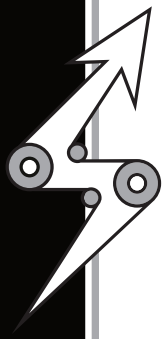




# J-Series TVS Gen 3 Supercharger Kit Installation Guide v1.0



Thanks for buying this kit! This guide will inform you of the parts included with your purchase, along with installation instructions. Each kit is verified complete with parts and signed off on before shipping.

If you get stuck or need a replacement part, please reach out to us at [retrofitsupercharger@gmail.com](mailto:retrofitsupercharger@gmail.com)

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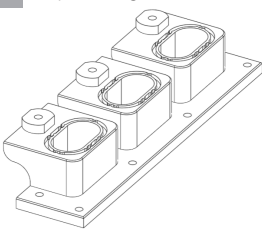
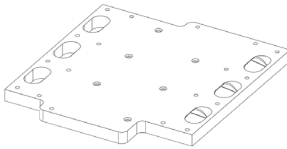
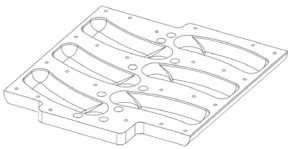
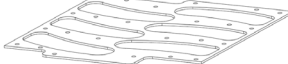


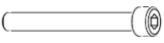




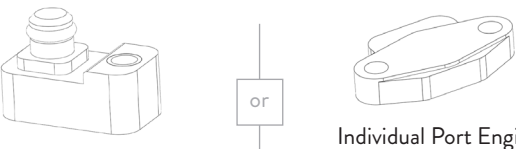
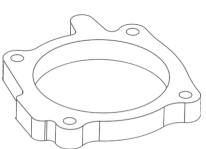
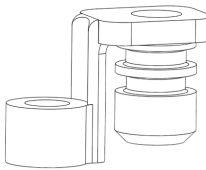
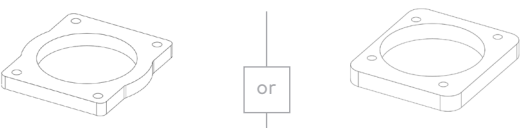
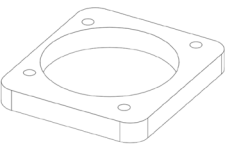
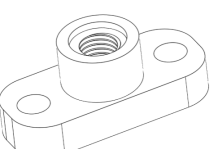
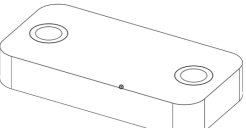
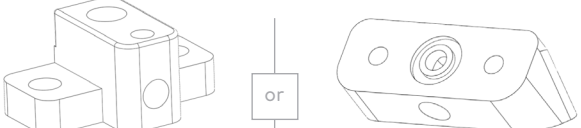
**Retrofit**  
**SUPERCHARGER**

**Parts List**

# Parts List

## a. What's Included

Below is a parts list that is included with the kit. Depending on which engine selection you made while ordering will determine which of the adapter/dummy/throttle body flange parts are included.

<p>2x Supercharger Risers</p> 	<p>1x Plenum Top</p> 	<p>1x Plenum Bottom</p> 	<p>1x Plenum Gasket</p> 
<p>6x Supercharger Studs</p> 	<p>6x Supercharger Stud Nuts M8x1.25</p> 	<p>9x Plenum Bottom Hardware M8x1.25</p> 	<p>12x Supercharger Riser Gaskets</p> 
<p>8x Plenum Top Hardware M6x1</p> 	<p>16x Supercharger Riser Hardware M6x1</p> 	<p>1x Supercharger EVAP Plug</p> 	
<p>1x Map Sensor Dummy (Depending on which engine you have to block off map sensor port on throttle body.)</p>  <p> <span>or</span> </p> <p>             Monoport Engine Style Map Dummy Sensor w/ o-ring              Individual Port Engine Style Map Sensor Dummy (Reuse existing o-ring)         </p>	<p>1x Audi Supercharger Throttle Body Flange w/ Gasket</p> 	<p>1x Supercharger Vac Port Adapter</p> 	
<p>1x Throttle Body Flange (Depending on which engine you have.)</p>  <p> <span>or</span> </p> <p>             Acura J37 Throttle Body Flange w/ Gasket              Older Cable Throttle J-Series Flange w/ Gasket         </p>	<p>1x Older Cable Throttle J-Series Flange w/ Gasket</p> 		
<p>1x IAT Adapter w/ Gasket</p> 	<p>1x Supercharger Port Block Off Plate w/ Gasket</p> 	<p>1x Map Sensor Adapter (Depending on which engine you have.)</p>  <p> <span>or</span> </p> <p>             Monoport Engine Style Map Sensor              Individual Port Engine Style Map Sensor w/ O-ring         </p>	

## Parts List

### b. What You'll Need

We thought long and hard about what to include with this kit to make sure very little is needed to get it installed. Below is a list of additional things required to turn the key and go vroom.

#### An Audi (NON-CREC) Supercharger

The non-crec are the original ones that didn't have the electronically controlled clutch for the snout. Here is a list of vehicles that came equipped with one you'll want. Please verify it is non-crec before purchasing. The list cuts off a year early to prevent overlap between generations of superchargers. These superchargers are EVERYWHERE and you can get them anywhere from \$75 to a few hundred. Check eBay, and also check your local junkyard. Porsche is listed, but are usually more expensive even though they are identical to the Audi ones.

Whichever one you go with, be sure to FILL IT WITH SUPERCHARGER OIL. Junk yards empty them – especially if they are shipped (ask us how we know lmao). You can buy the [AC DELCO oil](#) or the [Genuine Audi oil](#), just be sure to fill it. If it has oil in it, drain it into a measuring cup and replace what came out. If its empty, it will need 150ml (5.1-5.2oz).

#### Audi

- A6 3.0T (C7): 2012–2014
- A7 3.0T (C7): 2012–2014
- A8 / A8 L 3.0T (D4): 2012–2014
- Q5 3.0T: 2013–2014
- SQ5: 2014
- Q7 3.0T (4L): 2011–2014
- S4 (B8/B8.5): 2010–2014
- S5 Cabriolet: 2010–2014
- S5 Coupe: 2013–2014

#### Porsche

(Audi-sourced 3.0L Supercharged V6 Hybrids)

- Cayenne S Hybrid (958): 2011–2014
- Panamera S Hybrid (970): 2011–2013
- Panamera S E-Hybrid (970): 2014

#### An Intake Tube Fabricated

For routing your throttle body where it needs to go. We supply you with an Audi flange for the supercharger side, and a Honda flange for your throttle body, but depending on your needs will determine what shape/size/length tube connects them. Unless you're putting this on a sand rail, the engine orientation points the throttle body inlet on the supercharger towards the firewall. This kit is currently installed on a 2010 MDX, and two (V6 swapped) Honda Elements. They all needed a 2.75 inch 120° bend.



#### A Longer Serpentine Belt

No matter if you're running power steering or have it removed/bypassed (it works either way) you'll need a longer serpentine belt. Easiest way to do it is measure with a string around the crank, your accessory pulleys and the supercharger pulley – then subtract 1-inch. Go to your local parts store with that number and get the same width belt in that longer length.

#### An Intake Spacer and Gaskets At Least 28mm Tall

In order for the plenum to clear the fuel rails and the valve covers you'll need to run an intake spacer and gaskets that total at least 28mm tall. We took a cheap factory Odyssey spacer (40mm) and shaved it down on the CNC machine to maximize hood clearance. With that plus a gasket on either side it clears on the J37. You can do what we did, or you can run a factory spacer – we just wanted to get it as low as possible so the hood could close – which it does....on our J37 swapped Honda Element.

## Parts List

### c. What We Recommend

As mentioned before, we have this kit on three different cars and have been running them daily driven for almost 2 years! Each setup is different but there are some things you will want that will help maximize results. Some of these are a given, but just in case :-D

#### Bigger Injectors, Bigger Fuel Pump, Fuel Pressure Regulator

You don't want to run this kit on the factory fuel system. If you've purchased this kit, you more than likely understand that already. We've found that you can run near the limit of a stock block with 1000cc injectors, a 355LPH fuel pump, and a good fuel pressure regulator to dial it all in.

#### Fuel Return Line

You'll be able to achieve more power if you add a return line to your fuel tank rather than running dead headed like the J-series are setup to do. Just a suggestion.

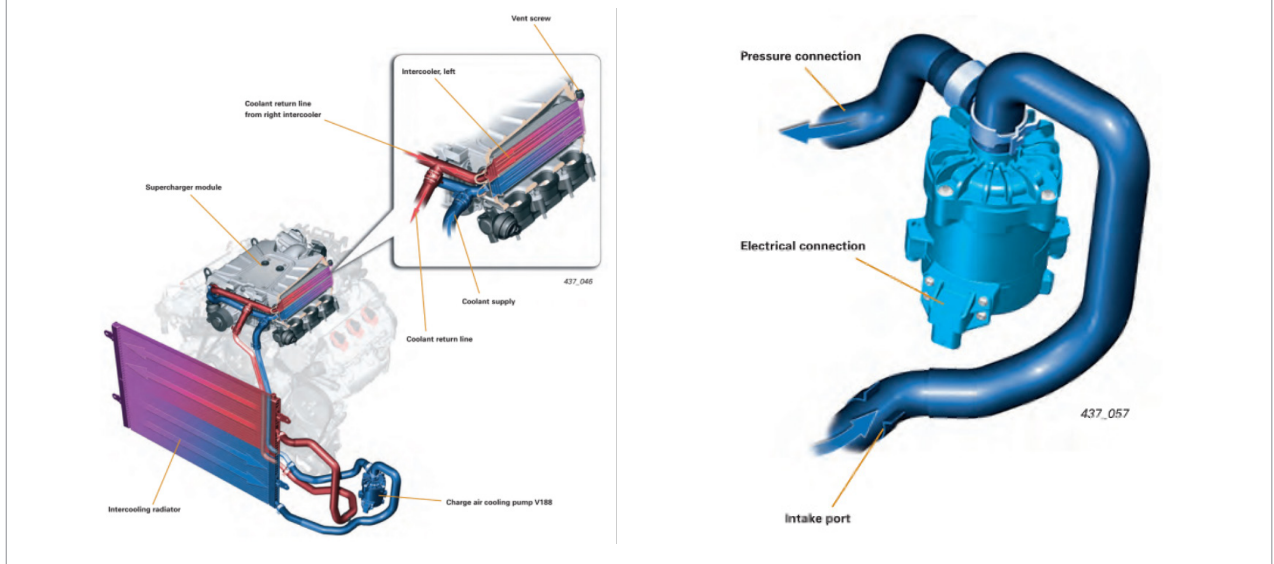
#### Tuning

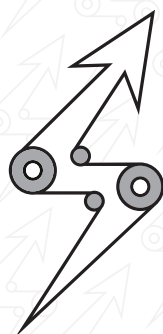
We're running this kit using HTS (Honda Tuning Suite) on a factory ECU, and a full AEM standalone. Whatever your preference is – get it tuned!

#### Cooling for the Supercharger

Yes, you can run it without it, but don't. These came from the factory hooked to its own cooling system on the Audi. Easiest way to replicate that setup is the following. There is an illustration below that shows you the basic idea of the supply and return you'll want to replicate with the parts you choose.

- **3/4 inch hose and clamps:** This will connect the supercharger to the rest of the cooling system.
- **Water pump:** You can use a [factory Audi auxiliary water pump](#), or [any aftermarket one](#) – this will need to be wired to turn on with ignition power. Various years, makes, models and even VW have different sized ones. Pick the ones that meets your size requirements.
- **Coolant reservoir:** This gives you a place to fill the system, but also allow for the coolant to expand and contract without overflowing. Best option is one from a hybrid vehicle (like a 2019 Toyota Corolla or Lexus UX200) that matches the supercharger hose size, has an inlet and outlet as well as a bleeder to burp the system. [eBay has them pretty cheap.](#)
- **Front mount heat exchanger:** You can use a [factory Audi one](#), or [any aftermarket one](#) as long as it matches the hose size of the system. If you're installing this on a sand rail (awesome) you would probably have a different setup that looks like some Baja Truck.





**Retrofit**  
**SUPERCHARGER**

**Installation Instructions**

## Installation Instructions

### a. Supercharger Prep

It is best to get the supercharger ready to go before starting the kit installation and before actually installing it. It is A LOT easier to reach the side ports and install the accessories with it off the car.

- 1 Start by flipping the supercharger upside down and you'll see the EVAP port on its belly with (hopefully) a tube sticking out.



- 2 Remove it and you'll see that it has two O-rings. We're going to use one of them.



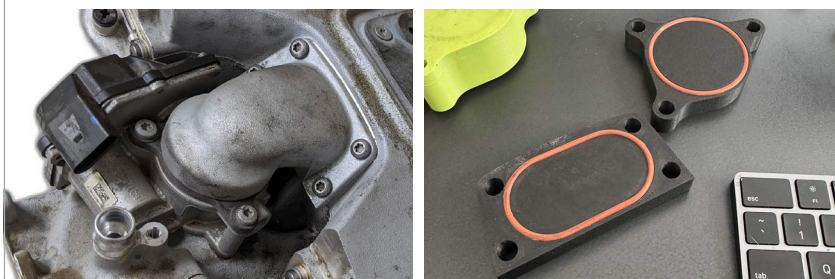
- 3 Pick the better of the two and remove it. We're going to apply it to the EVAP plug included with the kit.



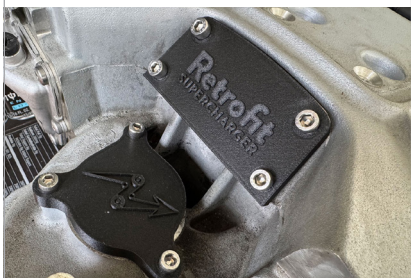
- 4 Once you've installed the O-ring, jam that thing in the port. It should fit nice and snug.



- 5 Next, remove the supercharger bypass valve, the plastic piece inside the metal tube connecting it to the top of the supercharger and the tube itself. There is a total of 7 bolts to do this. You'll need one of the O-rings from the bypass valve, and the O-ring from the metal tube. The supplied covers were designed to use those O-rings.



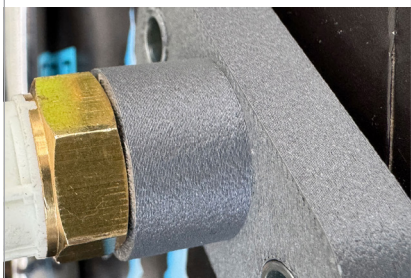
- 6 Attach the covers with the supplied hardware.



- 7 The IAT adapter is provided so you can get charged air temps. Shown here with an IAT sensor, but it is NOT included with the kit. If you're running this on a J37, you'll need to cut and extend the IAT wire from the MAF sensor to connect to a plug for this sensor, then run the ground to SG1 or SG2. The ECU will pick it up as if its reading from the sensor inside the MAF.



- 8 Install the IAT sensor into the adapter. It is meant to screw all the way in and bottom out so the O-ring does its job.



- 9 Then install the adapter onto one of the side ports of the supercharger using the supplied hardware and gasket.

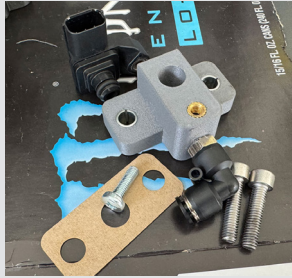


# Installation Instructions

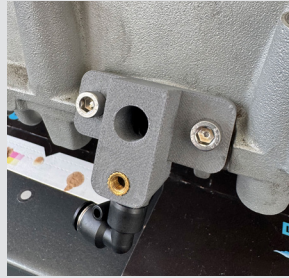
## a. Supercharger Prep - Continued

**10** The map sensor adapter is supplied so you can mount the sensor to the charged air side of the supercharger to get boost readings. The adapter comes with a gasket, mounting hardware and a push-to-connect fitting so you can run a line to your fuel pressure regulator. If you don't need that fitting, you can use the supplied plug in its place. These come in two variants depending on which engine you specified while ordering this kit. The images are shown with the map sensors which are NOT included in the kit.

**Newer style map sensor** (monoport engine) w/ gasket and mounting hardware. Keep the O-ring on your map sensor.



Install the adapter with the supplied hardware and gasket to a side port on the supercharger.



Install your map sensor to the adapter with the supplied hardware.

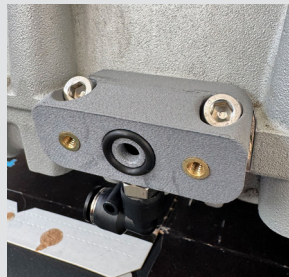


or

**Older style map sensor** (individual port, cable throttle engine) w/ gasket, mounting hardware and O-ring.



Install the adapter with the supplied gasket and hardware to a side port on the supercharger.

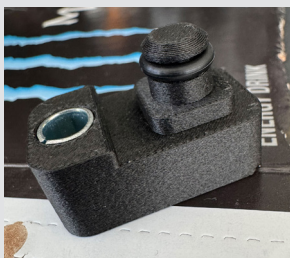


Install your map sensor to the adapter with the supplied hardware.



**11** Since you've relocated your map sensor, we've provided a dummy to cover where it used to be. Depending on which engine you selected when ordering the kit determines which dummy is supplied.

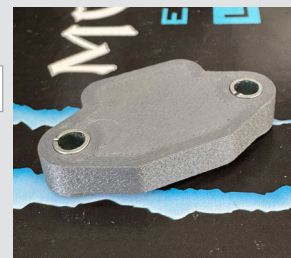
**Newer style map sensor dummy** w/ O-ring (reuse the screw that mounted the map sensor). Shown installed on a J37 throttle body.



or

**Older map sensor dummy** (reuse the O-ring on the throttle body).

Unfortunately, we don't have an older J-series (or b-series) throttle body to show the older map sensor dummy installed. Reuse the screws from the original map sensor to mount the dummy.



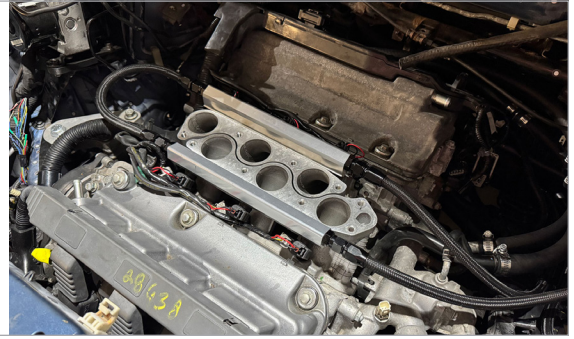
**12** Lastly (and most importantly) add oil to the supercharger. As mentioned earlier, when these are removed to store at a junk yard or shipped to you, they drain the supercharger oil. You'll want to drain whatever is left in there and fill it with 5.1-5.2oz of supercharger oil. Once finished, replace the bolt and snug it tight. [FCP Euro has a great video on the oil change process.](#) Here are the links again for the two types of oil: [AC DELCO oil](#) or the [Genuine Audi oil](#)

# Installation Instructions

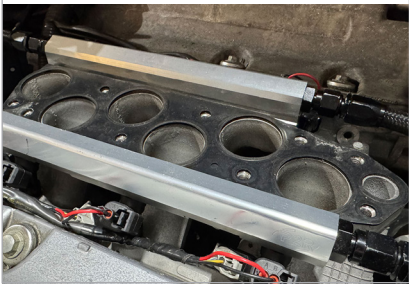
## b. Kit Installation

1 To get started you'll want to remove your factory intake, and intake manifold and throttle body. When you start the install, you should be looking at something like this -->

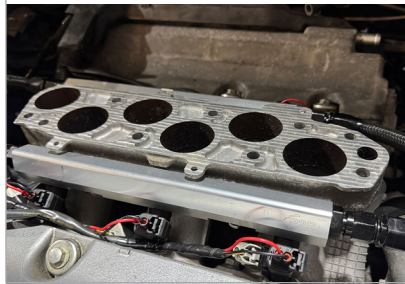
Now would be a good time to install new injectors, rails and fuel lines while you have access to those areas.



2 Add a gasket of your choice on top of the lowers. We use the factory metal ones.



3 Put your spacer on.

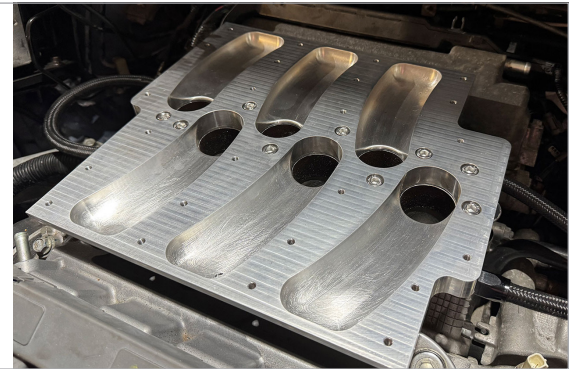


4 Add another gasket on top.

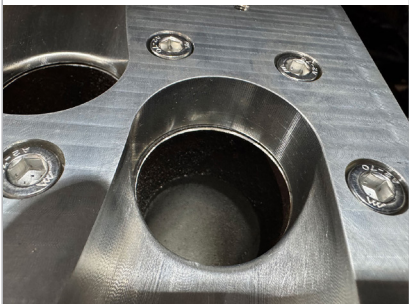


5 Place the lower plenum on top and use the nine m8x1.25 bolts to bolt down the lower manifold. Make sure the plenum orientation is correct – it is not symmetrical.

The left side in this image is the crank pulley side. Since there are two gaskets at play here, you'll want to do 2-3 rounds to get them torqued to 18 ft/lbs of torque. Start in the middle and work your way outwards on each side.



6 You may notice that the plenum ports are larger than the spacer – this is to allow a ported spacer/ lowers should you decide to do that so you're not having to bore out the plenum. It is okay to run it like this. This is how we run it.



7 Next, grab the plenum gasket and lay it on top. These are die-cut and we try our best to pop out all of the bolt holes before shipping them. If we missed one, simply poke it with a screwdriver and it'll fall right out. You'll want to make sure all the bolt holes are clear before installing the plenum top.



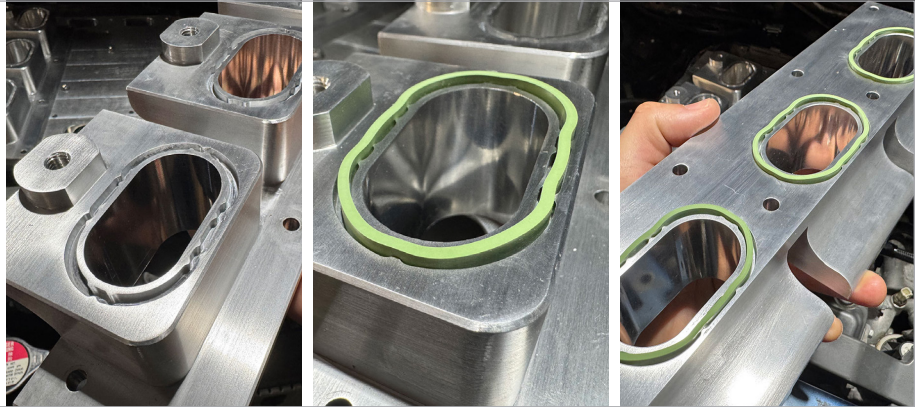
8 Next, install the plenum top. Use the eight shorter M6x1.0 bolts to secure the middle section. Torque these to 10 ft/lbs starting from the middle and extending outwards. You might need to do a couple of passes to get them there.



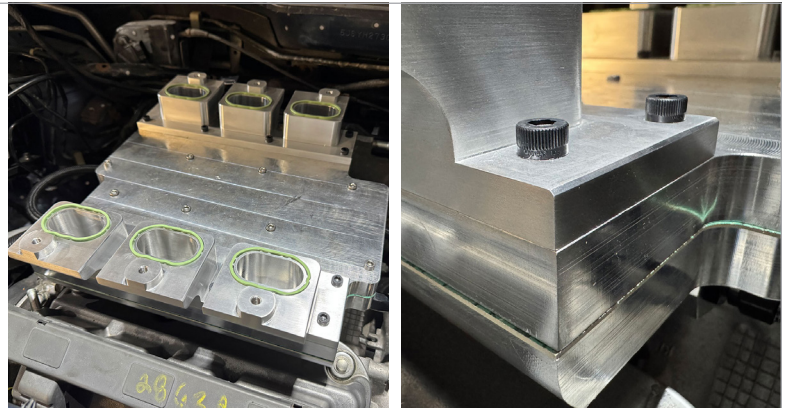
# Installation Instructions

## b. Kit Installation - Continued

9 Next comes the supercharger risers. You'll need to install the six O-rings on each before continuing – three on top, and three on bottom. Make sure they're all lying flat in the channel. The channels have notches in them to mimic the factory setup, so the O-rings stay once installed. Just lay them in the channel and press down a little at a time and they'll wedge in there nice.

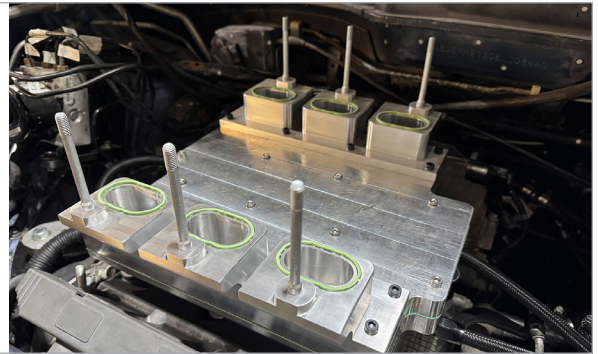


10 Once you've installed the O-rings on both risers, place them in position over the ports on either side of the plenum and use the longer m6x1.0 bolts to fasten them to the plenum. The risers are identical, so it doesn't matter which side they go on. Start by hand tightening them all. Each riser uses eight bolts, and you need to torque them all to 10 ft/lbs. Start in the center and tighten outwards and it will take a few passes to get them all torqued. There should be zero space between the risers and the plenum once they're all torqued down.



11 Next comes the supercharger studs. Thread all six of them into the provisions on the tops of the risers. These are meant to bottom out once installed, so there shouldn't be any space between the base of the stud, and the riser. You can wrap it with a paper towel and use pliers to snug them up or use the two nut counter trick – whatever you want. With them all threaded in, you should be looking at this -->

Now would be a good opportunity to re-check the plenum bolts to make sure they're still at 10 ft/lbs after mounting the risers. We're now ready to mount the supercharger!



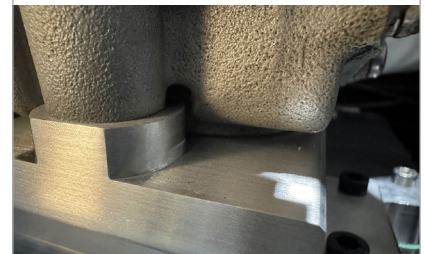
12 Carefully lift the supercharger and align it with the studs. Once the studs are all lined up it should slide easily down onto the risers.



13 Give it a couple of taps on the front and back to make sure it sits fully down on the studs. Then take the six M8 nuts and thread them on and tighten them down. Once snugged up, the stud should just be peeking over the top of the nut.



14 Check the surface where the supercharger meets the uppers. The kit is designed for the supercharger to sit flat, and you shouldn't see the green o-rings at all.



Next, step back and admire your new Retrofit Supercharger!



**Retrofit**  
**SUPERCHARGER**

[retrofitsupercharger@gmail.com](mailto:retrofitsupercharger@gmail.com)