



Installation Instructions for:
INTERCOOLED SUPERCHARGER SYSTEM
2005-2006 PONTIAC GTO LS2



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

Magnuson Products Inc
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INSTALLATION MANUAL
Magna Charger
GM 6.0 LS2 Liter Engines,
2005 and later Pontiac GTO

Please take a few moments to review this manual thoroughly before you begin work, as there are special steps for both the LS1 (2004) and LS2 (2005-on) equipped vehicles: Make quick parts check to make certain your kit is complete (see shipper parts list in this package). 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 fittings 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.

Magna Charger systems are manufactured to produce about 20 RWHP per pound of boost at sea level. High altitudes will produce different 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, for which we are not responsible. Magna Charger is not responsible for the engine or consequential damages.

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-Magna Charger approved programming will void all warranties. If you have any questions, call us.

After you finish your 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
Drive belt = Gates# K061010
Air Filter = K&N# 33-2289

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
Phillips and flat head screwdrivers
Fuel line quick disconnect tools (included in kit)
Small or angled 3/8 drill motor
Drain pan
Hose cutters
Hose clamp pliers
Safety glasses
Metric Allen socket set 3/8 drive
Shop vacuum cleaner

Contact information:
Magnuson Products Inc
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1990 Knoll Drive
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Sales/Tech support 805-289-0044
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info@magnacharger.com

1. Open the hood and remove the under hood insulation by prying out the seven plastic buttons that retain it. The insulation will not be reused.



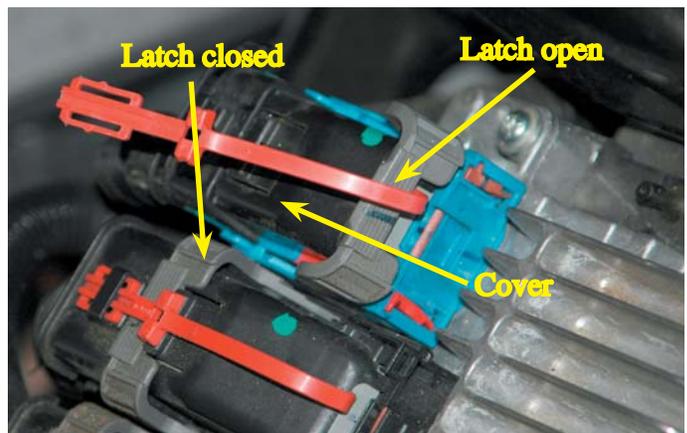
2. Disconnecting the negative (-) and then the positive (+) battery clamps with a 13mm wrench. Next, remove the the battery anchor and the battery itself.



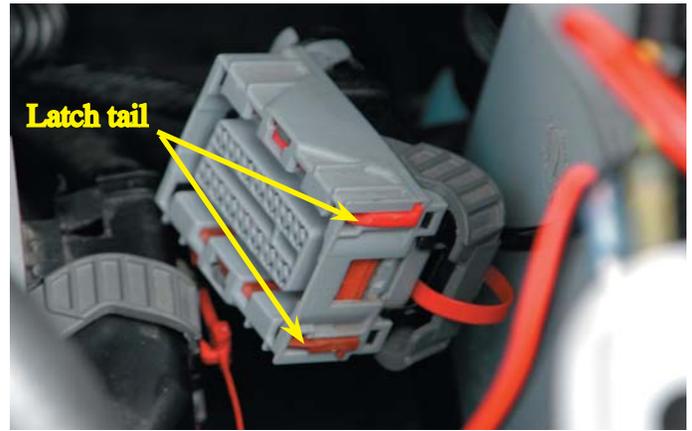
3. Locate the vehicles computer on the front surface of the driver side wheel well.



4. There are three computer connectors, Grey, Black and Blue. Remove the connectors by first removing the Red locking key, then pushing in on the Black cover and pushing the Grey latch down to open it.



5. The computer connectors can be removed when the latch is pushed down and the red tail of the latch is visible on the end of the connector.



6. Remove the two T20 TORX screws that secure the computer to its mounting bracket.



7. Remove the computer carefully from the vehicle.



8. Here are the shipping materials supplied to quickly return the vehicle computer to Magnuson Products Inc.



9. Place the computer into the plastic bag supplied and then wrap it in the bubble-pack sheet and seal the box.



10. 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 inc. Magnuson will then re-program the computer and quickly return it to you via UPS.



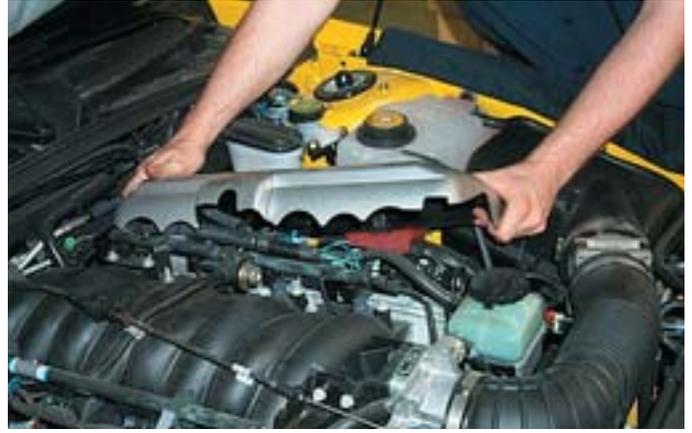
11. On top of each shock tower remove the two nuts that secure the strut tower brace with a 13mm socket wrench.



12. Remove the strut tower brace and fasteners from the vehicle, the brace can be reinstalled after the supercharger installation.



13. Remove the two engine covers by pulling up firmly along the edges.



14. Loosen the Air Tube clamp at the Mass Air Flow meter. (MAF)



15. Loosen the Air Tube clamp at the throttle body.



16. Remove the PCV tube from the air tube and from where it connects to the valve cover barb.



17. Remove the air tube completely, it will not be re-used.



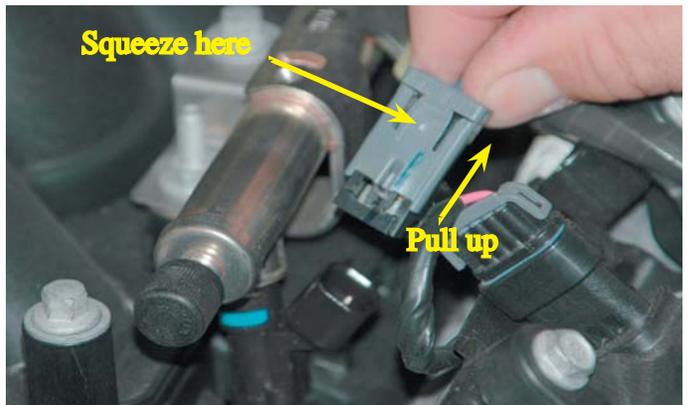
18. Disconnect the Electronic Throttle Control (ETC) connector on the right side.



19. Remove the PCV hose that connects the intake manifold to the engine valley cover vent.



20. Disconnect the eight fuel injector connectors by pulling up on the grey release latches and the squeezing them at the top. Remove the injector harness clips from the intake manifold.



21. At the front of the intake manifold locate the Manifold Absolute Pressure (MAP) sensor and disconnect the electrical connector.-



22. On both sides of the engine disconnect the ignition coil pack connectors from the coil packs by first removing the blue lock key.



23. The EVAP is located at the front of the passenger (Right) cylinder head.



24. Disconnect the Evaporative Purge Solenoid (EVAP) electrical connector.



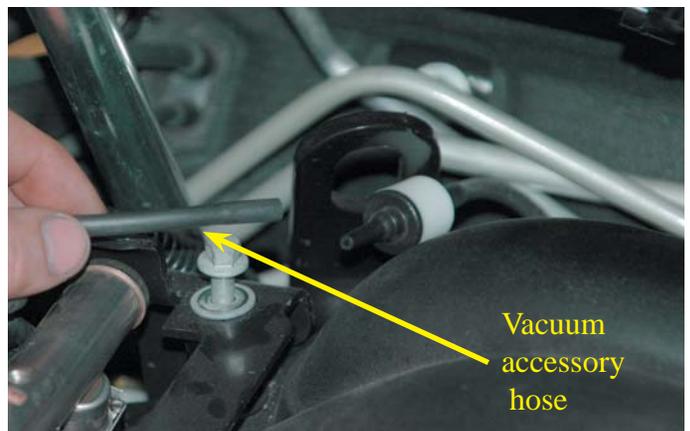
25. Remove the EVAP line at the firewall by squeezing on the connector and pulling it free.



26. Remove the EVAP tube connector from the intake manifold by pushing in on the white release trigger and pulling firmly.

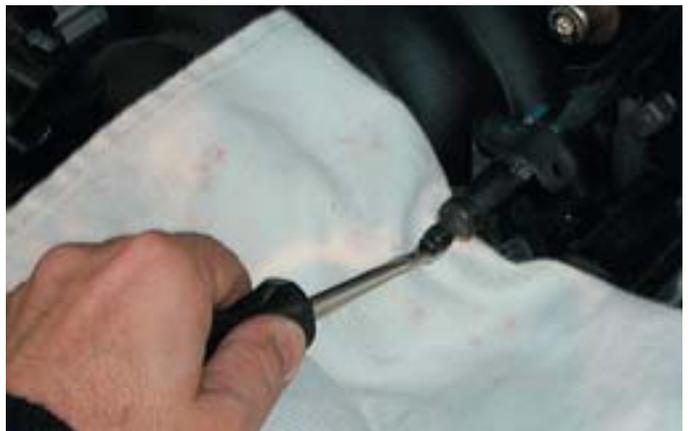


27. Remove the vacuum accessory hose and connector from the rear of the manifold.

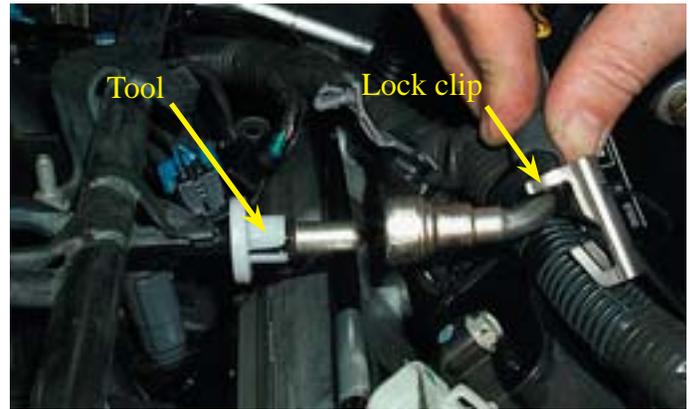


28. On the left side of the intake manifold, locate the fuel pressure test port.

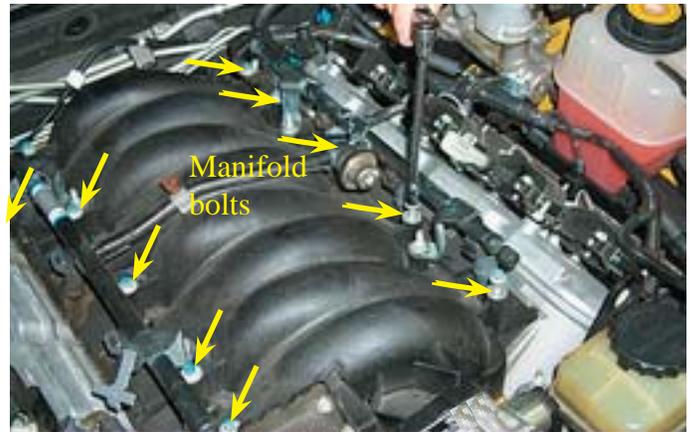
CAUTION! The fuel in the system is under pressure! Relieve the pressure in the fuel system by removing the cap and depressing the check valve with a screwdriver and collecting the fuel with a shop towel.



29. Remove the fuel line from the fuel rail by first prying the lock clip free with a small screwdriver. Use the supplied removal tool to remove the fuel line connector.



30.. Remove the intake manifold by loosening the ten manifold bolts with a socket wrench and a 8mm socket.



31. Remove the intake manifold, fuel system and throttle body assembly.



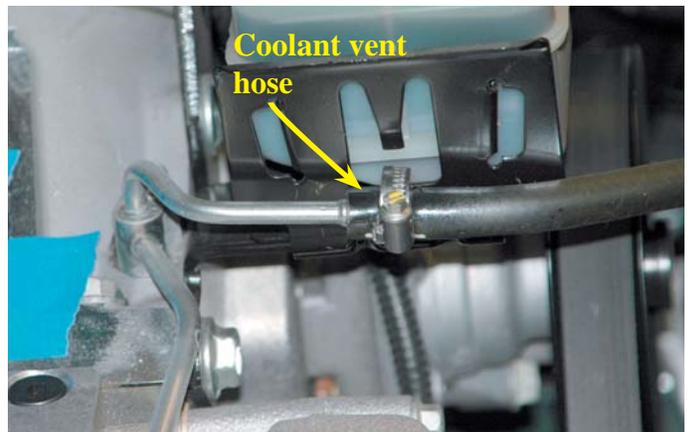
32. Use a shop vacuum cleaner to remove any debris or dirt from the intake port area and engine valley cover.



33. Cover the intake ports with tape or clean rags to keep dirt and debris from entering the engine.



34. Remove the coolant vent hose from the vent pipe.



35. Remove the coolant vent pipe by removing the attachment bolts with a 10mm socket wrench.



36. Remove the coolant vent pipe. 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.



37. Install the new vent pipe O-ring gaskets using the supplied grease to hold them in place.



38. Install the new vent pipe with the supplied bolts and torque them with a torque wrench and 10mm socket to 106 in-lbs.



39. Remove the accessory serpentine belt by rotating the tensioner bolt with a 15mm wrench. Release the slack and then pull the belt off the tensioner pulley.



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



41. Install the new tensioner assembly in place of the stock unit with the supplied bolts and torque them to 40 ft-lbs.



42. Remove the engine oil pressure sensor connector from the pressure sensor located at the rear of the valley cover.



43. Remove the engine oil pressure sensor from the valley cover with a 28mm wrench.



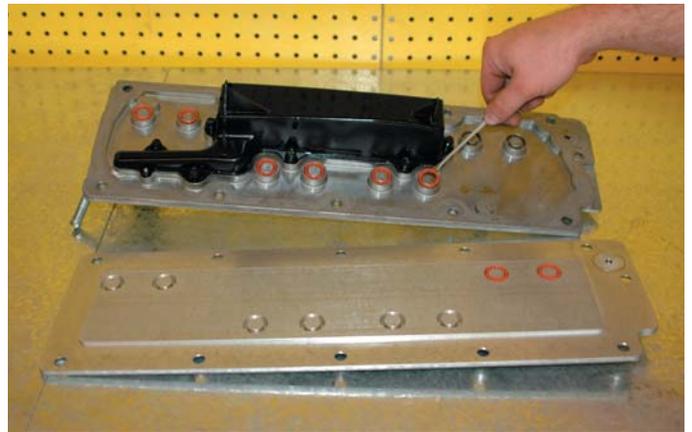
44. Remove the engine valley cover and gasket by removing the ten bolts with a ratchet and 13mm socket.



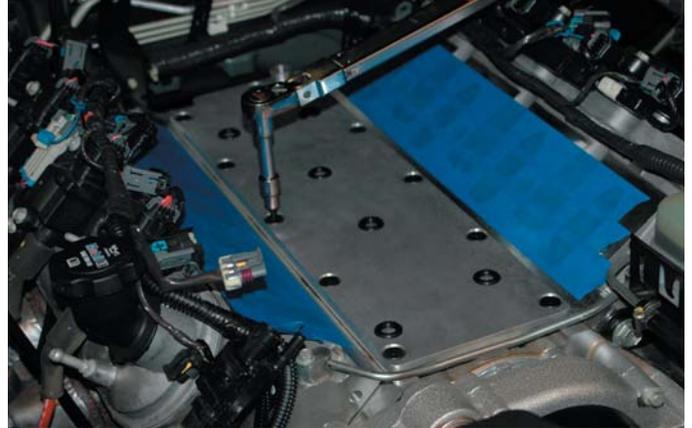
45. The gasket will be reused, the original valley cover and bolts will not. Inspect the gasket for any damage and then reinstall, note that it will only fit correctly in one position.



46. Using a small straight blade screwdriver, remove the 8 O-rings from the underside of the engine valley cover and transfer them to the grooves in the bottom of the new cover.



47.. Install the new engine valley cover and flathead bolts supplied with a 5mm Allen socket and torque the bolts to 18 lb-ft. Insert the six O-rings in the recesses in the new valley cover.



48. Install the Oil Pressure Transmitter in the new valley cover with a 26mm socket and torque it to 18 lb-ft.



49.. Re-connect the oil pressure transmitter electrical connector.



50. Re-install the oil pressure sensor and torque it to 15 ft-lbs. Re-attach the sensor electrical connector.



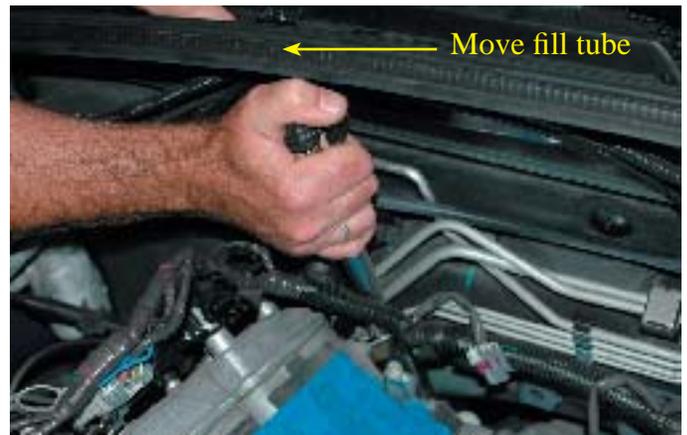
51. Remove the engine lift bracket from the rear of the right cylinder head by removing its two mounting bolts with a 15mm wrench.



52. The automatic transmission fill tube will need to be moved slightly outward to avoid contact with the supercharger fuel cross-over pipe.



53. **Vehicles with automatic transmission only.** **Manual transmission vehicles please skip to step the next.** Move the automatic transmission fill tube by pulling it firmly outward towards the fender of the vehicle. It will only be necessary to move the tube 1/4"- 3/8". After installing the supercharger and manifold assembly, check for contact between the fill tube and the fuel cross-over pipe.



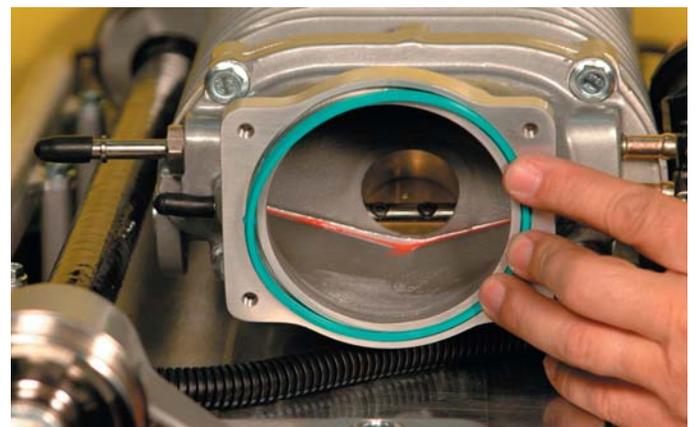
54. Remove the throttle body by removing the four mounting bolts with a 10mm socket wrench.



55. Carefully remove the original O-ring behind the throttle body on the original intake manifold.



56. Install the throttle body O-ring into the groove on the new inlet manifold. The LS2 throttlebody will be installed after the supercharger assembly is installed on the engine.



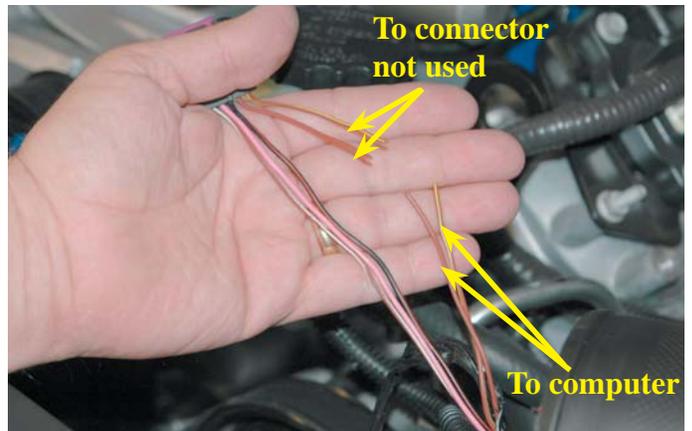
57. Remove the MAF from the airbox by loosening the connector clamp.



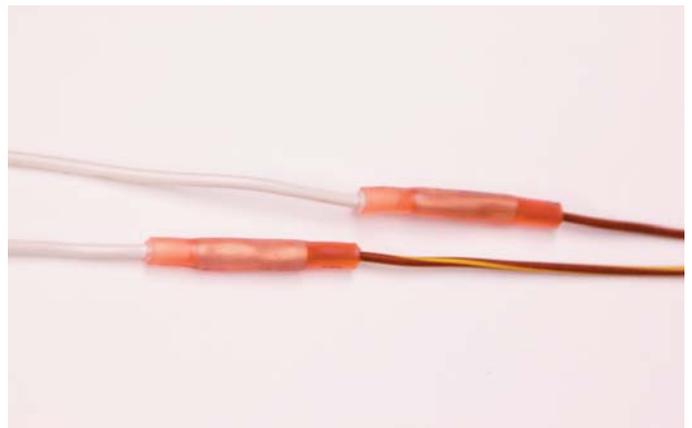
58. Pull back the grey locking latch on the MAF electrical connector and then squeeze the connector to remove it.



59. Remove the tape and split loom from the harness to about 6" below the MAF connector. Locate the Brown/Yellow and the solid Brown wires. These are the Intake Air Temperature (IAT) sensor wires on the connector. Cut these two wires approximately 2" below the connector.



60. Using the four crimp/shrink connectors and the two pieces of 63" long white wire supplied, extend the IAT wires that run to the vehicles computer. **The two wires to the MAF CONNECTOR will no longer be used.** Strip about 1/4" of insulation from the ends of the **BROWN/YELLOW** and **SOLID BROWN** wires to the computer and crimp the connectors on. Using a heat gun or blow dryer set on **HIGH**; shrink the insulation on the connectors so that it contracts around the wires completely. **You must shrink the insulation, as crimping the connectors alone is not enough to secure them!**



61. Using the new Intake Air Temperature (IAT) harness and crimp/shrink connectors supplied, connect the white 62" wires to either white wire of the new IAT harness. Strip about 1/4" of insulation from the ends of the IAT harness, then crimp the connectors on. Using a heat gun or blow dryer set on HIGH; shrink the insulation on the connectors so that it contracts around the wires completely. You must shrink the insulation, as crimping the connectors alone is not enough to secure them!



62. When you are finished cover the wires and connectors with the piece of split loom supplied. Route the new extended harness with the tie straps supplied along the vehicle harness to the firewall and over to the rear of the right (passenger) side cylinder head. You will be instructed to connect the harness to a new IAT sensor in a later step. Replace the MAF and tighten its mounting clamp securely. Re-install the MAF electrical connector.



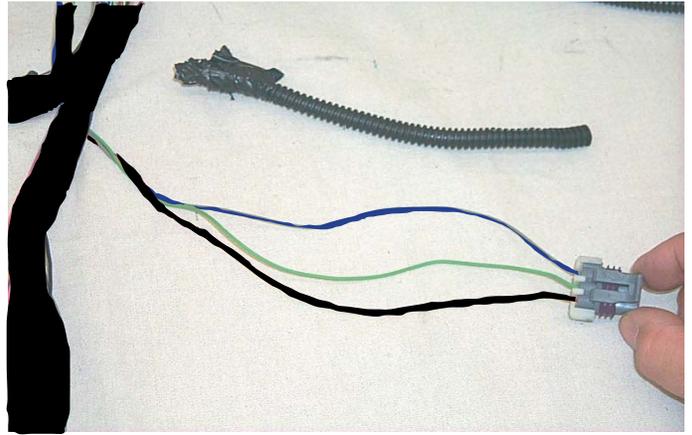
63. Install the IAT sensor (supplied for LS2) into its location at the right rear corner of the supercharger manifold. (Fuel rail and injector removed for clarity.) Apply a small amount of the supplied grease to the body of the sensor. Lift the manifold bolt and retaining bracket to slide the IAT sensor into the mounting grommet.



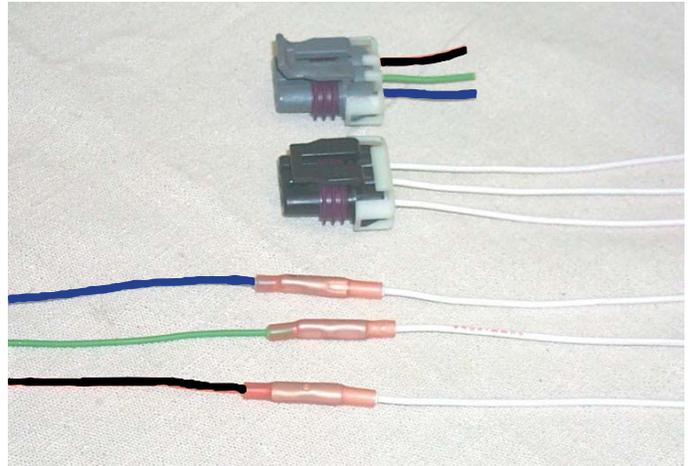
64. Push the IAT sensor down firmly into location.



65. Locate the MAP connector on the harness. Remove the black tape and split loom from the MAP connector and wires. Viewing the connector from the top or clip side note the location and colors of the three wires on the connector, Purple/White left, Green center and Black on the right. Approximately 1" behind the connector cut these three wires.



66. Install the new MAP harness to the Purple/White, Green and Black wires using the crimp/shrink connectors supplied. The new harness wires are all white, so care must be taken so the new white wires are in the same positions as the colored wires on the original connector. Strip about 1/4" of insulation from the ends of all the wires. Crimp the connectors on and shrink the insulation so that it contracts around the wires completely.



67. Remove the Manifold Absolute Pressure (MAP) sensor from the stock intake manifold by tilting the sensor forward and lifting it free. Ensure that the orange rubber seal is not missing or damaged as it and the sensor will be re-used.



68.. Apply a small amount of the grease supplied to the MAP sensor seal and install the sensor in its new location at the right rear of the supercharger manifold.



69. Install the MAP sensor in its new location using the supplied bracket and the button head Allen screw with a 4mm Allen wrench.



70. Install the fuel manifold O-ring into the recess on the fuel rail with some of the grease supplied. Next install the fuel manifold using a 4mm Allen socket and torque wrench. Torque the manifold fasteners to 106in-lbs.



71. Install the two intake manifold gaskets supplied onto the recesses in the manifold face. Ensure that the gaskets are fully seated in recesses.



72. Remove the tape from the ports. Use silicone or some mild soap and water solution to lubricate the port surfaces. This will help align the manifold and bolt holes. (Do not use anything that will damage the silicone port gaskets.)



73. With the help of a assistant carefully set the supercharger and manifold assembly in place. **Do not** use the black plastic bypass cannister as a lifting point. This is *pre-set* from the factory and can be damaged if you lift with it.



74. Remove the split-looms that support some of the manifold to cylinder head bolts. Start all ten bolts by hand to ensure proper alignment of the manifold.



75. Torque all ten bolts that secure the manifold to the cylinder heads gradually and evenly to a torque of 89 in-lbs. Use a 10mm socket and torque wrench.



76. Install the throttle body onto the new inlet manifold with the original mounting bolts. torque the mounting bolts to 106 in-lbs.



77. Ensure that there is clearance between the transmission fill tube and the fuel cross-over pipe.



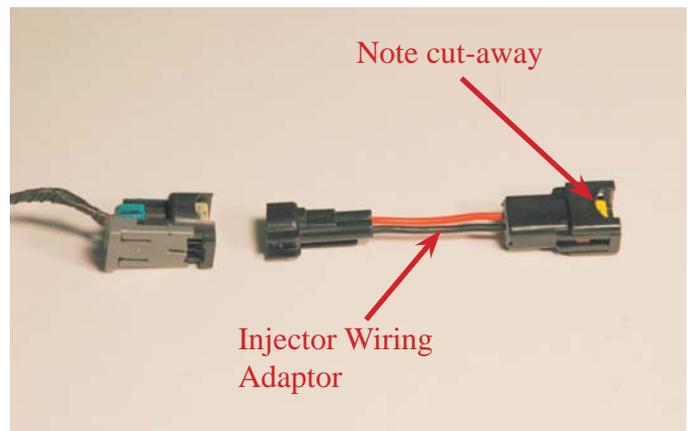
78. Install the coil pack connectors and blue lock keys on both sides of the engine.



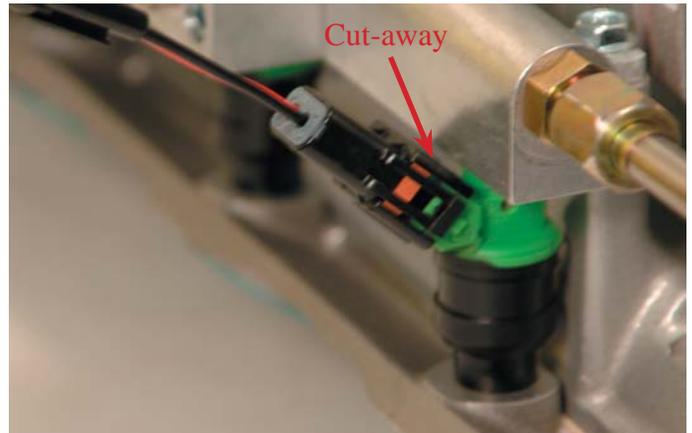
79. At the rear of the supercharger on the passenger side, plug in the new MAP and IAT connections.



80. Install the eight Injector Wiring Adaptors on to the harness fuel injectors connectors.



81. Install the Injector Wiring Adaptors on all eight fuel injectors. Note that the cut-away side of the connector goes towards the top of the injector.



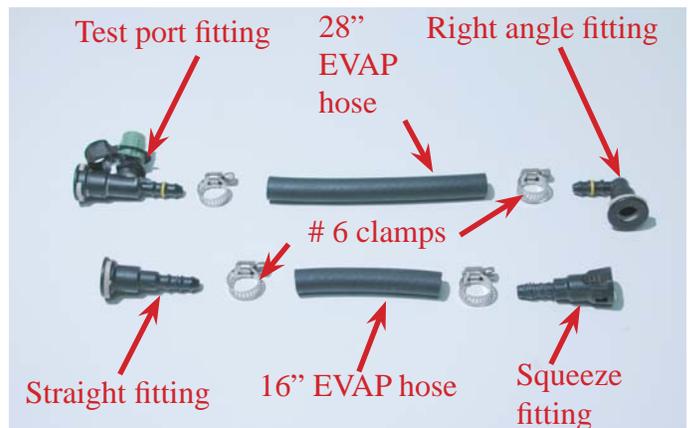
82. Locate the two hard plastic EVAP lines previously removed.



83. Using a sharp shop knife, cut the hard plastic tube where it covers the the barbed end of the EVAP fittings. Take care not to damage the fittings as they will be reused.



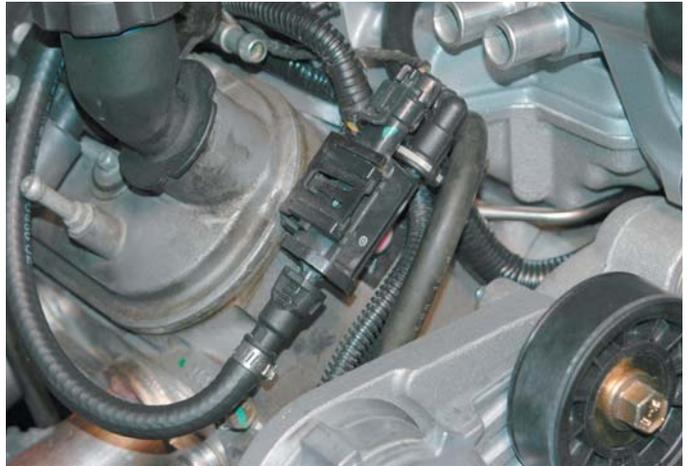
84. Using the piece of 5/16" EVAP hose supplied cut it into two pieces. One piece 18" long and the other 36" long. (The hoses are shown shorter for clarity) Starting with the longer of the two, assemble the hose with the test port on one end and the right angle on the other using the #6 clamps supplied. On the remaining hose, assemble it with the straight fitting, squeeze fitting and clamps.



85. Connect the long EVAP hose with the Test port fitting to the fire wall connection. Route the the other end of the hose forward between the driver side coil pack and the fuel rail. Pass the hose under the inlet maifold and supercharger drive to the EVAP purge solenoid.



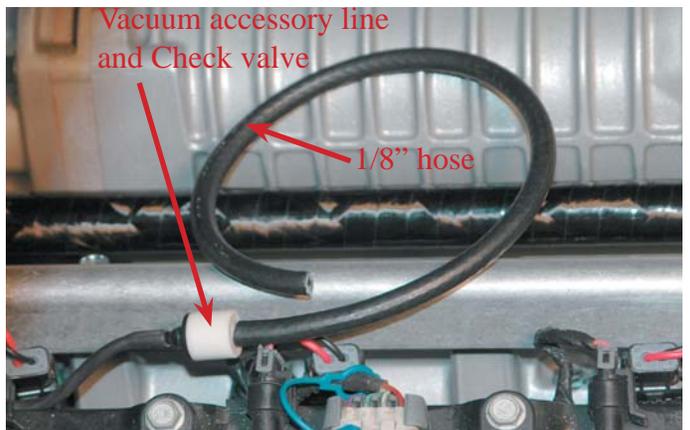
86. Re-connect the Purge solenoid electrical connection, then install the right angle fitting of the long EVAP hose to the top connection of the Purge solenoid. Connect the squeeze fitting of the shorter EVAP hose to the lower connection of the solenoid,.



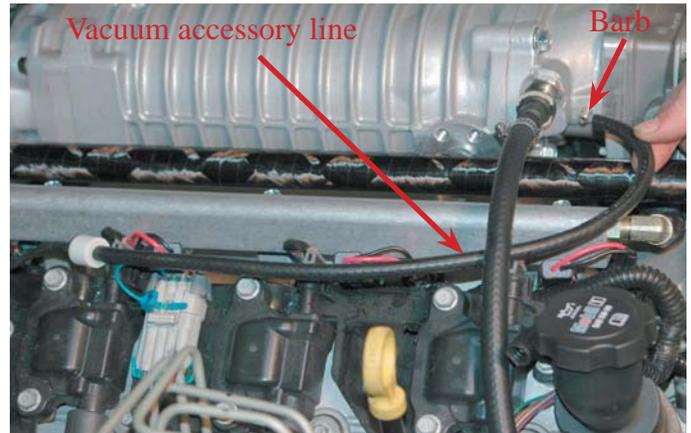
87. Connect the remaining end of the short EVAP hose to the fitting on the passenger (left) side of the inlet manifold above the supercharger drive shaft.



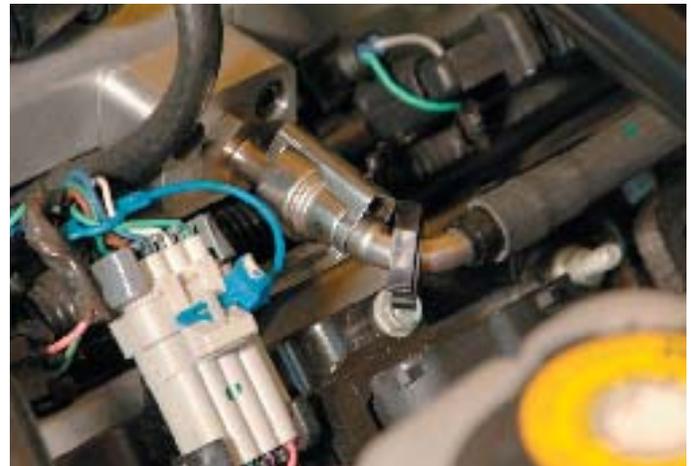
88. Locate the Vacuum accessory line at the fire wall and install the length of 1/8 hose supplied onto the end of the check valve.



89. Connect the new vacuum accessory line to the small barb on the left side of the inlet manifold.



90. Connect the fuel line to the fitting on the fuel manifold and secure it with the lock clip.



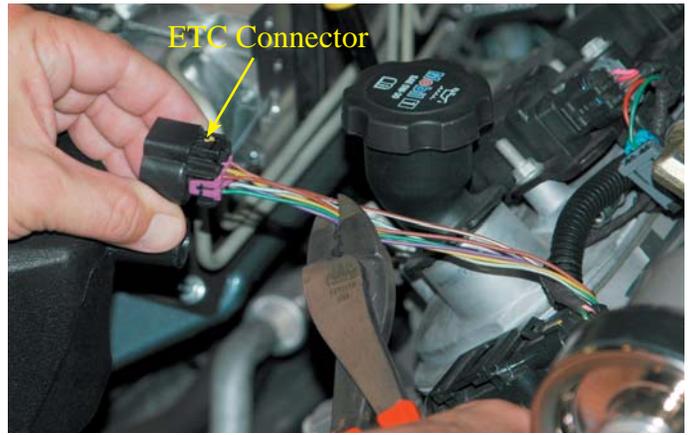
91. Unclip the steam vent line from the back of the electric cooling fan shroud.



92. Route the vent line down under the tensioner mounting bracket to the steam vent pipe barb. Trim the vent hose to length and attach it to the vent pipe barb.



93. Remove the tape and split loom from the harness to about 6" below the Electric Throttle Control (ETC) connector. Cut all these wires approximately 2" below the connector.



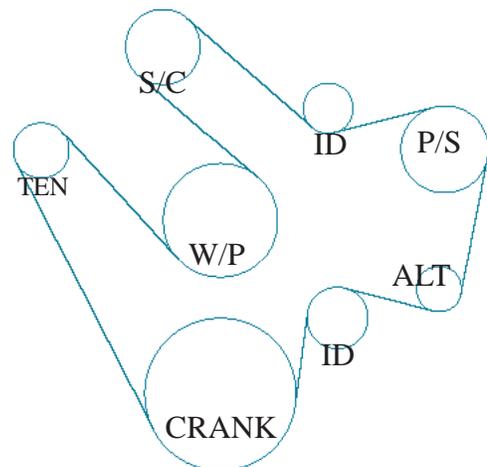
94. Using the color coded lengths of wire and crimp/shrink connectors supplied, extend the six throttle body connector wires. Be sure to correctly match the extension wire color to the harness and at the throttle body connector. Strip about 1/4" of insulation from the ends of all the wires. Crimp the connectors on and shrink the insulation so that it contracts around the wires completely.



95. Cover the extended ETC harness with the new split loom. route the extended harness under the throttle body and install the connector onto the throttle body



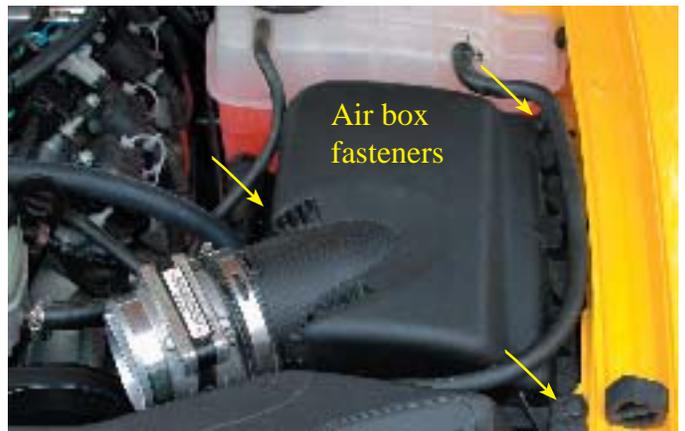
96. Here is the new accessory drive belt routing diagram.



97. Using a long 15mm wrench to compress the tensioner, install the new belt using the diagram above.



98. Unclip the small coolant hose from the top of the air box. Unscrew the three cross-head fasteners that secure the airbox cover with a cross head screwdriver and set the cover to one side.



99. Remove the stock air filter element and discard it.



100. Replace the stock filter element with the K&N air filter element supplied.



101.. Replace the air box cover, tighten the three fasteners and place the K&N “Warning” label on the cover.



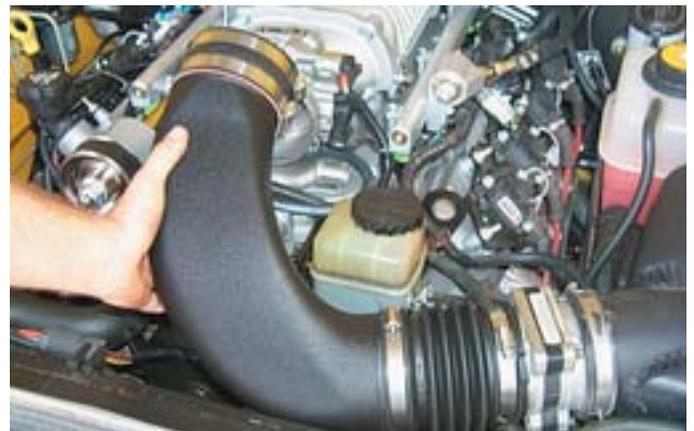
102. Here is the new air tube and mounting components.



103.. Install the hose connector and bellows on the air tube with the clamps supplied.



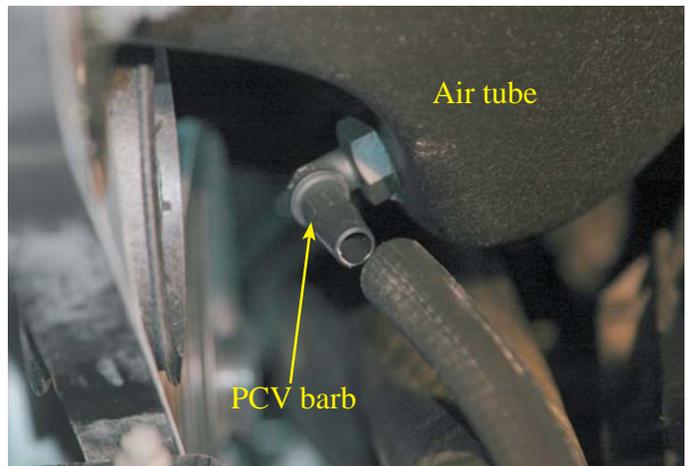
104.. Attach the bellows end of the air tube on the air meter.



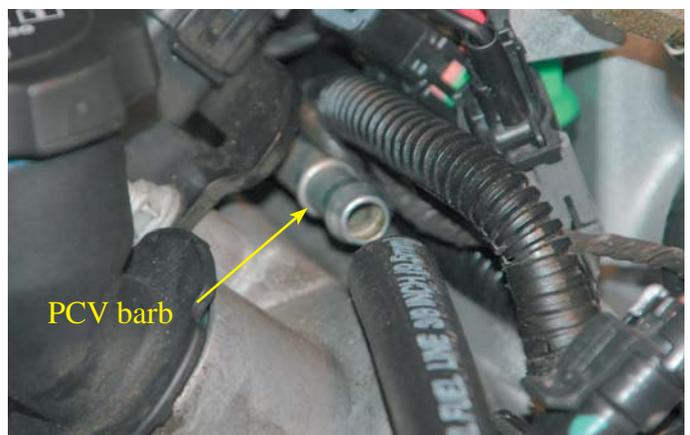
105. Attach the hose end of the air tube to the throttle body. Tighten all clamps securely.



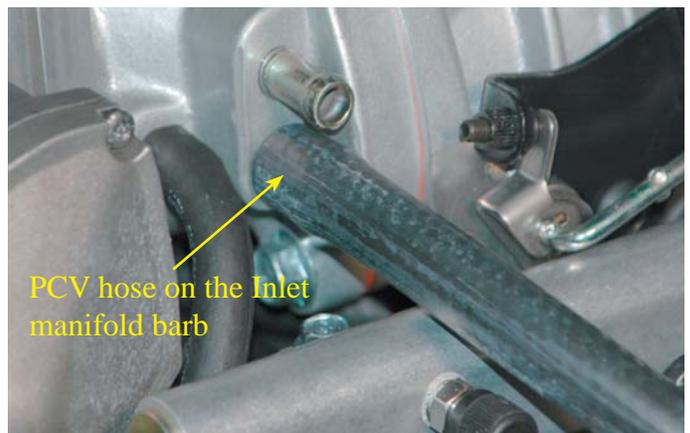
106.. Install the PCV inlet hose. Cut a 16" length of 3/8" hose supplied and attach one end to the barb on the right valve cover. Attach the other end of the hose to the barb on the bottom of the new air tube.



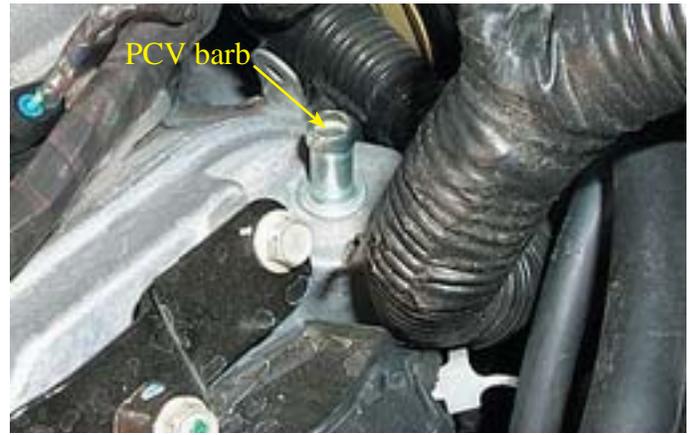
107. Assemble the PCV outlet hose by cutting a 18" length of the 3/8" hose. Attach one end the hose to the left valve cover PCV barb.



108.. Install the plain end of the 18"PCV outlet hose on the passenger (right) side of the engine.



109. At the rear of the left valve cover, remove the black rubber cap from the PCV barb. Connect the end of the PCV outlet hose to this barb.



110. Insert the new check valve into the 11/32" brake hose.



111. Install the check valve into the grommet on the brake booster.



112. Connect the end of the brake booster hose to the upper barb on the driver side of the inlet manifold.



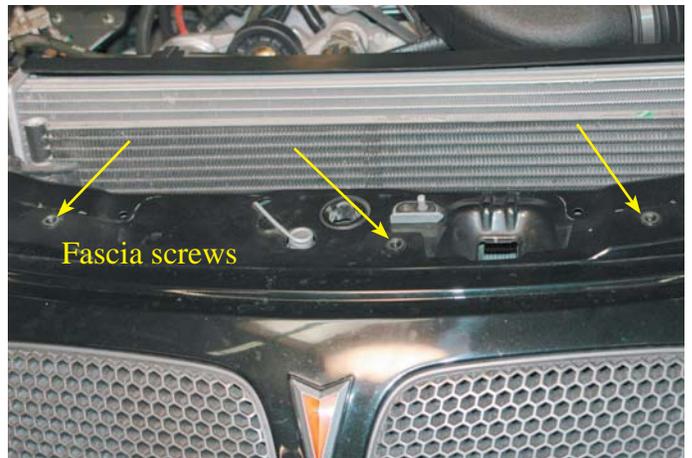
113. Remove the two push-lock fasteners that secure the back edge of the lower splash shield. Do this by prying up on the center of the fastener with a small straight blade screwdriver and then removing the fastener completely.



114. Remove the five push-lock fasteners and the radiator shield.



115. Remove the three screws that secure the front fascia or “nose” of the vehicle with a cross-head screwdriver.



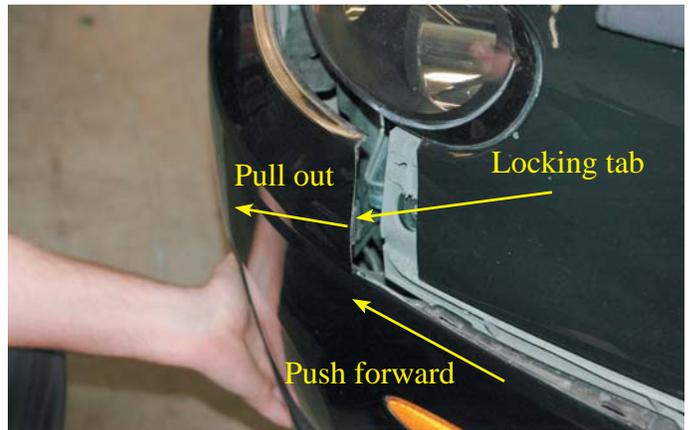
116. Remove the two screws in each wheel well that secure the front fascia.



117. Pull out on the wheel well edge of the front fascia.



118. Push the front fascia forward and then pull out at the edge of the fascia below the head light on both sides to free the locking tab.



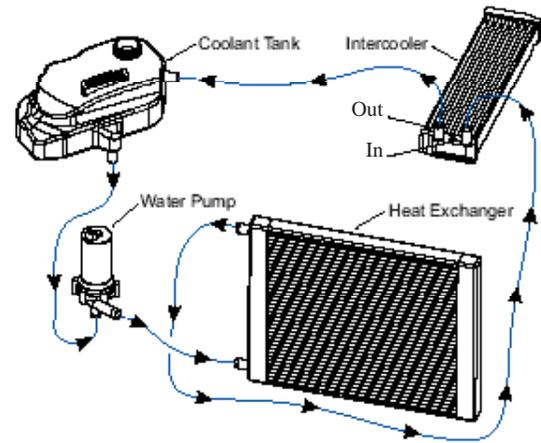
119. Disconnect the fascia electrical connection located on the driver side.



120. Remove the fascia complete.



121. This is a diagram of the complete intercooler system plumbing. Note the routing of the hoses and their connections.



122. Remove the fluid supply hose from the pump and then temporarily cap the pump nipple with the rubber cap supplied . Depress the wire clip on the electrical connector to remove it from the pump.



123. Remove the bolt that secures the rear of the reservoir bolt with a 10mm socket wrench.



124. Remove the yellow filler cap from the neck of the reservoir.



125. Remove the push-lock fastener that secures the bottom of the reservoir to the splash shield.



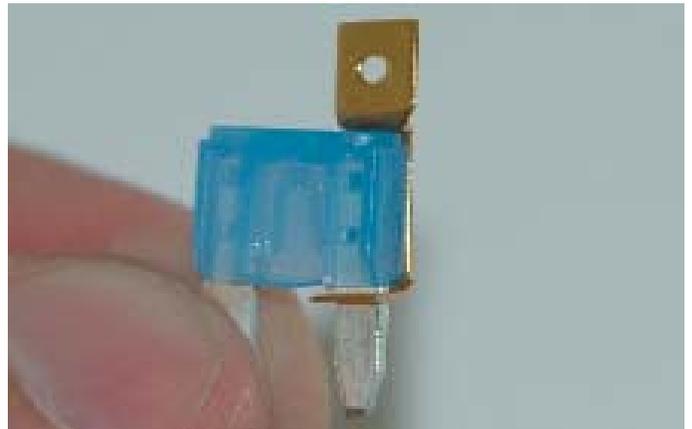
126. Remove the reservoir by rotating it 90 degrees and lowering it down and out.



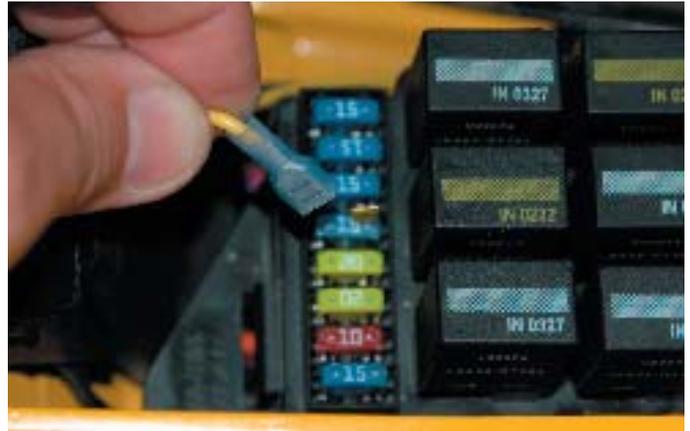
127. Install the intercooler pump relay harness by removing the cover of the Fuse/Relay center on the right hand side of the engine compartment. Remove the fourth 15amp fuse from the top marked "AUTO TRANS" temporarily from the base.



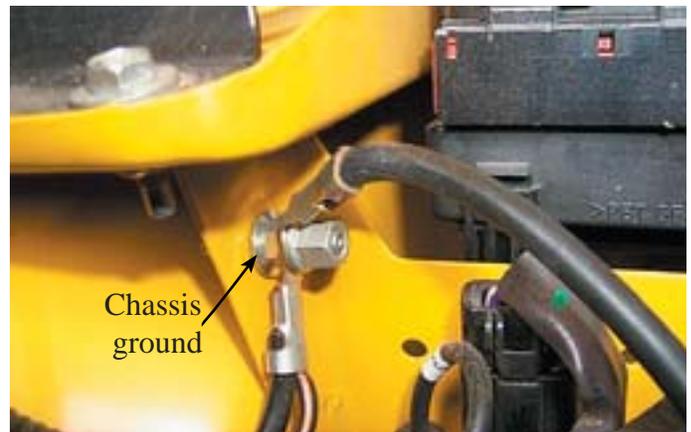
128. Place one leg of the 15 amp fuse through the Fuse-Tap supplied.



129. Install the fuse and Fuse-tap back into its original location. On the end of the yellow wire from the relay harness, strip the insulation back 1/4" and crimp on the female spade terminal. Connect the female spade terminal to the male spade of the Fuse-Tap.



130. Connect the Black ground (-) wire with the ring terminal to the chassis ground connection located just below the Cruise Control module platform. Remove the nut with a 10mm wrench and place the ring terminal on the stud. Re-install the nut and tighten it securely.



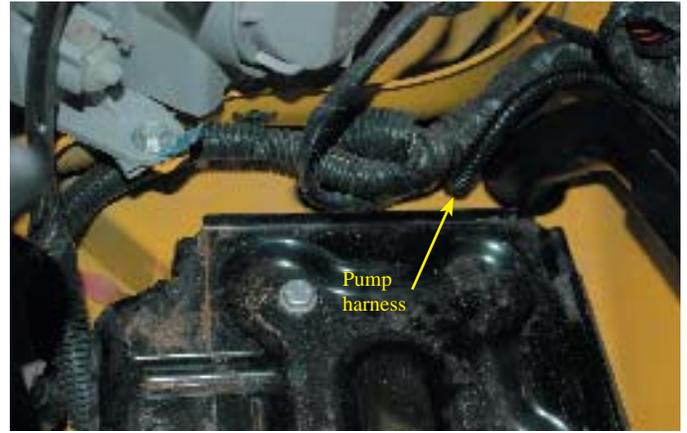
131. Connect the Red positive (+) wire with the ring terminal to the main power connection on the side of the Fuse/Relay Center. Remove the nut with a 10mm wrench and place the ring terminal on the stud by passing the red wire from under the base and on to the stud. Re-install the nut and tighten it securely.



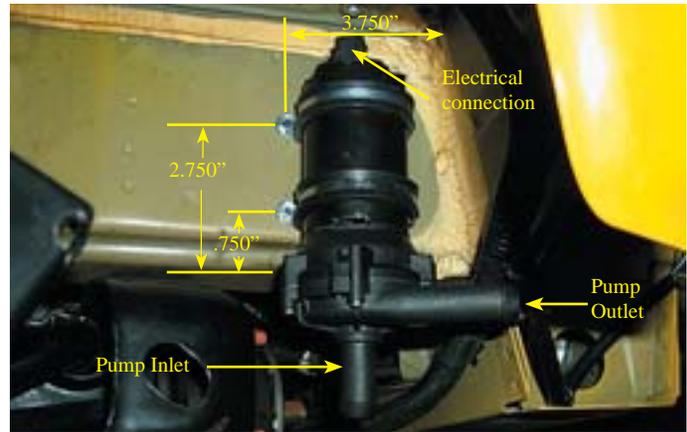
132. Lay the coolant pump relay next to the row of fuse on the Fuse/Relay center base. Install the Fuse/Relay center cover on the base by raising the relay slightly to hook the rear edge of the cover on the base then snap the cover in place.



133. Route the pump harness and connector down to the pump through the harness hole next to the battery platform.



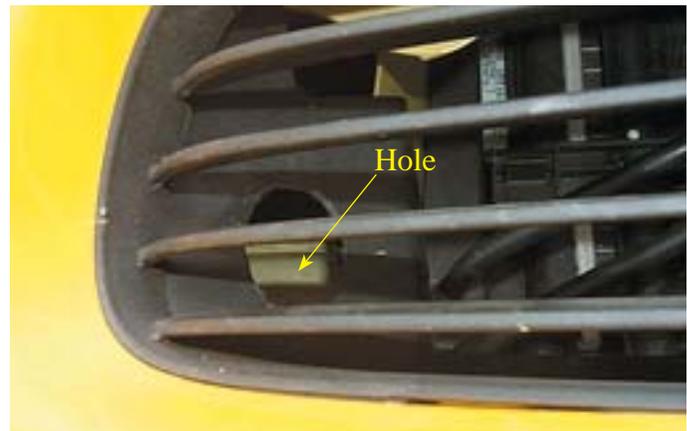
134. Mount the intercooler coolant pump on the outside of the frame rail just ahead of where the reservoir was located using the two Adel clamps and self-tapping screws. Drill two 1/4" holes in the locations shown for the self-tapping screws. Note the position of the pump inlet, outlet and electrical connections. Plug the pump harness connector into the end of the pump.



135. Re-install the windshield washer reservoir. Secure it with the front, rear and bottom fasteners. Remove the rubber plug from the pump barb and reattach the small fluid hose, then connect the washer pump electrical connector. Replace the inner fender panel and secure it with the crosshead screws. Re-install the filler cap on the neck in the engine compartment.



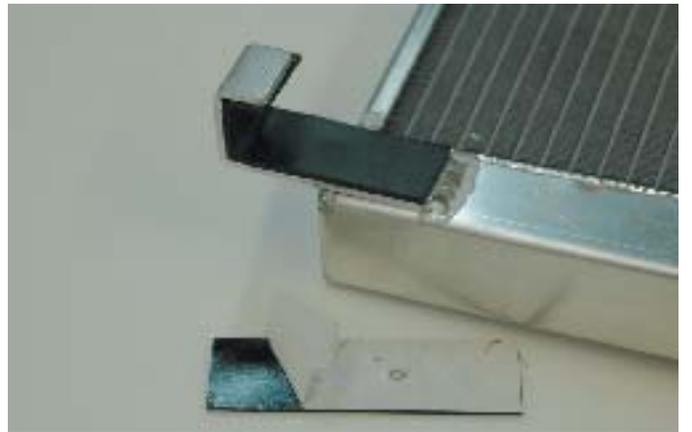
136. Make a hole in the passenger side of the splash shield as shown for the intercooler coolant hoses to reach the heat exchanger.



137. Using a sharp knife or hole-saw make two 1-1/8" holes in the side from the back side of the splash shield. This can be easily done by pulling down on the bottom edge of the front fascia or "Nose" cover.



138. Assemble the heat exchanger by peeling the backing paper off the two short plastic strips and apply them to the inside of the upper mounts.



139. Apply the longer third strip to the left front face of the heat exchanger 4-1/2" from the top edge as shown.



140. Connect a length of 3/4" hose cut a piece 80" long and attach it to the upper barb of the heat exchanger. Install a 22" piece from the remaining length on the lower barb of the heat exchanger. Secure the hoses with #10 clamps.



141.. The intercooler fluid reservoir will attach to the top of the battery with adhesive backed velcro strips. Clean the bottom of the coolant reservoir with lacquer thinner, as it must be very clean for the adhesive to attach. Clean the top of the battery as well. Reservoir color may vary.



142. Cut the 15” length of Velcro supplied into six pieces 2-1/2” long. Peel off the paper backing and install three pieces of Velcro onto the bottom of the reservoir as shown.



143.. Re-install the battery and its connections. Using the reservoir as a guide attach three pieces of Velcro to the top of the battery.



144.. Trim the molded 90 degree “elbow” hose supplied by cutting 2” from the short leg and 35” from the long end. Save the long cut piece for later use.



145. Install the trimmed elbow hose to the lower barb on the reservoir. Secure the hose with a #10 clamp.



146. Place the intercooler reservoir on the top of the battery. Ensure that the Velcro has a good “grip”.



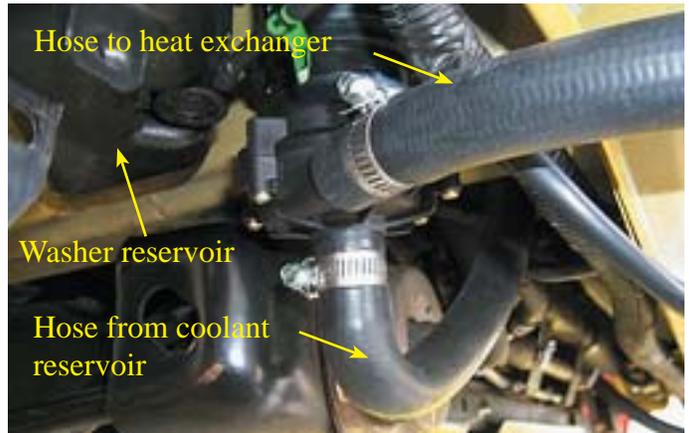
147. Lower the front heat exchanger into place on the front of the A/C condenser. As you lower the heat exchanger and hoses into place, pull the black A/C dryer cylinder forward on the left side to allow the heat exchanger to pass and the upper brackets to sit flat on the top of the A/C condenser.



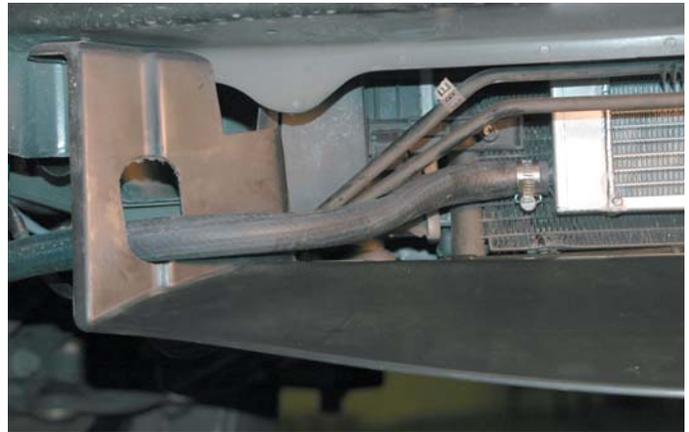
148.. Install the two 6x20mm bolts through the power steering cooler bracket and into the lower brackets on the heat exchanger. You can access these bolts through the lower grill or by pulling down the lower splash apron. Tighten the two bolts securely with a 10mm socket wrench. Replace the radiator shield and 5 push-lock fasteners.



149. Route the elbow hose from the lower barb of the reservoir down to inlet of the coolant pump.



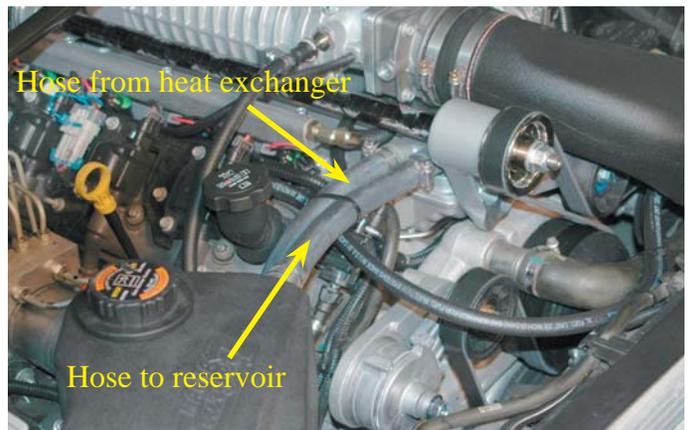
150. Connect the hose from the lower heat exchanger barb to the outlet on the pump through the new hole in the splash shield. Secure the hose with #10 clamps.



151. Route the hose from the upper barb down through the new hole in the right side of the splash shield. Continue the hose up into the engine compartment and connect it to the rear barb of the water manifold. Secure the hose with #10 clamps.



152. Using the remaining hose cut from the molded 90 degree "elbow" hose, trim this piece to 13" long and install it onto the right barb on the intercooler water manifold. Connect the other end to the upper barb on the intercooler reservoir. Secure the hose with #10 clamps.



153. Re-install the fascia by first reconnecting the electrical connection. Snap the locking tabs back into place below the headlights and then replace the upper mounting screws.



154. Replace the upper radiator and lower splash shields with the push-lock fasteners that secure them.



155. Fill the intercooler reservoir with a 50/50 mixture of GM recommended engine coolant and distilled or de-ionized water only. The intercooler system will hold approximately 2 gallons (8 liters). Check fluid level periodically.



156.. Here is the Magnavolt unit and wiring harness.



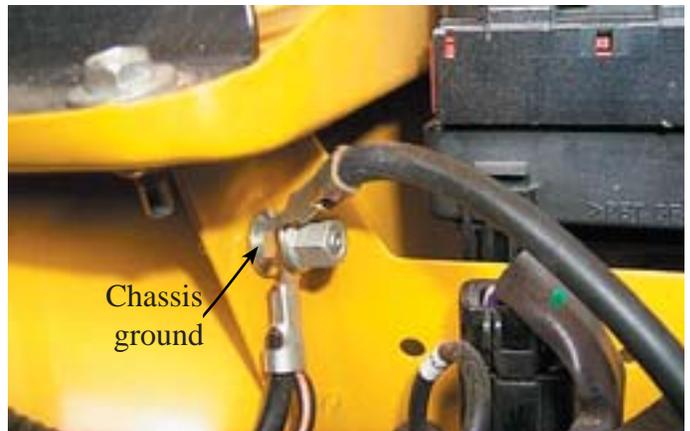
157. Remove the FUSE/RELAY center cover and using the Magnavolt as a template, drill two 5/16" hole along the top edge to mount the Magnavolt unit.



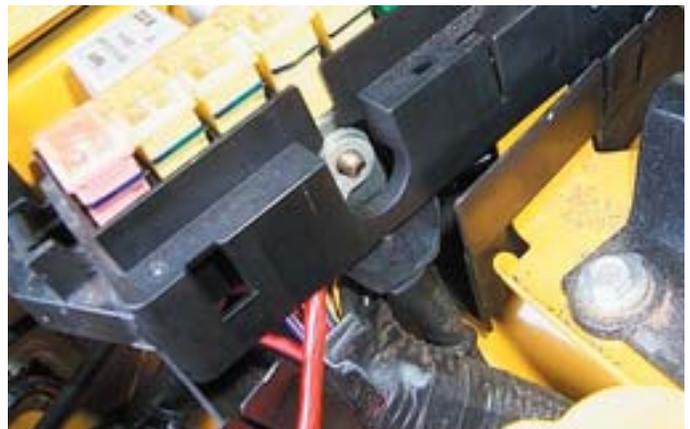
158. Assemble the Magnavolt unit to the Fuse/Relay center cover by placing the rubber mounts into the two holes in the cover and then place the magnavolt on the rubber mounts. Secure the mounts with the nuts supplied and tighten them with a 10mm wrench.



159. Connect the Black ground (-) wire of the Magnavolt harness onto the chassis ground connection located just below the Cruise Control module platform. Remove the nut with a 10mm wrench and place the ring terminal on the stud. Re-install the nut and tighten it securely.



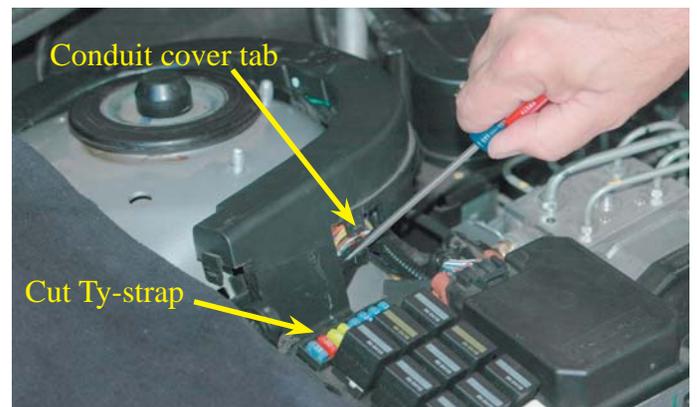
160. Connect the Red positive (+) wire with the ring terminal to the main power connection on the side of the Fuse/Relay Center. Remove the nut with a 10mm wrench and place the ring terminal on the stud by passing the red wire up from under the base and on to the stud. Re-install the nut and tighten it securely.



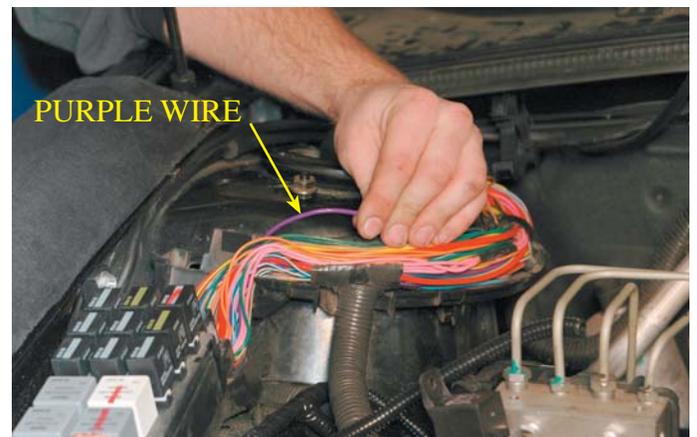
161. Replace the cover with the Magnavolt attached on to the Fuse/Relay center. Connect the Magnavolt harness to the unit.



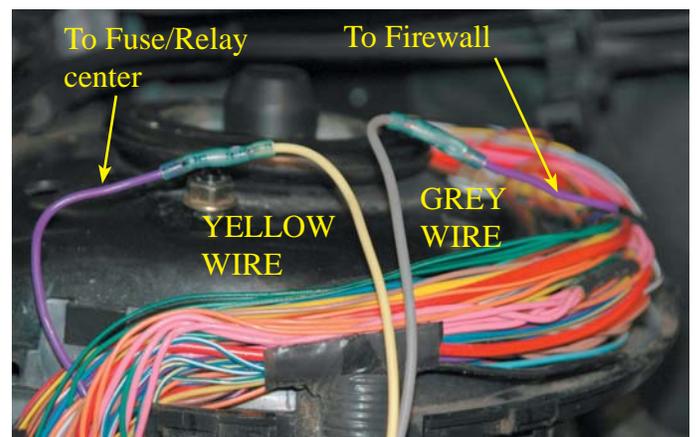
162. On the passenger side shock tower, locate the circular wire conduit. Cut the Ty-strap where it meets the Fuse/Relay center. Using a small straight blade screwdriver, gently pry the locking tabs free on the upper cover of the conduit to free the cover.



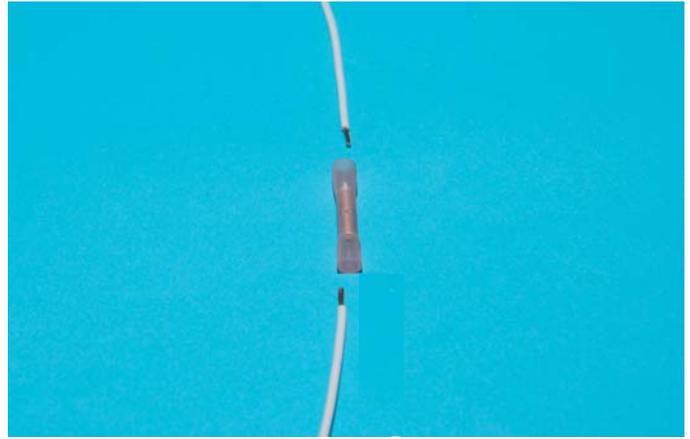
163. Once the conduit cover has been removed, locate the large PURPLE wire and cut it.



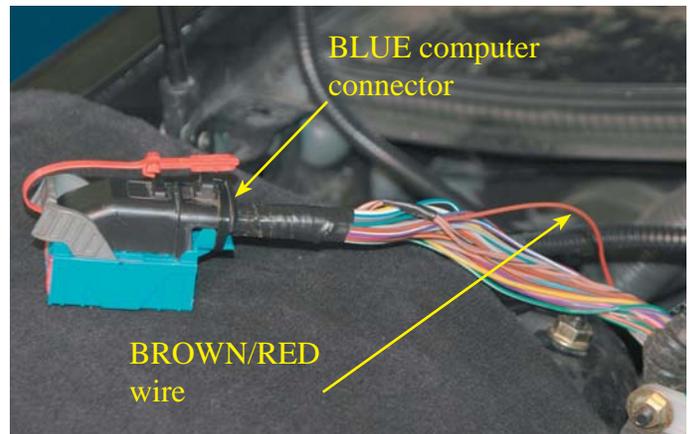
164. Using the Crimp/Shrink connectors supplied, Connect the YELLOW wire from the Magnavolt harness to the end of the purple wire that goes to the Fuse/Relay center. Connect the GREY wire from the harness to the end of the purple wire that goes to the firewall. Carefully tuck all the wire back into the conduit and snap the top cover back into place. Route the Grey and Yellow wires out at the Fuse/Relay center.



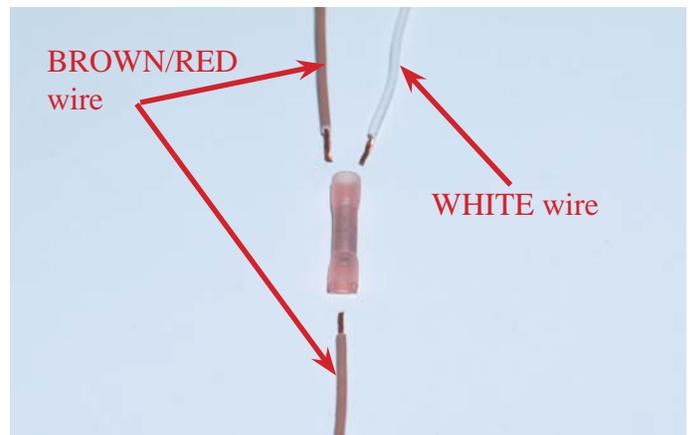
165. Using the length of solid white wire and the Crimp/Shrink connector provided, extend the white wire of the Magnavolt harness. Cover the white wire with the split-loom provided and carefully route the wire along the firewall, behind the supercharger to the computer area on the driver side wheel well.



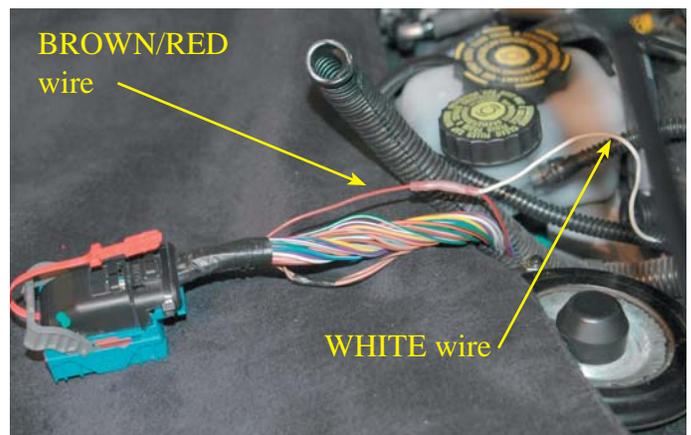
166. Peel back the black electrical tape and Split-loom from the BLUE computer connector. Locate the BROWN/RED wire.



167. Cut the BROWN/RED wire and using the Crimp/Shrink connector provided, connect the extended WHITE wire from the Magnavolt harness to the BROWN/RED wires.



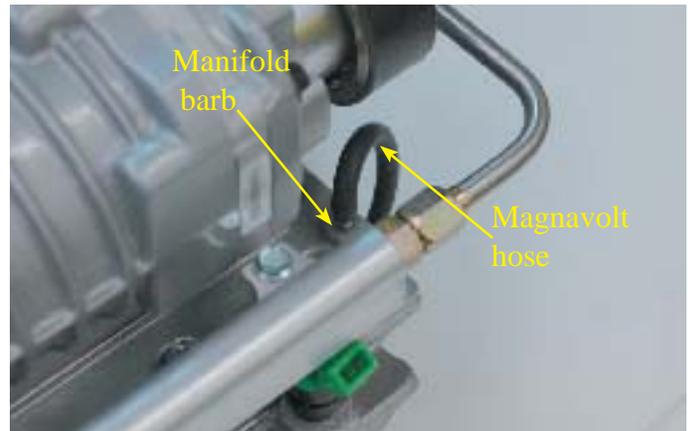
168. Carefully replace the Brown/Red wire in the harness and re-cover the harness with the original split-loom.



169. Install the length of 5/32” vacuum hose onto the Magnavolt hose using the black plastic hose connector.



170. Route the wire along the firewall, behind the supercharger to the manifold barb at the left rear of the supercharger manifold. Secure the hose and extended white wire as necessary with the Ty-straps provided.



171. Install the re-programmed computer on its bracket using the two T20 TORX screws .



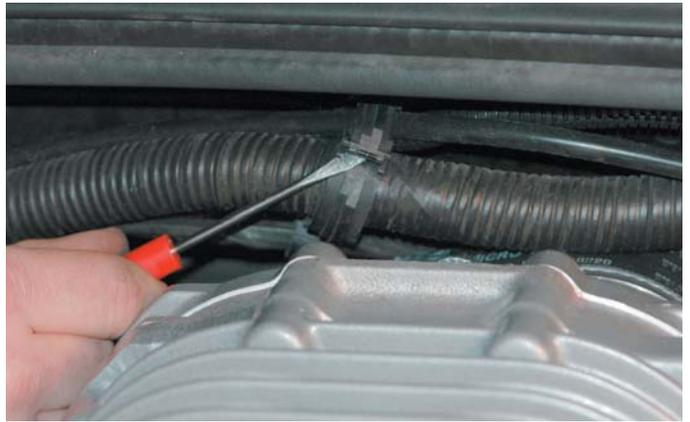
172. Carefully replace the three computer connectors by pressing them in place and pushing grey latches back into place until they snap into their original locations on the black covers. Secure the connectors with the red locking keys.



173. Locate the plastic cross-head screw in the rain gutter to the right of the center windshield wiper. Remove the screw with a screwdriver, From the underside in the engine compartment, push the screw base up and out so that just the hole in the rain gutter remains.



174. Using a small straight blade screwdriver, open the harness clamp and pull the harness free.



175. Remove the harness clamp from the firewall, it will not be re-used.



176. Here is the new harness clamp assembly, it will mount in the rain gutter hole that you removed the screw from in the previous step.



177. Install the harness clamp around the harness, hoses and cables directly behind the supercharger assembly. Take care that nothing can come in contact with the rear drive belt and pulleys. Secure the new clamp with the supplied bolt and nut in the rain gutter hole. Tighten them securely with a 10mm wrench.



178. Re-connecting the negative (-) and then the positive (+) battery clamps with a 13mm wrench.



179. Reinstall the shock tower brace with its fasteners into the original position.

The stock **GTO** engine covers can be modified by trimming them slightly to fit with the supercharger installation.



180. Starting with the right side engine cover, trim the cover as shown using a small saw. Go Slow! the plastic of the covers will cut very easily and a professional result can be achieved with a little patience. Test fit the covers as you go. Finish the cut edges with a file and sandpaper.



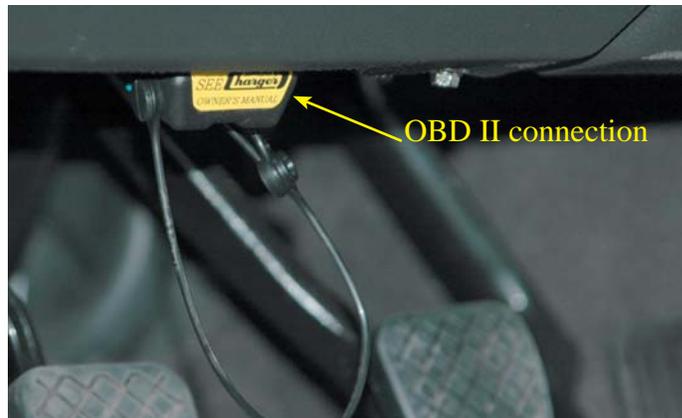
181. On the left side engine cover trim the cover as shown. A little more care must be used on trimming this cover as you must make room for the bypass canister. Trim and test the cover fit several times to get a good fit and finish. Leave the finished covers off the engine until you have completed your test drives and final inspection.



182. Install the “DO NOT RECALIBRATE” Sticker on the OBDII port cover supplied.



183. Locate the OBD II connection plug along the bottom edge of the dash above the brake pedal. Install the OBDII cover on the port and secure the attached cord around the wiring harness behind the port. Push the cord up behind the instrument panel so it will not interfere with the vehicle operation



184. With the supercharger system installed, the vehicle's PCM should never be re-calibrated by a GM dealer. If re-calibration is needed contact Magnuson products Inc.



185. Start the vehicle for 5 seconds and shut off, once again check for fuel leaks and supercharger belt alignment.

Test drive vehicle for the first few miles under normal driving conditions, listen for any noises, vibrations, engine missfire or anything that does not seem normal. The supercharger does have a slight whining noise under boost conditions, which is normal. Check inter-cooler reservoir as needed.



186. 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 low octane gasoline still in the tank.



If you have questions about your vehicles performance, please check with your installation facility or call Magna Charger at (805) 289-0044, Monday through Friday, 8am to 4:30pm.



Please enjoy your “Magna Charged” performance responsibly.