

CERTAIN 2023 MODEL YEAR 5.2L F-150 RAPTOR R AND MUSTANG GT 500 VEHICLES — LEFT AND RIGHT CYLINDER HEADS REAR CUP PLUGS INSPECT AND SEAL

NOTE: For Mustang GT 500 service procedure see below.

NOTE: For F-150 Raptor R service procedure proceed to Page 6.

MUSTANG GT 500 SERVICE PROCEDURE

1. Remove the strut tower cross brace. Follow the Workshop Manual (WSM) procedures in Section 501-02.
2. Remove the battery tray. Follow the WSM procedures in Section 414-01.
3. Remove the fasteners and the battery heat shield. See Figure 1.

•Torque: 80 lb.in (9 Nm)

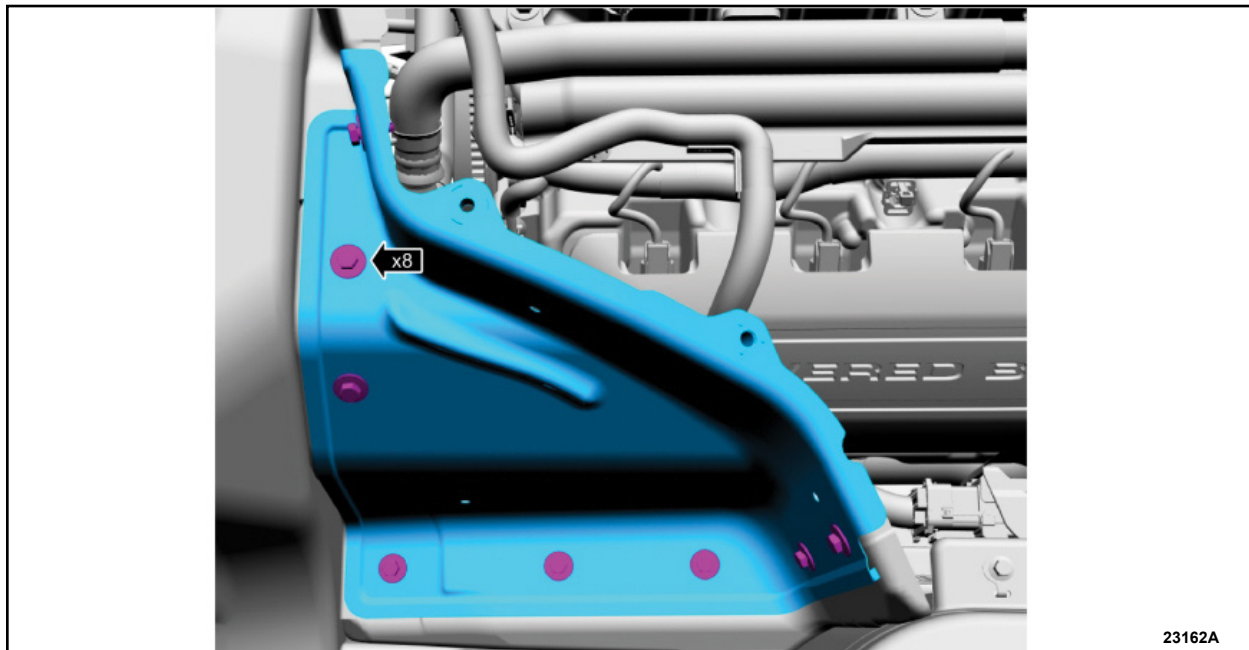


FIGURE 1



4. Position aside the heat shield covering the crankshaft position sensor electrical connector.
See Figure 2.

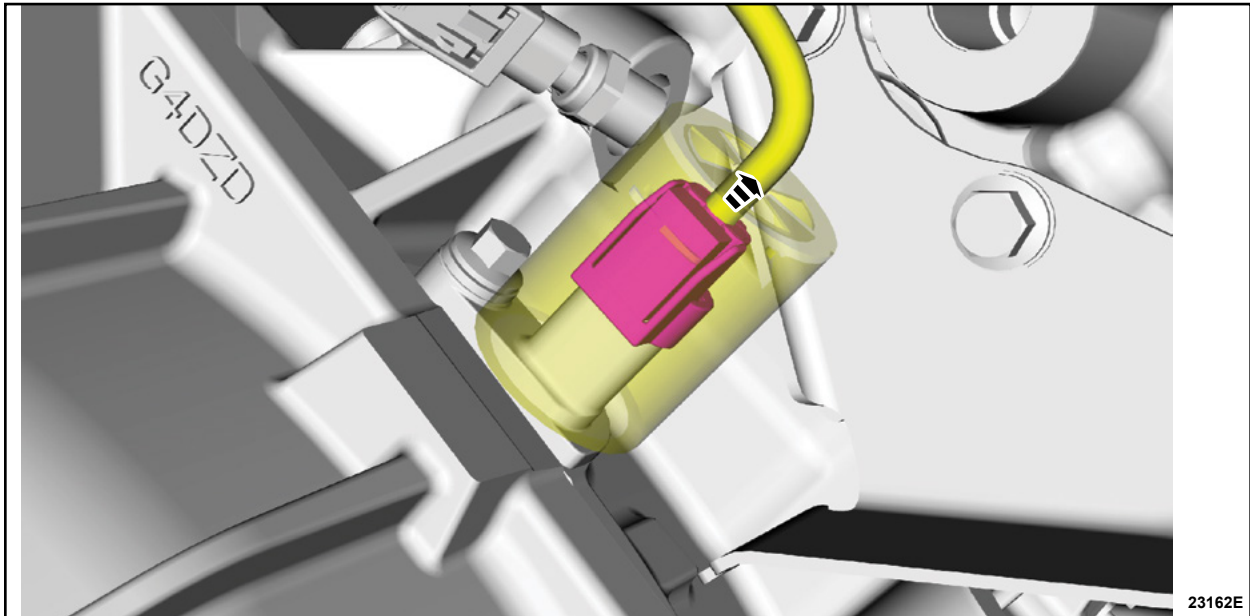


FIGURE 2

5. Remove the right hand (RH) heat shield and disconnect the exhaust camshaft position sensor electrical connector. See Figure 3.

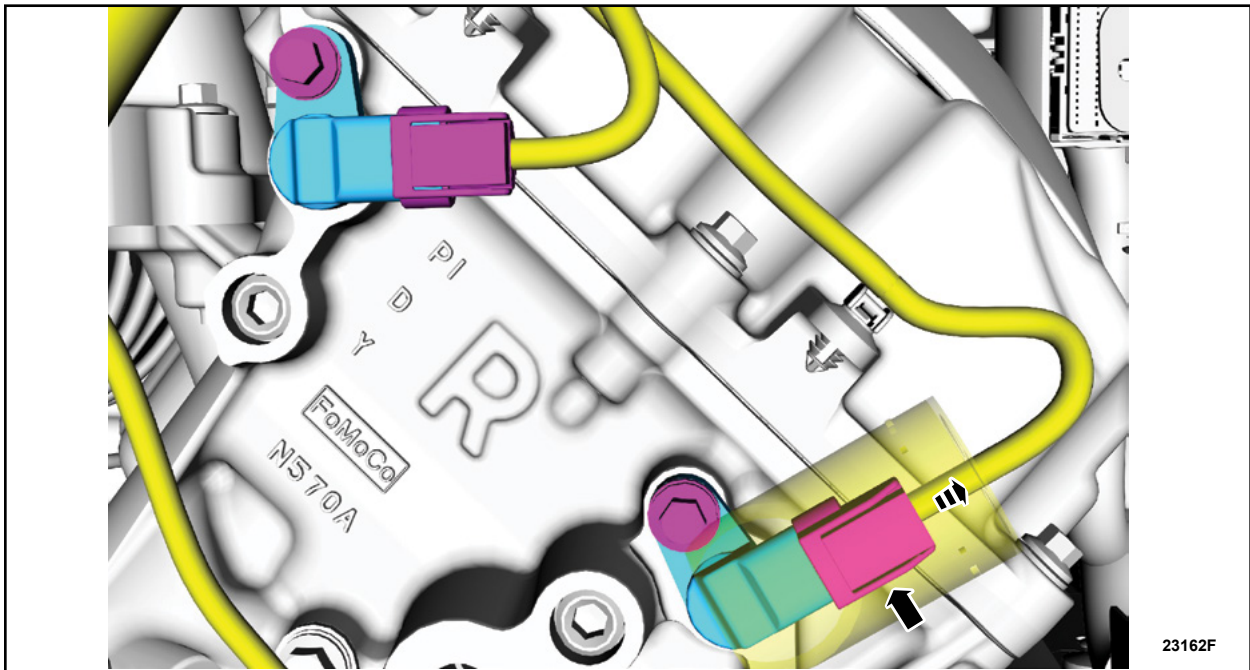


FIGURE 3



6. Remove the fasteners and the heat shield to gain full access to the RH engine cup plug.
See Figure 4.

- Torque Stage 1: 89 lb.in (10 Nm)
- Torque Stage 2: 45 degrees

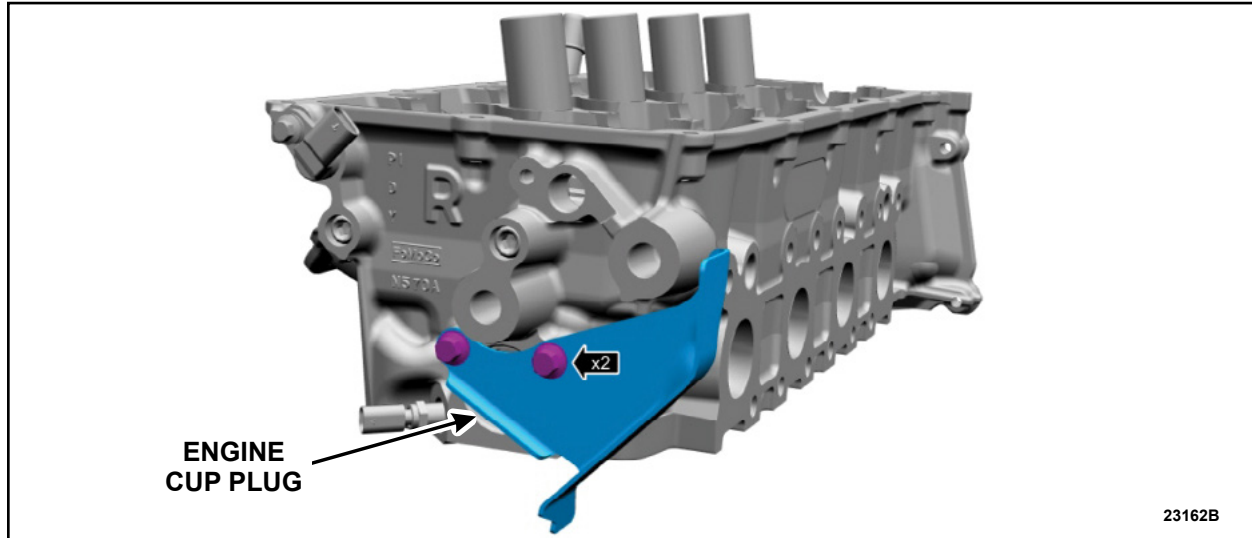


FIGURE 4

7. Spray the engine cup plug and surrounding area with brake cleaner to remove any debris that may be present.
8. Blow the area off with compressed air.
9. Repeat steps 7 and 8 a second time.
10. Clean the engine cup plug further if necessary.
11. Fully saturate a large swab with Loctite 290. See Figure 5.



FIGURE 5



12. Using the fully saturated swab, apply a generous amount of Loctite 290 around the full perimeter of the engine cup plug so that it wicks around the sealing surface completely. See Figure 6.

NOTE: It may be necessary to attach the swab to an extension to reach the cup plug. See Figure 6.

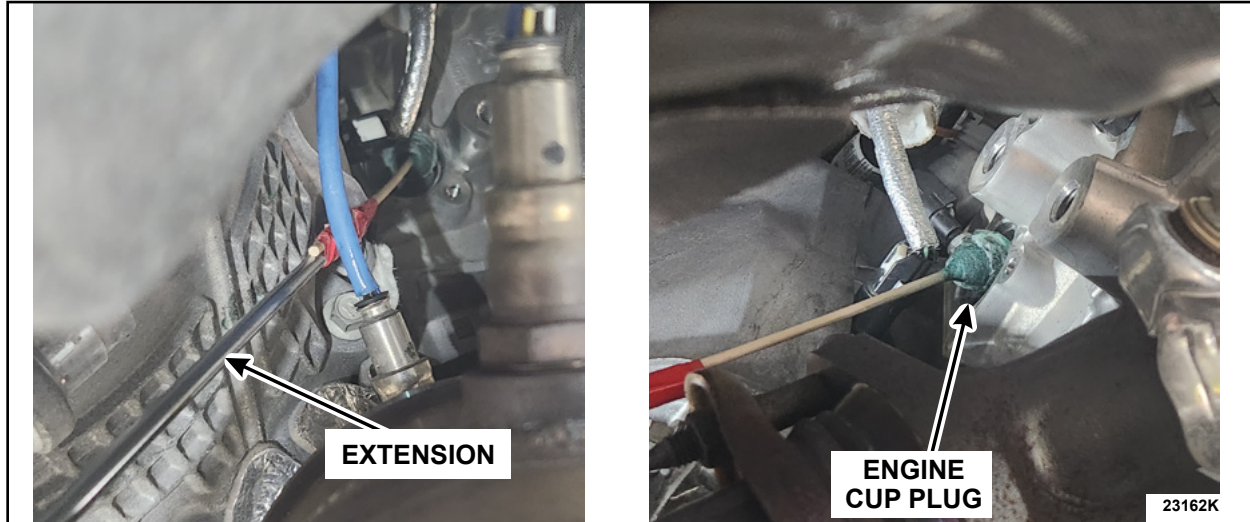


FIGURE 6

13. Clean off any excess Loctite 290 that may be dripping down from the sealing surface.

14. Remove the left hand (LH) catalytic converter. Follow the WSM procedures in Section 309-00C.

15. Remove the fasteners and the exhaust heat shield. See Figure 7.

• Torque: 5.9 lb.ft (8 Nm)

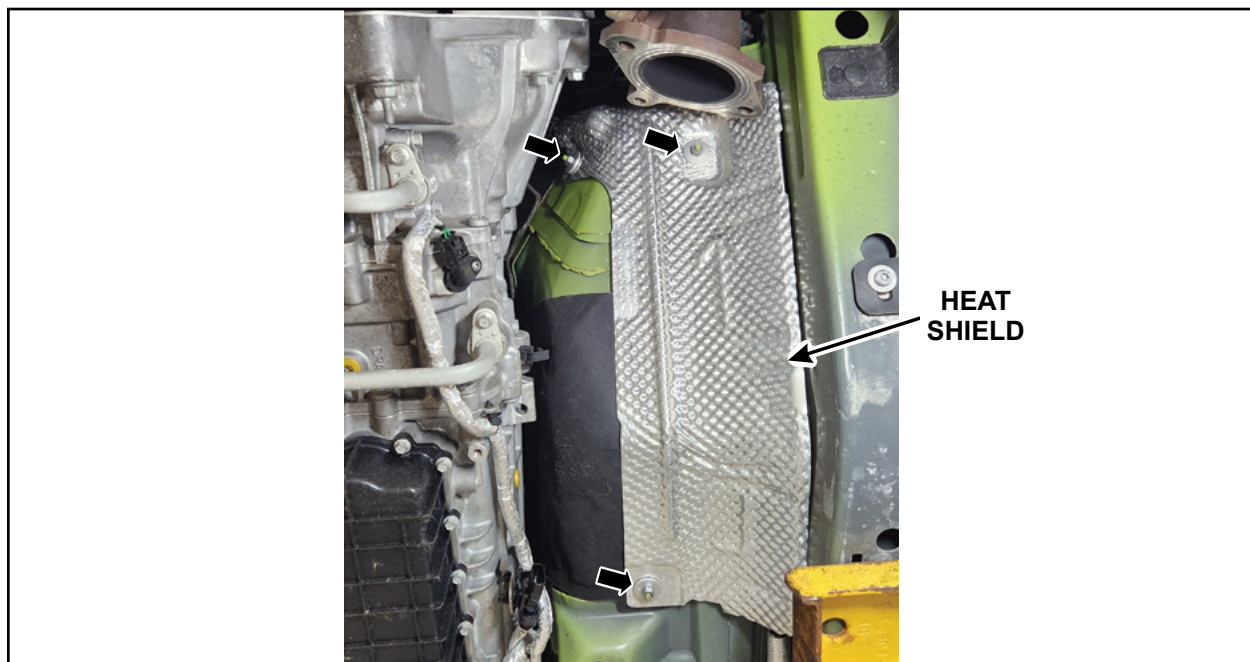


FIGURE 7



16. Remove the ground wire from the heat shield. See Figure 8.



FIGURE 8

17. Remove the fasteners and the heat shield to gain full access to the LH engine cup plug.
See Figure 9.

- Torque Stage 1: 89 lb.in (10 Nm)
- Torque Stage 2: 45 degrees

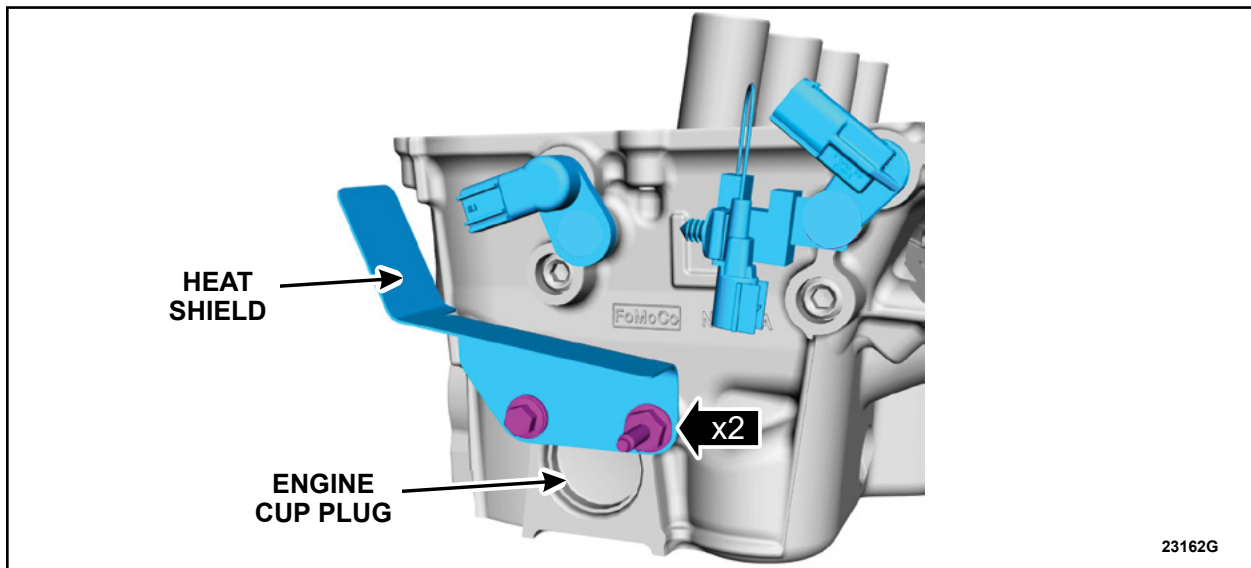


FIGURE 9

18. Repeat steps 7 through 13 on the LH engine cup plug.

19. Reassemble the LH side of the vehicle by reversing steps 14 through 17.

20. Reassemble the RH side of the vehicle by reversing steps 1 through 6.



F-150 RAPTOR R SERVICE PROCEDURE

1. Remove the bolts and the engine front undershield. See Figure 10.

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

NOTE: This step requires the aid of another technician.

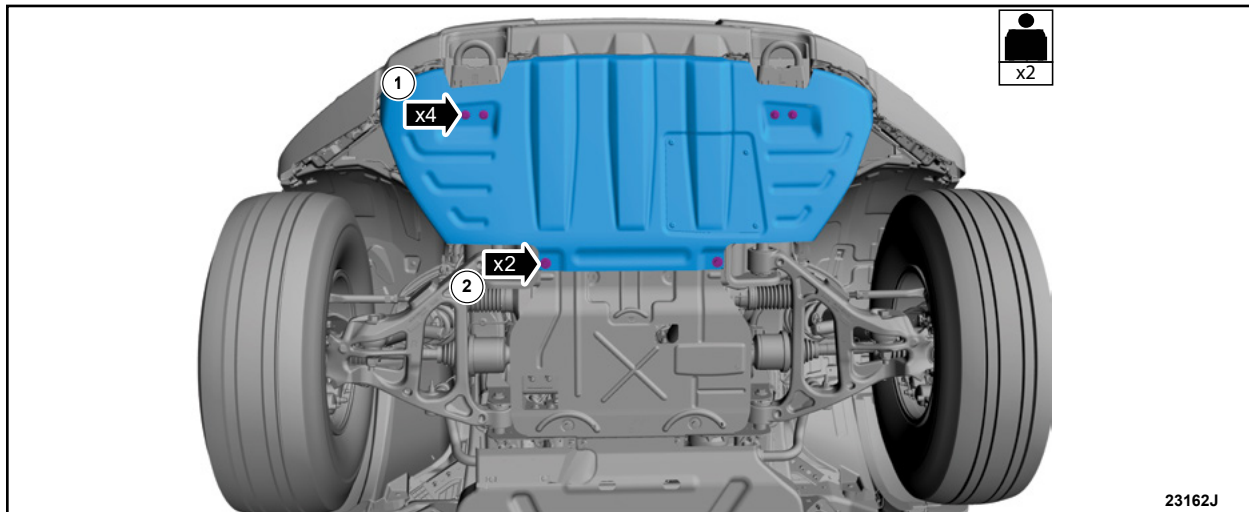


FIGURE 10

2. Remove the fender splash shield on both sides. Follow the Workshop Manual (WSM) procedures in Section 501-02.

3. Remove the right hand (RH) heat shield and disconnect the exhaust camshaft position sensor electrical connector. See Figure 11.

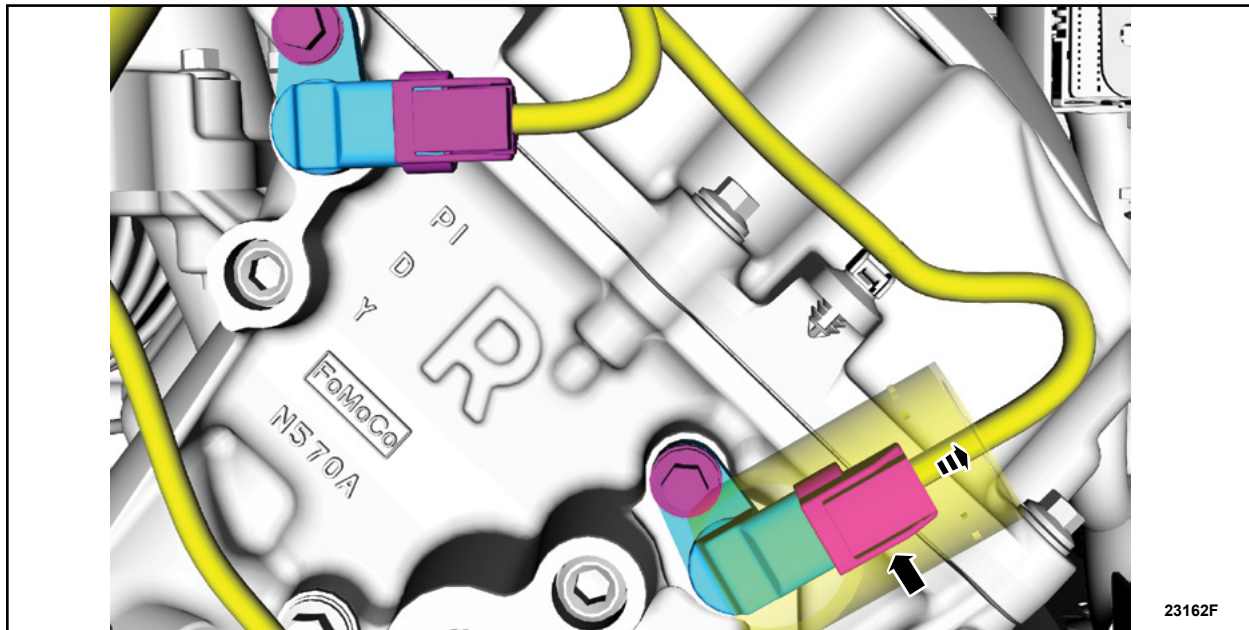


FIGURE 11



4. Remove the fasteners and the heat shield to gain full access to the RH engine cup plug.
See Figure 12.

- Torque Stage 1: 89 lb.in (10 Nm)
- Torque Stage 2: 45 degrees

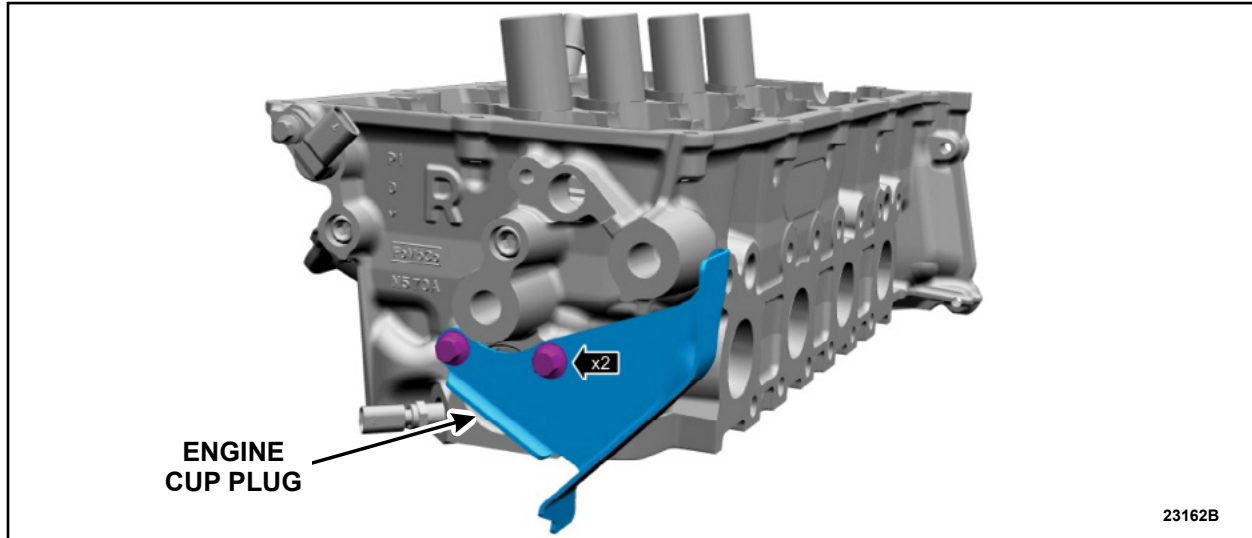


FIGURE 12

5. Remove the fasteners and the heat shield to gain full access to the left hand (LH) engine cup plug.
See Figure 13.

- Torque Stage 1: 89 lb.in (10 Nm)
- Torque Stage 2: 45 degrees

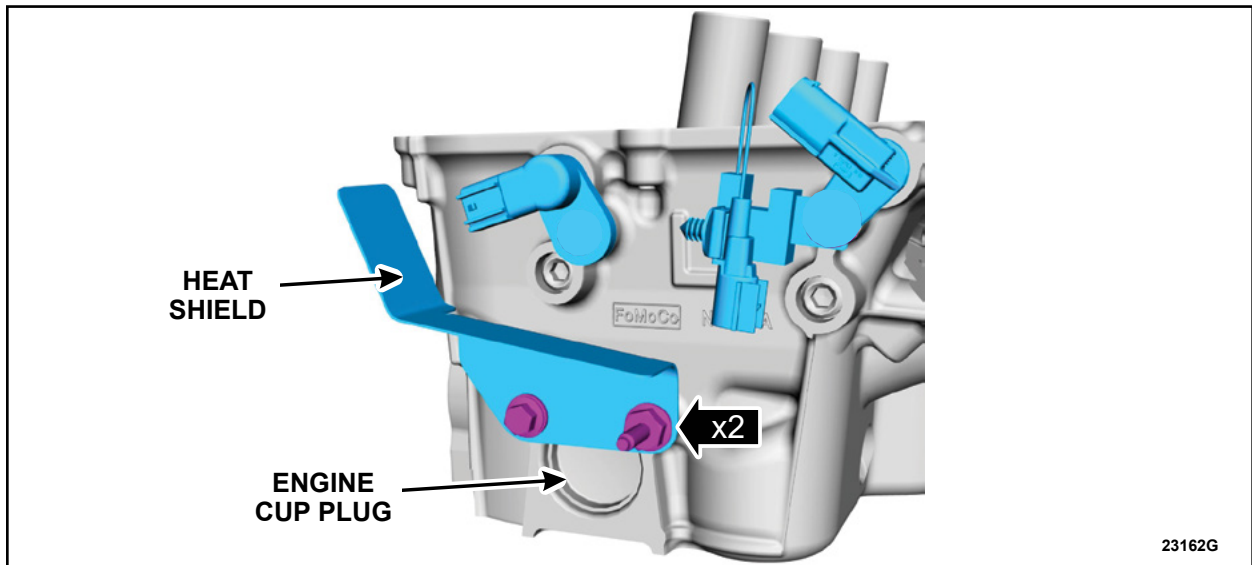


FIGURE 13



6. Spray the RH engine cup plug and surrounding area with brake cleaner to remove any debris that may be present.
7. Blow the area off with compressed air.
8. Repeat steps 6 and 7 a second time.
9. Clean the engine cup plug further if necessary.
10. Repeat steps 6 through 9 on the LH engine cup plug.
11. Fully saturate a large swab with Loctite 290. See Figure 14.



FIGURE 14

12. Using the fully saturated swab, apply a generous amount of Loctite 290 around the full perimeter of both engine cup plugs so that it wicks around the sealing surface completely. See Figure 15.

NOTE: It may be necessary to attach the swab to an extension to reach the cup plug. See Figure 15.

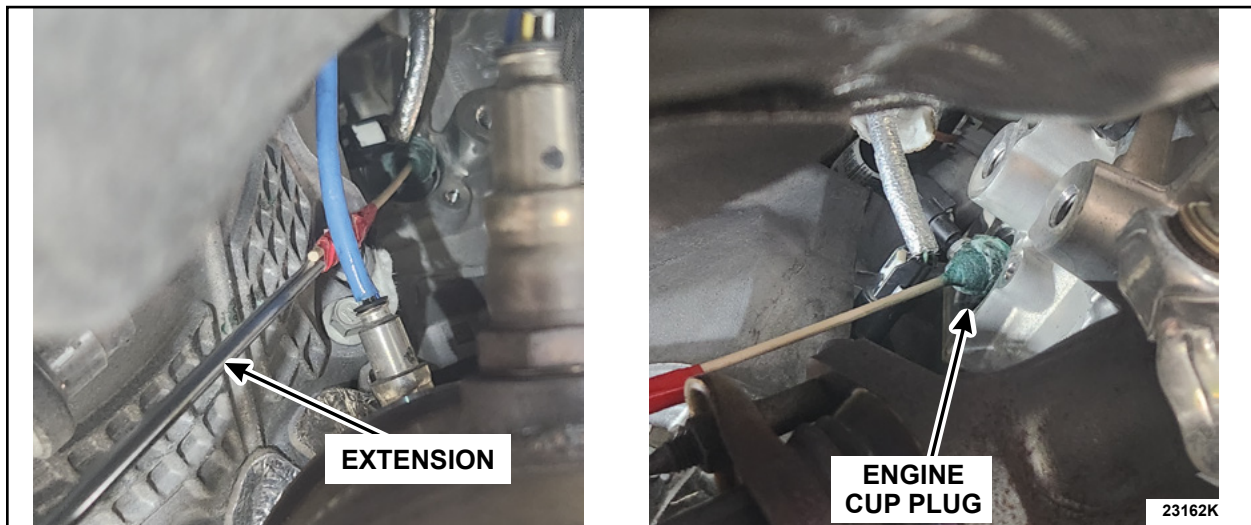


FIGURE 15



13. Clean off any excess Loctite 290 that may be dripping down from the sealing surface on either side.
14. Reassemble the vehicle by reversing steps 1 through 5.

