

**ALPHA POWERSPORT
SUPERCHARGER KIT**

2015-2017
POLARIS SLINGSHOT

W RNING

READ THIS BEFORE STARTING

Every Supercharger kit from Alpha Powersport has been designed to make your Slingshot more enjoyable. Any tampering of the kit beyond our factory recommendation will void your warranty of the kit. Our Supercharger kit will produce more than enough power for your need. We highly recommend that you consult with us on your goals if you seek to go beyond our recommendations.

The installation of our Supercharger kit is not child's play. It can result in engine damage or failure. We always recommend getting this kit installed at our certified installers. Having a factory manual for this install is also recommended. If the instructions are not clear, or you can not find the reference in the factory manual, give us a call for technical support.

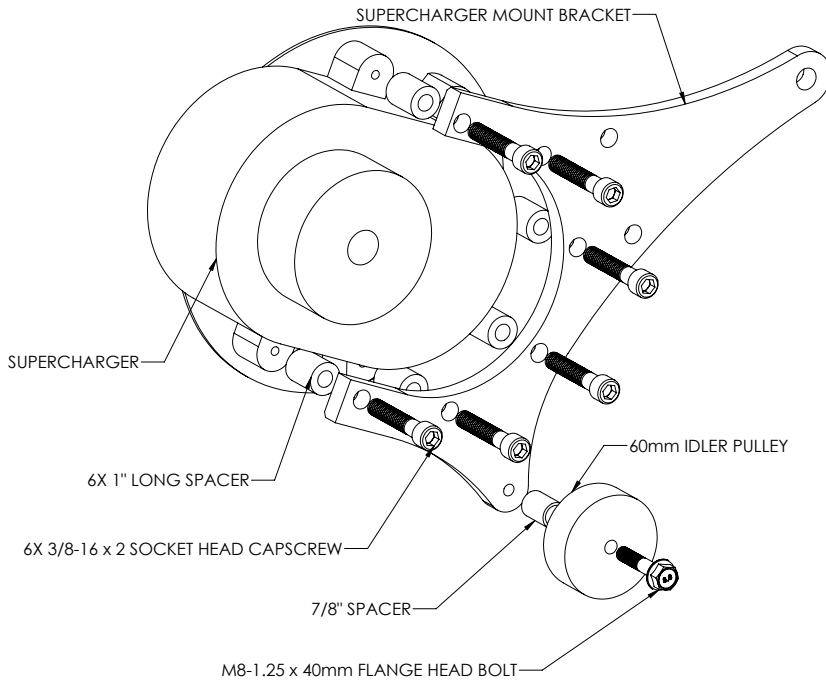
You must ship your factory computer to the following address to be reflashed BEFORE you can run the Supercharger kit. Shipping is **not** covered in the cost of the kit.

Bob Radke
2121 Ruhland Ave
Redondo Beach, CA
90278

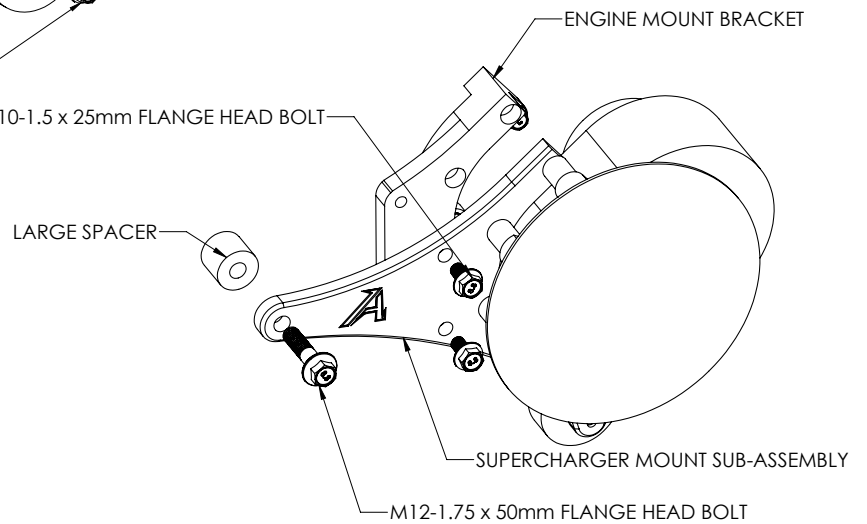
Thank you for choosing our product.

Technical Support: P) 715.600.2024 E) Info@AlphaPowersport.com

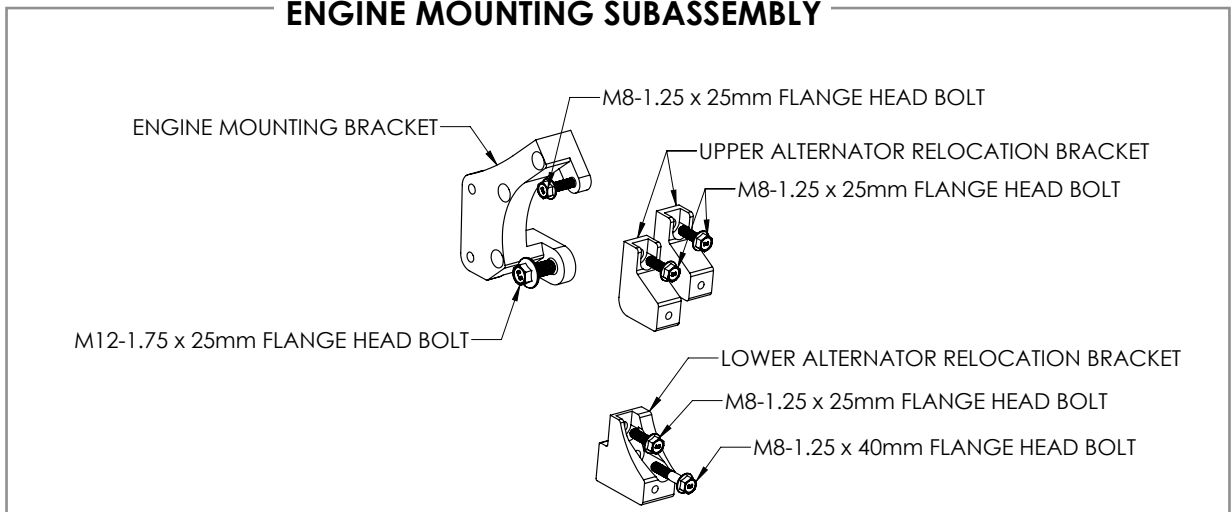
SUPERCHARGER SUB-ASSEMBLY



FINAL SUPERCHARGER ASSEMBLY



ENGINE MOUNTING SUBASSEMBLY





1x Supercharger Piping Kit

- 1x Supercharger Cold pipe
- 1x Supercharger Hot pipe
- 1x Throttle Body Relocate Intake Elbow
- 1x Supercharger Air Filter
- 1x Supercharger Heatshield

1x Supercharger Mounting Bracket Kit

- 1x Blower Mount Adapter
- 1x Blower Mount
- 2x Alternator Relocation Bracket (Upper)
- 1x Alternator Relocation Bracket (Lower)
- 1x Spacer (1.25x.5x1.10)
- 6x Spacer (.75x.375x1.015)
- 1x Spacer (Idler Pulley)

1x Vacuum Hose

1x Breather Hose

1x Tial Supercharger BOV

1x Upper Radiator Hose

1x 60mm Idler Pulley

1x 65mm Idler Pulley For Tensioner

1x Filter Pipe Joiner

1x Supercharger Belt

1x Supercharger Hardware kit

- 1x 2-Bar Map
- 1x Map sensor adapter harness
- 4x 60lb Injectors
- 4x NGK Spark plug
- 1x Teflon Tape
- 1x Electrical Tape
- 1x Pack Of Zipties
- 1x M12-1.75 x 25 Hex Head Flange Bolt
- 2x M10-1.25 x 25 Hex Head Flange Bolt
- 4x M8-1.25 x 25 Hex Head Flange Bolt
- 2x M8-1.25 x 40 Hex Head Flange Bolt
- 6x 3/8-16 x 2 Socket Cap Screws
- 1x M12-1.75 x 50 Hex Head Flange Bolt
- 3x 2.5" Coupler
- 1x 2.75"-2.5" Coupler
- 1x 3.5" - 4.25" 90 Degree Coupler
- 5x 2.5" T-bolt Clamp
- 1x 2.75" T-bolt Clamp

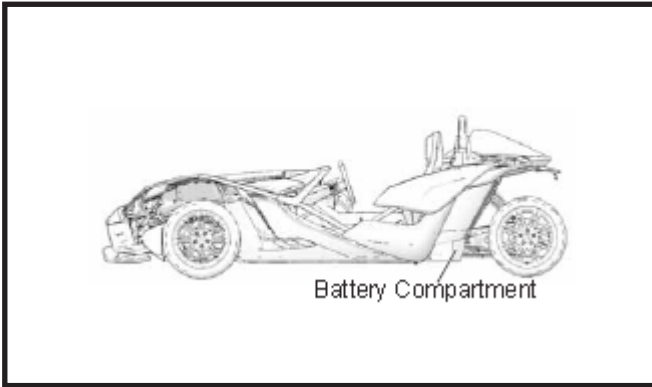


1x Intercooler

1x Strut bar



1x Supercharger Unit

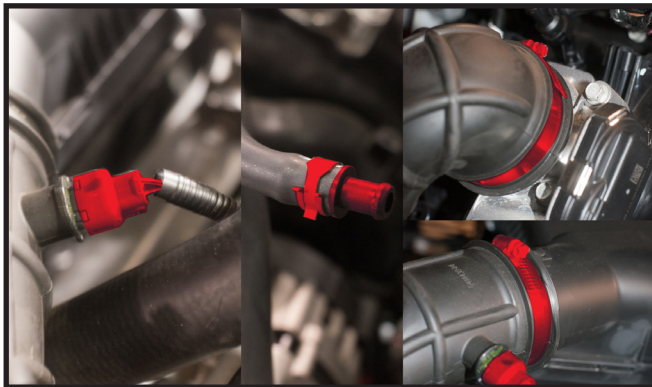
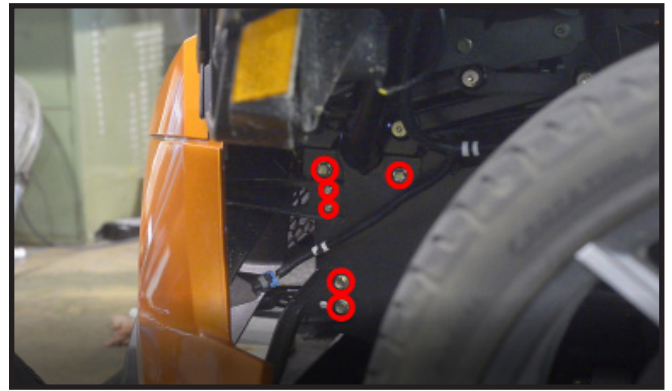


STEP 1

Getting started. The battery compartment is located on the lower left side of the vehicle, behind the rider compartment. Remove the access panel fasteners and remove the access panel. Remove the battery retainer nut. Remove the retainer wedge from the stud. Slide the battery out of the compartment. Remove the nut securing the negative (-) battery cable to the chassis ground. Remove the cable eyelet from the stud. Move the cable to prevent it from contacting any metal components. Unplug and remove the ECU from the slingshot. Use a 10mm to unfasten the two 10mm bolts holding the ECU to the chassis. Send the ECU out per the included instructions.

STEP 2

Remove the four 13mm and four 8mm bolts that holds the front bumper assembly to the chassis. Remove the four lower 13mm hood hinge bolts holding the hinge to the chassis. Lift the hood and bracket assembly off the slingshot with the bracket attached.

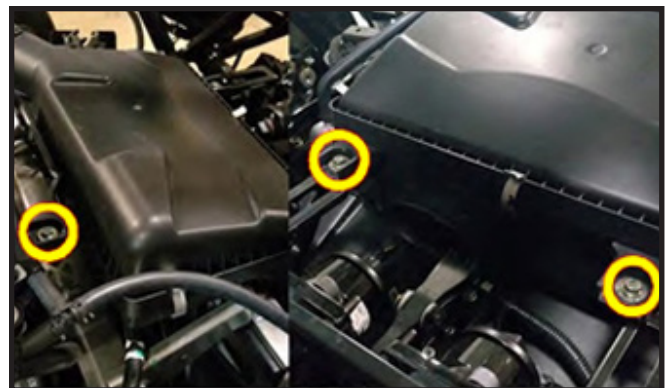


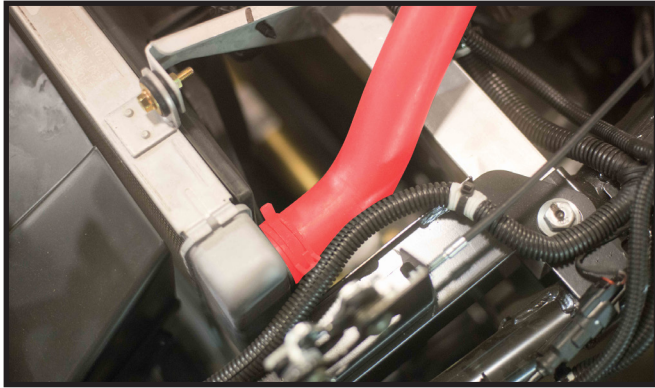
STEP 3

Remove the factory intake tube by using a flat screwdriver or an 8mm socket and loosen the two hose clamps pictured in Step 3 (Right top and bottom) Don't forget to pull the breather hose from the intake tube. DO NOT remove the clamp (Center photo) Also remove the Intake Air Temp sensor connector by pressing the button and pulling gently as seen in (Left Photo) The plastic breather adapter of the sensor will be used later in the installation.

STEP 4

Now it's time to remove the factory air box. This is done by removing the three 10mm hex bolts that attach it to the chassis seen in Step 4 photo. Once all these bolts are removed you can simply lift the box out of the normal location.





STEP 5

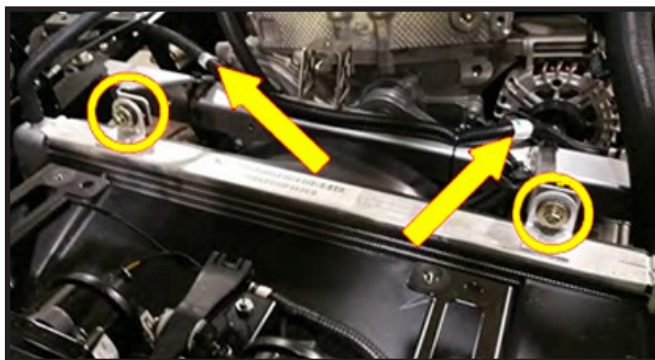
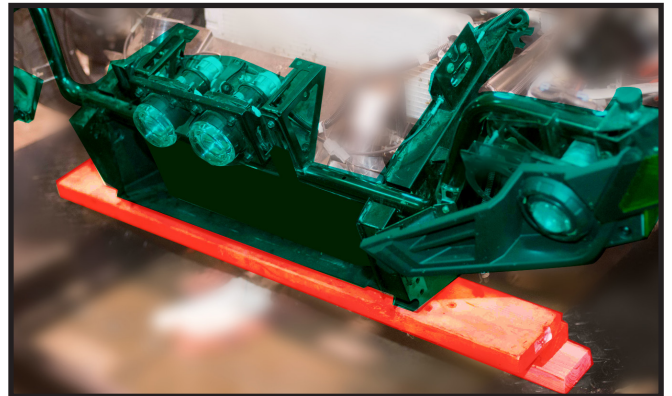
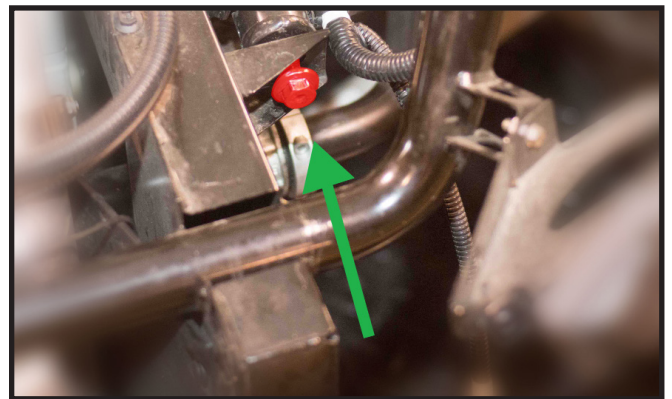
With a cold engine, drain the radiator by removing the upper radiator hose and removing the coolant tank cap.

(DISPOSE OF USED COOLANT PER LOCAL LAWS)

STEP 6

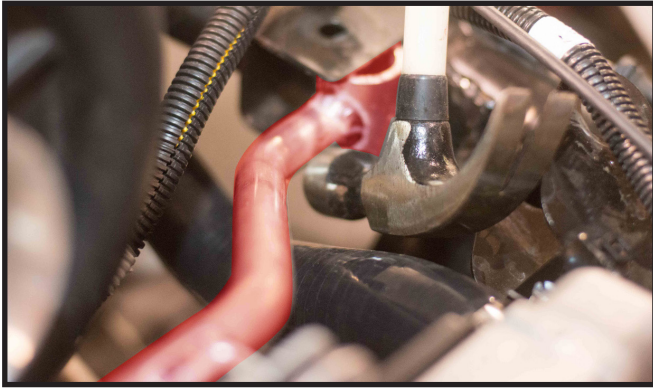
Remove the four 16mm bolts on the front (two on each side). Pictured to the right. Place approximately a 4.5" spacer under the front of your slingshot. This will be used to set the front of the Slingshot on without having to remove it completely from your vehicle. Now remove the two 16mm bolts with 18mm nuts that hold the front structure and the aluminum radiator support/cross member to the main frame pictured below. Be sure to have a good hold of it before pulling the final bolt out of the hole. Slide the front structure forward being careful to not over stretch any wiring harnesses, or hood latch cables.

NOTE: IF you have aftermarket wiring you may need to cut some zipties on your wiring.



STEP 7

Remove the factory bolts that hold the radiator to the support in front of the engine using a 10mm Socket and wrench. You may have to screw the bolt all the way out of the bushing to remove it. The radiator will not fall out. Reference bolt and ziptie location using Step 7 photo. Cut the zip ties holding the wiring to the aluminum cross member and remove the cross member. You may tip the radiator forward to help give more room to get the crossmember out.



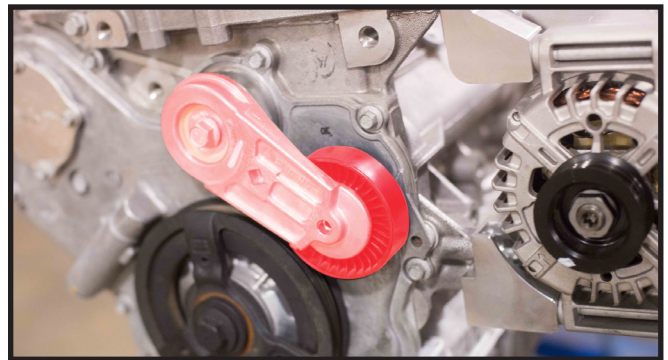
STEP 8

Now that you have removed the factory radiator brace, install the supplied radiator brace in place of the factory one. It is made to be a tight fit so you may have to tap it in place with a small mallet. Once that is installed you may replace the front clip of the sling-shot and tighten the four 16mm head bolts on to the chassis and the two through bolts and nuts on the crossmember. Again making sure not to over extend or pinch any of the wiring or hoses.

STEP 9

Remove the accessory drive belt and discard. This will be replaced with the provided belt.

Remove the stock belt tensioner assembly. With it off, remove the bolt holding the idler pulley to the tensioner and replace with smaller pulley provided. Reinstall the tensioner assembly.



STEP 10

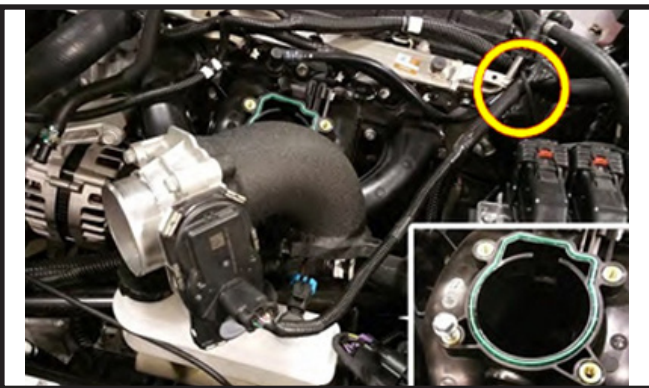
Time to extend the throttle body wires. Disconnect the connector from the throttle body.

NOTE: There is a gray safety lock on the connector shown in Step 10 photo. Slide that back first, otherwise the connector will not release. Cut the outer layer of electrical tape, being careful not to cut into the harness.



STEP 11

Once you are through the outer layer you can pull on the harness gently and it will start to come out of the loom. Carefully cut through the second layer of tape wrapping around the harness as you pull. Now you should be able to pull the wiring out of the loom just like Step 11 photo. Place the loom supplied in the kit over the exposed wire and tape. Remove the four 10mm hex bolts that attach the throttle body to the factory intake manifold.

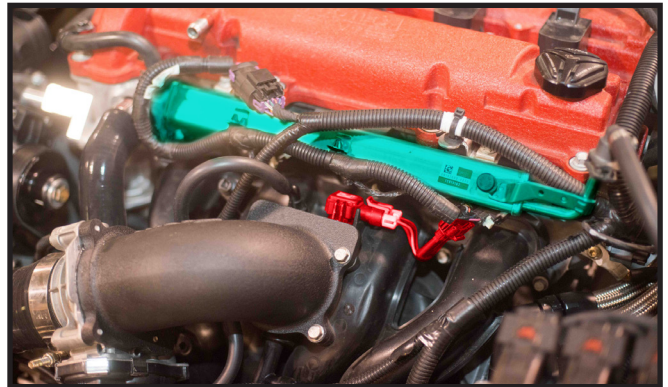


STEP 12

Now place the throttle body on the new intake elbow making sure the gasket included in the kit is in place. Tighten the bolts in a crisscross pattern to 89 in.lb. (10 Nm) Plug the throttle body connector in to the throttle body as shown in Step 12 photo. Insert one supplied bolt into the lower left bolt hole on the factory manifold just a few threads. Now carefully slide the assembly into place moving any harness or tubes out of the way as you place it. Place the remaining bolts in and tighten to 89 in.lb. (10 Nm). You may need to pull the circled harness to gain some more length, you do not want the throttle body wire stretched tight.

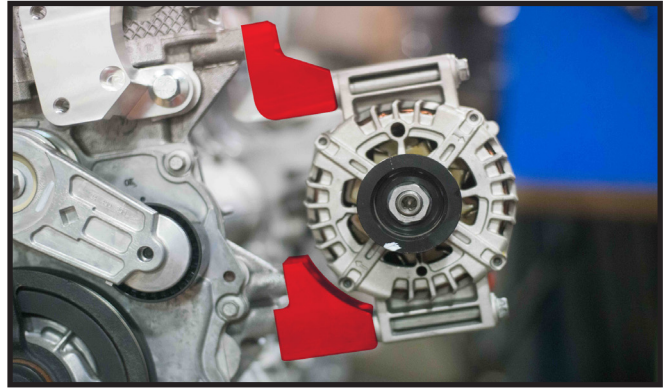
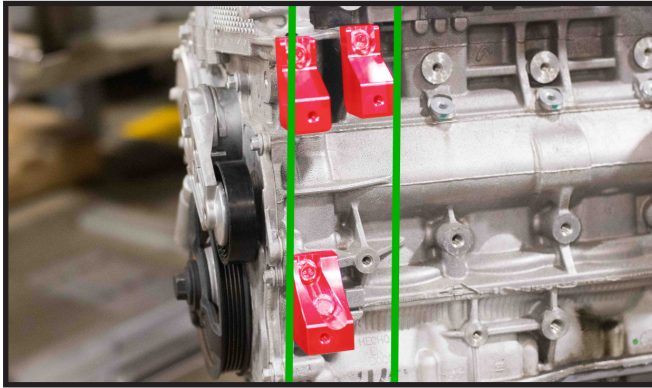
STEP 13

Install the 4 injectors included in the kit by first releasing the pressure in the fuel rail. Do this by removing the cap on the Schrader valve and with a small screwdriver or pick to press down on the pin in the center of the valve with a rag over the top to shield you from spraying fuel. (There will still be fuel in the rail so be sure to dispose of it properly.) Remove the two 10mm bolts holding the rail to the head. Take off the clips and swap the injectors. Place the clips on the injectors and reinstall the injectors on the rail. Be sure to use grease or oil to lubricate the O-rings before putting the new injectors back in. Install the spark plugs included in the kit. There is no need to gap the spark plugs. Replace the factory MAP sensor shown here with the supplied 2 bar MAP sensor supplied in the supercharger kit. Be sure to lubricate the grommet and firmly seat it in the manifold. Plug the adapter harness into the factory engine harness and you are all set.



STEP 14

Be sure you have the battery disconnected as indicated in step 1 of this instruction sheet. Remove the three bolts holding the alternator in place and move it off to the side. Be careful not to overextend the charging wires attached to the back of the alternator. Install the three spacer blocks pictured in the figure. Be sure the top 2 blocks are parallel to one another. It may be best to leave the top front loose until you install the alternator. Then go ahead and install the alternator with the factory bolts.

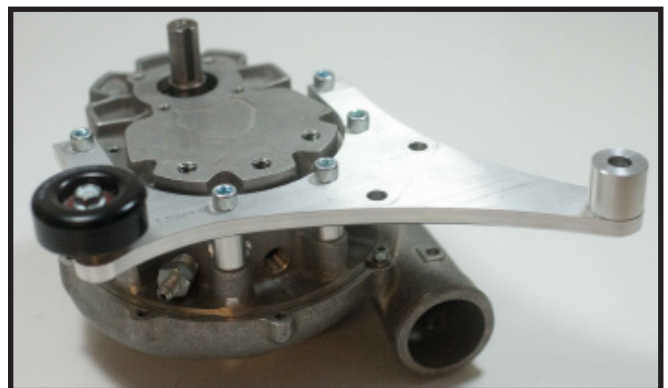


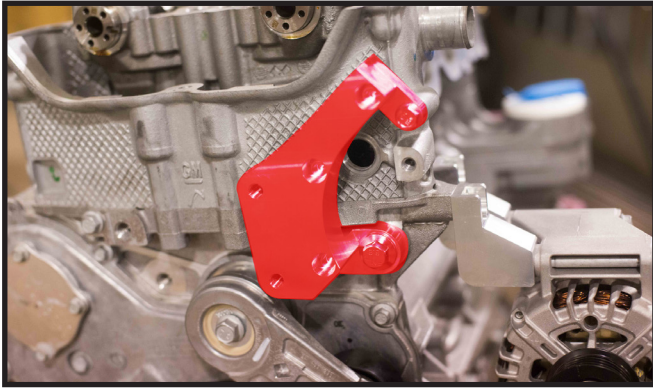
STEP 15

Now we are ready to install the supercharger assembly. We will start by putting the main supercharger assembly together. First install the idler pulley supplied in the kit to the main supercharger bracket as shown in the picture below using the small stepped spacer. Now we will install the main supercharger bracket to the back of the supercharger on the bench with the supplied allen head bolts using either an 8 millimeter or 5/16 allen socket or wrench.



NOTE: It is recommended to use blue locktight when assembling your supercharger kit. You can get this at your local auto parts store.



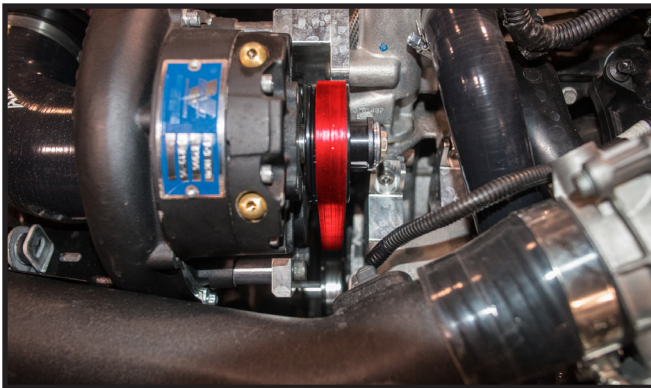


STEP 17

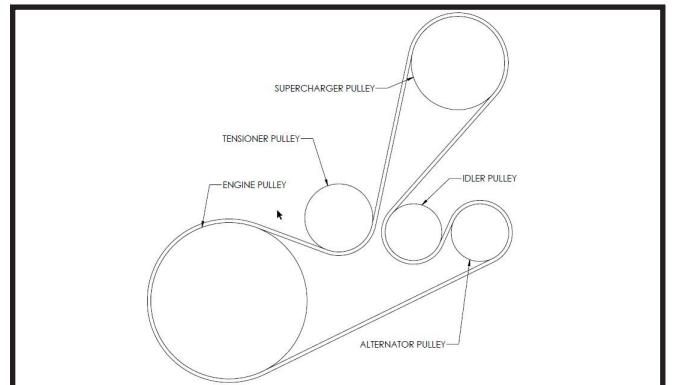
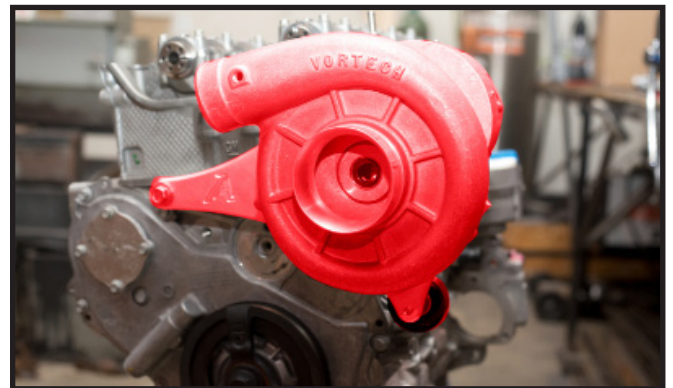
Now we will prepare the engine for the supercharger. Install the upper supercharger bracket to the engine block as shown in the picture. Use a 16mm socket to tighten the lower bolt and a 13mm socket to tighten the top bolt.

STEP 18

Install the supercharger and bracket loosely on the engine and install the two fine thread bolts through the center of the bracket. Then install the large spacer and the M12 bolt through the end of the bracket into the engine as shown

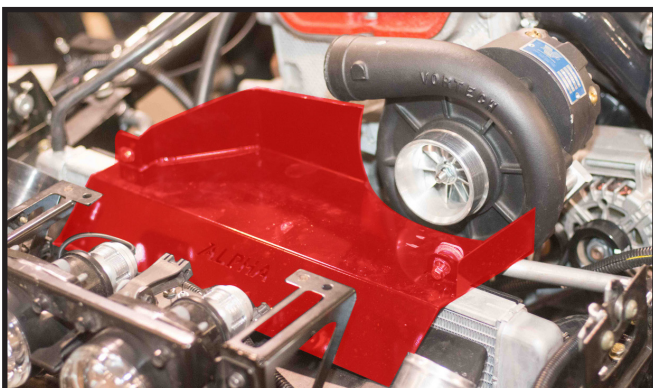


NOTE: Leave these three bolts slightly loose until you install the serpentine belt. Refer to the belt diagram for the belt routing. Once the belt is in place tighten down the three main bracket bolts.



STEP 19

Now that we have the crossmember in, we can install the supplied heat shield and tighten with the factory radiator bolts you removed earlier.



STEP 20

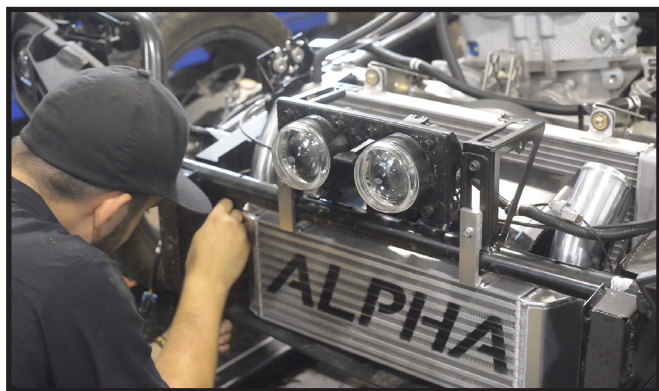
Time for the intercooler! Now remove the 8 plastic clips on the front radiator shroud and remove the upper and lower shroud. You will need to trim the top to fit using the supplied guide. Now reinstall the upper plastic radiator shroud with the 2 upper push clips.

NOTE: If you choose not to trim the upper shroud then just install the lower shroud without any trimming required.



STEP 21

Remove the two 10mm lower headlight mounting bolts. Take 2 of the 6 M6x25 Bolts supplied and bolt the intercooler to the 2 lower holes on the front headlight housing. Reinstall the lower plastic radiator shroud using 2 push clips at the front of the shroud. The bottom will fit without any trimming. (You will not be able to get the 4 clips that hold the top and bottom shrouds together back in)



STEP 22

Time to install the intercooler piping. First install the hot side from the supercharger to the intercooler. Install the blow off valve and intake air sensor on to the cold pipe. Be sure to use the cover to hold the intake temp sensor in place. Install the cold side pipe. Be sure to plug in the intake temp sensor. Now route the vacuum hose from the intake to the as shown in Step 22 photo.

NOTE: If you are running a boost gauge you will T into this line for it.



HAVE FUN! BE SAFE!

Your Slingshot is now Powered by Alpha SUPERCHARGER kit.
Welcome to the boosted FAMILY!

