

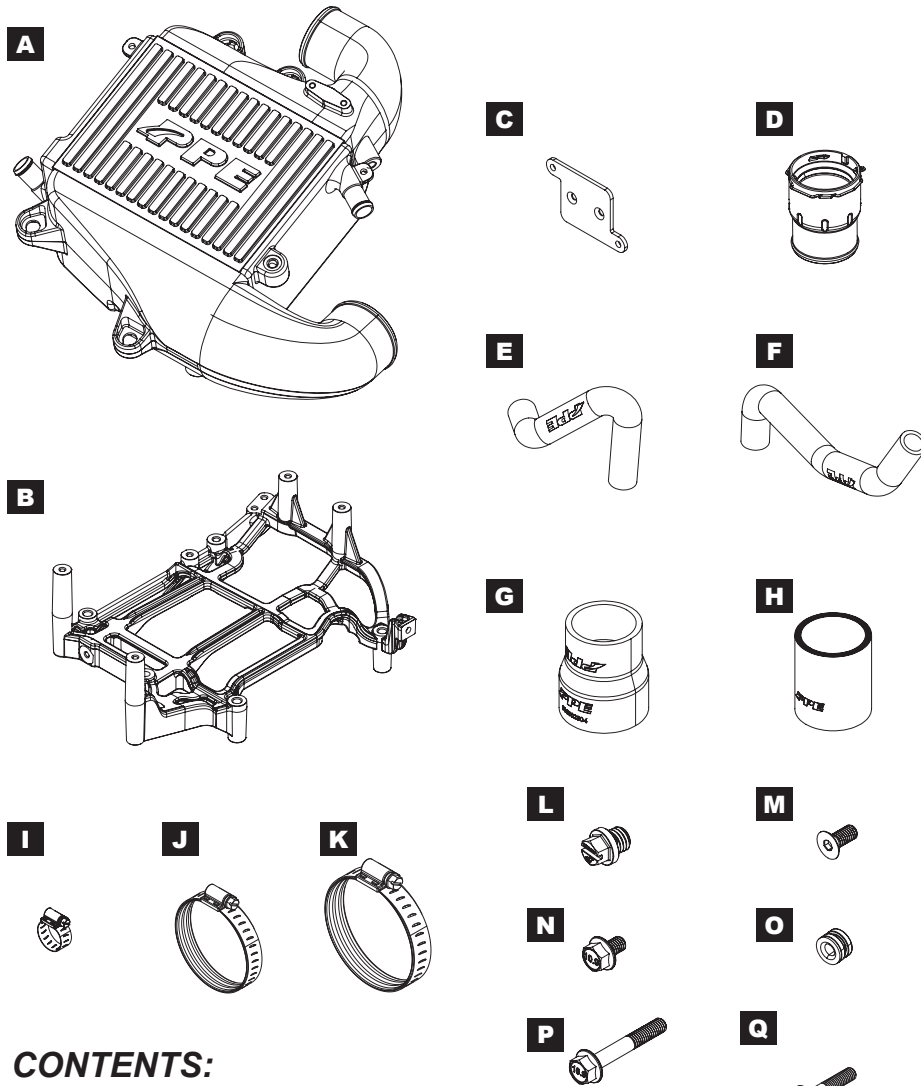
## **Intercooler Kit - Water to Air**

*2020-2022 Chevrolet/GMC  
Silverado, Sierra  
3.0L Duramax LM2*

*2021-2022 Chevrolet/GMC/Cadillac  
Suburban, Tahoe, Yukon, Escalade  
3.0L Duramax LM2*

*(115030000), (115030020), (115030012), (115030022)*

## **Installation Guide**



**CONTENTS:**

- A** (1) Intercooler
- B** (1) Base Bracket
- C** (1) NOx Control Module Bracket
- D** (1) Turbo Adapter/Resonator delete
- E** (1) Silicone Coolant Hose (IN)
- F** (1) Silicone Coolant Hose (OUT)
- G** (1) Silicone Reducer (3.0" to 2.5" x 4" length)
- H** (1) Silicone Straight Coupler (2.5" x 3.5" length)
- I** (4) Coolant Hose Worm Clamp
- J** (3) W-Style Constant Tension Worm Drive Clamp (52-76 mm)
- K** (1) W-Style Constant Tension Worm Drive Clamp (65-89 mm)
- L** (1) Air Bleeder Screw, Black
- M** (2) M6 Countersink Screw
- N** (2) M6-1.0X12mm Flange Bolt
- O** (4) Rubber Grommet/Steel Bushing (installed)
- P** (1) M6-1.0X55 Flange Bolt
- Q** (1) M6-1.0X30 Turbo Heat Shield Bolt

## INSTALLATION:

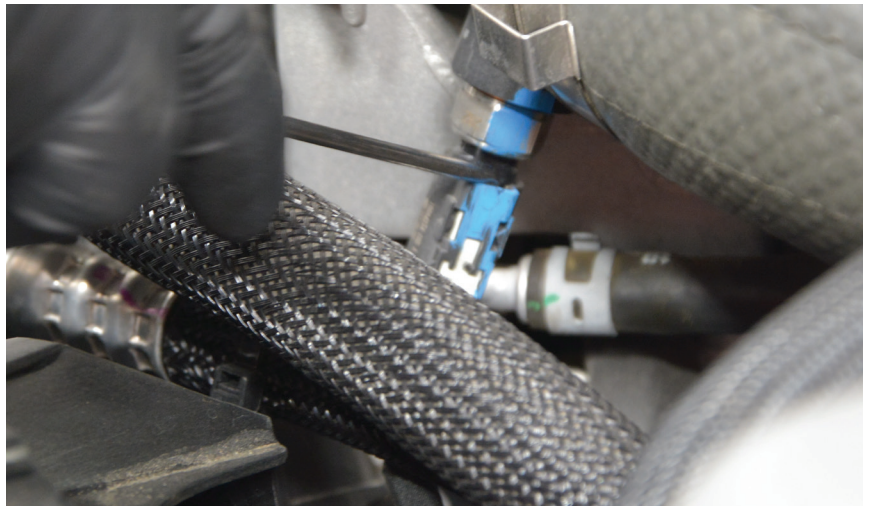
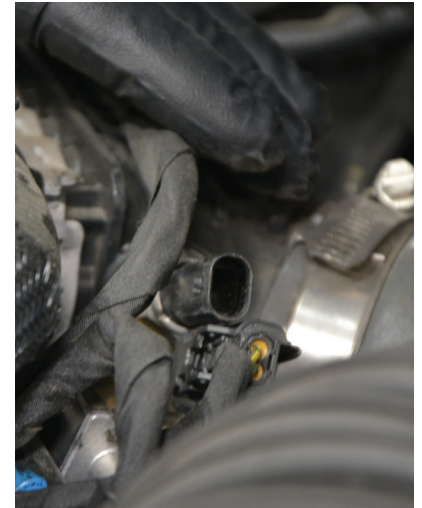
1. Vehicle off and cool. Disconnect negative battery terminal. Isolate for safety by placing a piece of rubber or cardboard under the disconnected terminal and the battery. **(Fig.1)**

2. Remove Oil Cap. Remove Engine Cover.



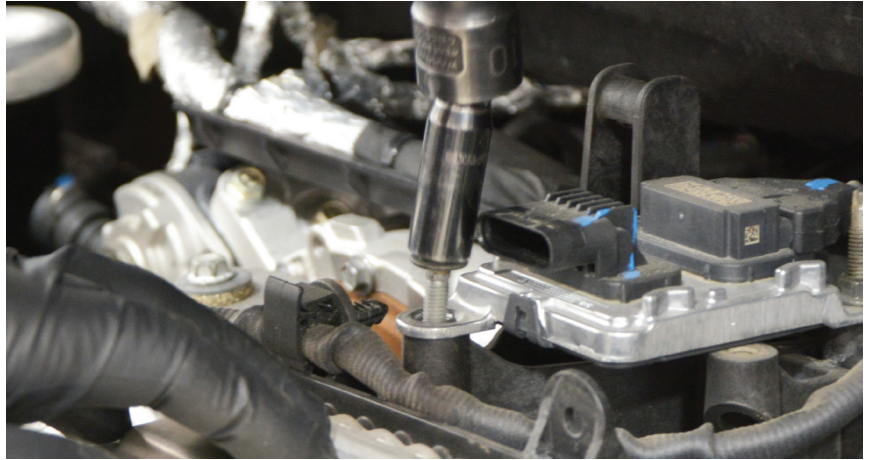
**Fig.1**

3. Disconnect NOx Control Module. Disconnect the loom-wrapped harness, move out of the way and secure. **(Fig.2)**



**Fig.2**

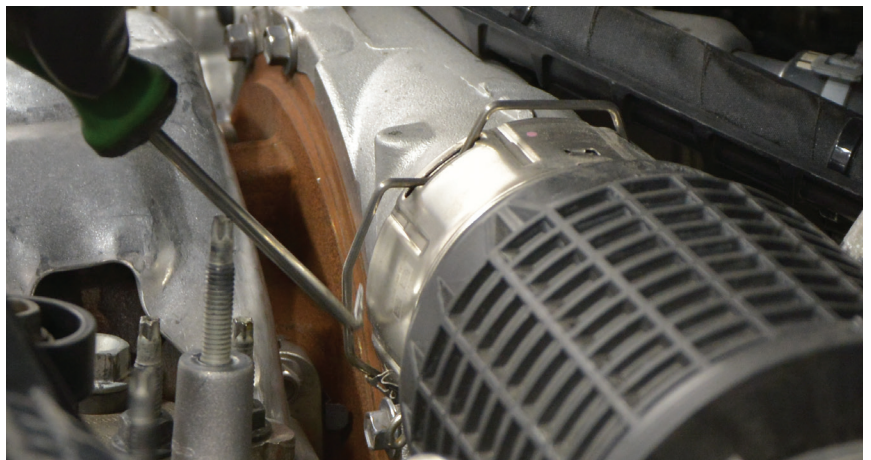
4. *Unbolt and move the NOx Control Module out of the way. (Fig.3) Save factory nuts for use later.*

**Fig.3**

5. *Unbolt and remove NOx Control Module bracket. (Fig.4)*

**Fig.4**

6. *Unclip and remove Turbo Resonator. (Fig.5)*

**Fig.5**

- 7. Disconnect and remove Intercooler Outlet Hose. **(Fig.6)**



**Fig.6**

- 8. Disconnect Inlet Coolant Hose. **(Fig.7)**



**Fig.7**

- 9. Disconnect Outlet Coolant Hose. **(Fig.8)**

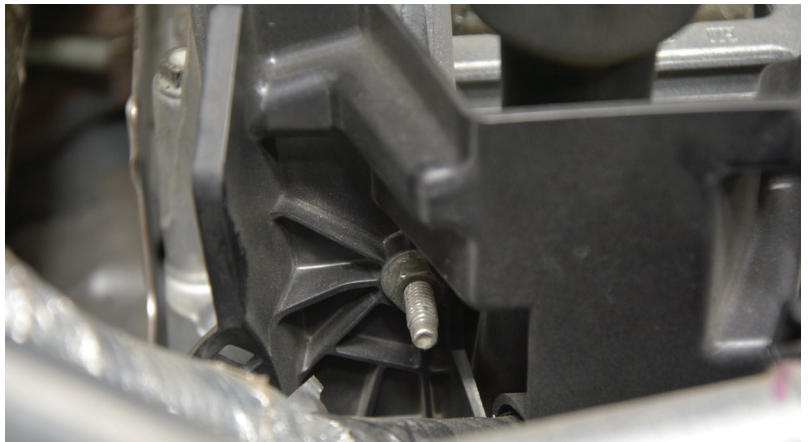


**Fig.8**

10. *Unbolt and remove stock Intercooler. Retain 4 factory screws. (Fig.9)*

**Fig.9**

11. *Remove factory nut and stud, and the front bracket. Save for reinstall. (Fig.10)*

**Fig.10**

12. *Remove fasteners from Turbo Shield. Move Shield to the side. (Fig.11)*

**Fig.11**

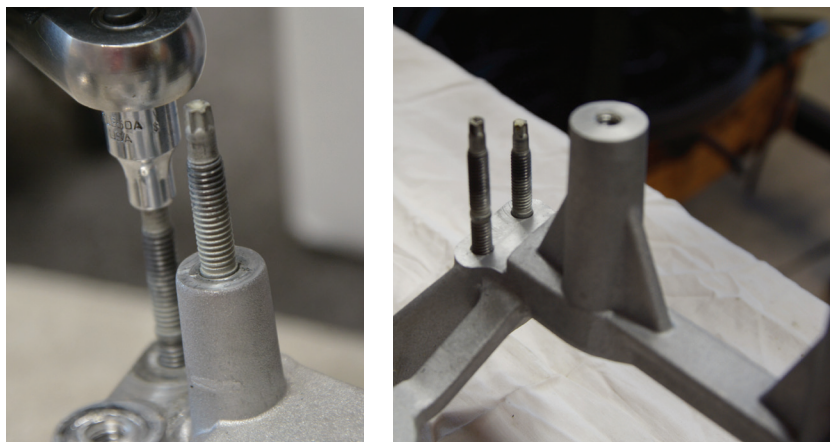
13. *Unbolt and remove Turbo to Base Bracket securing plate. Retain stock bolt and nuts for reuse. (Fig.12)*

**Fig.12**

14. *Unbolt and remove stock Base Bracket. (Fig.13) Save bolts for reinstall.*

**Fig.13**

15. *Remove the 2 stock left rear studs on the stock bracket and install in the locations shown on the PPE Base Bracket (B). (Fig.14)*

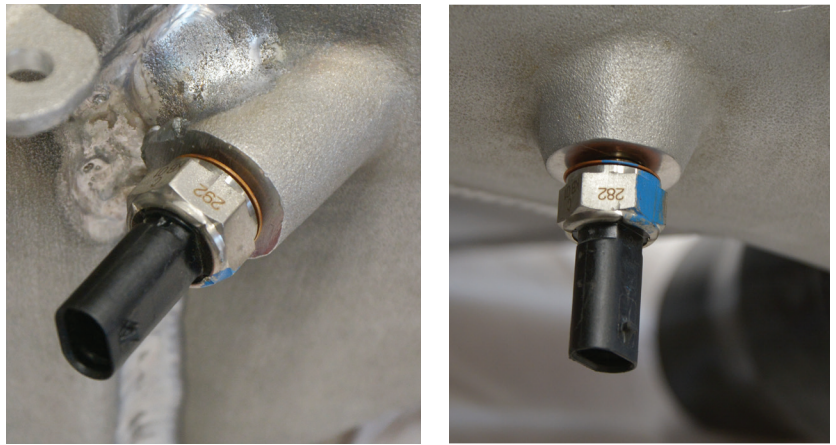
**Fig.14**

16. Carefully remove sensors and save for reuse. (Note the two factory front and rear temperature sensors are different and need to be reinstalled in their correct locations) **(Fig.15)**



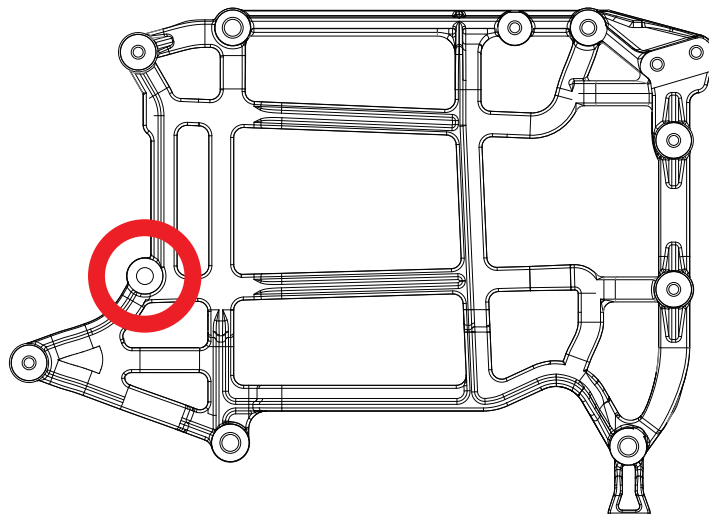
**Fig.15**

17. Install front and rear temperature sensors in their correct locations on the PPE Intercooler. **(Fig.16)**



**Fig.16**

18. Install PPE Base Bracket. Install supplied PPE M6 Flange Bolt (P) in location shown. **(Fig.17)**



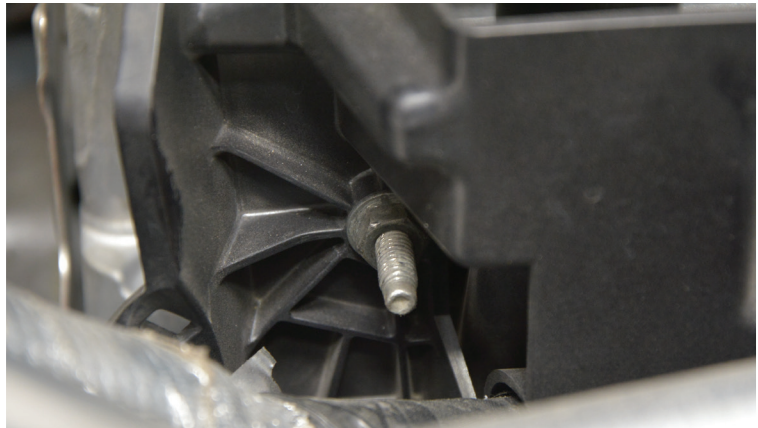
**Fig.17**



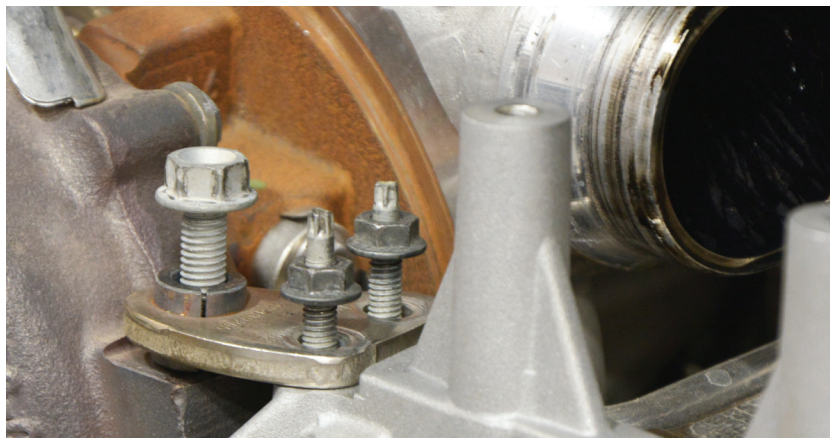
Install remaining factory bolts from Step 13. Tighten to secure. **(Fig.18)**

**Fig.18**

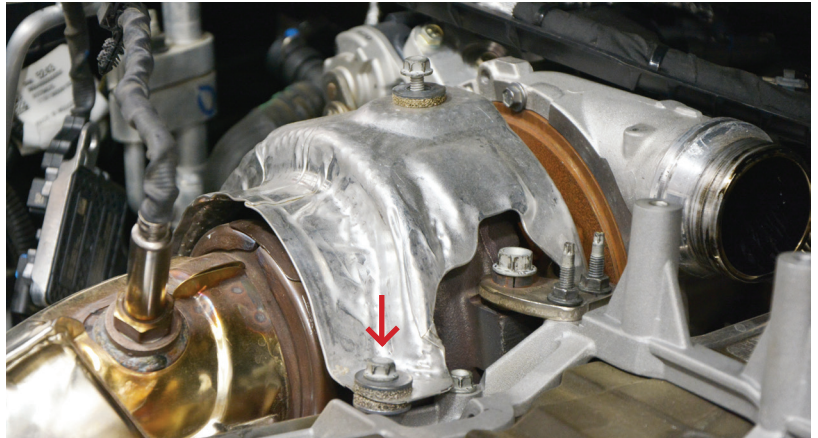
19. Reinstall stud and front plate that was removed in Step 10. **(Fig.19)**

**Fig.19**

20. Reinstall Turbo to Base Bracket securing plate over reinstalled studs from Step 14. Reinstall nuts on studs then bolt to secure turbo. Tighten to secure. **(Fig.20)**

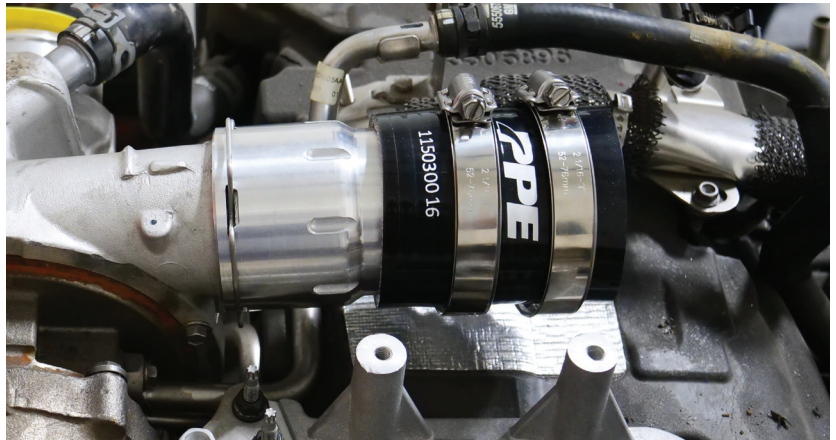
**Fig.20**

21. Reinstall Turbo Heat Shield and reinstall fasteners. Use provided M6x30mm Bolt (Q) Tighten to secure. **(Fig.21)**

**Fig.21**

22. Lubricate O-Ring on PPE Turbo Adapter (D) with silicone brake lube.

23. Install and secure PPE Turbo Adapter (D) to turbo. Install PPE Straight Coupler (H) to PPE Turbo Adapter. Slide 2 W-Style Constant Tension Clamps (J) on to the coupler. **(Fig.22)**

**Fig.22**

24. Fit Straight Coupler assembly over PPE Intercooler inlet by tilting the cooler so the outlet side is higher. **(Fig.23)** Align Intercooler inlet with the Straight Coupler (H) then push inlet into the Coupler.

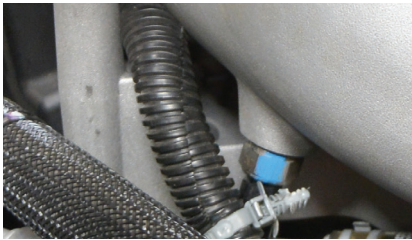
Loosely tighten clamp, allowing for final adjustment.

**Fig.23**

25. Slide 2 PPE W-Style Constant Tension Clamps (J,K) on the throttle body. Install PPE Reducer (G) on Intercooler outlet.

Fit installed Reducer end over throttle body. Loosely tighten T-Bolt Clamps to allow for minor adjustments. **(Fig.24)**

26. Route loom-wrapped harness under the Intercooler behind the Base Bracket.



**Fig.24**

27. Lower Intercooler on to Base Bracket and install 4 saved factory bolts from Step 9. Tighten bolts to secure Intercooler. **(Fig.25)** Tighten T-Bolt Clamps (J,K) on Intercooler inlet and outlet to secure.



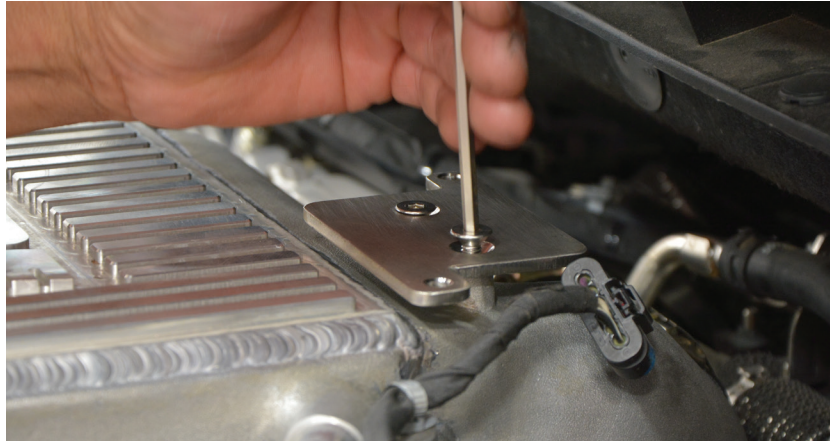
**Fig.25**

28. Reinstall sensor connections. Reinstall harness clips to secure. **(Fig.26)**

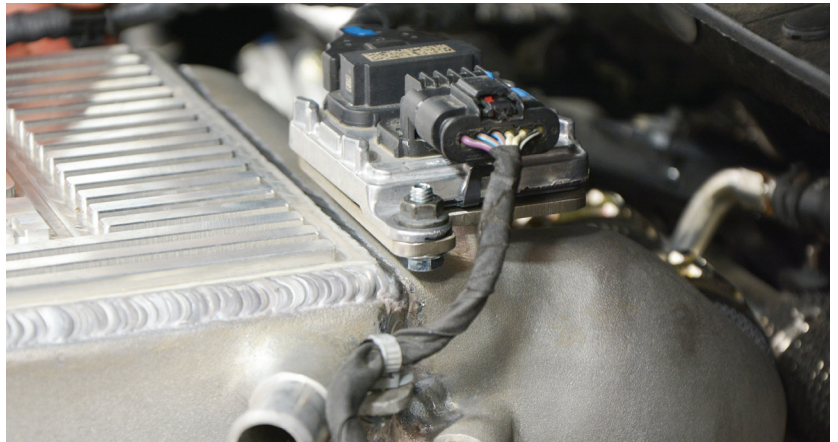


**Fig.26**

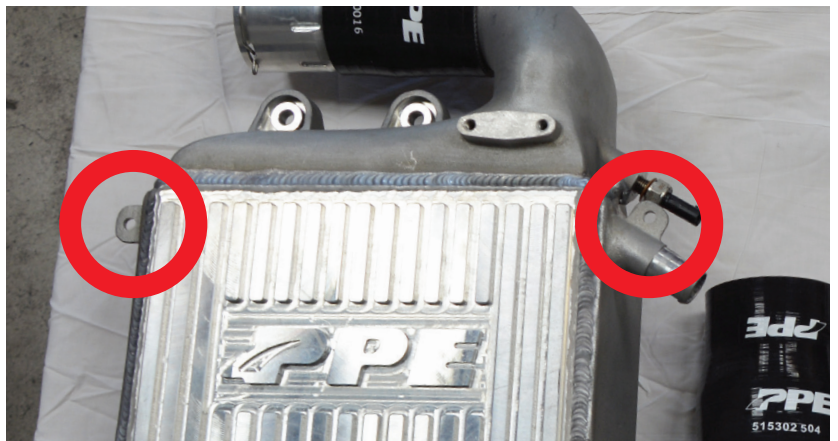
29. Install PPE Sensor Bracket (C) in the location shown. Thread and tighten M6 Screws (M) to secure Sensor Bracket. (Fig.27)

**Fig.27**

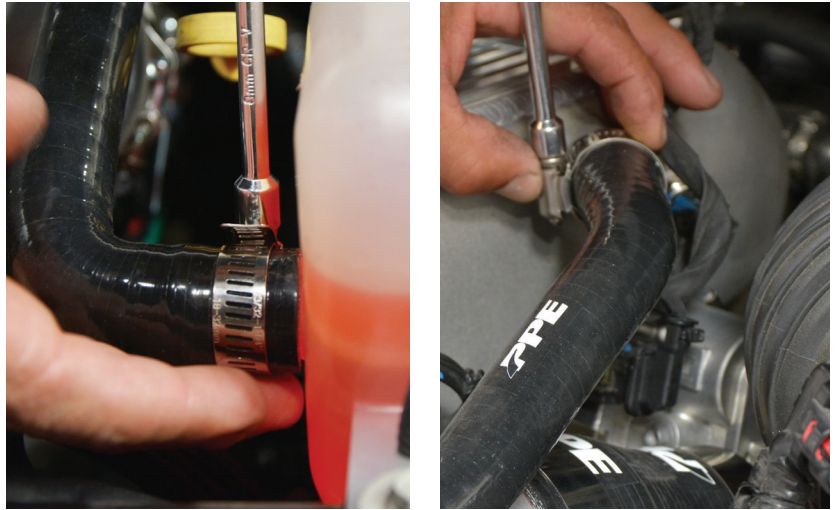
30. Reinstall factory NOx Control Module on top of the PPE NOx Control Module Bracket. Thread the saved factory nuts from Step 3 on to M6 Flange Bolts (N). Tighten to secure. (Fig.28)

**Fig.28**

31. Insert harness clips into the cast-in tabs on each side of the Intercooler. (Fig.29)

**Fig.29**

32. Install 2 Worm Clamps (I) on each end of the PPE Coolant Hose (F) Fit PPE Coolant Hose onto PPE Intercooler outlet and factory Reservoir. Tighten Clamps to secure. **(Fig.30)**

**Fig.30**

33. Install two Worm Clamps (I) onto Silicone Coolant Hose (E) Install assembly onto Intercooler. Tighten to secure Worm Clamps. **(Fig.31)**
34. Check and final-tighten all Clamps and fasteners. Check clearances. Replace oil cap.

**Fig.31**

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### Coolant bleeding procedure

Reconnect negative battery terminal.

Have the PPE Bleeder Screw (L) ready.

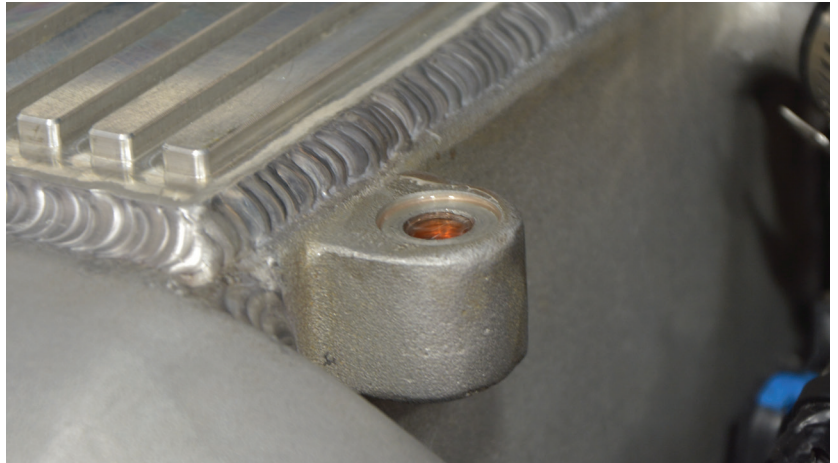
Remove coolant reservoir cap. Fill coolant reservoir to Full. Unbolt coolant reservoir. **(Fig.32)** Raise the coolant reservoir above the level of the PPE

**Fig.32**

Intercooler. The coolant will flow into the Intercooler.

Keep the Reservoir elevated above the Intercooler. Carefully fill Reservoir until fluid starts to flow out of the port.  
**(Fig.33)**

Install and tighten the PPE Bleeder Screw (L).



**Fig.33**

Fill to the indicator line on the Reservoir. Replace cap and reinstall Reservoir.  
**(Fig.34)**

Drive vehicle and bring up to operating temperature.

Check and refill the coolant reservoir to the fill line if necessary.



**Fig.34**

Place the supplied CARB E.O. label on a clean, visible location under the hood.

Installation complete.



## **DISCLAIMER OF LIABILITY**

Performance products can increase horsepower above and beyond factory specifications. Additional horsepower creates more stress on the drive-train components, which could result in drive-train failure.

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