

# INSTALL INSTRUCTIONS FOR 83-1000

## PART#: 83-1000



PRINT

### Vehicle Application

YEAR: 2011-2016

MAKE: Ford

MODEL: F-250/F-350

ENGINE: 6.7L Powerstroke

#### Note:

This Charge Air Cooler Pipe Kit may not fit with the following aftermarket parts installed:

- Aftermarket Intercooler
- Aftermarket Radiator and/or Coolant Hoses
- Aftermarket Fan or Fan Shroud
- Aftermarket Power Steering Fluid Reservoir
- Aftermarket Hood

### Tools Required

- 8mm Socket and Wrench
- 11mm Deep Socket
- 10" Socket Extension or 4" + 6" Socket Extensions
- Panel Popper
- Pick
- Small Flat Blade Screwdriver

- Wire Cutters
- Pliers
- Torque Wrench, 75 in-lb setting

**Note:** Approximate Install Time: 1 Hr 00 Mins for Kit Installation.

### **Notice:**

When removing any turbocharger air intake system components, make sure to cover any open ports to prevent any debris from entering the system. All components need to be inspected and cleaned (if necessary) prior to assembly and installation.

### **Maintenance: Periodically Check the Following**

- Charge air cooler T-Bolt Hose Clamps making sure they are tight and secure.
- All electrical connections and wire harnesses moved during the installation of the charge air cooler pipe/hose and making sure they are secure and away from any hot or moving components.
- Check for any signs of abrasion or wear and tear on the charge air cooler hose, coolant hoses, power steering reservoir, power steering hoses, and electrical harnesses near the charge air cooler pipe/hose and repair/replace as necessary.

### **Before You Start**

- Please read the entire product installation guide before proceeding.
- Ensure all parts are present.
- If you are missing any of the components, call Customer Support at (909) 947-0015.
- Do not work on your vehicle while the engine is hot.  
Make sure the engine is turned off and the vehicle is safely in Park and the Parking Brake is set

## Performance Testing

- After your installation is complete, engage the parking brake and start your engine. Listen for abnormal noises. If an air leak is detected, re-inspect hoses and connections as they may need to be repositioned and tightened.
- S&B FILTERS recommends that you keep your OE charge air cooler hoses and clamps in the event it is required in the future.
- In order to maintain your warranty, all connections and components must be checked periodically for alignment and for proper tension on all connections. Failure to do so may void your warranty.

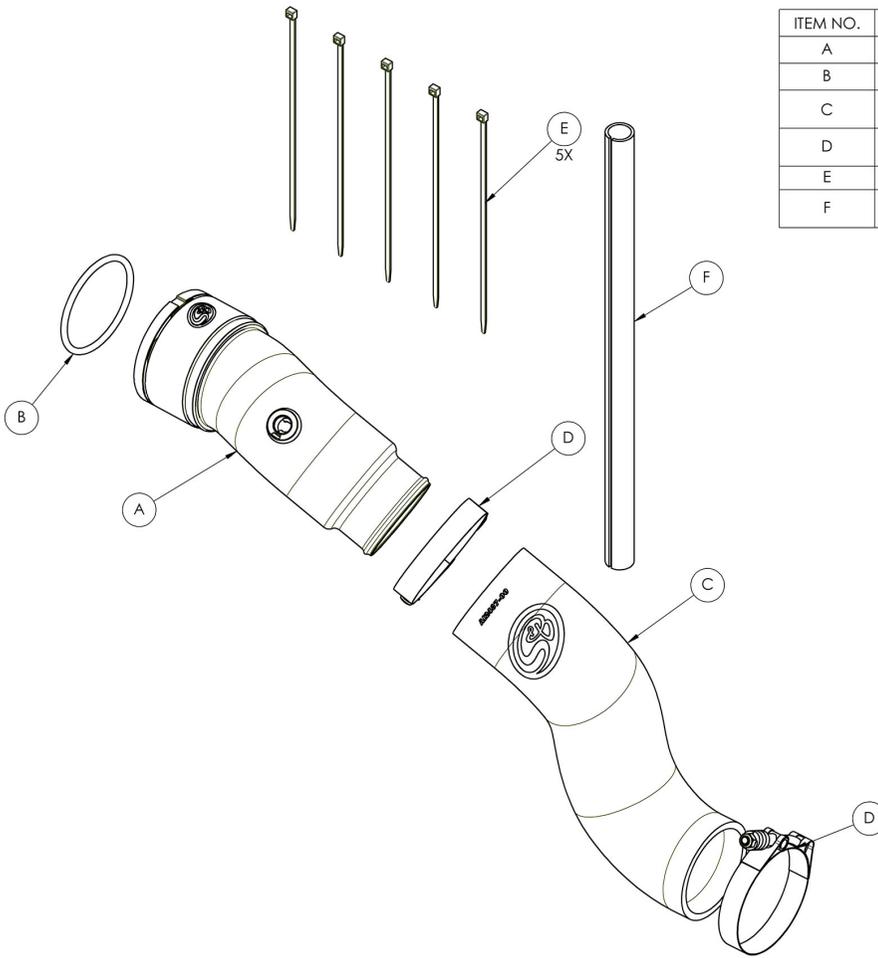
## CARB Status-Pending

### Emission Standard

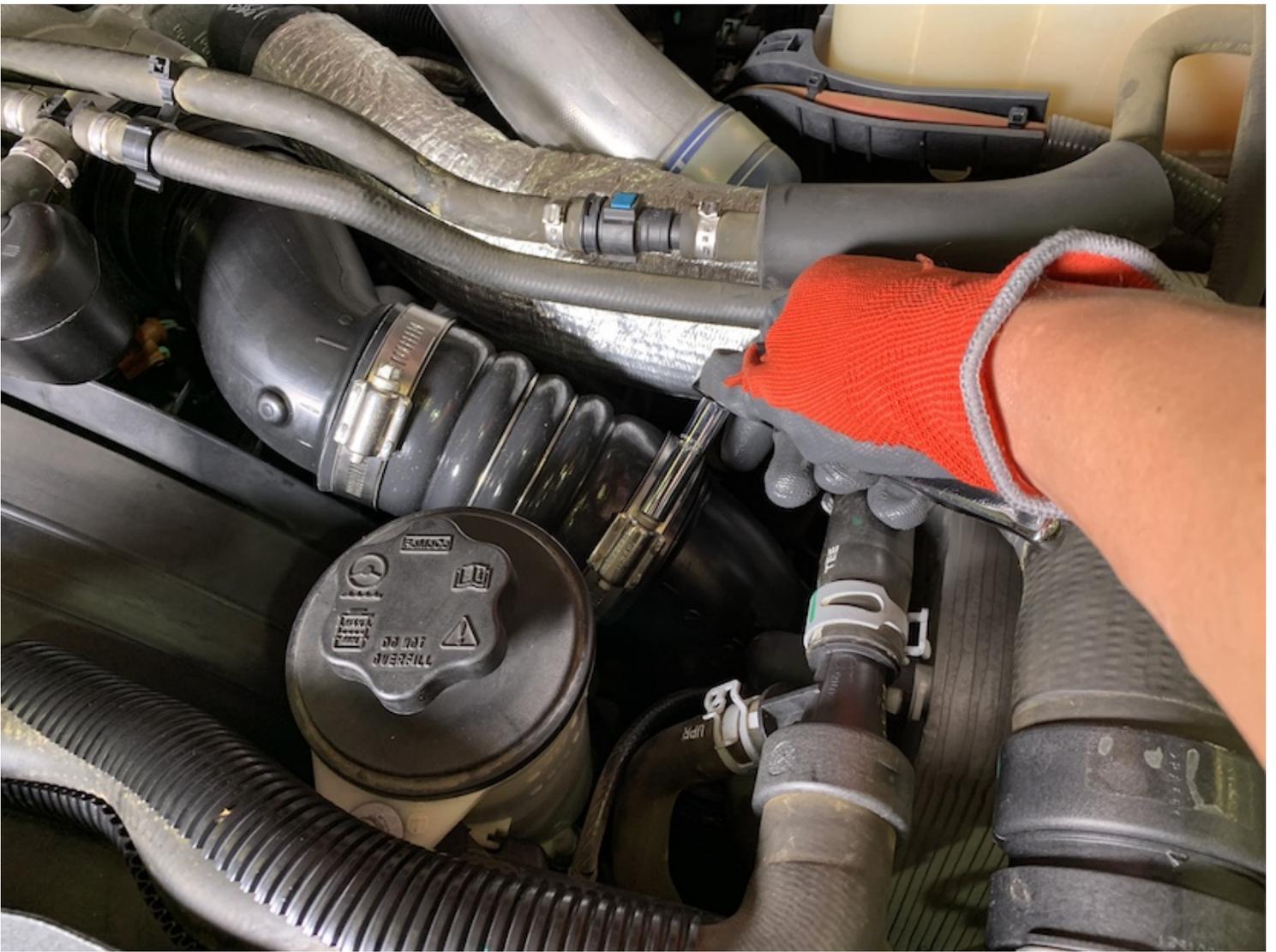
The California Air Resource Board (CARB) requires that an E.O. Identification label be applied to the vehicle in order to pass a smog check inspection when a Charge Air Cooler Pipe/Hose Kit has been installed. You must place the E.O. Label provided on or near the kit after installation so that a smog check technician can easily verify the E.O. Number. Check the status of the exemption process by looking up a specific part number at [www.sbfilters.com](http://www.sbfilters.com). The CARB Exemption number and/or status is listed under the Product Details section for each part number. If the status shows as "Pending," CARB has yet to issue an exemption but the product has been submitted. Products that have not been issued an E.O. number are street legal in most states, but may not be used on emission controlled vehicles in the state of California and are for off-road use only. If you purchased your kit from S&B Filters directly, we will automatically mail you your Exemption Sticker when it is issued to us. If you purchased your kit from an authorized S&B Filters Dealer, log onto our website and register to receive your Exemption Sticker.

## EXPLODED VIEW

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
A	AL3000-00	CAC Outlet Hard Pipe	1
B	AI2492-00	O-Ring, FKM	1
C	AI2487-00	CAC Outlet Tube	1
D	AG1042-00	T-Bolt Hose Clamp, Spring Loaded, 85.7-93.7mm	2
E	AI1750-00	Cable Tie, 9" Long	5
F	AI2633-01	Corrugated Split Loom Abrasion Resistant Sleeve	1



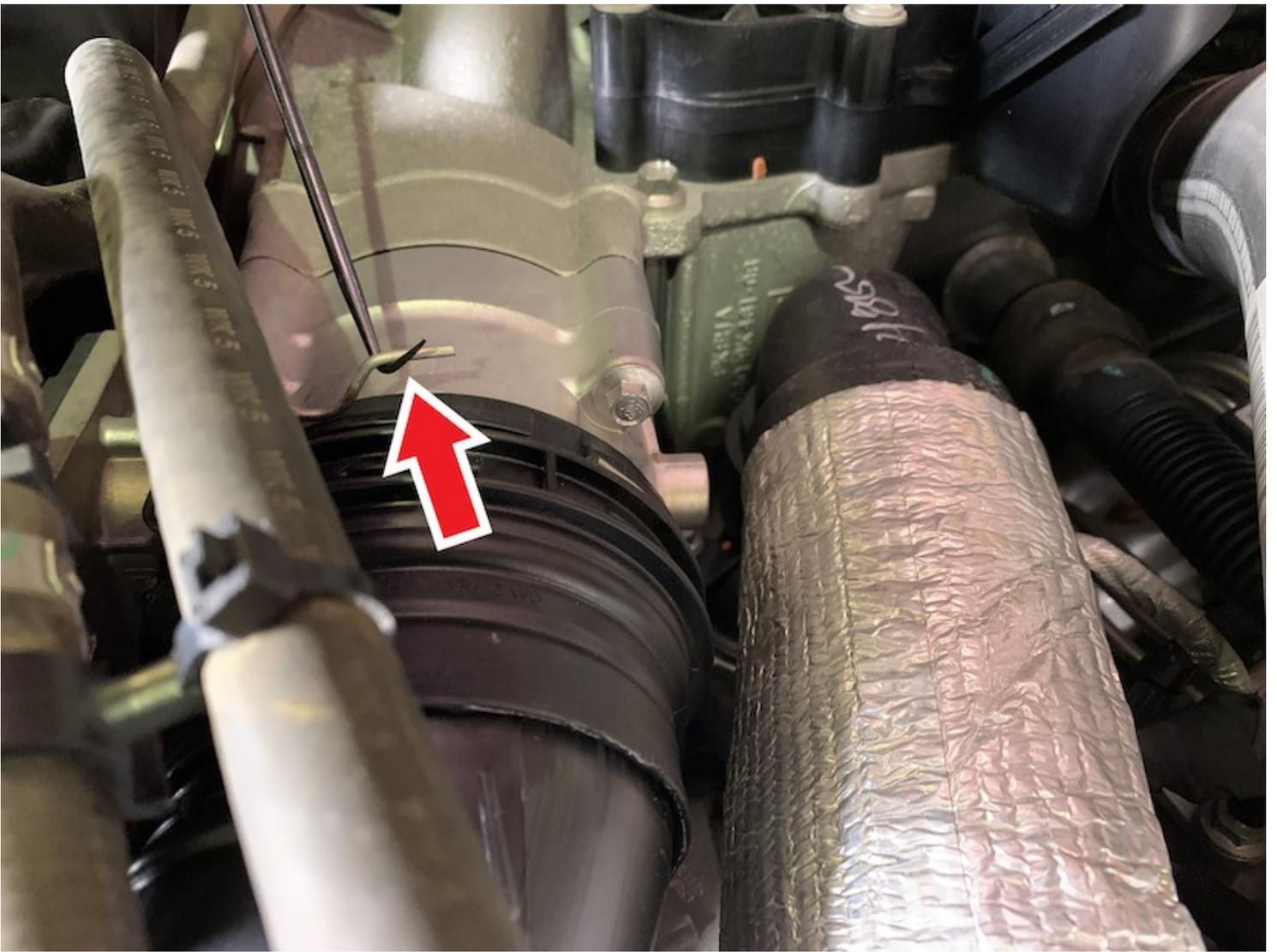
## INSTALLATION STEPS



## STEP 1

Loosen the upper hose clamp of the Charge Air Cooler (CAC) outlet hose. Loosen the second one closest to the Intercooler.

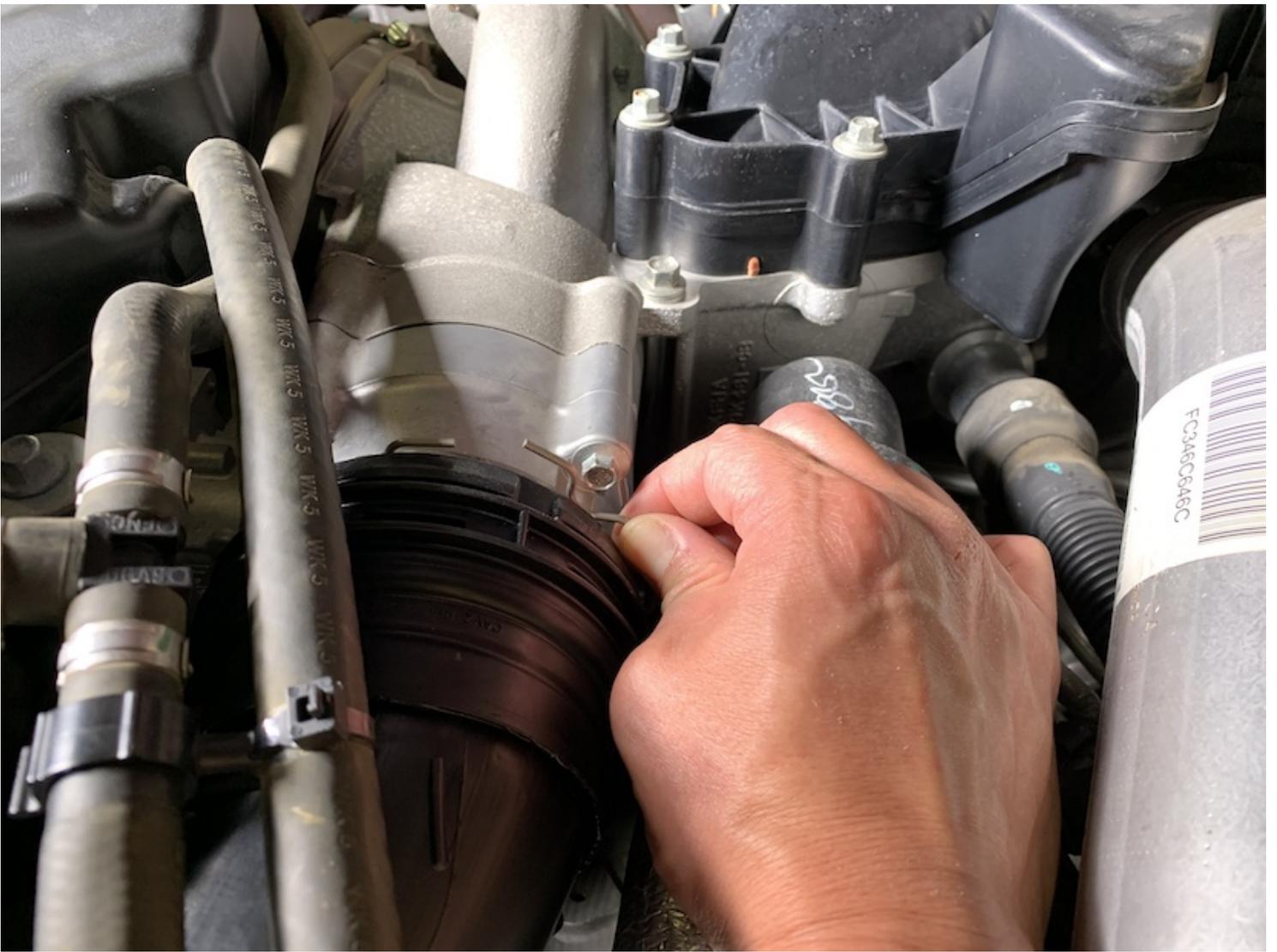
**Tools Required:** 8mm Socket/Wrench



## STEP 2

Using a Pick, locate the split in the Spring Clip and carefully remove the Spring Clip from the upper plastic CAC pipe.

**Tools Required:** Pick



### **STEP 3**

Working your way around, place the Spring Clip over the plastic and on to the throttle assembly for now.



## **STEP 4**

Slide the upper plastic CAC pipe off the throttle assembly and remove it from the vehicle.

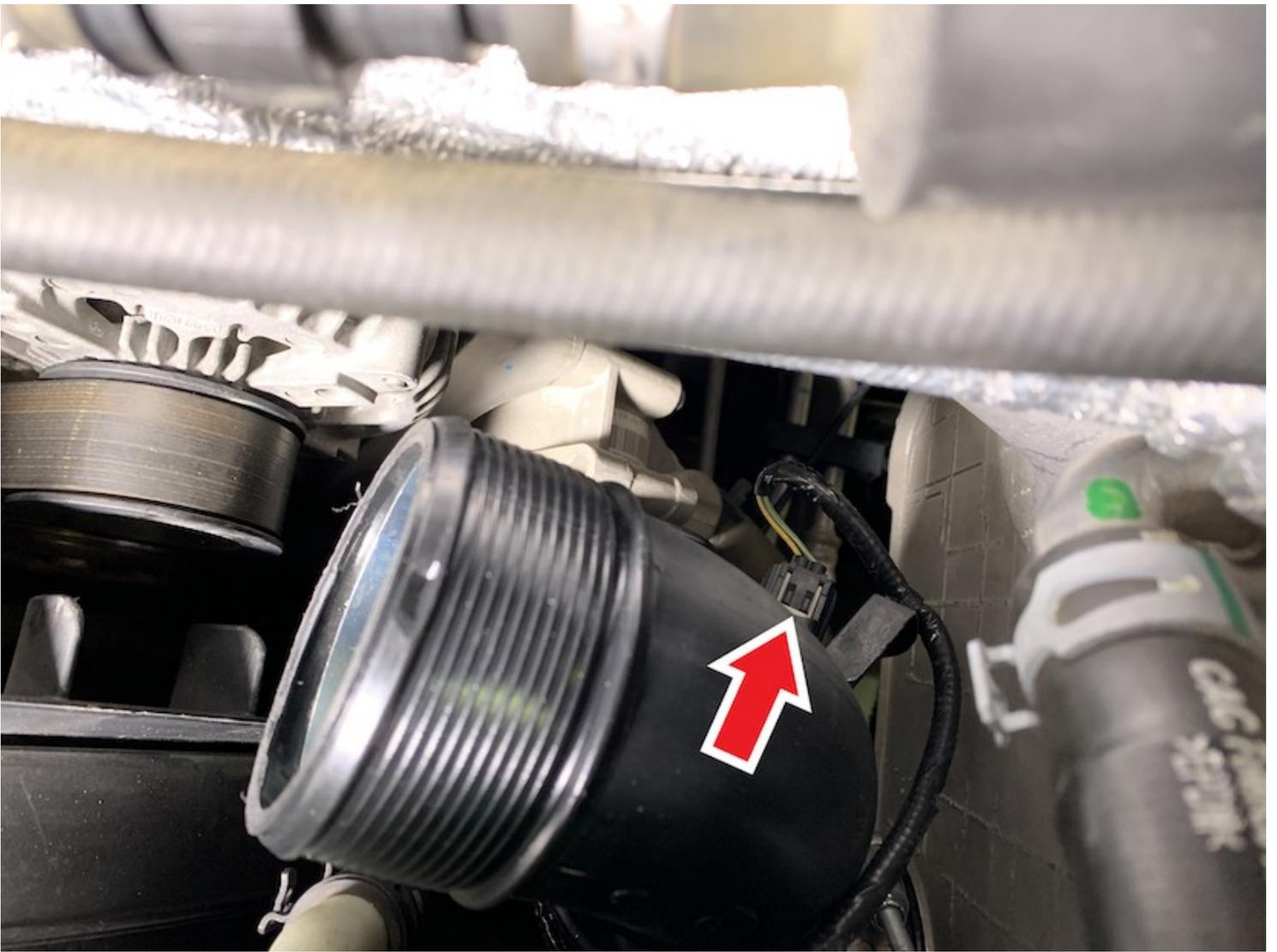


**STEP 4 (IMAGE 2)**



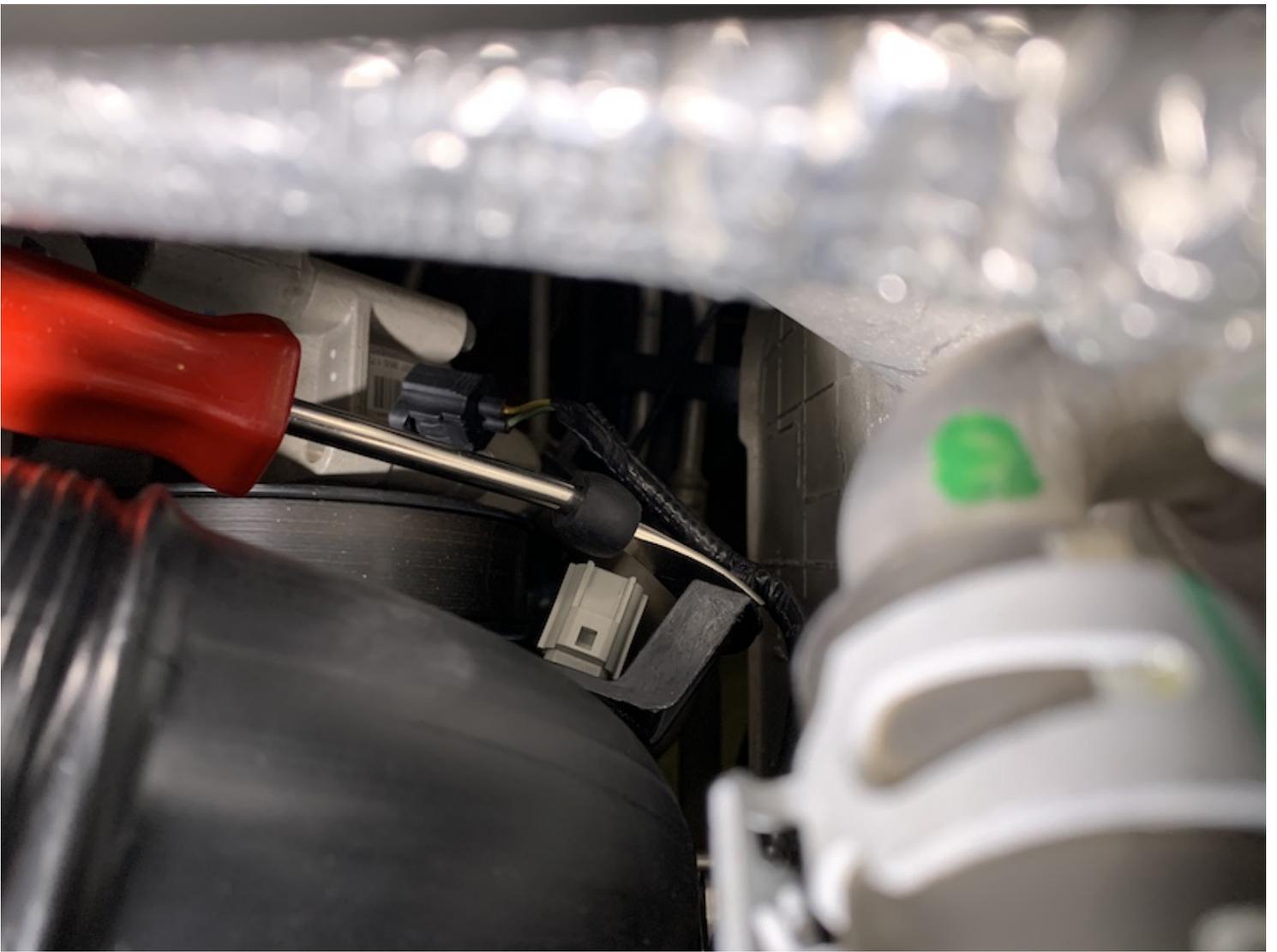
## **STEP 5**

Remove the Spring Clip from the throttle assembly and save it for use in Step 13.



## **STEP 6**

Remove the electrical connector from the Air Temperature Sensor located on the lower plastic CAC pipe. Depress the clip and pull it off.



## **STEP 7**

Remove the Temp Sensor harness retainer from the lower plastic CAC pipe.

**Tools Required:** Panel Popper



## STEP 8

Loosen the lower hose clamp of the CAC outlet hose.

**Tools Required:** 11mm Deep Socket/Wrench, 10" Socket Extension or 4" + 6" Socket Extension



## STEP 9

Slide the hose off the intercooler outlet and remove the lower plastic CAC pipe from the vehicle.



## **STEP 10**

Remove the Temp Sensor from the lower plastic CAC pipe. Use a Small Flat Blade Screwdriver to gently lift the Temp Sensor tab above the locking ramp, then twist (counter clockwise) and pull out the Temp Sensor.

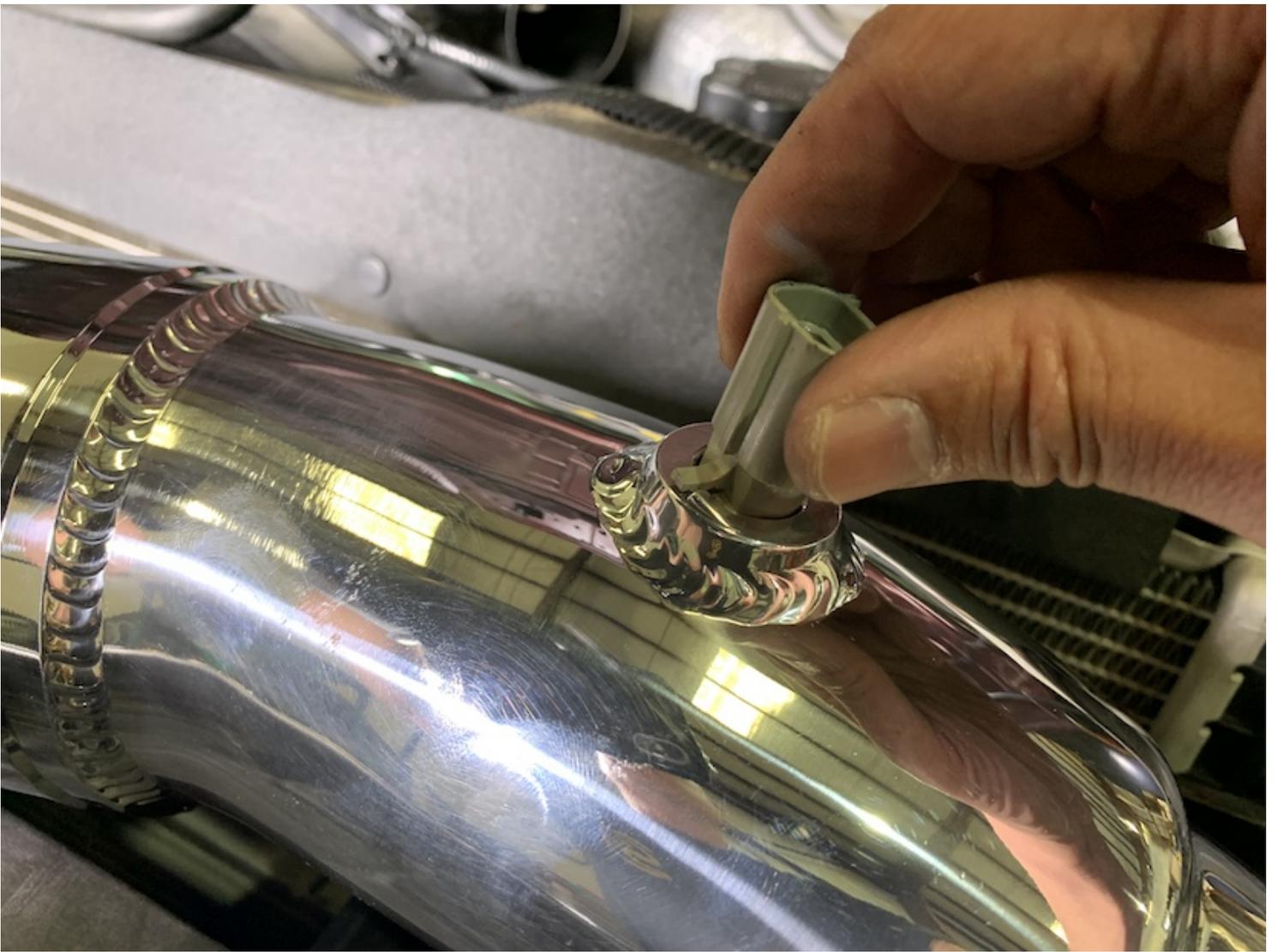


**STEP 10 (IMAGE 2)**



## **STEP 11**

Insert the Temp Sensor into the CAC Hard Pipe (A) with the Temp Sensor tab resting on top of the boss and in front of the locking ramp as shown below.



## **STEP 12**

Twist the Temp Sensor clockwise until the tab goes over and is locked by the locking ramp.

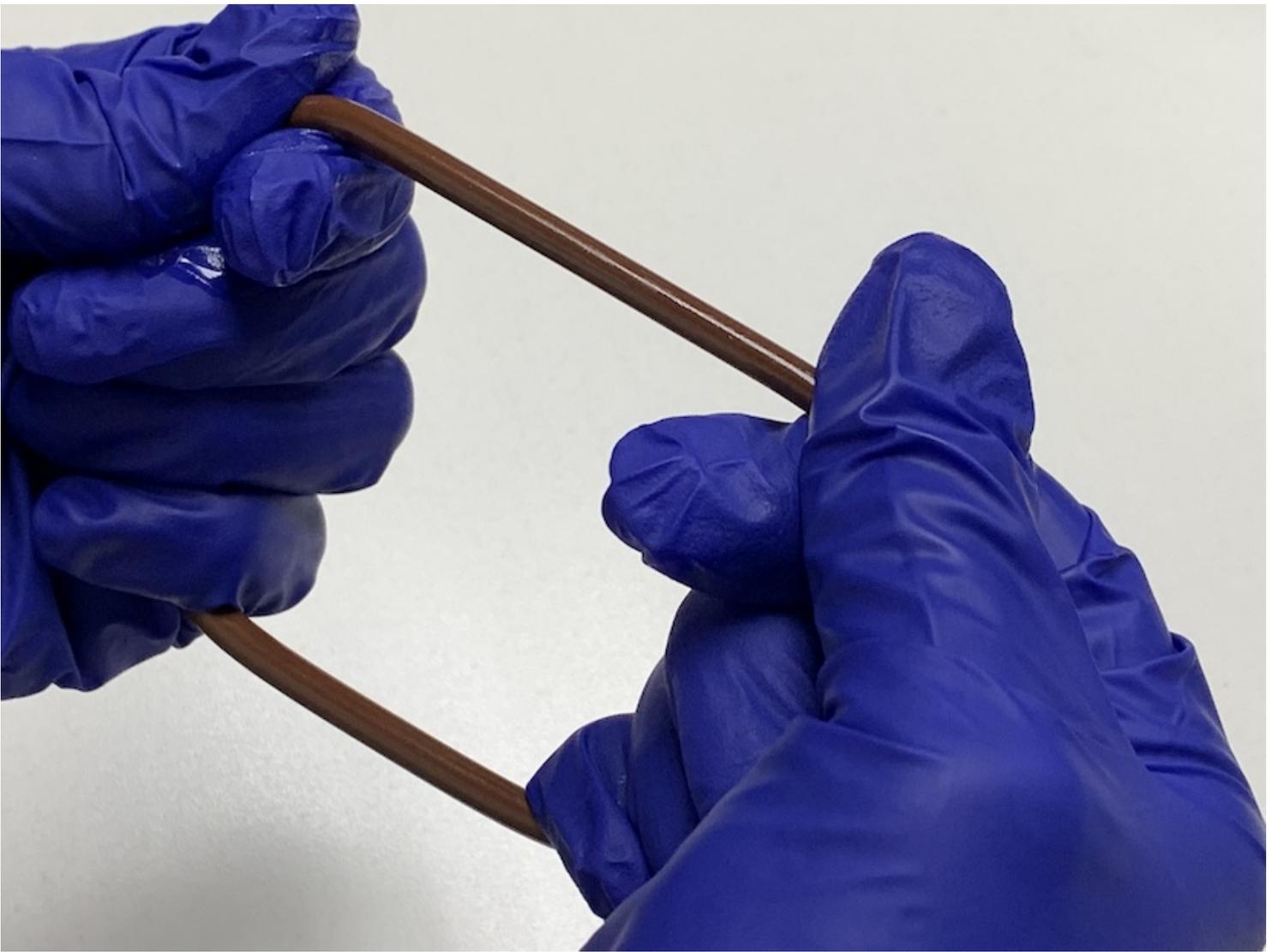


## **STEP 13**

Install the Spring Clip from Step 5 into the clip groove on the CAC Hard Pipe (A).



**STEP 13 (MAGE 2)**

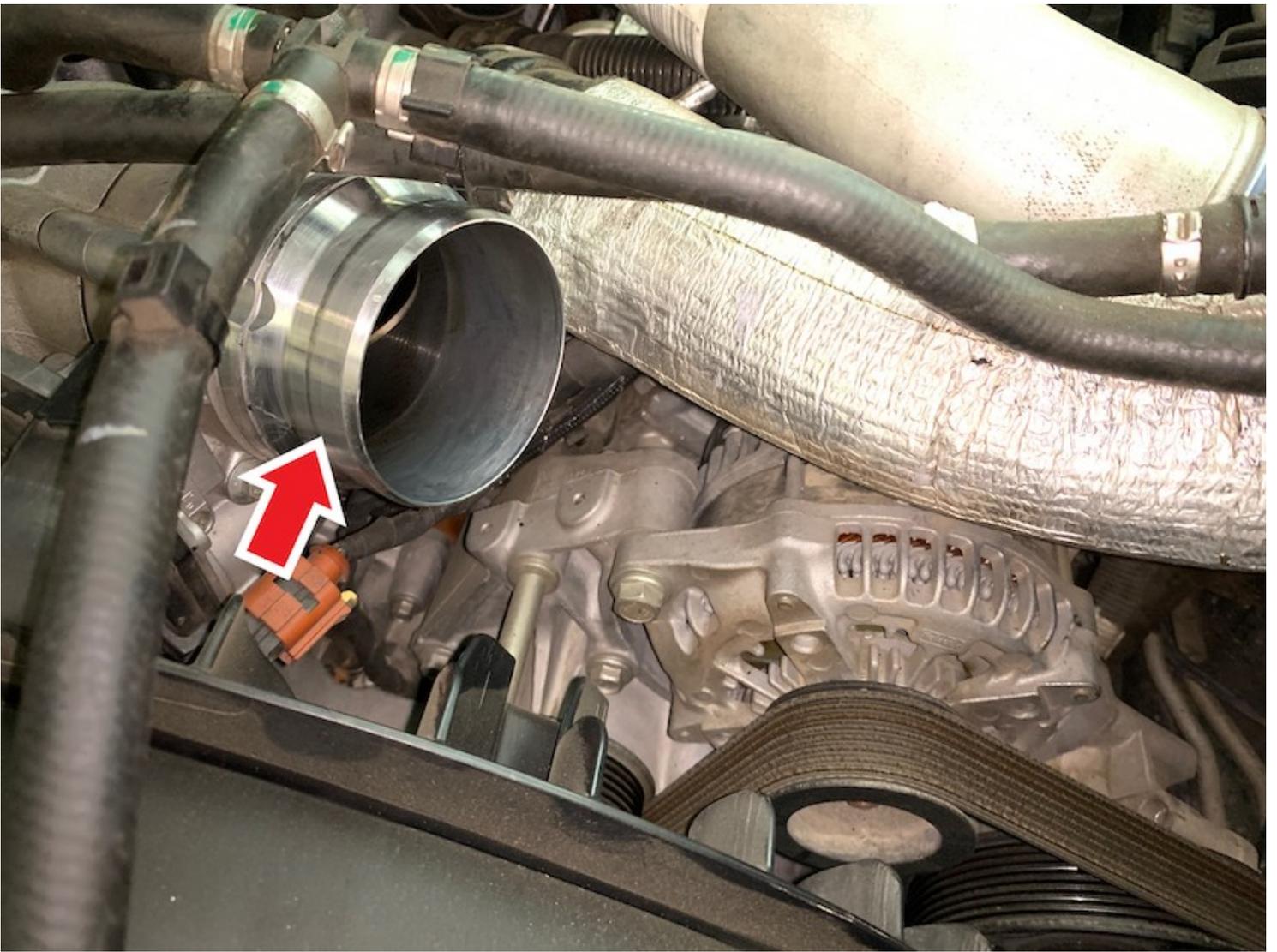


## **STEP 14**

Stretch the O-Ring (B) by hand while adding a thin coat of clean diesel engine oil to the O-Ring. Work your way around the entire O-Ring, gently stretching it as you go. After stretching, verify that the outside diameter of the O-Ring touches all around the inside of the o-ring groove of the CAC Hard Pipe (A) as shown below. If the O-Ring feels loose in the o-ring groove, gently stretch the O-Ring by hand once more.



**STEP 14 (IMAGE 2)**



## **STEP 15**

Add a thin coat of clean diesel engine oil around the outside diameter of the throttle assembly.



## **STEP 16**

Install the CAC Hard Pipe (A) onto the throttle assembly until the Spring Clip snaps into place on the throttle assembly. Rotate the CAC Outlet Hard Pipe so that the hose end is pointed upwards as shown.



## **STEP 17**

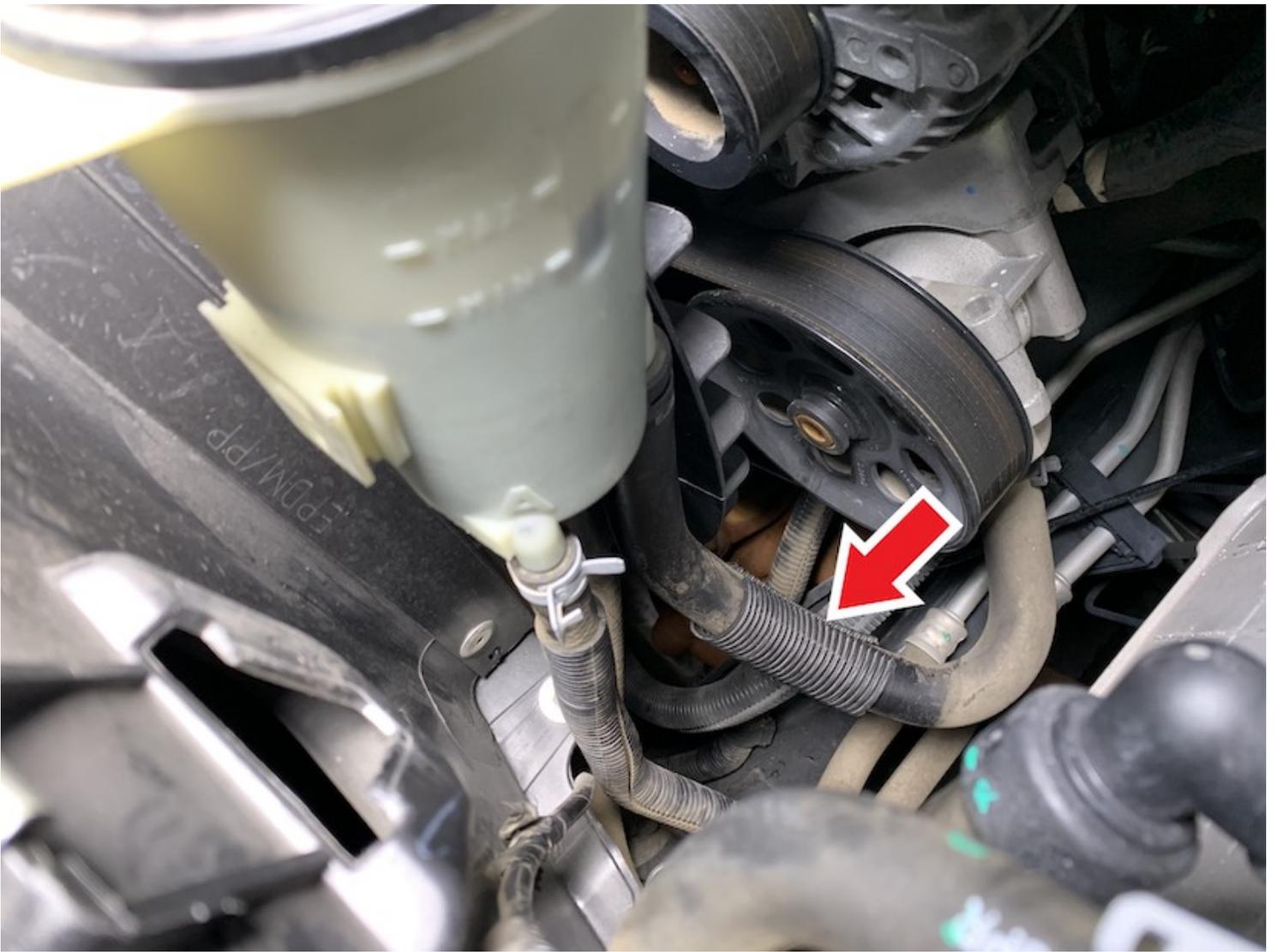
Remove the screw holding the power steering reservoir and set the screw aside.

**Tools Required:** 8mm Socket/Wrench



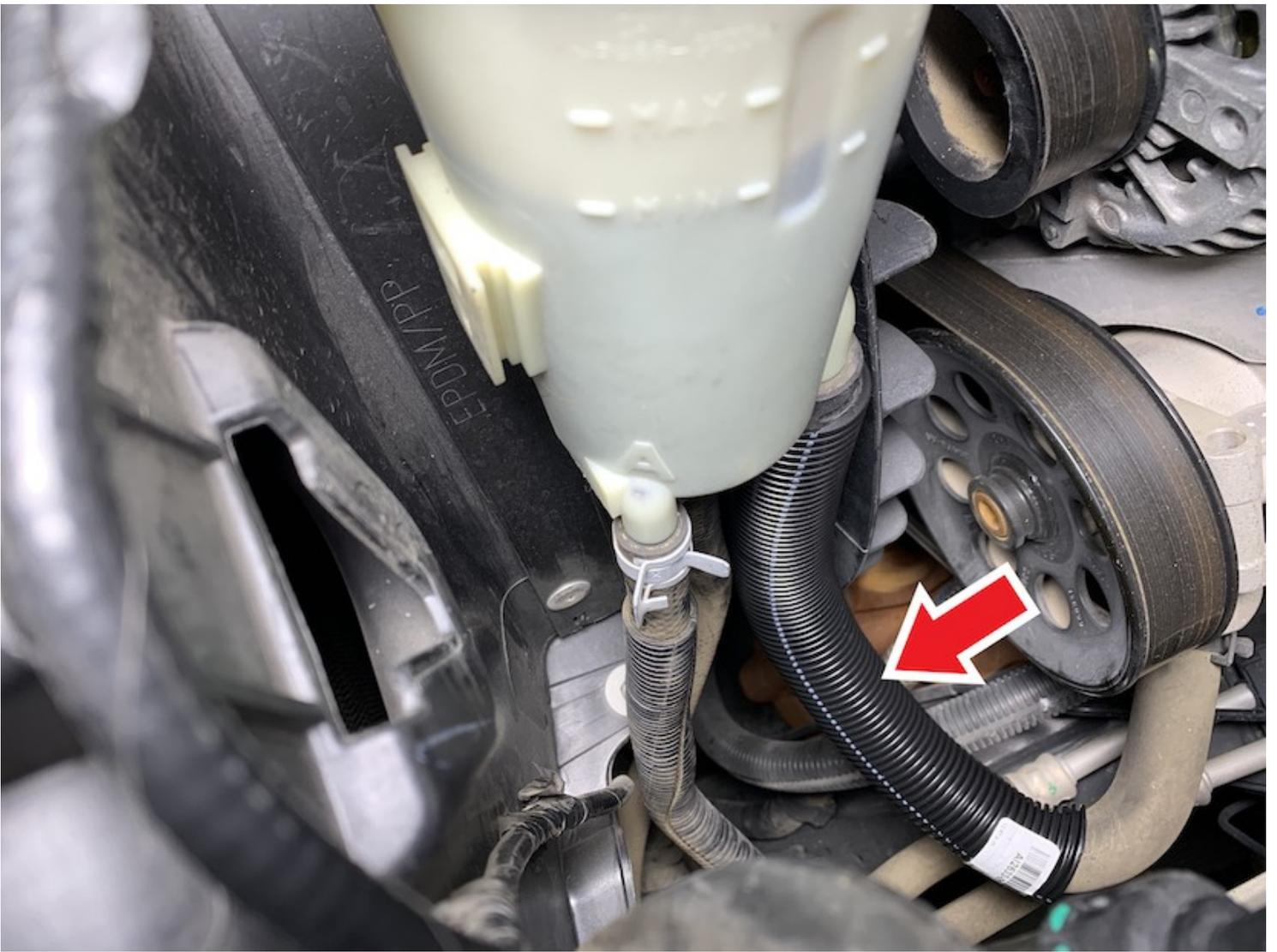
## **STEP 18**

Lift the power steering reservoir from the support slot and carefully leave it off to the side while keeping it upright. This will give you more room when you install the CAC Silicone Hose (C).



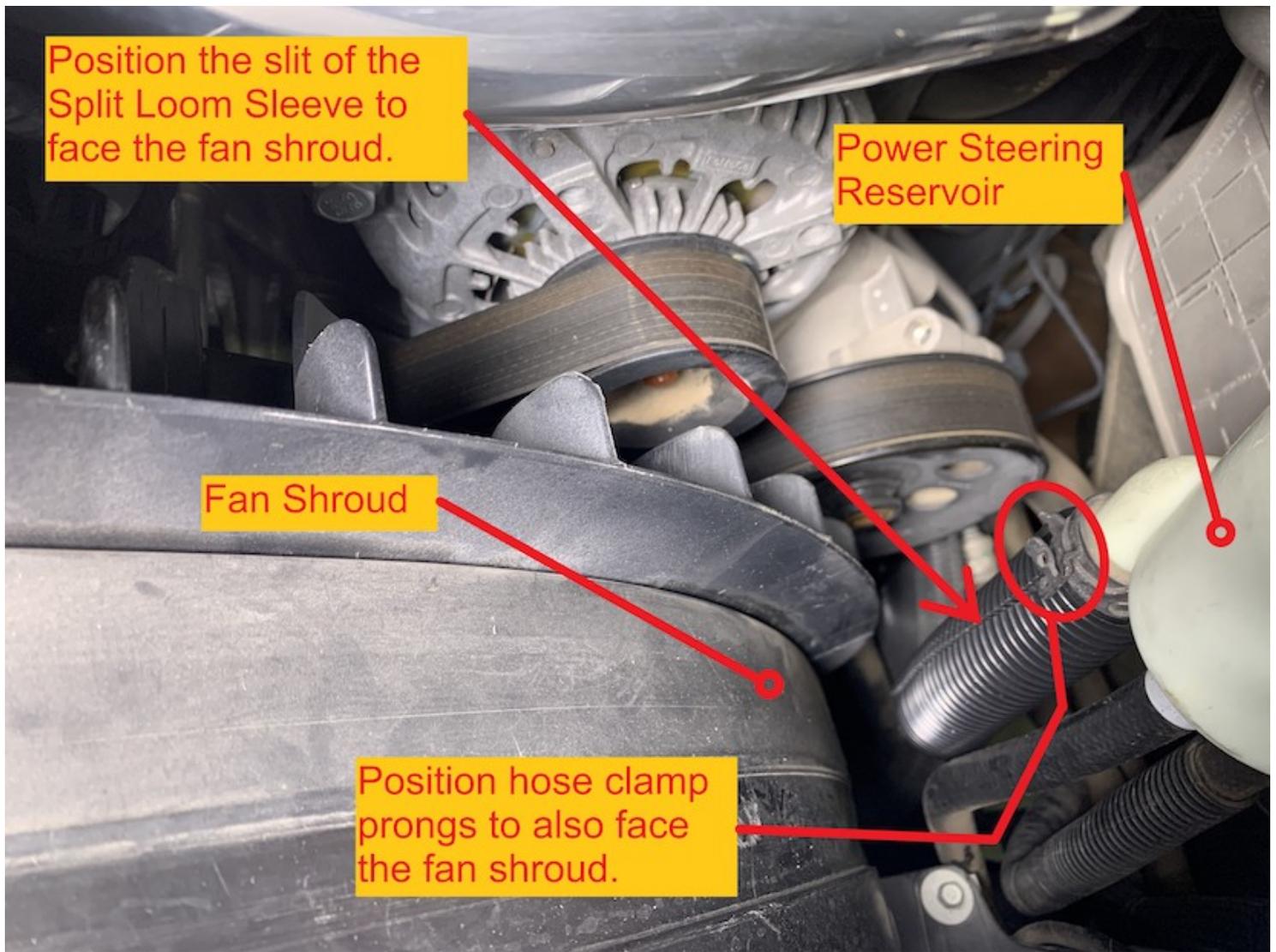
## STEP 19

Pull and remove the stock split loom sleeve from the larger diameter power steering reservoir hose.



## STEP 20

Install the Split Loom Sleeve (F) over the large diameter power steering reservoir hose as shown.



## STEP 21

Make sure the Split Loom Sleeve (F) is up against the hose clamp of the power steering reservoir hose and that the slit is facing the fan shroud as shown. Also rotate the reservoir hose clamp so that the prongs are also pointing towards the fan shroud. To reposition the reservoir hose clamp, simply squeeze the prongs with pliers to loosen, rotate the clamp to position, and then release the clamp prongs.

**Tools Required:** Pliers



## **STEP 22**

Move the Temp Sensor electrical harness away from the intercooler and temporarily drape it across the top of the power steering reservoir.



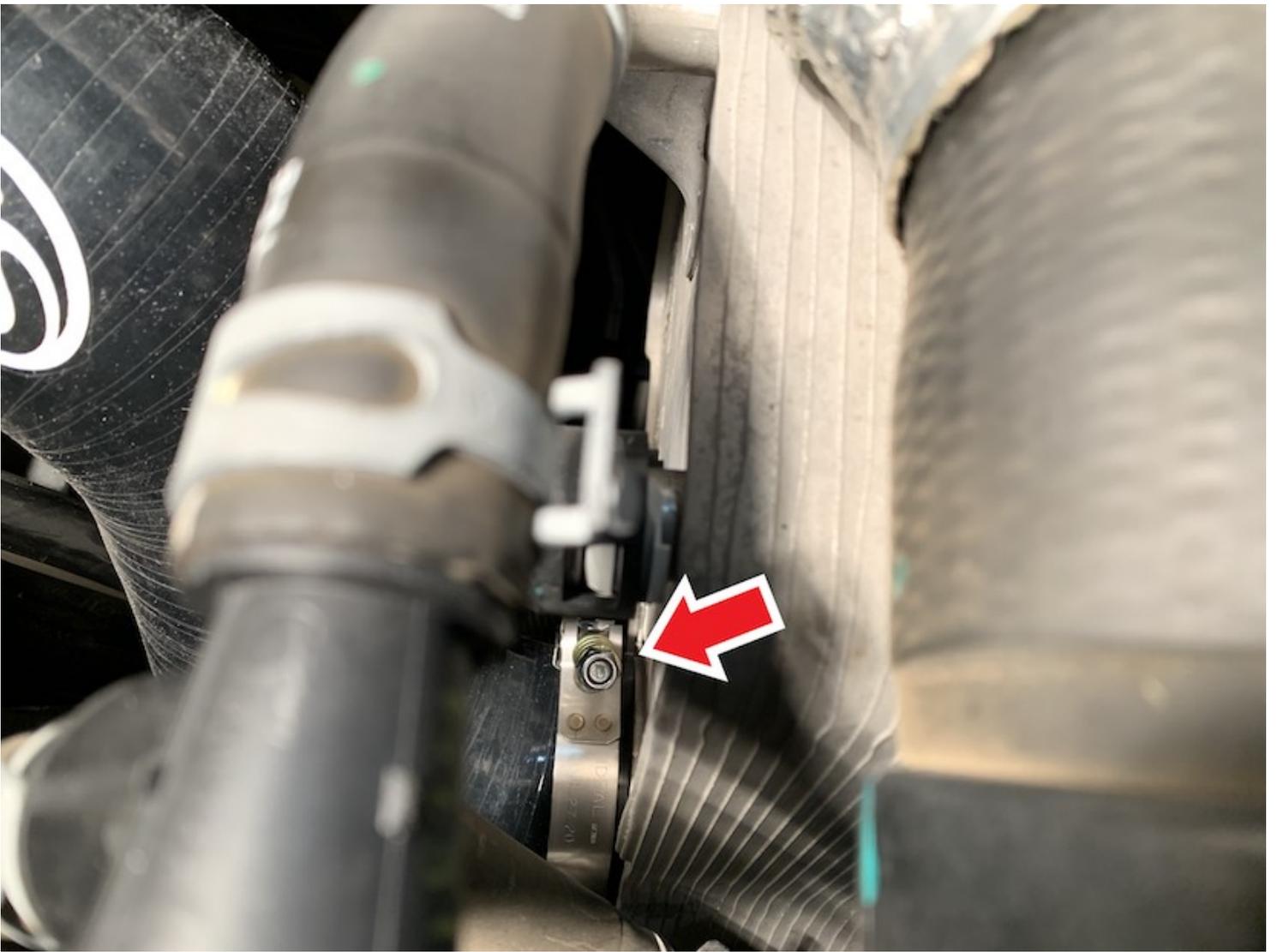
## STEP 23

Install the T-Bolt Hose Clamp (D) onto both ends of the CAC Silicone Hose (C). On the end without the logo, have the spring and nut pointed up towards you as shown below. On the end with the logo, install the T-bolt Hose Clamp (D) with the spring and nut underneath and pointed towards you as shown below. Leave both T-Bolt Hose Clamps loose for now.



## STEP 24

Install the CAC Silicone Hose (C) with the T-Bolt Hose Clamps into the vehicle with the logo end on top and the other end attaching to the Intercooler outlet. Leave the T-Bolt Hose Clamps loose at this time.



## **STEP 25**

The lower T-Bolt Hose Clamp (D) should be positioned so that the spring and nut are pointed towards you and accessible from above as shown below.



## STEP 26

The upper T-Bolt Hose Clamp (D), should be positioned so that the spring and nut are underneath and pointed towards the power steering reservoir as shown.



## STEP 27

Rotate the CAC Hard Pipe (A) and pull the CAC Silicone Hose (C) onto the end of the Hard Pipe. As you continue to rotate the Hard Pipe, the Silicone Hose will slip over the Hard Pipe into position as shown.



**STEP 27 (IMAGE 2)**



**STEP 27 (IMAGE 3)**



**STEP 27 (IMAGE 4)**



**STEP 27 (IMAGE 5)**



## STEP 28

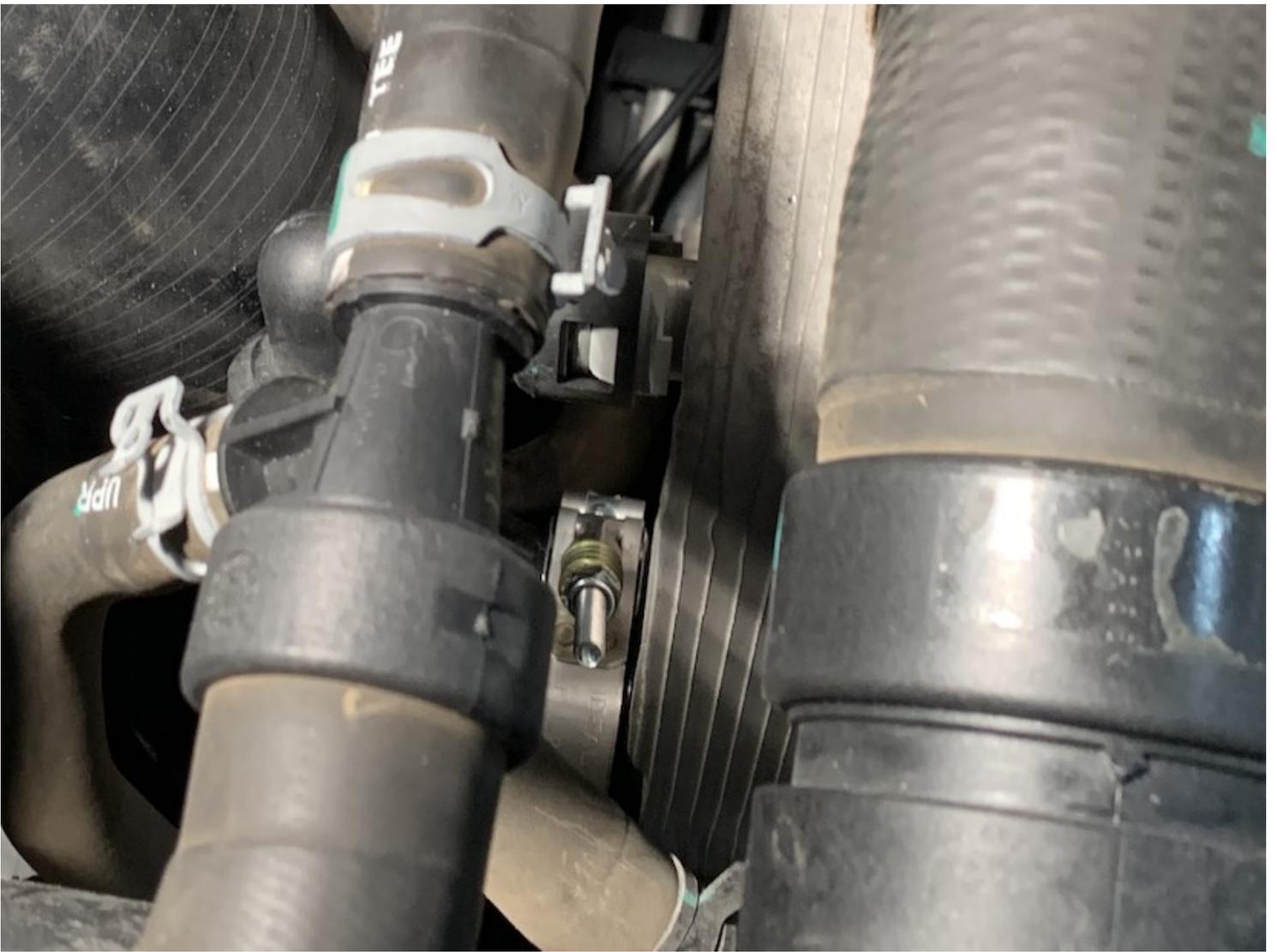
Put the power steering reservoir back in the support slot and check for clearances all around the CAC Hard Pipe (A) and CAC Silicone Hose (C). Rotate the CAC Hard Pipe to adjust the clearances making sure the CAC Hard Pipe and Silicone Hose are far enough away from the power steering reservoir and other surrounding lines, hoses, and clamps.



## STEP 29

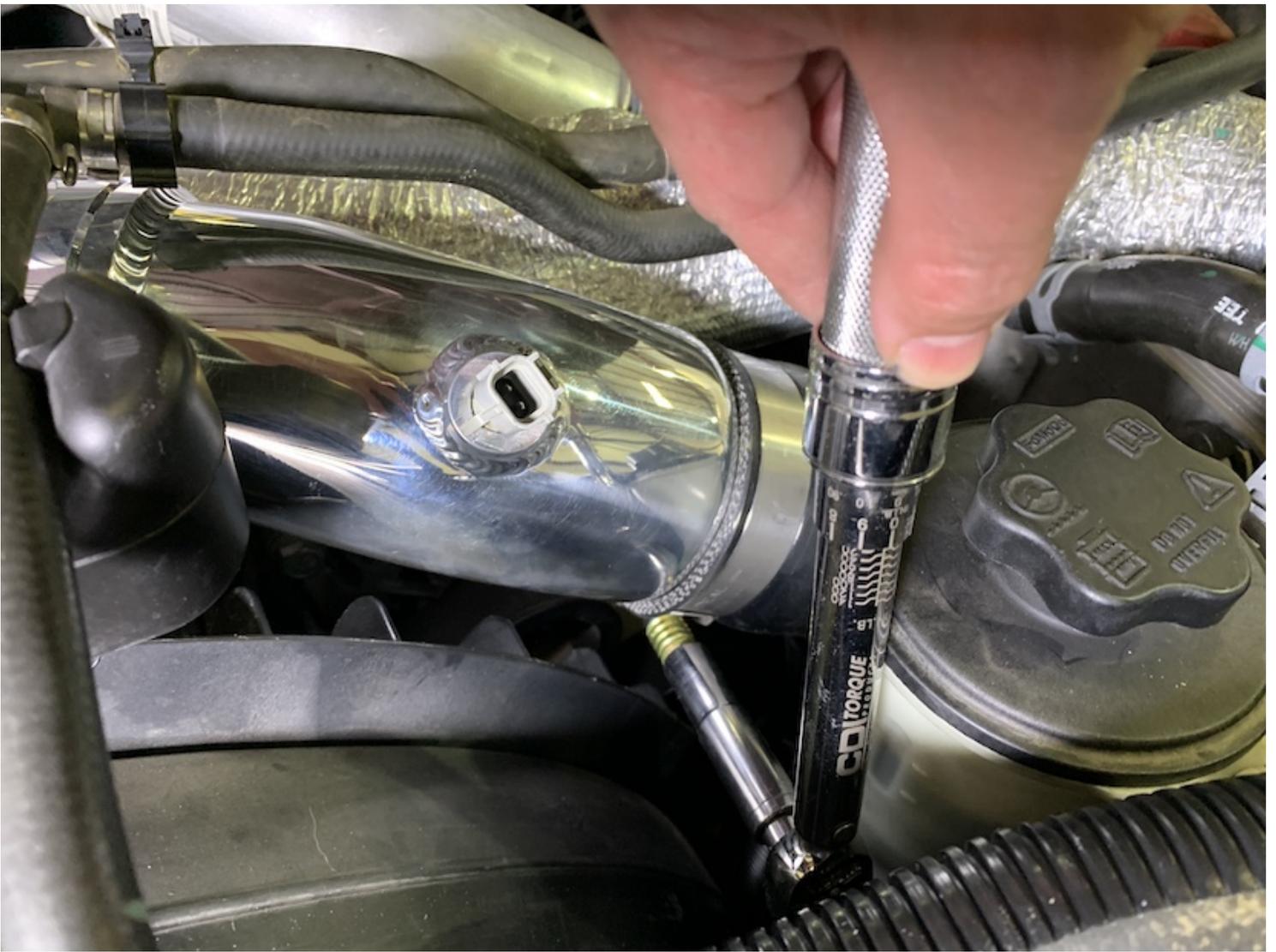
Once you have everything positioned properly, make sure the intercooler outlet is fully inserted into the CAC Silicone Hose (C) and then tighten and torque the T-Bolt Hose Clamp (D) to 75 in-lb.

**Tools Required:** 10" Socket Extension or 4" + 6" Socket Extension, 11mm Socket/Wrench, Torque Wrench.



## **STEP 30**

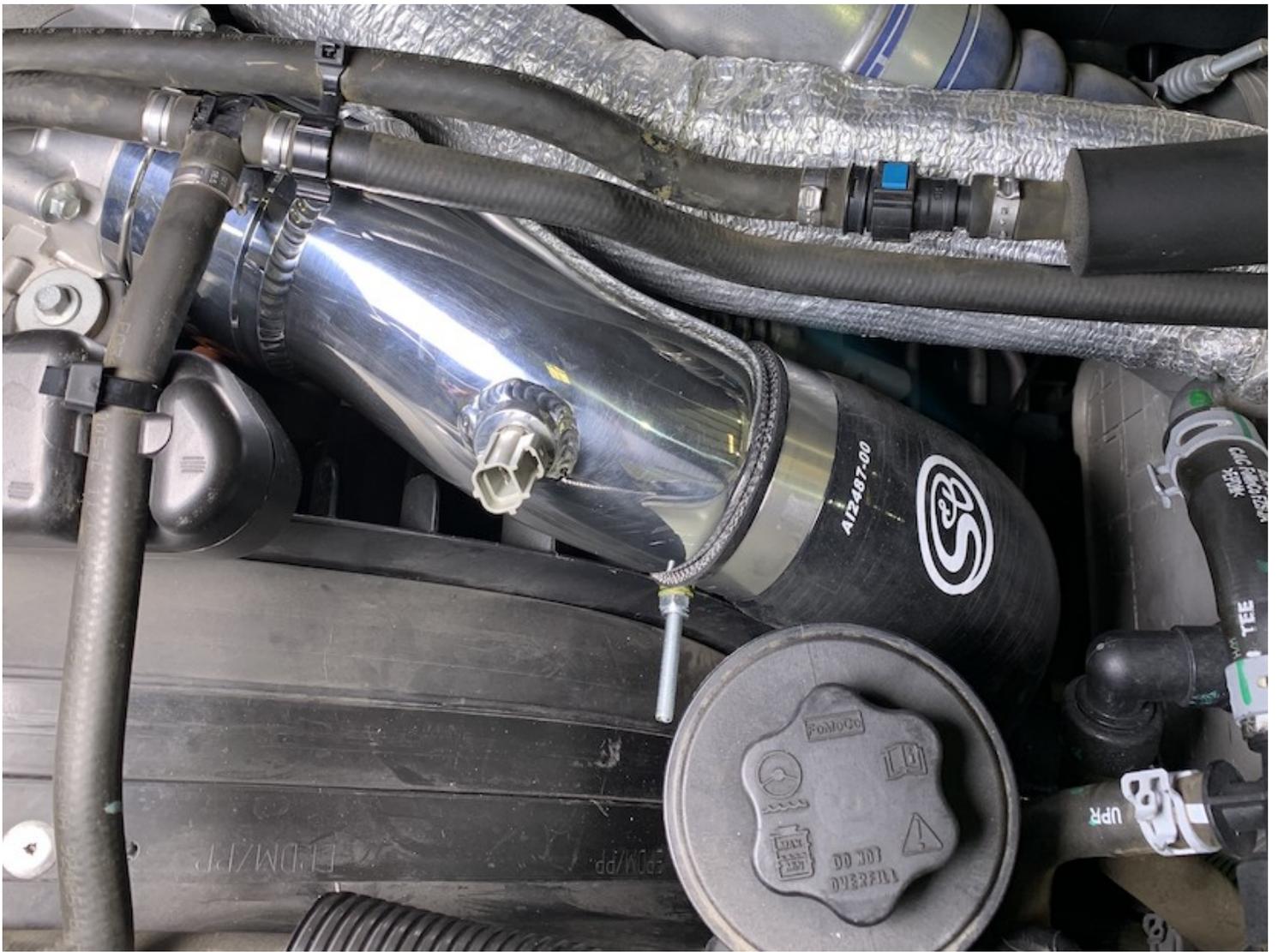
After tightening the lower T-Bolt Hose Clamp (D), verify that the CAC Silicone Hose (C) is up against the intercooler, with the intercooler outlet fully inserted, and the T-Bolt Hose Clamp (D) about 1/ 8" from the end of the Silicone Hose as shown below.



## STEP 31

Make sure the CAC Hard Pipe (A) is fully inserted into the CAC Silicone Hose (C), and that the T-Bolt Hose Clamp (D) is positioned so that the spring and nut are not close to touching anything. Tighten and torque the T-Bolt Hose Clamp to 75 in-lb.

**Tools Required:** 11mm Deep Socket/Wrench, Torque Wrench.



## STEP 32

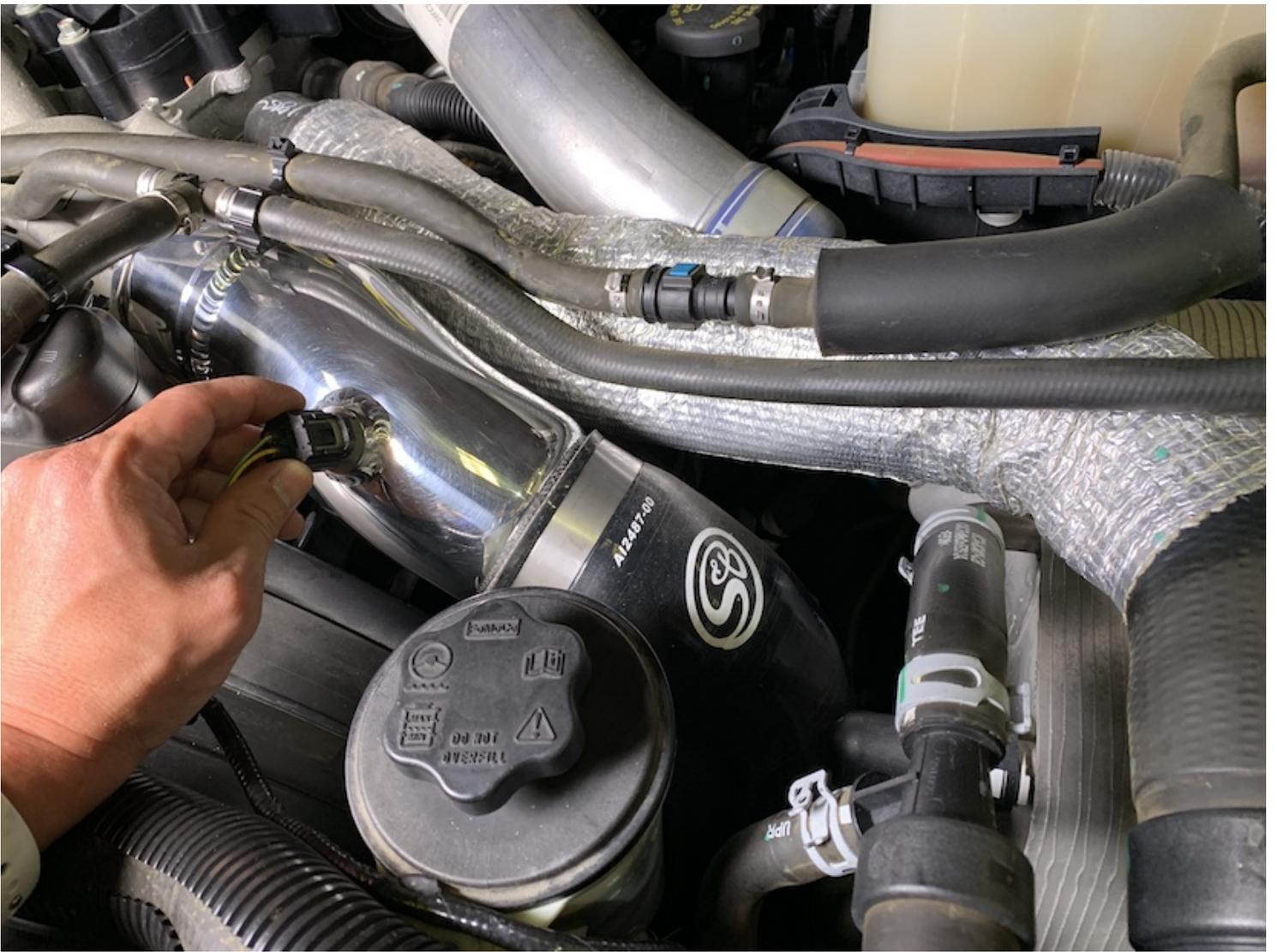
After tightening the upper T-Bolt Hose Clamp (D), verify that the CAC Hard Pipe (A) is fully inserted into CAC Silicone Hose (C) and the T-Bolt Hose Clamp (D) about 1/ 8" from the end of the Silicone Hose as shown below.



## **STEP 33**

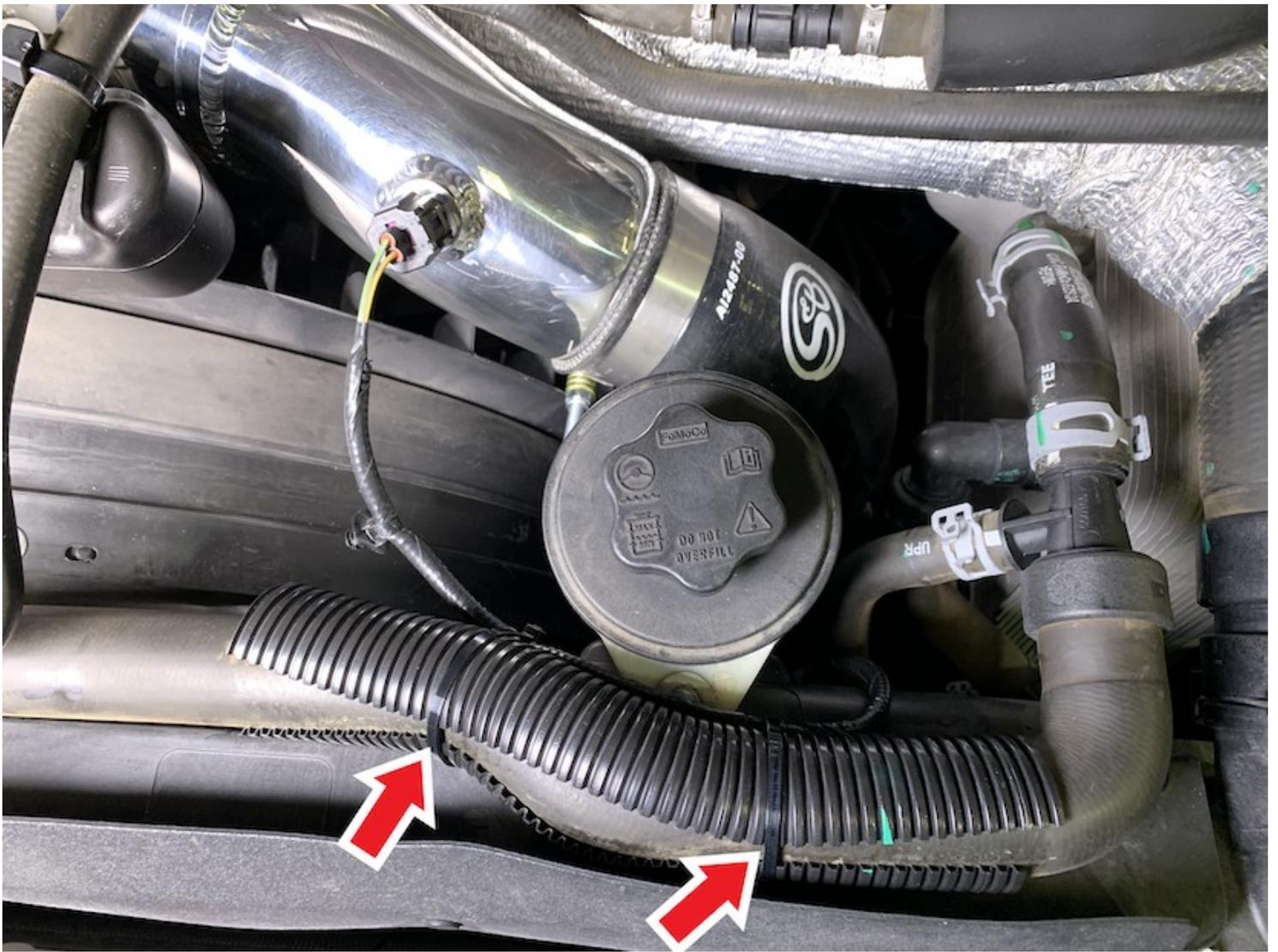
Replace the power steering reservoir support screw and tighten.

**Tools Required:** 8mm Socket/Wrench



## STEP 34

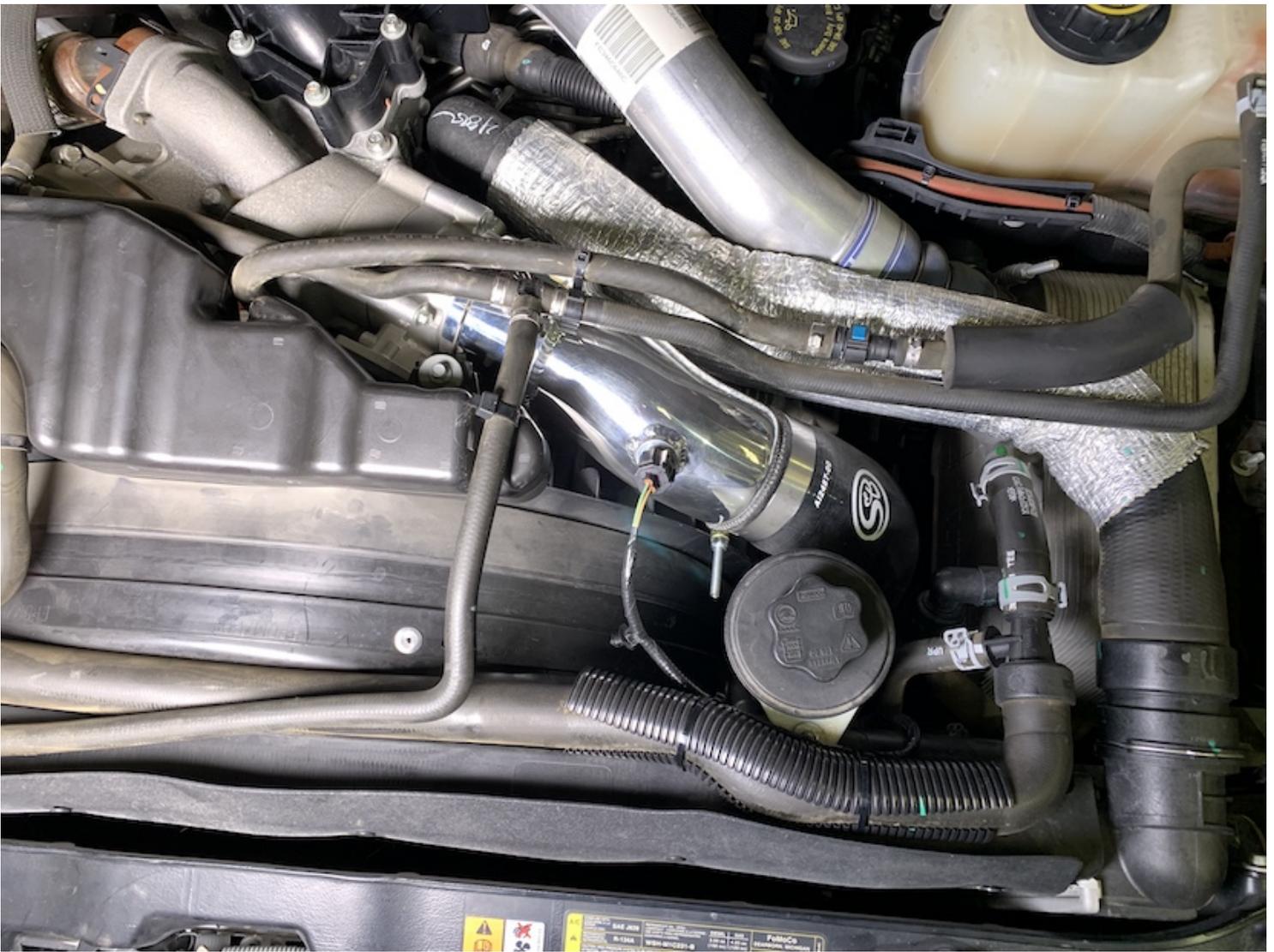
Reconnect the Temp Sensor to the harness.



## STEP 35

Secure the loose Temp Sensor harness with Cable Ties (E) to prevent the harness from rubbing during vehicle movement and vibration. Cut off the excess cable tie with a Wire Cutter.

**Tools Required:** Wire Cutter



## STEP 36

Inspect your installation, make sure the kit is properly positioned with clearances around all the parts to prevent wear or damage to any parts during vehicle operation, movement, and vibration. Verify both T-Bolt Hose Clamps are tight and secured. Keep all stock parts in case you would ever need to reinstall the stock intake assembly. Affix the ID label near the CAC Outlet Kit. If you are an installer, give the owner the QR code for the Installation Instructions so that he/she is aware of the Maintenance and Operation procedures given in the beginning of the Instructions. Clean a flat visible surface under the hood and affix the enclosed CARB EO sticker for SMOG purposes. **The installation is now complete.**



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