

YXZ “BIG” turbo kit

Installation manual v 1.1



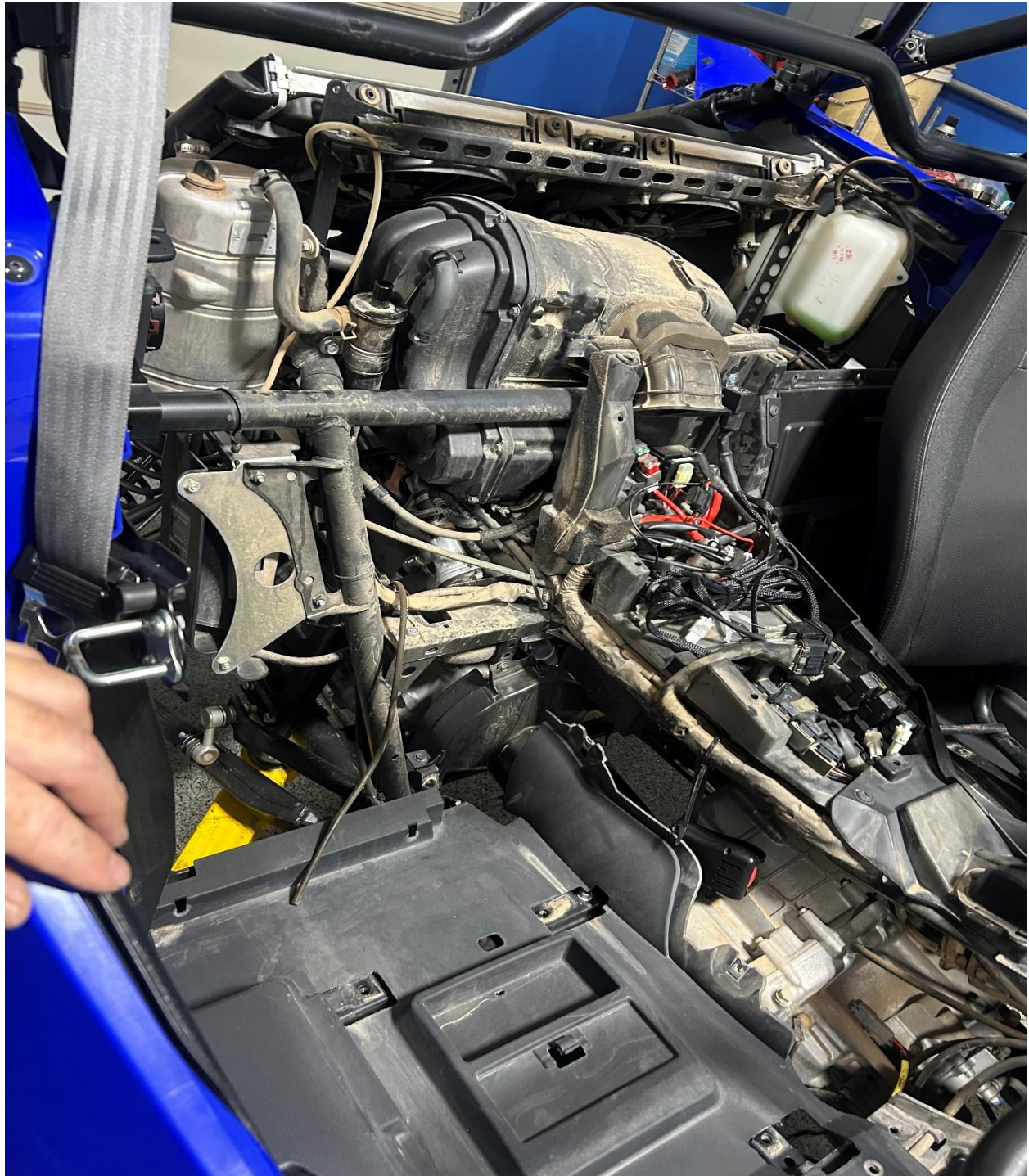
Vehicle Prep:

Remove the front body work, inner hood, front fender assembly and passenger side inner wheel well plastics. (see factory service manual for detailed instructions on removal if you are not familiar with these items. Bag/retain hardware removed and store in a safe location for reassembly at the end of the turbocharger kit install.



Remove the rear inner body work of the car (bed tray, radiator shroud parts, oil tank and coolant tank covers, and air box cover) This may differ depending on year of the vehicle (2016-18, or 2019+) Consult factory service manual for detailed instructions. Bag/retain hardware for reassembly. Remove the center lower skid plate to access the transmission tunnel of the car.

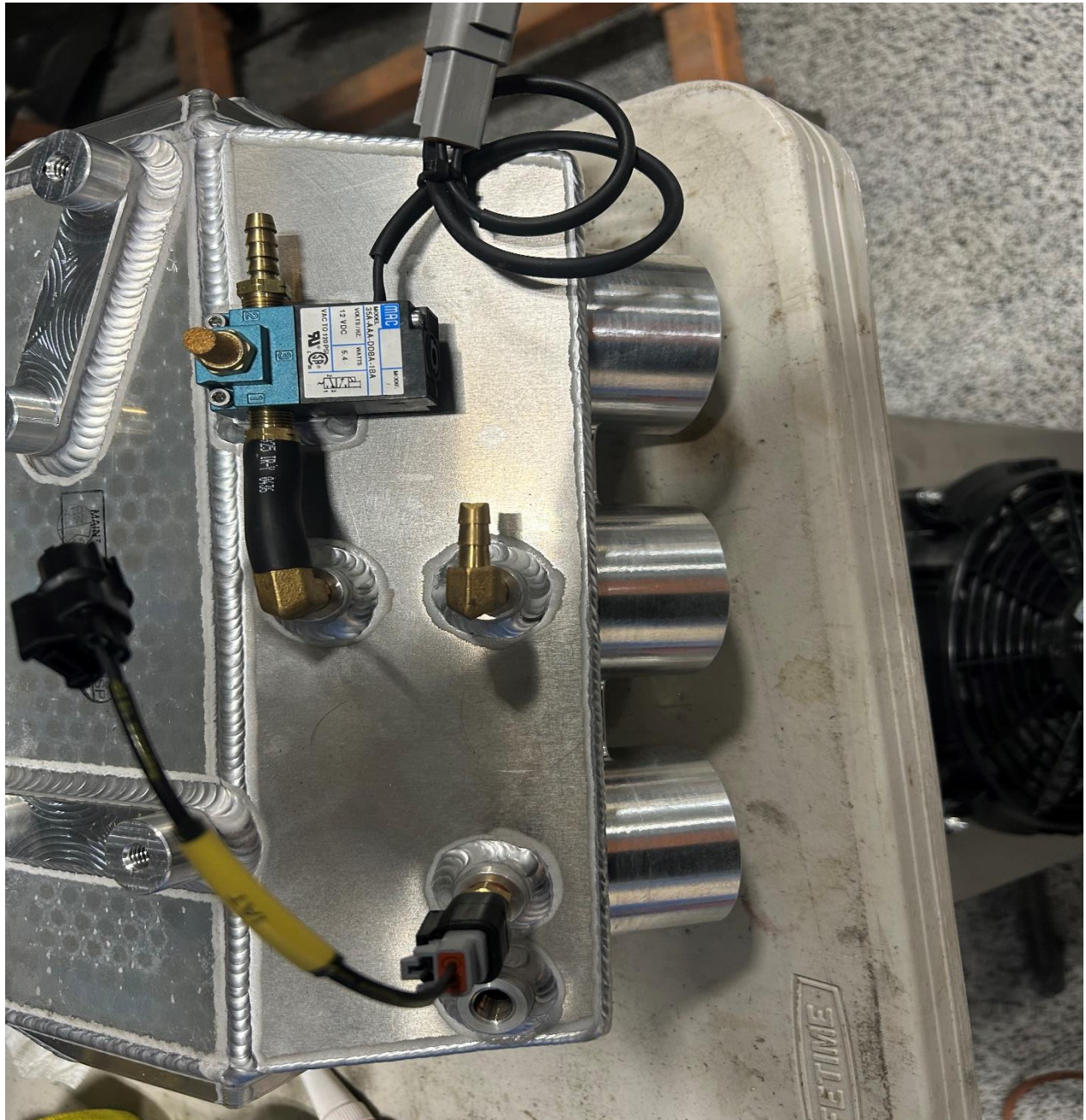
Remove passengers side seat, passengers side transmission tunnel plastics, and passenger side panel behind the seat. Bag/retain hardware for reassembly.



Remove the factory air box:

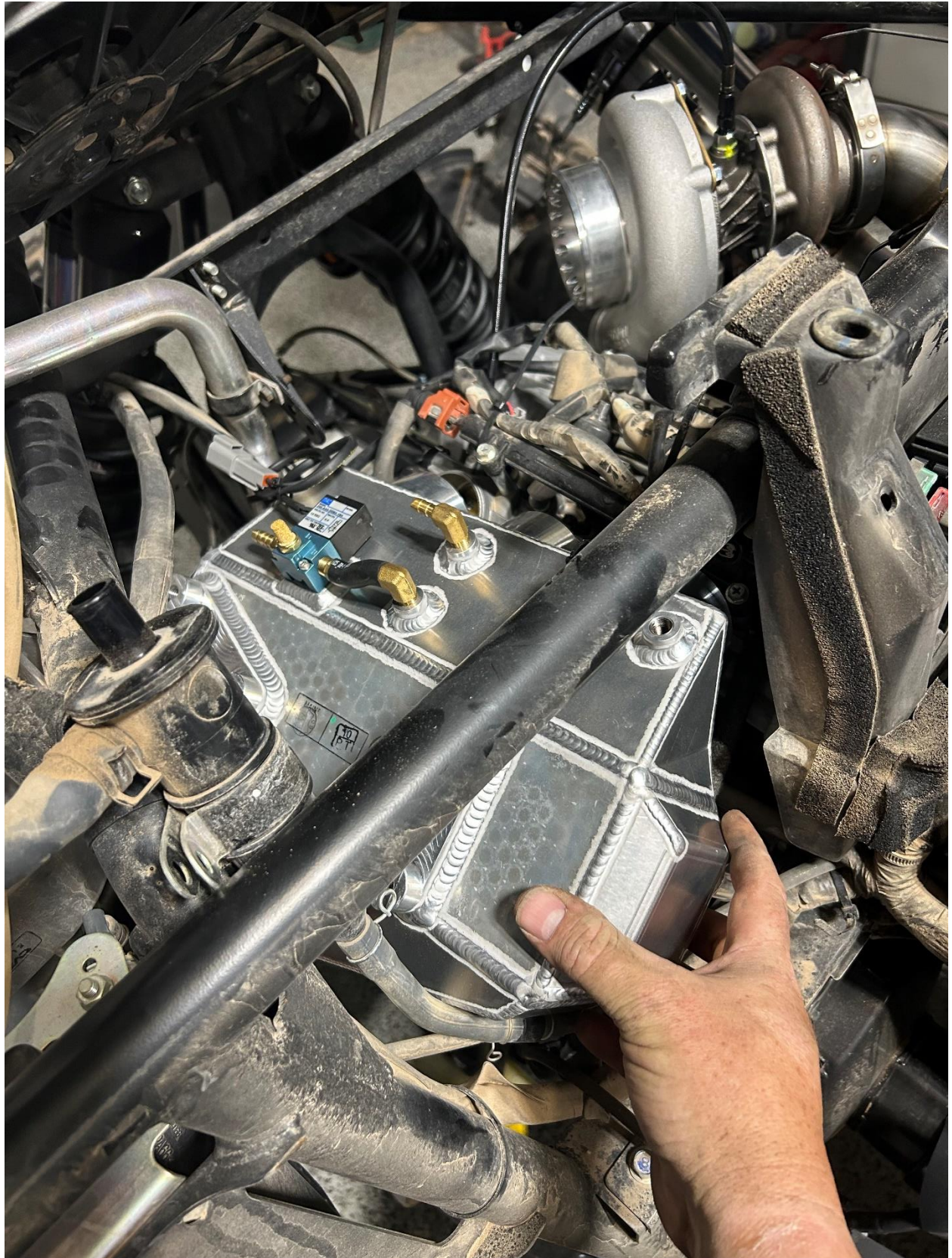


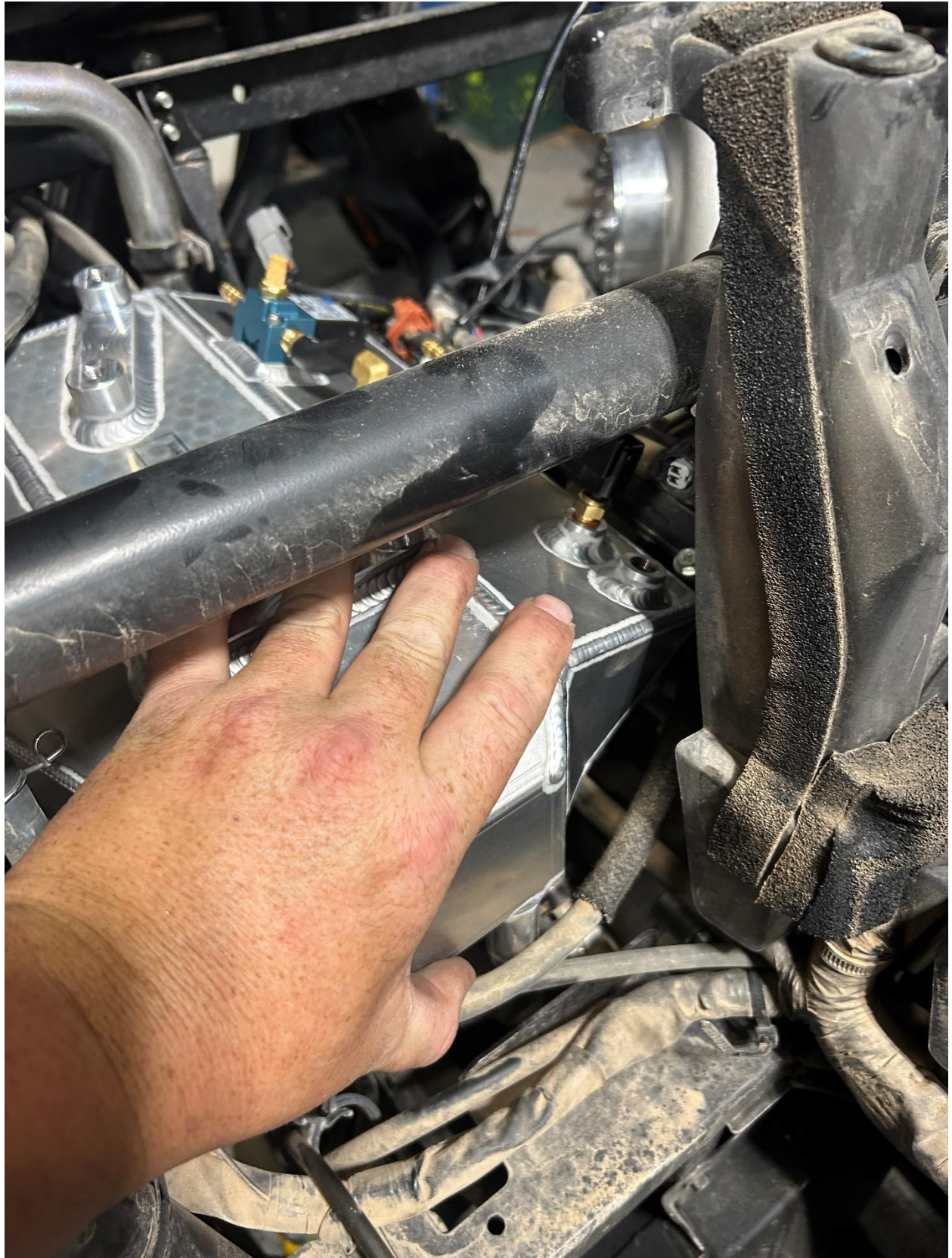
Prep the intercooler assembly, Install wastegate fittings as shown. Install Boost control valve (if using one) as shown. Install air temp sensor and aux pressure port fitting if being used. Plug unused ports. Plug unused ports.



Install the water/Air intercooler assembly onto the throttle bodies. Use o-ring grease on internal o-rings, and make sure throttles are “clean” prior to installation. It will take some effort to push the o-rings over the raised bosses of the throttles but you should feel a “click” when they are seated.

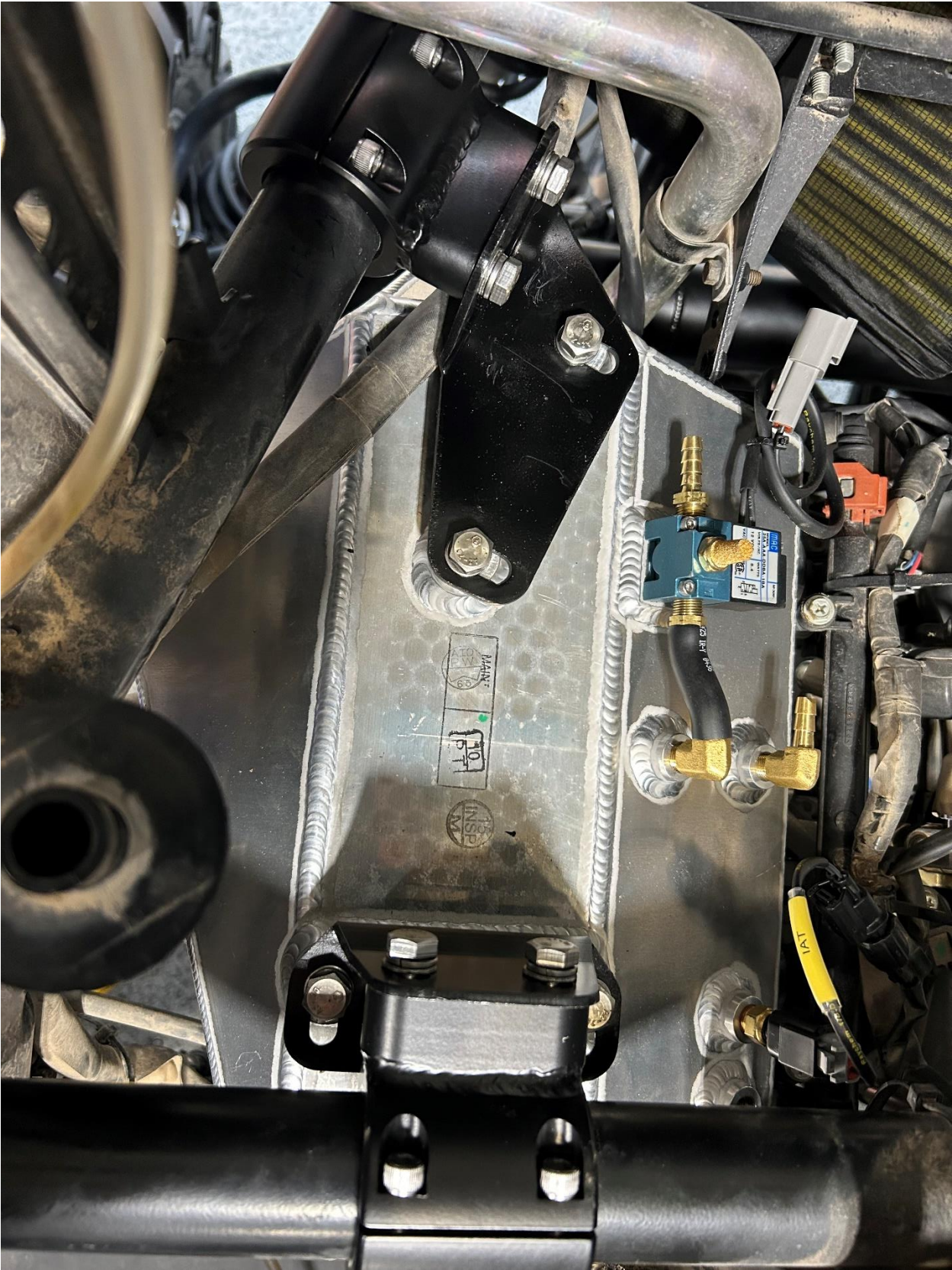






Loosely install intercooler frame mounting clamps and brackets. Intercooler should sit level with the frame crossbar. Tighten clamps and bolts to fully secure intercooler assembly



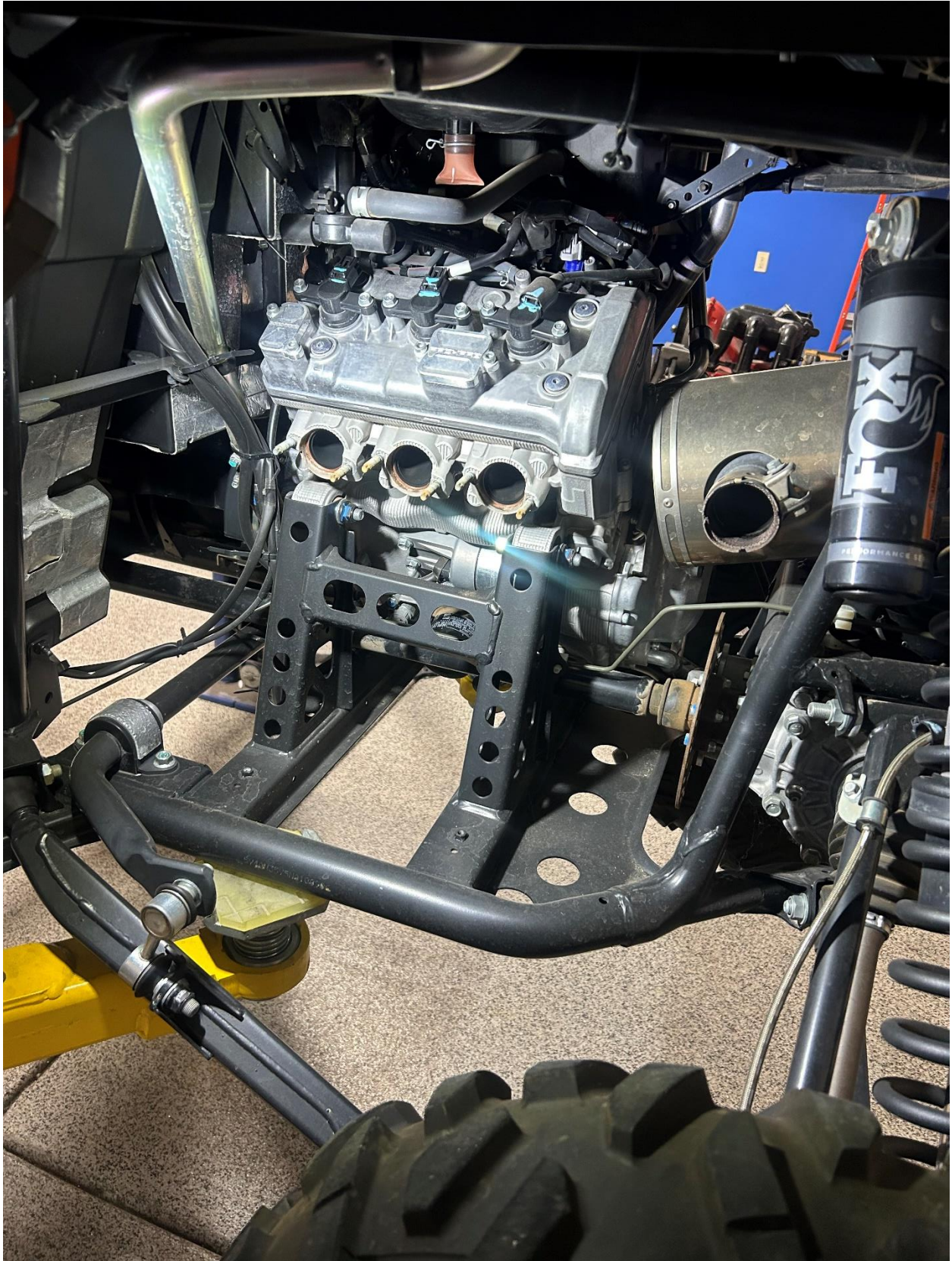


Install the 3/8npt-1/2" hose barb 90 into the bottom side of the intercooler using thread sealant or thread tape. Attach the factory IAC hose to this fitting.





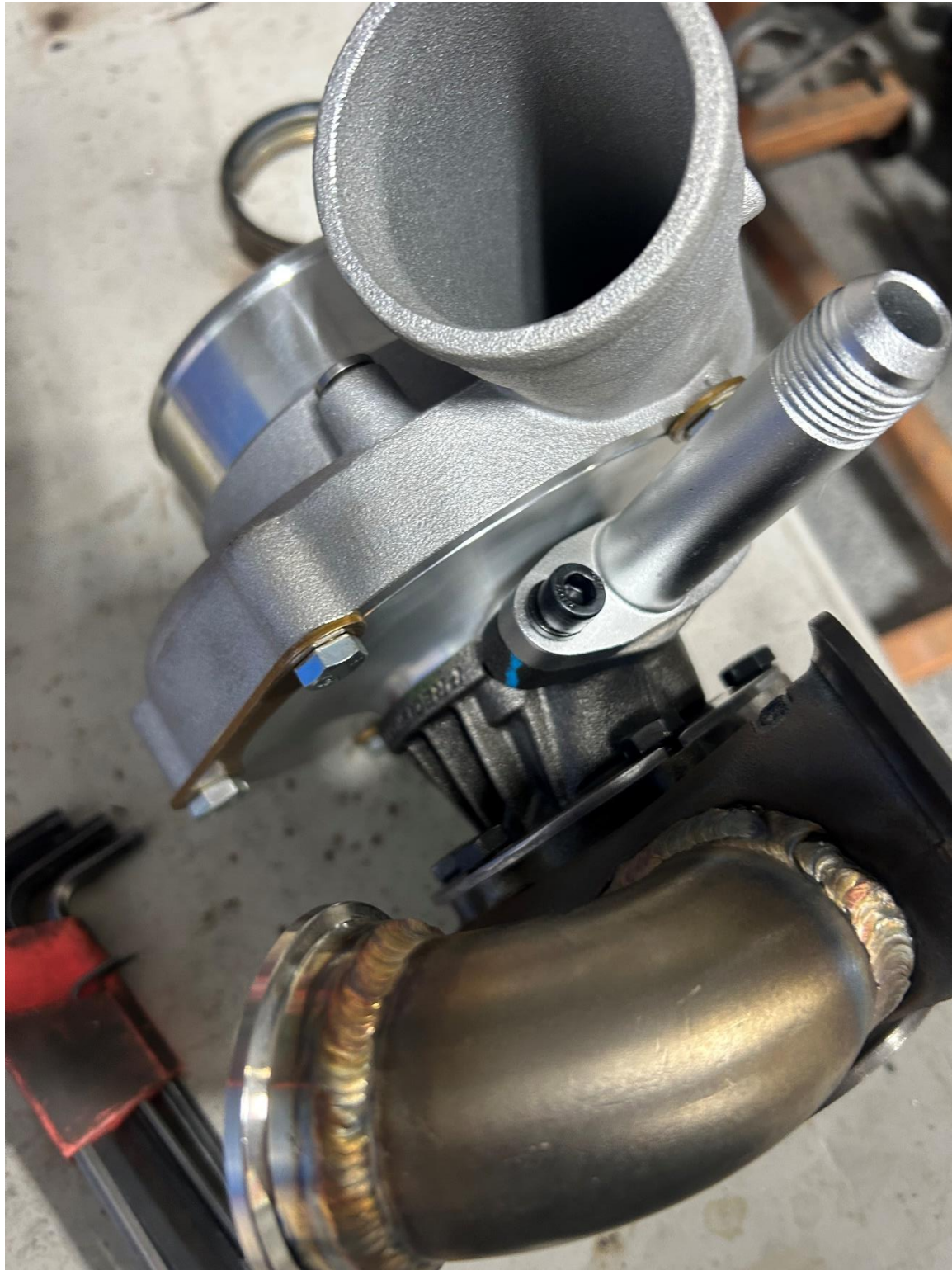
Remove the factory exhaust system: header/muffler



Use the supplied ARP 12pt nuts and Nord Lock washers to install the JTE header, torque nuts to 16 ft/lbs

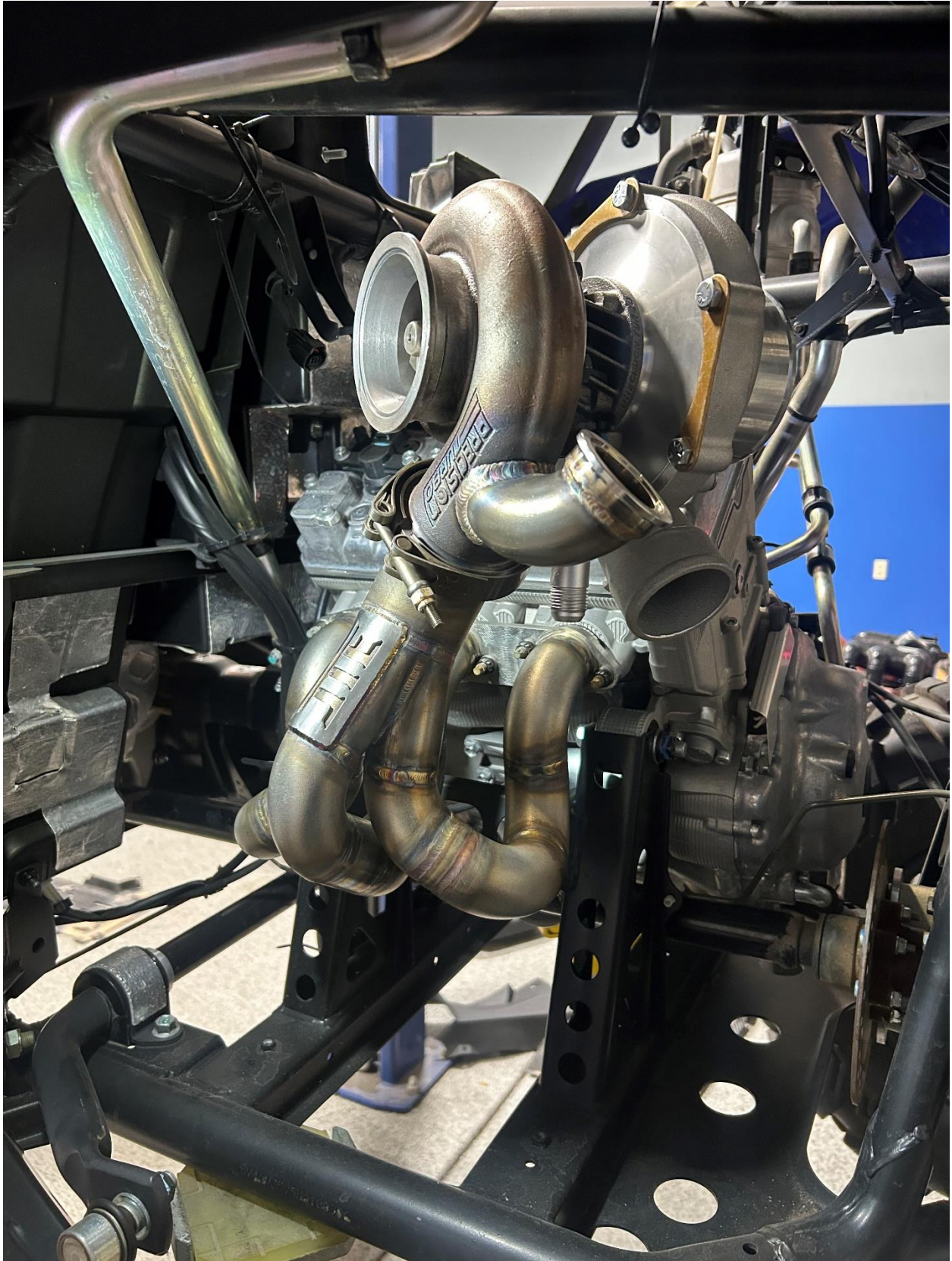


Prep the turbocharger, Install drain flange assembly and Oil feed fitting. Use thread sealant on the feed fitting.





Loosely install the turbocharge onto the header using supplied v-band clamp.



Loosely install the muffler mounting bracket onto the frame and loosely install the muffler assembly into the turbocharge using supplied v-band clamp.

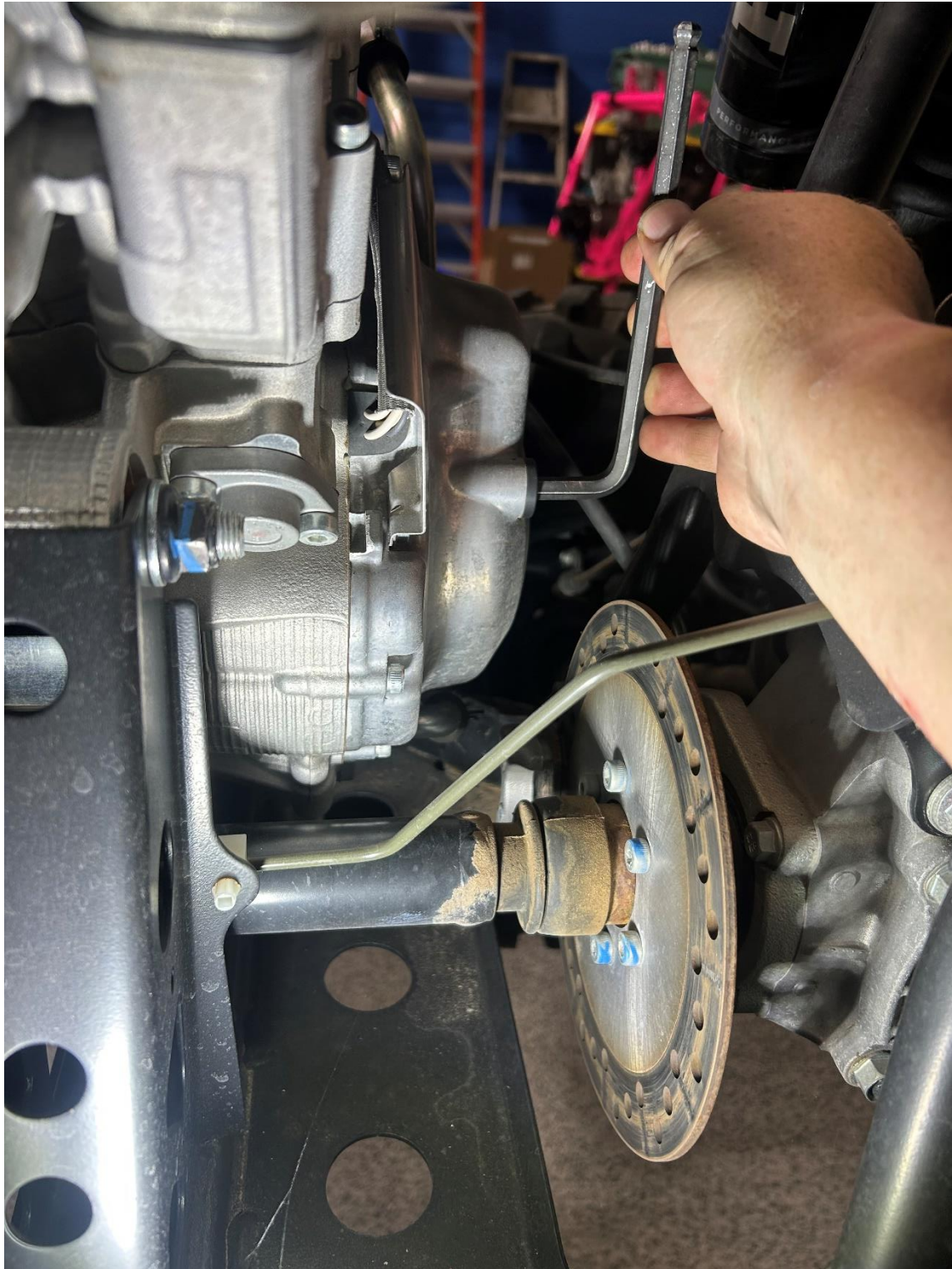


Once the turbo, muffler mount, and muffler assembly are in place install the muffler mounting t-bolt clamp



Tighten the muffler mounting clamp onto the frame, tighten the muffler mounting t-bolt clamp, tighten the turbine outlet v-band clamp, and lastly tighten the turbine inlet v-band clamp. This will ensure proper alignment between these components.

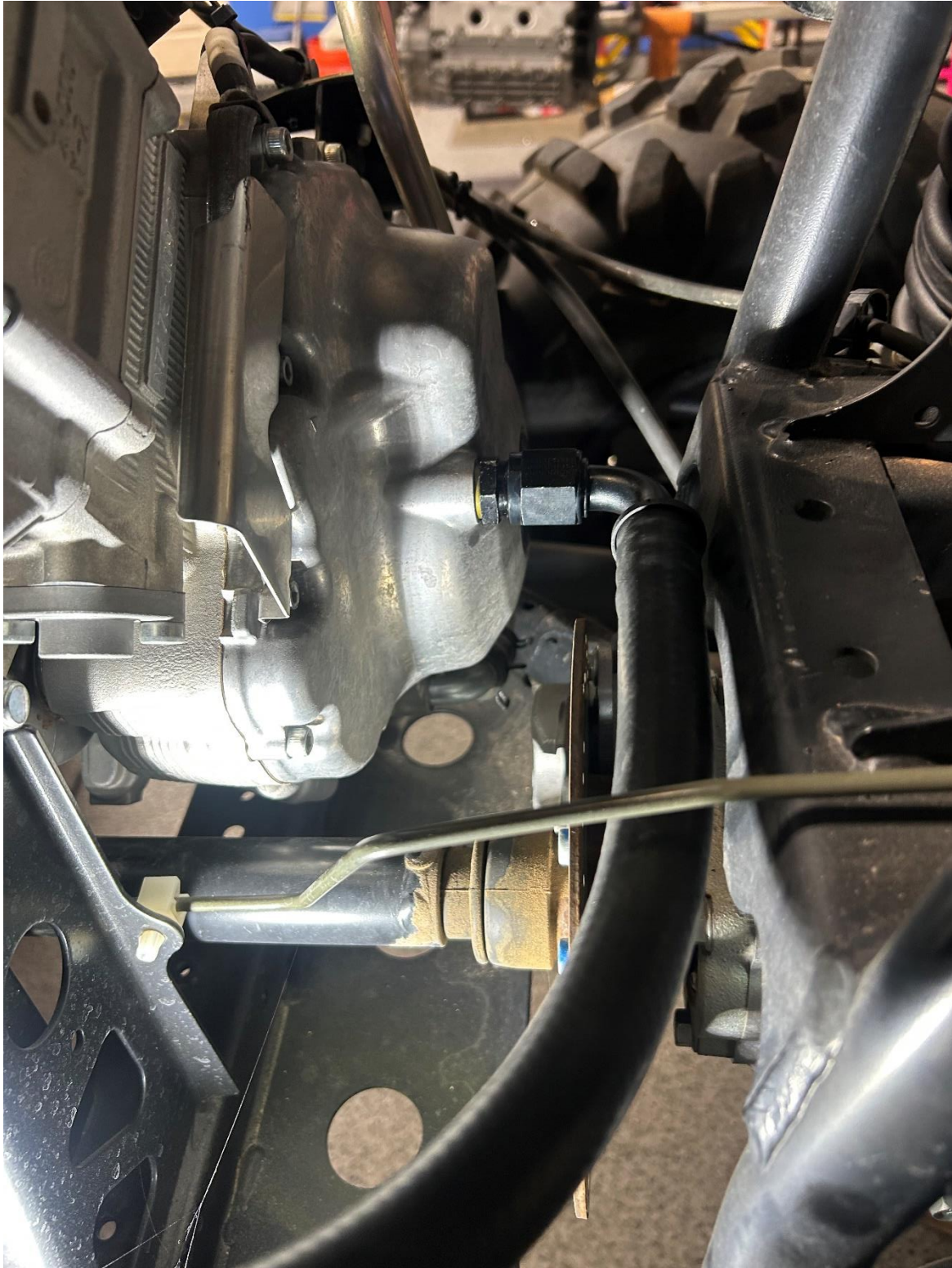
Remove the timing inspection plug from the stator cover at the rear of the engine and install the supplied 10AN drain fitting adaptor.





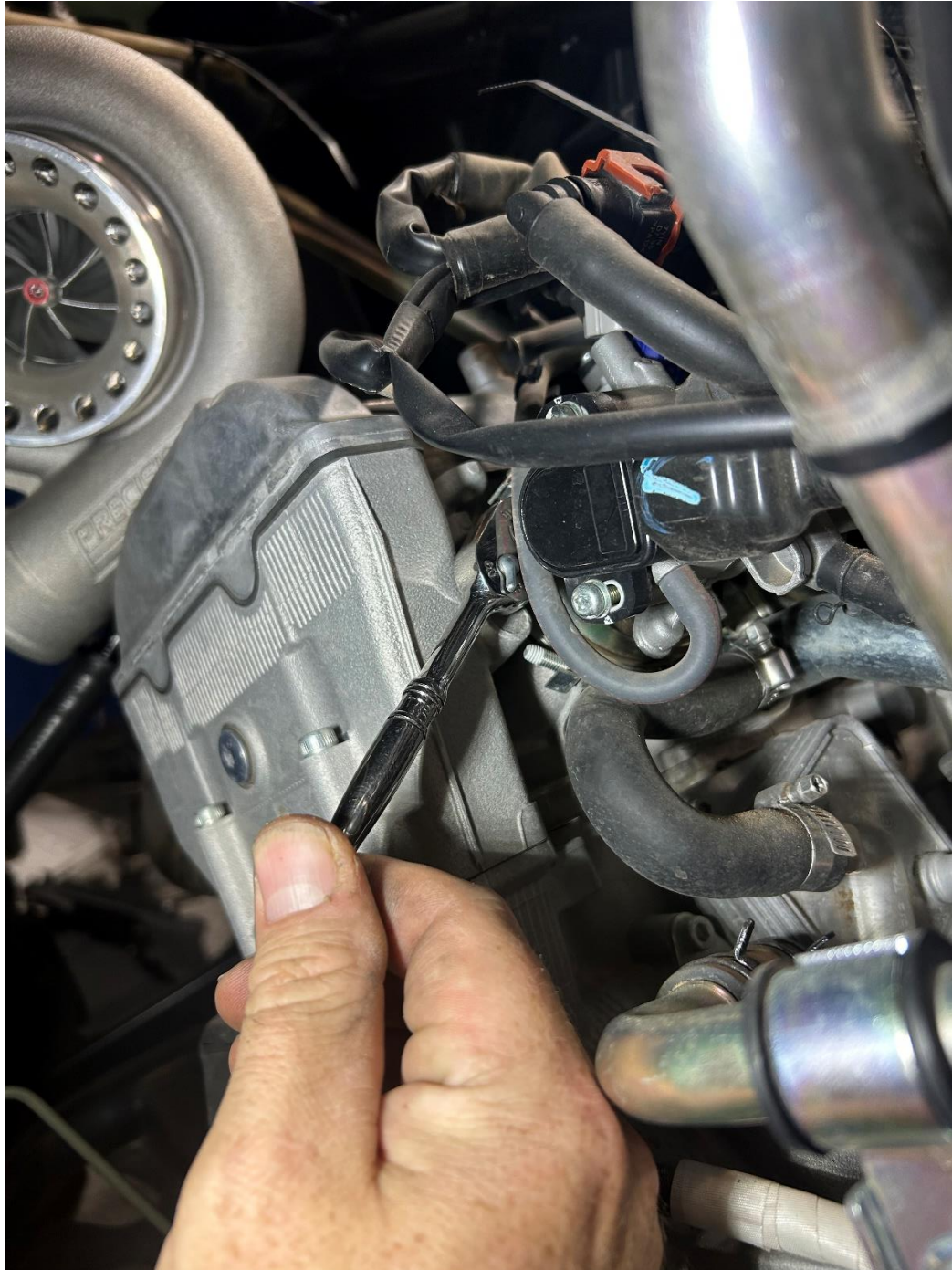


Install turbocharger drain line assembly, the 45 degree side of the hose attaches to the turbocharger fitting, the 90 degree fitting attaches to the stator cover fitting, route hose under the rear brake line as shown and tighten the fittings.





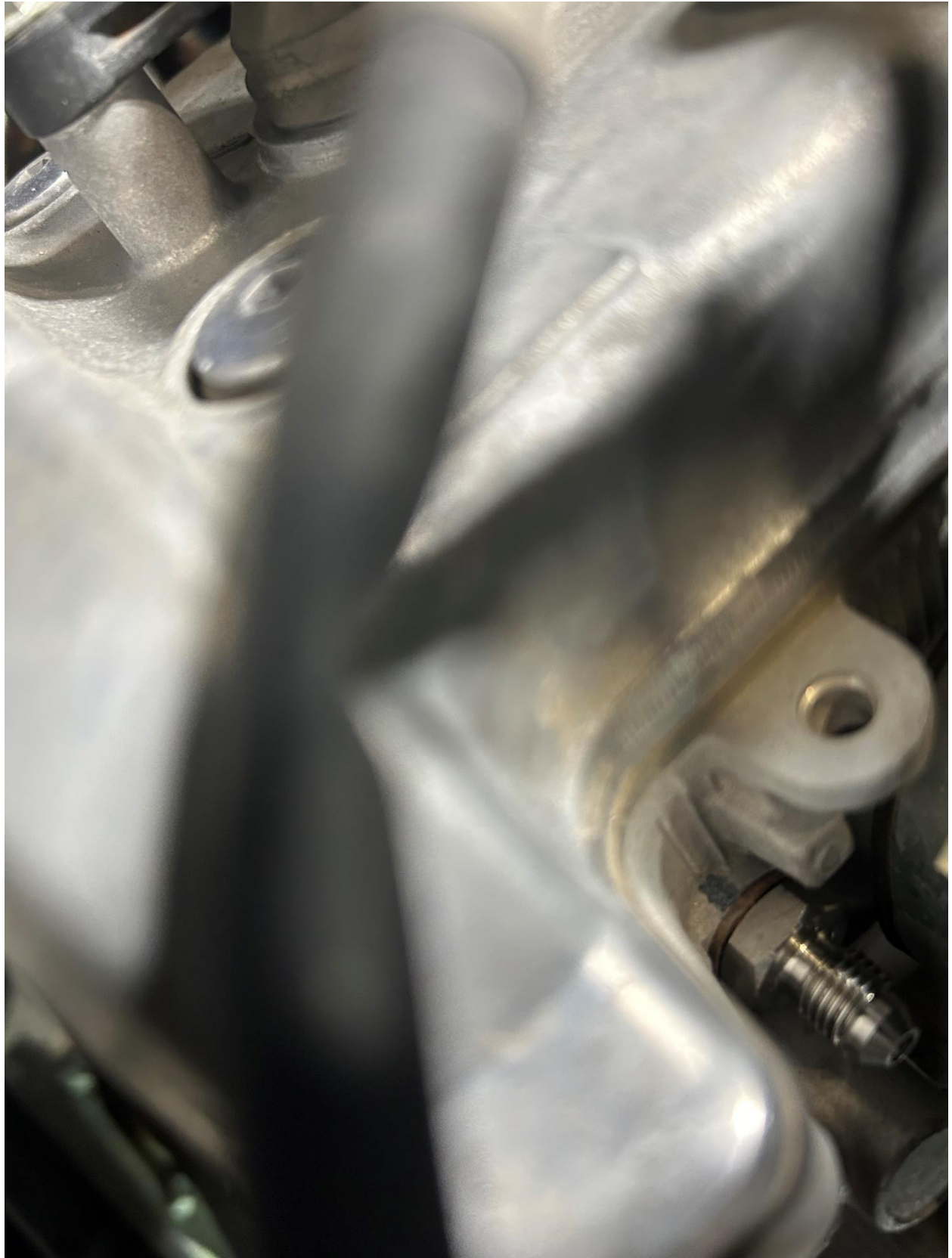
Remove the cylinder head oil feed port plug using a short 10mm socket and 1/4 " drive ratchet, this plug has a copper crush washer behind it. Port is found at the rear of the cylinder head in between the last throttle body and the timing chain case.





Install the supplied copper crush washer onto the cylinder head feed fitting supplied in the kit as show. Screw the fitting into the cylinder head port and tighten it with a short 14mm socket with ¼" ratchet.









Install the 90 degree side of the turbocharger oil feed line onto the cylinder head fitting, attach the straight end of the feed line onto the turbocharger feed fitting and tighten both fittings.





Prepare the wastegate; The turbosmart wastegate is shipped with 14psi springs installed. Please use turbosmart's provided spring chart and springs to set the spring pressure to your desired setting. Install the dump tube onto the wastegate. Install the boost control fittings as shown in the below photos.

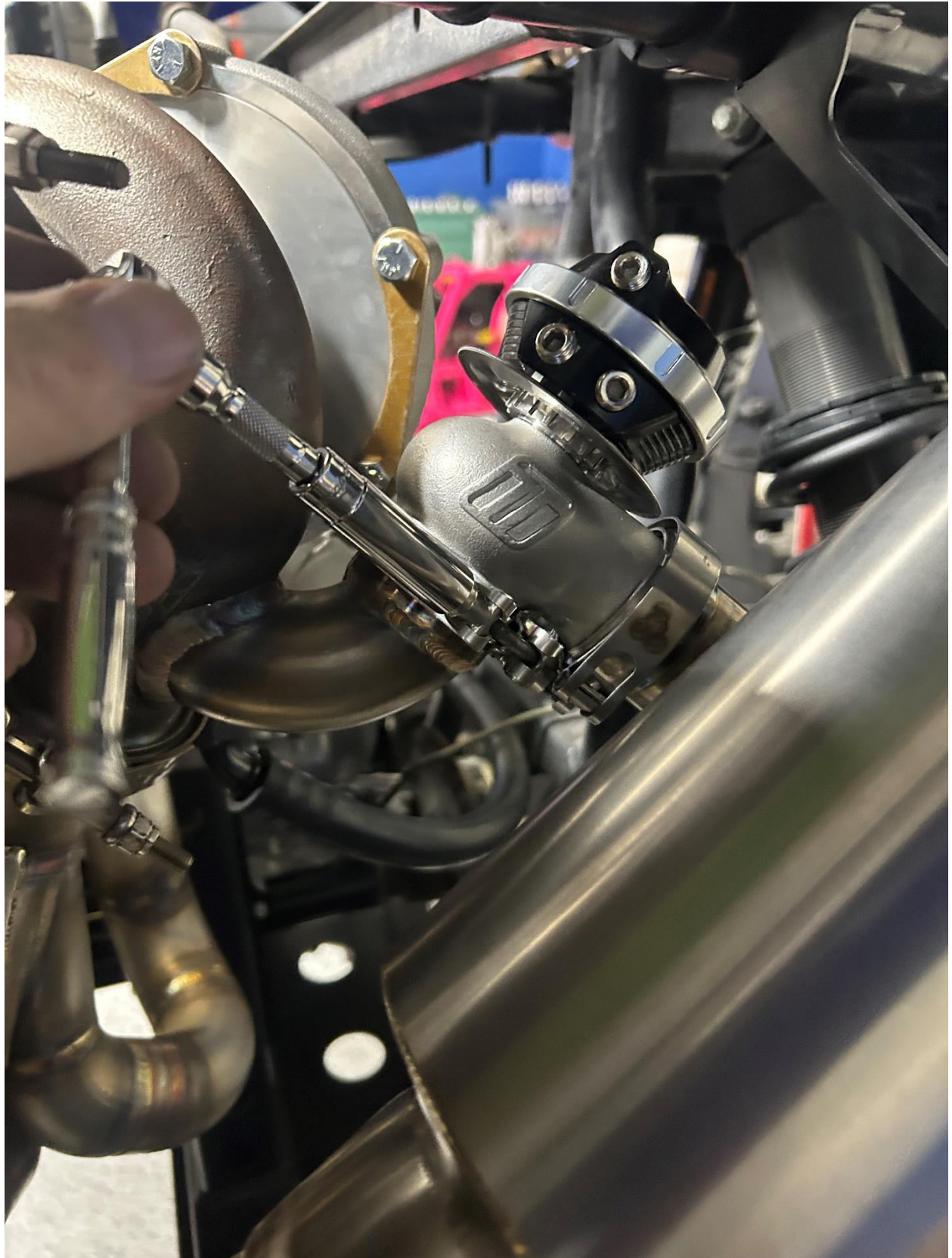






Insert the waste gate fire ring and install the gate onto the turbocharger wastegate flange with the provided v-band clamp.





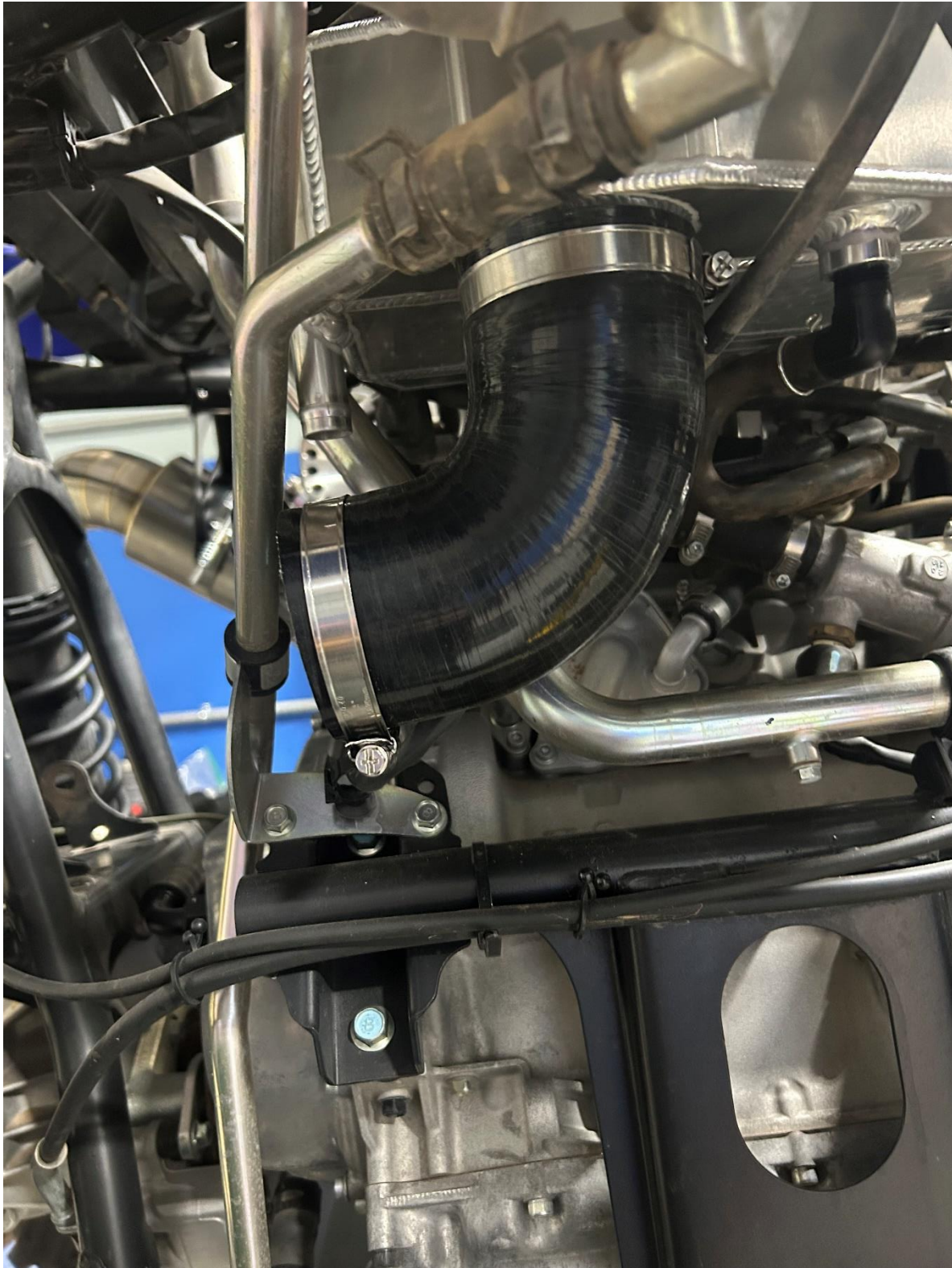


It is necessary to flip the rear shocks around (to move shock reservoir from front to rear)
Remove the upper shock bolts and rotate the reservoir 180 degrees and reinstall the upper
shock bolt. Do this for both rear shocks.





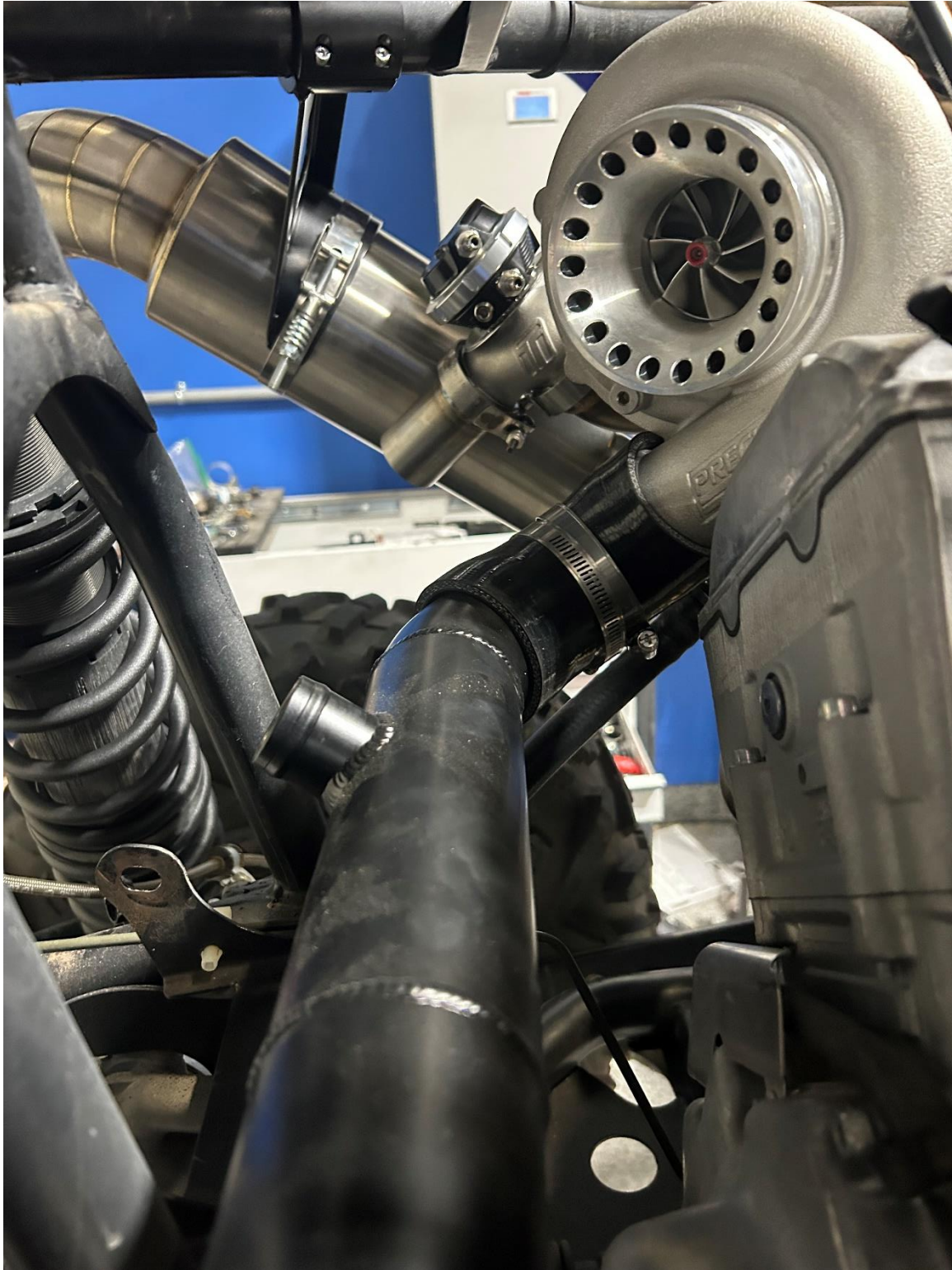
Install the 90 degree silicone coupler with symmetrical legs onto the intercooler inlet and slide provided hose clamps into place.



Install the second 90 degree coupler (shorter leg onto the compressor outlet) onto the turbocharger, slide clamps into place.



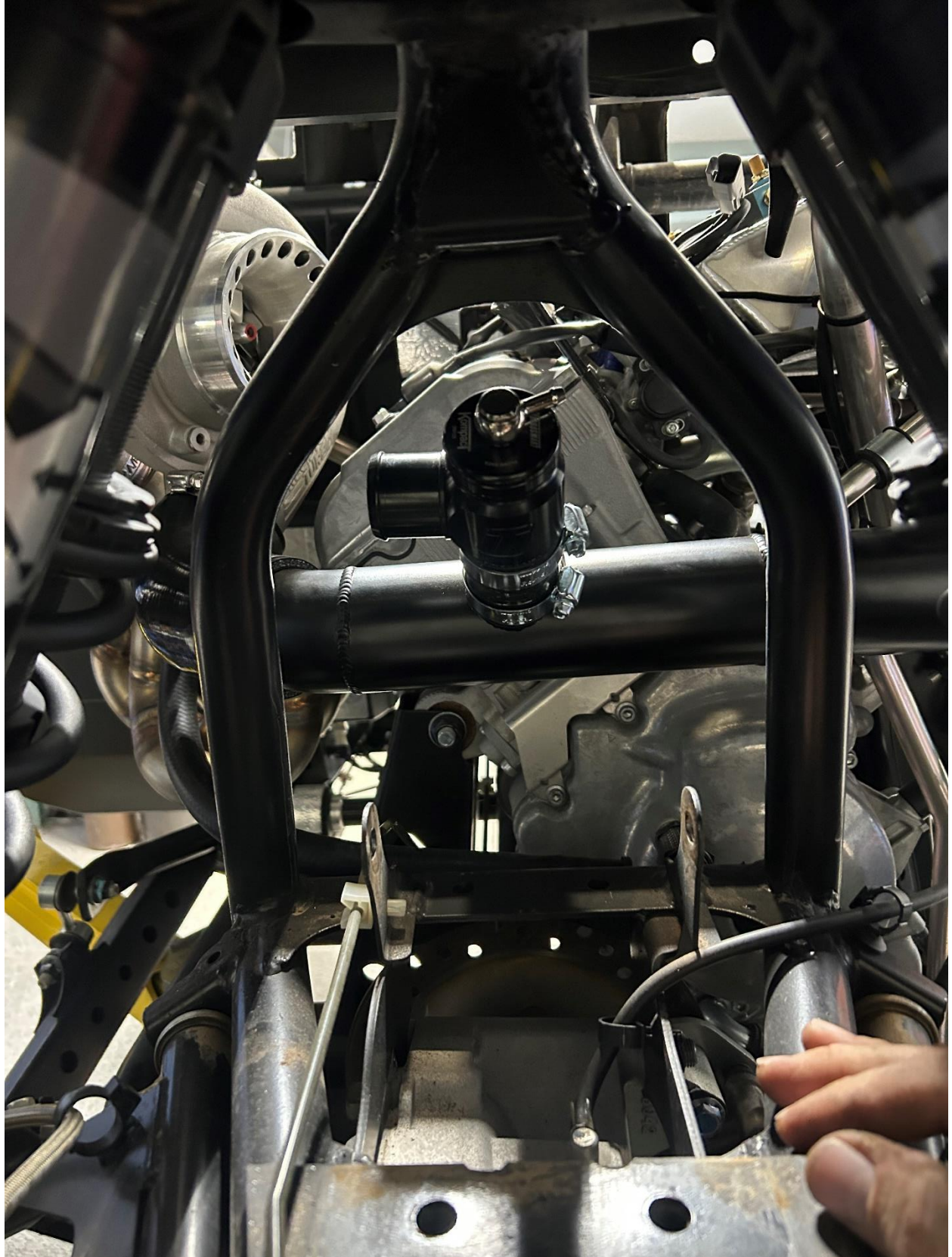
Install the charge pipe into the turbocharger coupler, then into the intercooler coupler. Pipe should sit level between the intercooler and turbocharger, BOV port should be centered in the chassis. Once pipe is aligned, tighten the clamps on the couplers.





Install the 2.5" length , 1.25" ID straight coupler onto the BOV inlet, slide clamps into place and install onto the charge pipe port with BOV outlet facing the drivers side of the car.

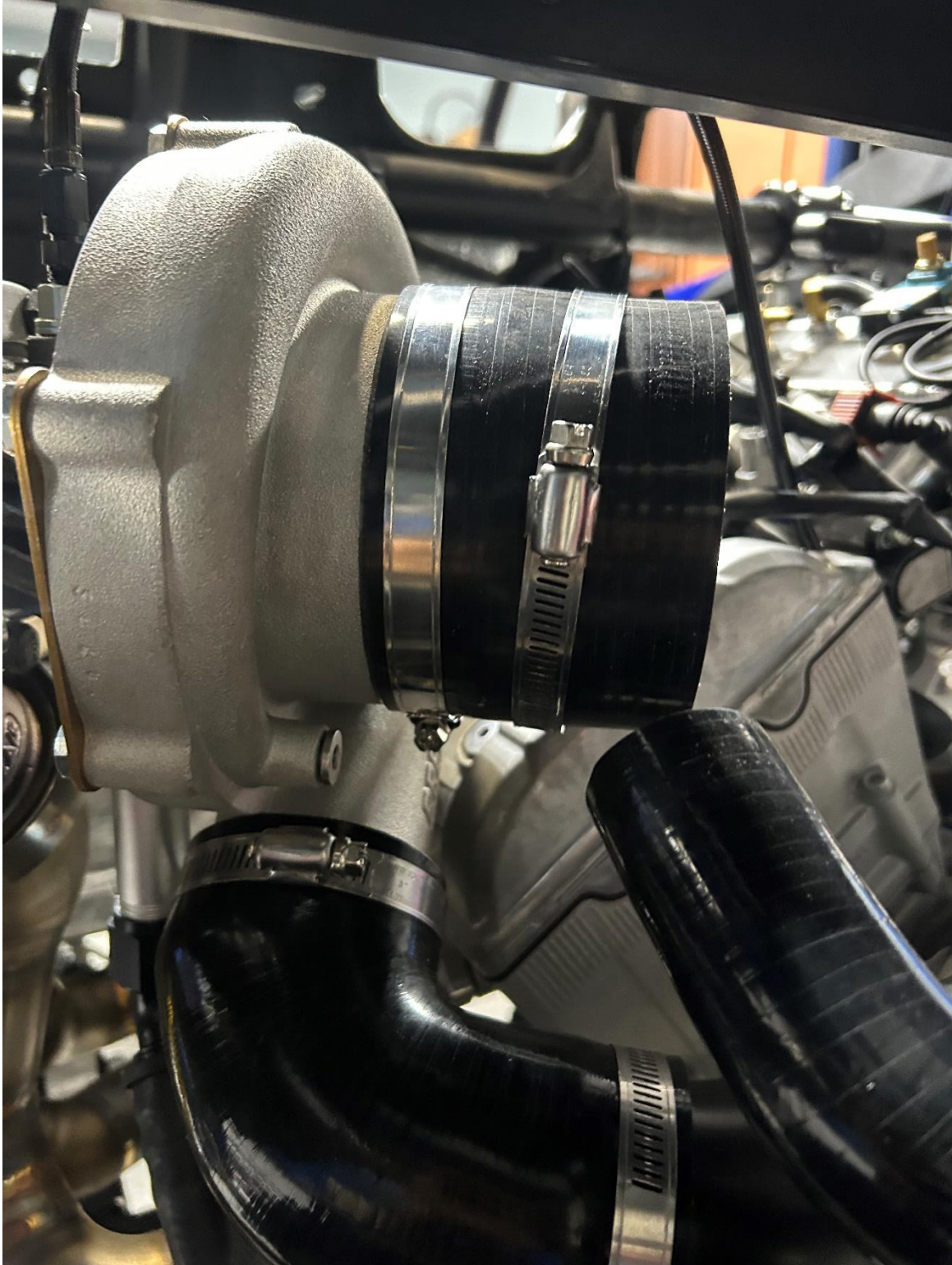




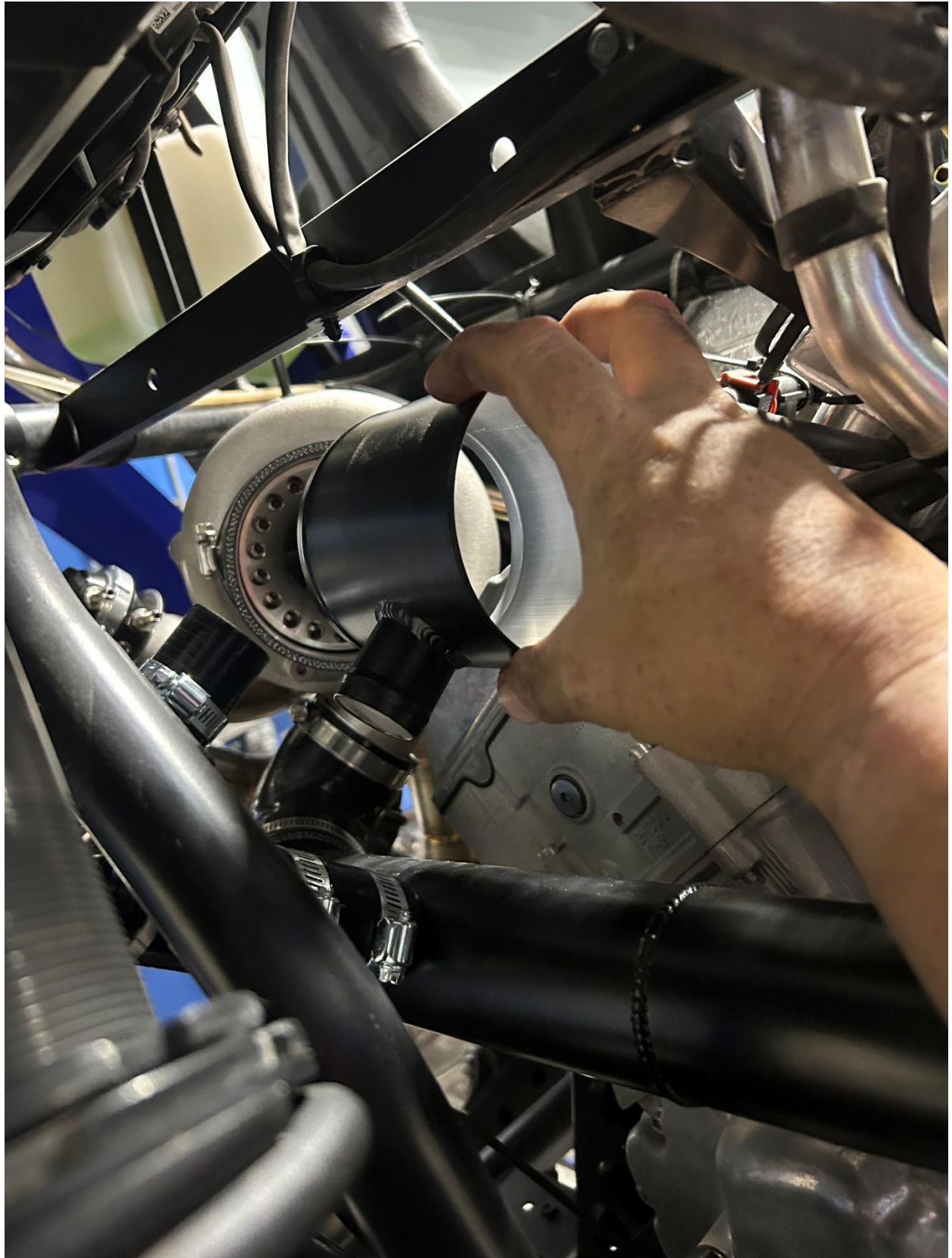
Install the 90 degree 1.25" silicone coupler onto BOV outlet with other side of coupler pointing to the "center" of the turbocharger inlet. Slide hose clamps into place



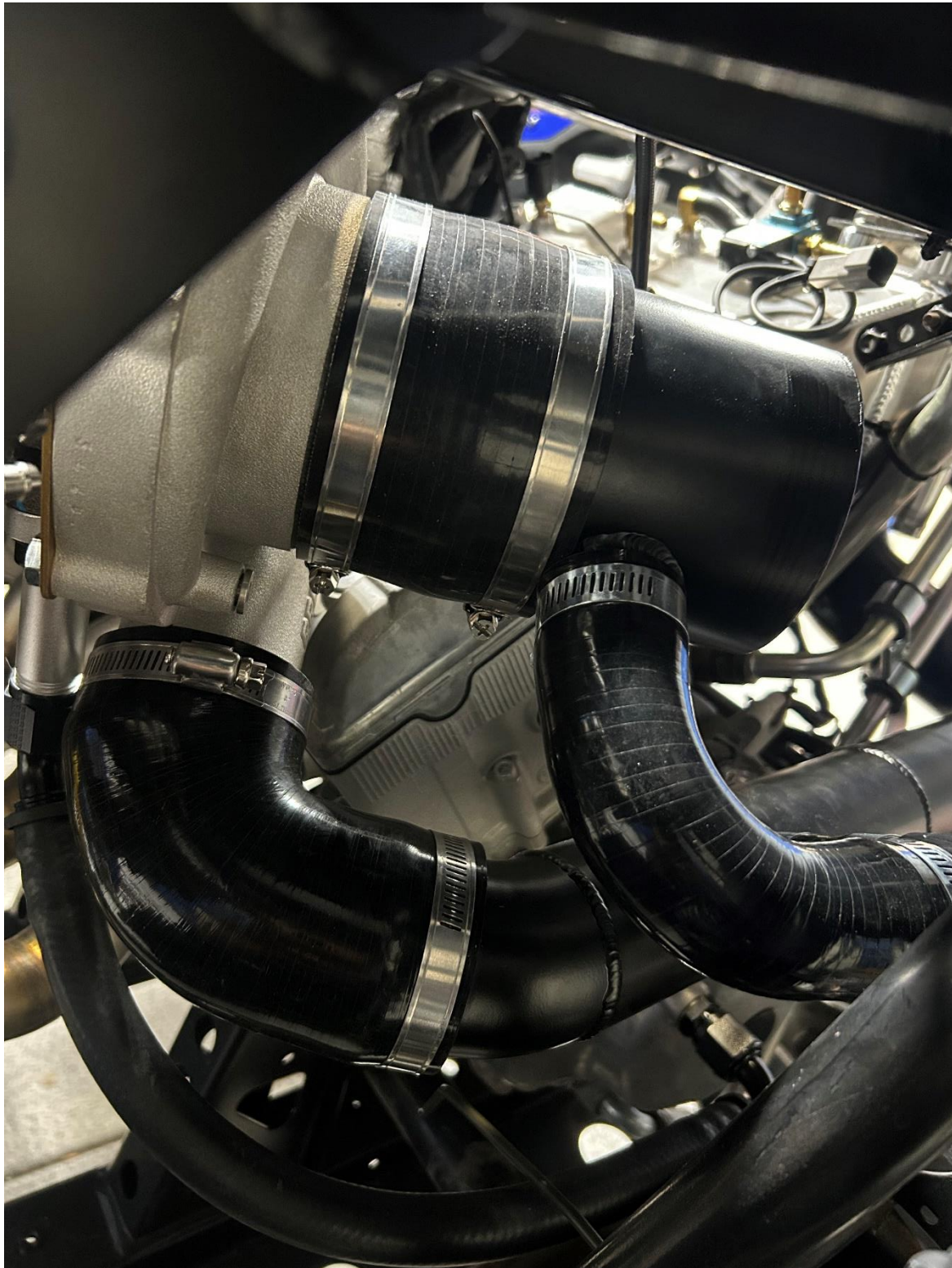
Install the 4" silicone coupler onto the turbocharger inlet, slide the provided hose clamps onto the coupler. Insert the fresh air intake pipe (barbed side of tube) into the coupler. The BOV inlet port on the intake pipe should be aligned with the 90 degree hose coming from the BOV.

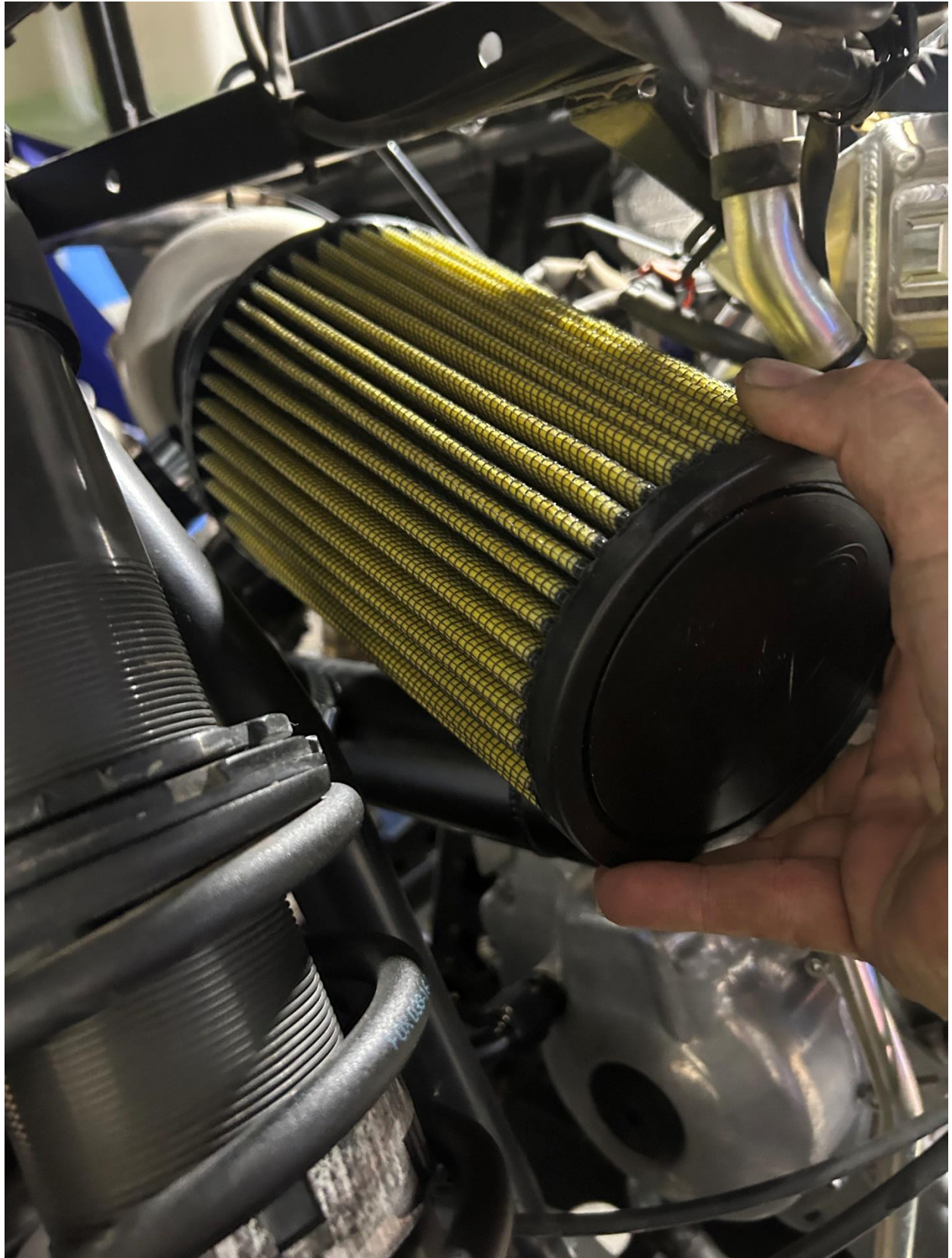




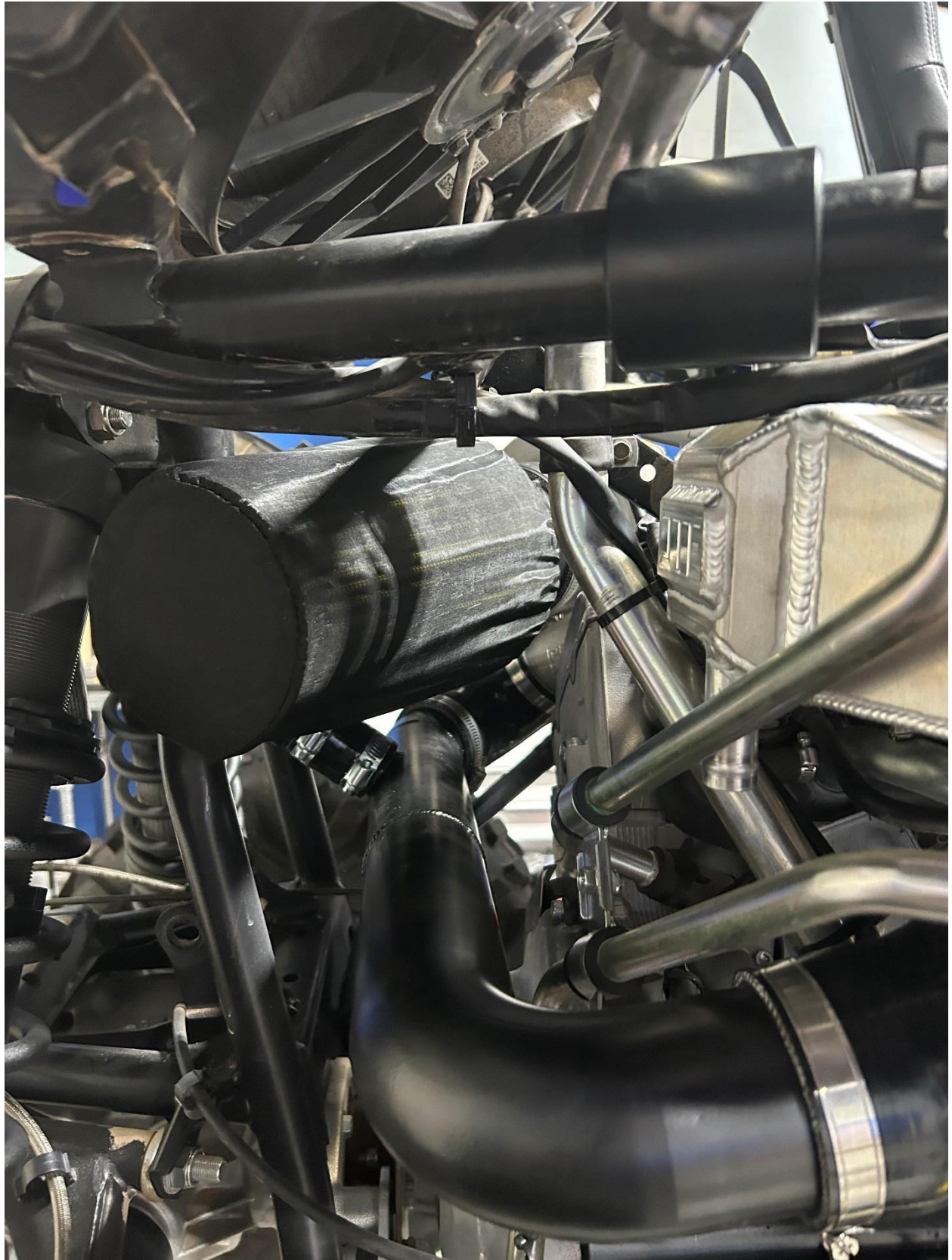


Install the BOV outlet coupler onto the port on the intake pipe and tighten the hose clamps on the BOV, BOV outlet and the turbocharger inlet. Install the air filter and outer wear onto the intake pipe.









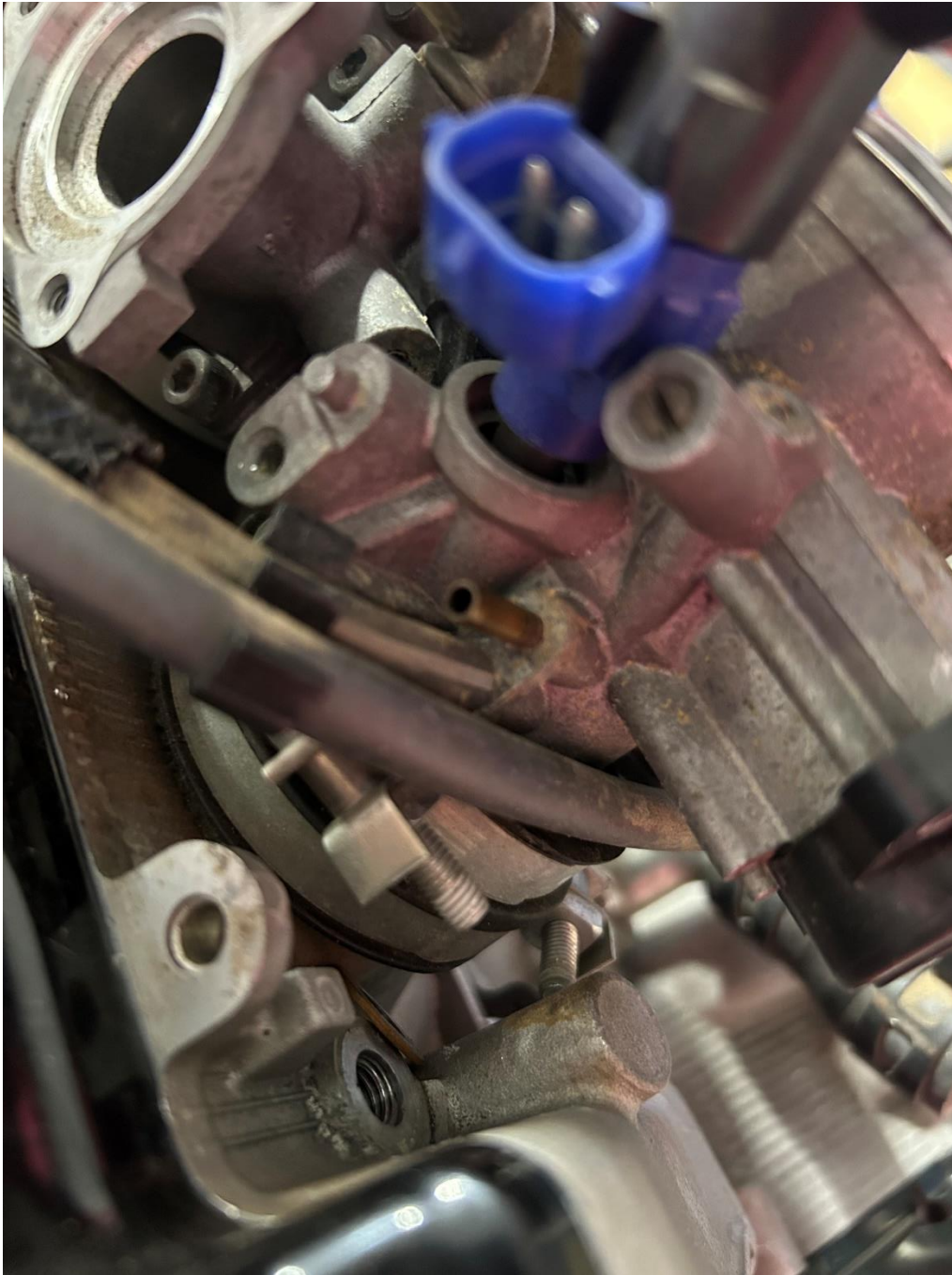
Plumb the wastegate boost control lines. The bottom port of the wastegate goes directly to one of the 90 degree fittings installed on the top side of the intercooler. The top port of the wastegate connects to the boost control solenoid (if using one) Use the ¼" hose provided in the kit to make the connections. Route hoses along the rear upper crossmember on the frame and secure them using zip ties. Secure the hoses onto the fittings using zip ties or hose clamps.



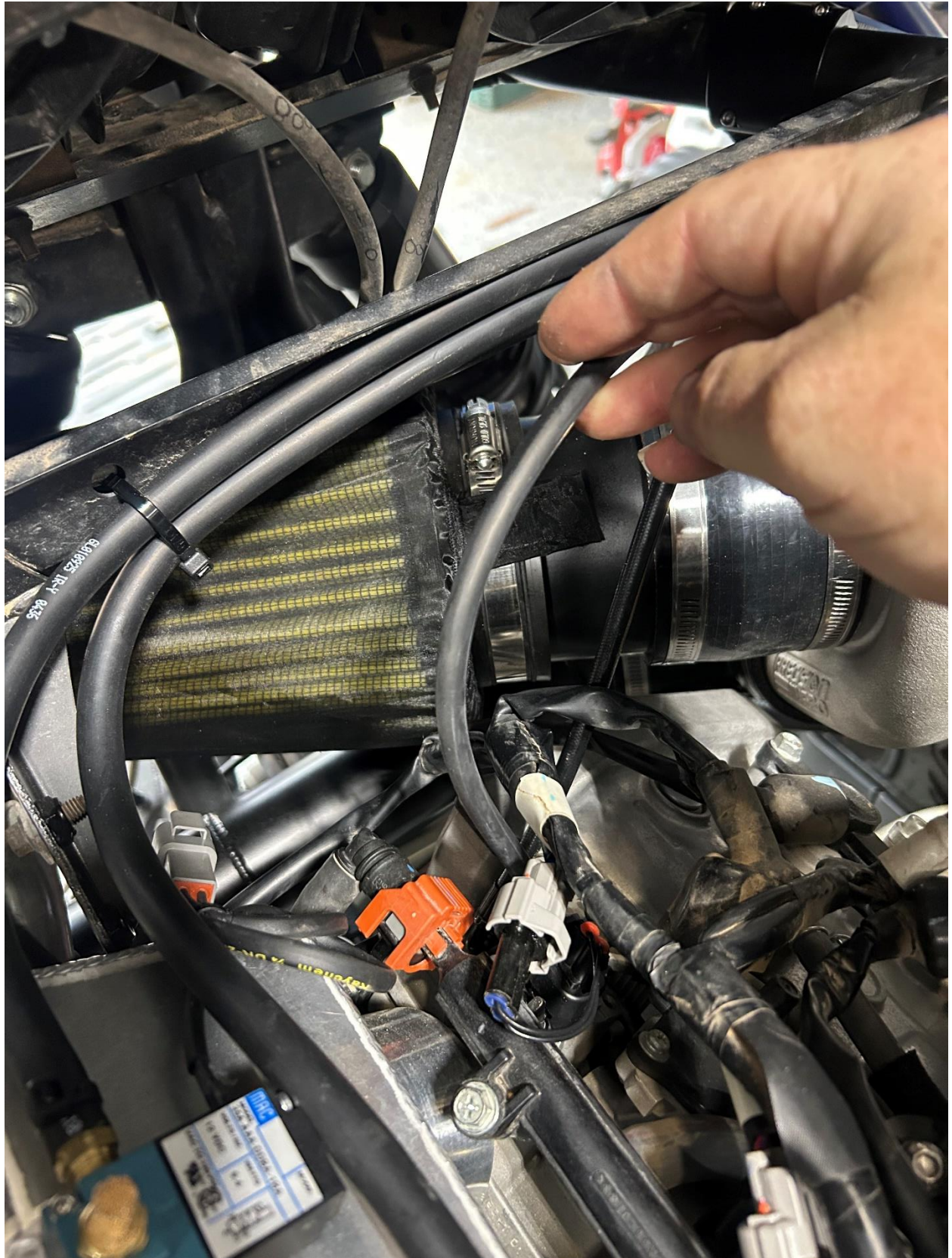


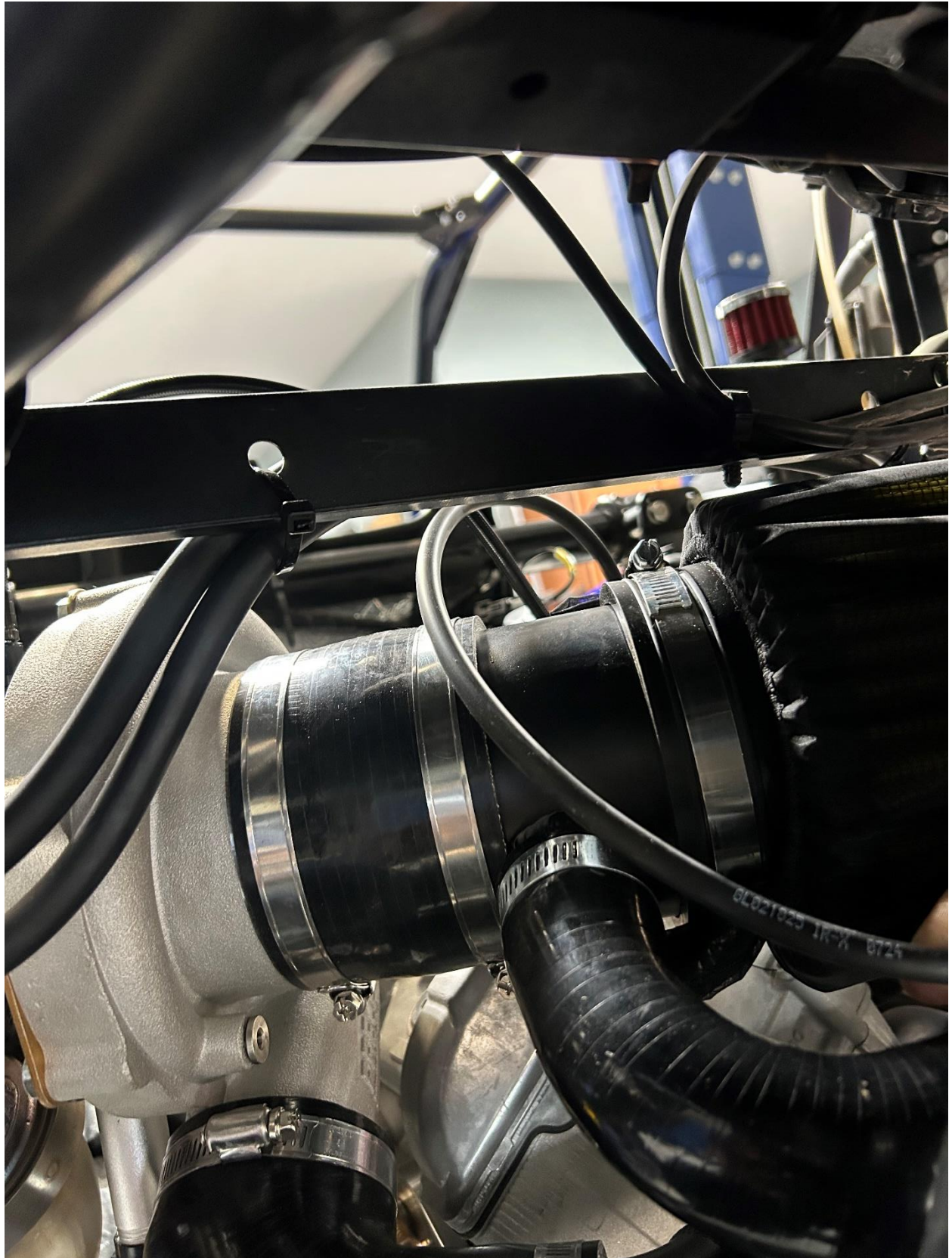


Connect the BOV vacuum circuit. Remove the vacuum cap from the rear most throttle body, re-use the spring clamp from the cap and install it onto one end of the 24" long 5/32" vacuum hose included in the kit and install the hose onto the vacuum port. Route the line over the top of the air filter and attach the other end of the hose to the fitting on the top of the BOV









Install the front radiator (if installing on a 2016-2018 chassis skip this step, you can use the existing factory front radiator mounting). Install the lower radiator support tab, Install the lower radiator bracket with supplied hardware, install radiator into bushings on lower bracket, install upper radiator bracket with supplied hardware and bushings.

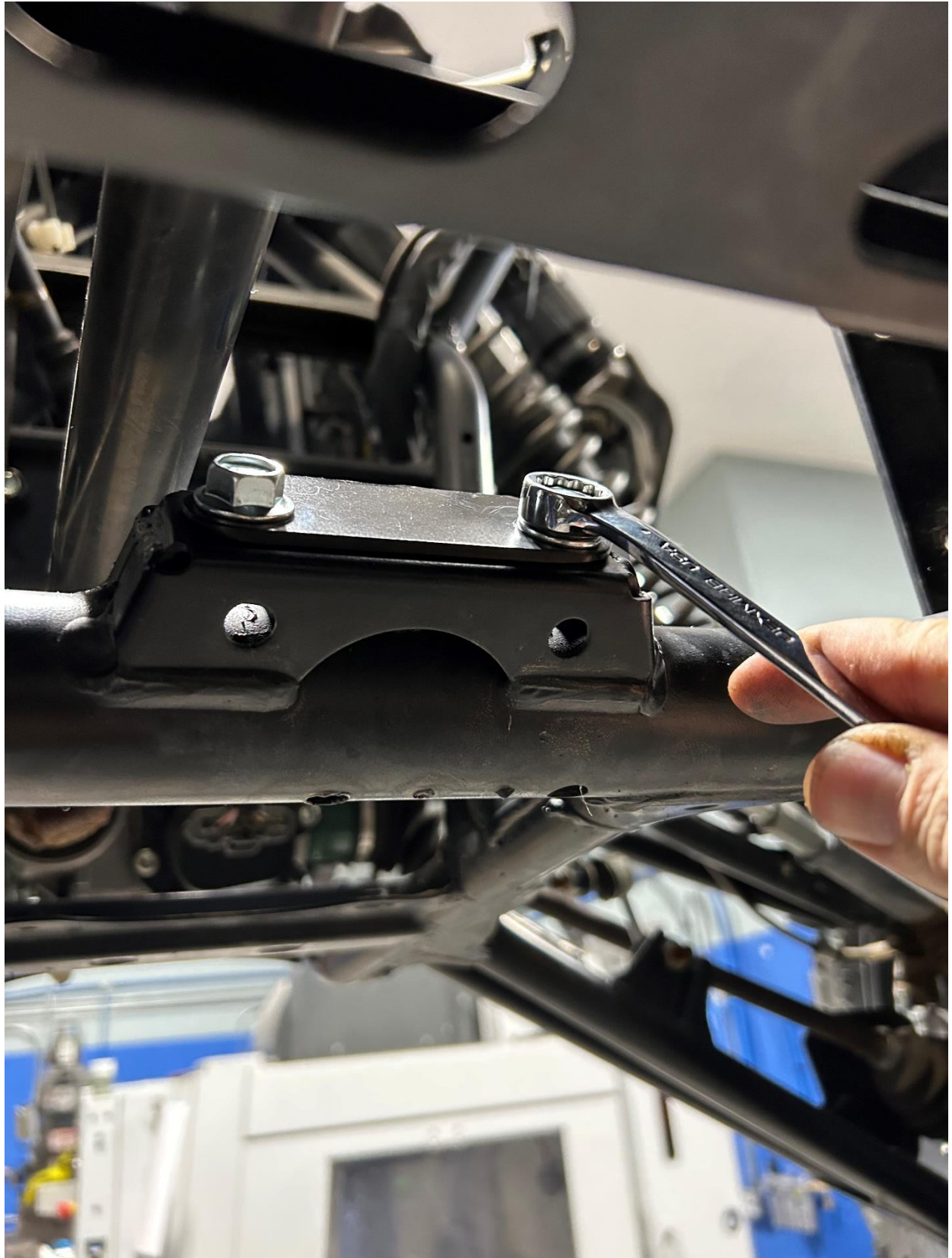










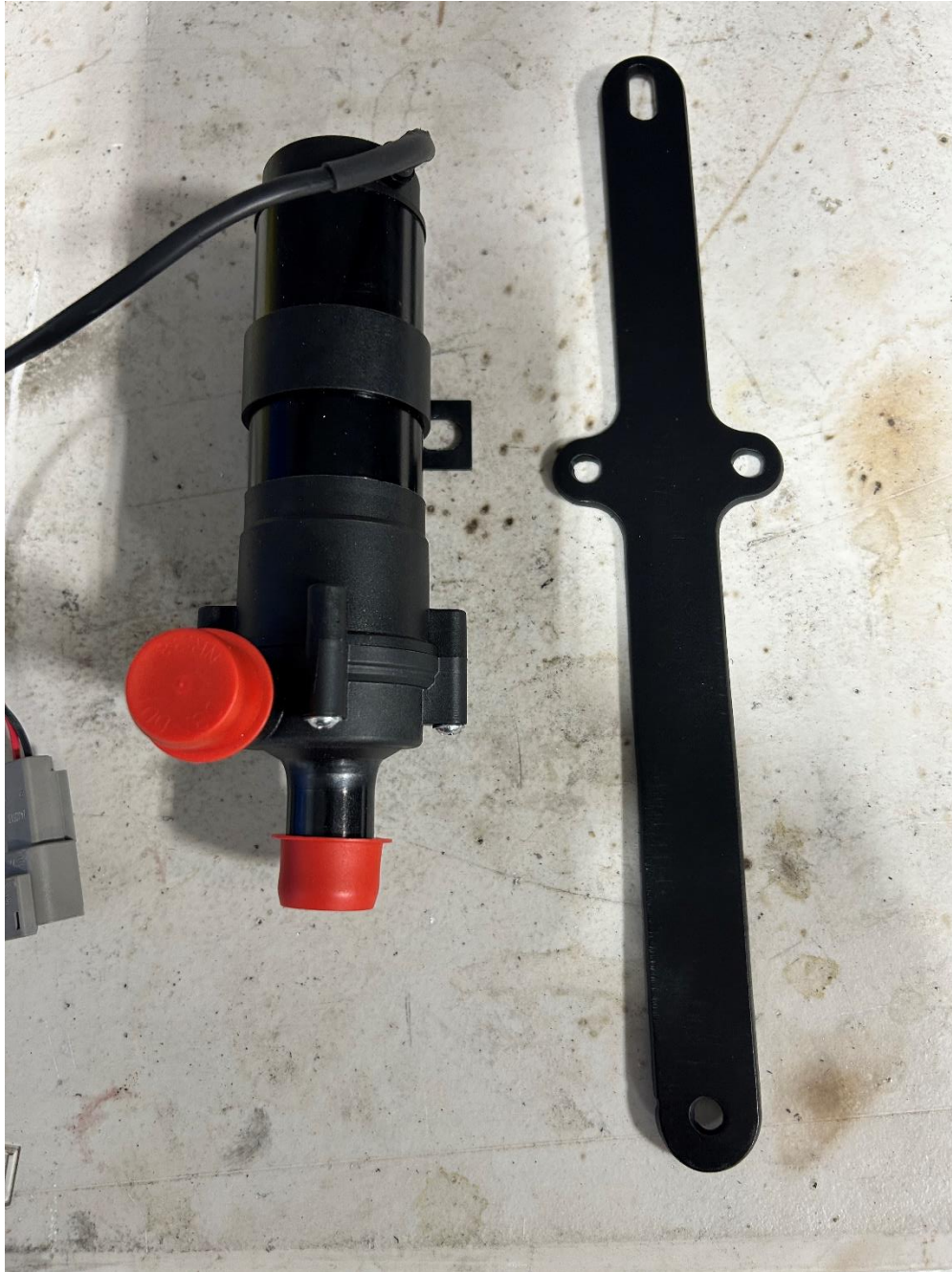








Install the brushless water pump onto the pump mounting bracket using supplied hardware. Note the orientation of the pump outlet fitting. Install the pump/bracket assembly into the chassis next to the transmission on the passengers side of the car. The front mounting hole in the chassis may or may not have threads for the fastener (depending on the year) if no threads are present tap the hole using an M6-1.0MM tap prior to installing the pump/bracket. Attach the bracket to the chassis using the supplied hardware.





LIFETIME











Connect the pump electrical harness to the pump and run it up through to the front/center area of the car behind the front radiator where the bundle of white electrical connectors is located. Un cap the 2-pin white factory aux electrical connector and plug the other end of the pump harness into the connector.









Intercooler hose routing; Prep and install the 7/8" to 3/4" reducer fittings and hoses for the radiator inlet/outlet. The 90 degree hose is used at the top of the radiator, the straight hose is used at the bottom of the radiator. Assemble the hose/reducers and install them onto the radiator using the provided hose clamps and tighten them into place.







Hose routing: Use a 20" piece of $\frac{3}{4}$ " hose to attach the lower radiator adaptor fitting to the pump inlet, secure the hose at both ends using provided hose clamps. Use an 8ft section of $\frac{3}{4}$ " hose to connect the top side of the radiator to the front port of the intercooler.

Carefully route the line through the transmission tunnel, under the sway bar and up through the inside of the factory engine water pump suction hose to the intercooler fitting. Use the remaining 6ft $\frac{3}{4}$ " hose section to connect the rear of the intercooler to the pump outlet.

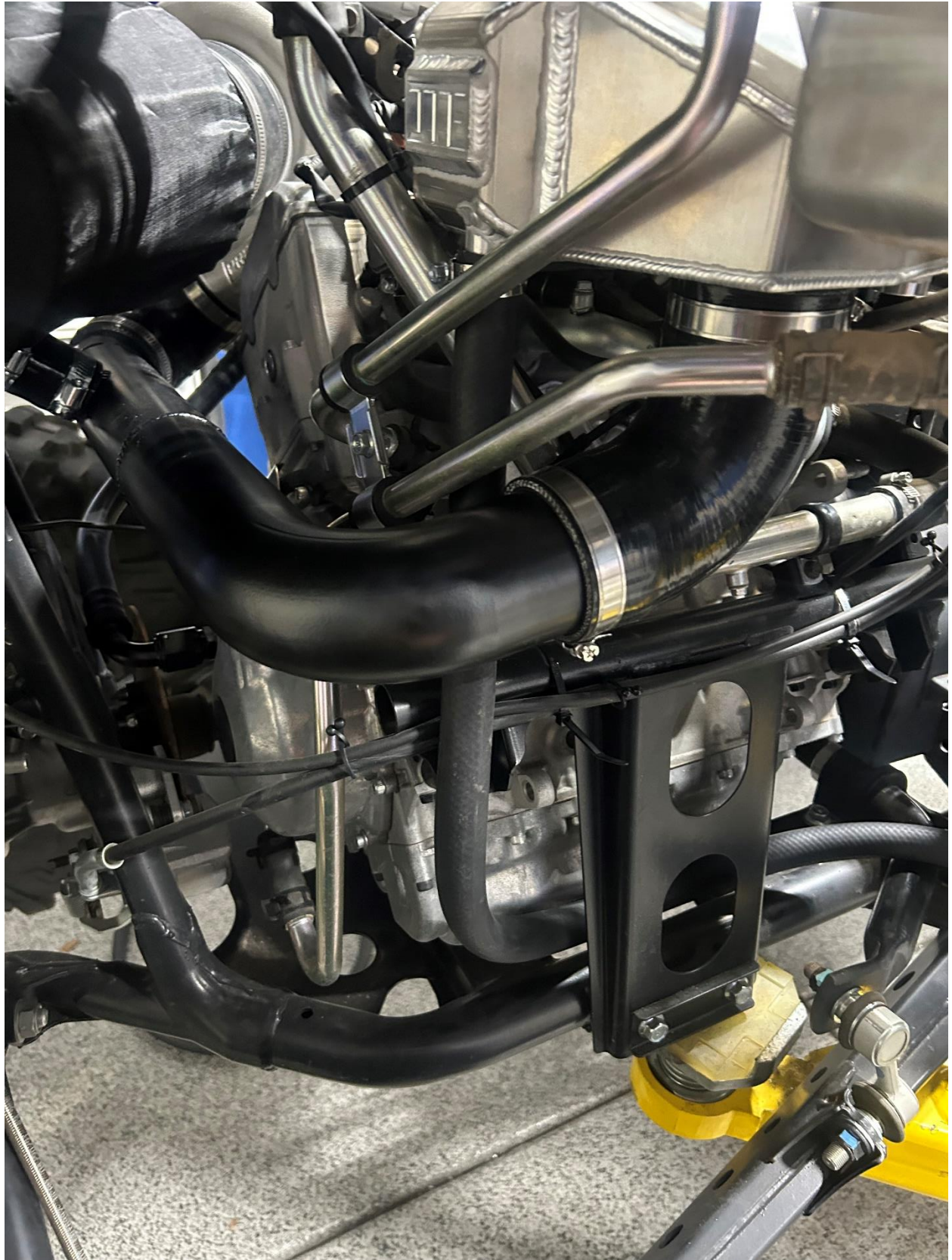
(hose will route up and over the side of the transmission from the pump outlet, then follow the same path as the second hose coming from the intercooler(see photos))





















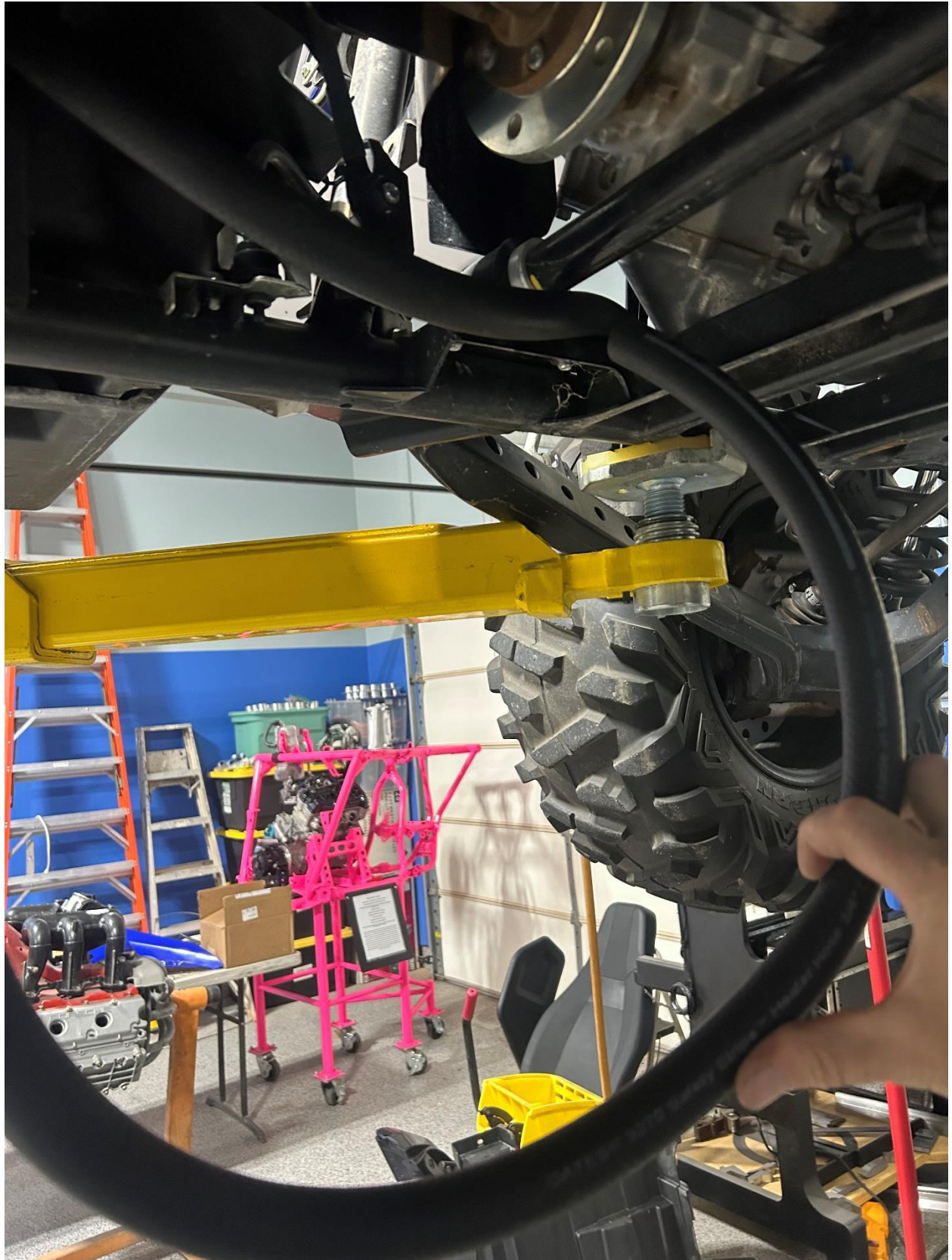


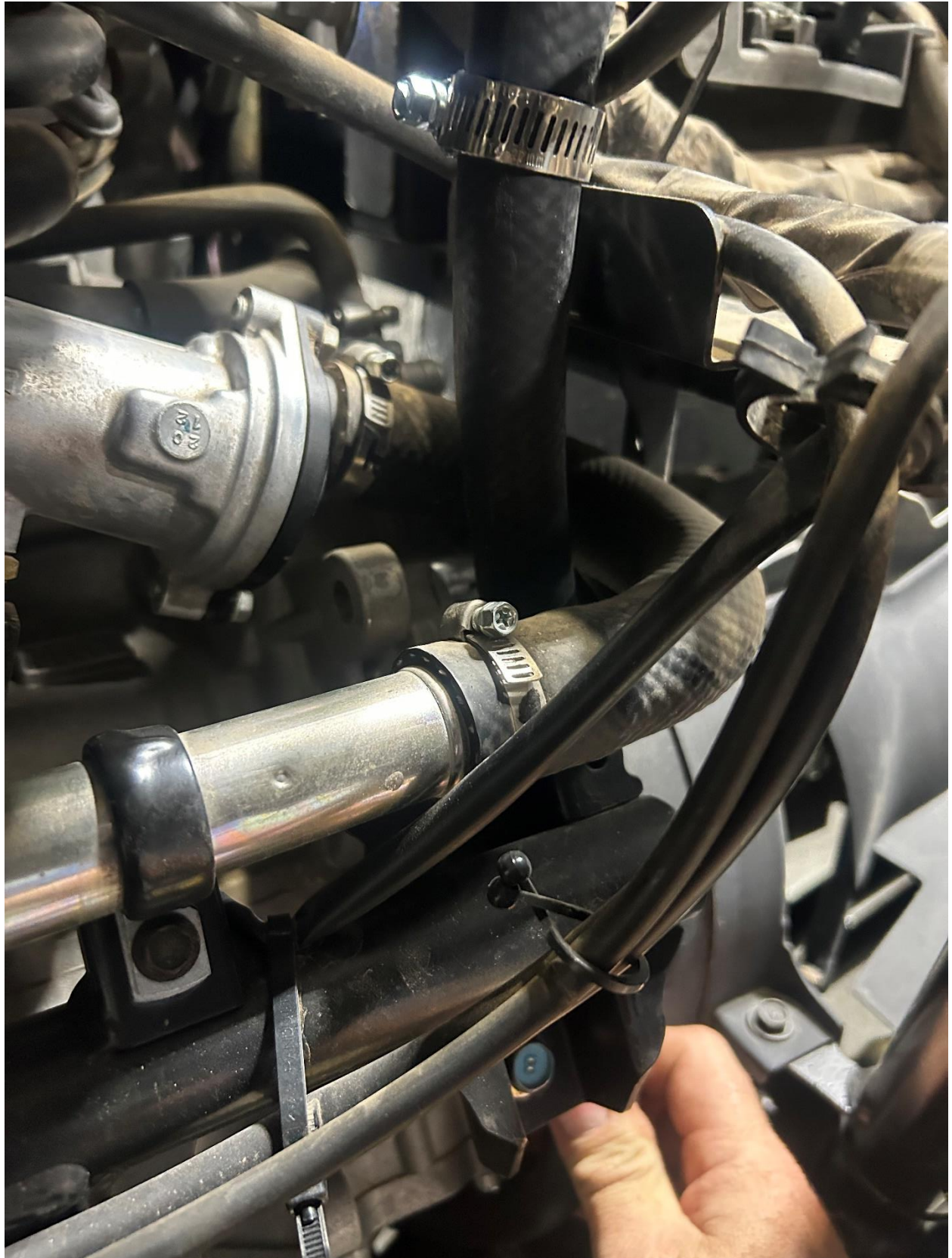
















Once all hoses are routed and connected securely with hose clamps, fill the radiator with coolant, use your preferred brand/type of coolant. We use standard green 50/50 antifreeze but any type will work.



Once radiator is full, turn the ignition on to power up the pump. The pump will suck the contents of the radiator into the intercooler system, continue to fill radiator with pump running until it is full. Once full, install the radiator cap and then turn off the ignition. This will insure that the system is completely free of trapped air.



Start the engine of the vehicle and check all oil and coolant connections to verify nothing is leaking. Re-assemble the vehicle in the reverse order it was taken apart. Install front body work and passengers side inner fender. Install transmission tunnel side cover, install rear seat plastics, radiator covers and rear body work. Re install passengers side seat. The factory service manual can provide more information about re-assembly of the factory

plastic parts if needed.



Engine Tuning:

This kit is sold without tuning or fuel components. There are a variety of ways to tune one of these cars based on your power goal and type of fuel you plan to use. Your engine **must** be built to handle the power producing capability of this kit. We would be happy to offer advice on engine components and fuel/tuning hardware if needed.

Thank you for your purchase!

Contact information:

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