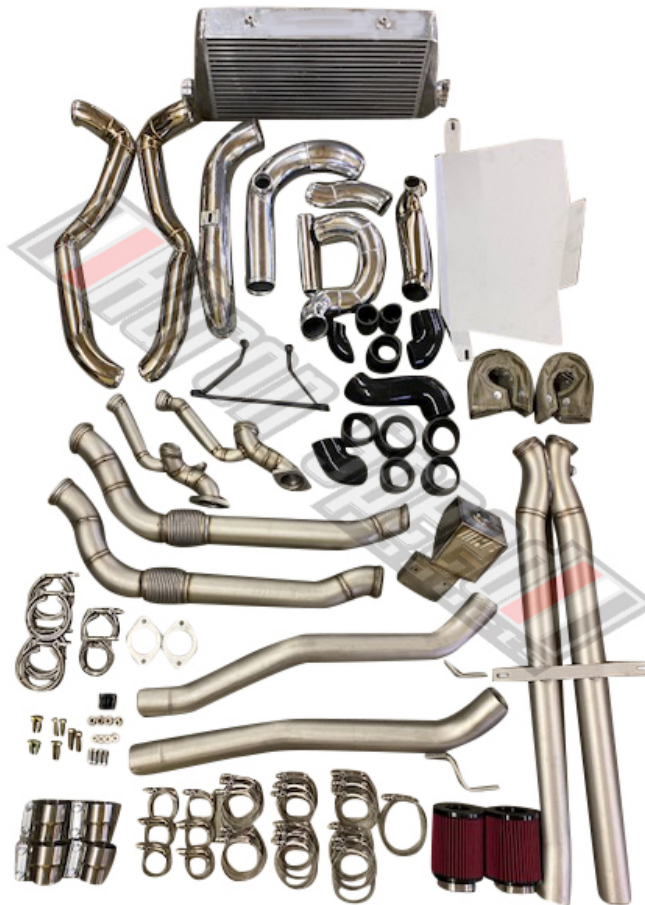




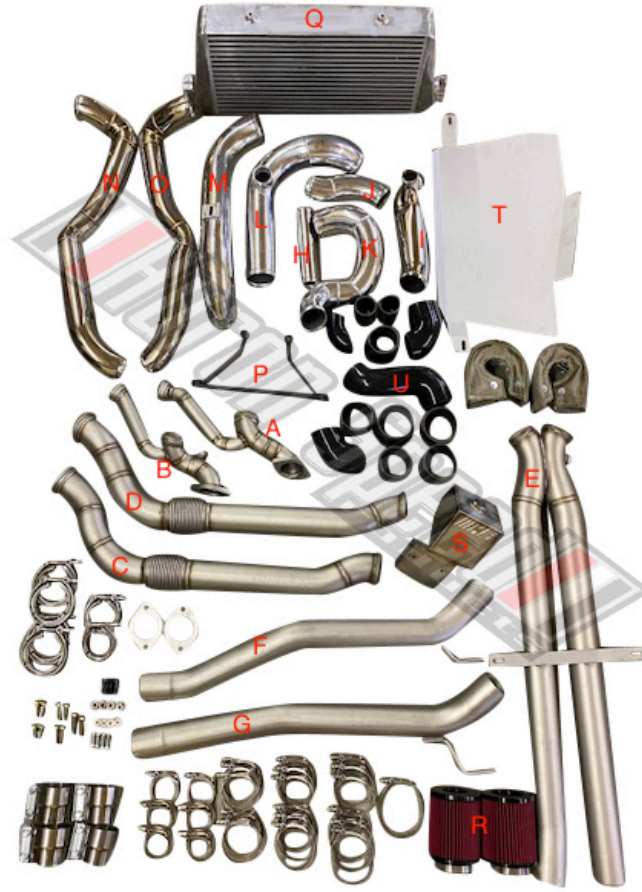
**2010-2015 Camaro SS**

**V2 Twin Turbo Kit Installation Guide**



## **Parts List**

- A- Driver's Side Hot-pipe to Turbo**
- B- Passenger's Side Hot-pipe to Turbo**
- C- Driver's Side Downpipe**
- D- Passenger's Side Downpipe**
- E- X-pipe**
- F- Driver's Side Mid-pipe**
- G- Passenger's Side Mid-pipe**
- H- Charge Pipe. DS Turbo into Merge**
- I- Charge Pipe. Merge**
- J- Charge Pipe. Out of merge into coupler U**
- K- Charge Pipe. Into PS of Intercooler**
- L- Cold side tube. Out of Intercooler**
- M- Cold side tube. Into the Throttle Body**
- N- Driver's Side Intake Tube**
- O- Passenger's Side Intake Tube**
- P- Intercooler Bracket**
- Q- 4" Front Mount Intercooler**
- R- Air Filters - pair**
- S- Windshield Washer/Methanol Tank w/ Oil Return Pump Mounts**
- T- Lower protection plate**
- U- Custom S shaped coupler – charge pipe side.**



**The following install guide is simply that, a guide to help you with installation. It is by no means the exact method to perform installation, simply some tips and tricks we can offer to help you out! Huron Speed is not responsible for anything that may happen to you, the vehicle, or the product during installation.**

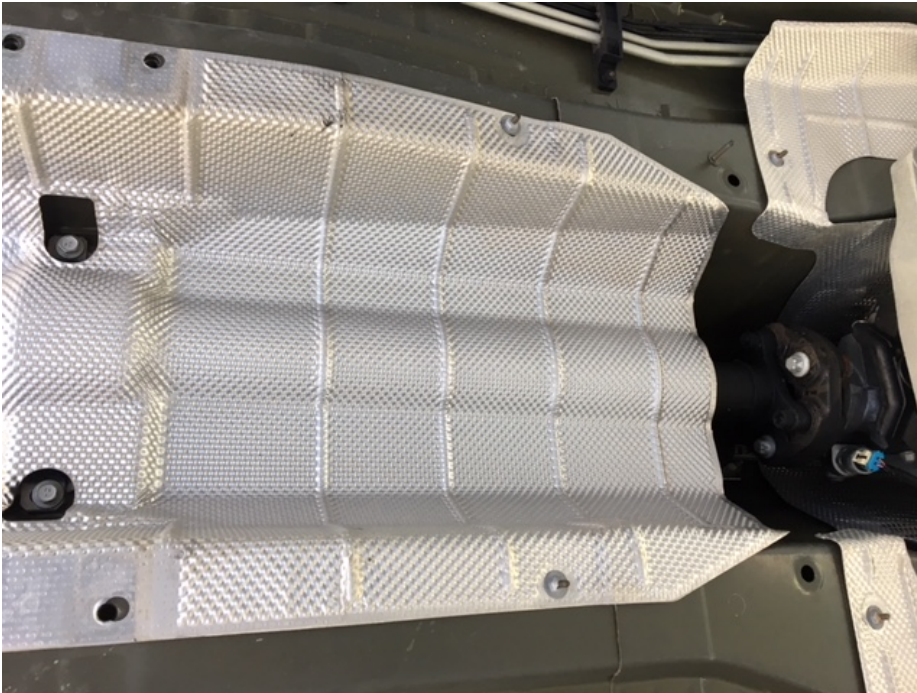
**Furthermore Huron Speed is not responsible for any installation costs for any reason at all no matter if you are installing or a professional shop is installing. All installation and labor costs no matter the scenario are the responsibility of you the purchaser of the product. Proper fueling and a professional dyno tune is **REQUIRED** to safely run this system on your vehicle. Failure to properly set the car up for boost **WILL** result in damage. If you have **ANY** questions, please reach out and ask and we would be more than happy to assist!  
**Jon@HuronSpeed.com****

**Step 1:** Disconnect Battery from rear trunk area

**Step 2:** Remove Dipstick Tube, Plug wires, Spark Plugs, and O2 Sensors

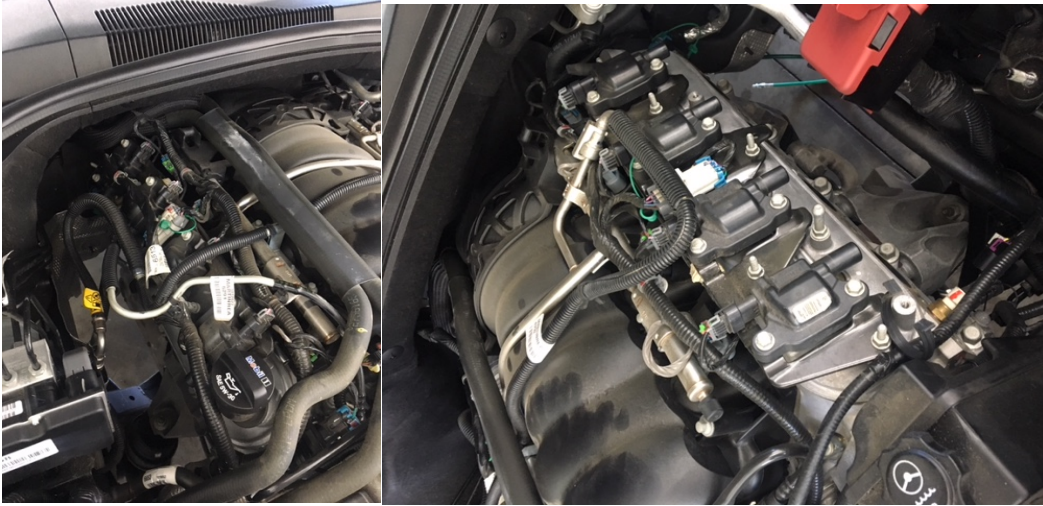


**Step 3:** Remove Factory Exhaust from bottom side of vehicle.





**Step 4:** Unbolt and remove the dipstick tube (set aside for re-use later), factory exhaust manifolds and catalytic converters. Set aside the OEM Exhaust manifold gaskets, these will be re-used. **It may be helpful to disconnect the fuel lines on the passenger side of the engine bay for this step**



**Step 5:** Remove front wheels followed by the wheel well liners. These are held in via (5) small screws per side, 3 on the bottom front side and 2 on the bottom rear side along with push pins located throughout.



**Step 6:** Remove the front Fascia





**Step 7:** Remove the front Bumper bar via the (6) 13mm bolts

**Step 8:** Install the Intercooler Bracket **Part: P** using (2) M8x1.25 bolts

**Step 9:** Attach the Intercooler Bracket to the Intercooler support brackets orientated like the photo below using (2) M8x1.25 bolts

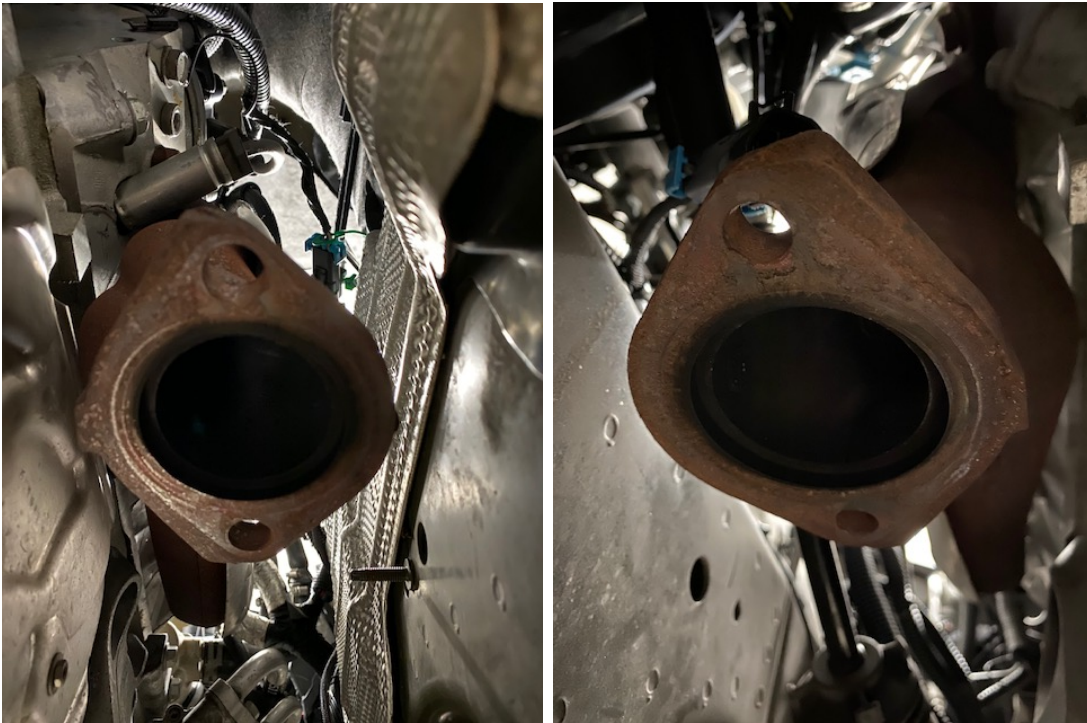




**Step 10:** Remove lower plastic dam from vehicle

**Step 11:** Remove catalytic converters from the factory exhaust manifolds. (Skip this step if you purchased our optional Tubular Manifolds)

**Step 12:** We highly recommend opening up both holes on the 2-bolt flange of each manifold (either stock manifolds or our tubular.) Opening these up a bit or slotting them will allow some adjustment of the connection tube to get where you need and help with install and alignment later on.



**Step 13:** Install Driver's Side Hot-pipe **Part: A** to your Driver's Side Factory Manifold using the supplied gasket and the Supplied M10x1.5 Studs with the supplied M10x1.5 flange nuts. Use some red loc-tite on the threads of the studs into **Part: A**. A bead of copper RTV around the gasket is recommended also as it helps ensure a perfect leak-free seal!



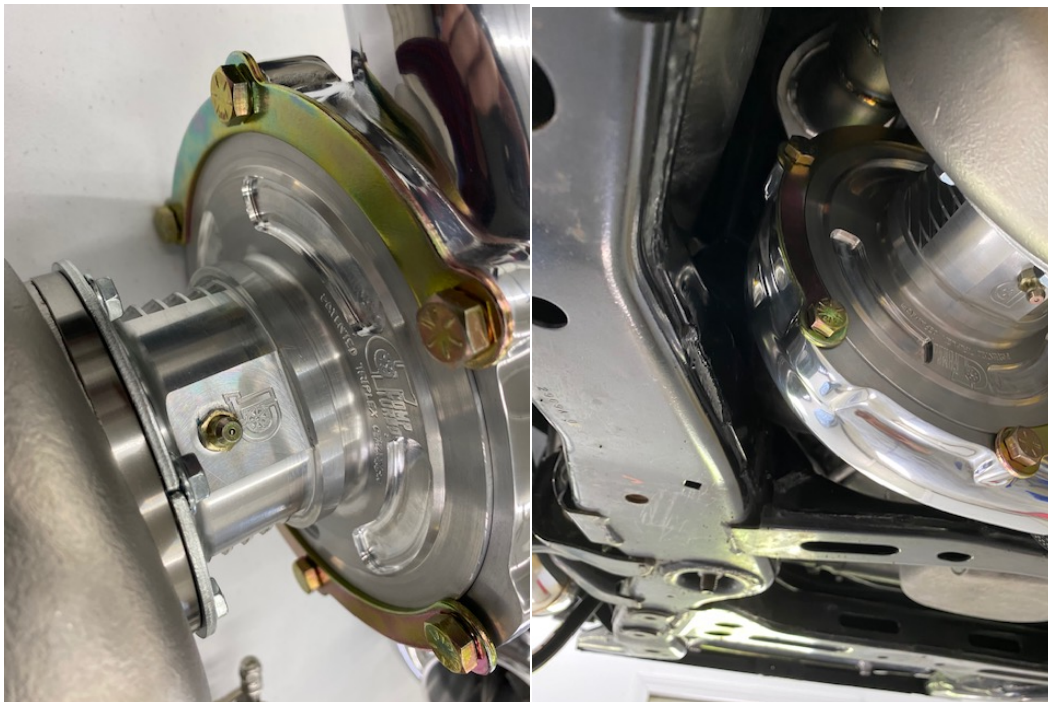
**Step 14:** Install Passenger's Side Hot-pipe **Part: B** to your Driver's Side Factory Manifold using the supplied gasket and the Supplied Studs with the supplied flange nuts. Use some red loc-tite on the threads of the studs into **Part: A**. A bead of copper RTV around the gasket is recommended also as it helps ensure a perfect leak-free seal! Re-install OEM Primary O2 sensors into the connection tubes with the O2 bungs.



**Step 15:** Loosen the (8) outside bolts on your Turbocharger's Compressor covers as well as the (6) outside bolts on your

Turbocharger's Turbine housing so both housings can spin freely of the CHRA.

**Step 16:** Install your Turbochargers to the Driver's Side **Part A** and Passenger's Side **Part B** Hot-pipes at the Turbine Housing V-band flange. Please check clearances to the Transmission cooler lines. Jump to Step 19 to see about this. Note the rough clocking of each turbo in the photos shown below as once bolted down the housings may not be able to rotate 360\* due to exhaust piping blocking certain areas. The DS Turbo Compressor outlet will point towards the PS of the car, parallel to the ground and the PS Turbo will face in towards the oil pan, slightly down. Leave the housings loose until all is installed to allow movement. Once cold side is attached and in place, snug back down the compressor housing bolts. You also want to make sure the greaseable Zerc fitting is facing down for easy access to service later on. Use the supplied V-band clamps to secure the turbine housings to the hot-side connection tubes. This now makes us your Driver's Side and Passenger's Side Turbo Assemblies.





**Step 17:** Do a test run of the cold side connection tube to get your couplers in the right location now. Set it up as shown below and wiggle into place. The 90\* coupler will slide directly onto the PS turbo compressor outlet and be a very snug fit, it will go into the coupler a ways. This can be a bit tricky finding the best arrangement to get this tube in and onto the compressor cover. We prefer to get it assembled out of the car and fit up into the car as one piece. Once you get the couplers and housing all clocked properly, pull it down and secure with the t-bolt clamps, tighten down the compressor covers, and do a final install.

\*\*Fitment note: If your AC hoses from the compressor run BEHIND the steering rack (we have seen on some later model cars, notably ZL1) then you will need to switch to the earlier model AC hoses that run on the front side of the steering rack, or else bend yours to clear the cold side. In some cases a new condenser may be required to mate to the older lines (again most notably later model ZL1)

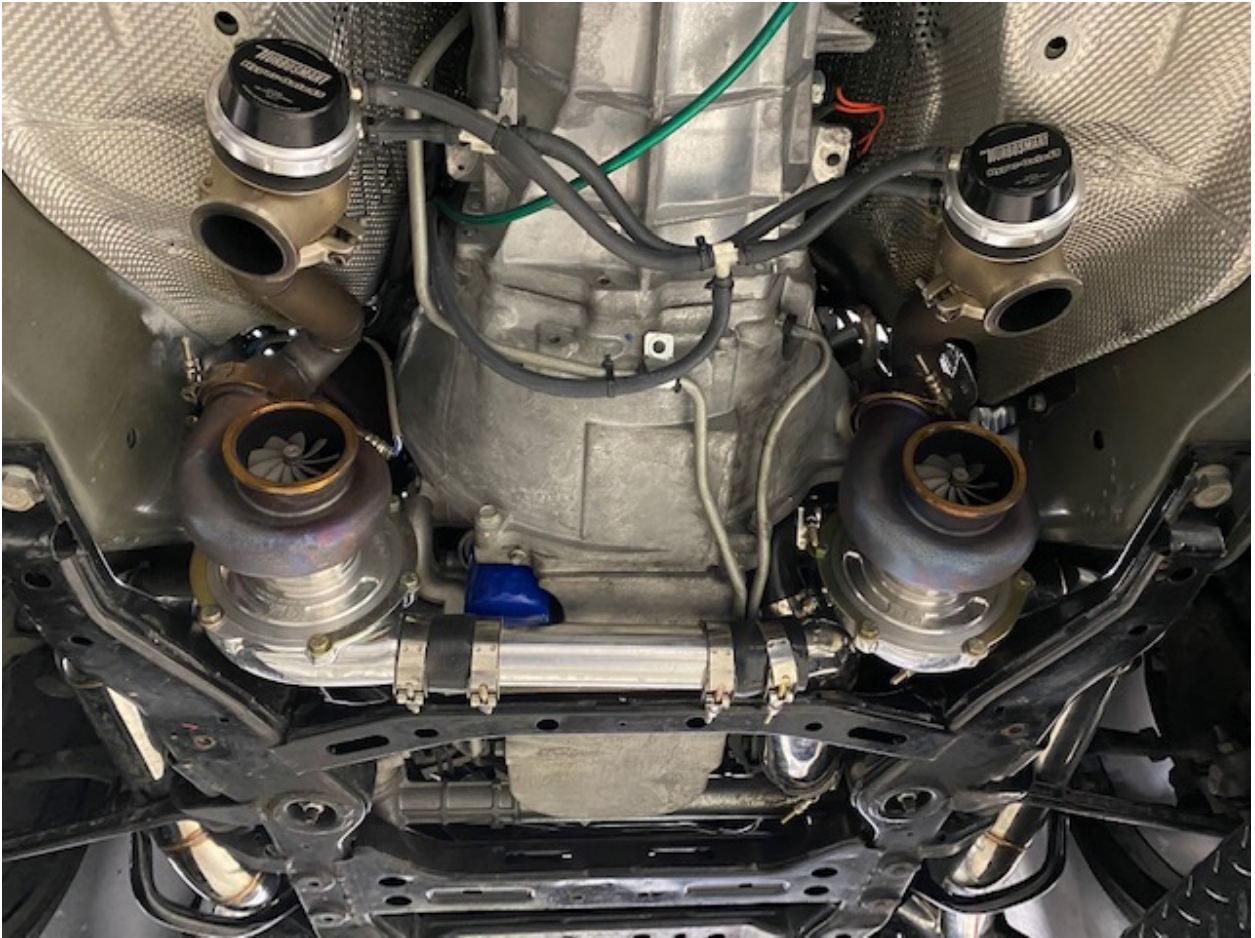






**Step 18:** Install the cold side connection tube **Part: H** from the DS compressor outlet into the cold side connection tube assembly using (2)

straight 2" silicone couplers and 2" T-bolt clamps. This is here to be an easily removable section for oil change access.

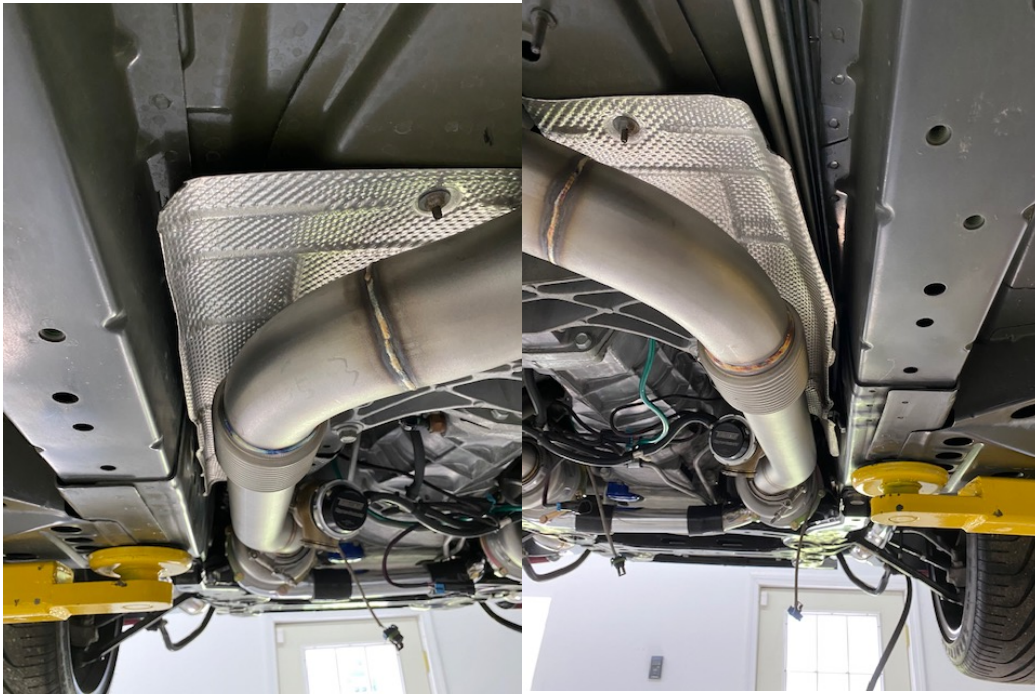


**Step 19:** On the Passenger's Side some massaging of the Transmission Cooler hard-lines is to be expected. See the photos below on a manual transmission vehicle how we gained clearance by simply bending out of the way, this needs to be done on automatic transmission equipped vehicle as well. This is not difficult, just use some care as to not pinch the lines during bending.





**Step 20:** Begin installing the Exhaust. Driver's side downpipe is **Part: C** and Passenger side **Part: D**. These parts are very similar in appearance, you can differentiate as the 2 weld seams after the Flex bellow will have a larger distance between them on the Driver's side downpipe.



Now you can install the X-pipe, **Part: E** which mounts to the vehicle using supplied holes and (2) M10x1.5 bolts. Attach the downpipes into the X using the supplied 3" V\_band Clamps. On the back end of the X, the DS Mid-pipe **Part: F** can be hung in the OEM hanger and attached into the end of the X pipe. Repeat for **Part: G** on the Passenger side. This will now take your exhaust all the way back to the popular Axle-Back connection.







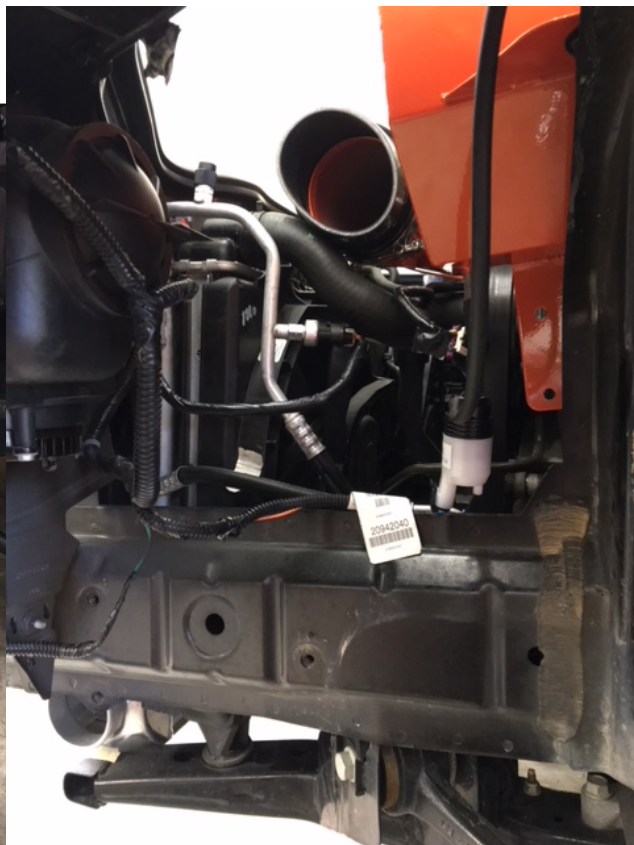
**Step 21:** Install the wastegates. The wastegates you are running will come supplied with all of their hardware. Ensure the firing rings (valve seal) are placed into the bottom of the gate to sandwich into the flange on our hotside piping. Install with their provided clamp. Orientate so the outlet is facing down. Install your fittings so an upper and lower port are bot accessible to you easily from the bottom of the car. Block off unused ports, but ensure one top and bottom port are open to attach a vacuum hose to. The bottom ports on the wastegate will run to a boost reference

source (we like to use the intake manifold for everything although the turbo compressor outlets can be used). The top ports are left OPEN to vent unless using a boost controller, then you will hook up per their instructions.



**Step 22:** Back up front on the Driver's side front of the wheel well area, drain the Windshield Washer fluid from the tank. Remove the Pump from the tank and set aside for use later and remove the tank from the vehicle which will not be re-used. Retain one bolt that secured the tank to the frame for use later on Intake tube bracket.





**Step 23:** In the engine bay, Unplug the MAF sensor from the Air Box Tube. Remove the factory Air Box and tube from the car. Retain the (2) Nuts you removed from the threaded posts in the engine bay that secured the Air Box. Remove the Card MAF sensor from the Tube by removing the 2 screws securing it in. The MAF sensor will be re-used, the factory Air Box and Tube will not.





**Step 24:** Place 4" to 3.5" Straight Silicone Coupler onto the Throttle Body and secure with 4" T-bolt Clamp.

**Step 25:** Install the MAF sensor into the new Tube Part: M and secure with the 2 metric M4 screws.



**Step 26:** Attach MAF loaded cold side tube Part: M to Cold side Tube **Part: L** via straight 3.5" Coupler. Attach the other end to the throttle body at the previously installed 4" to 3.5" reducing coupler on the throttle body. Attach the other end of Cold side tube **Part: L** to the intercooler using a straight 3.5" to 3" Reducing coupler. If using the larger HSI-6 intercooler this will use a straight 3.5" coupler.



**Step 27:** Install your Blow-Off Valve onto Cold side Tube **Part: L** using the supplied clamp and O-ring with the BOV. Install the vacuum fitting into the top of the BOV and tighten.





**Step 28:** Moving back under the vehicle, Install Charge Tube **Part: J** to connect to the open outlet on Charge Tube Y-bridge **Part: I** with a Straight 3" Silicone Coupler and (2) 3" T-bolt clamps. At the other end of Cold side tube **Part: I** you will attach custom cold side coupler **Part: U** and secure with a 3" T-bolt clamp. Lastly you will snake in Cold side Tube **Part: K** from the front around the OEM Coolant overflow tank. One end will insert into custom coupler **Part: U** and the other attach to the Intercooler Inlet using a straight 3" coupler w/ 3" T-bolt clamps.



Photos Below show routing of custom coupler Part: U with the Orange tube shown being Cold side tube Part: K



Photo below shows Charge tube Part: K in satin black coating routing into the intercooler.

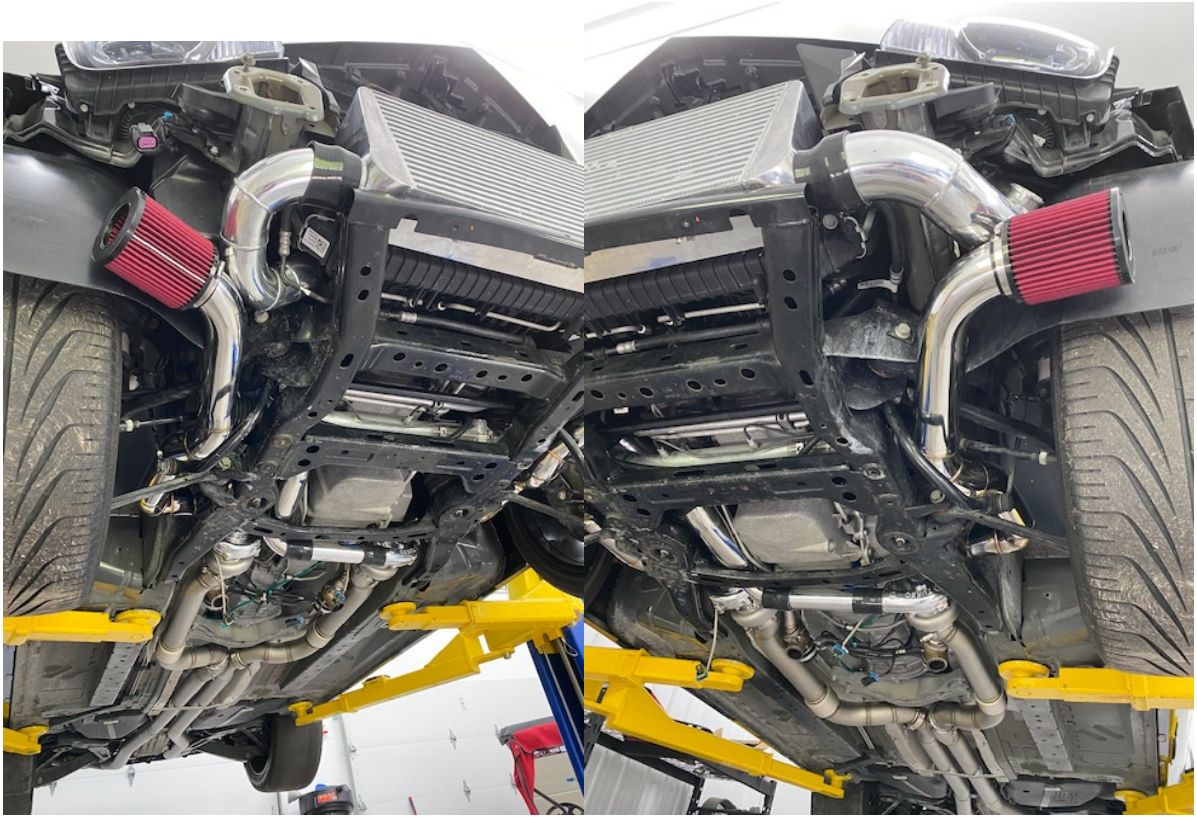


**Step 29:** Install Intake Tube's **Part: N** and **Part: O** into place. These run through the opening in the front cradle via the 90\* 3" Silicone couplers. The short end of each coupler will slide onto each turbocharger inlet and the longer end facing out towards the opening in the cradle. Being suction side clamps here are not required, you may add if you desire. The tubes will run through the suspension in the wheel well area, securing into the silicone coupler back at each turbo and up front via the mounting bracket to the OEM Bolt holes for the Coolant overflow and WW tank mounts with the OEM bolts. You will need to trim the excess bolt sticking through the nut on the front sway bar on each side to make clearance for the tubes. Please note, clearances here on these tubes will vary depending on your suspension setup. They are made from Aluminum so after a first drive you may experience some dings in these tubes from suspension movement which is OKAY and will not effect performance. Some self clearancing after a drive is normal depending on your suspension clearances in these 2 tubes as the soft aluminum material will allow for it. Space is very snug in here and we did our best to gain all possible clearance, just cannot allow for differences between all cars. Attach the supplied air filters to the end of each tube.









**Step 30:** Back under the car now inspect all of your connections and clearances. Ensure all charge and cold-side tubes are fully inserted into their couplers and the clamps are installed BEHIND the bead-rolls on each tube to prevent blowing off. Ensure nothing is touching any hot-side components or Turbo Assembly as if it is, it will melt! Make sure you have proper clearance in all areas, everything is secure, tight, and most of all SAFE!

**Step 31:** Back up top install your Windshield Washer pump that was removed in Step: 22 onto the factory pressure line. For this make sure you find a good location that is easily accessible. Depending where you place this the electrical connection wires may need to be extended to reach. Trim any excess line not used.

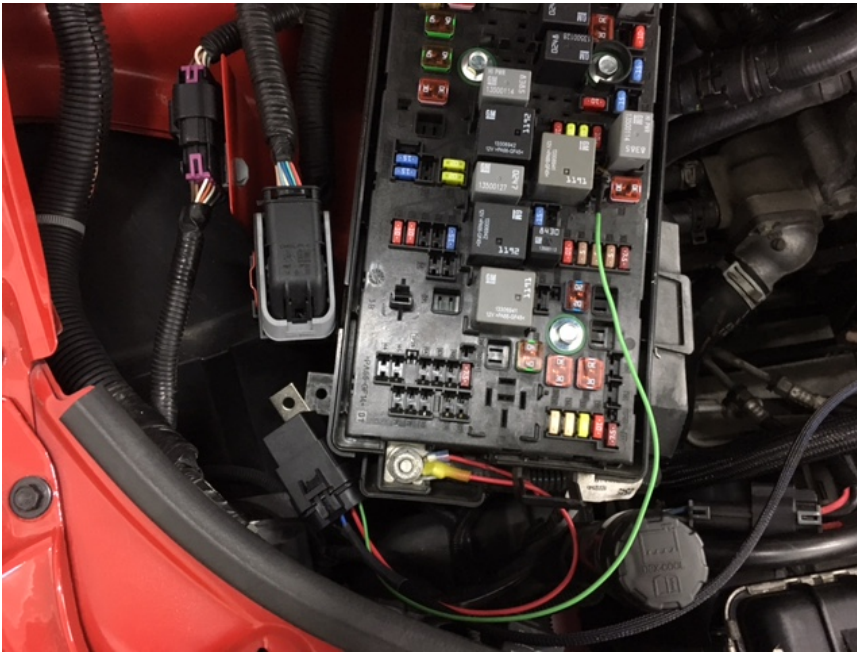


**Step 32:** If using Air-cooled turbochargers, you may skip ahead to simply mounting the supplied WW tank now and then to Step 36 as the following is helpful for setting up oiling to your turbochargers if they require..

If running oil-cooled turbochargers our WW Tank setup is drilled to accept mounting of a Turbowerx Exa Scavenge pump. Mount to this location using some nuts and bolts through the rubber grommets on the pump. Install Windshield Washer Tank w/ Pump Mount onto the (2) threaded posts that held the factory Air Box in place back from Step: 22.

**Step 33:** (Oil cooled turbos only) Oil Pump Electrical Harness. Note which wire on the harness going to the plug end is power and which is ground. From here mark the Power and Ground wires on your Oil Pump. Using proper crimpers, install the included plug onto the Oil Pump's (2) wires making sure your Power and Ground match that of the harness. Once plugged in you will run your ground terminal over to the threaded post and install under the mounting ear on the Windshield Washer tank (will require you to remove and re-install/tighten). You will run the rest of the harness across the engine bay following the top of the radiator to the Fuse Box. Secure the harness across the engine bay ensuring it is clearance of any moving components especially fan blades. In the fuse box locate Fuel Pump Fuse #19. Remove this fuse and place it into the double fuse holder on the Harness and plug this into Fuse #19 location in the fuse box. Remove the 13mm Nut on the power post on the Fuse

box and place the Harness Power Terminal over the post, re-install the 13mm nut and tighten. This harness has a Built-In Timer based on the Fuel Pumps Voltage. To test, once the engine's battery is re-connected, the pump should come on with key on power. Once you key off the pump should stay running for 20-30 seconds and will shut off on it's own. This feature is built in to help remove oil from the drain lines after shut down so it does not sit at the Turbocharger's drain outlet causing a smoking issue on re-start.



**Step 34:** (Oil cooled turbos only) Oil feed routing. On the driver's side of the engine block, near the front directly behind the alternator you will find a larger allen-headed Plug. Remove this plug, some oil may come out to be prepared to catch it. We recommend easy oil feed source here. From here we would recommend running -4an feed line into a Y fitting. Out of the Y fitting run a line to each turbocharger inlet with a check valve located on or as close to the turbocharger as possible. Route the lines safely and sure using stainless clamps, Adel clamps, wire, zip ties, etc (whichever you prefer) so the lines and secure and safe from anything hot or moving. Our optional oil feed and drain line kit will supply these materials. Photo below shows oiling setup on our older version kit.





**Step 35:** (Oil cooled turbos only) Oil Drain Installation. We recommend running a -10an line from the Scavenge pump inlet down to the turbocharger area and into check valve and then a -10an Tee or Y fitting. From the other 2 ports on your Tee or Y fitting run a line to each turbocharger drain. We recommend using our Low profile oil drain flanges as shown above. From the outlet of the scavenge pump we recommend running a -10an hose to the oil fill cap for easy return.

**Step 36:** Reconfirm everything on the understand is tight, secure, safe, away from heat sources, clearances are sufficient. Install the Turbo Blankets on each turbo and lower protection plate using the (2) Supplied M10x1.5 Allen head bolts w/ washers into the lower crossmember.









**Step 37:** Ensure all connections, brackets, etc for the front intercooler are tight. Secure the outside air temp sensor to the Intercooler Bracket using a zip tie or the like. Reinstall the front crash bar (6" Intercoolers won't allow) Re-install front Bumper Fascia and wheel well liners.



**Step 47:** Install a fresh set of spark plugs. For stock engines up to 600hp we recommend NGK TR6. For power levels over 600hp we recommend NGK BR7EF. Reinstall factory Spark Plug Wires. Reinstall Oil Dipstick and tube.

**Step 48:** Leave rear bung in X-pipe plugged (this can be used for Wideband sensors for monitoring or tuning).

**Step 49:** Your new turbo set-up will need Boost/Vacuum reference to the BOV and Wastegate bottom ports. You can do this many ways, the most simple would be to Tee into your brake booster hose and run lines from here to your needed areas. Our Boost/Vacuum reference kit will provide everything you need for an easy hook up!

**Step 50:** Your new turbo set-up will need a proper PCV set-up to prevent boosting of the crank case. We highly recommend the [MightyMouseSolutions.com](http://MightyMouseSolutions.com) 5<sup>th</sup> Gen Camaro SS PCV Set-up and install per their instructions for a Turbo set-up.



**Step 51:** Ensure your set-up has a proper fuel system to support the new power (If installing new Injectors, do NOT run the car without the computer flashed for the larger injectors). If running the car prior to tuning do NOT get into any boost prior to tuning or you WILL damage the engine. Proper fueling and a professional dyno tune is REQUIRED to safely run this system on your vehicle, remember.



