section 412-02.

**NOTE:** Connect the Rear Evaporator Rear Outlet and Inlet Lines to the rear climate control housing.



81. Install the RH front Fender splash shield. Please refer to WSM procedures in section 501-02
82. Install the RH front and rear wheels and tires. Please refer to WSM procedures in section 204-04A.

#### Front Climate Control Housing All Vehicles

83. Replace the front climate control housing and install the new thermostatic expansion valve while the climate control housing is out of the vehicle. Please refer to WSM procedures in section 412-00.

#### Underhood Component Connection

84. Install and connect the Thermostatic Expansion Valve Manifold and Tube Assembly to the front climate control housing Thermostatic Expansion Valve. See Figure 42.

- Torque to 133 lb.in (15 Nm).

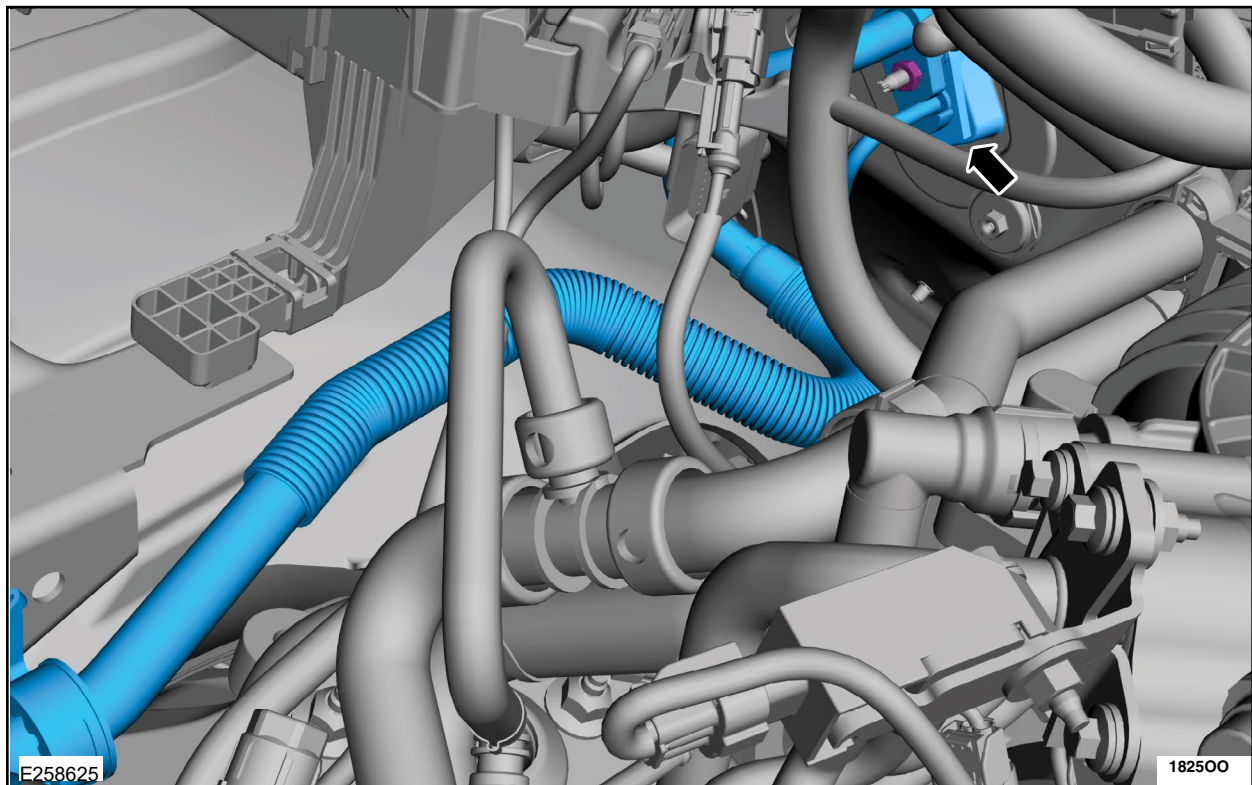


FIGURE 42



85. Install the thermostatic expansion valve manifold tube assembly fitting nuts to the rear evaporator inlet and outlet lines. See Figure 43.

- 1 Torque to 80 lb.in (9 Nm).
- 2 Torque to 159 lb.in (18 Nm).

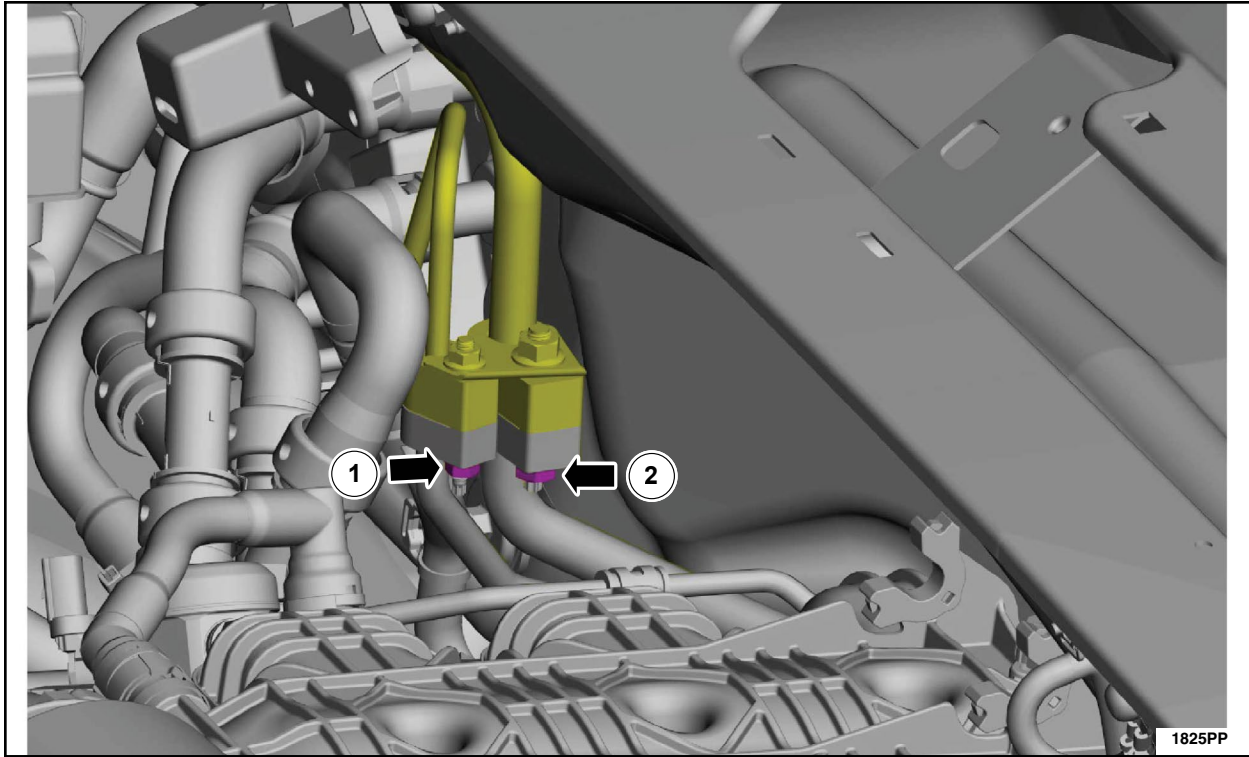
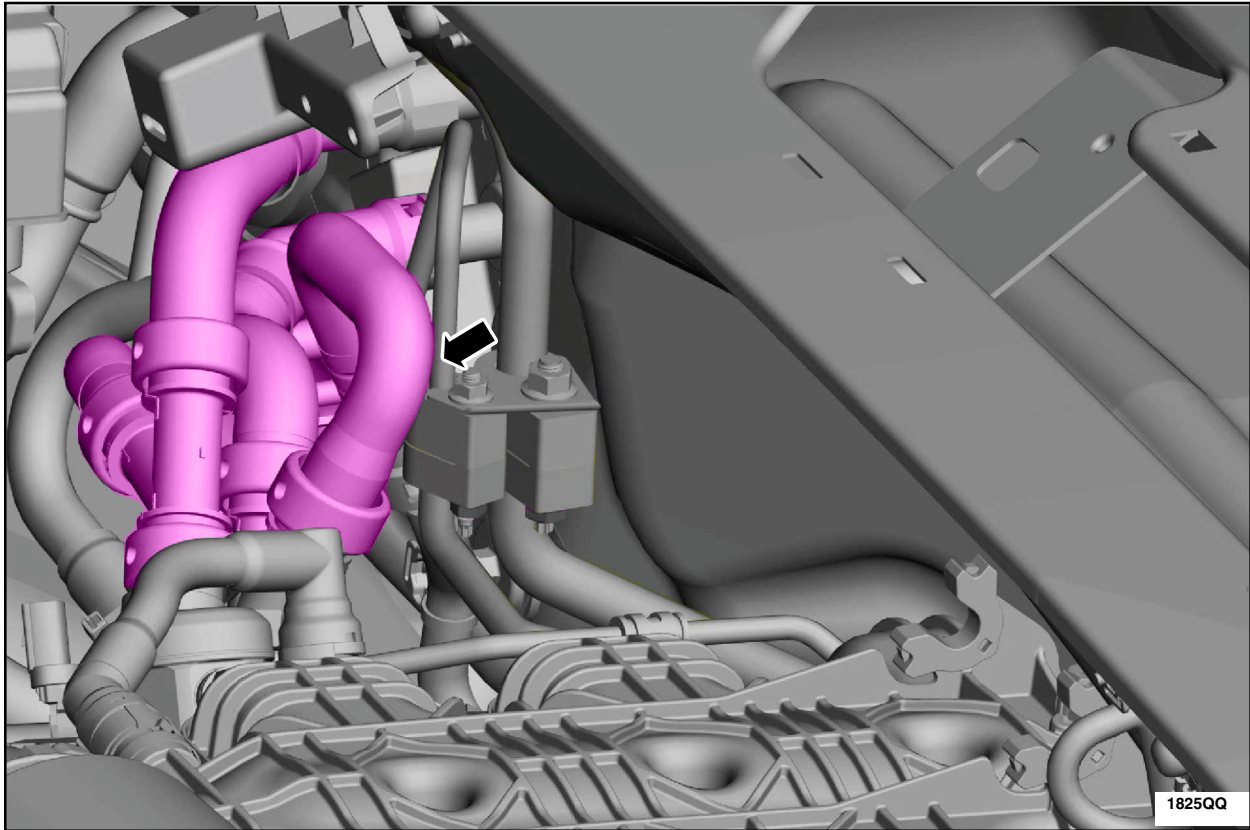


FIGURE 43



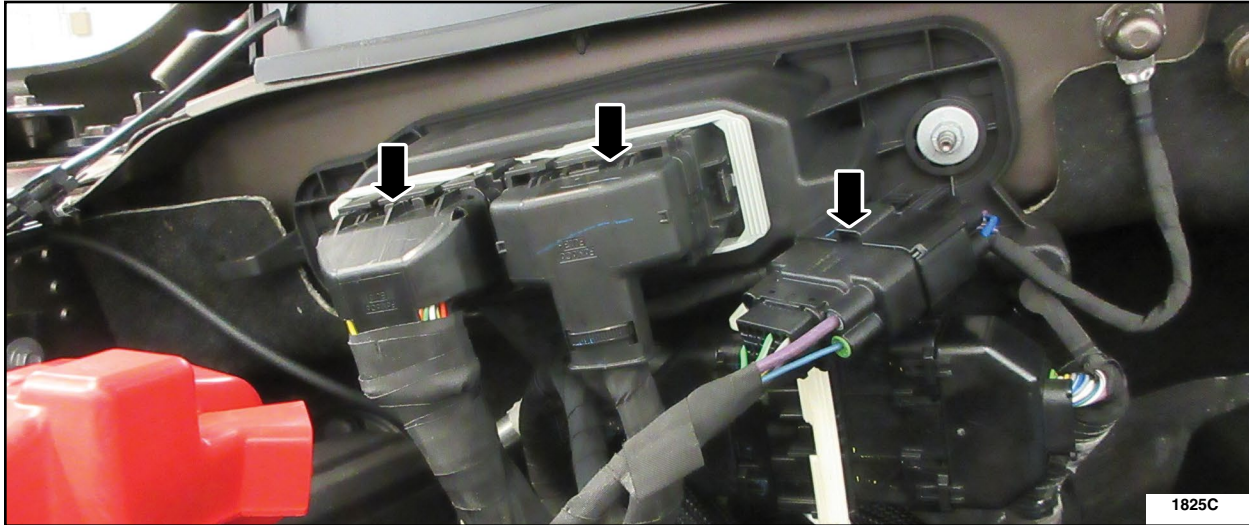
86. Install the front and rear heater core hoses to the heater core lines. See Figure 44.



**FIGURE 44**

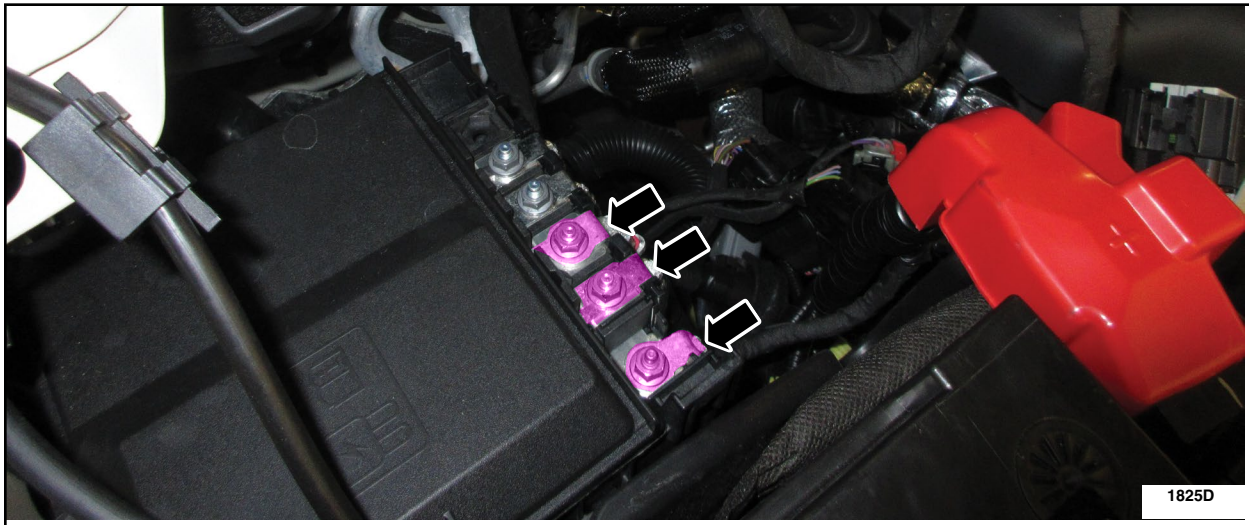


87. Install the PCM connectors and electrical connector. See Figure 45.



**FIGURE 45**

88. Install the three cables and nuts to the battery junction box, install the cover. See Figure 46.



**FIGURE 46**

89. Install the RH Air Cleaner Outlet Pipe. Please refer to WSM procedures in section 303-12.

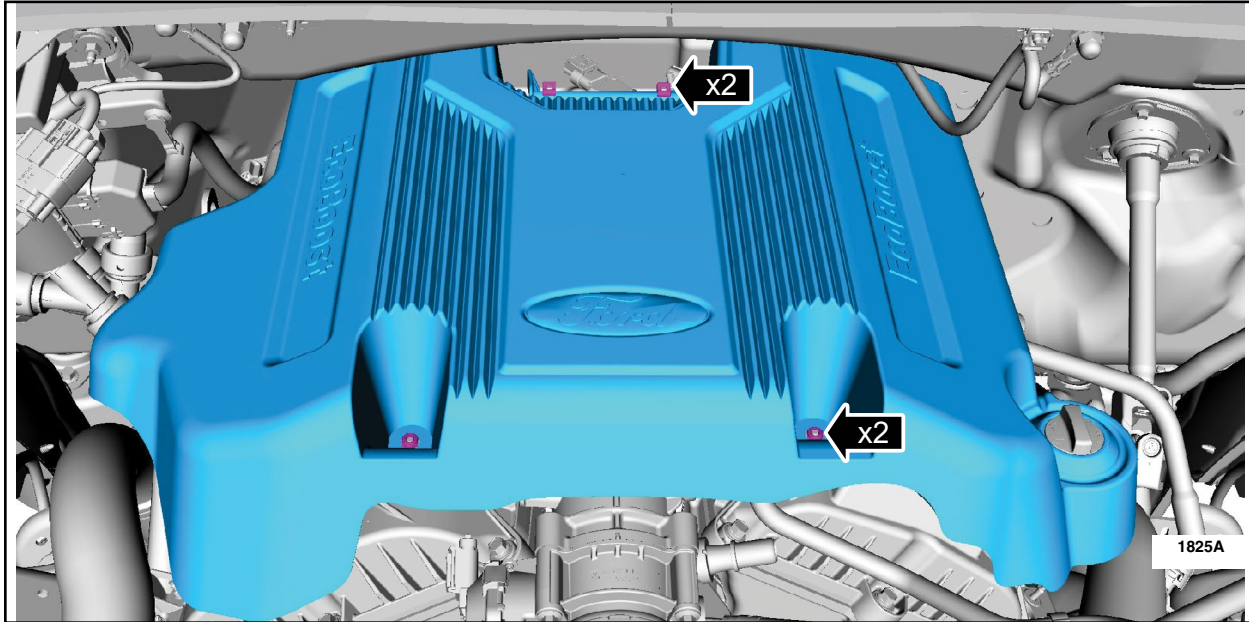
90. Install the RH Charge air cooler (CAC) intake pipe. Please refer to WSM procedures in section 303-12.

91. Install the Battery Tray and Battery. Please refer to WSM procedures in section 414-01.



92. Install the engine cover. See Figure 47.

**NOTE:** Expedition shown, Navigator similar.



**FIGURE 47**

93. Charge the A/C system. Please refer to WSM procedures in section 412-00.
94. Repower the SRS system. Please refer to WSM procedures in section 501-20B.
95. Check for DTC's. Please refer to WSM procedures in section 100-00.
96. Perform Cooling System Draining, Vacuum Filling and Bleeding procedure. Please refer to WSM procedures in section 303-03.
97. Close liftgate.
98. Package the loaner equipment back into the original boxes and ship them back using the return shipping labels (be careful to apply correct shipping labels to correct boxes).

