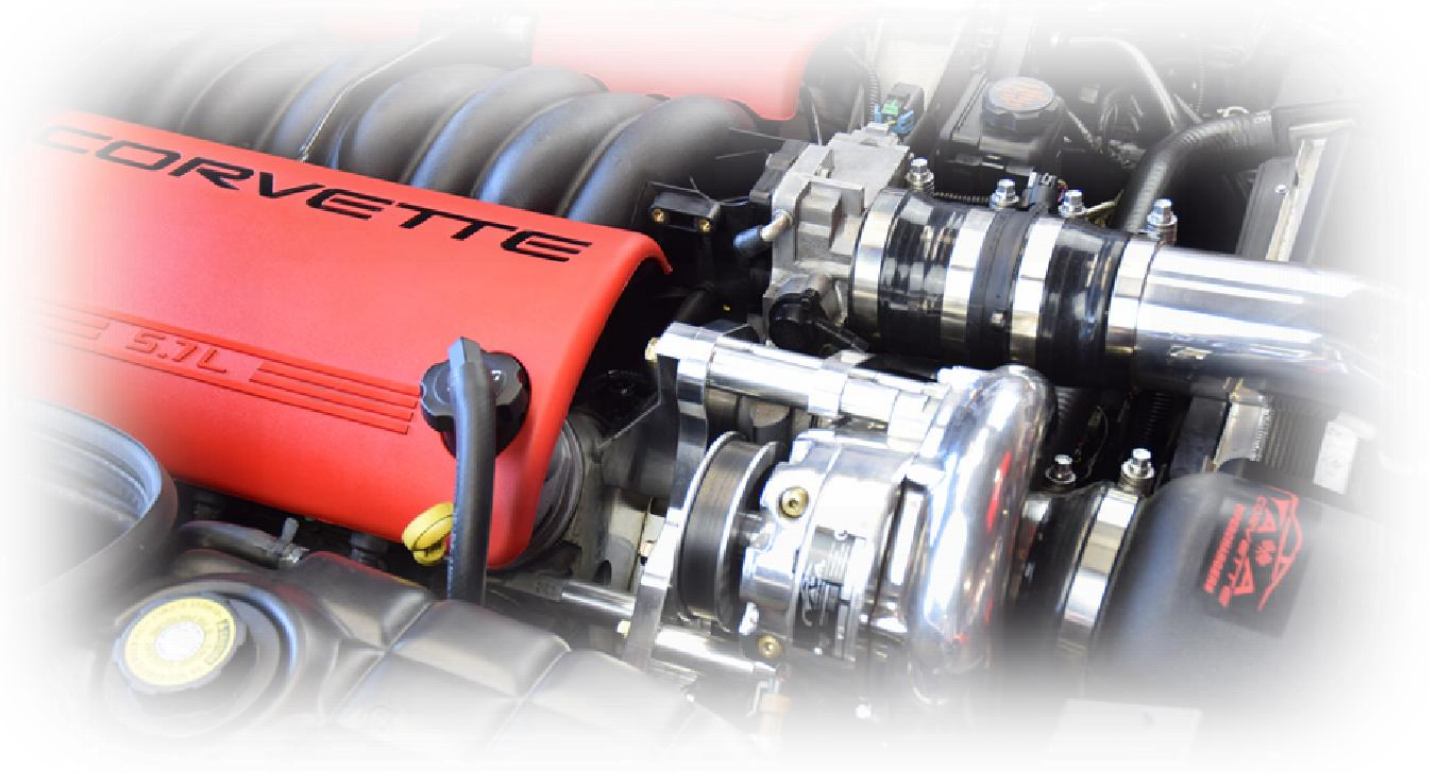


C5 SUPERCHARGER INSTALLATION INSTRUCTIONS

A&A CORVETTE C5 SUPERCHARGER SYSTEM





GETTING STARTED

Proper installation of this supercharger kit requires general automotive mechanic knowledge and experience. Please browse through each step of this instruction manual prior to beginning the installation to determine if you should refer the job to a professional installer/technician. Custom PCM calibration based on specific vehicle and engine modifications will be required for use with this kit. A&A Corvette does not include custom tuning with supercharger kits. We can, however, provide you with a “Base” tune. This will allow the car to start with the large injectors and make the car drivable, so you can drive it to a dyno shop for custom tuning. (California cars running our CARB compliant system will receive an approved calibration from A&A.) Please contact A&A Corvette for more information. Also, if you have a 1997-2002, you should change your power steering/alternator bracket to a later style, please see Section 3 of this manual for more information.

Keep in mind that some things do not necessarily need to be done in the order they are written in this manual.

You WILL need a hose hook to install some of the silicone hoses. Get one before you start!



HOSE HOOK TOOL- GET ONE!

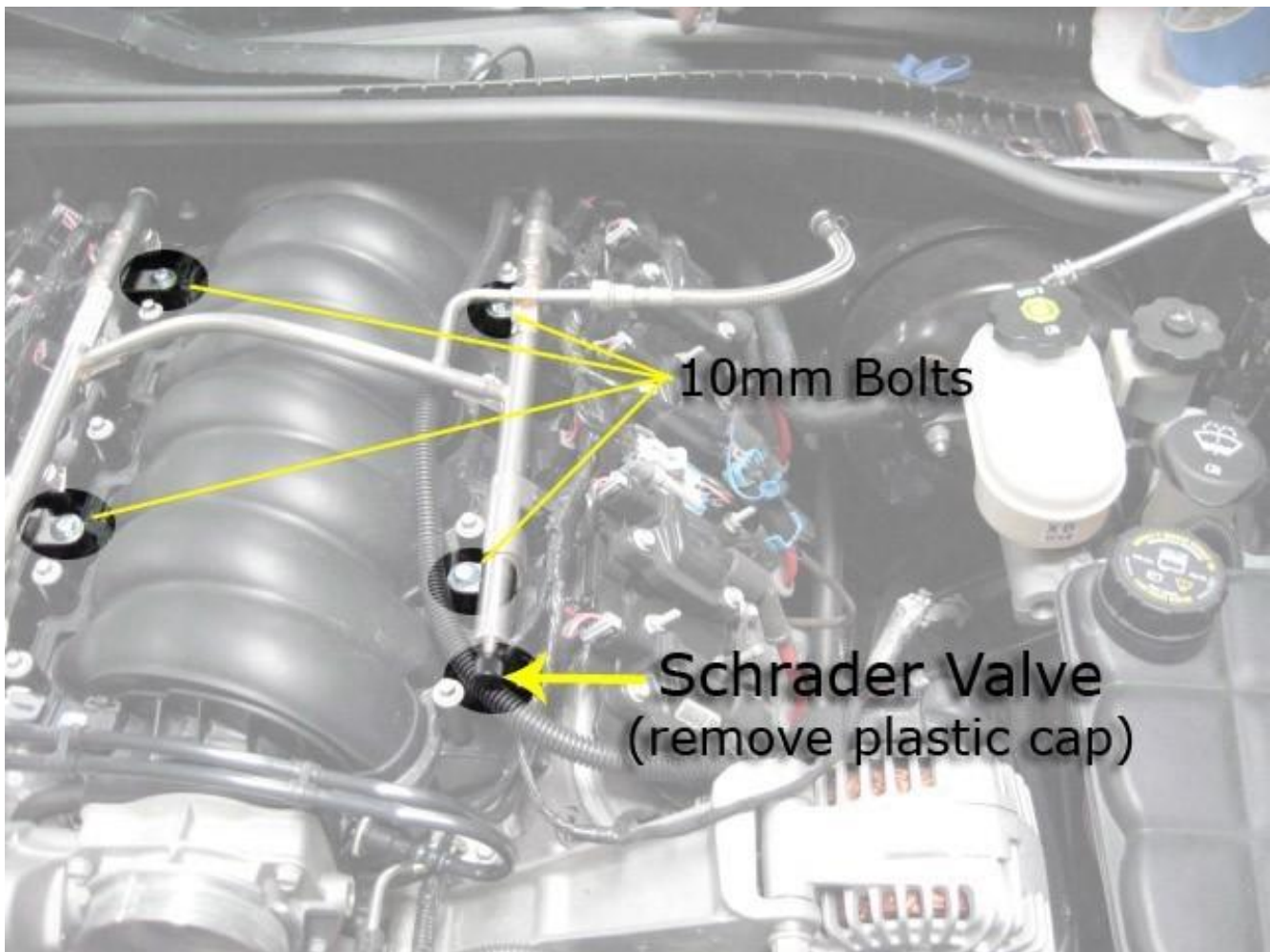
To start, disconnect the battery and remove the panel surrounding it.



REMOVE 2 PUSH PINS FROM BATTERY SHROUD

- Remove all 8 spark plug wires and blow compressed air around spark plugs.
- Remove factory spark plugs. Gap the provided TR6 plugs to .035” and install with anti-seize on the threads.
- Bleed any remaining fuel pressure into a suitable container by depressing the Schrader valve at the end of the fuel rail. Make sure you catch or clean up any fuel that may escape. Blow compressed air on the manifold around the fuel injectors to clean out any debris in the area. Remove safety lock on fuel line at fuel rail side and remove fuel feed line at the fuel rail side using a disconnect tool. (Place a rag under fuel line to help absorb leaking gas.) Disconnect the injector harnesses by pushing “in” the release tabs and pulling on the connector. There is a positive wire going to the alternator that goes over the driver’s side fuel rail. Lift this wire by pulling up on the plastic connectors. Remove the 4 (10mm) bolts holding the fuel rail and gently pull up on the fuel rail and remove from the vehicle. Remove the injector retaining clips from the top of the injectors and remove injectors. Lightly grease the O rings on the injectors and replace them in the reverse order as they were removed. Reinstall the clips. Reinstall the fuel rail.

NOTE: Leave the stock injectors in place if you plan to drive to a tuning shop for calibration. You can drive CAREFULLY without any ill effects with the stock injectors.



- Unplug the hood light harness and the outside air temperature sensor. These are in the nose of the car looking down from the top of the motor.

PINNING THE CRANK AND BALANCER

CONTRARY TO WHAT YOU READ ON THE INTERNET; YOU DO NOT NEED TO REMOVE THE STEERING RACK TO DO THIS.

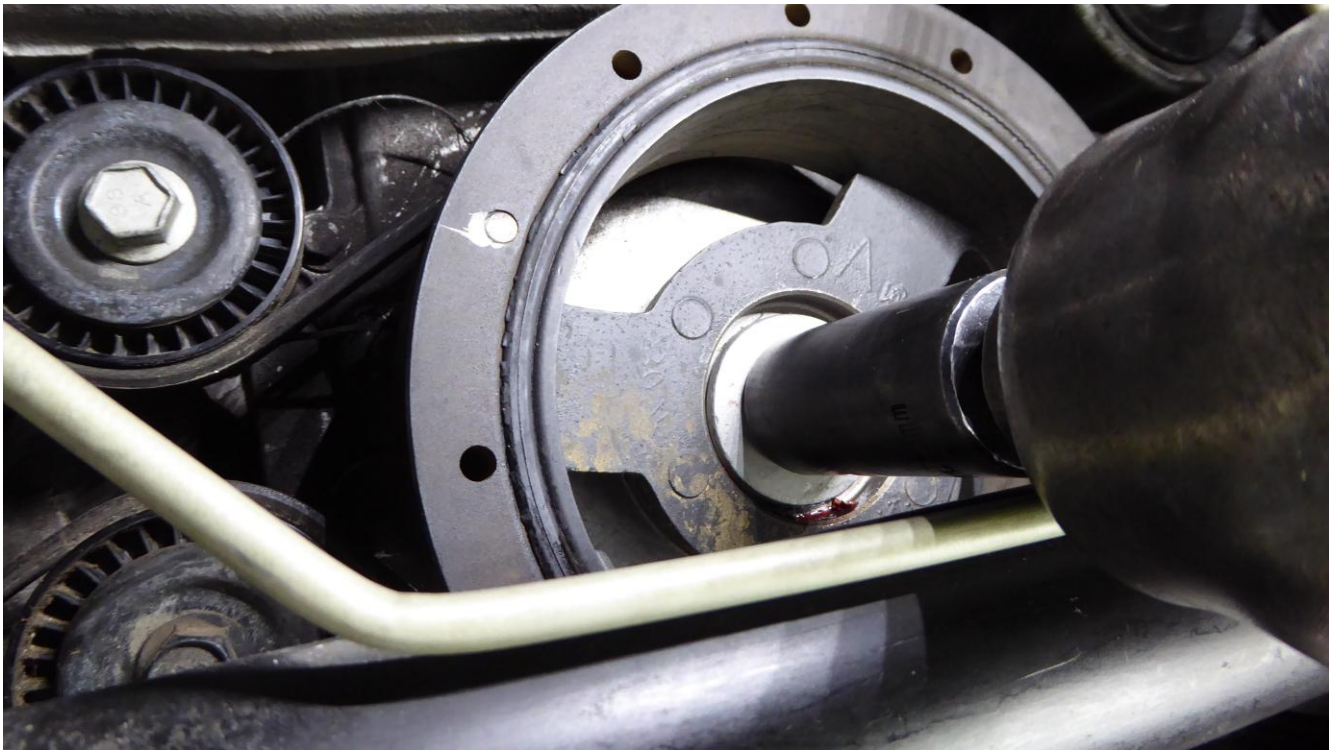
You will need a lift or some sort of jack and jack stands for part of this procedure,

Remove the plastic radiator hold-down and the large shroud in front of the radiator. Disconnect any wires and remove the fan assembly from the car. Remove the two 18MM bolts holding the steering rack to the cradle. You'll need a wrench on the back to stop the nuts from spinning. Some models have an ABS module in the way. Remove the bolts from the bracket, loosen the 10MM bolts from the bracket to the module but don't remove them. Slip the module out of the bracket and remove the bracket from the car.

Pop the steering rack out of its mounts and move it to the side. It will drop down slightly once it's out of the mounts.

- Now remove the two 18MM engine mount bolts facing straight down through the cradle. Use a piece of 2X8 wood or something similar to spread the load on a post jack or floor jack and lift the engine at the rear of the oil pan. There is now ample clearance to get a socket and impact gun on the balancer bolt.

Remove the factory balancer bolt with a 24MM socket. A powerful impact gun works best. Insert the provided 24MM bolt through the pinning fixture and bolt it on in place of the factory bolt. Tighten it enough to ensure it won't move around when drilling through it. Measure the provided pin and make sure you drill to a depth just slightly deeper than the length of the pin. Use a 1/4" drill bit and drill through the fixture, using the small hole in the fixture as a guide. It's very important that the pin doesn't protrude out beyond the lip of the balancer. The bolt will not seat and will get damaged if the pin sticks out beyond the lip on the balancer. Notice that the crankshaft is actually recessed into the balancer by about 1/4". (1/2" when using our 8 rib balancer) You do not have to have the pin flush with the end of the crankshaft. It's the flat face on the balancer that is of concern. Remove the fixture, blow out any shavings and insert the pin in the hole you have just drilled. (Double check your depth first)



WITH RACK MOVED TO THE SIDE AND THE ENGINE LIFTED SLIGHTLY THERE IS AMPLE ROOM TO GET A SOCKET ON THE CRANK BOLT



PROVIDED PIN FIXTURE



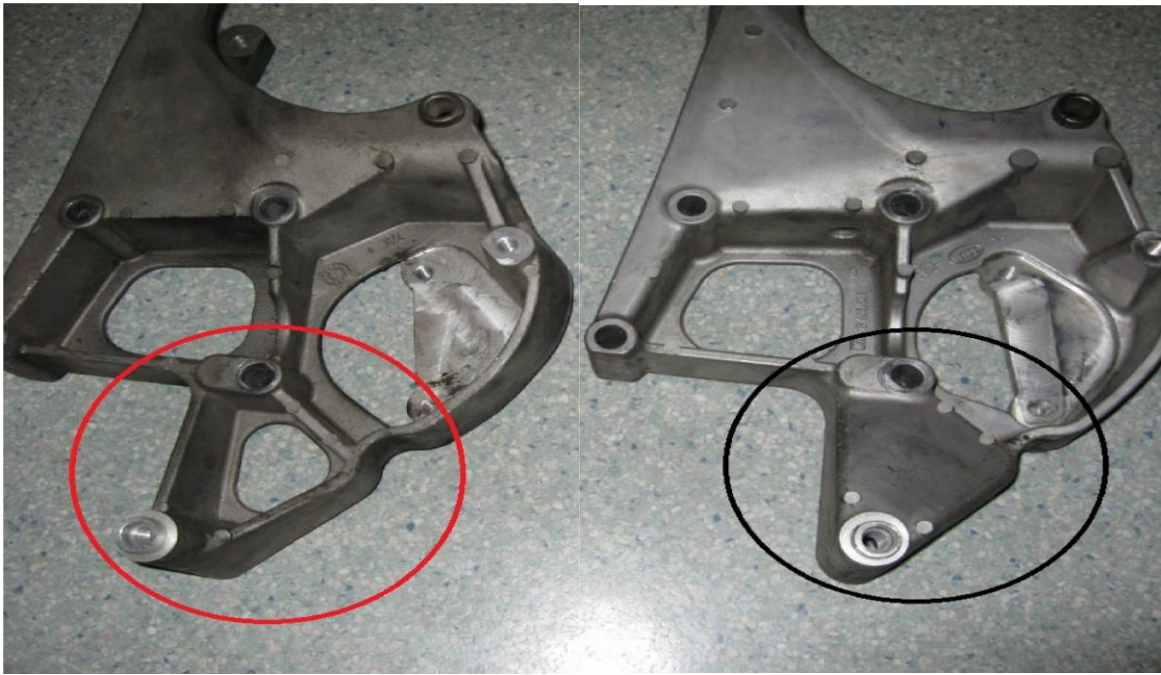
DRILLING CRANK AND BALANCER THROUGH PIN FIXTURE



PIN INSTALLED IN CRANKSHAFT AND BALANCER

Take the NEW provided factory balancer bolt, heat the threaded area with a hair dryer or heat gun, put red Loctite on the first 1/2" of threads and insert it in the crank. Tighten it to manufacturers' specs. This bolt must be EXTREMELY tight. Heating it up expands the bolt slightly and helps with its retention once it cools down.

TIP: Installing the bolt with a strong impact gun works fine. Mark a line on the bolt and balancer hub so you can see when the bolt stops turning.



EARLY VS. LATE ALTERNATOR / POWER STEERING BRACKET

There are two styles of alternator power steering brackets. Chevrolet changed the design in 2003. The early style is very weak and prone to breakage. The new style is much stronger. They are about \$120 at your dealer. We recommend you use the later style. (GM# 12578068) The picture above shows the difference. The older style is no longer available.

TRIM THE RADIATOR AND FAN HOUSING

You will need to trim the two vertical fins on the top of the radiator as well as the fan housing. This will allow the air bridge to sit in the correct spot. It is very tight in this area.

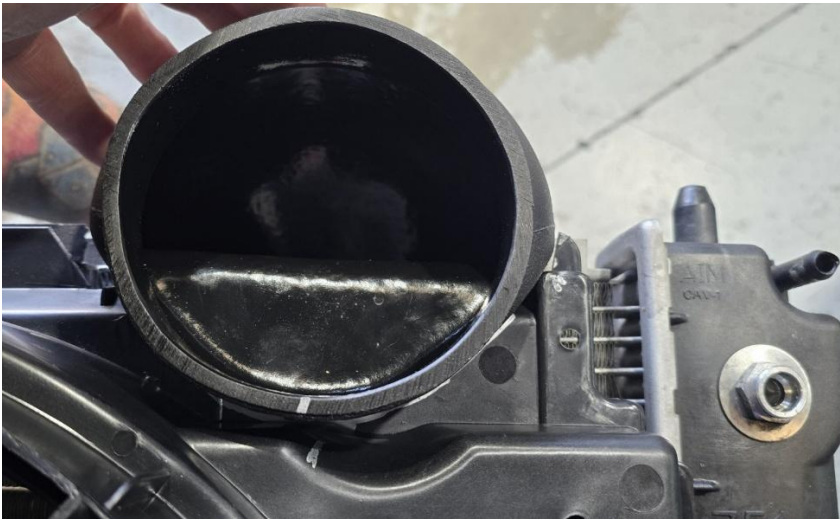
Mark the radiator fins 7 1/2" from the edge of the tank. Use a good pair of dykes and snip through the fins at a slight angle. Take a razor knife and score the inside of the fins a few times. Now you can bend the pieces back and forth until they snap off. This is the cleanest and easiest way to do it. Mark the middle of the radiator and snip off a section about 3" wide. This will give the MAF tube additional clearance.



SNIP 7 1/2" FROM THE TANK

Mount the fan housing in its slots. If it protrudes into the area of the radiator you just trimmed you'll need to trim that area of the fan housing away. Mark a vertical line on the fan housing 4 1/2" from the radiator tank. This will be the centerline of the air bridge.

The airbridge can now be placed in the radiator slot and over the fan housing. Make sure the airbridge is centered on the 4 1/2" line and sitting flat on the top of the radiator. It helps to put a mark at the bottom of the airbridge. Trace around the airbridge with a silver marker. It should look like the pictures below.



TRACE AROUND THE AIRBRIDGE USING IT AS A TEMPLATE



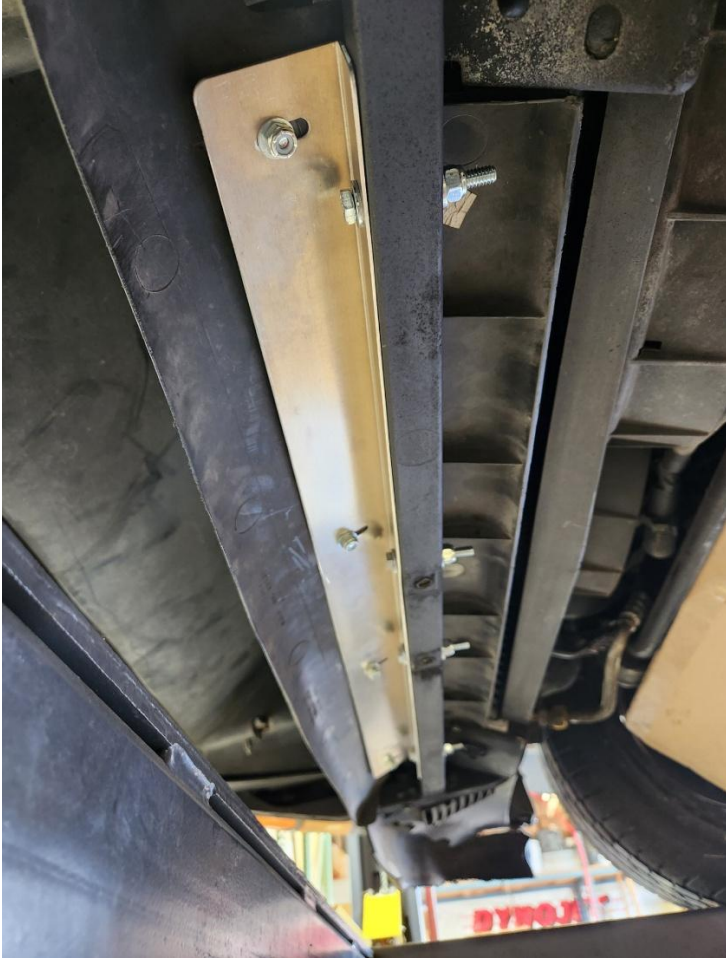
FAN HOUSING AFTER TRIMMING

Take the fan out again, trim it for airbridge clearance and set it aside for now. It will be easier to install the supercharger, bracket, and hoses with it out of the way.

MOUNT THE AIR DAM

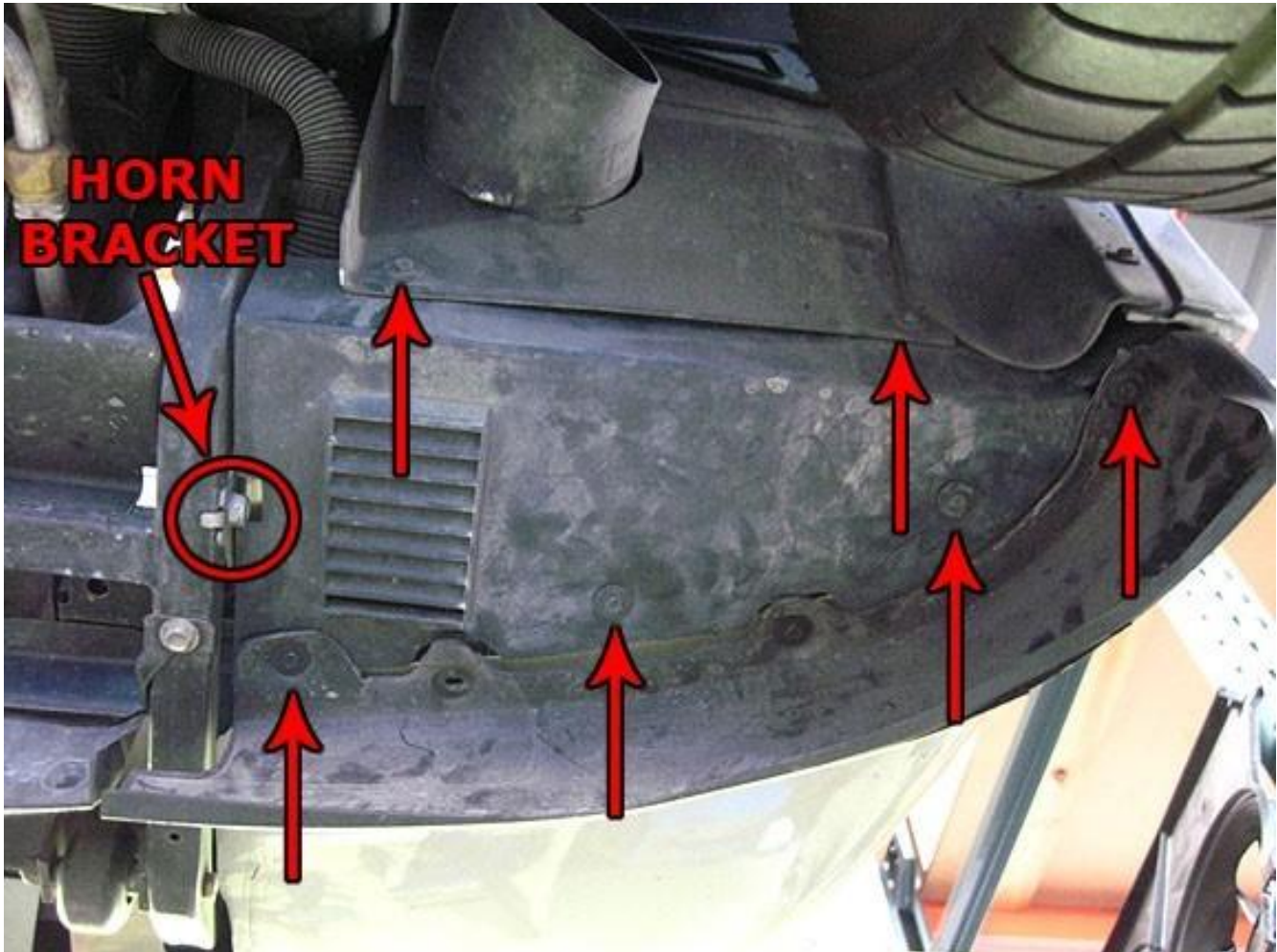
Remove the center air dam, springs and brackets.

Put the long aluminum bracket up against the front of the crossbar and mark the holes using it as a template. Drill the crossbar with a ¼" drill. Mount the air dam to the aluminum bracket, then bolt the bracket to the crossbar.



AIR DAM MOUNTED TO CROSSBAR

Remove the (5) 7mm screws that hold the bottom plastic shroud on the passenger side in front of the tire. Remove the plastic piece and set it aside, this gives you access to the horns and the passenger side radiator support. Remove the 10mm bolt that holds the horn bracket to the radiator support. Disconnect the horns and remove from the vehicle. On the driver side, remove the same 7mm screws and remove the panel.



- Flatten the little 90° bend on the horn bracket. Drill out the mounting hole on the horn bracket with a 21/64" bit. Pick up the horns and look at the way they are pointed. Then, remove the nuts holding the horns and swap them, keeping the horn orientation the same and fasten. This gives more room to connect the harness to the horns. You want to make sure they end up facing down or slightly down so they can't fill up with water.
- Remove the 13mm bolts that hold the skid bar to the frame on passenger side but just loosen them on the driver side. Insert the short spacer between the assembly and the frame at the front attachment point, put the hole on the horn bracket on top of the spacer and insert the new 8 x 50mm bolt. Insert the long spacer at the rear

attachment point with the 8 x 50mm bolt. Leave the bolts loose for now. Attach the two spacers on the driver side before tightening all 4 bolts. The horn bracket can be bent if needed to clear the brake duct.



FRONT VIEW OF RADIATOR SUPPORT MOUNTING POINTS WITH HORN BRACKET

- Drill a ¼" hole in the front vertical bar for the outside air temp sensor. Use the factory push pin and fasten the sensor to the radiator support.



TEMP SENSOR MOUNTED

In the open compartment on the driver's side, in front of the tire, you should see the air injection pump. There is a break in the air hose going from the air pump up to the stock air filter about halfway up the front of the air shroud, disconnect the hose here and insert the new filter, then route it back into the area next to the air pump. Then you can put the driver's side compartment back together.



AIR FILTER INSTALLED IN PUMP INLET HOSE (FILTER STYLES MAY VARY)

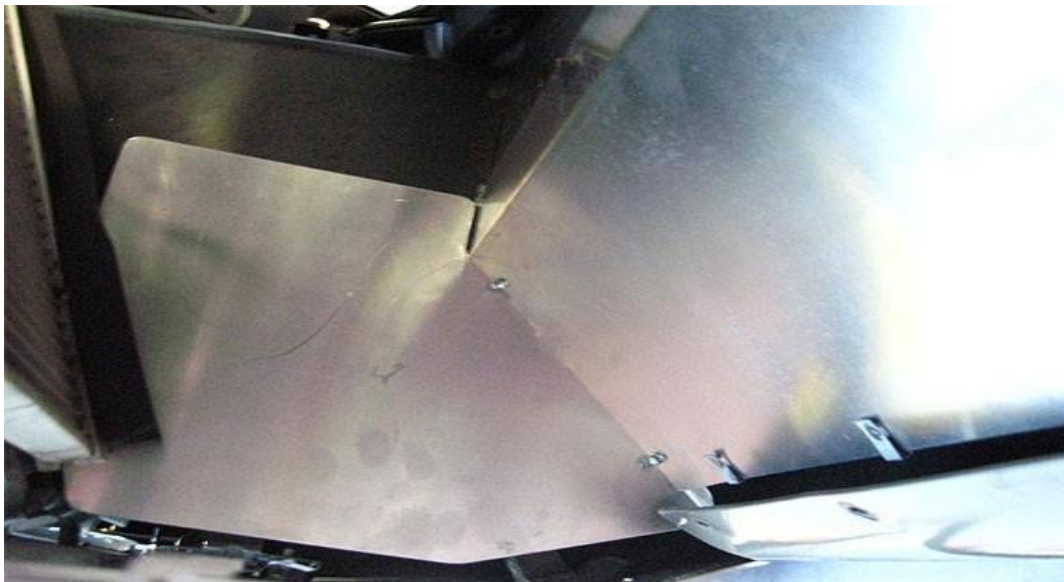
INSTALL THE SHEET METAL RADIATOR ENCLOSURE PANELS

Attach the large panel to the front bumper using five of the 7mm screws you removed when taking out the plastic shroud. Reuse the original clips. The top of the panel attaches to the frame using OE bolt holes.

Attach the side panels to the front panel using the provided screws. Attach the side panels to the frame using the self- tapping screws.



ENCLOSURE FROM THE TOP



ENCLOSURE FROM BELOW

INSTALL THE INTERCOOLER

The intercooler will go in next. The remainder of the tubing and the blowoff valve (BOV) will go in after the intercooler is mounted. Attach the large "L" brackets to the top of intercooler with the supplied bolts and washers, leave loose. (The long leg goes on the cooler) Push the cooler up from the bottom. Make sure the intercooler is horizontal with the exit tube lined up with the throttle body. The weld between the top tank and the core is to be oriented so that it is even with the bottom of the frame. The side fins on the intercooler should be flush with the front panel to seal in airflow. The inlet will go IN FRONT of the upright skid bar support. Once the intercooler is aligned

properly, mark mounting locations on the frame. Use a 1/8" drill bit to make pilot holes in the frame. Attach the intercooler brackets with the supplied self-tapping screws.



INTERCOOLER TOP VIEW- WITH MAF HOSE ATTACHED

Locate the small 90-degree braces and mount them to the intercooler side fins and front panel as shown in the picture below. You can see how the air is sealed in and forced through the intercooler.

Mount the plastic air dam to the intercooler with the provided bolts. Once the intercooler is mounted you can install the silicone MAF connector hose as shown in the picture above.



INTERCOOLER LOWER SUPPORT BRACKETS AND AIR DAM



INTERCOOLER BOTTOM VIEW

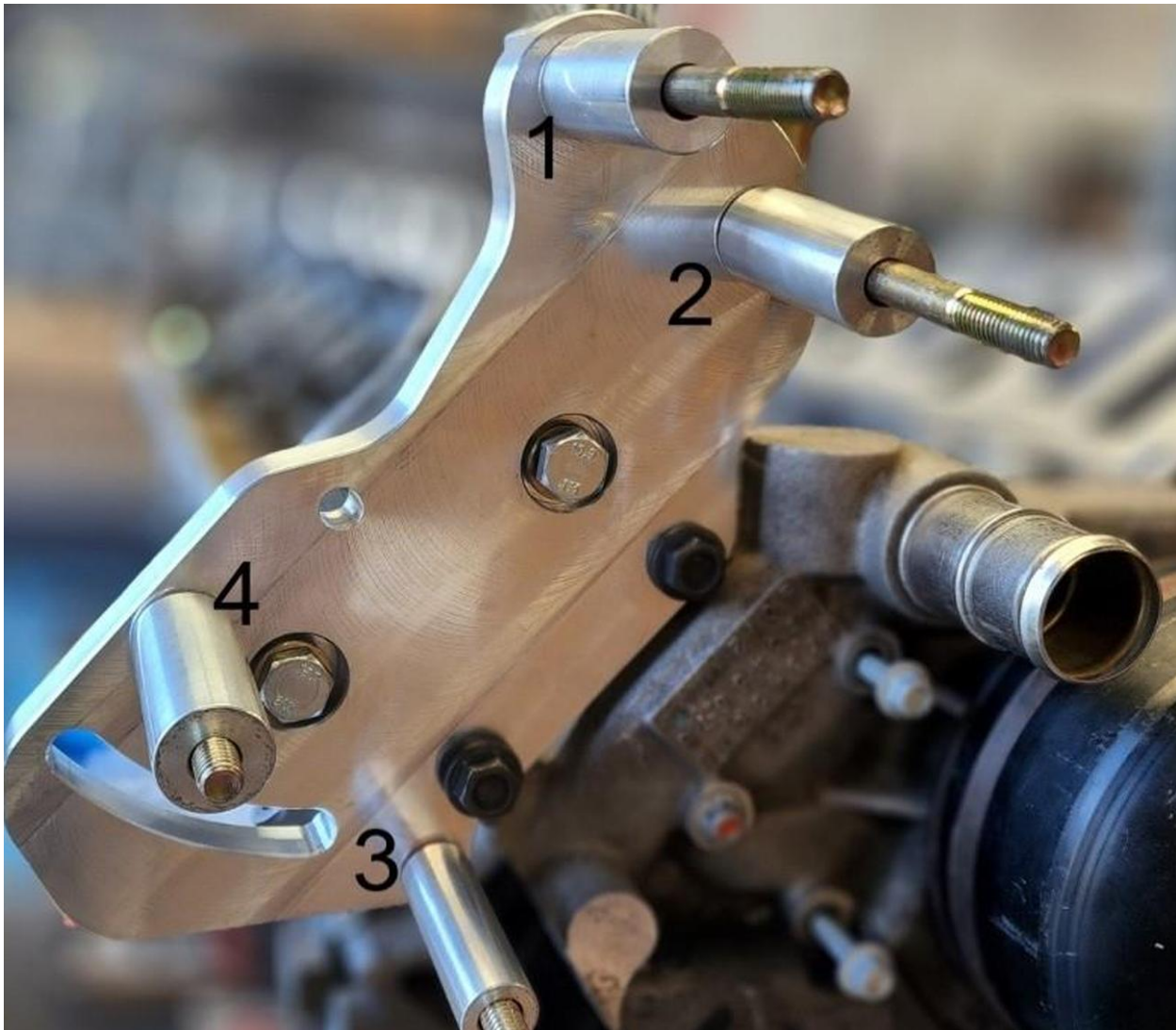
MOUNT THE REAR BRACKET

The rear bracket comes with the adjustable idler attached. This makes it much easier for the installer to understand how the bracket assembly works. However, the idler must be removed for now. You will reinstall the idler after the main supercharger bracket is installed.

The rear bracket bolts to the water pump, using the stock tensioner bolts and holes. It also bolts to the cylinder head with the M10 x 90mm bolts, 2.285" spacer and the thick angle brace. It's important to install all but the # 3 bolt that attaches the supercharger/main bracket assembly to the rear bracket before mounting it to the engine. The intake manifold and cylinder head will not allow some of them to be installed afterwards. Also note that the #3 bolt uses the smaller diameter spacer. Refer to the picture below.

Loosely mount the rear bracket to the water pump, using the stock tensioner bolts. Install the triangular brace in its slot and loosely install a 10MM X 90 MM bolt and washer through the rear bracket and brace into the cylinder head hole. Do the same with the 2.285" spacer. Now you can tighten ONLY the two water pump bolts. There is "fudge room" built into the bracket

holes so that the bolts will line up with milled heads etc. We wanted all four bolts loosely installed before tightening the two water pump bolts to make sure the others line up correctly.



REAR BRACKET MOUNTED WITH SPACERS INSTALLED

IMPORTANT ALIGNMENT CHECK: Temporarily remove the two bolts going through the rear bracket, spacers and into the cylinder head. Check how the spacer and rear brace fit between the head and bracket. Try to slide the brace in and out and do the same with the spacer. Ideally, they should be snug, but you should be able to move them with some effort. If there is a big gap, (like the spacer will fall out) tightening the head bolts will pull the top of the bracket towards the engine and push the bottom forward, pulling the whole assembly out of parallel with the engine. Conversely, if it is too tight, (like you can't even get them in) it will push the top of the bracket out and pull the bottom in, pushing the whole assembly out of parallel. If the spacers don't appear to be pulling or pushing the rear bracket out of parallel, tighten the head

bolts. **The rear bracket being out of parallel is the cause of 99% of all belt issues.** Everything starts with the water pump and this rear bracket.

If you have an alignment issue and an aftermarket water pump, the pump is the likely culprit. Aftermarket water pumps are notorious for causing issues. Using a paper gasket in place of the aluminum gasket (or vice versa) can also cause problems.

If your rear spacers are too loose or too tight, you must fix this problem now. Contact us for help.

If your rear bracket is parallel, tighten all 4 bolts and proceed.

BOLT THE SUPERCHARGER TO THE MAIN BRACKET

Remove the black cap from the bottom of the blower and install the drain line in its place. This line makes for easier oil changes on the self-contained units. Make sure it's angled back slightly so it won't hit the tensioner.

If using an oil-fed blower, refer to the specific instructions at the end for oil line routing.

Install the "D" shaped spacers under the bracket in holes 1,2 and 3. The flat side goes towards the gear case. Install the 2 ¼" Grade 8 bolts finger tight. Insert the "D" spacers in the 2 remaining holes and insert the long bolts through them just to align the spacers. Tighten the short bolts and remove the long ones. The 2 spacers may or may not stay in place. If they fall out don't worry about it, you can install them when you install the supercharger in the car.



BOLT AND "D" SPACER LOCATIONS

LOCK THE BILLET TENSIONER: Lay the assembly on a bench with the bracket facing vertically and the tensioner facing you. Get a long ratchet and a $\frac{3}{4}$ " socket. Insert the $\frac{5}{16}$ " lock pin (or any $\frac{5}{16}$ " bolt) in the open hole in the face of the tensioner. Rotate the tensioner clockwise, using the $\frac{3}{4}$ " bolt on the face of the tensioner, until you get to the

point where the pin drops in about 3/8". This locks the tensioner in the open (slack) position and makes installation easier.



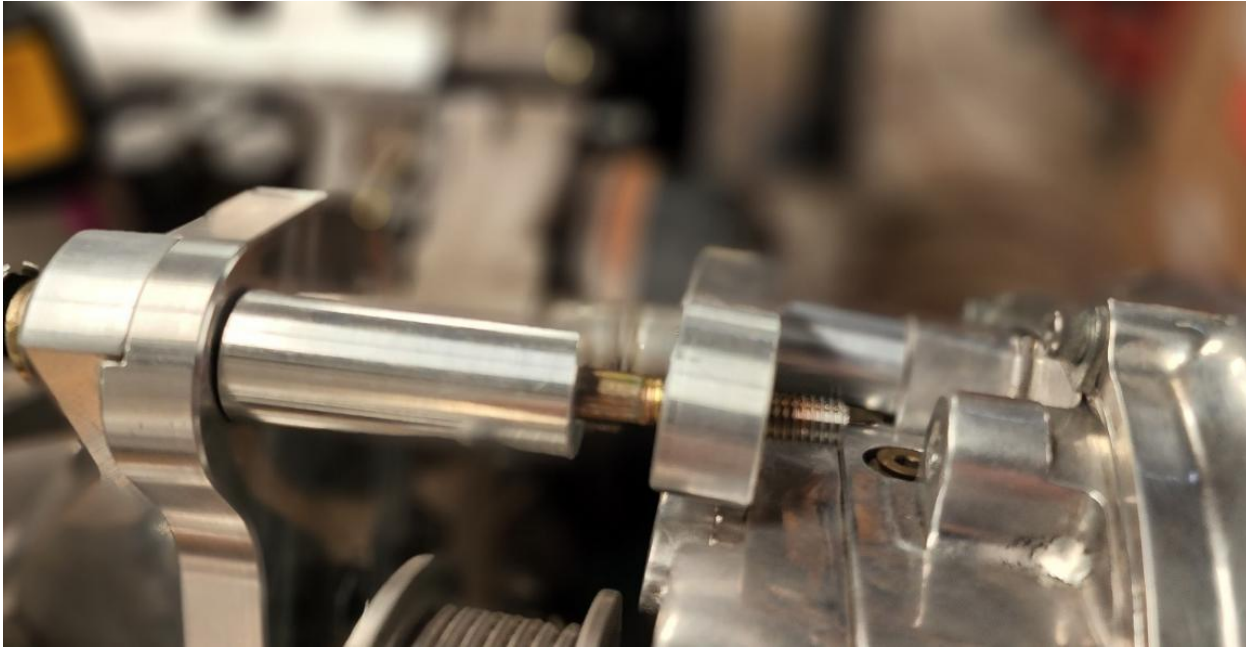
SETTING THE BILLET TENSIONER

Notice the two slots and 9/16" bolts on the outer perimeter of the tensioner. These are used to clock the tensioner for different sized balancers. To move the tensioner, loosen those two bolts as well as the 9/16" bolt in the center. Rotate the tensioner all the way counterclockwise (moving the pulley closer to the balancer) if you are using a stock sized balancer. Rotate it all the way clockwise (moving the pulley away) if you are using an 8" overdrive balancer. Tighten the bolts back up again. **DON'T TOUCH THE BLACK ALLEN BOLT. It is a travel limiter. If you take it out, the tensioner will unwind violently.**

INSTALLING THE SPERCHARGER IN THE CAR

Push all the bolts going through the rear bracket and spacers back so no threads are showing, except the long one at the top. (#1 bolt) Temporarily remove #3 bolt and spacer altogether. Note that the #3 spacer is smaller in diameter than the rest.

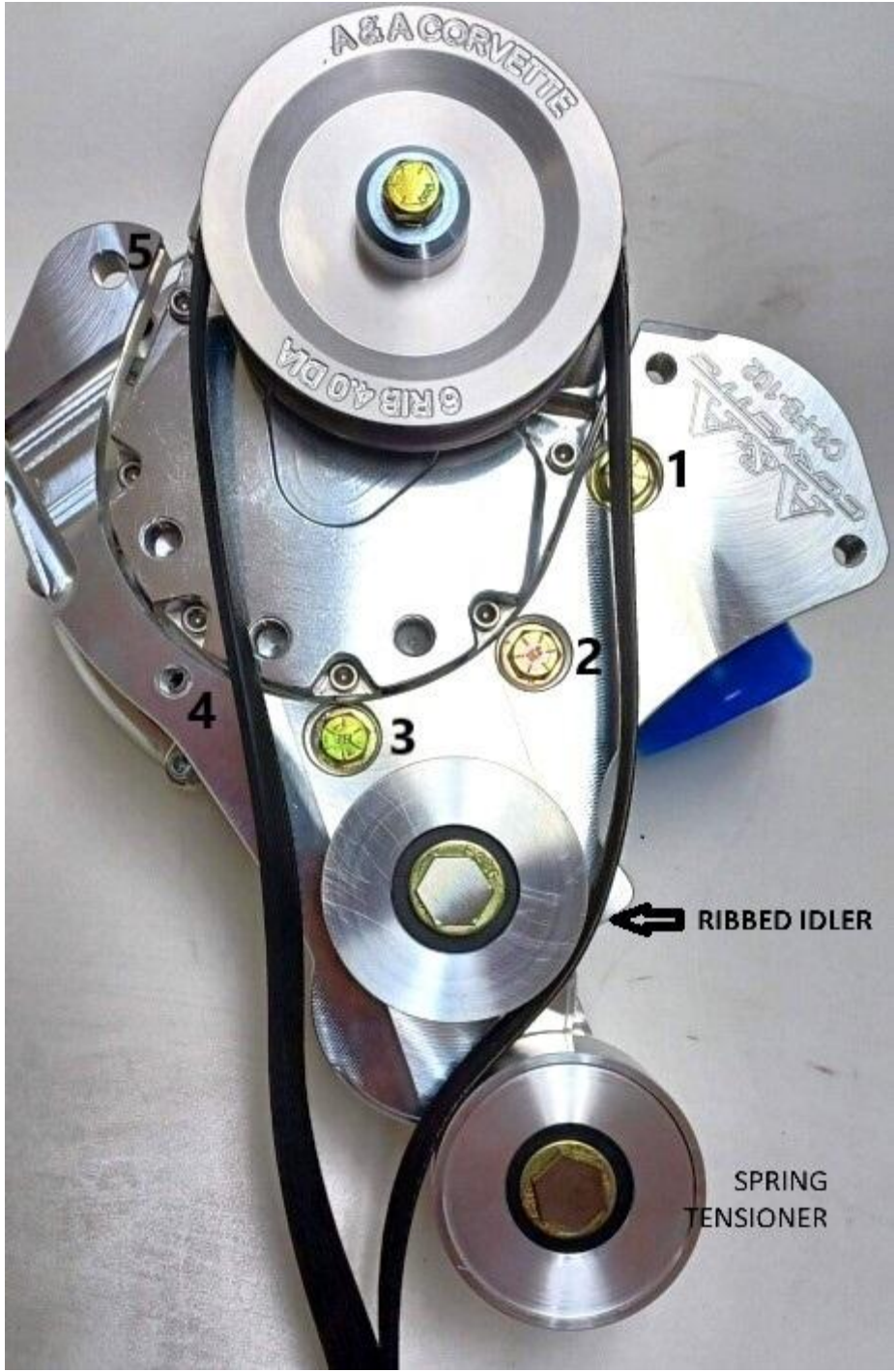
Lower the assembly into position and just hang it from the top bolt to take the weight. Install the "D" spacer, if not installed already, and thread the bolt into the blower a few threads. This makes the rest of it much easier, as the blower assembly is supported. If using a V3, make sure the drain line is not getting kinked going in.



HANG THE BLOWER ASSEMBLY ON THE TOP BOLT TO TAKE THE WEIGHT

Once the unit is hanging loosely you can slip the belt around the supercharger pulley, idler, tensioner and balancer. It's very tight between the water pump and idler so you need to do this part now while you can easily slide the assembly forward for clearance.

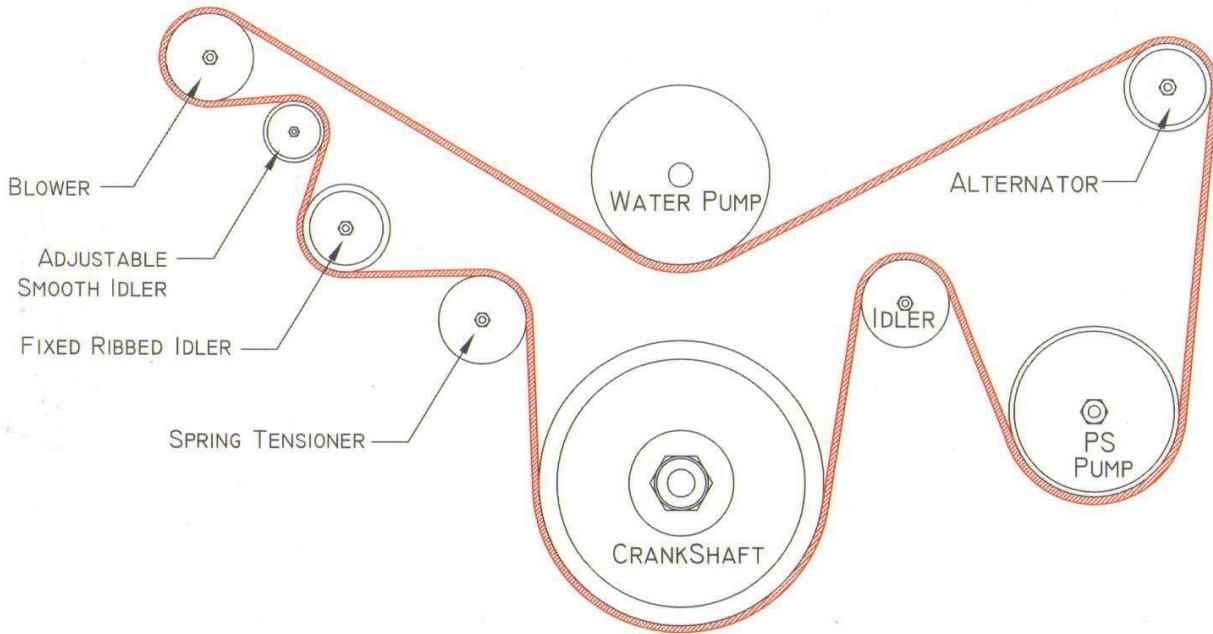
Feed the belt down through the top. It should be routed as shown in the pictures and diagram below. Leave the belt off the alternator for now.



BELT ROUTING ON MAIN BRACKET AND TENSIONER



BELT COMING OFF TENSIONER AND UNDER BALANCER



SCALE: 1/1	NEXT ASSY: N/A	NAME: BELT ROUTING DIAGRAM	
DRAWN BY: AG	USED ON: N/A	PROJECTION:	A&A CORVETTE PERFORMANCE <small>ONHARD, CA. 93036</small>
DATE: 11/21/05	UNIT: UNIT		
MAT'L: NOTED		DRAWING NUMBER: 09-001	
TOL: .XX± .XXX± ANGLES±	N/A	REV: -	

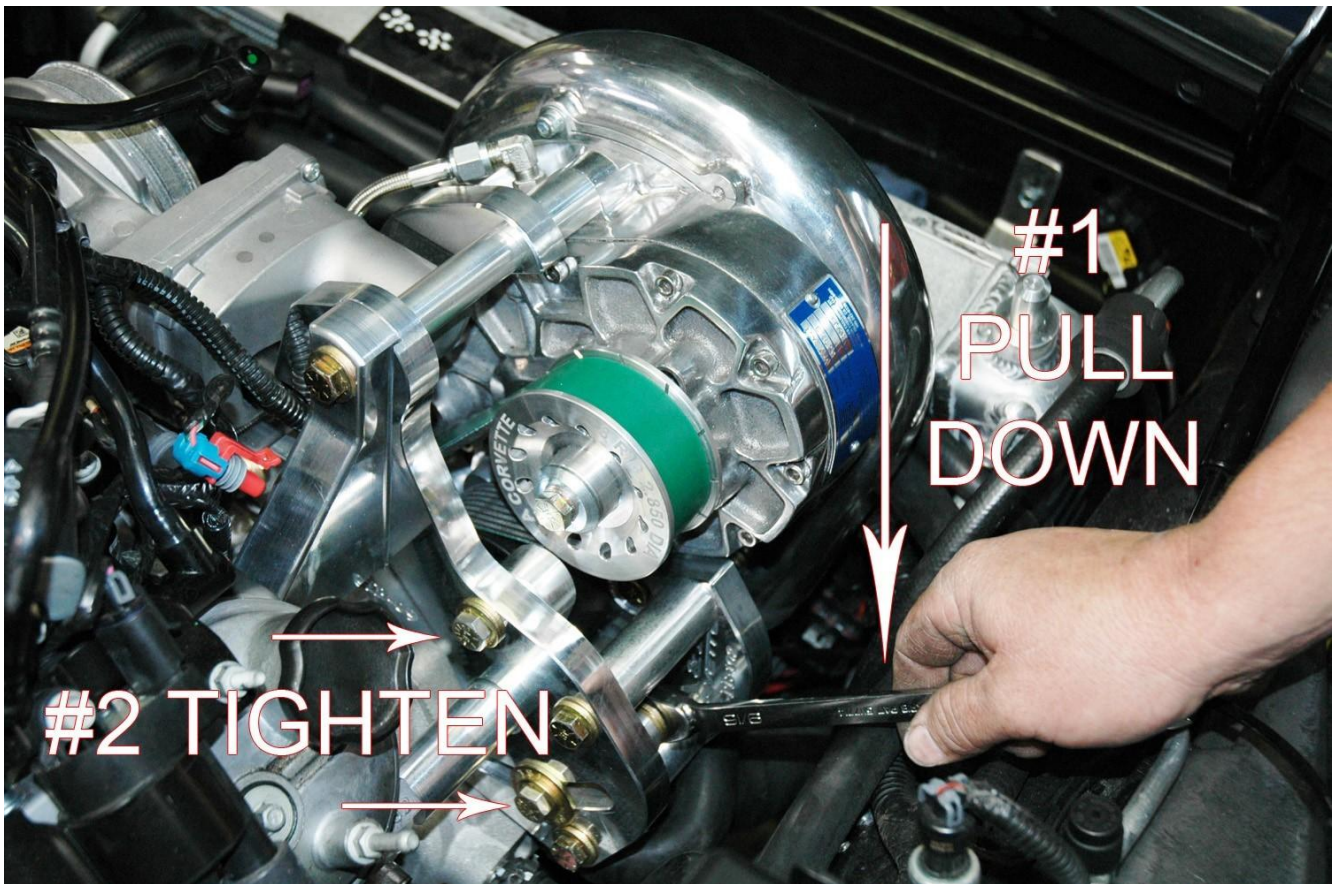
Double check the belt as it comes off the spring tensioner. It should go down and under the balancer. If the belt is routed correctly, align the front and rear brackets and get the remainder of the 3/8" bolts started. (Leave the # 3 bolt and spacer out for now) Once all the other bolts are in, just snug them up to make sure the blower is close to its final position. You can now pop the belt over the alternator pulley.

Reinstall the sliding Idler bracket and pulley assembly as it was when you received it. Install the #3 bolt and spacer. Tighten all the supercharge bracket bolts.

PROPER BELT TENSIONING PROCEDURE

- Make sure the spring tensioner is locked in the open position. (Rotated clockwise with the 5/16" lock pin inserted) Rotate the sliding idler, located just below the blower pulley to the inboard side with a 9/16 wrench on the exposed bolt. This is a left-handed thread so you will not loosen the bolt while pulling down. The belt does not need to be extremely tight. The spring tensioner will

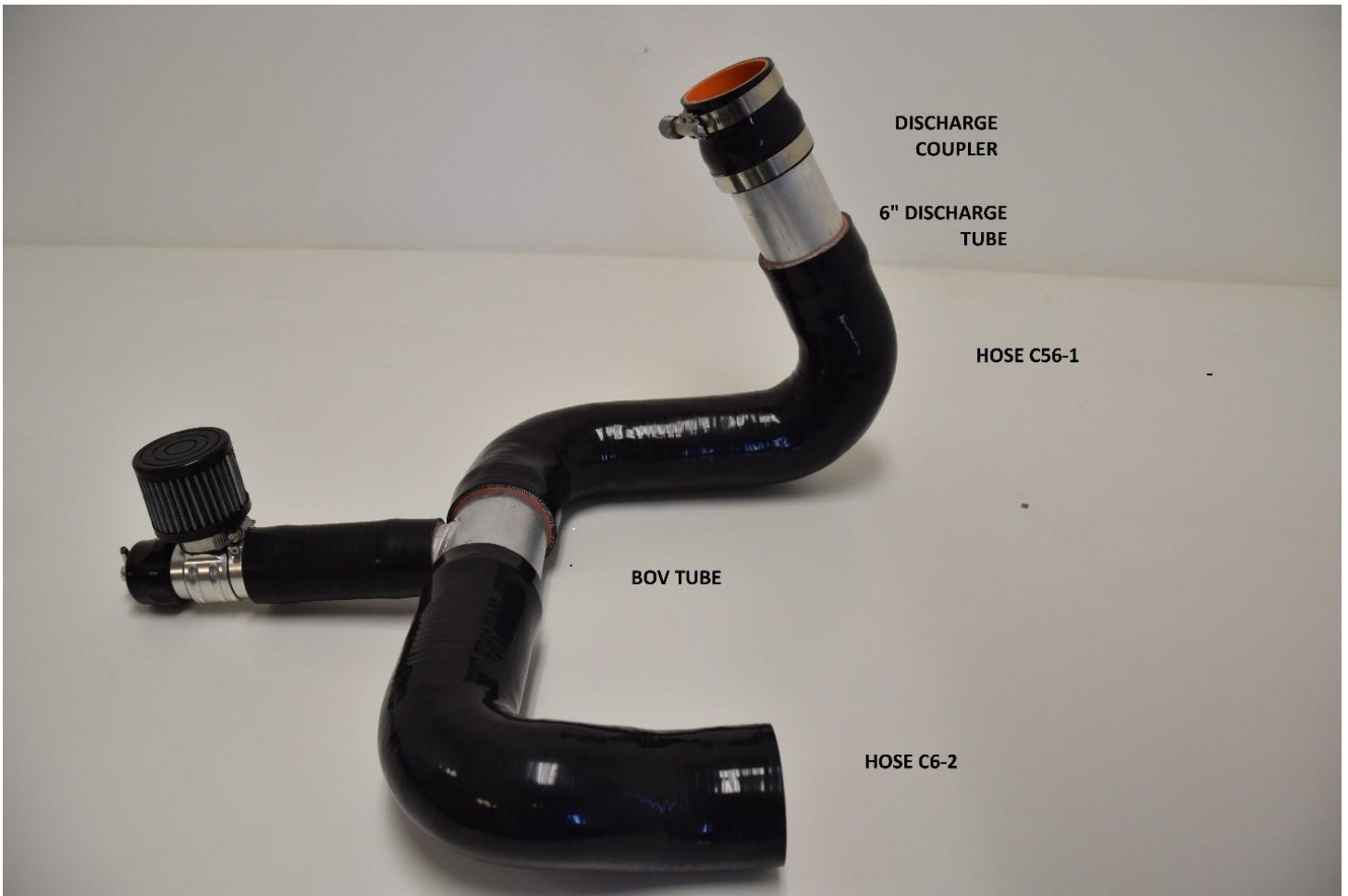
Remember that the spring tensioner is still in the open position. Pull down on the wrench and then tighten the two bolts on the sliding idler bracket. Now you can go to the spring tensioner and remove the lock pin to properly tension the belt. You'll need to rotate the tensioner slightly to take the load off the pin. **Ideally, you want the belt tension to be set so that you barely need to rotate the spring tensioner to remove the pin.**



SLIDING IDLER ADJUSTMENT

- Make sure the drain line does not interfere with the tensioner. Tie it off to the side if it does.

You can now start installing the charge hoses and blowoff valve assembly. The following picture gives you a good overview of how all the hoses are laid out in the engine bay. Use this for a visual reference when installing your hoses.



HOSE LAYOUT

Clamp hose # C6-2 going up and over the skid bar to the intercooler. Attach the blowoff valve (BOV) and 2" silicone coupler to the BOV TUBE then connect the BOV tube to the previously installed #C6-2 hose. Generally, the BOV is aligned so that the hose is horizontal, and the filter is facing up, as shown below. There are different BOV options and vehicle options with and without brake ducts. You may need to angle the BOV differently for your application.

The corner of the panel behind the BOV will need to be trimmed slightly. Reference the picture below.



BOV TUBE WITH PANEL TRIMMED



FRONT VIEW- FIRST HOSE GOING OVER THE SKID BAR

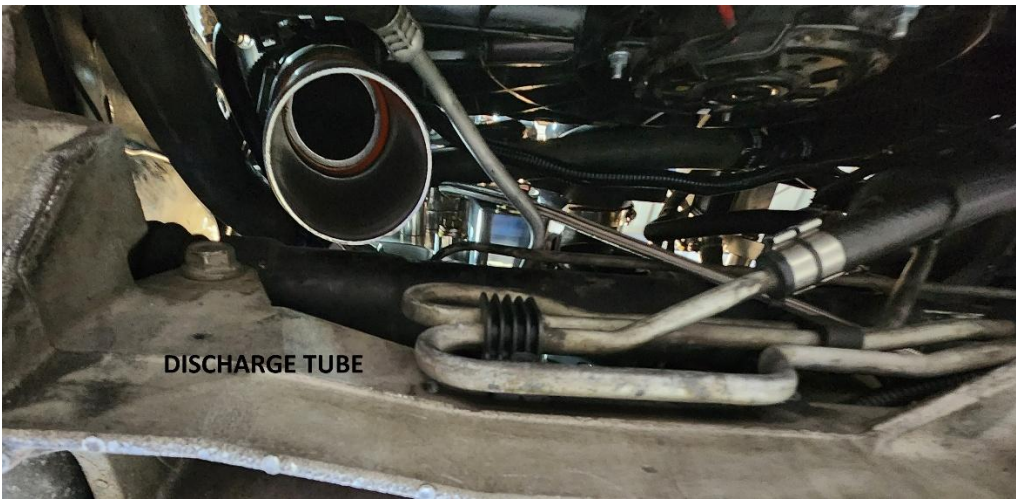
Now you are going to work backwards a little bit. Clamp the discharge coupler/ reducer (2.75 to 3" on Si and Ti units, and a straight 3" coupler on YSi units) to the remaining 6" X 3" aluminum tube.

Orient the clamps as shown in the picture below. Leave the top clamp loose, tighten the bottom clamp, then push the assembly onto the discharge opening of the blower, from the bottom.

With the top clamp facing forward and the bottom clamp pointing towards the frame, tighten the top clamp from the top. A long ¼" extension, wobble socket, and a 3/8" or 10MM socket works best.



DISCHARGE TUBE CLAMP ORIENTATION



DISCHARGE TUBE FROM BOTTOM

Silicone hose # C5-6-1 is the last hose between the blower and intercooler. It will clamp to the BOV tube previously installed in the right front fender and the discharge tube you just installed. The hose goes behind the sway bar.

(If you have a power steering cooler, either flatten the mounting brackets and the fins where the hose will pass by or remove it and loop the hoses. The cooler is located right in the hot airstream from the fan and does not help in any way. (Anyone who uses a P/S cooler for road racing relocates it anyway)

The hose will be pinched somewhat, particularly with large sway bars, but it won't hurt anything. We've never seen one wear through or cause any HP loss. You will need to push it fairly far up onto the tube to make sure the hose doesn't hang down below the aluminum engine cradle. A little soapy water or silicone spray may help with this. Also push it onto the BOV tube as far as possible. This will give you more tire clearance with wider tires.

You may need to tweak the transmission cooler or AC lines for clearance.

Attach the long vacuum hose to the BOV and run it up between the spacers added to the radiator support bracket. It will run up and over the fan housing and over to the power brake booster area where it will be "teed" into the power brake booster hose in a later step. The actual routing is not important, just make sure the hose is tied up and away from any moving parts.

The lower panel can be installed to enclose the area where the BOV is located. Modify it as shown in the following picture. Drill a ¼" hole just to the right of the opening and install the original clip there. This will be the new mounting point.

This completes the charge hose connections from supercharger to intercooler.



ENCLOSURE PANEL MARKED FOR TRIMMING



Install the fan housing in its original clips and connect the wires. The opening previously cut for the air bridge should be tested at this point. Just set the airbridge over the radiator and make sure it can sit all the way down flat on the top of the radiator core. Pull the radiator forward if need be. If it does fit, proceed.

Ensuring the radiator is in the proper position is critical in getting the airbridge and MAF tube to fit correctly. You may have to tweak the AC lines and trans cooler lines to do this. Try to fit the upper radiator support brackets, using the original holes, bolts and rubber inserts from the OE plastic piece. It's best to bend the lines so the radiator will naturally rest in the correct spot. You may have to use some muscle, but it will move into the correct position.

INSTALLING THE AIRBRIDGE AND MAF TUBE

This is the part where you will absolutely need the previously mentioned hose hook. Clamp the small end of the 4 ½" reducer to the blower inlet. Mount the air filter on the airbridge and install the barbed fitting in the hole in the filter flange. The fitting will be on the side closest to the frame. The fitting is very tight but will go in.

Push the airbridge down onto the reducer so that the top half folds inward and the bottom is inside the reducer. Using silicone spray or soapy water will help. Once the reducer is folded inward, insert the hose hook and pull the reducer onto the airbridge. Think of it like trying to get a tire onto a rim. It will take some effort, but it WILL pop over

the reducer. Here is a video from our YouTube channel showing one being installed.

<https://www.youtube.com/watch?v=zIz8PP6PhOI>

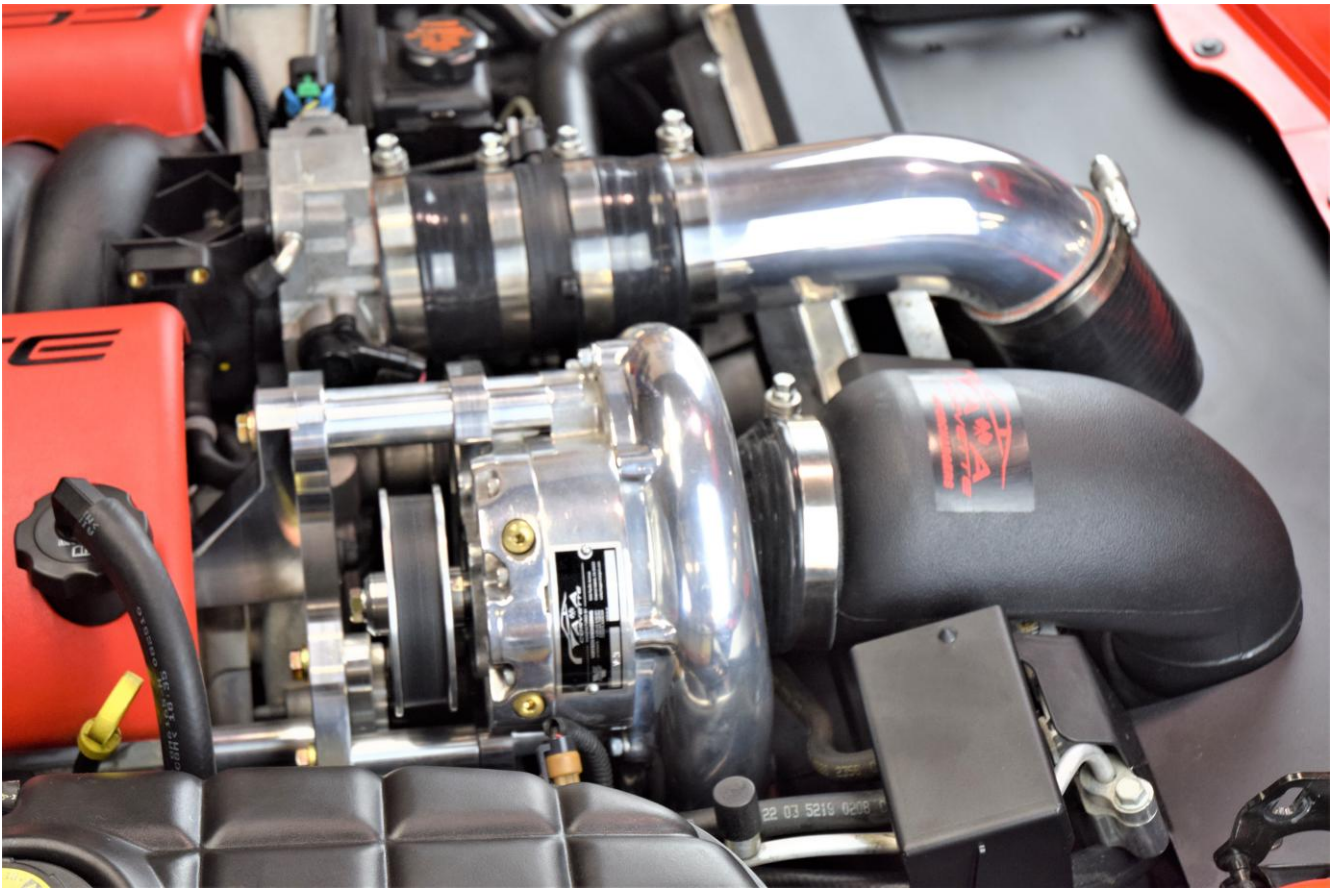
Push the 5/8" breather hose onto the filter fitting. This will be routed to the provided oil filler cap fitting.

Next is the MAF tube and couplers. If you haven't done so already, install the 3 1/2" "S" coupler with the bend at the bottom. Then the 62° mandrel bent tube, another silicone coupler, the MAF and then another silicone coupler to complete the connection between the intercooler and throttle body. The silicone coupler at the throttle body will be very tight but it WILL stretch over the throttle body. The use of a hose hook will make it much easier to slip the hose over the large end of the MAF and the throttle body.

NOTE: (If you have a 1997-2000 model, mark the 62° aluminum tube on the driver side and drill a 5/8" hole. Insert the grommet from the IAT sensor and install the sensor).

If you have a plastic MAF, trim the little tab off where shown. This will allow the coupler to slide all the way on.





AIR BRIDGE AND MAF TUBE INSTALLED

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TOP COVER INSTALLATION

- Find the two laser cut mounting brackets. Install them on the frame rails using the supplied self-tapping screws as shown. You'll notice that the bracket is offset to conform with the frame. Make sure the top of the bracket is even with the top of the frame rail. There are two holes in the top cover as well. Make sure the mounting bracket will be located under these holes.



MOUNTING BRACKETS INSTALLED

- Lay the top shroud on the brackets making sure the front tucks into the gap where the front bumper meets the frame. Attach the shroud to the brackets using the supplied black 7MM screws. You will need to pre-drill the bracket with a 1/8" drill bit using the top shroud as a guide. There is a notch on the passenger side for the hood light wiring loom to go through.



FRONT END COMPLETED

Cut the brake booster hose in half and insert the $\frac{1}{2}$ X $\frac{1}{4}$ vacuum T in the hose. Connect the hose from the BOV to the T.



VACUUM T INSTALLED

FUEL SYSTEM

There are various options for fuel system upgrades. The standard system (included) consists of either a Kenne Bell Boost A Pump or a Vortech Max Flow Booster. The instructions for each of them are in the A&A Web Store, under the respective product description.

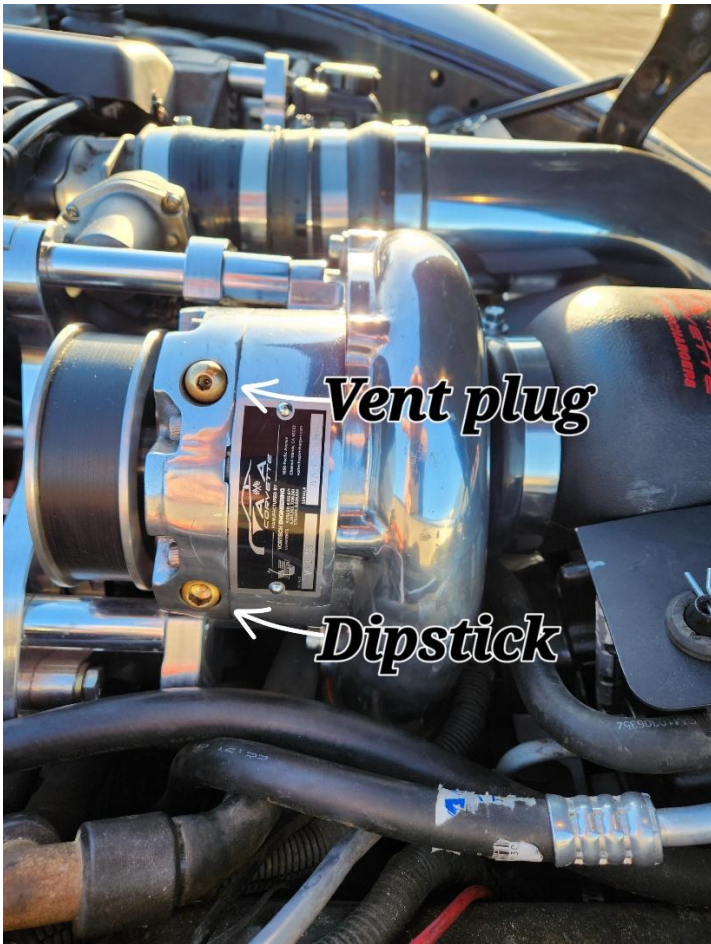
FINAL ASSEMBLY AND CHECK

V3 SELF-CONTAINED HEAD UNITS ARE SHIPPED WITHOUT OIL. YOU MUST FILL THE UNIT WITH ONE FULL BOTTLE OF VORTECH OIL (4 OZ.)

Remove the shipping plug from the head unit (upper plug) and remove the dipstick (lower plug) to let air escape as you are filling it. Squeeze one bottle (4oz.) into either hole and install the vent plug in place of the shipping plug. Don't overtighten it. They are brass and can stick or strip out. Save the shipping plug in case you need to send the head unit in for service or a trade-in. Save the box and packing materials for the same reasons.

Any unit to be considered for warranty repair MUST INCLUDE THE OIL to be analyzed.

Note: The dipsticks are notoriously hard to read with the thin oil used. We have modified them by sanding one end and putting a "full" mark on it. It's ugly but much easier to read this way. That being said, it's best to drain the blower fully when changing the oil and add one full 4 oz. bottle of Vortech oil. No matter what the dipstick says, this is the correct amount of oil.



Refill engine with fresh factory specified oil.

Check all fittings, nuts, bolts and clamps for tightness.

Reconnect the battery.

"Key on" (DO NOT START) the vehicle to cycle the fuel pump. Do this a few times as the pump only comes on for a few seconds if the engine does not start. Ensure that the fuel rail and injectors are sealed properly.

- If vehicle PCM has been flashed for the injector change, start vehicle and immediately check for fuel leaks.
- Recheck all fluid levels and verify that no hoses, wires, etc. are near exhaust headers or moving parts and that there is no fluid leakage.

Look at the belt and make sure it is running true.

FINAL THOUGHTS: We want you to have the best experience possible when dealing with us both before and after the sale. You can always talk to a sales manager, the owner and head designer, or one of our technicians who is infinitely knowledgeable on how the products operate and are installed. You won't get a minimum wage customer service rep that knows nothing outside his or her script. You'll get great advice based on many years of experience every time.

We're happy to help you with your DIY install questions or product inquiries even after hours. The phones forward to either a manager or the owner to help with both. Remembering that we are on Pacific time, you can generally get help until 9 PM on weekdays and weekends alike. It's something we started when the company was very young and have found it to be an invaluable resource to our customers.

ADDENDUM FOR OIL FED UNITS (V1, V2 and V7)

Follow the instructions for the standard V3- Self Contained units but read this section in reference to the oil feed and return lines before mounting the supercharger and bracket assembly.

When using an engine oiled unit (V1, V2 or V7) the oil drain line must be installed before the bracket is bolted to the head unit. We use a stainless AN line and it is very tight in this area. The line must be oriented as shown in the picture below to clear the billet tensioner. Double check that the line has adequate clearance after the blower is installed.

You'll see that it goes behind the steering rack and down to the oil pan fitting. **It is VERY IMPORTANT that the hose slopes down all the way to the fitting. It cannot slope down and then back up, forming a sort of "belly" in the line.**

This can impede the oil flow and cause it to back up in the blower housing.



OIL RETURN LINE ROUTING

The oil return line will run down to the oil pan. We'll supply you with a Rota Broach (mini hole saw) to cut a nice clean hole with minimal shavings. If you're careful, you can cut just deep enough so you can pop the little disc out. Make sure the hole is to the right as far as possible and about .400" from the bottom. This is so you don't drill into the oil pickup tube.

After cutting, use a 3/8" NPT tap to cut threads in the pan. Put grease on the flutes, turn the tap about 1 turn, clean the tap, add more grease and repeat. Make sure the AN fitting can go in about 3 or 4 turns for a good seal. Clean the threads with a solvent, add a dab of silicone to the fitting threads and install it in the pan. The following picture shows the proper location.

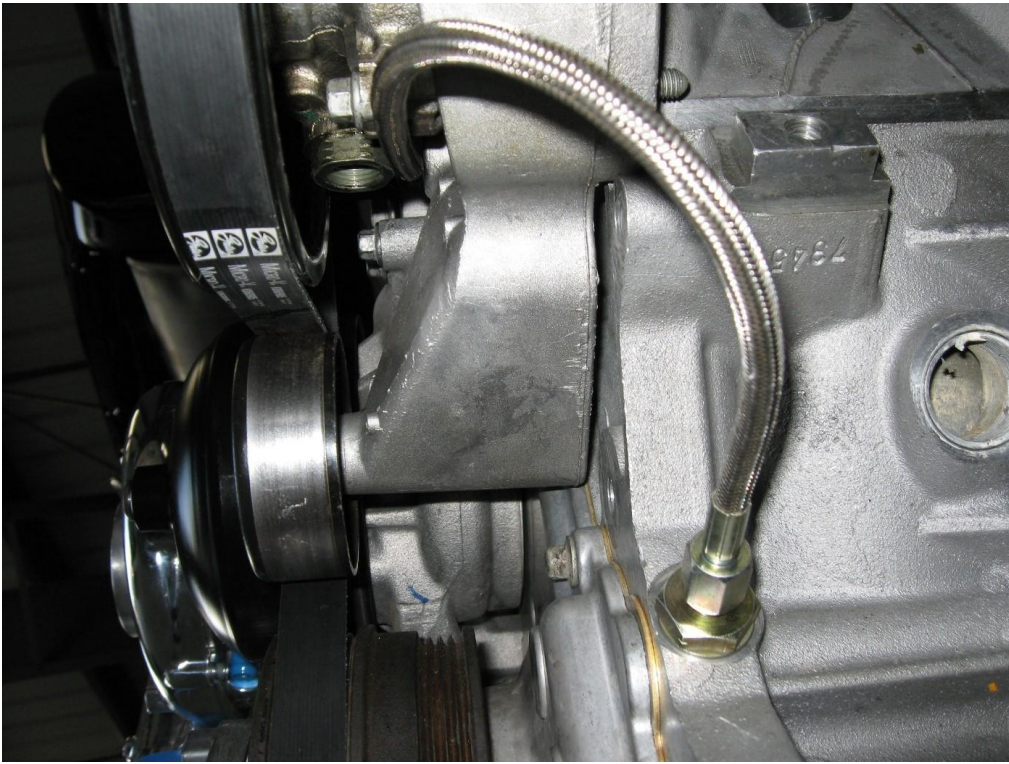


AN RETURN LINE FITTING

OIL FEED LINE

Remove the galley plug on the lower driver's side of the block. Install the custom 16MM O Ring Boss to -4AN fitting in its place. Make sure the seal is on the fitting. Connect the -4 line to the fitting and route it up to the top of the head unit.

There is a small conical filter inside the feed fitting on the head unit. This should be taken out periodically and cleaned.



-4 AN OIL FEED LINE