



2012-15 Camaro 3.6 Supercharger Kit Installation Guide



LEGAL DISCLAIMERS AND IMPORTANT INFORMATION, PLEASE READ BEFORE INSTALLING THE SUPERCHARGER SYSTEM!!

- Use extra caution when driving any modified vehicle. Increased power may produce increased speeds that may make the vehicle unsafe or uncontrollable and result in serious injury or death. We do not condone speeding or breaking any traffic laws. It is the responsibility of the purchaser, owner or operator of the vehicle being modified with this supercharger system to understand all risks associated with increasing the horsepower of a vehicle and to obey all local traffic laws.
- Overkill and its partners are not liable for any damages as a direct or indirect result of installing this supercharger. The purchaser, installer or reseller of this supercharger system cannot, under any circumstances, hold the companies mentioned liable for any subsequent loss, damages, fines or penalties. It is the responsibility of the purchaser, owner or operator of the vehicle being modified with this supercharger system to understand all risks associated with increasing the horsepower of a vehicle.
- This supercharger system is NOT CARB approved and is not legal for use on any public roads in the state of California. This system has not undergone any approval for use on public roads. Despite all efforts to ensure no increased emissions from normal vehicle operation, this system may not meet your local emissions laws. It is the responsibility of the purchaser, owner or operator of the vehicle being modified with this supercharger system to understand and comply with all emissions laws associated with their vehicle.
- Use of 91 octane or higher is **REQUIRED** with this supercharger system. Do not use 87 octane, 89 octane, or E85 ethanol fuel. For all forms of racing or sustained high speed use, it is recommended to use a mixture of 100+ octane unleaded race fuel and the highest octane pump gas available. It is **HIGHLY RECOMMENDED** to use the computer tuning services provided by Overkill or the installer of this system to ensure the safe and proper operation of the engine with this supercharger installed. Your provided Autocal or HP Tuners can provide scans for the owner/operator of the vehicle to view. It is the responsibility of the purchaser, owner or operator of the vehicle being modified with this supercharger system to understand all risks associated with increasing the horsepower of a vehicle, and to understand for themselves how to identify unsafe and improper vehicle operation which may lead to engine damage.
- Installation of this system by a trained certified mechanic is **HIGHLY RECOMMENDED**. It is the responsibility of the purchaser, owner or operator of the vehicle being modified with this supercharger system to ensure the safe and proper installation of this system to avoid damage to any of its components which may not be covered under warranty due to installation error or abuse.

Installation Overview

- Step 1: Remove Front Bumper
- Step 2: Remove Air Filter Assembly
- Step 3: Remove Power Steering Reservoir System
- Step 4: Install New Power Steering Reservoir System
- Step 5: Install New Upper Coolant Hose
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- Step 7: Install Tensioner To Mounting Plate
- Step 8: Install Mounting Plates and Vortech
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- Step 23: Reinstall Front Bumper
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- Step 25: Flash Tuning File

Before you begin the installation, ensure that you have followed the included instructions to read the factory computer tuning from your vehicle and emailed it to willoverkill@gmail.com and waited to receive your new supercharged tunes back before attempting to install. This process may take several business days.

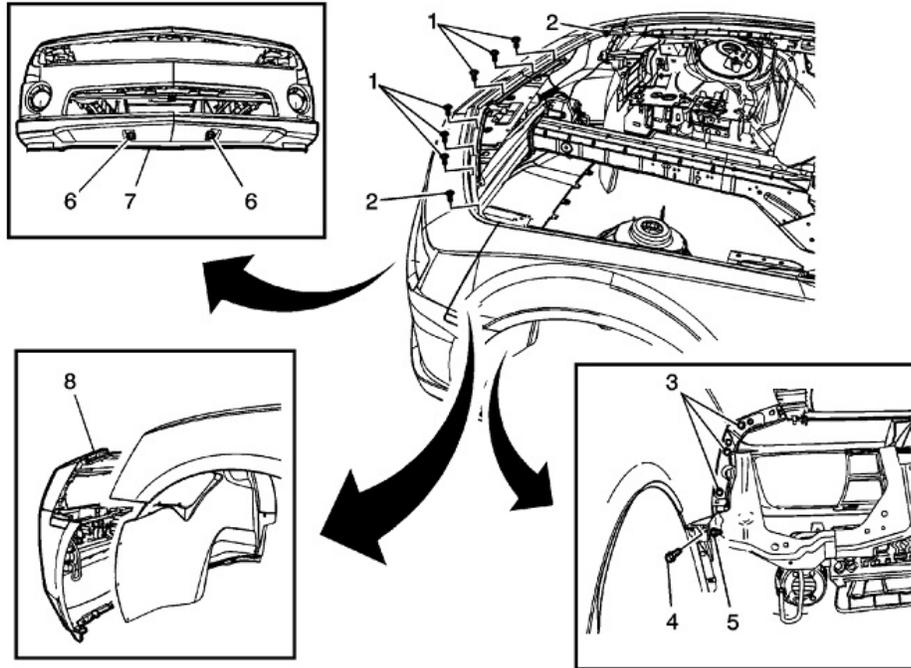
Disconnect your battery before starting the installation. Remove the negative battery terminal and place a clean towel on the battery post to prevent contact.

From your dealership, you will need 500ml to a quart of power steering fluid applicable to your year Camaro, plus a jug of Dexcool coolant, ideally premixed.

Recommended items to have: Blue Loctite, Dielectric Grease, WD40, Spark Plug Gapping Tool, Electrical Tape, A Sharp Razor Blade, Drill, 3.5" Hole Saw, Allen Socket and Torx Socket Bits for 3/8" Ratchet, Torque Wrench, Full Socket Set, Sturdy Scissors, Tub to catch oil that will drain, Zipties

Step 1: Remove Front Bumper

Reference the following image:



#1 In Photo – Remove 6 push-in retainers from upper support

#2 In Photo – Remove 2 Screws from upper support

#6 In Photo – Remove 2 Screws from lower bumper



Remove the screws that line the inner fenderwell skirt and peel back (Tip: Turn the wheels to aid access to these screws), then remove the bolt marked #4 In Photo



From the passenger's side, unplug the main harness connector



Your front bumper cover will now be loose and free to remove. Recommend you set it down on a cloth and away from the work area so not to damage its finish!

Step 2: Remove Air Filter Assembly

Remove the oil filler cap, pull up on and slide forward the engine cover to remove, then reinstall the oil cap to prevent debris falling in.

Remove the breather hose from the air duct on the driver's side of the duct by the throttle body, loosen the clamps at the throttle body and air filter housing and remove the duct.

Unplug the MAF sensor connector on the air box, loosen the two nuts on the strut tower and then pull up and remove the entire air box.



Step 3: Remove Power Steering Reservoir System

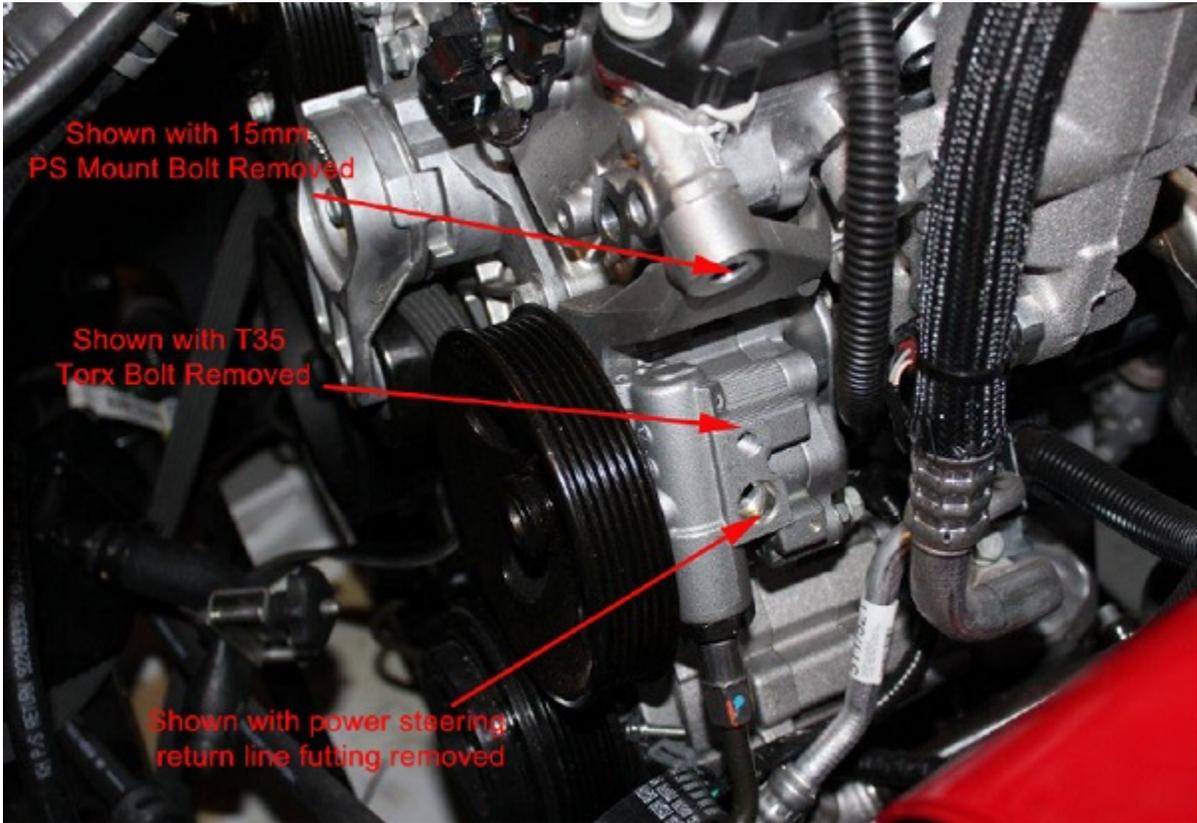
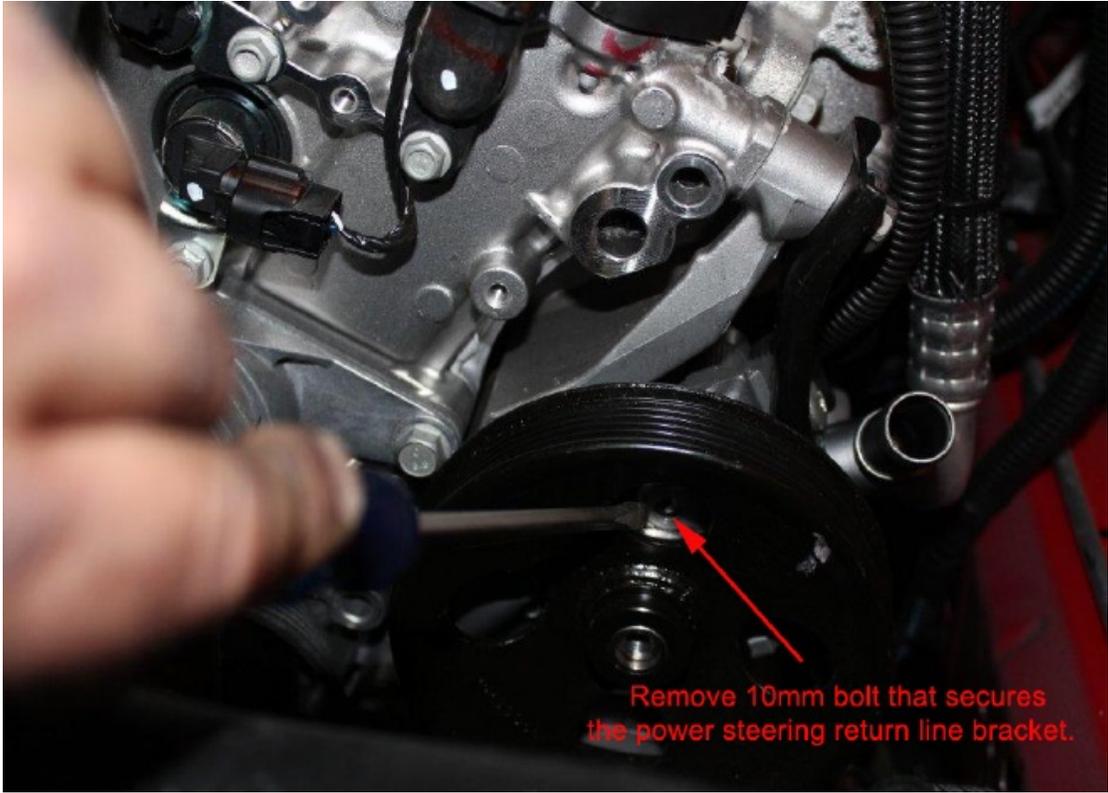
Next we're removing the factory power steering fluid reservoir and associated hoses.



Begin by draining the reservoir of fluid. Remove the smaller hose from the reservoir and use a tub, cup or bottle to catch the fluid (tip: keep the cap on to slow the initial drain of fluid from the reservoir, then remove the cap to accelerate draining). Lower the hose to catch as much fluid from inside as possible, then push aside. Remove the larger hose from the reservoir and do the same.

Remove the reservoir from its bracket by pressing the retaining clip with a flatblade screwdriver and slide the reservoir up and off. Then remove the two 10mm bolts holding the black bracket on.

Reference the following picture, you'll need now to remove a 10mm bolt and slide it through the opening in the pulley and out, it will not be reused. Then look for the black bracket at the side of the engine attaching to the power steering pump, remove the 15mm bolt and torx bolt (save for reuse), and remove the hose and its fitting.



Step 4: Install New Power Steering Reservoir System

We'll now begin to install the new power steering reservoir system. Start with the new pump fitting, it's a one piece fitting with an Oring installed, and a C-clip retainer plate. Install the fitting in the pump, slide the retainer plate in place and secure with the Torx bolt previously removed. (Note, different bolt was used in this photo)



Next, mount the bracket for mounting the new fluid reservoir. Go back to the brake master cylinder; from the engine side, remove the nut securing the master cylinder to the brake booster. Slide the new bracket in place over the stud, and note the two forks fitting around the casting to prevent the bracket from rotating. Reinstall the nut.



You'll need to use the new fluid reservoir as a guide as you bend the A/C lines out of the way. Use light to moderate pressure and push the lines over to make room for the new reservoir. Once space is created, the reservoir will sit right beside the brake fluid reservoir like this...



Install the large return hose onto the fitting using the short 90° bend end. Ensure to angle the hose upward and prevent any low spots in the hose between the fitting and reservoir. Slide one of the hose clamps on and secure when happy with the positioning. Then trim the hose to length at the reservoir end using good scissors, razor blade, or a proper hose cutter, install a clamp, and secure to the reservoir.



Finish with the smaller hose. You have two options, use the included barb fitting to secure to the existing hose end that you took out of the factory reservoir, or run the new hose all the way to the front of the car and secure to the cooler with no joints. If the latter, remove the 10mm bolt securing the old hose next to the radiator, and remove. Trim the hose to desired length and route/secure as desired away from moving parts.



Step 5: Install New Upper Coolant Hose

Use a tub or container to catch the old coolant as it comes out of the old upper coolant hose. Remove one end at a time, catch the coolant for disposal, and save the clamps. Install the new coolant hose with the bigger end on the engine side and smaller end on the radiator size, with the clamps from the old hose. Remember to check your coolant level at the end of the installation.



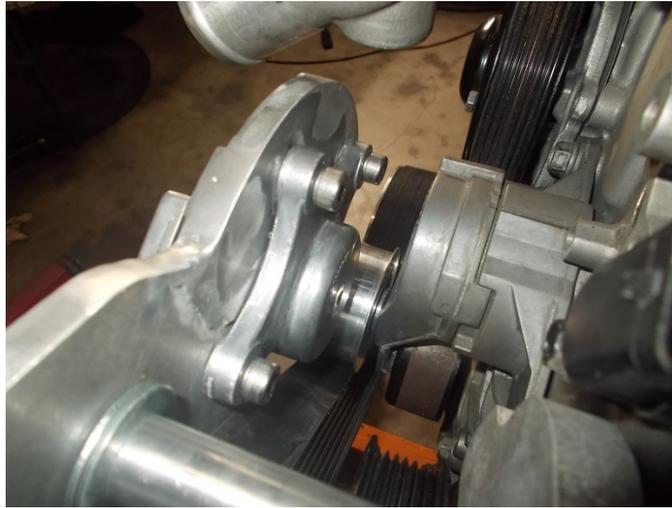
Step 6: Install Crankshaft Pulley

One of the harder parts of the installation will be removing the crank pulley bolt. Using a strong impact gun ideally, remove the bolt. The new pulley will index into the OEM crank pulley spokes. Once the new slip fit pulley feels slotted in and sits flush with the OEM crank pulley, reinstall the bolt and torque to factory specifications of 74 ft-lbs and an additional 150 degrees rotation.



Step 7: Install Tensioner To Mounting Plate

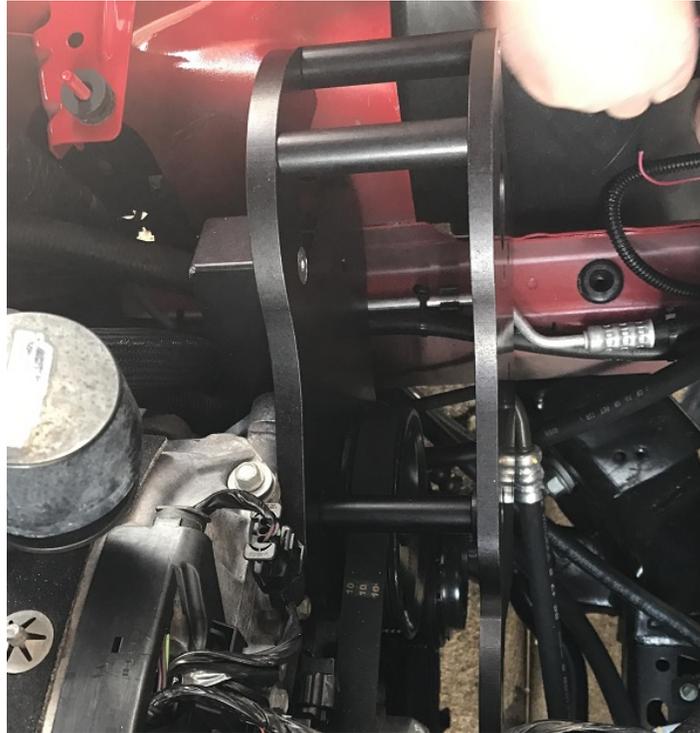
To prepare to install the mounting plates, first attach the tensioner assembly to the outer face plate with the Vortech attached. Referencing the Vortech, the tensioner body mounts on the pulley side of the plate, with the outside of the pulley facing the same direction as the Vortech pulley. Install the included 3 bolts and torque to 8 ft-lbs or 96 inch-lbs with blue Loctite recommended.



Step 8: Install Mounting Plates and Vortech Unit

Time to install the good stuff!

Once installed, the plates will look like this, OF COURSE YOU'LL HAVE THE VORTECH ATTACHED TO IT, but this gives you an idea of how the plates install...



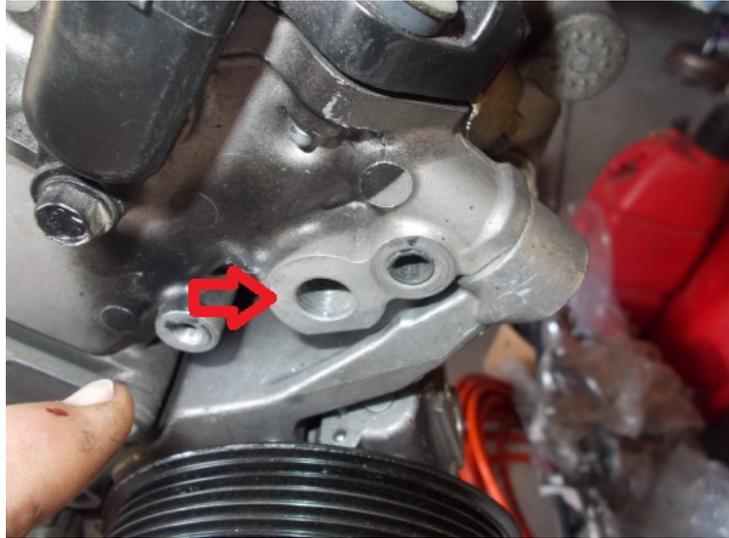
Identify first the components: You'll have the outer plate with the Vortech attached and tensioner now attached, you'll have the inner engine side 2 piece plate with a 2nd rectangular block piece sitting into a recess in the backside of the plate and held on with one countersunk bolt, you'll have 2 long round spacers with smaller inner diameters, 1 long round spacer with a larger inner diameter, two M8 socket head cap screws, one long M12 screw with a countersunk head, and one black M12 washer.

Blue Loctite is recommended on all of the following bolts.

Our recommended method of installing is to first fasten the two plates together using the two long spacers with smaller inner diameters and two M8 socket head screws. Use the large diameter spacer and large M12 screw to help align the plates (seen at the bottom of the picture above) while you secure the plates together using the M8 screws and their long spacers. Torque to 15 ft-lbs. Once assembled, you can use one of those plate spacers as a good handle to lift the assembly with.

Ensure the 2 piece engine side plate is assembled but leave the screw securing them together loose enough to allow some movement of the rectangular block without coming out of its recess.

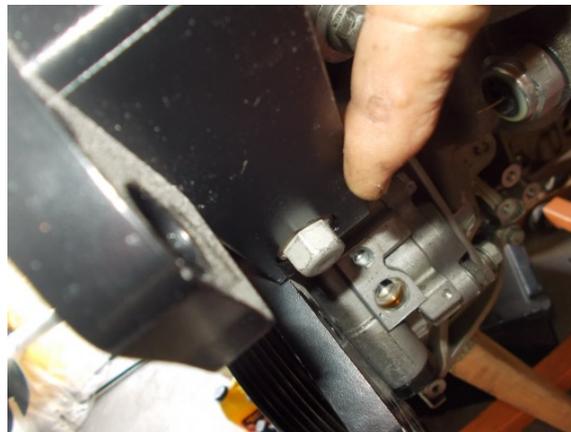
Prep by removing a large existing bolt from this location on the cylinder head in the power steering pump vicinity.



Pass the long M12 screw through the outer plate, through its round spacer, through the inner engine side plate, and place the black washer over the screw behind the engine side plate so it goes between the plate and the engine block.

Holding the M12 screw assembly together, lift the mounting plates into position and secure the M12 screw into the bolt location pictured above, do not tighten fully yet.

Grab the 15mm bolt you removed during the steering reservoir removal. It goes in the backside of the rectangular block and bolts to the same location it came out of. Leave the bolt just loose enough to provide movement in the plate.



Firstly, torque the long M12 countersunk screw to 40 ft-lbs. Next, torque together the countersunk screw holding the two piece engine plates together to 15 ft-lbs. Lastly, torque the 15mm bolt to 20 ft-lbs.

You can now install the 8-rib belt. Install over the supercharger pulley first, then with the tensioner rotated clockwise with a 3/8 ratchet slide the belt over the crank pulley to the inner most ribs and release the tensioner. Check belt alignment to ensure it will run straight and adjust on the crank pulley as required.

Step 9: Remove Washer Fluid Reservoir

On the driver's side in the fender well, you'll see the factory washer fluid reservoir that needs to be removed. Drain the washer fluid by removing the fluid line from the pump or removing the pump completely from the reservoir, just be prepared for the swift evacuation of the fluid and don't get wet. Unplug the electrical connector from the pump. Remove the three bolts you see on reservoir body and remove from vehicle.



Step 10: Remove Bumper Crash Support and Prep for Intercooler

Remove the 6 bolts on either side of the front crash support brace, which is the big metal bracket that's running side to side in front of the radiator. Remove completely so you can install the intercooler.



You'll also need to remove this large piece of air deflector plastic to make room for the intercooler.



Step 12: Install Front Intercooler and replace Bumper Crash Support

Put the intercooler back in place. With the plastic removed, it will sit onto a square metal bracket that the plastic bolted to. Optional is to drill holes and use the extra included bolts to secure to the crash bar; the bolt bosses will almost line up with two existing holes and they just need drilling to a larger hole size. If you choose to just rest the intercooler on, that's ok too, it won't be going anywhere with the upper brackets installed.

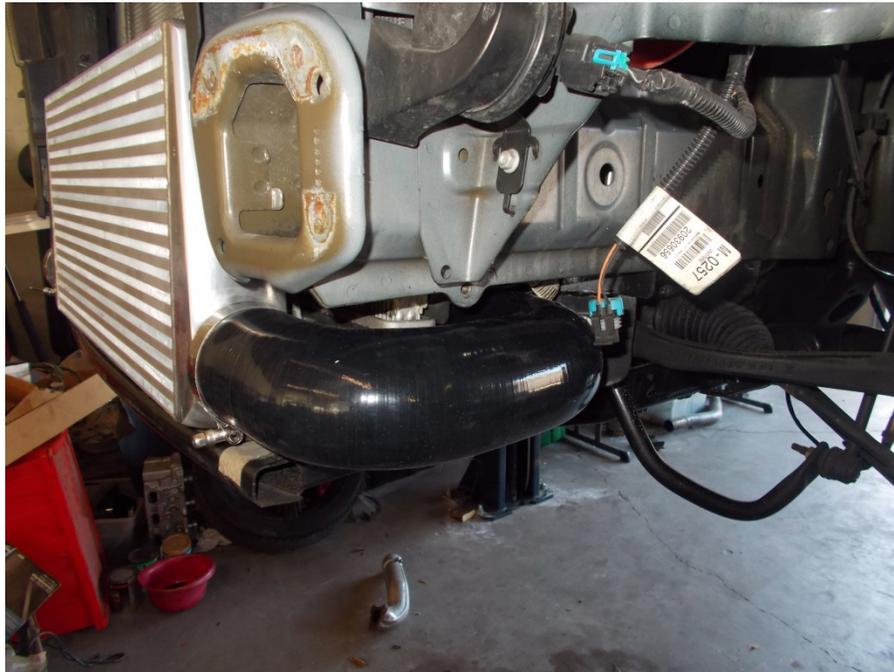
Reinstall the crash bar and its bolts. Find the centerline of the crash bar and mark it if you did not bolt to the lower brace, otherwise skip. Install the 3 brackets onto the upper intercooler mounting points using the included 3 bolts and separate washers. Use the included drill bit and tap and drill down into the crash bar and tap a thread, then install the included 3 bolts with attached washer. Blue Loctite is recommended.



Step 13: Install Driver's Side Intercooler Piping

Time to install the intercooler piping, start on the driver's side to connect the supercharger outlet to the intercooler. The tubing will go as follows: Reducing insert sleeve over the supercharger outlet –into—Mild bending silicone elbow (orange inside) –into—Aluminum 90 degree elbow –into—180 degree silicone elbow. You'll need 4 clamps to attach, 2 of the 86-94mm clamps go with the orange inside elbow and 2 of the 79-87mm clamps go with the 180* silicone elbow.

Tip: Use WD40 and spray the insides of the silicone couplers to help them slide onto the aluminum tubing and rotate easily. The WD40 will dry and not harm the silicone.



Step 14: Install Passenger's Side Intercooler Piping

Moving to the passenger's side, you'll need the following components to go from the intercooler into the engine bay: smaller 90 degree Cobra head silicone elbow –into– Preassembled Blow-Off Valve tube –into– 90 degree silicone elbow –into–45* aluminum elbow –into–reducing coupler –into–metal silicone joiner –into–90* reducing elbow –into–MAF housing –into–90* reducing elbow. Leave the MAF and final 90* elbow off for now, they will be installed shortly.

The blow off valve will be positioned in the passenger's fenderwell, with the tube running parallel to the ground and front/back with the direction of the vehicle.



You'll need an assortment of different size T Bolt clamps for this one, follow closely:

-2 of the 86-94mm clamps for the smaller Cobra elbow with orange inside

-1 of the 79-87mm clamps for the 90 silicone elbow to BOV and 1 73-81mm clamps for the outlet end to metal elbow

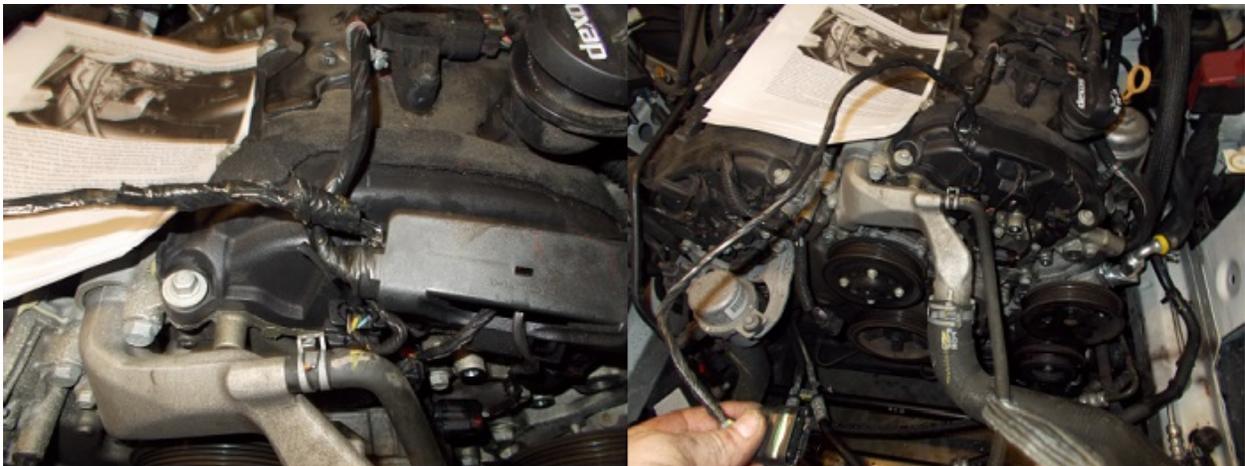
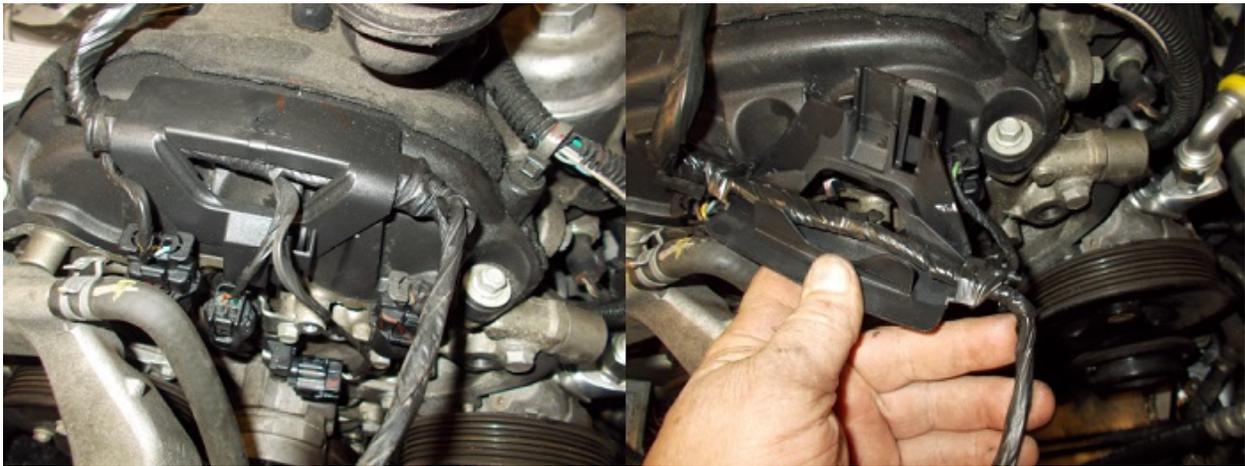
-1 of the 73-81mm clamps for the straight reducing coupler small end and one 79-87mm clamps for its bigger end

-1 of the 79-87mm clamps the 90° silicone elbow into the MAF on its smaller end and one 92-100mm clamps for the larger end. You'll also need the same clamp combo again for the final elbow into the throttle body.

Use the travel of the Cobra head to BOV tube connection to slide sideways until the 90° elbow on the outlet has a good fitment into the engine bay. You'll also need to angle the outlet 90° elbow so it points upwards around 45° into the engine bay, and will want to adjust the angle of the whole assembly to achieve a good fit. WD40 spray on the couplers is all critical to allow this movement for a short time during installation. Use the 45° aluminum elbow as your guide: when you're done with the correct fitment, it's outlet will be vertical (straight up) and it will have good clearance to the subframe as it passes into the engine bay. Once you're happy, tighten up the clamps.

Step 15: MAF Wiring

Before going further with the intercooler piping, lets prep the wiring for the mass airflow sensor. There's no plug in wiring extension included because the connectors aren't available to make one, but you don't have to cut and extend the wiring, the wires run inside the wiring harness back towards the passenger's side of the vehicle. Unsnap the plastic cover. Take a utility knife or razor blade and carefully start to cut the electrical tape away from the harness exposing the wiring, and then start to unravel the MAF wires from the bundle. Once you get back to the junction closer to the throttle body, you should have enough reach on the wiring to reach the new MAF location. Be careful not to cut into the wire sheathing or cut yourself!



Once you're completed, tape the MAF wiring back up with new electrical tape, and clip the plastic retainer back into place.

Step 16: Install Throttle Body Spacer and MAF

A throttle body spacer is provided to provide engine vacuum to the blow off valve. Open the kit, it'll have a spacer with fitting preinstalled, a gasket and longer bolts. Remove the throttle body by removing the 4 securing bolts. Install the spacer with the vacuum fitting and hose facing the passenger's side of the vehicle. Using the longer provided bolts, secure the throttle body with the provided gasket between the throttle body and plate, and the factory rubber seal sealing the plate to the intake manifold. The included hose will run to the blow off valve.

Remove the MAF sensor from the factory air filter housing use a torx bit. Note the direction of the sensor and the open window with element that was facing towards the air filter. Install into the new MAF housing with that window facing the screen mesh on the one end of the new housing.

Install the MAF into the 90° silicone elbow you left off with from Step 14 with the screen end facing into this elbow. The MAF should have the sensor's electrical connection pointed upward and slightly toward the engine as desired.

Secure the other remaining 90° silicone elbow between the MAF and throttle body. You can trim the elbow's length fitting over the throttle body with a sharp knife to achieve a better fit as you desire. Secure the clamps once you like the fit.

Ensure to plug in the MAF wiring connector and secure the wiring away from moving parts.

Step 17: A/C Line Modification and Install Intake

Let's complete the installation on the driver's side. The A/C line that runs right in front of the Vortech unit needs to be modified so it is out of the way of the inlet tubing. This will require some careful bending but you should be able to do this without disconnecting the line and releasing the A/C Freon, just take your time and pay close attention to what you're up to.

Use a screw driver handle to create a gentle bend so you don't kink the line.



Attach the Amsoil air filter to the large aluminum elbow. Install the two regular hose clamps over the Cobra head shaped silicone intake elbow and install onto the inlet of the supercharger, do not tighten yet. Ensuring to check clearance from the A/C line, slide the aluminum elbow up from the fenderwell and into the Cobra head elbow. Once you're happy with the alignment, tighten down the clamps.



Step 18: Install Vortech plug

Using the included package, remove the plug shown from the Vortech (meant for shipping only) and replace with the new plug and new crush washer.



Step 19: Install Spark Plugs

The kit came with 6 new spark plugs, AC Delco part number 41-118. You'll need a spark plug socket and a long extension. You may find you need to remove the EVAP solenoid to get the middle passenger's side spark plug out, otherwise this is a simple remove coils, remove plugs and reinstall. Gap the spark plugs at .030"- .032".

Step 20: Install MAP Sensor

The MAP sensor is located on top of the intake manifold towards the back of the engine. Simply unplug the electrical connector, remove the one Torx bolt, remove the sensor and replace with the one sensor from the kit, tighten the bolt and plug the connector in.

Step 21: Install Washer Fluid Reservoir

The new washer reservoir will come as the bottle and pump and hardware separately. If we for any reason did not remember to remove the black pump from new bottle, you can remove and discard. You won't need any hardware from your original bottle.

Behind the driver's side headlight in the airbox area, remove the grounding stud, and replace it with the longer bracket and one of the new bolts and washers from the kit.



Next take the shorter bracket, spacer, and one of the nuts. This goes on the airbox stud on the strut tower. Slide the spacer on the stud first, then short leg of bracket, and nut.



Install the included pump upside down so it sticks downwards. Use some lubrication on the rubber seal as needed and push the pump in fully to secure.



Now put the washer bottle in place, secure to the brackets using the nuts, washers and bolts provided, then tighten up the brackets once you're happy with the positioning. Plug in the fluid hose and electrical connector.



Step 22: Install Catch Can System

Installing the catch can is very important. Without this system in place, oil will get into your engine, your valves, piston tops, into your intercooler system and into your supercharger even. However with it in place, you'll be amazed at the oil it prevents entering these crucial areas and will help prolong engine life considerably.

Your catch can will include a bunch of new preassembled hoses and the can itself with mounting brackets. The can should be mounted as shown off of the brake vacuum pump. Remove the nut from the bottom of the right side bolt, install the short leg bracket over the bolt with long leg facing down, and reinstall the nut. Mount the mounting ring to the L bracket and pump into the ring bracket, snug everything up.



There are 4 lines to be run in total. Follow along in the sequence step by step, reread as many times as you need to, and you'll be able to install the catch can successfully.

First, if you haven't already, remove the PCV line that used to connect to the factory air duct to the rear of the driver's side valve cover, and use the included rubber cap to cap that valve cover port. Next, on the passenger's side, unclip the PCV line from the valve cover and rotate the line and fitting on top of the intake manifold until you can pull up and remove it from the manifold.

Line #1 – From the passenger's rear valve cover, use some pliers (vice grips preferably) to remove the push in factory fitting, using a twist and pull up motion. With the new fitting smooth surface lubricated lightly, push into the valve cover. Use the shorter ½" hose provided to run from this fitting to the center port on the catch can.



Line #2 – Install the longer 3/8" hose into the intake manifold, it will have the same factory fitting as the factory tube you previously removed. Remember to rotate the fitting to ensure the fitting is fully inserted and secure. Run to either of the outer ports on the catch can.

Line #3 – On the Cobra head silicone elbow, install the other 3/8" hose with its 90° fitting into the silicone elbow. Connect the other end to the other outer port on the catch can.

Line #4 - Included in the kit is a piece that replaces the oil filler cap. It's called a clean side separator. Install the CSS by screwing into the oil filler neck. Connect the longer 1/2" hose to its vacuum port, and run that hose down to the air filter, shoving the 1/2" hose over a preinstalled fitting on the filter neck.





Step 23: Reinstall Front Bumper

Time to reinstall the front bumper fascia and button up the car. Refer to the original disassembly process, and just do everything in reverse.

Step 24: Final Checks Under The Hood

Time to check everything you've installed. Look for the following items:

- Things are clear from the serpentine belt
- Things are clear from the exhaust downpipes
- Intercooler piping isn't clunking against the subframe, adjust if so to correct
- Check the fluid level in the supercharger. It comes prefilled. Do not overfill.
- Check all clamps are tight
- Check that the catch can fittings are tight and the drain valve is closed
- Check Your Coolant level and add
- Add fluid to the Power Steering Reservoir to the cold mark
- Secure the drain lines of the supercharger and catch can.

Step 25: Flash Tuning

Select Your Overkill tuning files for your supercharger system from your email, upload them to your Autocal handheld or open it in your HPTuner suite. Remember to flash the tune with the key on but engine off, and wait 15 seconds after key on before starting the flash. The most common mistakes are being too quick to do key turns, and disrupting the flash process by fidgeting and affecting cable connection. Your vehicle may become inoperable if the flash is interrupted, and the flash will take roughly 1 minute, so sit still!



Maintenance On The Supercharger Kit

The Vortech will require its first oil change at 2500 miles, and then regular oil changes every 7500 miles or 1 year. Check the oil level on a regular basis in between changes.

Use the braided oil drain line to drain the fluid. The unit will then take 4 oz of the specific fluid from Vortech. Do not overfill. Do not use any substitute oil. Part number for a 3 pack of 4 oz oil bottles is **009035** and at time of writing instructions the price is \$33.99 from Jegs.com. You can also order from other performance outlets. Ensure to get proper Vortech branded oil, no substitutes!!



The Amsoil oil filter has an outer prefilter that can be wiped off with a clean wet towel to remove excess dirt. Should the filter itself require cleaning, remove from the vehicle, remove the prefilter sock, vacuum the outside with a shop vac to remove loose dirt. Mix up a solution of Woolite and very warm water in a tub deep enough to submerge the filter, and then submerge the filter. Leave for 10 minutes to soak, and you can then use a soft brush like a paint brush to agitate the outside of the filter to further clean. Rinse with a soft stream of water from the inside out to rinse the dirt and soap away. Repeat as needed to clean any soiled areas that remain. Finally leave to air dry, which may take 3 hours or more, do not reinstall until the material is dry. The prefilter can be washed in soapy water and dried with a towel. Finally reassemble. No oiling required.

The spark plugs are iridium and have a long life span. For ideal performance, we recommend replacing every 4 years or 60,000 miles. They can be purchased GM.

Your catch can should be drained at every oil change or at least twice per year. Ensure to close the drain valve after draining the oil from the can, or you'll have an air leak.

Strongly recommend the use of synthetic oil like Amsoil in your engine, differential and transmission, with quality filters, and change at factory intervals or earlier!

Warranty On Supercharger Kit

The Vortech and all physical components on the kit are warrantied for 1 year from date of purchase for defects of materials. Examples of this would be if a silicone elbow develops a split, if the intercooler develops a crack, the tensioner no longer operates as designed, the Vortech develops a leak from its body. Items that aren't covered are items that come from abuse, misinstallation, improper maintenance, collisions, acts of god, or from additional non kit related modifications.

This warranty covers replacement of the part only. It does not cover labor costs to diagnose or to remove or replace the component. It does not cover any towing costs. It does not cover any downtime costs on the vehicle.

Items that exclude the Vortech manufacturer's warranty include but are not limited to:

- Disassembly, attempted disassembly, or modification of the Vortech unit
- Removal of the serial tag identification
- Ingestion of debris by the supercharger
- Running low on oil, using improper oil, or improper oil change intervals