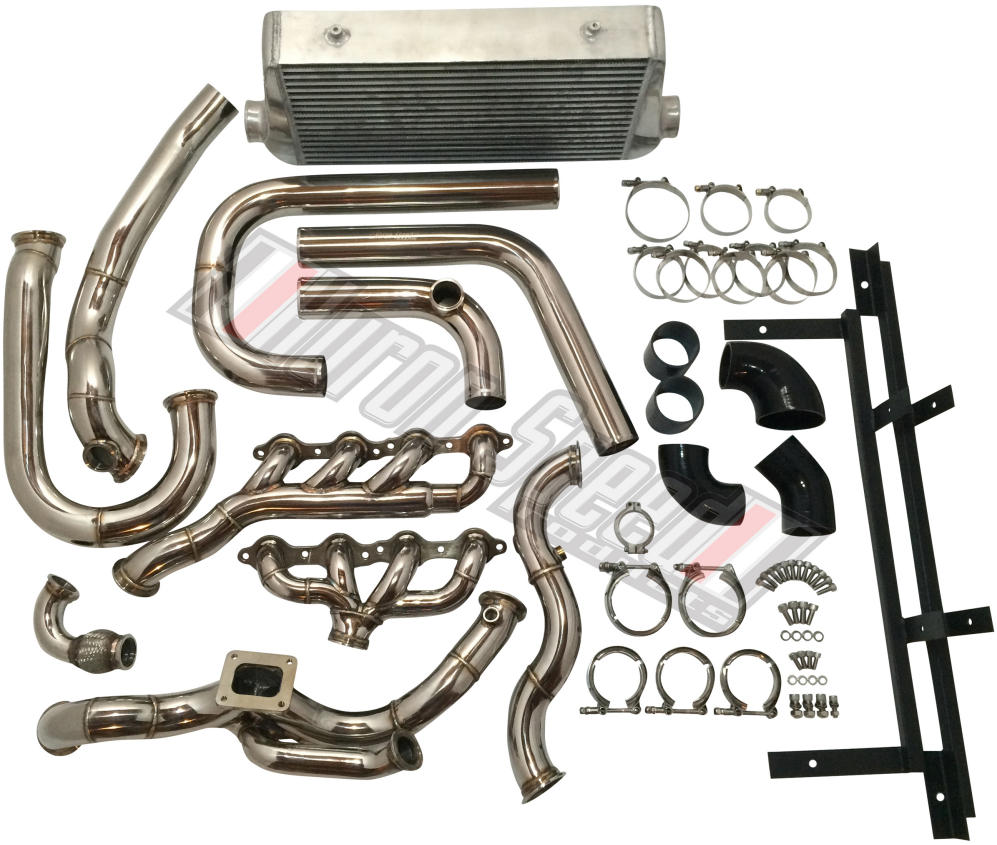
98-02 LS1 F-Body Single Turbo V2 A/C Retaining Kit



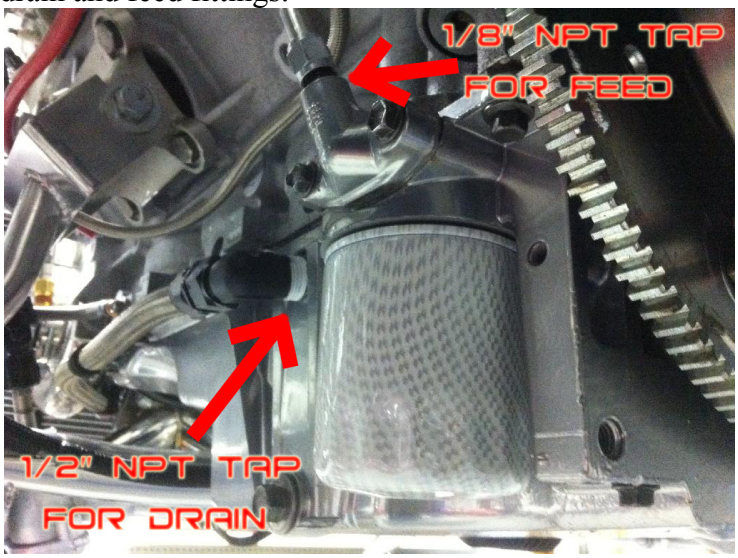
Prep:

-Remove front bumper, front bumper foam, and front bumper support. Remove cooling fans. (Fans will not be reused). Recommended to remove Radiator and A/C Condenser to make for a much easier install with more open space to work. Remove AIR pump from under the front drivers side of vehicle. Replace factory K-member with the aftermarket unit you have chosen (BMR or PA Racing Turbo Style) With the factory K-member off, before installing the new k-member is a good time to drop the oil pan in the steps below if running an oiled turbo.

If using an oil-required turbo, follow the next step, if using a Comp Oil-Less Turbo, skip to relocation

-Remove oil pan to prepare for oil drain and feed fitting installation.

-Clean out oil pan and prep surface. Note the following picture for a good location of oil drain and feed fittings.



-Drill/Tap for your supplied fittings. Good recommended fittings are 1/2" NPT x -10an for the drain (tap pan for 1/2" NPT) and 1/8" NPT x -4an for the drain (tap the spout fitting above the oil filter for 1/8" NPT)

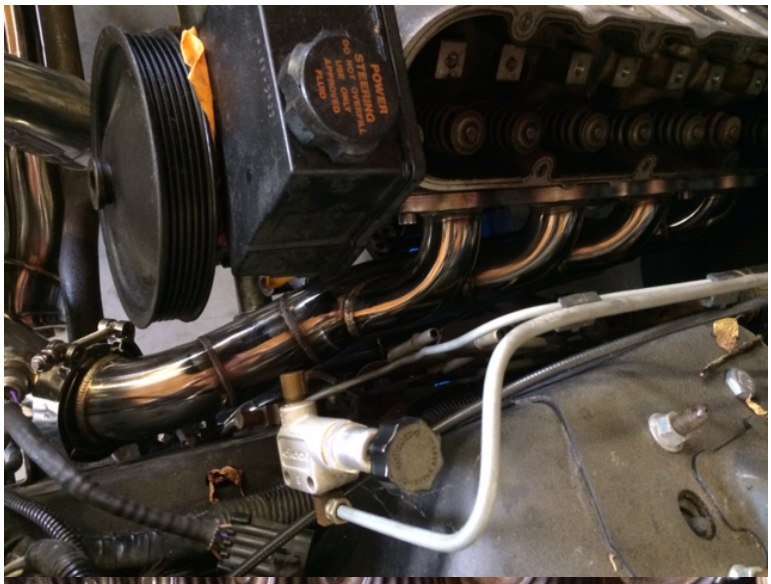
-Secure fittings into the oil pan using Teflon Tape on NPT sides of the fittings.

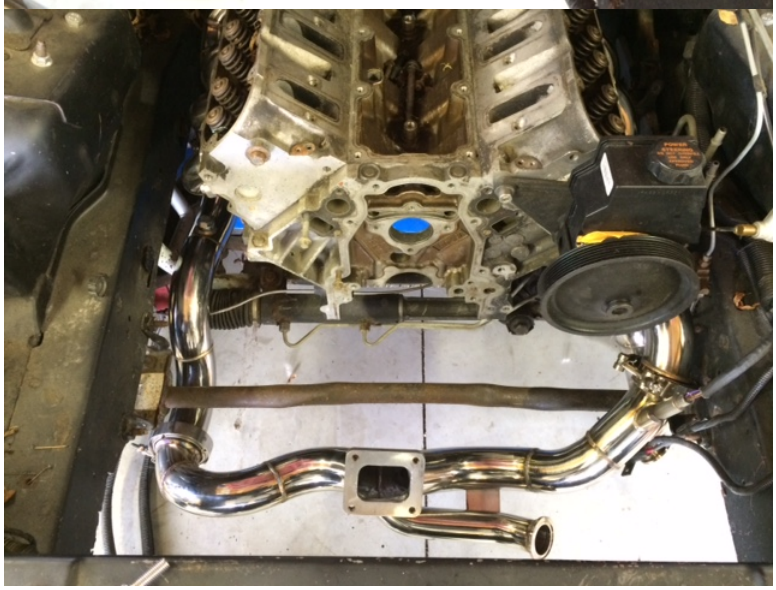
Hotside:

-Ceramic Coating the Hot-Side pipes is strongly recommended to keep engine bay temps down, prevent melting of any close clearance components, and keep as much heat in the piping for best performance!

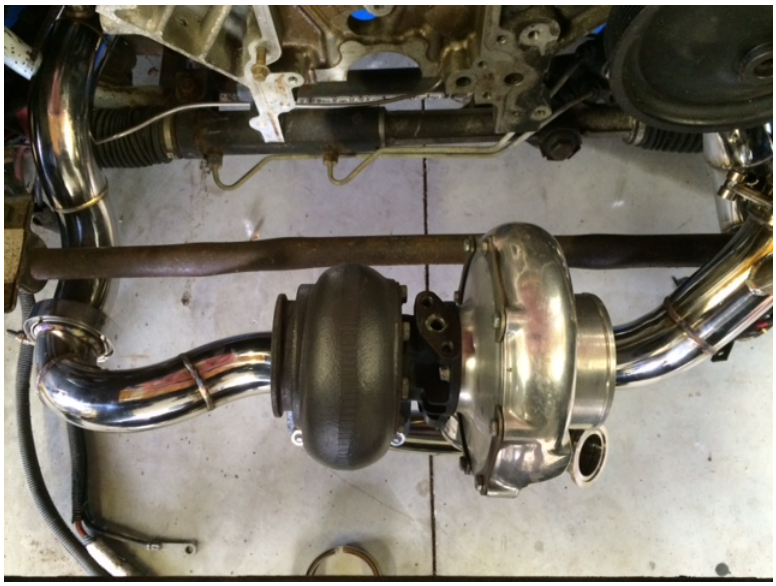
-Insert front 2 O2 sensors into the crossover pipe and the passenger side hot-pipe with a couple dabs of anti-seize on the threads of each.

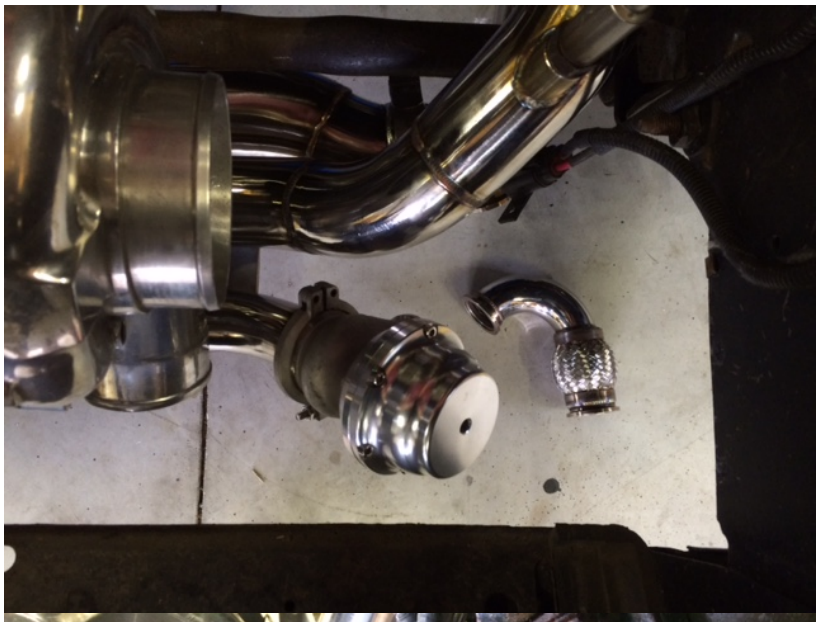
-Install the drivers' side exhaust manifold, which sweeps around the factory alternator allowing you to retain it. The use of a Fresh GM exhaust gasket or a Remflex brand is recommend. Secure the manifold to the head using (6) of our supplied 12 M8x1.25 bolts in your stainless nut/bolt kit. Leave the manifold a few threads loose so it can be wiggled a little back and forth.
-Ensure clearance of Power Steering lines to manifold on drivers side. Bend out of way for desired clearance
-Repeat the same as above on the passenger side with our passenger side A/C Retaining manifold using the other (6) bolts in your kit.
-Attach the crossover to the drivers side exhaust manifold with one of the supplied 2.5" V-band clamps. Here it helpful to have someone hold the crossover up while you install the v-band clamp due to the heavy weight of our .120 wall tubing used on the crossover. If you are alone, putting a jack under the V-band flange on the opposite end of the crossover to hold it up can work as well as shown. Leave the V-band connection snug but loose enough so you can rotate the crossover on the v-band connection to the manifold.
-Attach the passenger side hot-pipe to the passenger side manifold in the same manner by leaving it snug, but loose enough to swivel.
-You can now mate up the final connection of the passenger side hot pipe to the passenger side of the crossover. You should have enough play here from everything still loose to properly line it up.
-You can now begin to start snugging the hot-side down a little at a time at each connection point.


POWER
STEERING



-Now it is time to orientate your turbo properly. Test fit the turbo in place so it fits on the flange, with the compressor out in the orientation shown in the photo. With this, clock the housings so you oil feed fitting is at the top, and drain at the bottom. With this situated corrected, remove the turbo, snug all bots back down, install your oil drain flange with gasket to the bottom and tighten on the -10an drain line. With this complete, re-install into the car with the oil line running through to the connection you placed in the drivers side of the pan earlier.
-Using the (4) Supplied M10x1.5 bolts with washers, secure the turbo to the crossover T4 flange with gasket. If no gasket came with your turbo, the use of Copper RTV will suffice.
-You can now place the first portion of your downpipe into place by dropping it through the gap between you crossover tube on the passenger side and the sway bar. Secure the downpipe to the turbo with one of the supplied 3" V-band flanges. Snug but leave loose enough to swivel the downpipe on the turbo.
-Now going under the car, slide your second piece of the downpipe through the K-member and attach to the end of the first section of downpipe using the remaining supplied 3" V-band clamp. Snug but leave loose enough to swivel.
-Install your 44-46mm wastegate onto the flange off the crossover. Be sure not to forget to install the firing ring! Leave loose enough to spin the wastegate.
-Now orientate the wastegate outlet so you can attach the short wastegate recirculation tube onto the outlet and connect into the port in the downpipe. Make this connection. After this go over and ensure you have proper clearance of the downpipe going through the K-member, to the steering shaft, steering boot, etc. Once clear, tighten down all connections.





Radiator/Condensor/Fans:

-Install pusher style cooling fans (Derale #16925's are recommended) to the front side of the A/C Condensor. Test fit this before final securing to the condenser.
-Our AC line kit is highly recommended for a clean install of AC lines to route of to the way of the turbo plumbing.
-Reinstall radiator, condenser unit into the car.

Cold Side:

-Bolt the intercooler to the intercooler brackets using the supplied short (4) M8x1.25 bolts and washers, and leave somewhat loose.
-Bolt the Intercooler/Bracket combo to the vehicle where the bumper support used to be. This will be used with 4 nuts/washers/bolts through the holes in the crash support beams. In 3 of these holes, use the supplied M10x1.5 Bolt/Washer/Nut combos. The other has a smaller hole that the supplied M8 sized bolt combo uses.
-Once the combo is all bolted to the car, tighten all bolts and nut/bolt combinations.
-Attached a straight 3" silicone coupler on each end of the intercooler. Secure each to the intercooler using a 3" T-Bolt clamp. (7/16 ratchet on the t-bolt nuts)
-Use the J shaped pipe to run from the turbo to the passenger side of the intercooler. The short end of the J will connect to the passenger side inlet of the intercooler. Secure this to rubber coupler using a 3" T-Bolt clamp.
-Attach the other end of this pipe to the compressor outlet of the turbo using the 90* 3"-2.5" silicone coupler (If turbo has a 2.5" discharge on the compressor outlet) otherwise use the supplied 3” - 3” 90* coupler. Use corresponding T-Bolt clamps to secure this coupler. You will have one 90* coupler left over depending on the size of your turbo compressor outlet.
-Attach the 90* pipe with the attached BOV flange to the drivers side outlet of the intercooler. Attach so the BOV flange is facing UP. Secure this to the intercooler using a 3" T-Bolt clamp. Attach your BOV to this pipe using the BOV's supplied V-band clamp.
-Attach the 45* 3" Silicone coupler to the open end of the 90* BOV Cold Side pipe. Orientate as shown in the picture below and secure using another 3" T-Bolt clamp.
-Prepare your final Cold Side pipe for the IAT sensor. If you are using the factory grommet style, drill a hole in your desired location, a step bit works best. 4” off the end of the pipe fits nicely. If using a threaded style, drill and weld on your bung in your desired location.
-Install final Cold Side charge pipe. This will run through the hole beneath the fuse boxes on the drivers side. Some minor trimming of the plastic surrounding the fuse boxes may be required on the bottom.
-Install this charge pipe into the open end of the 45* 3" silicone coupler and secure using another 3" T-Bolt clamp.
-Attach the 3"-4" 90* Silicone coupler to the open end of the last cold side pipe leading to throttle body. Secure the 3" end onto the charge pipe using a 3" T-Bolt clamp. Secure the opposite 4" end to the throttle body using a 4" T-Bolt clamp.

Final Notes:

*Reinstall front bumper. Some minor trimming of the bottom may be required for it to tuck nicely up around the bottom of the intercooler brackets. Some self-tapping screws can secure the bottom flap of the bumper to the bottom beam of the intercooler bracket if desired.

*Run vacuum lines from the side port of your waste gate (top port vented to atmosphere unless using a boost controller), and BOV to a boost/vacuum source.

*Run your oil feed line from the top of the turbo to the location noted in the first picture up top. Our Oil Feed and Drain Line kit will come with the line and 2 fittings needed for this.

*Ensure your PCV is properly set-up so you do not boost the crank-case. The stock PCV system set-up WILL boost the crank-case. It is recommended to pull from the turbo inlet as well to create a vacuum, this will allow help the turbo properly drain and return the oil. Recommended to consult Mightymousesolutions.com and run one of his PCV cans set-up per his instructions, works very well!

*Where as an air filter is not needed to run the kit, in a street application it is HIGHLY recommended to keep contaminants from entering the turbo. Use our supplied 4” turbo Air Filter.

*The downpipe is a starting point for the exhaust. It is recommend that you add to the downpipe to have the exhaust exit the rear of the car. If you prefer to run an open downpipe we also have an option to dump the exhaust up front with the 3” downpipe as well, please contact for info.

*Ensure all electrical connections/plugs/grounds are plugged back in (O2 sensors, IAT sensor, etc)

*Final wiring to the new pusher style fans to be completed per the fan manufacturers instructions.

These are just helpful steps and by no means a strict guide that must be followed as many cars are already in modded form. This is to help give you a good direction of what all is involved in the install and to bring up tips and tricks that may help you along. This kit is for off-road use only and should be installed by a professional. Please refer to Huron Speed’s terms and conditions once again prior to install.