

# 2016-Current Camaro 3.6 Supercharger Kit Installation Guide



Thank you for purchasing the Overkill supercharger system for your 6<sup>th</sup> gen Camaro V6. This installation guide will help you through the install, but reach out to me, Will, at <a href="willowerkill@gmail.com">willowerkill@gmail.com</a> should you have any questions that I can help resolve. Installation is recommended by a professional mechanic, or at minimum an experienced DIY mechanic with good problem solving skills.

# 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. Overkill does 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 is 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 Overkill 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 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 Intake Manifold, Install MAP Sensor, Spark Plugs
- Step 4: Install Throttle Body Spacer and Reinstall Intake Manifold
- Step 5: Install Crankshaft Pulley
- Step 6: Install Tensioner To Mounting Plate
- Step 7: Install Mounting Plates and Vortech Unit
- Step 8: Remove Bumper Crash Support and Prep for Intercooler
- Step 9: Install Front Intercooler and replace Bumper Crash Support
- Step 10: Install Driver's Side Intercooler Piping
- Step 11: Install Passenger's Side Intercooler Piping
- Step 12: Modify MAF Wiring
- Step 13: Install Intake and Air Filter
- Step 14: Install Catch Can System
- Step 15: Reinstall Front Bumper Fascia
- Step 16: Install Vortech plug
- Step 17: Final Checks Under The Hood
- Step 18: 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 <a href="willowerkill@gmail.com">willowerkill@gmail.com</a> 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" Rachet, Torque Wrench, Full Socket Set, Sturdy Scissors, Tub to catch oil that will drain, Zipties

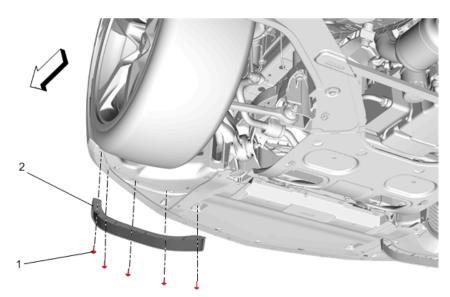
## **Step 1: Install Your Tuning Software and Read the Factory Tuning**

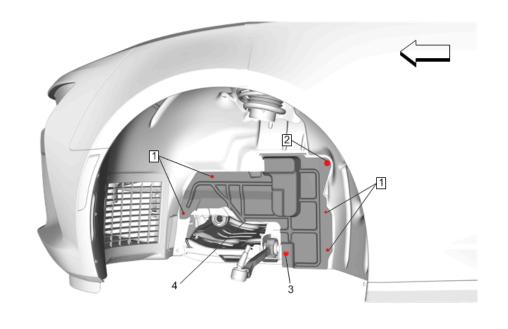
Before you start doing the installation, you must first read the factory tuning from your vehicle to send to Overkill so that I can begin to write your new tuning while you're doing the installation. Do NOT make this the last step and then be concerned when you'll get the new tuning back because the car isn't drivable after the install without it, do this first!

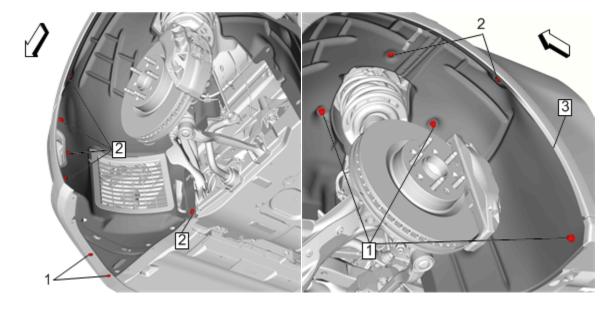
Follow the additional instructions provided to operate the HP Tuner suite

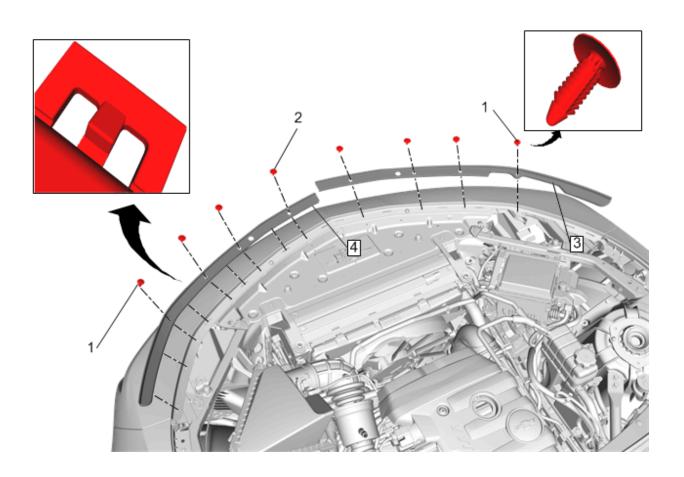
## **Step 2: Remove Front Bumper**

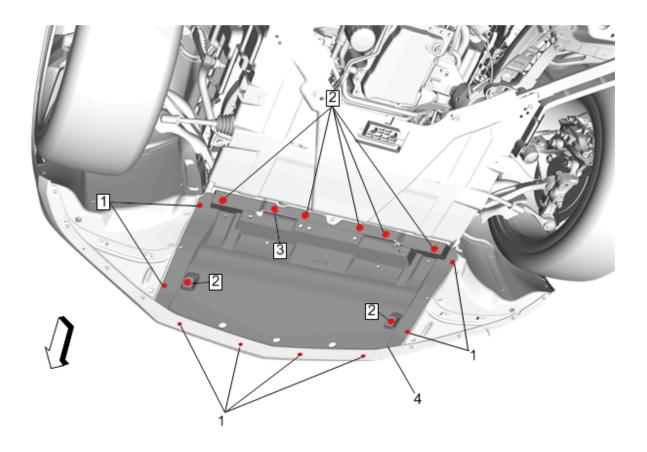
Let's get the hard part out of the way and remove the front bumper and the inner fender skirts to give room to work. Everything will be held together with what will seem like a million screws, follow the location references in these following images to remove all the screws and trim parts required, and finally remove the front bumper fascia.

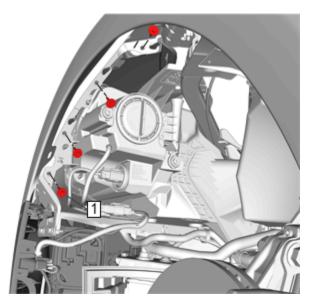


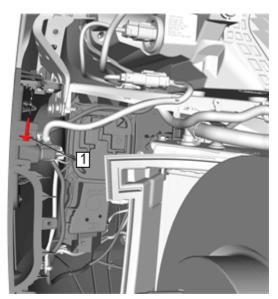


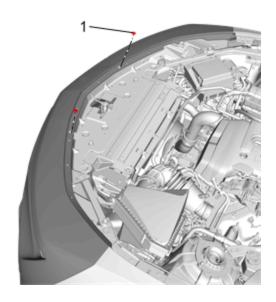








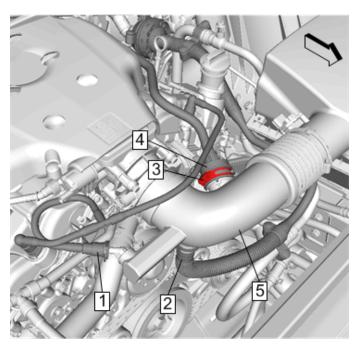




**Step 3: Remove Air Filter Assembly** 

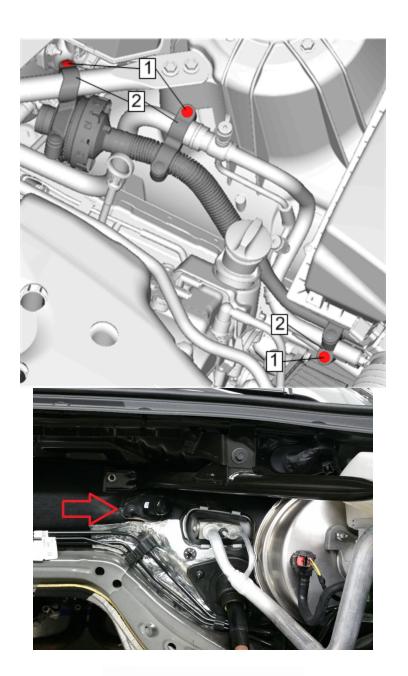
Onto an easier task, remove the factory air filter system, or whichever aftermarket system you may have. We'll outline the factory system, but refer to your aftermarket manufacturer's instructions as needed.

Unhook everything from the air ducting. Loosen the PCV breather tube's band clamp from the backside (#3/4), pinch the clip to remove the other smaller PCV hard line from the left side (#1) and the air resonator tubing from the bottom (#2), then loosen the clamps at the throttle body and air cleaner and remove the duct.



Unplug the MAF connector, remove the wiring from the air cleaner housing using an auto trim tool to remove the plastic Christmas tree fastener, and pull up on the air cleaner assembly to remove. You'll want to remove the two T20 torx screws and remove the MAF sensor from the cleaner assembly; you can do this later or now, just keep the sensor safe as it's fragile.

The air sound tube needs to be disconnected back at the firewall, it will be removed entirely. Following the plastic tubing to a large round cylinder, at the diagonal brace by the driver's strut tower, and then back to the firewall, you'll want to remove the clips shown #1 below. At the firewall, you'll see one bolt to remove from the fitting, the turn the fitting counter clockwise to dislodge and remove. Taking the new firewall cap fitting in the kit, insert and twist to lock in, and then use the bolt you removed to re-secure the new fitting. Remove the sound tubing entirely from the vehicle.

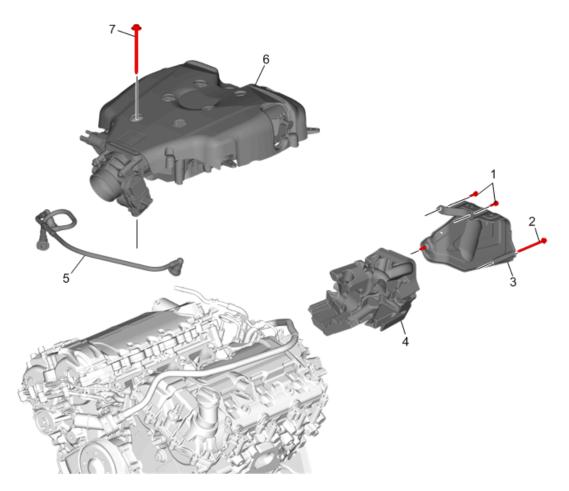




#### Step 4: Remove Intake Manifold, Install MAP Sensor, Spark Plugs

Let's remove the intake manifold, you'll need to do this to change the spark plugs, and it's also a good opportunity to swap the MAP sensor.

Disconnect the EVAP solenoid electrical and hard line from just behind the throttle body. Disconnect the throttle body electrical. Disconnect the MAP sensor wiring harness at the back top of the manifold. Now reference the picture below, there will be several horizontal bolts to remove, and the vertical bolts holding the intake manifold down; remove them all and lift out the manifold.



With the manifold removed, locate the MAP sensor ontop of the manifold at the back held on with one T20 torx screw, and swap it for the new MAP in our kit.

Using a spark plug socket with extension, go cylinder by cylinder to disconnect the ignition coil electrical connector, remove the 10mm retaining bolt and remove the coil, and change out the spark plugs. Using a gapping tool, check and ensure the spark plugs have a .030-.032" gap. Use anti-seize on the threads and tighten to

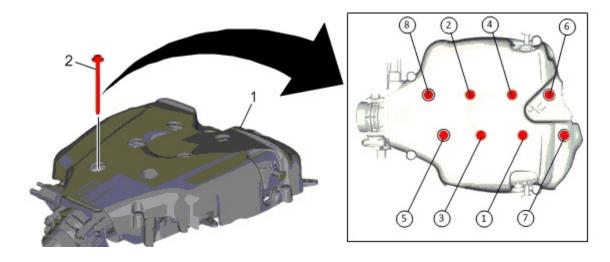
factory spec. Use a little dielectric grease to lubricate the coil's rubber seals for easier re-installation.

Before reinstalling the manifold, now is a great time to look in the catch can hose assembly bag and locate the largest hose with the largest plastic clip, this goes at the very back of the engine. Follow the large plastic hose that's remaining from the intake tubing removal to the back of the engine, and reference your new fitting on how to push the white clip in and pull the fitting back and off its port. Install the new fitting and leave the hose accessible in the engine bay for the catch can install.

#### Step 5: Install Throttle Body Spacer and Reinstall Intake Manifold

Before reinstalling the intake manifold, good time to install the throttle body spacer. A throttle body spacer is provided to provide engine vacuum to the blow off valve and to the catch can system. You'll have a spacer with two fittings preinstalled, a gasket and longer bolts. Remove the throttle body by removing the 4 securing bolts, keep the factory seal inplace on the manifold. Install the spacer with the straight vacuum fitting facing the passenger's side of the vehicle and the 90\* fitting will face upwards and towards the driver's side. Using the longer provided bolts, secure the throttle body with the provided gasket between the throttle body and plate and the rubber seal will seal the manifold to plate on the other side, ensure its clean and in good shape and replace as needed. The included ½" hose will run from the side port to the blow off valve.

Reinstall the intake manifold now or at any point in the remaining installation. The main bolts get torqued to 18 ft-lbs according to GM, and they provide this bolt torque sequence.



#### 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, this can often work better without swivel connections and if you find there isn't enough space to get your impact directly on the bolt you can remove the cooling fan assembly with a couple bolts and 5 minutes of work. Very importantly, measure the factory bolt that came off; it will either be 4" or 100mm, or it will be 117mm or just over 4.5", there are two lengths of factory LGX crank bolt and depending whether you have the shorter or longer will depend whether you use the shorter or longer of the new bolts provided.

The factory pulley stays where it is and the new pulley will index into the OEM crank pulley spokes; offer up the new supercharger crank pulley and rotate until it slots and indexs in place and sits flush with the factory pulley. Use the appropriate new longer bolt from the kit, again using the shorter if you have the shorter factory bolt or longer for the longer as described above; a little blue or even red threadlocker is a wise decision, use whenever possible. Personally I tighten with an impact gun using my judgement and have not had an issue, however if you can use a torque wrench, tighten the new bolt to 180 ft-lbs.



## **Step 7: Install Tensioner To Mounting Plate**

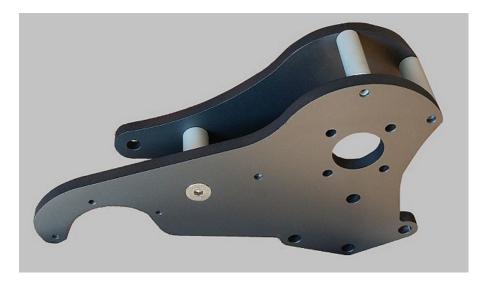
To prepare to install the mounting plates, first attach the tensioner assembly to the outer face plate with the Procharger attached. The tensioner will mount on the plate on the side where the Procharger's pulley is, and both that pulley and the tensioner pulley will face the same direction. Use the included 3 bolts from the fastener's kit and torque to 8 ft-lbs or 96 inch-lbs with blue Loctite recommended. Don't overtorque these little bolts!



**Step 8: Install Mounting Plates and Supercharger** 

Time to install the good stuff!

Once installed, the plates will look similar this, OF COURSE YOU"LL HAVE THE PROCHARGER ATTACHED TO IT, but this gives you an idea of how it looks.



Identify first the components:

You'll have the outer plate with the Procharger attached and tensioner now attached, hereafter referred to as #1

You'll have another plate that mounts to the engine block, referred to as #2

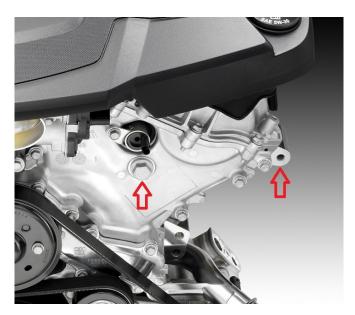
You'll have 5 spacers in the fastener kit. Sort them first by their outer diameter, you'll have two larger diameter and 3 smaller diameter. Sort them now by length: you'll have 3 that are the same length, two of smaller diameter and one larger diameter, put those 3 together as they go between the mounting plates, the guide will refer to the large diameter spacer as #1 and the narrower diameter spacers as #2. The remaining two spacers go between the engine plate and engine block, the large diameter will be referred to as #3 and the smaller diameter as #4.

You'll 5 bolts, let's sort and label them. #1 will be a larger diameter bolt with a dome rounded head (button head), while #2 will be a similarly large diameter bolt but with a flat top bowl shape head (countersunk head). #3 will be the longest of the thinner bolts, and #4 will be the two thinner bolts that are slightly shorter and same length as each other.

Blue Loctite is recommended on all of the following bolts.

You may find you need to unbolt and rotate the cooling fan controller mounted on the front of the cooling fan, use zipties to resecure in a position that offers clearance.

The engine plate connects to the front of the engine by removing the prominent 15mm bolt from the front of the cylinder head, and locating a through hole on the side of the cylinder head.



On the front of the engine where you've removed the bolt, grab bolt #1 and spacer #3, slide the bolt through the engine plate then put the spacer inbehind, and thread it into the engine until finger tight.

Use bolt #3 and slide it through the backside of the outer mounting position towards the front of the vehicle, place spacer #4 over it and this will thread into the engine mounting plate. Torque this bolt to 18ft-lbs and then back to bolt #1 and tighten to 35ft-lbs.



Use spacers #1 and #2, and bolts #2 and #4 to put the plates together; the thinner bolts and spacers go to the top of the plates and come through the backside, and the larger diameter closer to the tensioner goes through the front side. Torque screw #2 torque to 35 ft-lbs and #4 screws to 18 ft-lbs.

As required, you can unclip and unbolt the large A/C metal line from its mounts and gently bend it out of the way of the mounting plates, this is not abnormal. Use zipties or rebent the mounting tabs to resecure at your discretion.

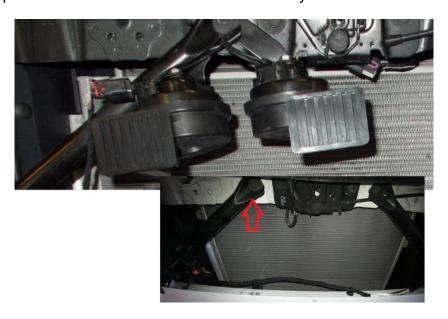
When completed, the assembly will look like this...



Step 9: Installing the Intercooler

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

You'll need to move the horns. After unbolting from the crash support brace, use this diagonal support brace bolt to mount the horn assembly.



You'll need to completely remove the plastic air deflector around the front of the radiator. You'll see round washer-like push clips around the radiator edge holding it on, pry them off one by one (careful as they like to fly off like projectiles) until you can completely remove and discard this plastic deflector.

Put the intercooler inplace. You may find a metal A/C line on the driver's side hits the intercooler side tank, use a pry bar or just your strong hands to gently massage it to the side and up out of the way. Once satisfied, reinstall the bumper support and secure with its bolts to 32 ft-lbs. Install the intercooler mounting brackets to the top of the intercooler with the dual bolt side on the crash bar upper face, and the single bolt hole facing downward to slightly lower the intercooler. You can either install the intercooler's tubing first and allow some side to side adjustment of the intercooler before securing with its mounting hardware, or secure now and adjust the tubing as needed, use your judgement. When you're ready, simple tighten the two bolts to the top bolt bosses on the intercooler, and using the provided drill and tap secure with the 4 bolts provided to the top face of the crash bar.





#### Step 10: Install Driver's Side Intercooler Piping

Time to install the intercooler piping! The driver's side is a one piece silicone tube, which will ease installation.

You'll want to prep by gently pushing this A/C line towards the radiator to make a little extra clearance for the tubing to pass through the area.



Tip: Use WD40 to spray the outside of the tube to help slide it into place. The WD40 will dry and not harm the silicone.

From the outside of the vehicle, slide the long straight section up into the engine bay above that metal line and with a clamp over the outside first you can slide it over the outlet of the Vortech. Should you need to reclock the positioning on the Vortech, there are 6 allen head screws on the backside of the snail-like outer section of the Vortech, you can loosen those slightly and rotate the outlet to the positioning that fits best, and then be sure to retighten those 6 retaining bolts.

Next, align the other end of the silicone tube to the intercooler inlet. Once it's in a relative position, go back to the Vortech side and tighten its clamp first, ensuring to feel with your fingers through the silicone skin that you've indeed got the clamp over the outlet on the Vortech and not too near the edge, try and get the clamp up to the top of the silicone as much as possible; if the silicone coupler is slightly loose over the Vortech, this is normal, it will compress with the tightening of the clamp and resize itself

with a few heat cycles from driving the vehicle, just ensure to completely tighten the clamp.

Now back at the other end, slide a clamp over and position the silicone tube over the intercooler inlet, position and tighten the clamp at your discretion.

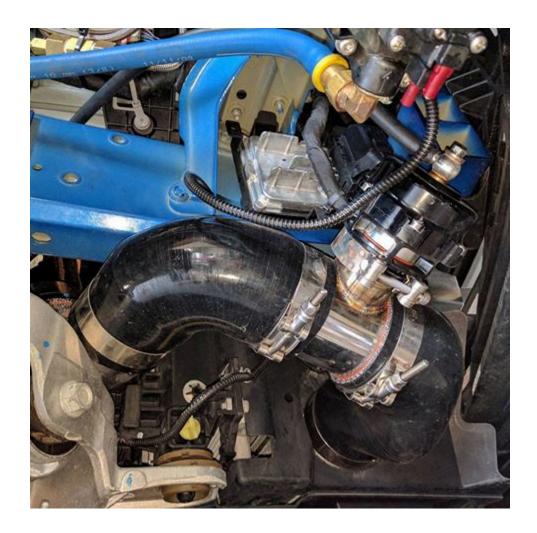
Old photo below shows a joint that won't be there with the new one piece design but you can see the relative positioning of the tubing.



#### Step 11: 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: 3" 90 degree Cobra head silicone elbow  $\rightarrow$  Preassembled Blow-Off Valve tube  $\rightarrow$  3" 90 degree silicone elbow with one shorter and one longer leg (orange interior)  $\rightarrow$  smaller 3" 90\* aluminum elbow  $\rightarrow$  45\* 3"-3.5" multisize silicone elbow (orange interior)  $\rightarrow$  MAF housing  $\rightarrow$  90\* 3"-3.5" multi-size silicone elbow.

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.



Prep by installing the MAF from the factory air filter housing into the new MAF housing. Remove the MAF sensor from the factory air filter housing use a T20 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. Secure with the new allen head bolts.

The MAF connection ends of the 45\* and the 90\* silicone couplers are larger and will take the large T-Bolt clamps.

Tip: Use WD40 on the INSIDE of the silicone coupler joints to provide temporary lubrication to rotate and position the connections before tightening the clamps.

Preassemble the blow off valve tee to the shorter end of the Cobra head 90\* elbow, it doesn't matter which way the BOV goes. The 90\* silicone elbow (orange inside) will be precut with a short end and a long end, the short end will go to the blow off valve BOV tee, but in the meantime preassemble the long end to the metal 90\* elbow. Stick the metal elbow through into the engine bay, then assemble the BOV tee to the 90\* silicone short end and attach the Cobra elbow to the outlet of the supercharger. Don't forget clamps and WD40 on each connection. Rotate the connections and use the ability to slide the BOV tee pipe in its silicone couplings to get a good fit on the metal elbow going into the engine bay, you'll want that elbow outlet facing straight up in the engine bay and you should find the BOV tee is on a slight upward angle from the intercooler connection. Go in sequence now and tighten the clamps to the BOV tee and intercooler.

Install the MAF into the 45\* silicone elbow with the MAF sensor pointed downward and with the screen end facing into this elbow. With WD40 sprayed, slide the narrow end of this 45\* silicone elbow over the metal elbow that's now in the engine bay and facing upward. Secure the remaining connection from the MAF to the throttle body with the reducing size 90\* silicone elbow (black inside). Check your connections for a good fit, rotate and slide as needed, and ensure the MAF wiring is clear of the serpentine belt system and anything else. Now go in sequence tightening all the clamps to secure the tubing.



Now is a good time if you've not done so yet to take the ¼" hose from the BOV throttle body spacer kit and run it from the spacer to the BOV vacuum fitting on its top.

Take the MAF wiring extension harness, plug in the MAF, route the wiring in the manner you see fit (try securing it with zip ties to the factory harness) and plug in the harness end.

## Step 13: Install Intake and Air Filter

Let's complete the installation on the driver's side by installing the air intake and filter.

You may feel the need to cut off or trim this air cleaner mounting bracket if it touches the silicone elbow.



Shown is the old silicone elbow but the new elbow will be multi-size and have one very short leg, this goes over the inlet of the Procharger. Note that it will have a hole drilled in it, this is for the catch can fitting and normal! Install over the Procharger inlet and keep mildly tight at the moment in-case you need to rotate it. Attach the air filter to the large 90\* aluminum elbow. Slide the aluminum elbow up from the fenderwell and into the silicone elbow. Try and get the filter and tubing up as close to the headlight as possible for clearance from the fender liner. Once you're happy with the alignment, tighten down all the clamps.



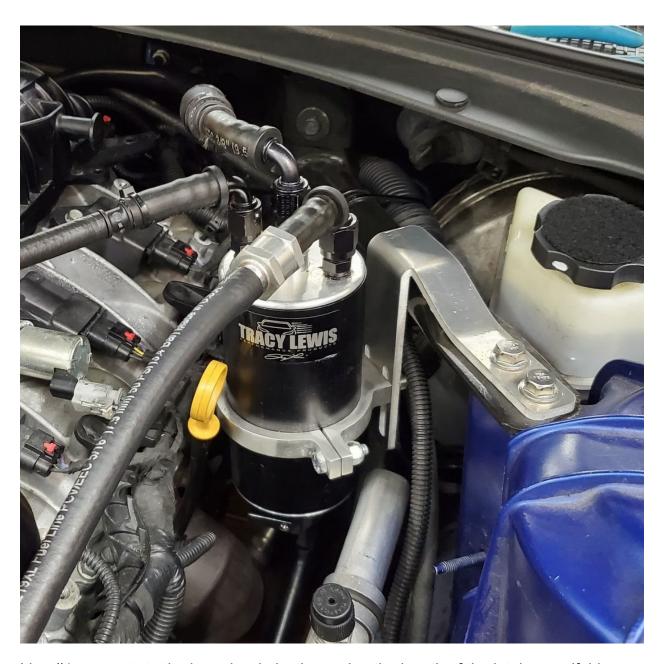
**Step 14: Install Catch Can System** 

Installing the catch can is very important. Without this system inplace, 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 over near the supercharger where the air cleaner box once sat.

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 lets mount the can. Slide the can into the ring mount which will be attached to a bracket; this bracket goes over by the driver's strut tower, you'll see its black brace and two bolts to the strut tower, remove those bolts, use the 2 short spacers and long bolts in the kit to temporarily secure the bracket in place, and fit the can in place. You can slide the ring mount up and down on the main bracket, and you can slide the can inside the ring mount; use your discretion to get the can in a good positioning and as high as possible, then start tightening down the bolts to secure the ring clamp (remove the main bracket as needed to access the bolts). With everything secure, tighten down the two bolts on the main bracket.



Line #1 connects to the large hard plastic running the length of the intake manifold on the driver's side. The line has a short length of the large 5/8" size and reduces to 3/8"; connect the larger end to the plastic factory line and then run in a cosmetically pleasing fashion over to the center port on the catch can, trim its length as you desire with a knife or scissors and slide it over the center port barb.

Line #2 is a short hose with a check valve. Attach to the top port of the throttle body spacer and connect to an outer port on the catch can, trim the catch can end as desired but do not shorten the line where the check valve is closest to, there is a flow restrictor in the rubber line that you don't want to cut out.

Line #3 is a longer 3/8" line (that may include a 90\* plastic barb at one end) and a check valve in it. This line runs from the elbow in front of the Procharger inlet to the other outer port on the catch can. Locate the predrilled hole in the inlet silicone elbow, insert the 90\* barb fitting (or the end with the check valve closest to it) to the silicone elbow, trim the catch can end of the hose as desired for fit.

Ensure to secure now all the swivel barbs on the catch can, you'll want them snug and secure to avoid vacuum leaks. Also check and ensure the drain valve is closed, it'll be perpendicular to the drain valve or horizontal to the ground; vertical or inline with the fitting means the valve is open and again you'll have a vacuum leak, plus the can will drip oil, yuck, so keep that closed.

Line #4 is a 3/8" hose that will have a tee and two shorter lengths, these go to the ports on the front of the valve cover where you removed the factory plastic connections from the air intake tubing. Slide the ends over the barbs on the valve covers. The other end goes to the barb that's preinstalled in the neck of the air filter, run the hose down the filter as desired, trim to length and install over this barb.



## Step 15: 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 18: Fill the Procharger with oil

Using the included package, fill the Procharger with a full 6oz bottle of oil.



**Step 17: 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
- Secure the drain lines of the supercharger and catch can.

#### Step 18: Flash Tuning

Select Your Overkill tuning files for your supercharger system from your email and flash to the vehicle using the flashing process.

Don't forget once installed and running that you'll want to send driving scans to Overkill, follow the instructions to get that done for potential tune revisions required.

## **HP Tuner instructions**

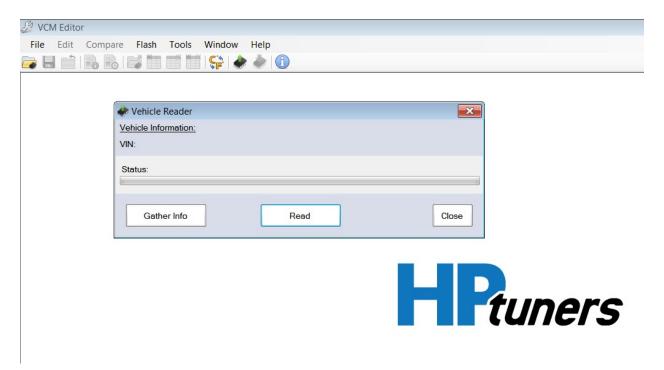
# Step 1: Install software on your PC

In the HP Tuners kit is a USB stick, and on it is the software to install on your PC You can also find the HP Tuners software on their website which will be their most up to date versions and may be the best way to go, you can find it at <a href="https://www.hptuners.com/downloads">www.hptuners.com/downloads</a>
Download the "Download VCM Suite: Latest Full Version" in the upper left, and if you need them you can also download the MPVI2 Drivers on that page. Plug your HP Tuners MPVI2 module into your PC using the USB cable, install the software. Next, open VCM Editor, go to Help > Resync Interface, and that'll pole the module for your licensing information that has been preloaded; you will need to be connected to the internet. Ok, ready to go to the vehicle.

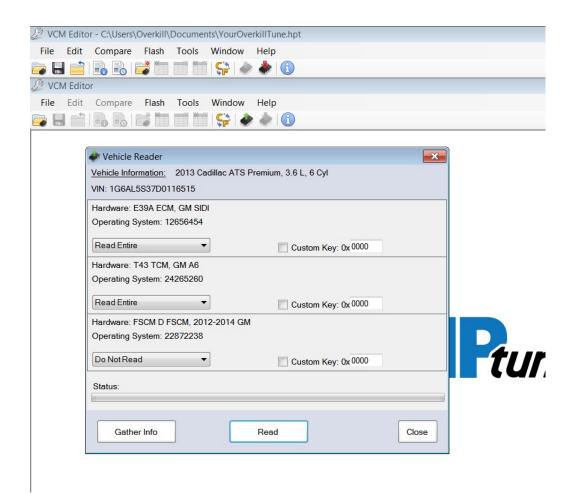
# Step 2: Reading your Factory Tuning

Using the HP Tuner MPVI2 module and supplied USB cable, connect to your vehicle's OBD2 port below the dash. Turn the key or ignition to "on" or "run", so the instrument cluster lights up, but do NOT start the engine. If you have a push button start, press and hold the start button with your foot off the brake pedal for about 10 seconds to put the vehicle into run mode. Wait 20 seconds from turning the ignition on before you begin a read of any of the computer modules, to allow them time to boot up and run their startup system checks. Turn the radio off and the HVAC system off to conserve battery power, you can also turn off the headlights if its dark out.

In the VCM Editor program, to go Flash > Read Vehicle; in the popup window that opens, click the Gather Information button.



Once it poles the vehicle, you'll see a new pop up window with options to read the various computers that are supported. Always have the engine ECM computer at the top set to Read Entire, and if you're an automatic transmission you'll want the transmission TCM computer set to Read Entire. If you see an option for the FSCM which is the fuel pump computer, set this to "Do Not Read" unless you have instructions otherwise from me, otherwise it will cost you 1 extra credit that you'll need to purchase with your own money!!



With those set, click Read and let it do its thing, the read will take typically 3-5 minutes on most GM vehicles but if you have a Pontiac G8 3.6, a 2005-11 CTS with the 3.6, 2010-11 Camaro 3.6, the engine computer read could take upwards of 25 minutes so be prepared. If you have a 2017+ GM vehicle, you may get a message that the tuning can't be read at this time and try again later, if so ensure you're connected to the internet to allow the HP Tuner suite to send the file to HP Tuners, and then try again in about 1 hour.

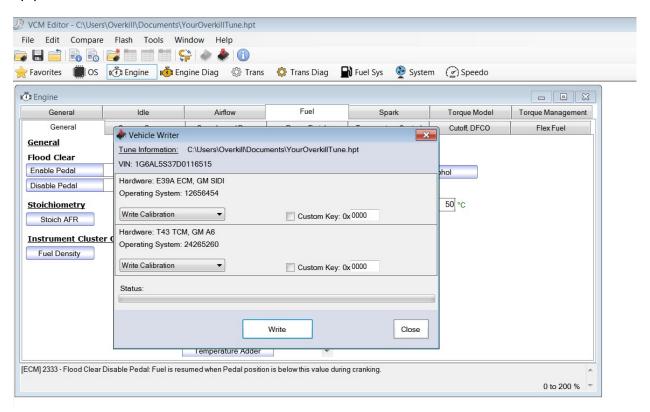
Once completed, save the file as your name, your vehicle, and "factory" or "stock" so you know that this was your factory computer tuning should you ever need to access it again. Email the file that you just saved to <a href="willowerkill@gmail.com">willowerkill@gmail.com</a>. I will typically get your tune back to you within 48 hours (excluding weekends), you can follow up with an email if you don't hear in that timeframe, keep in mind it takes me an hour typically to write the initial tuning for every vehicle I do so it won't be an instantaneous process!

Step 3: Flash your Overkill Tunes

When you receive back your Overkill tune files, they'll be labelled as Overkill or OK and then Supercharger. Subsequent revisions will be labelled Mod1, Mod2 etc. If you're automatic transmission equipped, you'll have your Overkill transmission settings in this file.

At some point in the flash, you'll be asked to license the vehicle and file. When the screen comes up, click Licensing Options, select Specific Vehicle and click ok to license your vehicle with the included credits.

To flash the tune to the vehicle, open up VCM Editor, go to File > Open and select the tune that you wish to run. Go to Flash > Write Vehicle, and for the computer options that come up you'll want to see Write Calibration selected.



Turn the key or ignition to "on" or "run", so the instrument cluster lights up, but do NOT start the engine. If you have a push button start, press and hold the start button with your foot off the brake pedal for about 10 seconds to put the vehicle into run mode. Wait 15-20 seconds from turning the ignition on before you begin a write of any of the computer modules, to allow them time to boot up and run their startup system checks. You can now click Flash and let the system upload the tunes to your vehicle. Do not interrupt this process by using the computer for other things, disconnecting the cable by accident or otherwise, fidgeting with the stereo or hvac or etc, it is very very important not to

interrupt the writing process, you may leave your vehicle inoperable! This is rare but can happen. If for any reason the flashing process is interrupted, do not turn off the ignition, check all your connections and try immediately to flash again, you should see the HP Tuner suite recover and reboot the flashing process.

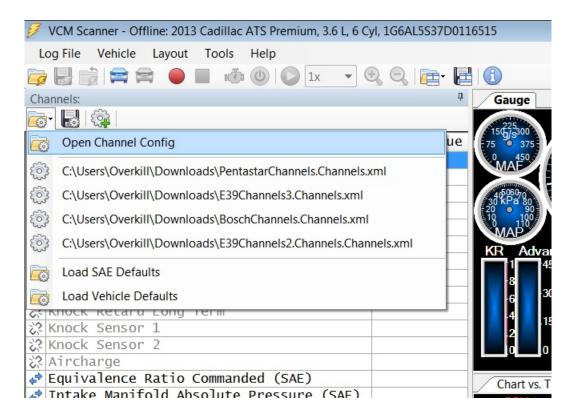
Once the flashing process is computer, and you see Write Complete for all the computers selected, you can turn off the ignition, wait 10 seconds, and then start your vehicle. If you have a push button start, turn the ignition on and then off again, you may find it doesn't try to start the first time, just try again and it should fire up.

Your vehicle will now be programmed with Overkill tuning!

# Step 4: Taking a Driving Scan

While you've received your Overkill tunes programmed to your modifications, it's always beneficial to take a driving scan and send that scan data to Overkill so your tune can be further refined as needed.

Open the VCM Scanner, connect your laptop to the vehicle with the cable/module, start your vehicle up (this time its ok to use this suite while the engine is running). Go to the excel like table on the left side of the scanner, to the top and you'll see a button that says Recent Channel Configs, click on that, Open Channel Config and select the .xml file that I've emailed with your tunes (email me back for one if you don't see it attached).



Now go to Vehicle > Connect and Vehicle > Start Scanning, confirm that you see the parameters on that table in the right hand column changing as it gets information from the computer.

Now go ahead and drive the vehicle. Take about a 10 minute scan, nothing too short, try not to be overly long as the file becomes huge to try and sift through on my end, and include your regular driving habits, include some brief full throttle if you can such as a highway ramp entrance or a 0-60 run in an appropriate area, and at the end of the scan include about 30 seconds of idling. When finished, go to Vehicle > Disconnect, then Log File > Save Log File As, save it as your name and what tune you're running (John Smith OK93 for example) and add the date if you choose, then email me that file to <a href="willoverkill@gmail.com">willoverkill@gmail.com</a>. I'll look at the data, revise the tune as needed and email that back within 5 business days.