

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

*2011-2023 Ford  
Super Duty  
6.7L Power Stroke*

*(315045100), (315045112), (315045120), (315045122)*

### ***Installation Guide***

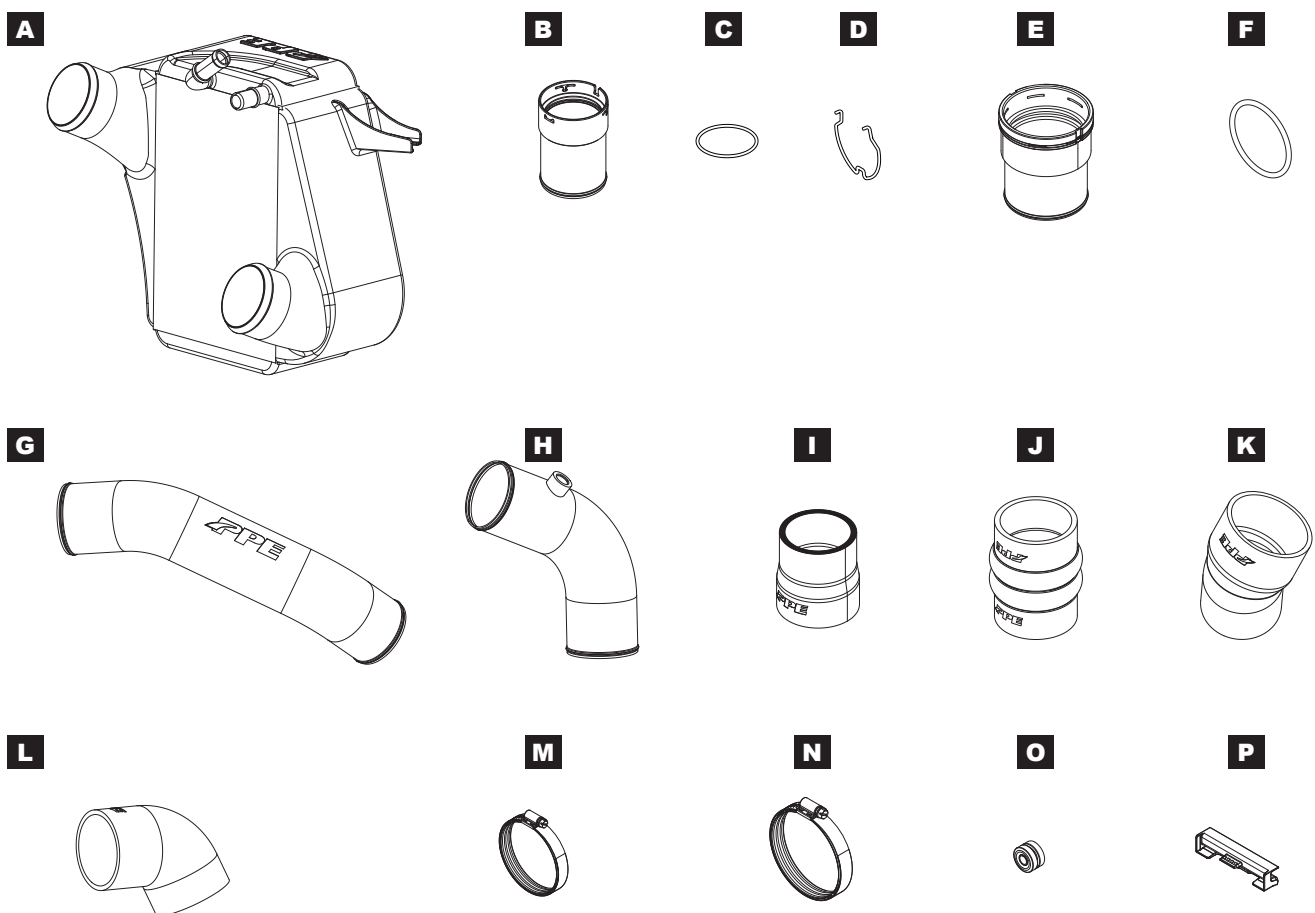
## NOTE:

It is not legal in California to install the product on vehicles with the following Test Groups or Engine Families: BFMXH06.7A24, CFMXH06.7A24, DFMXH06.7A24, FFMXH06.7A24, GFMXH06.7A24, GFMXH06.7P4B, HFMXH06.7P4B, JFMXH06.7P4B, KFMXH06.7P4B, LFMXH06.7P4B, MFMXH06.7P4B, NFMXH06.7P4B, PFMXH06.7P4B.

The product is only legal in California to be installed on vehicles with 8,501 to 14,000 pounds gross vehicle weight rating (GVWR).

The Test Group or Engine Family can be found on the Vehicle Emission Control Information label located under the hood.

The GVWR rating can be found on the driver door jamb.



## CONTENTS:

- |          |  |          |   |
|----------|--|----------|---|
| <b>A</b> | (1) Intercooler                          | <b>I</b> | (1) Turbo Coupler                       |
| <b>B</b> | (1) Aluminum Turbo Adapter               | <b>J</b> | (1) Inlet Coupler                       |
| <b>C</b> | (1) O-Ring for Turbo Adapter             | <b>K</b> | (1) Throttle Body Coupler               |
| <b>D</b> | (1) Clip for Turbo Adapter               | <b>L</b> | (1) Outlet-Coupler                      |
| <b>E</b> | (1) Aluminum Throttle Body Adapter       | <b>M</b> | (7) Constant Tension W-Clamp 65-89      |
| <b>F</b> | (1) Big O-Ring for Throttle Body Adapter | <b>N</b> | (1) Constant Tension W-Clamp 78-102     |
| <b>G</b> | (1) Hot Side Pipe                        | <b>O</b> | (1) Rubber Grommet with Aluminum Insert |
| <b>H</b> | (1) Cold Side Pipe                       | <b>P</b> | (1) Rubber Bushing-Rear Intercooler     |

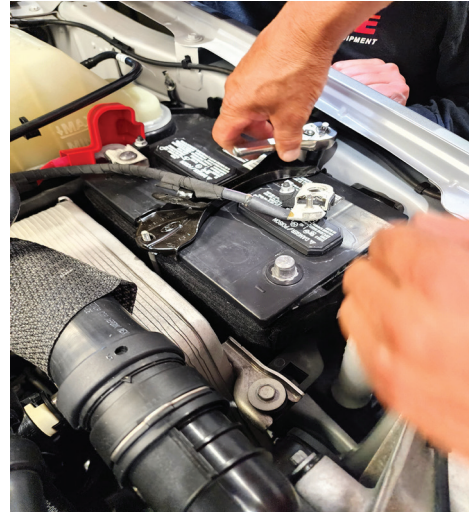
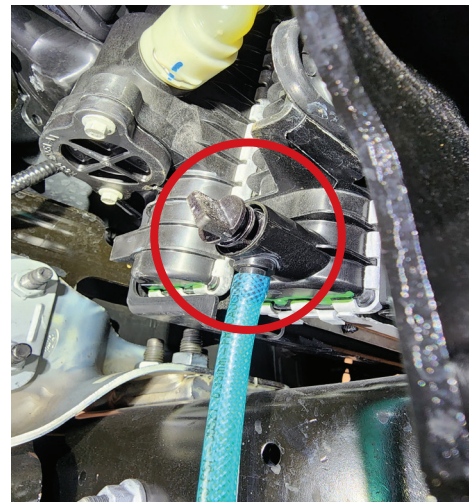
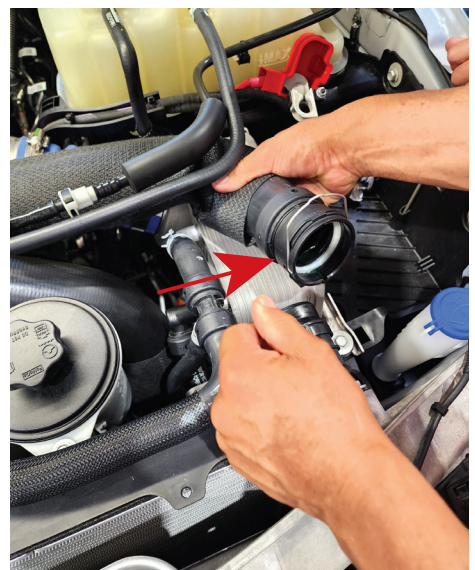
## INSTALLATION:

**Step 1:** Vehicle off and cool.  
Disconnect both batteries if equipped.

**Step 2:** On the driver side, remove the battery by disconnecting the terminals and hold down bracket. **(Fig.1)**

**Step 3:** Drain the coolant by removing the cap from the reservoir and locating the drain petcock on the lower driver side of the radiator. **(Fig.2)**

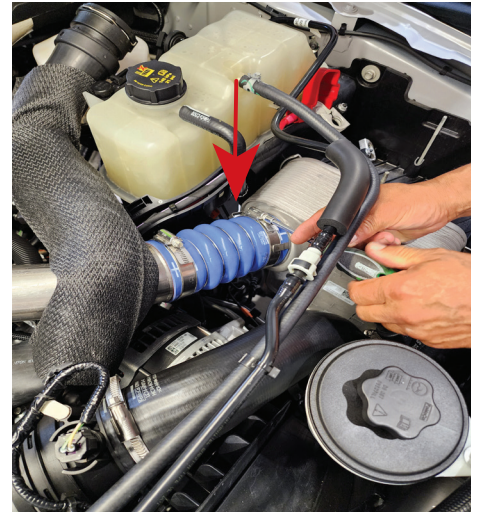
**Step 4:** Disconnect the upper radiator hose and set aside. **(Fig.3)**

**Fig.1****Fig.2****Fig.3**

**Step 5:** Remove the hot charge pipe by disconnecting the retaining clip at the turbo, and the clamp from the factory intercooler. **(Fig.4, 5)**



**Fig.4**



**Fig.5**

**Step 6:** Disconnect the IAT (Intake Air Temperature) sensor from the cold side charge-pipe and set aside. **(Fig.6)**

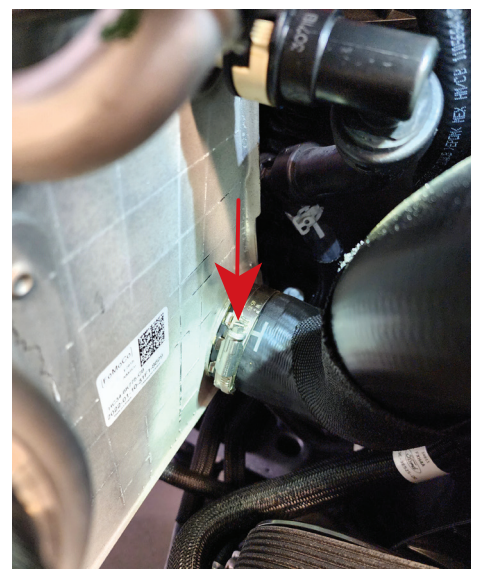


**Fig.6**

**Step 7:** Remove the cold charge pipe by disconnecting the retaining clip from the throttle body and the clamp from the factory intercooler. **(Fig.7,8)**

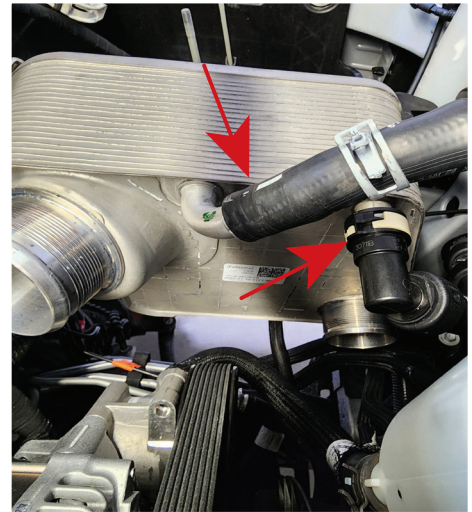


**Fig.7**



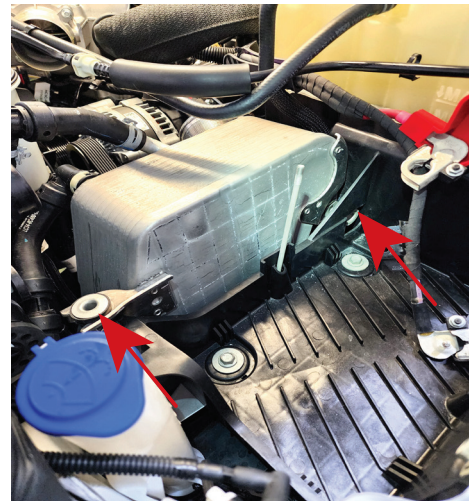
**Fig.8**

**Step 8:** Remove the coolant lines from the factory intercooler. **(Fig.9)**



**Fig.9**

**Step 9:** Begin the removal of the factory intercooler by taking out and safely storing the two 13mm bolts that are currently securing it to the battery tray. You'll need these bolts in a later step of the installation process. **(Fig.10)**



**Fig.10**

**Step 10:** Prepare the PPE intercooler installation with the following:

Install the supplied rubber grommet: **O** **(Fig.11)**

Install the supplied rubber bushing: **P** **(Fig.12)**



**Fig.11**



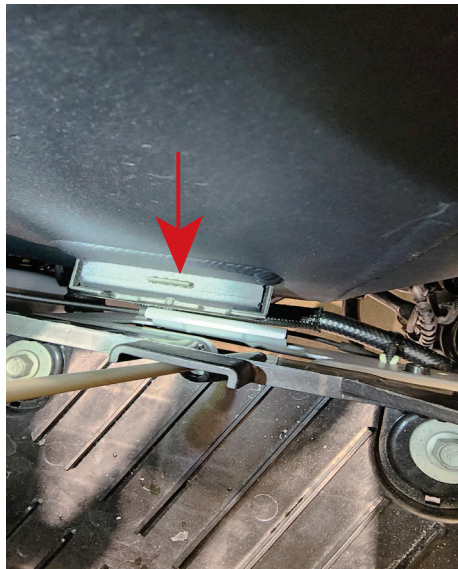
**Fig.12**

**Step 10: Continued:**  
Transfer the U-nut: **(Fig.13)**.



**Fig.13**

**Step 11:** Carefully position the PPE intercooler, making sure the rubber bushing is securely in place on the support bracket located behind the battery tray **(Fig.14)**. Reattach and tighten the intercooler using the two factory 13mm bolts to the battery tray. **(Fig.15, 16)**



**Fig.14**

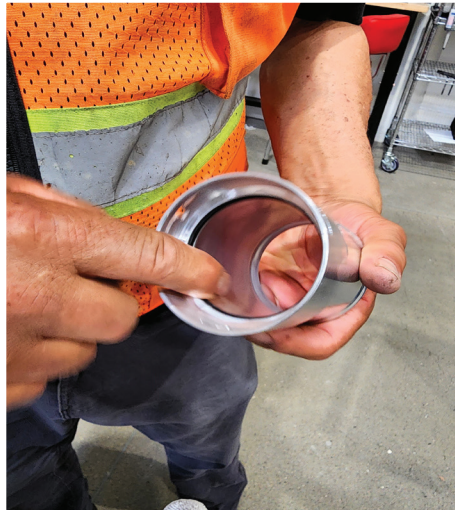


**Fig.15**

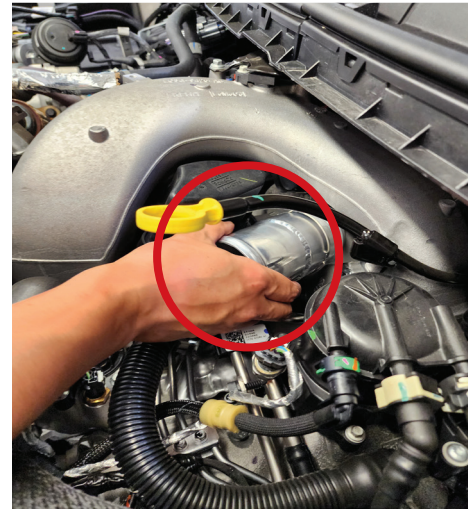


**Fig.16**

**Step 12:** Begin the hot charge pipe installation by ensuring that the clip **D** is securely attached to the turbo adapter **B**. Apply a thin layer of silicone lubricant to the O-ring **C**, (**Fig.17**) and then gently slide the adapter onto the turbo (**Fig.18**).

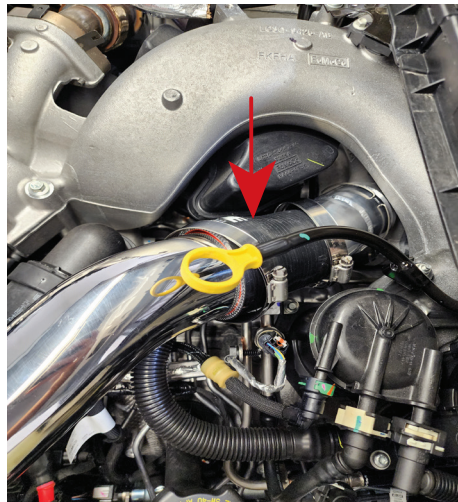


**Fig.17**

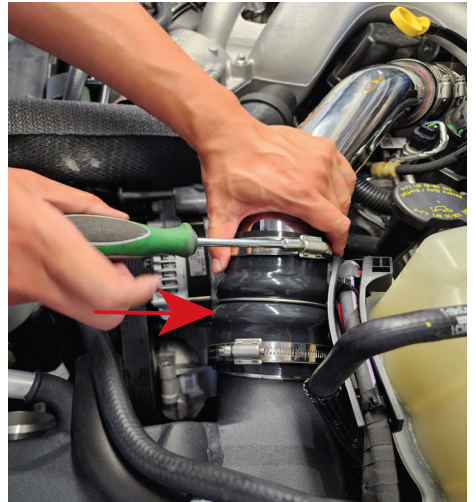


**Fig.18**

**Step 13:** Place the coupler **I** with two 65-89mm clamps **M** onto the turbo adapter, securing it in position. Next, attach the hot side pipe as shown in (**Fig.19**). Afterward, slide the coupler **J** and the two 65-89mm clamps over the hot pipe and onto the inlet of the PPE intercooler (**Fig.20**).



**Fig.19**



**Fig.20**

**Step 14:** Begin the cold charge pipe installation by pre-assembling tube **H**, couplers **K L**, throttle body adapter **E**, and aligning them according to the configuration and orientation depicted in (**Fig.21**). This section will require one 78-102mm clamp **M** & three 65-89mm clamps **N**.



**Fig.21**

**Step 15:** Transfer the factory throttle body adapter clip over to the PPE adapter **E** along with installing the supplied O-ring **F** (Fig.22), then apply a thin layer of silicone lubricant to the O-ring.



**Fig.22**

**Step 16:** Lower the cold side tube assembly until the coupler is fully seated on the PPE intercooler outlet (Fig.23,24).



**Fig.23**



**Fig.24**

**Step 17:** Slide the PPE adapter **E** over the throttle body ensuring the clip is fully locked. Note the PPE logo on the coupler for proper orientation (Fig.25).

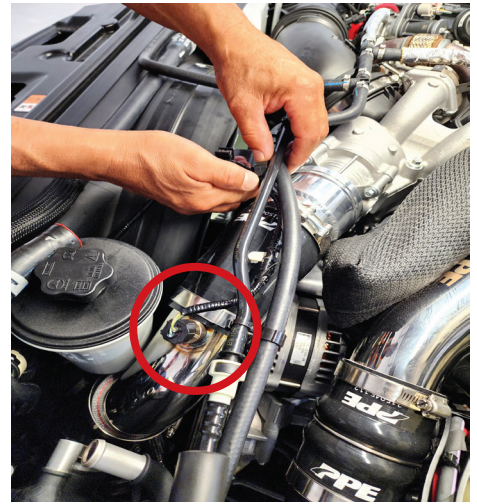


**Fig.25**



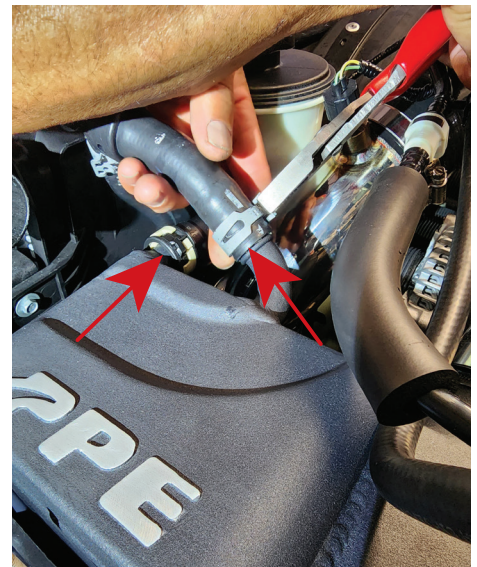
**Step 18:** Carefully adjust the positioning of couplers and charge pipes to achieve optimal fitment, ensuring there is no interference with surrounding components. Once aligned correctly, securely tighten all clamps.

**Step 19:** Install the IAT (Intake Air Temperature) sensor (**Fig.26**).



**Fig.26**

**Step 20:** Reconnect the coolant lines to the PPE intercooler (**Fig.27**).



**Fig.27**

**Step 21:** Reconnect the upper radiator hose (**Fig.28**).



**Fig.28**

**Step 22:** Reinstall and connect the battery along with the hold down bracket.

**Step 23:** Fill the system with the manufacturer recommended coolant.

**Step 24:** Place the supplied CARB E.O. label on a clean, visible location under the hood.



**Fig.29**

**Installation Complete**

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## **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.

Note regarding emissions-related, non-E.O.-legal products: THESE PRODUCTS ARE LEGAL IN CALIFORNIA ONLY FOR RACING VEHICLES THAT MAY NEVER BE USED, OR REGISTERED OR LICENSED FOR HIGHWAY OR OFF-ROAD USE.

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The Seller gives Limited Warranty as to description, quality, merchantability, and fitness for a particular purpose, productiveness, or any other matter of Seller's product sold herewith. The Seller shall not be responsible for the products proper use and service and the Buyer hereby waives all rights other than those expressly written herein. This warranty shall not be extended, altered or varied except by a written instrument signed by Seller and Buyer.

Limited lifetime warranty on all PPE cast aluminum products, and PPE Transmission Coolers. Three (3) year limited warranty on PPE Manifolds and Up-Pipes Kits, and OEM-Length Up-Pipes. One (1) year limited warranty on all other PPE products from the date of sale to original buyer and limited solely to the parts contained within the products kit. All products that are in question of Warranty must be returned prepaid to the Seller and must be accompanied by a dated proof of purchase receipt. All Warranty claims are subject to approval by Seller. Under no circumstances will the Seller be liable for any labor charged or travel time incurred in diagnosis for defects, removal, or re-installation - of this product or any other contingent expenses. Under no circumstances will the Seller be liable for any damage or expenses incurred by reason of the use or sale of any such equipment. In the event that the buyer does not agree with this agreement: the buyer may promptly return this product, in a new and unused condition in its original packaging, with a dated proof of purchase to the place of purchase within ten (10) days from date of purchase for a full refund. The installation of this product indicates that the buyer has read and understands this agreement and accepts its terms and conditions.



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