

MAGNUSON

SUPERCHARGERS

Installation Instructions for: CORVETTE SUPERCHARGER SYSTEM 2006-2013 Z06 LS7 CORVETTE



Step-by-step instructions for installing the best in
supercharger systems.

*** PREMIUM FUEL REQUIRED ***



ATTENTION!
Your MAGNUSON SUPERCHARGER kit
is sensitive to corrosion!
Take care of it by using 50/50
anti-freeze with de-ionized water.

Magnuson Products LLC
1990 Knoll Drive, Bldg A, Ventura, CA 93003
(805) 289-0044 phone * (805) 677-4897 fax
magnusonproducts.com * magnacharger.com

SUPERCHARGER INSTALLATION MANUAL

Magnuson SuperCharger
GM 7.0 Liter Engine
2006-2013 Z06 Corvette LS7

Please take a few moments to review this manual thoroughly before you begin work:

A quick parts check to make certain your kit is complete (see shipper parts list in this manual). If you discover shipping damage or shortage, please call our office immediately. Take a look at exactly what you are going to need in terms of tools, time, and experience. Review our limited warranty with care.

When unpacking the supercharger kit **DO NOT** lift the supercharger assembly by the black plastic bypass actuator. This is pre-set from the factory and can be altered if used as a lifting point!

Caution: Relieve the fuel system pressure before servicing fuel system components in order to reduce the risk of fire and personal injury. After relieving the system pressure, a small amount of fuel may be released when servicing the fuel lines or connections. In order to reduce the risk of personal injury, cover the regulator and fuel line fitting with a shop towel before disconnecting. This will catch any fuel that may leak out. Place the towel in an approved container when the job is complete.

Use only premium fuel, 91 octane or better.

Magnuson SuperCharger systems are manufactured to produce about 20 Rear Wheel Horsepower (RWHP) per pound of boost at sea level. To ensure engine stability while enhancing performance, most kits are shipped to achieve about 6 lbs of boost, giving you a gain of about 120 RWHP and about 120 ft lbs of torque at sea level. Altitude, options and vehicle modifications will affect these numbers.

Our Magna Charger kits are designed for engines in good mechanical condition only. Installation on high mileage or damaged engines is not recommended and may result in engine failure, in which we are not responsible. Magnuson Products LLC is not responsible for the engine or consequential damages.

Magnuson Products supercharger kits are designed for use on stock vehicles. To that end, the alteration or modification of the fuel system, drive train, engine, and/or supercharger outside of stock parameters in any way can result in engine damage or failure for which Magnuson Products is NOT responsible and will void Magnuson Products warranty and CARB certification. Aftermarket engine recalibration devices that modify fuel and spark curve (including, but not limited to programmers) are not recommended and may cause engine damage or failure. Use of non-Magnuson Products approved programming will void all warranties. If you have any questions, call us.

After you finish you installation and road test your vehicle, please fill out and mail in the limited warranty card, so we can add you to our files (this is important for your protection).

A new GM fuel filter is recommended at the time of supercharger installation.
Stock spark plugs and stock plug gap is recommended
Drives belt = Gates #K061045
Air Filter = TKO 1001-99T

Magnuson Products has joint ventured with RK Sports, Lingenfelter Performance Engineering, and Ken Grody Performance in the development of aftermarket hoods that will clear the supercharger system. It is our goal to add all new hood suppliers to the list as they become available.

Tools Required

- Metric wrench set
- 1/4" - 3/8" and 1/2" drive metric socket set (standard & deep)
- 3/8" and 1/2" drive Foot pound and inch pound torque wrenches
- Belt tensioner wrench
- Phillips and flat head screwdrivers
- 1/2" breaker bar
- Fuel line quick disconnect tools (included in kit)
- Small or angles 3/8 drill motor
- Drain pan
- Hose cutters
- Hose clamp pliers
- Safety glasses
- Torque angle meter
- 1/2" impact gun
- Small drift punch
- Hammer
- Harmonic balancer modification kit (included in kit)
- Compressed air
- Blow gun
- Metric Allen socket set 3/8 drive
- Metric Torque socket set 3/8 drive
- 18mm metric line wrench
- Power steering oil suction tool or turkey baster.

Contact Information:

Magnuson Products LLC
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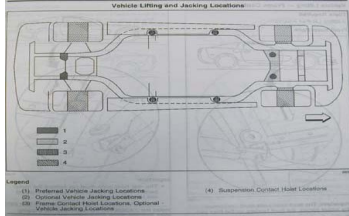
1. The first step is to use the provided SCT hand-held tuner to setup the calibration for your new supercharger system. Follow the instructions in the supplied SCT tuner manual. Locate your EO sticker and follow the instructions for placing the sticker on the supercharger. If the Box-2 did not come with the SCT hand-held tuner inside, then skip to step#2 and proceed with the vehicle computer removal and packaging procedures.



2. With a 10mm wrench disconnect the (-) negative battery cable in the trunk on the passenger side of the compartment. Make sure the cable is far enough away from the battery that it does not accidentally touch the battery and make connection during the installation.



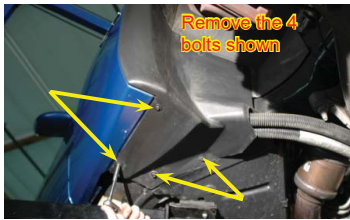
3. If your Box-2 did not come with a SCT tuner, you will need to send your computers in to Magnuson Products for calibration. Raise the vehicle on an automotive hoist using the factory recommended lift points. Refer to the owners' manual or shop guide for these locations.



4. Remove the front right wheel with a 19mm wrench.



5. Remove the two 7mm and two 10mm bolts on the bottom of the rear splash panel on the front passenger side of the vehicle.



6. Remove the two Push-lock fasteners at the top of the splash panel by gently prying up on the center of the fastener and then removing the fastener completely.



7. Starting at the bottom, gently pull out on the splash panel toward the front axle to disengage the five spring clips. The top of the panel has a plastic tab that will drop free. Be careful to not pull out on that tab and break the plastic clip.



8. Removing the inner fender panel will expose the vehicles operating computer. This is high in the fender well. Remove the two 10mm bolts that anchor the computer to the fender mounting bracket. Pull the computer off the locating pins. The computer is now free to drop down.



9. There are two computer connectors. Remove the connectors by first pulling the Red locking key out, then pushing in on the Black cover button and pulling the connector down.



10. Remove the computer connectors carefully by pulling straight out.



11. Here are the shipping materials supplied to quickly return the vehicle computers to Magnuson Products LLC.



12. Completely fill out the pre-paid shipping form supplied and then remove the adhesive label on the third page, placing it on the top of the box. Take the box to your nearest UPS office to be returned to Magnuson Products LLC. Magnuson will then re-program the computer and quickly return it to you via UPS.



13. Remove the pressure in the fuel tank by removing and then replacing the fuel filler cap.



14. Remove the stock hood by removing the four bolts with a 13mm socket wrench. Set the hood aside carefully for an EBAY auction.



15. With a cool engine, open the petcock drain on the passenger side of the radiator and release the coolant into a clean drain pan for reuse later. Remove the radiator cap to vent the system. **(Be careful not to remove the radiator cap if the engine is still hot.)**



16. Remove the engine/coil covers by pulling up firmly on them. The covers will not be reused.



17. Remove the Mass Air Flow meter (MAF) connector from the air box by pulling up on the grey release trigger and squeezing the connector.



18. Remove the PCV inlet tube from the air filter bellows by pushing up on the release lever. The tube will not be reused.



19. Use an 8mm nut driver or flathead screwdriver to loosen the clamp on the bellows to the throttle body.



20. Pull up firmly on the air box assembly to separate from the three mounting grommet pins and remove from the vehicle.



21. Disconnect the EVAP intake tube on intake manifold by pushing in on the white release trigger and pulling the connector free.



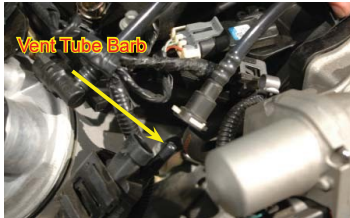
22. Release the other end of the tube at the bottom of the EVAP solenoid by pushing in on the release trigger.



23. Disconnect the EVAP solenoid electrical connection.



24. Release the vent tube at the top of the EVAP solenoid by pushing in on the release trigger.



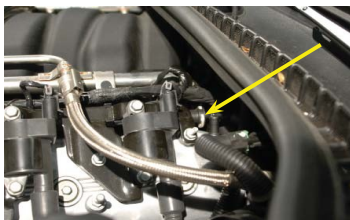
25. Disconnect the PCV vent tube from both valve covers and the oil reservoir on the passenger side of the vehicle. This assembly is roughly in the shape of a "T".



26. Remove this assembly from the vehicle and set aside for later use.



27. Disconnect the other end of the vent tube disconnected in step # 25 at the fire wall connection and set it aside as it will be reused in a later step.



28. Disconnect the Electric Throttle Control (ETC) connector at the throttle body by squeezing the trigger connector and pulling to remove it.



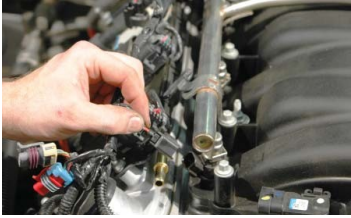
29. Disconnect the Manifold Absolute Pressure (MAP) sensor connector.



30. Use a shop knife to cut the tape that secures the wiring harness to the fuel rails in four locations.



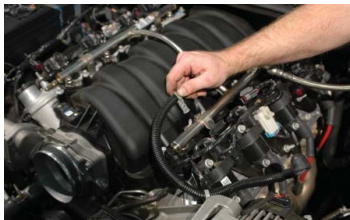
31. Disconnect the eight fuel injector connectors by pressing in on the release triggers and pulling the connectors free.



32. Use a 13mm socket wrench to remove the nut that secures the battery cable on the back of the alternator.



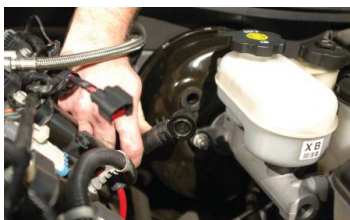
33. Pull up on the anchors that secure the battery cable to the intake manifold and fuel rail (three locations).



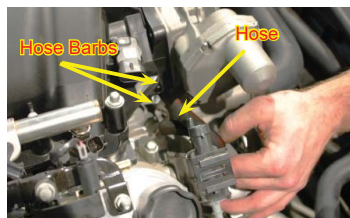
34. Free the battery cable from the intake manifold and lay it aside.



35. Remove the power brake check valve and hose from the brake booster grommet by pulling it out firmly.



36. On the passenger side of the intake manifold behind the throttle body, remove the PCV hose by pressing the release clip and pulling free. Repeat on other end of the hose.



37. Release the fuel line safety clip. After removing the clip place some shop rags or towels under the fuel line in preparation for removal.



38. Use the fuel line removal tool to remove the fuel line from the fuel rail. To do this, first push the fuel line onto the barb firmly, hold in place while you insert the supplied fuel line removal tool into the fuel line. Push the tool into the fuel line releasing the spring clip and pull the fuel line off of the fuel line hose barb.



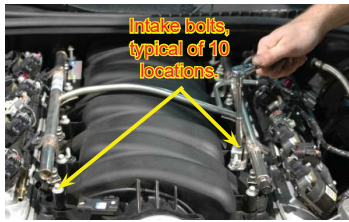
39. If you have, or can improvise, we recommend that you plug both the fuel line and the fuel line barb on the fuel rail to contain fuel seepage. Use shop towels to catch any dripping fuel and dispose of properly.



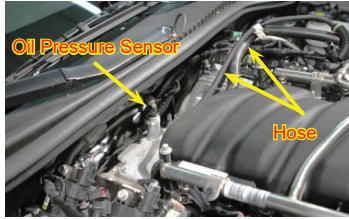
40. Exiting the firewall on the driver side above the valve cover is the exhaust baffle valve vacuum line. Disconnect this fitting from the firewall barb.



41. With an 8mm socket wrench remove the ten intake manifold bolts.



42. With the help of an assistant, feed the brake booster valve and hose as you carefully remove the intake manifold and set it aside.



43. After moving the assembly a bit, as you have access to the Oil Pressure Sensor, disconnect the electrical connection so the hoses can move freely and then remove the intake manifold assembly completely. Set aside as we will be using components later on.



44. Using a vacuum cleaner, remove any dirt or debris from the intake port area. **(Be careful not to get any debris in the intake ports.)**



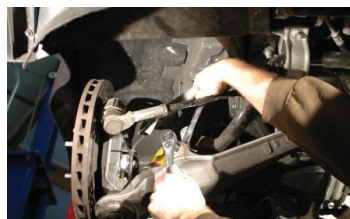
45. Use alcohol or a suitable non-petroleum based solvent to wipe off the heads to remove any residue.



46. Cover the intake manifold ports with tape or clean rags to keep dirt and objects from entering the engine.



47. Remove the nuts that secure the sway bar end links to the lower A-arms on both sides of the vehicle. Use an 18mm socket on the outside and an 18mm open-end wrench on the inside.



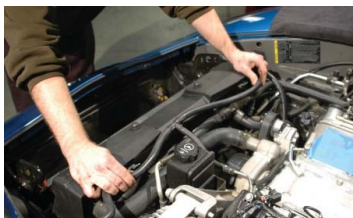
48. From under the vehicle, remove the four bolts that secure the sway bar brackets to the chassis with a 13mm socket wrench



49. After removing the sway bolts, brackets and end link nuts, remove the sway bar and set it aside.



50. Remove the overflow hose from the clips on the radiator cowl.



51. Using a 10mm socket wrench, remove the two bolts on each side of the radiator cover.



52. Remove the radiator cover and set it aside for a modification in a later step.



53. Un-clip the coolant hoses from the three clips on the fan shroud.



54. Use a small straight blade screwdriver to open the three harness clamps and release the wiring harness on the fan shroud.



55. Locate the cooling fans electrical connector under the wiring harness located on the fan shroud. Squeeze the connector firmly and pull the connector free as shown.



56. The fan shroud is held to the radiator by two bolts. One is located high on the passenger side. Use a 10mm wrench and remove this bolt.



57. Remove the other bolt located near the bottom on the driver side with a 10mm socket wrench. The fan shroud should now be free to remove.



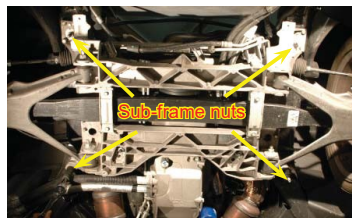
58. Remove the fan assembly by pushing up on the fan shroud to un-clip it from the radiator and then carefully pull the assembly out from the vehicle completely. You will need to wiggle the fan assembly a bit side to side to get it around the oil cooler hoses.



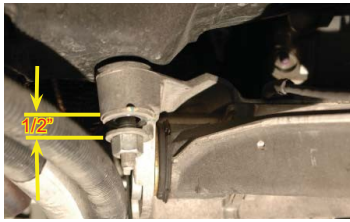
59. Use a 13mm wrench to remove the oil hose clamp bolt, the clamp will be removed temporarily.



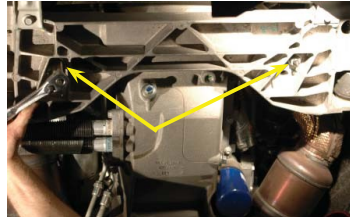
60. Using a 21mm socket wrench, loosen the four front sub-frame nuts shown.



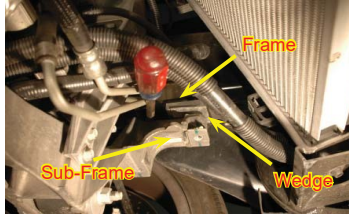
61. Loosen the four front sub-frame nuts until the bottom of the nut is even with the end of the threads on the bolt. The gap between the washer and the sub-frame should be approximately $\frac{1}{2}$ ".



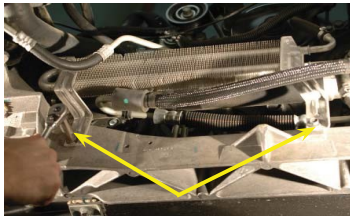
62. Remove the two motor mount nuts with an 18mm socket wrench.



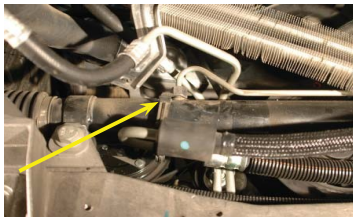
63. Using a suitable pry bar, pry down the sub-frame at the front two mounting points. Temporarily push a metal or wooden wedge approximately $\frac{3}{8}$ " – $\frac{1}{2}$ " thick between the frame and sub frame at these points.



64. Remove the two bolts mounting the power steering cooler to the frame using a 10mm wrench.



65. Release the clip holding the power steering hoses to the passenger side of the Rack & Pinion piston and pull the hoses free.



66. Swing the power steering cooler out and down toward the passenger side and tuck in place as shown out of the way.



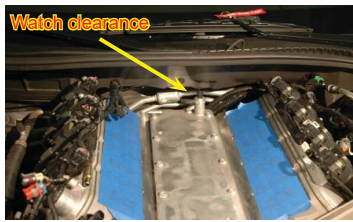
67. Using a 16mm wrench, remove the power steering line attached to the top of the steering rack. Use a shop towel to catch any fluid lost. Place a cap on the hose and fitting.



68. Using a floor jack and a sturdy piece of wood between the jack and the bottom of the oil pan, gently raise the engine.



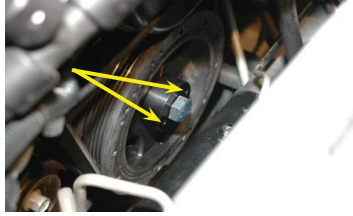
69. When raising the engine with the floor jack, **take care to watch the clearance between the back of the engine and the fire wall**, so as not to damage any of the components on the fire wall.



70. The following steps may be pre-formed from above or below on the vehicle. Remove the front harmonic balancer bolt using a 24mm impact socket and a 1/2" impact wrench. **NOTE: We recommend safety glasses during all steps. Please be sure to wear them during these steps. You may need to use MAP gas to heat the pulley. Make sure to use caution whenever using a flame in the engine compartment and around combustible material.**



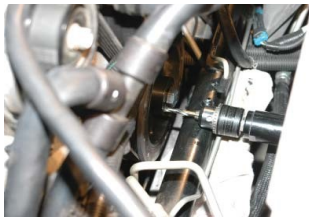
71. Install the drill guide using the supplied bolt and orient the holes to give you access with your drill. We found 2:30 and 8:30 worked pretty well for us.



72. Use a torque wrench and 24mm socket to torque the bolt to 30 ft-lbs.



73. Using a small or angled 3/8" drill and the supplied drill bit, insert the drill into the guide holes and drill to the second step of the drill bit. (Make sure that you drill all the way to the second step.)



74. Using compressed air, blow the drill shavings out of the holes.



75. Install the supplied reamer into drill. Using a small amount of oil, ream holes until reamer bottoms out in the holes.



76. Using a 24mm socket, remove the large bolt and the drill guide from the engine.



77. Once again, use compressed air to blow out the holes.



78. Place beads of Green Loctite on the two supplied hardened roll pins, and then insert them into the drilled holes. The use of a small hammer and punch may be necessary to tap the pins in. **(Make sure that the pins are in far enough that they do not touch the balancer bolt.)**



79. Install the new supplied factory GM harmonic balancer bolt.



80. Using a 24mm socket tighten the new harmonic balancer bolt according to General Motors specifications. Tighten to 50 Nm (37 ft-lbs) then tighten an additional 230° using a torque angle meter.



81. With the crankshaft modifications complete, replace the power steering line previously removed and tighten the fitting securely using a 16mm wrench.



82. Replace the hose clip on the power steering rack anchoring the hoses back in place.



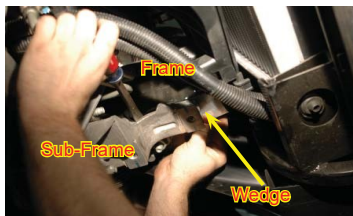
83. Remount the power steering cooler assembly to the original location and fasten using the original hardware. Torque the bolts to 106 in. lbs. **Verify your torque wrench settings.**



84. Reinstall the fan assembly. Use care to not damage the radiator core, and clip the fan assembly back into place. Install the two bolts that held it into place and reconnect the fan electrical connection. Clip the wiring harness, coolant lines, and radiator shroud cover back into their original locations on the fan shroud using original hardware. (This is a reverse of steps 51-59)



85. Remove the wedges from between the frame and sub frame. Tighten the sub frame and motor mount nuts securely. (This is a reversal of steps 61 – 64)



86. Replace the oil reservoir feed bracket back to the bottom of the sub frame using the original bolt.



87. Replace the sway bar by installing it in its original position and replacing the sway bar brackets and reconnect the end links.



88. Torque the sub-frame, the sway-bar connections and motor mounts to the torque values below. Torque Specifications:

Engine sub-frame nuts	80 ft-lbs
Motor mount nuts	60 ft-lbs
Sway bar to frame	45 ft-lbs
Sway bar link nuts	55 ft-lbs
Wheel lug nuts	110 ft-lbs



89. Remove the accessory serpentine belt by rotating the tensioner bolt with a 15mm wrench. Once the belt has become slack, pull the belt off an idler pulley and then remove the belt, this will not be reused.



90. Use a 15mm wrench to remove the pulley from the tensioner assembly. Set this pulley aside for later installation with the new tensioner.



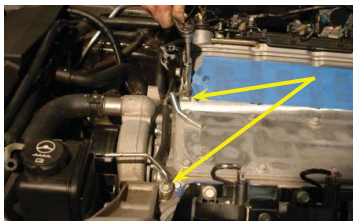
91. Remove the stock tensioner assembly by removing the two mounting bolts with a 15mm wrench.



92. Remove the coolant hose from the vent pipe.



93. Remove the vent pipe with a 10mm socket wrench. Ensure that the O-ring gaskets under the vent pipe blocks do not stick to the cylinder heads. If so, remove them as new gaskets are supplied.



94. Install the new O-ring gaskets on the vent pipe blocks using some of the supplied Lubriplate lubricant to hold them in place.



95. Install the new vent pipe with the original bolts and torque them with a torque wrench and 10mm socket to 106 in-lbs. **Verify your torque wrench settings.**



96. Using the tub as a check-guide, take a medium Phillips screwdriver, insert it into the valley cover hose barb to the bend, and carefully rotate the vacuum barb counterclockwise. The dimension between steam vent pipe and the centerline of the barb should be about $\frac{1}{4}$ ".



97. NOTE: If the radiator hose neck is on the passenger side of your vehicle, this step is not necessary. Remove the upper radiator hose from the water pump housing by squeezing the spring clamp then pulling the hose free. Tuck this hose out of the way over beside the alternator.



98. Using a power steering oil suction tool, turkey baste bulb, hand soap pump, or whatever you can improvise with to remove the fluid from the power steering reservoir and put into a disposable container. (Old fluid can be disposed of at an oil recycling center.)



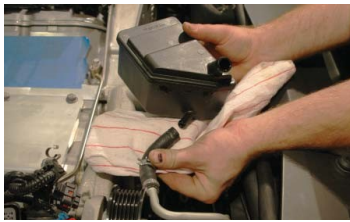
99. Using a 15mm wrench, remove the two bolts that secure the power steering fluid reservoir to the alternator bracket.



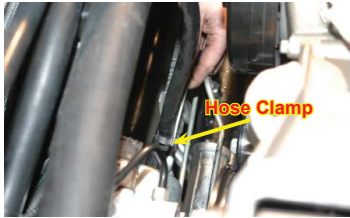
100. Remove the mounting bracket from the reservoir then remove the large hose from the bottom of the power steering reservoir by squeezing the clamp with a pair of pliers. Use a shop towel to catch any residual fluid. You may need to use a hook point to separate the hose from the barb as it may stick firmly in place.



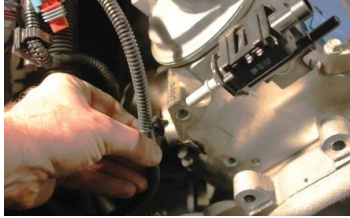
101. Remove the small hose from the bottom of the reservoir. Be careful of dripping fluid, use a shop towel and dispose of properly.



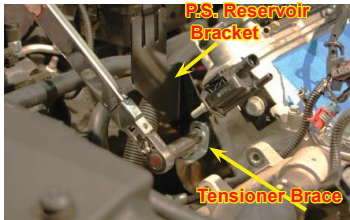
102. Cut or open the factory pinch clamp from the top barb on the power steering cooler. Pull the hose off the barb quickly placing your thumb or finger over the end of the hose to minimize the mess. Use shop towels to catch any residual fluid. This entire section of hose and hard line will not be reused.



103. Remove the wiring harness anchor from the front of the right (passenger side) cylinder head. This hole will be used to mount the relocated power steering reservoir mounting bracket.



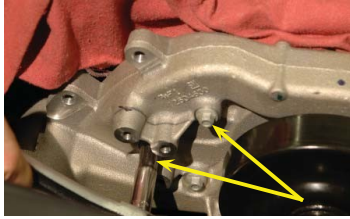
104. Install the new power steering reservoir mounting bracket using the new bolts supplied. Incorporate one of the supplied tensioner brace brackets angles on the upper bolt. The long slot will be at the bottom. Push up on the bottom of the bracket so that the bolt is contacting the bottom edge of the short slot. Torque the bolts to 40 ft-lbs using a 15mm wrench. The angle bracket will have a tendency to rotate, so start with a counterclockwise bias so that it ends up flat as shown in this picture.



105. If your water pump discharge barb is on the passenger side of the vehicle, the following steps are not necessary, skip to step # 112. Cover your engine well, as we will need to do some sawing and grinding for clearance with the new tensioner assembly.



106. Remove these two 10mm bolts from the existing stock water pump.



107. Use a die grinder, reciprocating saw, hack-saw, or what have you to cut off the two bosses shown level with the face of the surface of the boss from the removed bolts.



108. Test fit the new tensioner bracket and assembly to check for full travel. You will need to adjust the cut at the passenger side boss as necessary. Roughly, you will be grinding from the bolt hole at an angle back toward the water pump casting on the side nearest the passenger side fender. Test your cut using the new tensioner assembly and adjust as necessary.



109. File the bottom of the upper radiator hose barb casting by the water pump pulley for additional belt clearance. This will be about 1/10" (100/1000) at the outside edge and parallel back toward the face of the casting.



110. The intent is to create a little more clearance for the new belt line. Your final modification should look something like this.



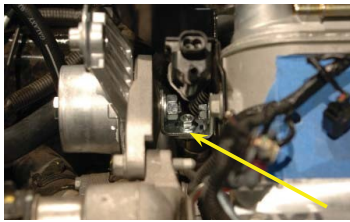
111. Install the new tensioner mounting bracket in the original location of the OEM unit with one original bolts and one countersunk Allen bolt. Torque the bolts to 40 ft-lbs; **Verify your torque wrench settings.**



112. Install the tensioner with the provided long 19mm bolt in the tensioner package. Torque the bolt to 50 ft-lbs. **Verify your torque wrench settings.**



113. Place the other angle from the tensioner brace bracket package on the back of the long bolt you just tightened. The Long slot should align with the long slot on the angle mounted earlier on the power steering reservoir bracket. Tighten in place aligning the two angles together. Use the provided nut and bolt to tie the two angles together, anchoring the tensioner assembly.



114. Install the pulley removed onto the new tensioner and torque the bolt to 40 ft-lbs. **Verify your torque wrench settings.**



115. Slide the power steering reservoir into place on the new mounting bracket.



116. Using the length of 5/8" hose supplied, install the hose connector in one end and secure with the provided clamp.



117. Install the 5/8" hose with the connector into the end of the large power steering hose to the pump. Secure the connector with the original spring clamp.



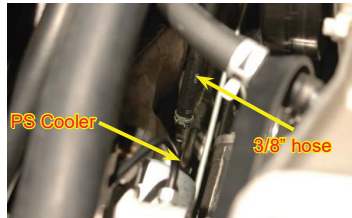
118. Pass the 5/8" hose through the center of the new serpentine drive belt.



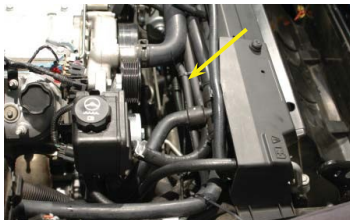
119. Route the 5/8" power steering hose forward along the fan shroud, following the same path as the coolant lines toward the passenger side of the vehicle, cut to fit and connect to the large barb on the power steering reservoir using the provided clamp.



120. Connect the length of 3/8" hose to the barb on the bottom of the power steering cooler. Secure the hose with the green clamp supplied.



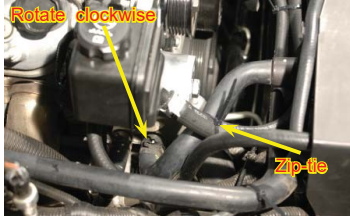
121. Route the new hose up to the parallel the 5/8" hose you just ran, loosely zip tie the lines together.



122. Connect the end of the 3/8" hose to the small barb on the power steering reservoir using the supplied green clamp (the reservoir is shown lifted for clarity).



123. Using a pair of pliers to squeeze the stock spring clamp, rotate the coolant line shown where it meets the water pump housing. Rotate the hose so that it will not contact the tensioner mounting bolt and release the clamp to hold it the new position. Alternately you can loosely zip tie the hose together with the large power steering hose you just ran.



124. Use a 15mm wrench to replace the bolts removed from the original power steering reservoir mounting bracket location. Use a torque wrench to torque to 40 ft-lbs. **Verify your torque wrench settings.**



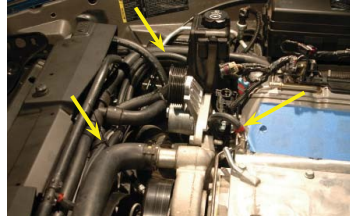
125. Remove the hose and clamp from the coolant vent "T" fitting.



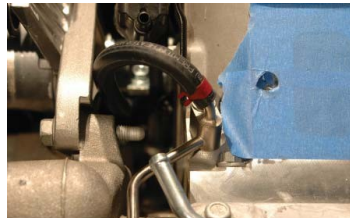
126. Connect the new 1/4" coolant hose to the coolant vent "T" fitting with a provided red clamp. Route the hose along the same path as the PS hoses to the barb on the coolant vent pipe.



127. Loosely zip tie the hoses together, pass below the power steering reservoir and up toward the coolant vent pipe.



128. Connect the hose from "T" fitting to the barb on the coolant vent pipe. Secure the hose with a red clamp provided.



129. Connect the oil pressure sensor plug to the oil pressure sensor on the factory valley cover.



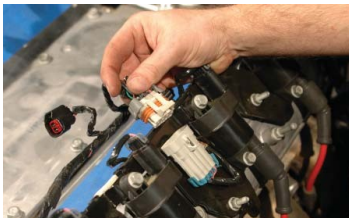
130. If your vehicle has the O2 sensor plug on the coil bracket, unplug the oxygen sensor plug from the connection on the coil bracket. If not, skip to step 133.



131. Unclip the receiving end of the oxygen sensor plug from the mounting slot on the coil bracket.



132. Disconnect the coil plug control connections from both sides of the engine.



133. Disconnect the spark plug wires from the coils.



134. Unbolt the five bolts holding the coil brackets to the valve covers using a 10mm wrench.



135. Remove the coil brackets for modification.



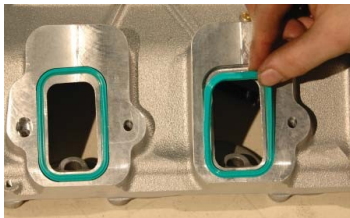
136. Use a small flathead screwdriver to un-snap the plastic wire covers and remove the covers from the coil brackets.



137. Remove the intake manifold to head gaskets from the OEM manifold.



138. Install the intake manifold gaskets into the recesses in the intake manifold "tub" grooves as shown.



139. Place a bead of the supplied Lubriplate Lubricant into the gasket groove of the "tub" to "lid" surface as shown.



140. Press the supplied gasket strip into the groove. **Be careful to not stretch the gasket.** Work the gasket into the grooves getting full coverage, and then after you're satisfied there is no stretching, cut off the remaining material.



141. Verify that the four Teflon intercooler spacing balls are seated properly in the "tub" recesses.



142. Remove the tape you placed over the intake ports on the heads.



143. Install the "tub" onto the heads over the valley cover. The IAT wires pass through the groove on the driver side head. **Ensure the wires are not being pinched between mating surfaces.**



144. Place a dab of Loctite 567 thread sealer on the ten supplied M6 x 35mm bolts. Bolt the "tub" to the heads and torque to 106 in lbs. **Verify your torque wrench settings.**



145. Place a dab of black silicone RTV at the junction of the ends of the "tub" to "lid" gasket to ensure a complete seal.



146. Carefully place the supercharger "lid" into position on the "tub". Loosely finger-tighten the two bolts at the front of the fuel rails for the moment.



147. Disconnect the two fuel cross-over fittings at the front of the fuel rails, and remove the crossover braided hose temporarily.



148. Unbolt the fuel rails using a 10mm wrench and pull the fuel rails free, the rear crossover line should still be connected. Pull the injectors out of their recesses when finished.



149. Use a dab of Blue Loctite thread sealer on the supplied "lid" to "tub" bolts and using a 10mm wrench torque the bolts to 106" lbs. Use a center-out, crisscross pattern. The second bolt from the back on the driver side is a button-head, Allen bolt. Maintain the sequence incorporating this bolt which is below the fuel rail manifold mounting location. **Do not forget the two bolts under the supercharger inlet at the front edge of the mating surfaces.**



150. Install the injectors back into their recesses. Use a small dab of the provided Lubriplate Lubricant on the O-rings to facilitate installation and ensure seal.



151. Remove the MAP sensor from the OEM manifold.



152. If your MAP sensor is the old style with the orange gasket seal, you will need to put a dab of Green Loctite 680 on the provided bushing and install in the supercharger lid as shown.



153. Place a dab of the provided Lubriplate lubricant on the gasket of the MAP sensor and insert into the hole behind the pulley on the passenger side behind the supercharger.



154. Use the provided MAP hold-down clip and the 4mm Allen head bolt to anchor the MAP sensor to the new lid.



155. Place a dab of the supplied Lubriplate lubricant on the injector O-rings and press the fuel rails back in place.



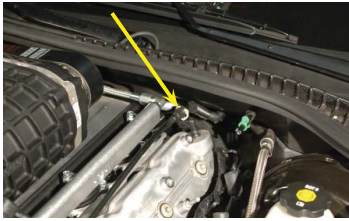
156. Replace the fuel rail hold down bolts after placing a dab of Blue Loctite on the threads and torque the bolts to 106" lbs. The back bolt on the passenger side (incorporates a spacer and Adel clamp) can be put in place for location purposes, but do not tighten at this time.



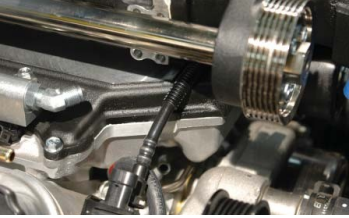
157. Use a 14mm wrench to loosen the front idler pulley under the supercharger inlet.



158. Reattach the driver side EVAP Sensor tube removed earlier to the driver side firewall barb.



159. Route the tube under the front of the supercharger inlet (where the cross-over tube was located) and plug the other end to the EVAP Sensor hose barb. Slide a piece of the provided 1/4" split-loom over the tube at the front passenger side to protect from chaffing on the mounting bolt.



160. Replace the fuel cross-over braided hose and tighten the nuts firmly using an 11/16" wrench.



161. **HELPFUL HINT:** Upon tightening the second side, the hose may want to twist. Use a med-large channel lock or pliers to carefully hold the fitting just behind the nut while you are tightening.



162. Tighten the idler pulley using a 14mm torque wrench to 40' lbs. **Verify your torque wrench settings.**



163. Place a dab of the provided Lubriplate Lubricant on the supplied O-ring and place inside the bore on the driver side fuel rail as shown.



164. Using a 10mm wrench, install the fuel manifold onto the driver side fuel rail. Torque the bolts to 106" lbs. **Verify your torque wrench settings.**



165. Remove the throttle body from the OEM manifold using a 10mm wrench.



166. Remove the OEM gasket from the groove on the OEM manifold.



167. Install the OEM O-ring gasket into the groove of the supercharger inlet.



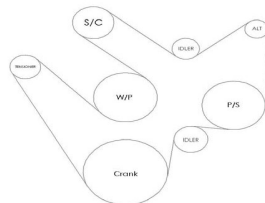
168. Install the throttle body on the new supercharger inlet. Torque the bolts to 106" lbs using a torque wrench. **Verify your torque wrench settings.**



169. Install the new supplied supercharger and accessory fan belt with a 15mm tensioner wrench, using the new supplied belt routing diagram below.



170. Belt Routing Diagram



171. Connect the eight fuel injector plugs.



172. Remove the tape off the passenger side harness to about the center bolt of the coil pack. This is to free the MAP sensor plug from the harness where it will change direction and go to the rear of the supercharger.



173. Re-tape the harness with the MAP sensor plug and wires removed to the junction of the wires near the center of the coil pack. After taping the remaining wires back up, tape the wires running to the MAP sensor plug as well.



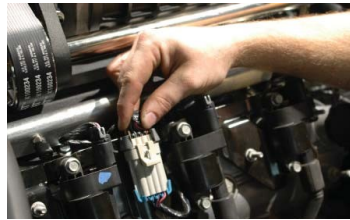
174. Route and tuck the MAP sensor wires back along the fuel rail and plug into the map sensor at the rear, passenger side of the super-charger lid.



175. Mount the modified coil packs using the stock hardware, and torque the mounting bolts to 106 in-lbs. **Verify your torque wrench settings.**



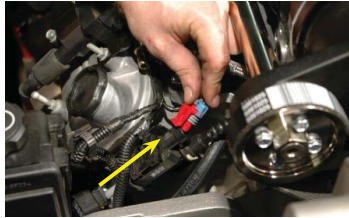
176. Plug in the main coil pack connections on both sides of the engine.



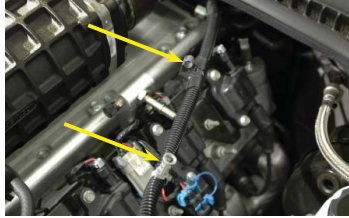
177. Connect the plug wires to the coils.



178. Connect the EVAP sensor plug to the EVAP solenoid.



179. Remove these two alternator cable mounting clamps from the wire loom. The front clamp will remain in place and be utilized.



180. Route the split-loom covered cable between the coil packs and fuel rail. Attach the final mounting post to the stock location at the front of the driver side valve cover. Attach the eye terminal to the alternator using a 13mm wrench. Replace the cover on the terminal.



181. Connect the fuel line to the supercharger fuel rail manifold barb. Test the line by pulling firmly; you should not be able to remove the fuel line without using the fuel line removal tool.



182. Install the fuel line safety clip.



183. Remove the OEM brake booster valve on the stock hose from the OEM intake manifold removed earlier.



184. Install the brake booster valve just removed on one end of the supplied 11/32" hose. Use some lubrication to help with the tight fit.



185. Plug the brake booster valve into the stock location on the brake booster canister.



186. Route the hose forward along the coil pack, cut to fit and connect to the forward barb on the supercharger inlet.



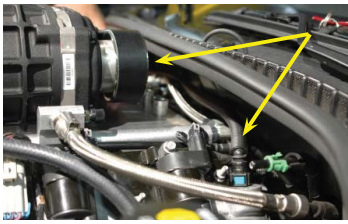
187. Cut the three fittings off the OEM PCV "T" tube removed earlier. **Be careful to not damage the fittings, but the tube will not be reused.**



188. Cut a section of the supplied 3/8" hose to 11-1/2" in length. Place the straight fitting just removed on one end, and a pass-through end of the "T" fitting on the other end. Connect the straight fitting to the rear fitting of the oil reservoir on the passenger side of the engine compartment.



189. Cut a 20-1/2" section of the 3/8" hose and connect the 45° fitting on one end. Connect the fitting to the driver side PCV barb at the rear of the valve cover and route the hose behind the passenger side of the fuel cross-over braided hose and connect to the other pass through fitting of the "T" installed in the previous step.



190. Connect the 90° fitting to the end of a 19" section of 3/8" hose. Connect the fitting to the front passenger side barb of the valve cover. Route the free end back to the remaining barb of the "T" fitting.



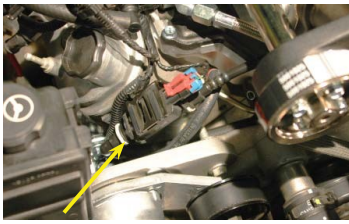
191. Remove the two fittings from the disconnected EVAP hose removed earlier using a sharp blade to split the plastic. **Be careful to not cut the fittings.**



192. Connect the 90° elbow to one end of the supplied 5/16" hose. Use the supplied black spring clamp to secure the connection.



193. Connect the 90° elbow to the bottom barb of the EVAP sensor, and route the free end of the hose under the EVAP sensor, below the supercharger inlet to the driver side of the engine.



194. Connect the other fitting removed from the OEM hose to the free end using the supplied black spring clamp and connect to the remaining EVAP barb on the driver side of the supercharger inlet as shown.



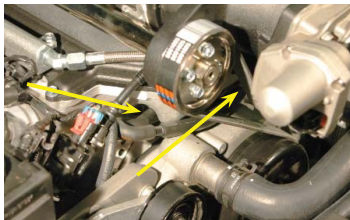
195. Locate the short "U" hose removed from the OEM manifold to the valley cover barb. One end is slightly flared and probably retains the impression of the original spring clamp. Cut 1" off this end of the hose.



196. Cut a section of 3/8" hose to 22" in length. Insert one end of a hose coupling (mender) in one end. Plug the other end of the hose coupling onto the cut end of the "U" hose you just modified as shown.



197. Plug the remaining end of the "U" hose section onto the passenger side valley cover barb. Route the hose under the supercharger inlet to the driver side of the vehicle.



198. Plug the remaining end on the other supercharger inlet hose barb as shown.



199. Zip-tie the hoses together to prevent the hoses from migrating toward the pulley and belt line.



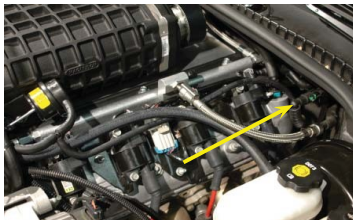
200. The bi-modal exhaust has a remaining vacuum barb at the driver side firewall. This will connect to the by-pass hose. Cut the existing by-pass hose between the valve and inlet and install a provided "T" fitting between the cut ends.



201. Remove the vacuum hose from the OEM manifold.



202. Plug the fitting onto the bi-modal exhaust barb at the firewall. Route the hose forward and connect to the remaining barb of the by-pass "T" fitting.



203. **NOTE: If your vehicle has the brake cooling duct exiting and then terminating pointing toward the rear of the vehicle just after passing through the front splash panel (as shown in this picture), follow the next three steps. If your brake cooling duct flattens and turns toward the inside of the wheel well where it is bolted, and points out toward the brake disk, skip to step #206.** Use a small flathead screwdriver to pry out the center pin and remove the eight Push-lock fasteners that secure the front splash panel as shown.



204. Remove the two 7mm bolts and one 10mm bolt that secure the passenger side end of the spoiler to the splash panel and frame with a socket wrench.

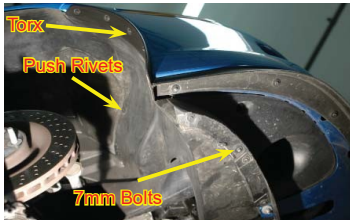


205. Remove the front driver side splash panel assembly from the vehicle. You will need to separate the pieces for re-assembly later.



206. **NOTE: For vehicles with brake cooling duct bolted to the inside of the fender well (as shown in this picture) follow the next two steps.**

To remove the fender well splash panel, there are three 7mm bolts on the bottom surface, five T-15 Torx screws on the vertical edge to the body connection, and three push rivets at the top of the splash panel that all need to be removed.



207. Use a 10mm wrench to remove the bolt at the inside surface of the fender well by the duct exiting port. Remove the push pin rivet on the front surface of the duct that connects the duct to the air inlet, and pull the brake cooling duct from the vehicle, set aside for later reinstallation.



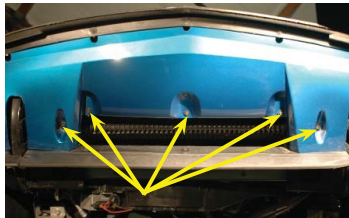
208. Squeeze the electrical connector to unplug the electrical connection from the horn assembly on the passenger side forward of the wheel well.



209. Use a 10mm wrench to remove the horn assembly from the diagonal fascia sub-frame mounting location.



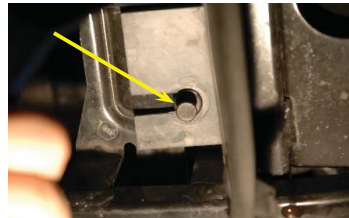
210. Remove the five 7mm bolts at the tail end of the nose cover and set aside for later re-installation.



211. **NOTE: If your vehicle has the soft rubber air deflector between the nose fascia (as shown in this picture) and the front frame cross member; there will be three 10mm bolts attaching the rear edge of the air deflector to the frame cross member that need to be removed as well.** Temporarily remove the soft rubber air deflector from the vehicle and set aside for later reinstallation.



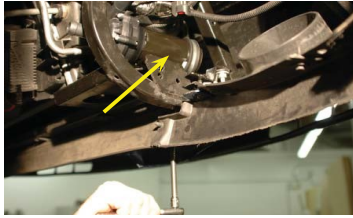
212. Remove this push rivet from the inside of the nose cover sub frame. This rivet is adjacent to the bolt removed at the recess on the passenger side of the nose cover.



213. This is the intercooler coolant pump and its mounting clamp. **Note: The plastic caps on the inlet and outlet should be removed before the hose connections are made.**



214. The pump will mount to the hole vacated by the push rivet you just removed. The discharge barb points to the passenger side fender, and the inlet toward the rear. The Adel clamp is at the end of the pump near the plug connection with the loop facing up and toward the passenger side fender. Tighten the supplied bolt and nut firmly.



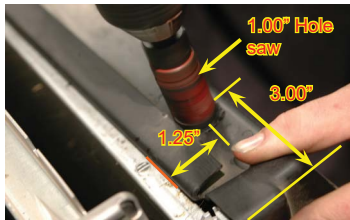
215. Start the Heat exchanger installation by applying the adhesive backed foam strip to the back side of the heat exchanger top and bottom tanks. The back side of the heat exchanger is the side without the two hose connections.



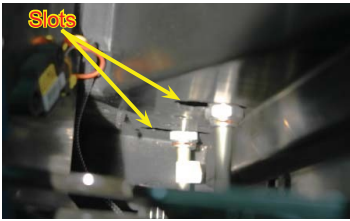
216. Apply a small piece of the foam strip to the Heat Exchanger Retaining Bracket.



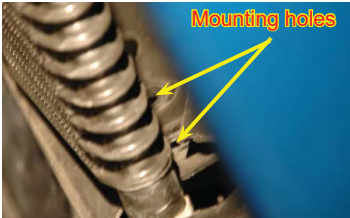
217. Using a 1" hole saw, make a hole in the top of the radiator shroud on the passenger (right) side. This will create an access hole for the coolant air-bleed valve. The radiator cowl is removed in this picture for clarity.



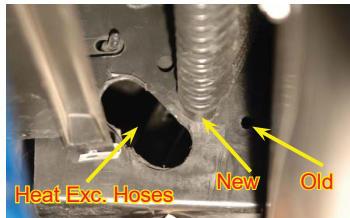
218. The existing oil cooler needs to be relocated forward approximately 1" to accommodate the new intercooler heat exchanger. Drill two 1-1/4" holes on the driver side wall from below, for the oil cooler lines to move into. These need to be parallel to the existing holes and at least 1" forward of the existing. Remove the four bolts (two each side) that mount the oil cooler to the plastic side walls. Link these holes to the existing holes (creating a slot) so that the oil cooler can be pushed forward. There are other plastic deflector pieces that will need to be modified as well to allow movement. You can just cut off the ends using a pair of snips or razor knife as necessary.



219. Once free, carefully mark and drill new mounting holes using a 3/8" bit. These holes need to be parallel to the existing holes and slots you just created; at least 1" forward of the existing mounting holes. This will be difficult to mark, but it can be done. On the driver side, if you push the hoses and cooler forward into the new location, from the sides you can mark an arc of the existing mounting bushing. Then slide the oil cooler back and make a centerline mark based on the arcs.



220. Using the existing holes as a guide, mark and drill the mounting holes on the passenger side (much easier). Drill two more 1-1/4" holes and link them together on the passenger side, below and forward from the bottom of the oil cooler as shown for the new intercooler heat exchanger hoses.



221. Install the heat exchanger by sliding it in front of the radiator. The heat exchanger will sit on the flat area immediately in front of radiator.



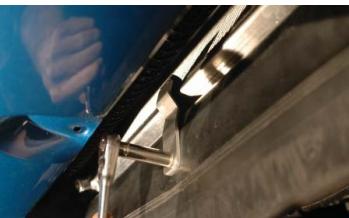
222. Move the heat exchanger around until the air-bleed valve appears in the newly created hole in the radiator shroud.



223. **NOTE: If your vehicle had the soft rubber air deflector removed in step #211, this will already be done.** If not, then now remove just the center bolt in the spoiler with a 10mm socket wrench as shown.



224. **NOTE: If your vehicle had the soft rubber air deflector removed in step #211, this will be done at a later moment.** If not, install the Heat Exchanger retaining bracket with the bolt removed in the previous step. Ensure that the foam pad is contacting the lower tank of the heat exchanger and tighten the bolt securely.



225. Assemble the intercooler reservoir and mounting bracket using the supplied 10mm bolts, tighten firmly.



226. Remove the valve cover mounting stud at the rear passenger side of the valve cover using a 10mm wrench.



227. Install the supplied spacer between the valve cover and the rear bracket mounting hole of the intercooler reservoir assembly and replace the bolt back onto the valve cover from whence it came.



228. Add the supplied nut to mount the front of the reservoir bracket to the existing stud just behind the center of the coil bracket oxygen sensor plugs. Tighten using a 10mm wrench.



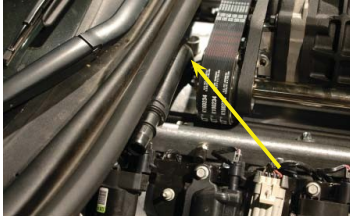
229. Cut 2" off the short end of one of the supplied $\frac{3}{4}$ " x 4" x 18" elbow hose and 12" off of the long end.



230. Install the supplied hose coupling (mender) in the long end of the remaining hose.



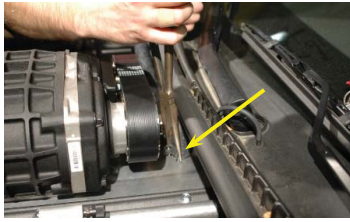
231. Install the short end of the hose you just modified to the passenger side barb of the supercharger intercooler. The hose coupling (mender) should be facing the passenger side of the vehicle.



232. Cut 2" off of the short end of the other supplied $\frac{3}{4}$ " x 4" x 18" elbow hose. Cut the long end off to fit where it will join the hose you just installed on the supercharger intercooler. Use the supplied spring clamps on the coupling end and worm gear clamps on the reservoir end and supercharger inlet end. Tighten firmly.



233. Cut 2" off the short end of one of the supplied $\frac{3}{4}$ " x 4" x 36" elbow hoses. Install this short end onto the driver side barb of the supercharger intercooler using one of the supplied worm gear clamps. Route this hose over to the passenger side and forward between the reservoir and the coil brackets.



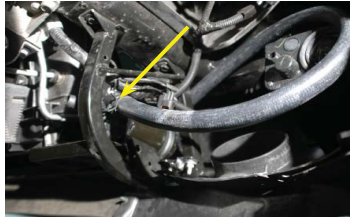
234. Place the Adel clamp around the two hoses from the supercharger intercooler and bolt to the rear passenger side fuel rail mount. The spacer goes between the clamp and the supercharger lid. Tighten the bolt to 106 in-lbs; be sure to verify your torque wrench settings.



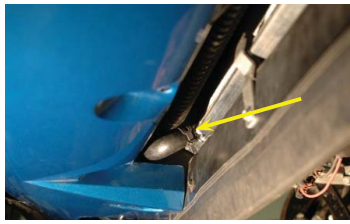
235. Cut 2" off the short end of the supplied $\frac{3}{4}$ " x 4" x 60" elbow hose. Use the supplied spring clamp to attach to the driver side barb of the heat exchanger. Mount the hose with the long end pointing toward the passenger side of the vehicle.



236. Route the hose through the holes you created in step #220, run over the turn signal enclosure and curve back to connect to the discharge barb on the intercooler pump as shown. Secure the hose with one of the supplied spring clamps.



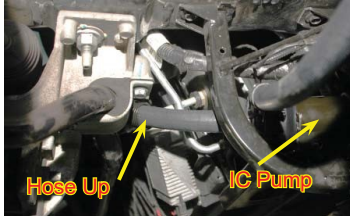
237. Cut 2" off the short end of the other supplied $\frac{3}{4}$ " x 4" x 36" elbow hose and connect to the passenger side barb on the heat exchanger using a supplied spring clamp. Route the long end of the hose through the same hole the driver side hose you just installed used.



238. After passing through the hole in the splash panel, route the hose up and into the engine compartment prior to reaching the inter-cooler pump.



239. Connect one end of the provided straight $\frac{3}{4}$ " hose to the inlet barb on the intercooler pump using a supplied spring clamp. Route the other end up and into the engine compartment as shown.



240. Cut the remaining end of the hose from the intercooler pump inlet barb to fit to the discharge barb on the intercooler reservoir. Clamp onto the barb using one of the supplied worm gear clamps.



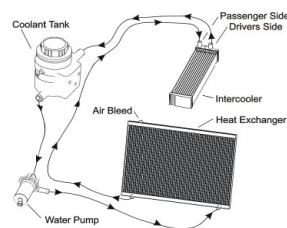
241. Route the two 3/4" x 2" x 36" elbow hoses (one from the driver side of the supercharger intercooler and one from the heat exchanger passenger side hose barb) to meet at or near the power steering reservoir. Cut the hoses to fit and join using one of the supplied hose couplings (mender) and supplied spring clamps.



242. Loosely tie your hoses together using the supplied zip ties. Inspect your hoses. At any and all possible chaffing points, cut and slide a section of the provided split loom over the hoses as protection against wear.



243. This is a plumbing diagram for the inter-cooler system.



244. Here is the intercooler pump wiring harness components. Install the supplied fuse into the fuse holder and replace the cover.



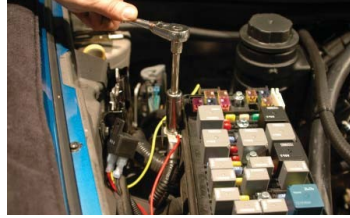
245. Open the fuse center cover on the passenger side of the engine compartment.



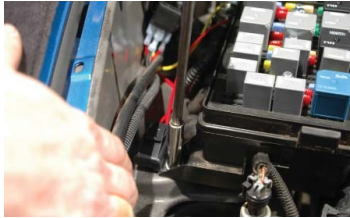
246. Use a 13mm wrench to remove the nut on the positive terminal.



247. Replace the nut incorporating the large "eye" terminal of the red wire from the fuse holder of the intercooler wiring harness and secure using the 13mm wrench.



248. Enlarge the hole of the fuse holder cap so that it will fit over the forward stud of the passenger side fender fuse center mount. Remove the mounting nut and reinstall incorporating the harness fuse holder as shown.



249. Remove the nut from the ground post by the passenger side hood shock mount near the radiator using a 10mm wrench.



250. Tuck the black ground wire from the inter-cooler pump harness into the split loom that goes to the intercooler pump connection (leave about 6" exposed). Route the split loom forward toward the hood shock mount and attach the black "eye" terminal to the existing ground stud after removing the existing nut and tighten with a 10mm wrench.



251. Use the legend on the inside of the fuse center lid to locate and remove the 10amp TCM-Trans fuse. Install the provided fuse-tap onto one leg as shown.



252. Re-install the fuse with the fuse-tap back in the original location.



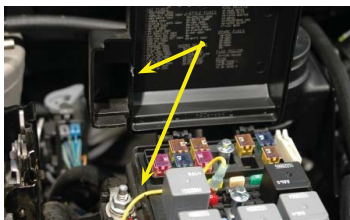
253. Strip off ¼" of the insulation from the yellow wire from the intercooler pump wiring harness and crimp on the supplied "spade" connector.



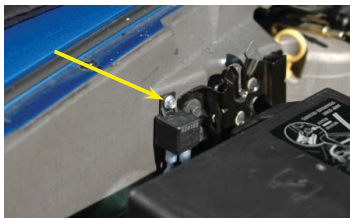
254. Plug the "spade" connector onto the fuse tap of the TCM-Trans fuse.



255. Note where the wire lays over the fuse center edges and cut notches in both the base and the cover so as to not have the wire get pinched with the lid opening and closing which could compromise the insulation.



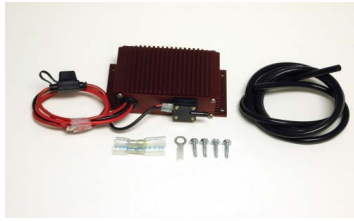
256. Use the provided self-tapping bolt to mount the relay of the harness to the sidewall by the existing fuse center as shown.



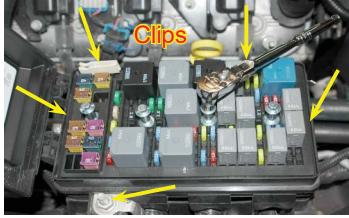
257. Route the plug end of the intercooler pump harness forward and down to the intercooler pump and connect to the terminal near the clamp on the forward end of the pump as shown.



258. Here are the Fuel Pump Booster components.



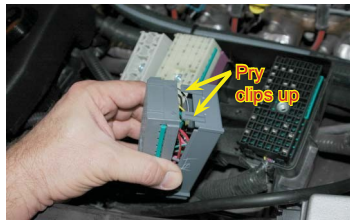
259. Open the Fuse/Relay center cover. Remove the positive (+) battery cable connection using a 13mm socket wrench. Use a 7mm socket to release the four bolts in the top of the Fuse/Relay center. These bolts cannot be removed; you will feel when the bolts no longer engage their threads. Now press the bolts down to disconnect the four wiring blocks from the bottom of the Fuse/Relay center. Detach the Fuse/Relay center from its base by gently prying open the four retaining clips shown here. Pull up firmly on the Fuse/Relay center to expose the four wiring blocks located in the base.



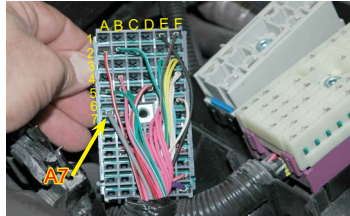
260. The four wiring blocks are different colors, light-gray, white, dark-gray, and black. Lift the DARK-GRAY block from the base.



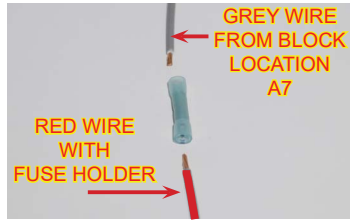
261. Gently remove the wire cover from the bottom of the DARK-GRAY wiring block by prying up on the clips that retain the cover on each end. This will expose the wire connections on the bottom of the block.



262. Here is the DARK-GRAY wiring block with the bottom cover removed showing the wiring. Note: The wire connections are lettered across the top and numbered down the side. Locate the GRAY wire in the A7 location. This is the wire we will be making connections to.



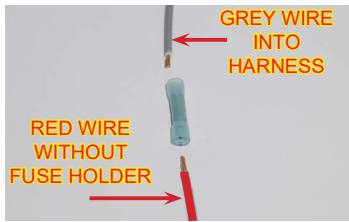
263. Locate the GRAY wire in the A7 location. Cut the wire approximately 1-1/2" from the block and strip the insulation back 1/4" from both ends. Locate the RED WIRE WITH THE FUSE HOLDER from the Fuel Pump Booster and connect it to the end of the GRAY wire on the DARK-GRAY wiring block with a crimp-shrink connector.



264. Install the crimp-shrink connector by inserting the stripped ends into the connector and crimp them securely. Using a heat gun or blow-dryer set on high, shrink the plastic covering of the connector until the plastic covering has shrunk tightly around the wires. **Crimping the connector alone is not enough; you must shrink the plastic covering!**



265. Use the same process to connect the RED WIRE WITHOUT THE FUSE HOLDER from the Fuel Pump Booster to the remaining end of the GRAY wire going into the wiring harness with a crimp-shrink connector.



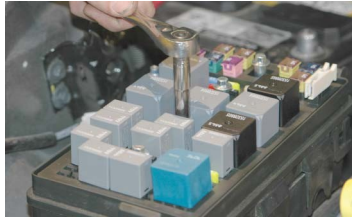
266. Locate the BLACK WIRE from the Fuel Pump Booster and strip the insulation back 1/4" from the end. Install the crimp-shrink "EYE" connector to the end of the Black Wire, crimp and shrink securely using a heat gun or hair dryer set on high.



267. Route the BLACK wire with the "eye" connectors from the Fuel Pump Booster down to the ground terminal located directly below the Fuse/Relay center base on the frame rail. Remove the nut of the ground terminal using a 10mm wrench, place the "eye" connector on the ground terminal and re-install the nut securely.



268. Once the electrical connections are made, re-connect the wiring blocks to the bottom of the Fuse/Relay center by carefully tightening the four bolts with a 7mm socket. Pass the new wires out of the base along the harness from the DARK GRAY wiring block. Snap the Fuse/Relay center back into its original location on the base.



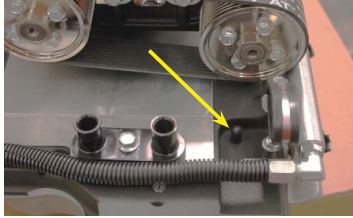
269. Replace the Fuse/Relay center cover.



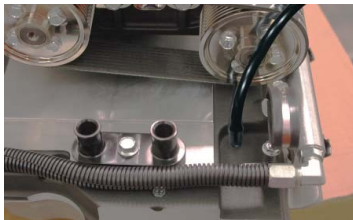
270. Use the self-tapping screws supplied to mount the fuel pump booster to the side-wall of the passenger side engine compartment wheel well.



271. These next pictures are shown "on the bench" for clarity. On the passenger side of the vehicle, behind the jack-shaft pulley at the rear of the supercharger lid, locate the pressure port capped with a small rubber cap. Remove the cap.



272. Using the hose supplied, connect one end of the hose to the pressure port barb, and route the other end to the Fuel Pump Booster by the Fuse/Relay center.



273. Connect the remaining end of the hose to the Fuel Pump Booster pressure switch. Secure the hose out of the way using the tie-wraps supplied.



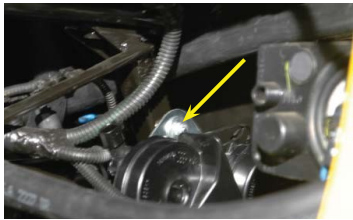
274. This is the existing position/location of the horn assembly on the mounting bracket.



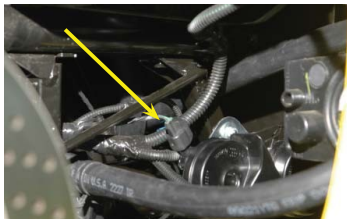
275. Remove both horns from the bracket using a 10mm wrench. And remount to the bracket as shown in this picture. The horns will now be facing forward instead of down and on the opposite side of the bracket. The horn plug will now be toward the rear and facing up.



276. The mounting hole in the bracket will need to be opened slightly to fit the new bolt. Push the provided bolt through the existing upper angled sub-frame brace hole with the threads pointing toward the fender and the bolt head toward the center of the vehicle. Add the spacer on the bolt, then the horn mounting bracket, then the nut and tighten using 10mm wrenches.



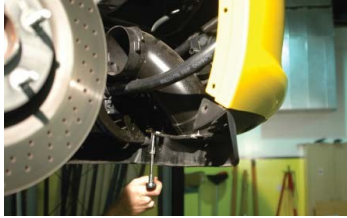
277. Reconnect the horn plug to the horn assembly.



278. Inspect your coolant hoses carefully and add sections of the provided split loom to protect the hoses from any chaffing and rubbing on hard or sharp edges.



279. **NOTE: If your brake cooling duct flattens and turns toward the inside of the wheel well where it is bolted, and points out toward the brake disk, skip to step #283.** For other vehicles, if you haven't done so yet, separate the wheel well splash shield and the brake cooling duct/spoiler from each other. Route the brake cooling duct over the intercooler pump discharge barb, engage all slots of the spoiler and reattach to body panels using all the stock hardware.



280. Attach the fender well splash shield, twisting to lock the brake cooling duct back into position and fasten using all the original hardware and locations. This includes push pin rivets and bolts.



281. Re-attach the nose fascia at the bottom using all the stock fasteners, tighten securely.



282. Bolt the brake cooling duct back to the original location in the wheel well using the stock hardware, and insert the push pin rivet back in the front to cowl splash shield location.



283. Install the fender well splash shield using all the stock fasteners (this is a reversal of steps 206-207).



284. **NOTE: For vehicles with the soft rubber air deflector follow the next four steps.** If your nose fascia was attached in step #281, skip to step #288. Re-attach the underside ends of the nose fascia as shown using the two outside 7mm bolts, tighten securely.



285. Use the three stock 7mm bolts to secure the remaining (center) nose fascia locations, incorporating the soft rubber air deflector removed in step #211 as shown.



286. This shows the center spoiler mounting hole which will be the location of the heat exchanger mounting bracket. We will incorporate this bracket with the re-attaching of the back edge of the soft rubber air deflector.



287. Use the remaining three 10mm bolts to attach the frame end of the soft rubber air deflector incorporating the heat exchanger mounting bracket in the center hole. Ensure that the foam pad of the bracket is contacting the lower tank of the heat exchanger and tighten the bolt securely.



288. Place a strip of light colored tape on the driver side of the upper grooves in the splash shield/air deflector in front of the radiator/heat exchanger as shown.



289. Assemble the new air box using the stock "bellows" on the throttle body end, and the provided screws and spacers with the provided air filter on the intake end. The spacers go between the air filter and the air box. Remove the MAF sensor from the OEM air box and attach to the new air box location. It's important to ensure that the gasket is properly seated to avoid leakage. This is the completed air box assembly. Note the spacers between the air box and the air filter.



290. Remove the three grommet-post-push pin rivets from the radiator cover by prying the center "nail" up after pulling the grommets off. Then remove the rivets by pulling them out.



291. Insert two of the push pin rivets into the existing 1/4" holes in the bottom of the new air-box stand-off mounts. Push the "nails" back in locking the rivets in place.



292. Push the bellows end of the air box onto the throttle body and loosely tighten the clamp.



293. Use a sharp pencil or pen to mark around the strike of the push pin rivet mounting posts onto the light tape (you placed on the splash shield/air deflector earlier). **Be careful to not move the air box between marking each side of the air box push-pin mounting posts or installation will be difficult.**



294. Remove the bellows and air box, use an awl or center punch to mark through the tape onto the splash shield/air deflector.



295. Use a 5/8" bit with an assistant holding a backing board behind the splash shield/air deflector to drill the two holes you just marked. You need to be careful, because a standard bit will bite through the plastic and pull the drill motor and bit into the heat exchanger close behind the splash shield. A Forstner bit or hole-saw may work, but in any case, use extreme care to not damage the heat exchanger and radiator.



296. Insert two of the grommets you removed from the radiator cover into the 5/8" holes you just drilled.



297. Attach the air bellows of the air box assembly back onto the throttle body and tighten using a flathead screwdriver or 8mm nut driver. Tighten firmly in position.



298. Press the push pin rivets of the air box assembly into the grommets you just installed. They should pop right in and lock the air box in position. Removal just requires a firm tug on the air box when you need to change the filter.



299. Remove the stock fittings from the OEM bellows to oil reservoir tube.



300. Cut a section of 3/8" hose to 52" in length. Press the fittings just removed onto the ends of the hose.



301. Connect the right angle end on the bellows barb. Route the hose down and back following the intercooler hoses, around the intercooler reservoir, and plug onto the remaining oil reservoir hose barb.



302. Connect the supplied throttle body cable extension to the OEM throttle body harness plug.



303. Route the other end of the harness extension under the power steering reservoir along the radiator and connect to the throttle body.



304. Zip-tie the wire extension to the existing hoses to keep the wiring free from the belt line.



305. Plug the provided extension harness onto the end of the OEM MAF plug. Plug the new MAF terminal into the MAF sensor plug. Plug the IAT from the new harness into the IAT plug exiting below the supercharger "tub" on the driver side near the by-pass valve. Tuck any excess wires as necessary and secure using zip-ties.



306. Replace the computer connectors in their original positions, making sure to lock them in place by pushing the grey levers towards the harness. Secure the connectors by inserting the red lock keys in position.



307. Re-install the computer on the mounting bracket using the original fastener and a 10mm socket wrench.



308. Replace the rear fender well splash shield using the original hardware. Slide the top tab in place first, and press in the mounting clips carefully working your way down.



309. Re-install the road wheel and torque the lug nuts to 110 Ft-Lbs.



310. Fill the power steering reservoir at this time using GM approved fluid.



311. Fill the radiator reservoir with a 50:50 mixture of purified water and GM approved engine coolant only. After the initial start-up and the engine has come to operating temperature, recheck the fluid level in the reservoir and all the hose connections.



312. Fill the intercooler reservoir with a 50:50 mixture of purified water and GM approved engine coolant only. The intercooler system will hold approximately 6 quarts of liquid. Fill the reservoir until the fluid level comes to about one and a quarter inch from the top edge of the filler neck.



313. Using a straight blade screwdriver. Open the bleed valve to let any trapped air escape from the intercooler system. Some coolant will be lost when bleeding the system. Add coolant as necessary to the reservoir and continue to bleed the system until you can get a steady stream of coolant from the valve for over one minute. Check the intercooler reservoir level and re-open the bleed valve as needed.



314. Affix the Premium Fuel Only decal on the inside of the fuel fill door.



315. Affix the belt routing diagram to the radiator cover.



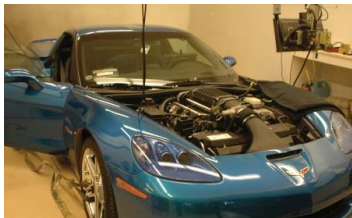
316. Affix the OBDII port cover on the OBDII port at the driver side below the dash. Clip the cover ring on an adjacent wire to keep it local.



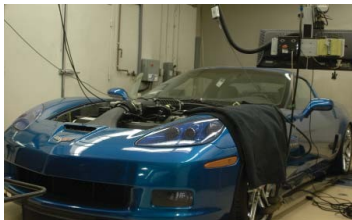
317. Reconnect the battery negative (-) terminal in the trunk using a 10mm wrench. Replace the cover.



318. Start the vehicle for 5 seconds and shut off, once again check for fuel leaks and supercharger belt alignment. Check radiator and intercooler reservoir levels. Test drive vehicle for the first few miles under normal driving conditions, listen for any noises, vibrations, engine miss fire or anything that does not seem normal. The supercharger does have a slight whining noise under boost conditions, which is normal. After the initial start up and the engine has come to operating temperature, recheck the coolant level in the intercooler reservoir and open the valve again to bleed any residual air trapped in the system. Check all the hose connections.



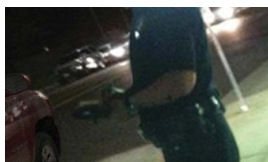
319. After the initial test drive gradually work the vehicle to wide open throttle runs, listen for any engine detonation (pinging). If engine detonation is present let up on the throttle immediately. Most detonation is caused by octane gasoline still in the tank. Premium fuel must be used.



320. Mount your new hood using a 13mm wrench and tighten securely testing the fit and alignment. ENJOY!



If you have questions about your vehicles performance, please check with your installation facility or call Magnuson Products at (805) 289-0044, Monday through Friday, 8am to 5pm.



Please enjoy your "Magna Charged" performance responsibly.

Now might be a good time to start thinking about that radar-laser detector!

*** PREMIUM FUEL REQUIRED ***

MAGNUSON
SUPERCHARGERS