



***advanced FLOW engineering*** BladeRunner – Charge Pipe Combo Kit

**Instruction Manual** P/N: 46-20684-B

Make: **Ford**

Model: **F-250**

Year: **2023-2024**

Engine: **V8-6.7L (td)**

Make: **Ford**

Model: **F-350**

Year: **2023-2024**

Engine: **V8-6.7L (td)**



- Please read the entire instruction manual before proceeding.
- Ensure all components listed are present.
- For technical support please call 951-493-7185.
- Ensure you have all necessary tools before proceeding.
- Do not attempt to work on your vehicle when the engine is hot.
- Retain factory parts for future use.

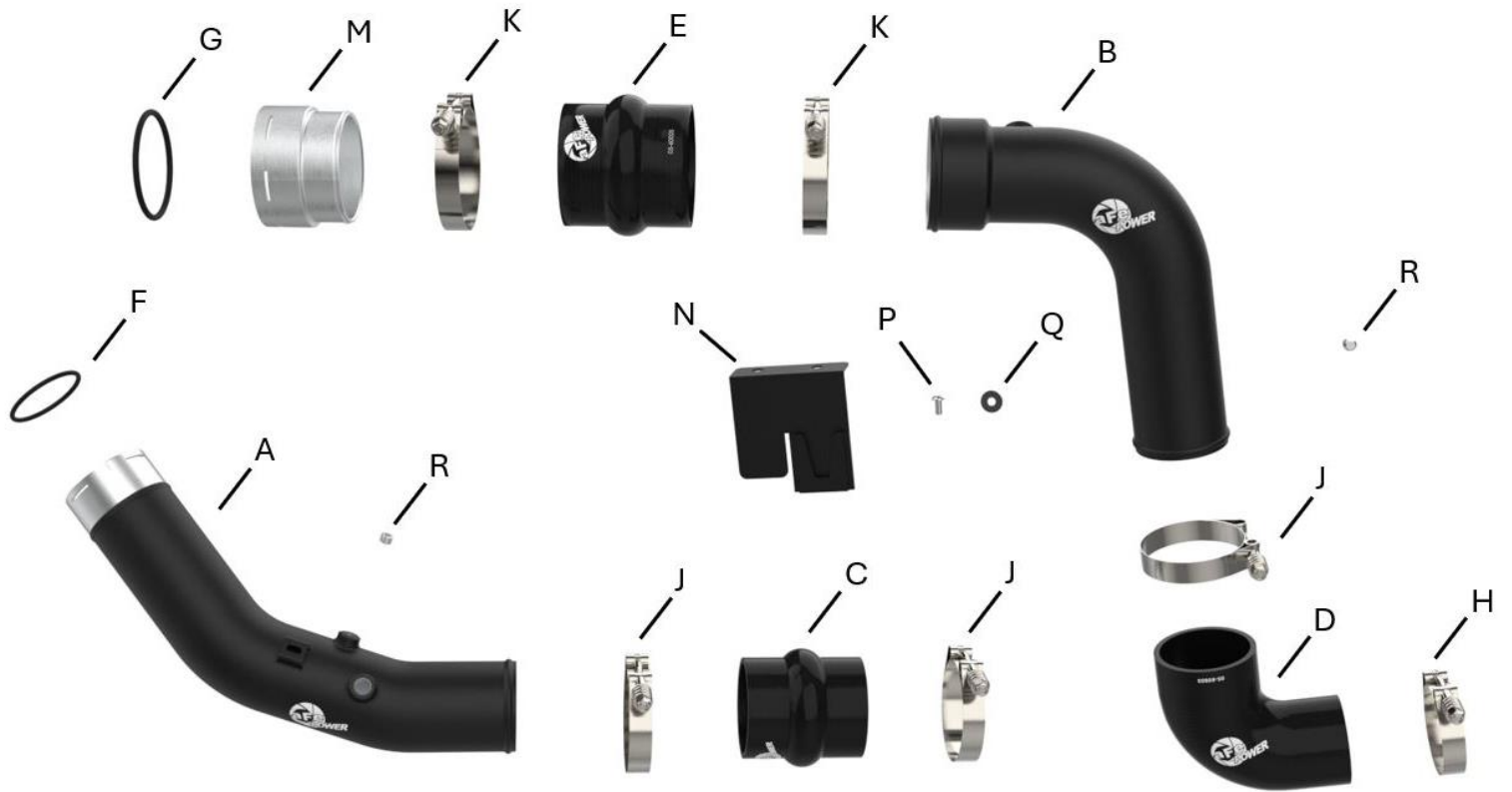
| Label | Qty. | UoM | Description  | Part Number |
|-------|------|-----|--|-------------|
| A     | 1    | Ea. | Tube, Hot Side: 46-20688                           | 05-61422B   |
| B     | 1    | Ea. | Tube, Cold Side: 46-20689                          | 05-61338B   |
| C     | 1    | Ea. | Coupling, Silicone Hump: 3"ID x 4"L                | 05-60012    |
| D     | 1    | Ea. | Coupling, Silicone Rdr: (3"x2.63") x 1.30"L 90 Deg | 05-60803    |
| E     | 1    | Ea. | Coupling, Silicone Hump: 3.50"ID x 4"L             | 05-60025    |
| F     | 1    | Ea. | O-Ring, 60mm ID x 4mm W                            | 05-60615    |
| G     | 1    | Ea. | O-Ring, 80m ID x 5mm W                             | 05-61136    |
| H     | 1    | Ea. | Clamp, Spring Loaded T-Bolt: (3" - 3.25") (ss)     | 05-60435    |
| J     | 3    | Ea. | Clamp, Spring Loaded T-Bolt: (3.25" - 3.50") (ss)  | 03-50530    |
| K     | 2    | Ea. | Clamp, Spring Loaded T-Bolt: (3.75" - 4") (ss)     | 05-60024    |
| M     | 1    | Ea. | Adaptor: 05-60596                                  | 05-60605    |
| N     | 1    | Ea. | Bracket, P/S Reservoir Relocation: 46-20149        | 05-60621    |
| P     | 1    | Ea. | Screw, Btn Hd Socket: M6x1x10                      | 03-50113    |
| Q     | 1    | Ea. | Washer, Flat: M6                                   | 03-50070    |
| R     | 2    | Ea. | Plug, Hex Hd Socket: 1/8" NPT (Zn Plt)             | 03-50029    |

**Installation will require the following tools:**

7mm, 10mm, 11mm sockets , 4mm allen, 3/16" allen, extensions, ratchet, flat screwdriver, pick, teflon tape, grease.

Warranty Information available at <https://afepower.com/contact#warranty>

**Emissions Disclaimer:** This product is not currently CARB exempt and is not available for purchase in California or for use on any vehicle registered with the California Department of Motor Vehicles.



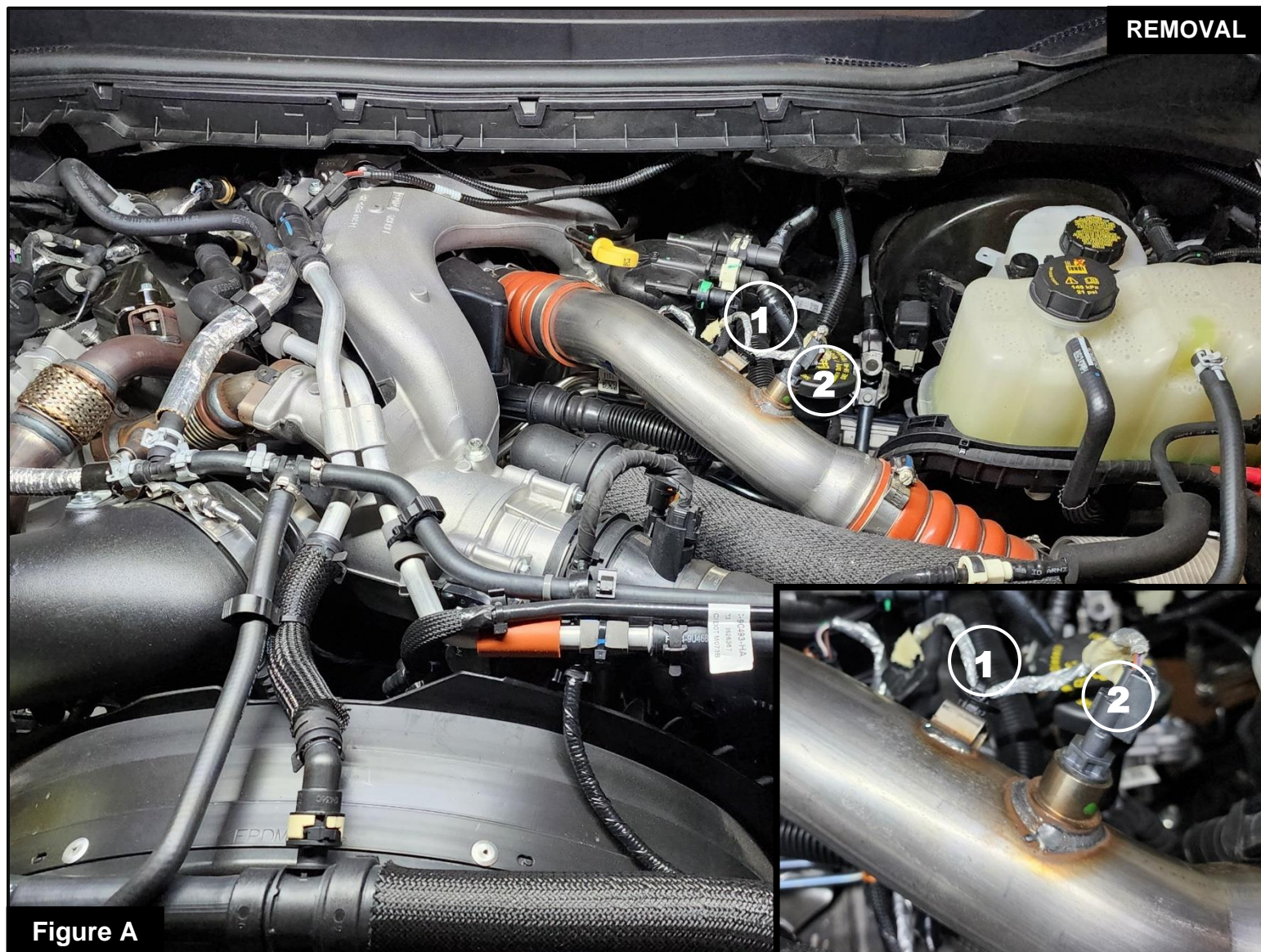


Figure A

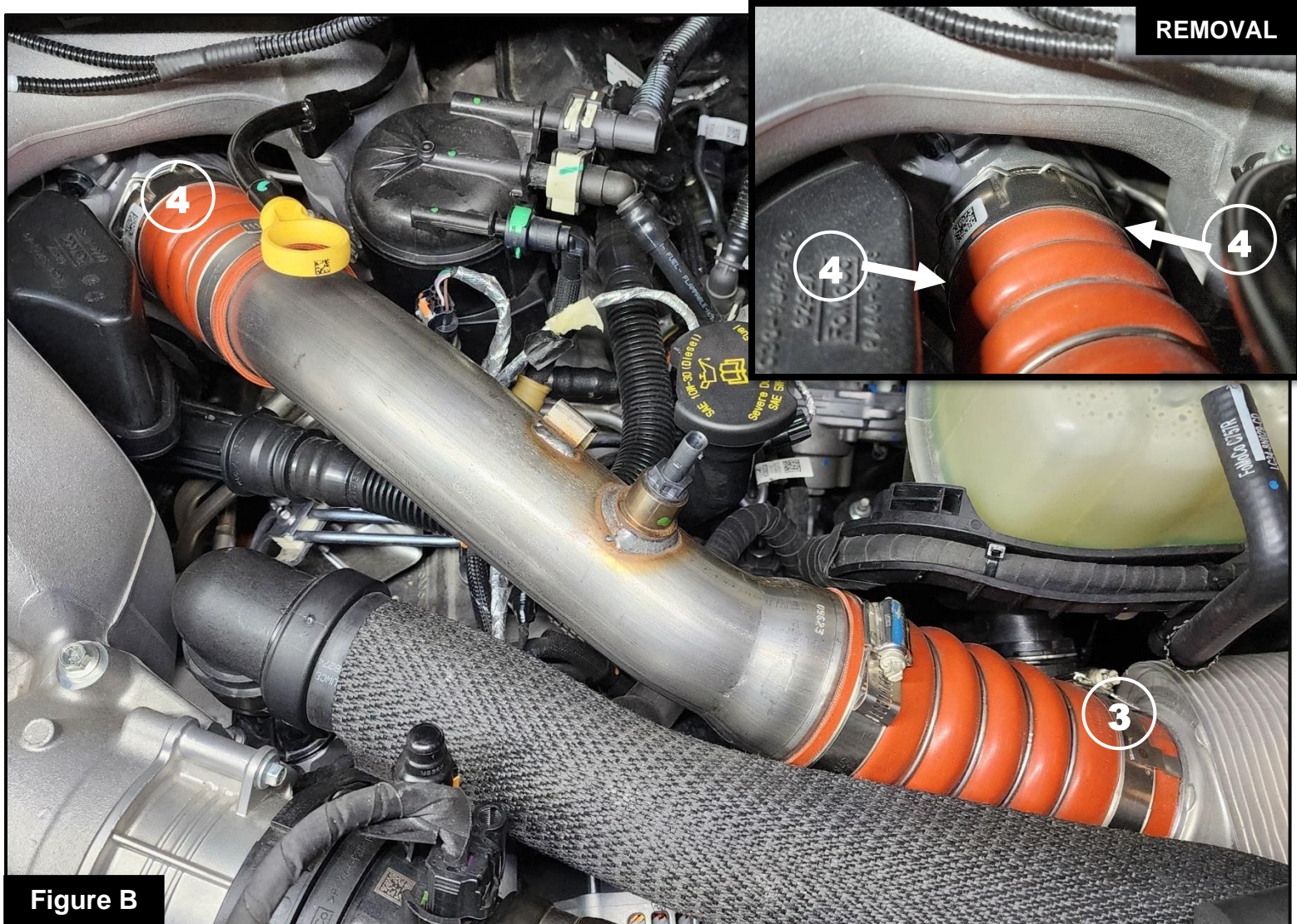
### Refer to Figure A for Steps 1-3

Step 1: Disconnect the negative battery cables.

Step 2: Release the wiring harness from the mount on the factory hot side charge pipe (1).

Step 3: Release the security tab, by sliding it up, then disconnect the temperature sensor connector from the sensor on the factory hot side charge pipe (2).





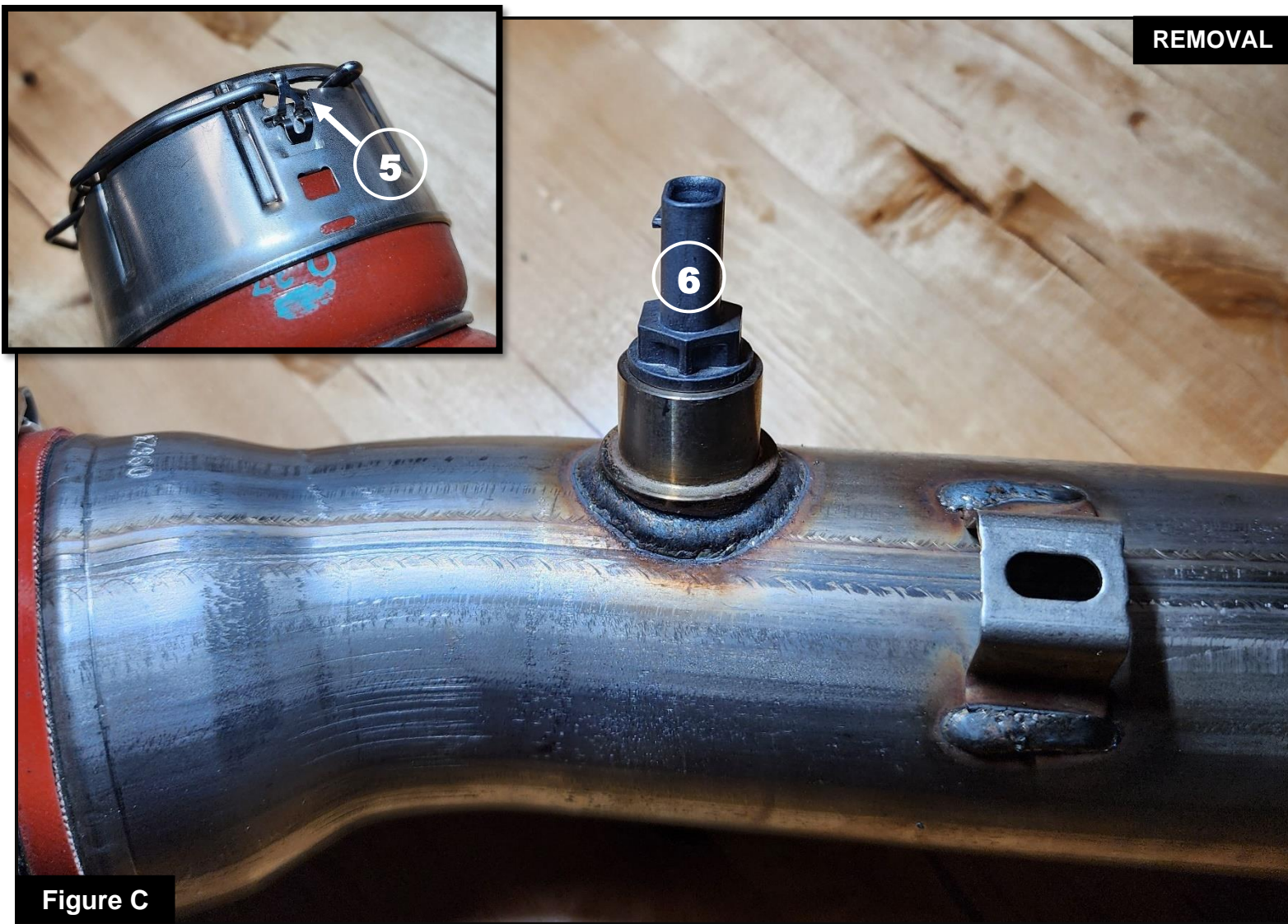
**Figure B**

### **Refer to Figure B for Steps 4-5**

Step 4: Loosen the clamp securing the hot side charge pipe onto the intercooler inlet (3)

Step 5: Expand the retaining clip securing the hot side charge pipe onto the turbo outlet, then remove the factory hot side charge pipe from the vehicle (4)



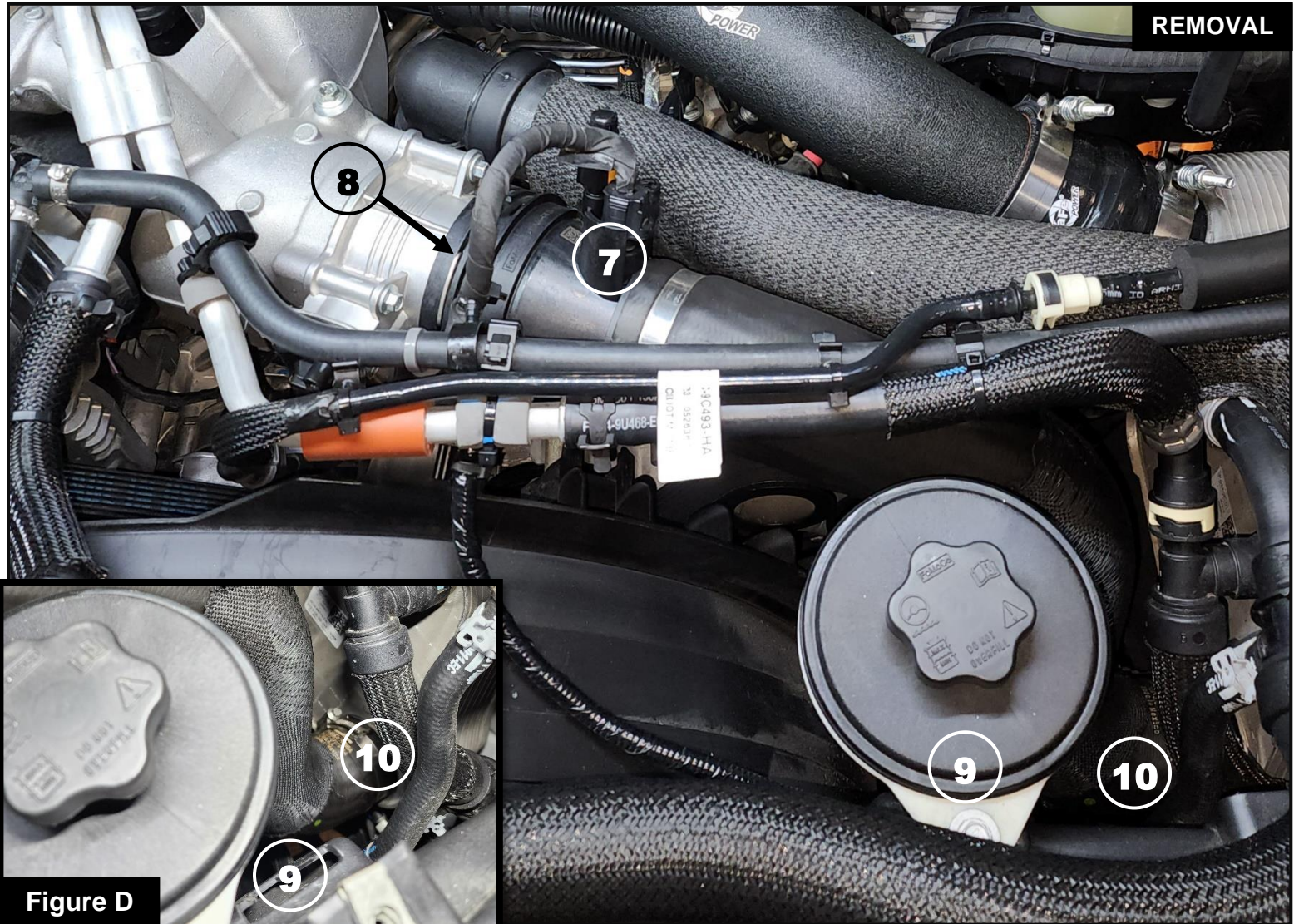


### **Refer to Figure C for Steps 6-7**

Step 6: Remove the factory retaining clip from the factory hot side charge pipe (5). Do this by gently lifting the tabs up on each side and sliding the clip out of the slots, set aside for later use.

Step 7: Remove the factory temperature sensor from the hot side charge pipe (6) set aside for use later.





**Refer to Figure D for Steps 8-11**

- Step 8: Disconnect the temperature sensor connector from the sensor on the factory cold side charge pipe (7).
- Step 9: Remove the retaining clip securing the cold side charge pipe onto the engine inlet (8) set aside for use later.
- Step 10: Remove the screw securing the power steering reservoir to the fan shroud, then lift the reservoir out of its slot and set it to the side (9).
- Step 11: Loosen the clamp securing the cold side charge pipe to the intercooler, then remove the cold side charge pipe from the vehicle (10).





Figure E

### **Refer to Figure E for Steps 12-14**

**Note: Be sure to use thread sealant on the plug or sensor to prevent any leaking**

Step 12: If you are not using any aftermarket sensors, install the supplied 1/8" NPT plug into the smaller threaded fitting on the aFe POWER hot side charge pipe (11)

**Note: Be sure to lubricate the O-ring with grease to prevent it from tearing during installation.**

Step 13: Install the temperature sensor from the factory hot side charge pipe into the aFe POWER hot side charge pipe (12) do not over tighten.

Step 14: Install the supplied aFe POWER silicone hump coupling, 3"ID x 4"L, with one supplied 3.25" spring loaded spring loaded T-Bolt clamp onto the aFe POWER hot side charge pipe (13) do not tighten the clamp yet.





**Figure F**

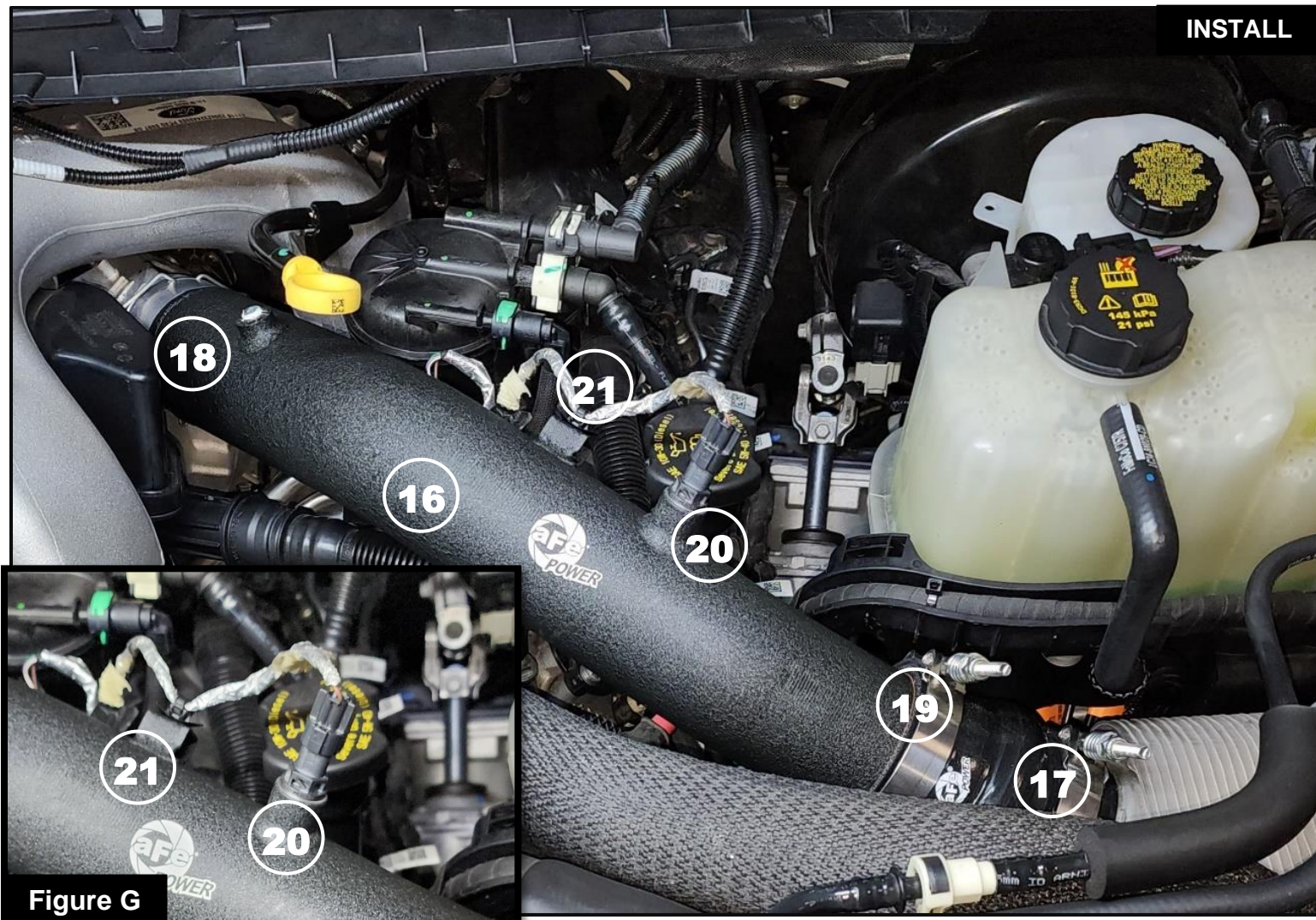
**Refer to Figure F for Steps 15-16**

***Note: Be sure to lubricate the O-ring with grease to prevent it from tearing during installation.***

Step 15: Install the 60mm ID x 4mm W O-ring into the groove on the inside of the supplied aFe POWER hot side charge pipe (14)

Step 16: Install the factory retaining clip from Step 6 onto the aFe POWER hot side charge pipe (15)





## Refer to Figure G for Steps 17-21

**Note: Be sure to thoroughly clean all oil residue off of the connections before installing any of the aFe couplings onto the vehicle.**

Step 17: Place one 3.25" spring loaded T-Bolt clamp onto intercooler inlet, then install the aFe POWER hot side charge pipe into the vehicle starting at the turbo outlet but do not allow the retaining clip to snap into place (16)

Step 18: Install the coupler onto the intercooler inlet and tighten the clamp to the intercooler (17)

Step 19: Slide the aFe POWER hot side charge pipe onto the turbo outlet (18) and ensure the retaining clip snaps into place all the way around. Tighten the clamp to the hot side charge pipe (19)

Step 20: Reconnect the temperature sensor electrical connector to the sensor (20)

Step 21: Secure the wire harness to the mount on the aFe POWER hot side charge pipe (21)



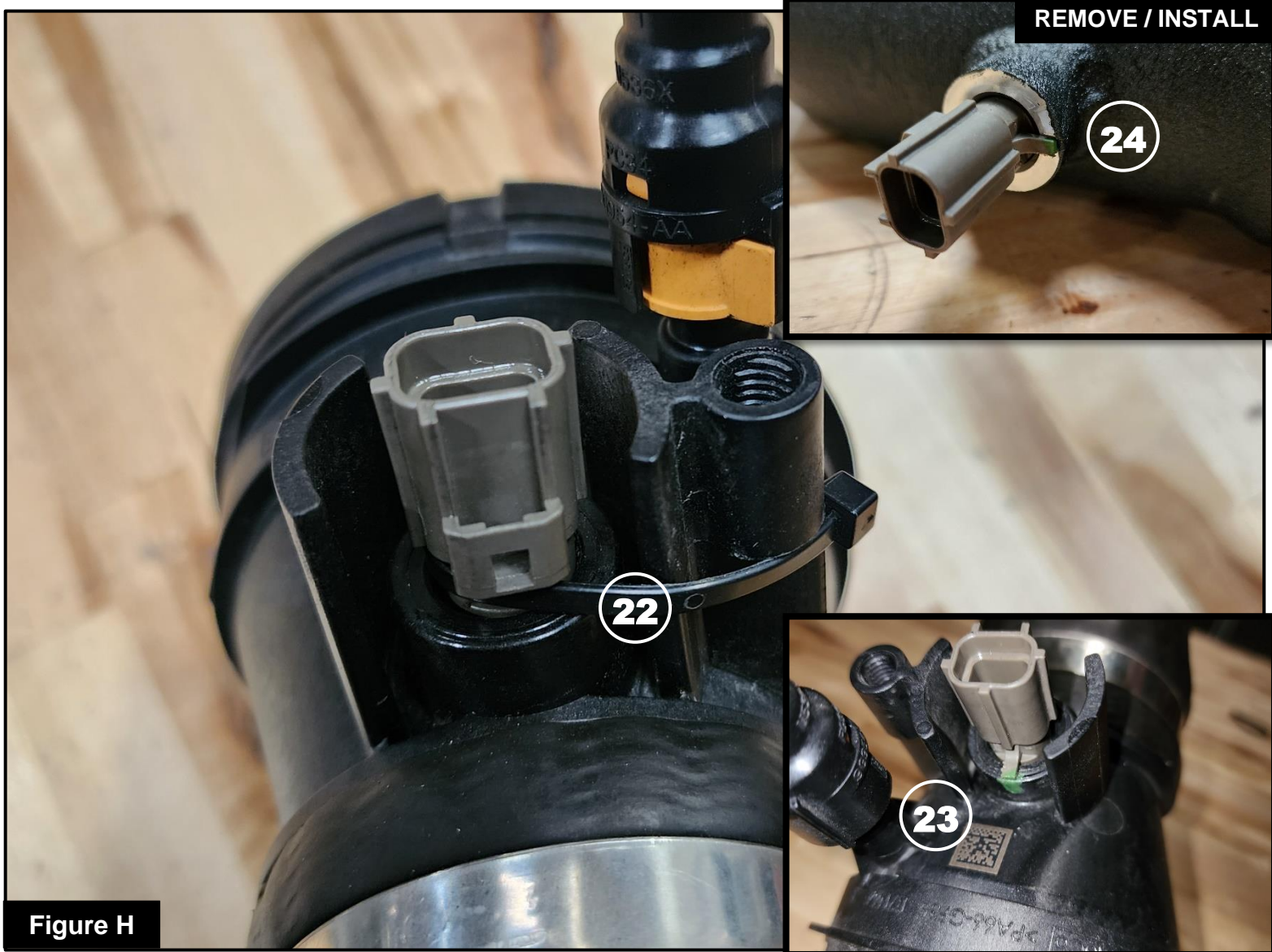


Figure H

## **Refer to Figure H for Steps 22-24**

Step 22: Remove the zip tie from the factory cold side charge pipe temperature sensor (22) Do this by just sliding it up and working it around the ledges.

Step 23: Remove the factory temperature sensor from the cold side charge pipe (23) Do this by gently lifting the tab and twisting the sensor counterclockwise and pulling it out.

**Note: Be sure to lubricate the O-ring with grease to prevent it from tearing during installation.**

Step 24: Install the temperature sensor from the factory cold side charge pipe into the aFe POWER cold side charge pipe (24) twist it to lock it into place on the tab.




**Figure I**

## **Refer to Figure I for Steps 25-28**

Step 25: Install the supplied aFe POWER silicone elbow reducer coupling, 3" x 2.63" x 90Deg and one 3.25" spring loaded T-Bolt clamp onto the cold side charge pipe (25) do not tighten the clamp yet.

Step 26: Place the supplied 3.00" spring loaded T-Bolt clamp onto the end of the coupling from the previous step (26)

Step 27: Install the supplied aFe POWER silicone hump coupling, 3.50"ID x 4"L and one 3.75" spring loaded T-Bolt clamp onto the cold side charge pipe (27)

Step 28: Place one supplied 3.75" spring loaded T-Bolt clamp onto the end of the coupling from the previous step (28) do not tighten the clamp yet.




**Figure J**

### **Refer to Figure J for Steps 29-31**

**Note: Be sure to use thread sealant on the plug or sensor to prevent any leaking**

Step 29: If you are not using any aftermarket sensors, install the supplied 1/8" NPT plug into the threaded fitting on the aFe POWER cold side charge pipe (29)

**Note: Be sure to lubricate the O-ring with grease to prevent it from tearing during installation.**

Step 30: Install one 80mm ID x 5mm W O-ring into the groove on the inside of the supplied aFe POWER engine inlet adaptor (30)

Step 31: Install the factory engine inlet retaining clip from Step 9 onto the aFe POWER engine inlet adaptor (31)





Figure K

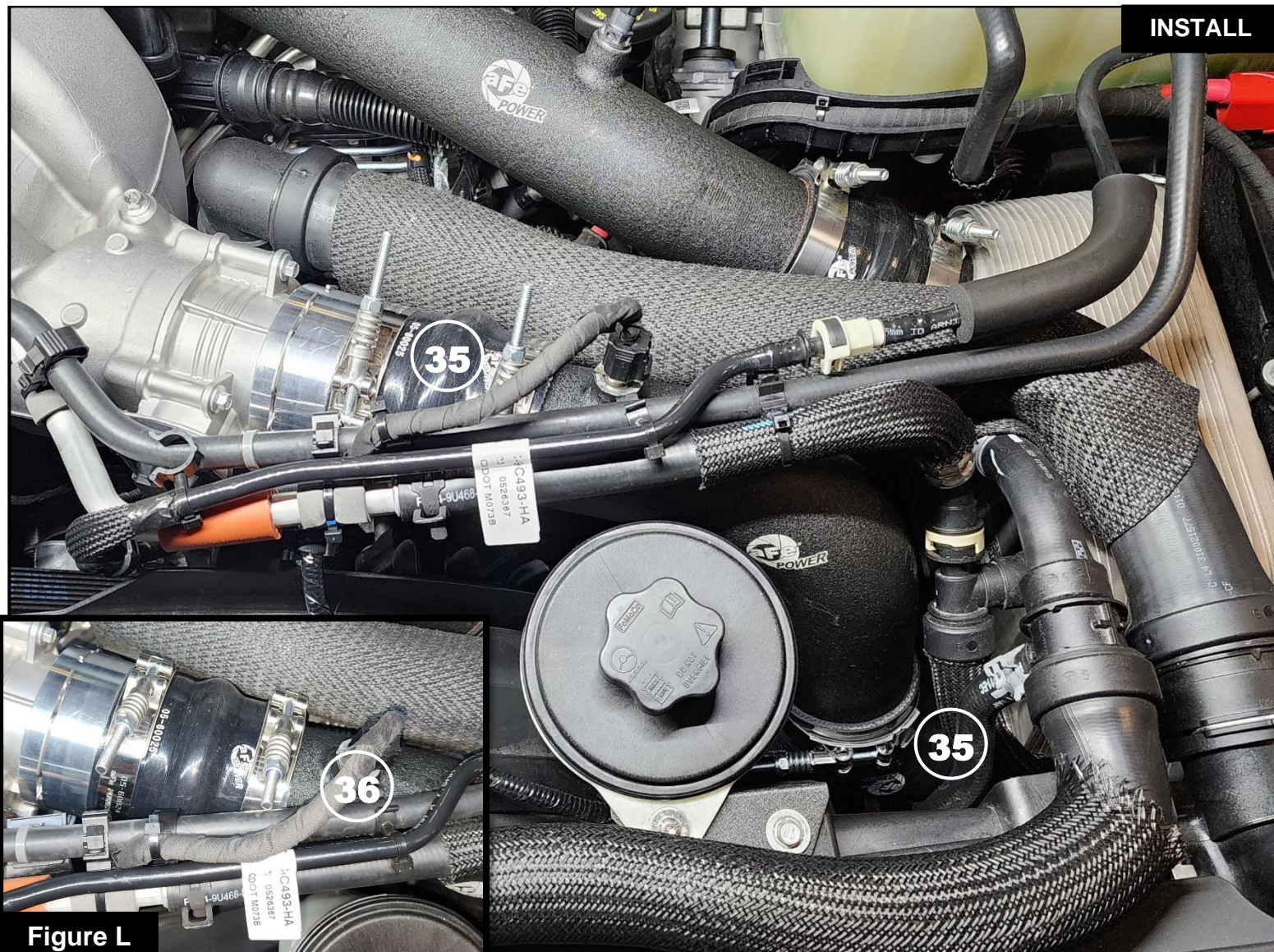
### **Refer to Figure K for Steps 32-34**

Step 32: Install the aFe POWER engine inlet adaptor onto the engine (32) ensure the retaining clip snaps into place all the way around.

Step 33: Install the supplied aFe POWER P/S reservoir bracket into the factory location for the power steering reservoir and secure it with the factory screw (33)

Step 34: Install the power steering reservoir onto the aFe POWER P/S bracket and secure with the supplied M6x1x10 screw and M6 washer (34)





### **Refer to Figure L for Steps 35-39**

Step 35: Install the aFe POWER cold side charge pipe into the vehicle by first connecting to the intercooler and then to the engine inlet adaptor (35) do not tighten the clamps yet.

Step 36: Ensure the aFe POWER cold side charge pipe is not touching anything, then tighten all of the clamps.

Step 37: Unclip the plastic clips securing the temperature sensor harness to the coolant hose. Reroute the harness so that it reaches the aFe POWER charge pipe and connect it to the sensor (36)

Step 38: Reconnect the negative battery cables.

Step 39: Install is now complete.

**NOTE: Check all clamps, and connectors are secure after 100-200 miles**



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