

## ***advanced FLOW engineering*** Turbo Inlet Pipes

### **Instruction Manual P/N: 59-20003**

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Make: <b>FORD</b>	Model: <b>F-150 RAPTOR</b>	Year: <b>2017-2020</b>	Engine: <b>V6-3.5L(tt)</b>
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Make: <b>FORD</b>	Model: <b>EXPEDITION</b>	Year: <b>2018-2021</b>	Engine: <b>V6-3.5L(tt)</b>
Make: <b>LINCOLN</b>	Model: <b>NAVIGATOR</b>	Year: <b>2018-2021</b>	Engine: <b>V6-3.5L(tt)</b>



- Please read the entire instruction manual before proceeding.
- Ensure all components listed are present.
- If you are missing any of the components, call customer support at 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.	Description	Part Number
A	1	Turbo Inlet Pipe (Driver Side)	05-5920003B1
B	1	Turbo Inlet Pipe (Passenger Side)	05-5920003B2
C	1	Coupling, Silicone Reducer (Driver Side)	05-01581
D	1	Coupling, Silicone Reducer (Passenger Side)	05-01582
E	2	Clamp, SmartSeal, #032	03-50655
F	2	Clamp, SmartSeal, #044	03-50656
G	1	Hose, Silicone with Quick-Disconnect (18" Long)	05-01577*
H	1	Hose, Silicone with Quick-Disconnect (28" Long)	05-01585*
I	2	Cable Tie, 12"	05-60167

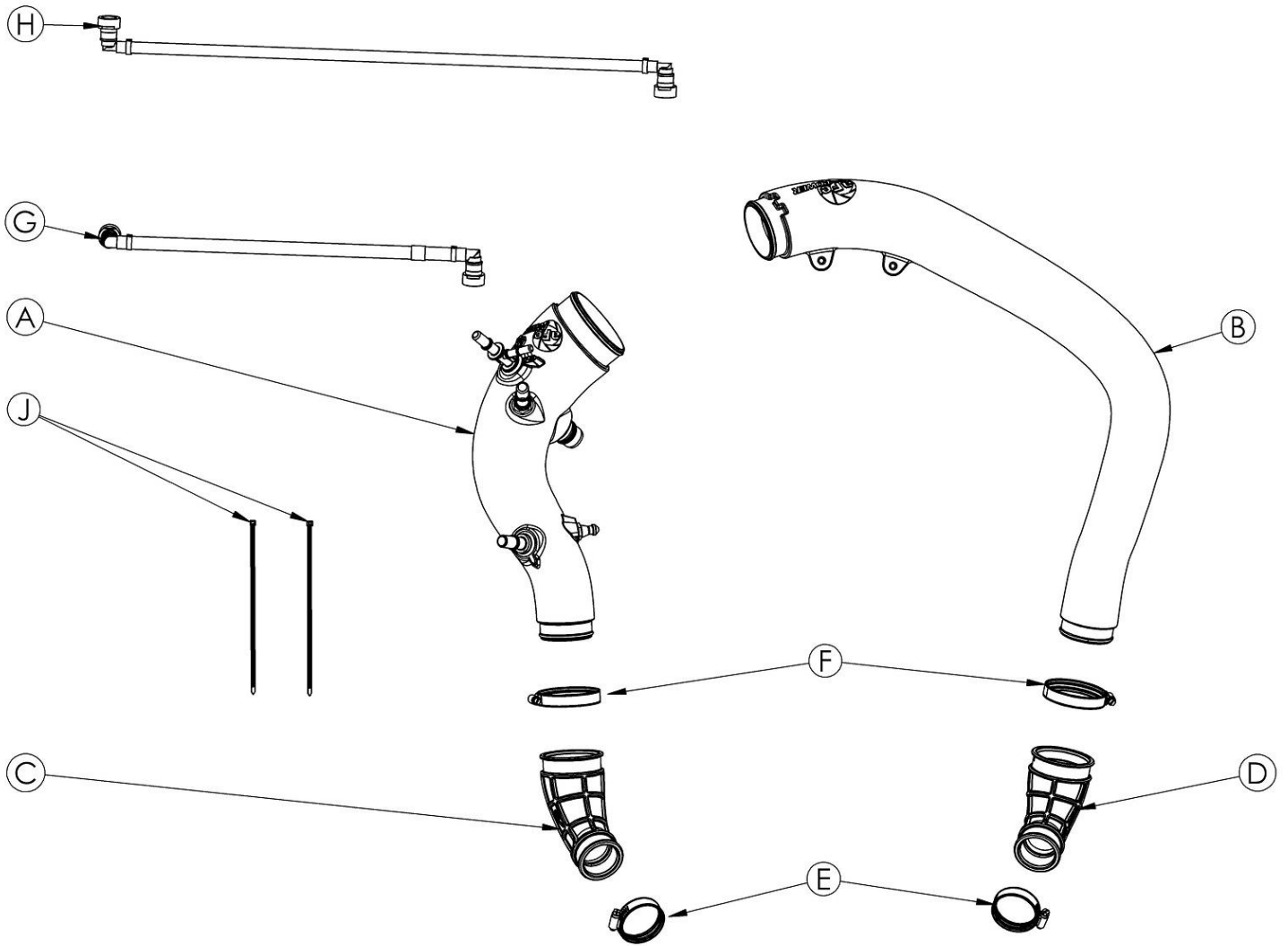
\* Used on 2019-2020 models only

**Installation will require the following tools:**

Long Flathead screwdriver or trim removal tool, 7mm, 8mm, 13mm Nut drivers or Socket and Ratchets with extensions, Lubricant Spray

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 Step 1**

**Note:** Steps 1 to 8 describe how to remove the factory air intake system. If you have an aFe POWER or other aftermarket intake, please refer to the instructions that were included for removal of that intake.

Step 1: Unplug the Intake Air Temperature sensor harness, and unclip it from the intake tube.

**Figure B****Refer to Figure B for Steps 2-5**

Step 2: Loosen the two clamps connecting the intake tube to the turbo inlet tubes.

Step 3: Unclip the coolant line from the intake tube.

Step 4: Unclip the top of the factory air box and remove the intake tube, air filter and top of the air box from the vehicle.

Step 5: Remove the two plastic rivets securing the front scoop of the housing.



**Figure C**

**Refer to Figure C for Steps 6-8**

Step 6: Remove the wastegate acuator from the housing.

Step 7: Unclip the wire from the back of the air box.

Step 8: Remove the 13mm screw securing the air box to the fender, then pull the factory air box out of the truck.



Figure D

**Refer to Figure D for Step 9**

Step 9: Loosen the clamp at the driver side turbo, using a 7mm nut driver, or flathead screwdriver. It is easiest to access from the driver side wheel well.

Note: It is recommended to remove the wheel well covers to access the turbos.



Figure E

**Refer to Figure E for Step 10**

Step 10: Disconnect the 3 fittings from the driver side turbo inlet. Use a flathead screwdriver to unlock the fittings with green locking tabs. Squeeze the locking tabs together to unlock the fitting with the red tabs.



**Figure F****Refer to Figure F for Step 11**

Step 11: Disconnect the crankcase vent by pulling and holding the gray locking tab to left, while pulling upward.

**Figure G****Refer to Figure G for Step 12**

Step 12: Disconnect the the bypass valve hose from the bottom of the turbo inlet, rotate the gray portion while pulling downward.

**Figure H****Refer to Figure H for Step 13**

Step 13: Lubricate the turbo inlet grommet and mounting peg, then pull the tube out of the grommet in the direction of the arrow. Remove the turbo inlet tube from the vehicle.



Figure I

**Refer to Figure I for Steps 14-15**

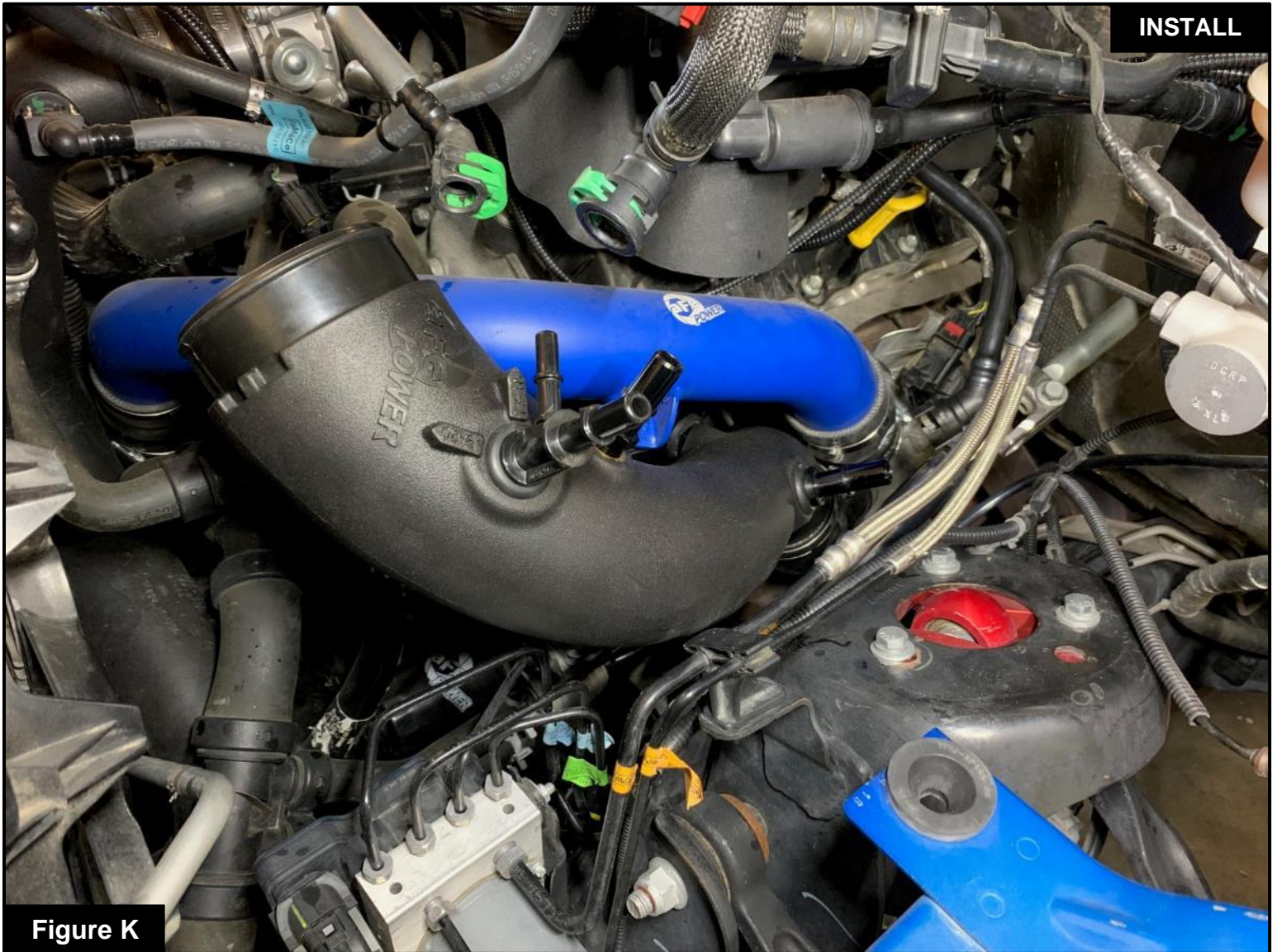
- Step 14: Loosely install the clamps on the ends of the driver side coupling, the coupling is labeled "DS."
- Step 15: Install the coupling and clamps onto the driver side turbo, oriented as shown. Do not tighten the clamps yet.

**Figure J****Refer to Figure J for Steps 16-17**

Step 16: Orient the plastic vent T-fitting to the markings on the tube, depending on if your vehicle is a 2017-2018 vehicle, or if it is a 2019-2020 vehicle.

Step 17: Confirm that the crankcase aluminum vent fitting is oriented correctly. The small cutout on the flange of the aluminum fitting should be in line with the arrow on the tube, as shown in the smaller figure above.

**If you had an aFe POWER intake or are installing an aFe POWER intake, do NOT place the small white vent insert into the aFe POWER turbo inlet pipe.**



**Refer to Figure K for Step 18**

Step 18: Install the aFe POWER driver side turbo inlet pipe by first sliding the tube into the coupling and then pushing the mounting peg into the factory grommet. Make sure the coupling is seated correctly on the turbo and the turbo inlet.

**Do not tighten clamps yet.**

2017-2018 Only

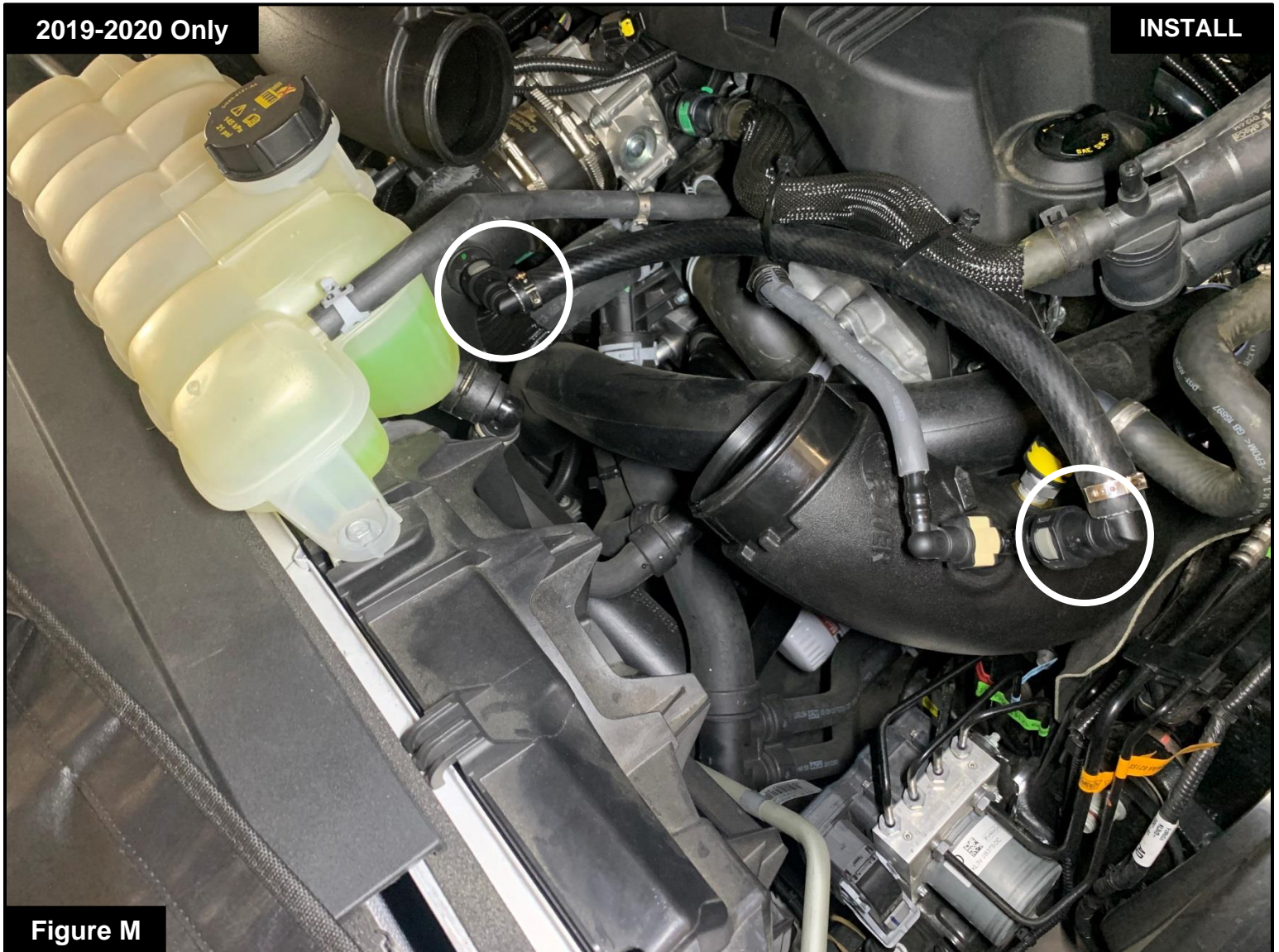
INSTALL



Figure L

**Refer to Figure L for Step 19 ( For 2017-2018 Vehicles Only)**

Step 19: For 2017 – 2018 vehicles only, Reconnect all of the quick disconnect fittings on to the driver side turbo inlet, including the crankcase fitting closer to the turbo.



**Figure M**

**Refer to Figure M for Steps 20-21 ( For 2019-2020 Vehicles Only)**

Step 20: Disconnect the factory hose connected to the charge pipe just before the throttle body.

Step 21: Replace it with the provided shorter hose, orient as shown and connect it to the T-fitting on the aFe POWER turbo inlet. Make sure that the side with the white label goes on the T-fitting side. Secure the hose with a provided cable tie.





2019-2020 ONLY

INSTALL

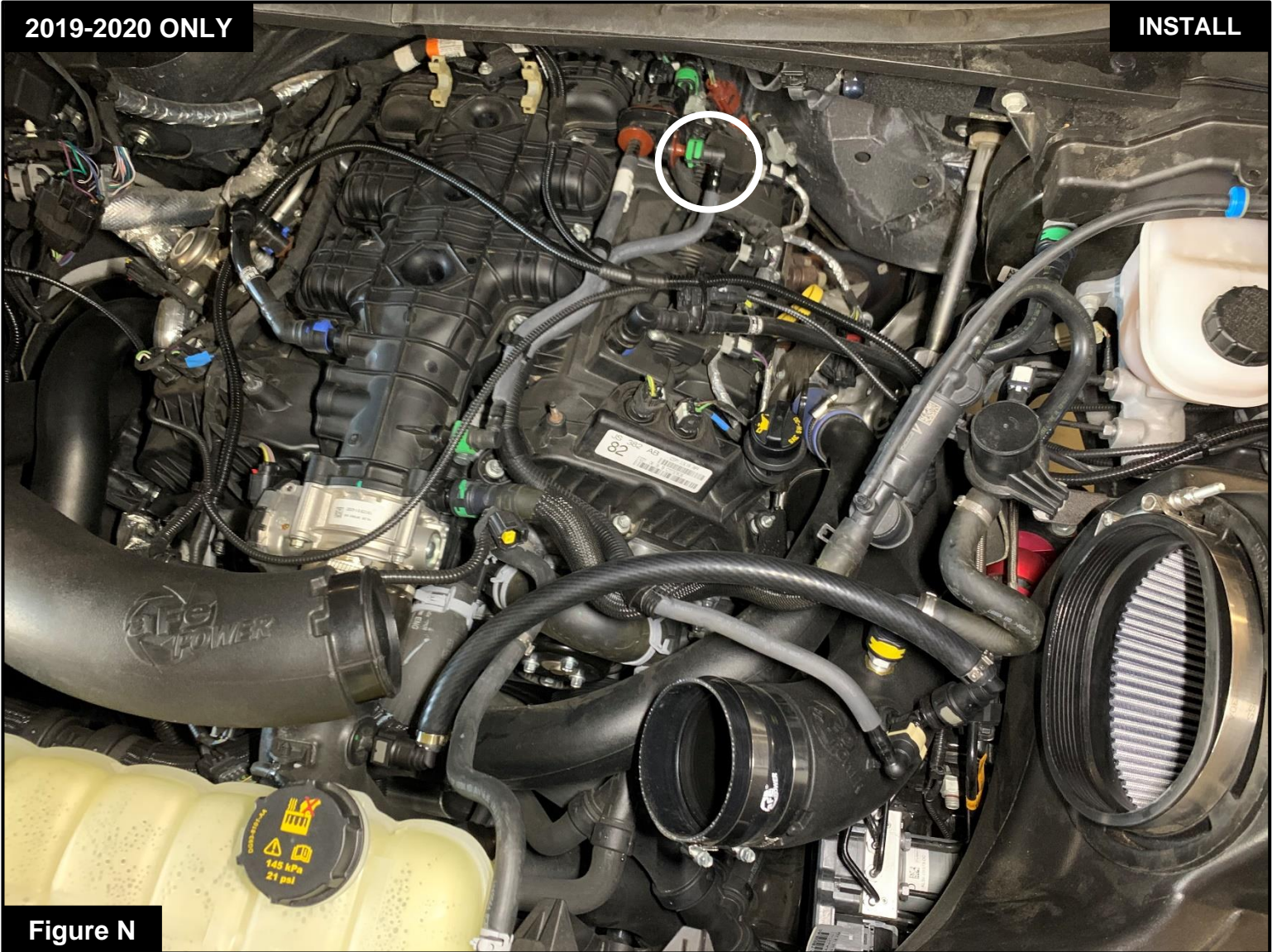


Figure N

**Refer to Figure N for Steps 22-23 ( For 2019-2020 Vehicles Only)**

Step 22: Remove the engine cover.

Step 23: Disconnect the longer factory hose from the connection to the engine by the firewall and remove the hose.

2019-2020 ONLY

INSTALL

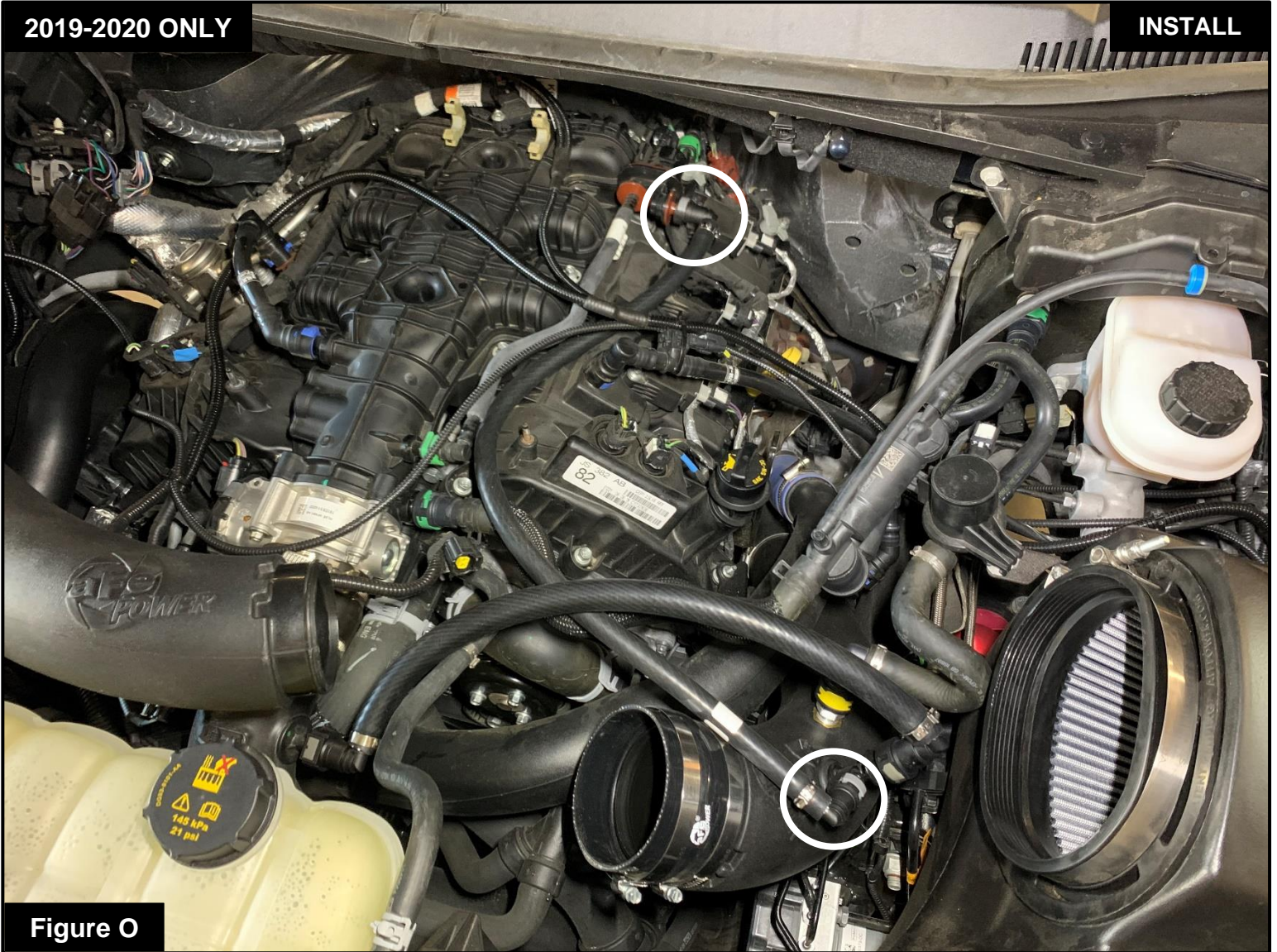


Figure O

**Refer to Figure O for Steps 24-26 ( For 2019-2020 Vehicles Only)**

Step 24: Replace the factory hose with the longer provided hose. Secure the hose with a provided cable tie.

Step 25: Reconnect the two last remaining quick disconnect fittings, including the crankcase fitting closer to the turbo.

Step 26: Re-install the engine cover.

**Figure P****Refer to Figure P for Steps 27-28**

Step 27: Reconnect the bypass valve vent tube to the bottom of the turbo inlet pipe.

Step 28: Verify all connection are correctly installed on the driver side aFe POWER turbo inlet pipe.

**Figure Q****Refer to Figure Q for Step 29**

Step 29: Using a flathead screwdriver or trim removal tool, unclip the Intake Air Temperature harness from the factory passenger side turbo inlet.



Figure R

**Refer to Figure R for Step 30**

Step 30: Loosen the clamp at the passenger side turbo, using a 7mm nut driver, or flathead screwdriver. It is easiest to access from the passenger side wheel well.



Figure S

**Refer to Figure S for Steps 31-32**

Step 31: Loosen the top clamp securing the charge pipe, and lift the charge pipe out of its mounting grommet to allow more clearance. There is no need to completely remove the charge pipe. Make sure to lubricate the grommet first. (aFe POWER Charge pipe shown on the pictures)

Step 32: After lubricating the grommet, pull the passenger side turbo inlet out of its mounting grommet. Remove the turbo inlet from the vehicle.

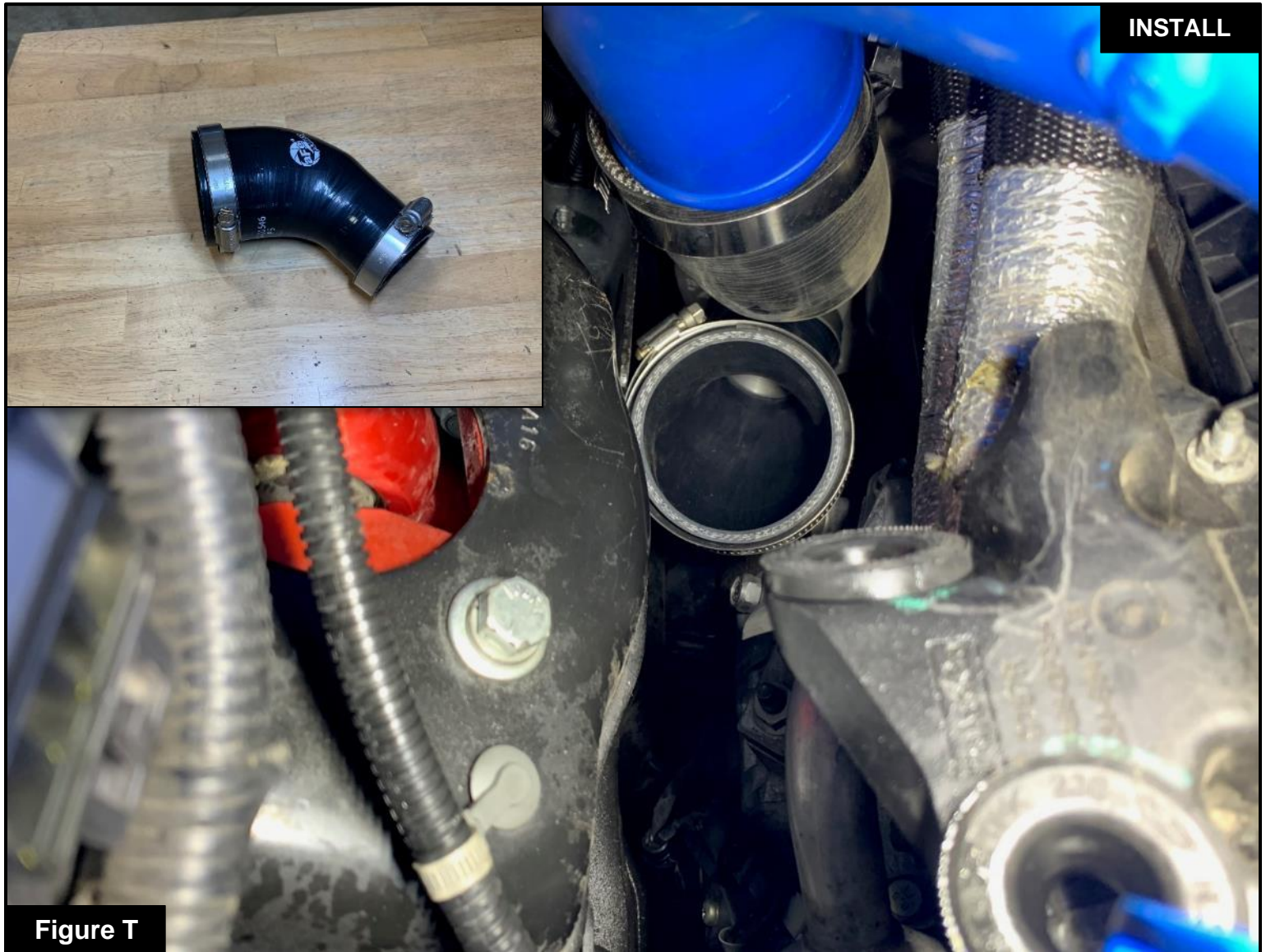


Figure T

**Refer to Figure T for Steps 33-34**

Step 33: Loosely install the clamps on the ends of the passenger side coupling, the coupling is labeled "PS."

Step 34: Install the coupling and clamps onto the turbo, oriented as shown. Do not tighten the clamps yet.



**Refer to Figure U for Steps 35-36**

Step 35: Install the aFe POWER passenger side turbo inlet by first sliding the tube into the coupling, then pushing the mounting peg into the grommet. Make sure the coupling is seated correctly on the turbo and the turbo inlet.

**Do not tighten clamps yet.**

Step 36: Reinstall the charge pipe into the mounting grommet and its coupling.



**Figure V****Refer to Figure V for Step 37**

Step 37: Secure the IAT sensor harness onto the aFe POWER passenger side turbo inlet, by pressing the clips into the threaded inserts.



**Figure W**

**Refer to Figure W for Step 38**

Step 38: Reinstall the air intake system using Steps 1 to 8 as a reference.



Figure X

**Refer to Figure X for Steps 39-40**

Step 39: Make any final adjustments needed to align the driver side coupling, then tighten both clamps.

Repeat this step for the passenger side coupling.

Step 40: Retighten the clamps on the charge pipe.



**Figure Y**

## **Refer to Figure Y for Step 41**

Step 41: Verify all clamps and connections are secured. Your installation is now complete. Thank you for choosing aFe POWER!



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