Installation Instructions for: Radix Intercooled Supercharger System 2003-2006 Hummer H2

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

ATTENTION!
Your MAGNA CHARGER intercooler kit is sensitive to corrosion!
Take care of if by using 50/50 anti-freeze with de-ionized water.
We encourage you to read this manual thoroughly before you begin work, for a few reasons:

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.

Make sure to have 91 or high octane fuel in the tank.

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 me altered if used as a lifting point!

**Tools Required**

- Safety glasses
- Metric wrench set
- 1/4” drill bit
- 1/4", 3/8", and 1/2” drive metric socket set (standard and deep)
- 8mm hex (Allen) wrench
- 3/8” and 1/2” drive foot pound and inch pound torque wrenches
- Belt tensioner wrench or 1/2” breaker bar
- 7/32” socket
- Drill and 5/16” drill bit
- Phillips and flat head head screwdrivers
- Fuel quick disconnect tools (included in kit)
- E5 inverted Torx socket
- Small or angled 3/8” drill motor
- Drain pan
- Compressed air
IMPORTANT

Our Magna Charger kits are designed for stock engines, with stock components, in good mechanical condition only. Installation on worn or damaged engines is not recommended and may result in engine failure, for which we naturally can’t be responsible. Magna Charger is not responsible for the engine or consequential damages.

Aftermarket engine re-calibration devices that modify fuel and spark curve (i.e., programers) are not recommended and may cause engine damage or failure. If you have any questions, call us!

⚠️ 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, and of course, no smoking.

Magna Charger strongly recommends the following:

- Clean your engine compartment before starting any engine disassembly.
- You must have a clean fuel filter - check and replace as needed before installation.
- You must have a clean air filter - this system comes with a new air filter for your convenience.
- OE type/Stock spark plugs and stock plug gap is recommended.
- Start with and use only 91 octane fuel or higher.
- Drive belt is a Gates #K061120.

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

Please remember to follow all safety rules that apply when working, including:

- Wear eye protection at all times.
- Do not work on a hot engine.
- Be careful around fuel - use shop towels to catch any spills and dispose of towels properly.
1. Start the supercharger installation by installing the upgraded fuel pump. Ensure that the fuel tank is less than 1/8" full (preferably empty) by checking the fuel level gauge. Even though the gauge may read empty, some residual fuel will be present in the tank. Exercise extreme caution and common sense when working around gasoline. Extinguish all open flame or other sources of ignition and be sure to perform the following steps in an area with adequate ventilation. Personal protection in the form of eye protection and fuel resistant gloves are strongly recommended.

2. On the right (passenger) 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 depressing the check valve with a screwdriver and collecting the fuel with a shop towel.

3. Relieve the pressure in the fuel tank by removing the fuel filler cap. The following steps are for 2004 & 2005 vehicles, for 2003 skip this section and continue to step 44.

4. Loosen the clamp and remove the fuel fill pipe from the tank. Disconnect the tank vent hose by squeezing the connector and pulling it apart.
5. Locate the Evaporative Control (EVAP) canister at the front of the fuel tank.

6. Disconnect the vapor lines from the EVAP canister by squeezing and pulling them off.

7. Remove plastic shield covering the fuel tank.

8. Remove the (2) bolts that secure the outside edge of the tank shield with a 13mm socket wrench.
9. Along the inside edge of the tank shield locate the attachment bracket. Remove the nut with a 10mm wrench.

10. Remove the bolt along the inside edge of the tank shield with a 13mm socket wrench.

11. Remove the fuel tank straps by removing the (2) strap bolts with a 15mm socket wrench. Gently lower the fuel tank down approximately 18" to gain access to the connections on the top of the tank.

12. Disconnect the large electrical connector on the top of the tank by pulling back on the gray lock tab and squeezing the end of the connector. Disconnect the tank pressure sensor connector by lifting up on its lock clip and pulling back on the connector.
13. Disconnect the fuel and vapor connections on the top of the tank module. Squeeze the colored tabs on the bottom of the (2) smaller connectors together and then push up on the tabs to release the connectors. Push the large vapor connector towards the tank module; squeeze the sides of it and then pull back to release it from the tank module. Lower the tank free from the vehicle. With the aid of an assistant, remove the fuel tank to a suitable work area.

14. The tank module is retained in the tank by a lock ring that locks into a retaining collar on the tank. Note: The position of the lock ring in relation to the collar.

15. CAUTION! USE A NON METALLIC HAMMER OR DRIFT to remove the lock ring by tapping the ring counter-clockwise. Do not use a metallic hammer and/or drift as a spark may result and ignite a fire.

16. After rotating the lock ring counter-clockwise, remove the lock ring.
17. Note: A tab on the top flange locates that the fuel module will only fit in one position in the tank as it.

18. Pull the module out of the tank carefully, so the fuel level float will not catch on the edge of the opening. On 2004 and later vehicles inside the fuel tank, there will be (2) or more fuel and vapor connectors attached to the underside of the module. Squeeze and pull as before to disconnect these. Once the fuel module is removed from the tank, the white plastic “can” of the fuel module will still contain about one quart (1 liter) of fuel. Carefully tilt the module “can” so you can pour this excess fuel back into the tank.

19. After removing the module from the tank, use a shop towel to cover the tank opening to prevent any debris from entering.

20. Here is the fuel tank module assembly as removed from the fuel tank. Prepare a well-ventilated workspace away from any source of ignition or open flame. Lay the module assembly on clean, dry shop towels to catch any residual fuel as you disassemble it.
21. On the underside of the module’s mounting flange, unplug the electrical connectors for the fuel pump and the fuel level transmitter.

22. Locate the fuel pressure regulator mounted on the white plastic body of the fuel module. Using a straight blade screwdriver, gently pry up on the regulator until the regulator is unplugged from the module body. The O-ring on the base of the regulator will be visible at this point.

23. Using (2) small screwdrivers, gently pry out the (2) lock tabs that hold the pump to filter hose connector in place. Remove the filter connector and hose from the filter.

24. Disassemble the module assembly by separating the module “can” from the module body. To do this, gently pry up on the (3) retaining clips located along the top edge of the can. It may be helpful to use (3) small screwdrivers as wedges to hold the edges of the can up as you pull the can free.
25. Here is the module can separated from the module body. Note: The fuel pump has remained in the module body. Set the can with the fuel level transmitter aside for now for re-installation in a later step.

26. Unclip the fuel strainer from the module body; this will free the fuel pump.

27. Pull the fuel pump, strainer, feed line and electrical harness free from the module.

28. Disconnect the electrical harness from the pump and remove the O-ring from the connector, as they will be reused. The pump and attached components will not.
29. Here are the new fuel pump components. Note: The hose style may vary.

30. Assemble the fuel line by sliding a crimp-clamp over the end of the hose first and then pushing the hose on the barbed end of the new fuel hose connector.

31. Use a pair of side cutting pliers to crimp the loop of the crimp-clamp around the fuel hose. Take care not to cut the loop but only tighten it.

32. Install the mounting sleeve over the body of the fuel pump. Slide a crimp-clamp over the end of the fuel hose and then install the hose on the outlet nipple of the new pump. Crimp the loop of the crimp-clamp around the fuel line. Take care not to cut the loop but only tighten it.
33. On one end of the pump harness, cut the wires 1” from the plug and strip the insulation back ¼”. Onto the stripped wire ends, install the crimp/shrink spade terminals supplied.

![Crimped terminals](image1)

34. Using a heat gun or blow dryer set on HIGH; shrink the insulation on the spade terminals so that it contracts around the wires completely. You must shrink the insulation, as crimping the terminals alone is not enough to secure them!

![Heat gun](image2)

35. Install the pump harness on the top of the fuel pump. Note: That the pump terminals are marked “+” and “-”. Install the gray wire on the “+” terminal and the black wire on the “-“ terminal.

![Pump terminals](image3)

36. Install the fuel strainer by placing it on a hard surface and aligning the large inlet nipple on the bottom of the pump with the opening on the strainer. Note: That the strainer should be pointing towards the outlet nipple side of the pump.

![Strainer installation](image4)
37. Press down firmly with the pump so that the strainer slides on until its collar is against the bottom of the pump.

38. Insert the pump assembly, hose and harness first, into the body of the fuel module. Position the pump so that the fuel strainer is pointing towards the fuel filter.

39. Install the O-ring from the original fuel hose connector on the new connector. Insert the new connector into the top of the fuel filter until it “clicks” into place.

40. On the inside of the can, ensure that the module tension spring is located in its channel.
41. Slide the can back over the body of the tank module until the (3) clips at the top of the body snap into place. Reconnect the pump and transmitter connectors to the underside of the module-mounting flange.

42. Press the regulator down into position, ensure that it’s sealing O-ring is not visible. The tank module assembly is now ready for reinstallation into the fuel tank.

43. Reinstall the tank module into the tank with the flange tab pointing towards the word “TAB” on the tank. Coat the bottom surface of the lock ring with some of the grease supplied, then install the ring on the retaining collar. Apply some more grease on the (7) raised lock bumps on the surface of the lock ring. Using the same tools you used to remove the lock ring, rotate the ring clock-wise until the lock bumps are in the same position as they were in step 14. With the help of an assistant, reposition the fuel tank back into the position on your jack. Reattach the fuel, vapor and electrical connectors by pushing them on. Raise the tank back into its original position and reinstall the fuel tank straps with a 15mm socket wrench, torque these nuts to 40lb-ft. At the front tank, re-attach the vapor lines to the black plastic vapor tank. Install the fuel fill pipe onto the tank and tighten the clamp securely. Re-attach the vent line. Re-install the plastic fuel tank shield with its fasteners using a 13mm socket and box wrench. Refill the fuel tank with 91-octane or higher.
44. With a 8mm wrench disconnect the (-) negative battery cable. 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. (Wrap negative cable connector with electrical tape.)

45. With a cool engine remove the radiator cap. (Be careful not to remove the cap if the engine is still hot.)

46. Open radiator petcock and drain coolant into a clean drain pan. Save coolant for reuse later on.

47. Remove the plastic sight shield bolt using a 10mm socket wrench.
48. Lift plastic shield from top of engine.

49. Using a flat blade screwdriver loosen the (2) large hose clamps holding the air cleaner duct assembly.

50. Remove the duct assembly by lifting it out.

51. Remove the throttle control cables from the throttle body assembly. On these vehicles simply disconnect the electrical connectors on the throttle body.
52. Using a long pair of pliers, remove the coolant hoses from the bottom of the throttle body.

53. Remove the Positive Crankcase Ventilation (PCV) hose from the intake manifold.

54. Open the large electrical harness retainer clip, then using a 10mm socket wrench remove the bolts holding the plastic wire harness retainer to the intake manifold.

55. Disconnect the following electrical connectors. (8) Fuel injectors, Idle Air Control (IAC), Throttle Position Sensor (TPS), Manifold Absolute Pressure (MAP) sensor, Evaporative emission canister purge solenoid (EVAP), alternator and knock sensor.
56. Lift the electrical harness from the top of the engine and set off to the side.

57. Disconnect the EVAP vent tube from the solenoid by squeezing the retainer, and then release the tube from the solenoid. Follow the same procedure on the other end of the EVAP vent tube and remove the tube from the vehicle. This assembly will be reinstalled.

58. Using 10mm wrench, remove & swing hood latch assembly to the drivers’ side for removal and installation clearance.

59. Remove the positive crankcase vacuum hose PCV from the intake manifold.
60. Disconnect the small vacuum hose from the rear passenger side of the intake manifold, if so equipped.

61. With the fuel line disconnect tool (included in kit), remove the fuel lines from the fuel rail. Be careful, the system may be under pressure. Use shop rag under the connections to catch any fuel spills. Stay away from sparks and flames. (Remember fuel is highly flammable.)

62. Using a 8mm socket wrench remove the (10) intake manifold bolts.

63. Carefully remove the intake manifold assembly and set aside.
64. Using a vacuum cleaner, remove any dirt or debris from the intake port area. Be careful not to get any dirt in the intake ports.

65. Cover the intake ports with tape or clean rags to keep dirt and objects from entering the engine. (Remember be clean.)

66. Remove the small plastic clips from the knock sensor electrical harness and set aside. The intake manifold will not clear if this step is missed.

67. Using a 15mm wrench, remove the steel bracket from the rear of the drivers’ side cylinder head.
68. Using a 10mm socket wrench, remove the (2) vent pipe bolts.

69. Remove the vent pipe assembly. (Make sure that the O-ring gaskets do not stick to the cylinder heads. If so, remove them.)

70. Using a 15mm tensioner wrench remove the stock serpentine belt from the vehicle. The belt will not be reused.

71. Using a 15mm socket wrench or standard wrench remove the (3) bolts holding the factory belt tensioner to the bracket and remove the tensioner. (Put tensioner and bolts aside for later use.)
72. Be sure battery has been disconnected (step 44). Using a box wrench disconnect the battery positive terminal from the back of the alternator.

73. With a 15mm socket wrench remove the (2) bolts holding the alternator to the alternator bracket. Remove the alternator.

74. Take the new supplied coolant vent pipe and test fit to the front of the cylinder heads. Check for clearance between the pipe and the alternator bracket as shown.

75. If contact occurs between the coolant vent pipe and the alternator bracket, use a felt tip marker and mark the bracket where the coolant vent pipe hits as shown.
76. Using a die grinder, grind the marks made in step 75. Once the clearance is ground out, check the coolant vent pipe once again and make sure that the vent pipe does not touch the alternator bracket.

77. Using the stock bolts removed in step 68, install the new supplied front coolant vent pipe and rear block off blocks. (Late model vehicles already have the rear blocks installed.) Torque the bolts with a torque wrench and a 10mm socket to 106lb in. (Make sure that the O-Ring seals are installed correctly.)

78. Using the new supplied 16” x 3/8” PCV vacuum hose, connect one end to the PCV valve as shown, and lay the other end of the hose off to the drivers side out of the way. (To be connected in a later step.)

79. Install the intake manifold gaskets supplied onto the supercharger manifold. Ensure that the gaskets are fully seated into the relief’s in the manifold.
80. Remove the stock MAP sensor from the stock intake manifold, by pulling back on the (2) tabs and lifting the sensor out. (Make sure that the orange MAP sensor seal does not get damaged, as it will be reused.)

81. Put some lubricant on the MAP sensor seal and press the MAP sensor into the provided hole in the supercharger manifold as shown.

82. Using a 4mm Allen wrench, install the MAP sensor retaining clip with the provided 6mm button head screw as shown.

83. This step is for 2003 vehicles only, 2004 & 2005 vehicles skip to step 87. Remove the stock fuel pressure regulator from the stock fuel rail by disconnecting the vacuum hose, pulling off the spring-loaded clip and pulling the regulator out. (Be careful not to drop or lose any of the small O-rings on the regulator.)
84. Make sure that the (2) O-rings and the screen filter is complete as shown.

85. Using a small amount of grease or oil lubricate the (2) O-rings on the fuel pressure regulator and push it into the new supplied fuel manifold as shown.

86. Using a pair of C-clip pliers install the new supplied C-clip into the fuel manifold as shown. (Make sure that the clip seats into the machined groove in the manifold.)

87. Apply a small amount of grease to the new supplied fuel manifold O-ring and set in the machined recessed area on the new drivers side fuel rail as shown.
88. Install the assembled fuel manifold to the drivers’ side fuel rail using the (2) new supplied 6mm bolts. (Be careful not to pinch the O-ring.)

89. Using a 10mm socket on a torque wrench the bolts to 98/100 in-lbs.

90. 2003 vehicles only. Connect 3/16” hose from manifold top to OE regulator port.

91. Using a 10mm socket wrench remove the stock throttle body from the stock intake manifold, also using a #5 internal Torx socket remove the (3) factory studs from the stock intake manifold.
92. Remove EVAP solenoid from stock manifold, lubricate O-ring, and mount on front of new intake manifold.

93. Remove 10mm bolt directly below alternator and below factory idler.

94. After removing OE tensioner, reuse the (2) fasteners shown in photo A in holes shown in photo B.
95. Install new tensioner with new bracket support assembly, where old tensioner was removed.

96. Torque all fasteners to 40 ft-lbs.

97. Carefully cut out & remove cable guide/mount that was mounted on top of intake.

98. Spray a thin coat of silicone or similar product to assist seating of the manifold seals.
99. Carefully remove and replace the oil fill neck with the shorter supplied assembly, and replace fill cap. In some cases, you will need to remove the valve cover to release this tube. After removing fill tube, reinstall valve cover.

100. Using an assistant, carefully lower manifold assembly into place.
101. Remove the flex-loom piece, allowing manifold fastener to drop into place. Insert the (9) remaining M6 X 100 bolts into manifold. Start all (10) fasteners by hand.

102. Torque all (10) fasteners in a criss-cross fashion to 89 in-lbs.

103. Using supplied gasket, mount throttle body using stock nuts and torque them to 89 in-lbs.

104. Route fuel lines around manifold for smooth routing.
105. Re-attach fuel lines making sure they are secured.

106. Re-attach injector plugs and other related sensors.

107. Connect throttle body to cylinder head manifold coolant hose.

108. Connect throttle body coolant hose from radiator.
109. Route EVAP tube along fuel rail on drivers’ side. Re-connect to fitting on back of engine, route under supercharger nose.

110. Route the EVAP hose under supercharger nose drive and connect. (Note: Nose drive support is shown in this picture above, but is not to be installed until the next step.)

111. Attach supercharger nose drive support.

112. Remount alternator using OE hardware.
113. Re-attach all electrical connections.

114. Re-attach hood latch assembly to firewall using OE fasteners.

115. Apply the belt routing and vacuum diagram over the existing belt route label.

116. Route belt on to all pulleys. Use 15mm tensioner or breaker bar to release tensioner. See new belt routing diagram provided. (Drive belt is a Gates #K061120)
117. Install/plug-in throttle control cable and check all connections for kinks or binding.

118. Locate Mass Air Flow (MAF) cable, pull back flex loom approximately 8 inches. Separate the tan & black wires from this harness.

119. Cut the tan & black wires approximately 7” from the MAF connector.

120. Using the new Intake Air Temp (IAT) harness and crimp/shrink connectors supplied, connect either white wire of the new harness to the tan wire and the black wire that run to the vehicles computer. The wires to the MAF will no longer be used. Strip about ¼” of insulation from the ends of the black and tan wires to the computer and 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!
121. Plug the IAT harness into the IAT sensor located under the supercharger nose.

122. Install the clamp and bellows supplied on the air filter.

123. Install the air inlet tube on the MAF and throttle body.

124. Remove the rubber cap from the center barb located on the back of the inlet manifold. Attach the remaining end of the PCV hose from the PCV valve to this barb.
125. Route passenger side PCV hose to the 3/8" barb located on the bottom of the air tube; shorten hose if needed for smooth routing.

126. Check all connections; vacuum routing, fuel hoses and wires for proper placement.

127. Using a 13mm socket wrench remove the (4) bolts holding the left side hood stop bracket to the chassis.

128. Firmly grasp the relay centers cover and lift off.
129. Pull back on the (2) tabs holding the relay centers main cover off.

130. Lift the cover off and set aside for modification.

131. Position the intercooler reservoir bracket on the engine side face of the main cover. Align the cut-away of the cover with the edge of the bracket.

132. Mark the location of the (3) mounting studs on the cover and then drill 5/16” holes in these locations.
133. Place the reservoir bracket in location on the holes. Secure the bracket on the inside of the cover with the (3) nuts supplied. Tighten the nuts with a 10mm socket wrench.

134. Here is the intercooler reservoir/pump assembly. Note: the hose and electrical connections.

135. Install the reservoir/pump assembly on the (2) reservoir bracket studs with the supplied nuts. Tighten the nuts securely.

136. Install the intercooler pump harness starting at the relay center. Cover the red and black wires that lead to the intercooler coolant pump connector with the split loom supplied. Tuck the relay under the factory GM wiring so that the relay center cover base will cover it. Route the harness with the coolant pump connector down and forward along the factory GM harness.
137. In the wiring below the fuse/relay center, locate the gray fuel pump wire that goes from the relay center down the frame towards the rear of the vehicle. Use a 12-volt automotive test light or voltmeter to check that you have the correct wire. With the battery temporarily connected, switch the ignition on and your test light should glow for about 3 seconds and then go out when you have located the correct wire. Install a T-tap connector onto the gray fuel pump wire.

138. Connect the yellow wire from the relay into the T-tap connector installed in the last step. Note: Detailed Wiring diagram can be found in the back of this instruction manual.

139. Using a 13mm socket wrench remove the positive terminal nut from the lug. (Caution - make sure the battery is disconnected.)

140. Install the positive terminal from the relay to the positive lug as shown. (This is the wire with the fuse holder in it.)
141. Using a 10mm socket wrench, remove the nut from the body ground stud on the firewall as shown.

142. Locate the single black ground wire from the relay, strip the insulation back ¼" from the end and then firmly crimp the ring terminal on the end. Install the black wire with its ring terminal on the body ground stud from the previous step and secure it firmly with the original nut.

143. This step is for 2003 vehicles only, 2004-2005 vehicles skip to step 144. Install the wiring harness for the fuel pump in the same location as you did for the intercooler pump wiring harness. Attach the extra yellow wire from the intercooler pump relay onto the male spade terminal marked “85” on the bottom of the fuel pump relay. Attach the ring connector from the fused power wire in the same location as you did for the intercooler pump relay in step 140. Attach the black ground wire ring connector in the same location as you did in step 142. Route the black and red split loom covered wires down and along the inside of the left frame rail to the fuel filter location.

144. Reinstall the relay center cover complete with the reservoir and pump installed. (Be careful not to pinch any wires.)
145. Reinstall the fuse/relay cover by aligning it up and pushing down on it.

146. Reinstall the left side hood stop bracket to the chassis.

147. Install the intercooler electrical connector into the bottom of the coolant pump. Secure the wiring as necessary with the tie-wrap straps supplied.

148. Remove any brush guards or push bars to expose original equipment grille.
149. Open hood, and locate 6mm nuts on either side of headlights. Remove (2) 6mm nuts on each side (4 total) to allow grille removal.

150. Pull firmly at the top and bottom of the center of the grille. Carefully unsnap or “pop” grille out.

151. Using supplied template, punch and drill (2) 1-1/2" to 1-5/8" holes and (2) 17/64" holes on the grille shell.

152. Here is the heat exchanger and its mounting components. The (2) stud mounts will be installed in the bottom (2) holes of the heat exchanger. Use a 10mm wrench to install them. Peel the paper off the adhesive side of the foam strip and apply the strip to the top of the heat exchanger.
153. Carefully install the heat exchanger into its mounting location. Secure the stud mounts with the supplied nuts using a 10mm wrench.

154. Here is a diagram of the intercooler coolant system.

155. From the length of hose supplied, connect one end to the driver side intercooler fitting; secure it with a #10 clamp. Route this hose to the heat exchanger.

156. Pass all hoses through the radiator bulkhead to the heat exchanger by routing them beside the radiator on the driver side. The hoses should then pass down in front of the radiator and out to the heat exchanger through the large rectangular hole below the front of the radiator.
157. Route the hose from the driver side intercooler barb to the driver side heat exchanger barb. Use enough hose so that it will make a smooth transition to the heat exchanger without kinking when the hood of the vehicle is closed. Connect a length of the remaining hose to the passenger side barb and route this hose to the outlet barb of the coolant pump.

158. Connect the hose from the driver side heat exchanger barb to the outlet barb of the coolant pump using enough hose so that it will make a smooth transition to the heat exchanger without kinking. Secure the hose at the pump with a #10 clamp.

159. Connect one end of the remaining length of hose to the air bleed fitting located on the pre-installed hose from the passenger side intercooler barb. Secure the hose at the fitting with a #10 clamp.

160. Attach the remaining end of the hose from the air bleed fitting to the inlet barb of the coolant reservoir. Secure the hose with a #10 clamp. Refill radiator and intercooler system with a 50/50 mixture of GM recommended coolant and distilled or de-ionized water only. Bleed the intercooler system at the bleed fitting. Check system periodically for fluid level. Replace the grille and brush guard / pull bars if fitted.
161. The following steps are for 2003 vehicles only, for 2004 & 2005 skip this section and continue to step 176.

   Lift vehicle in the air using an automotive lift or you can also use a floor jack and jack stands. (Caution! Do not work under the vehicle without using safety stands, the vehicle could fall and cause serious injury or loss of life.)

162. Using a 15mm socket wrench remove the aluminum rock/skid guard. Set this aside for reinstallation later.

163. Locate the center cross member as shown, using a 21/64 drill bit drill (2) holes 2 ¾ inches apart from each other in the top of the cross member 1 inch out from the torsion bar adjusting bolt as shown.

164. Drill holes by drilling straight up in between the cross member as shown (Caution wear safety glasses).
165. Locate the fuel filter above the cross member on the drivers side of the vehicle. Disconnect the fuel line on the filter as show by squeezing the (2) white plastic tabs together and pulling the line off. This is the line that goes to the front of the vehicle.

(Caution fuel system could be under pressure, loosen the gas cap first and wrap a rag around the fuel line for safety.) (Wear safety glasses.)

166. Remove the plastic clip from the fuel filter. Use a small pocket screwdriver or pick to aid in the removal. (Do not damage the clip it will be reused in a future step.)

167. Using the supplied clamps, 8mm bolts, and nylok nuts, fasten the fuel pump assembly to the top of the cross member as shown with the electrical connectors facing the passenger side of the vehicle. Install the small plastic retaining clip removed in step 165 to the new fuel line as shown. (Make sure the connector snaps on tight.)

168. Push the inlet side pump hose on to the fuel filter, making sure that it locks into place. (Pull on it to make sure it does not come off.) Also push the outlet side hose into the fuel line that goes to the front of the vehicle. (Make sure you check this one to by pulling on it too.)
169. After running the new supplied fuel pump wires down to the fuel pump, cut the wires to length and crimp on the new supplied wire ends to the wires. (The terminal ends are on the fuel pump.)

170. The fuel pump wiring must be wired correctly to work, the red Positive wire goes to the “+” post on the pump and the black negative wire goes to the “-” post on the pump. (Double-check your installation before moving on.)

171. Place the wires on the pump, install the nuts and tighten securely. (Do not over tighten the nuts or you will break the studs.)

172. Set the fuel pump hose into the lip of the cross member, drill a small hole in the cross member just above the hose. Using (1) of the supplied tie wraps, secure the hose as shown.
173. This is what the fuel system will look like after it is installed. Double check everything and make sure that the hoses and wires will not rub on anything. Also make sure that they are not close to the exhaust.

174. Using a 15mm socket wrench re-install the rock/skid plate to the chassis.

175. A picture of how it should look after it is finished.

176. WARNING! Before downloading the new software into your vehicles Programming Computer Module (PCM), make sure to turn off all power consuming accessories: heater, A/C, radio, dome light, etc. Turn off the daytime running rights by applying the emergency brake or by turning the headlamp switch counter-clockwise.

Carefully read and follow all instructions in the Magna Charger 9814 Flashpaq manual supplied.
177. Vehicle Programming Instructions For the Micro Tuner

IMPORTANT! To ensure trouble-free programming of your vehicle’s computer:

- Make sure the vehicle’s battery is sufficiently charged.
- Turn off all accessories & close doors to prevent unnecessary drain on the battery.
- Do not attempt to program your vehicle while a battery charger is connected.
- Improper battery voltage will result in failure of the programming process.
- Do not disconnect the cable or turn off the ignition during programming.
- Apply emergency brake to disable daytime running lights.
- Reconnect battery ground (-) cable.

178. Connect the supplied cable to OBDII connector located under the dash near the steering column. Make sure this connection is seated all the way in and that it is secure. You do not want this cable coming out of the connector during programming.

179. Turn the ignition key to the on or run position but do not start the vehicle.
180. Once programming is completed, ensure the vehicle is off and the keys are out of the ignition.

181. Start the vehicle for 5 seconds and shut off, once again check for fuel leaks and fan-supercharger belt alignment. Check radiator and intercooler reservoir.

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

183. 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 causes are 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 5pm.

Ventura, CA (November 21, 2002) Magna Charger, manufacturer of superchargers and supercharger systems for foreign and domestic vehicles, was presented the prestigious award at the annual Specialty Equipment Market Association Show (SEMA) in Las Vegas, Nevada.

Sponsored by General Motors Corporation, the 2002 SEMA Design Award for the “Most Innovative Product” was awarded to Magna Charger and recognized by the all-star team of judges for their outstanding and innovative design achievement. The criteria used by the judges included innovation, technical achievement, quality and workmanship.

The award was presented for the Radix® Intercooled supercharger system, designed for the Chevrolet, GMC and Cadillac, 4.8L, 5.3L and 6.0L General Motors Trucks and SUV’s including the new H2.

Please enjoy your “Magna Charged” performance responsibly.
2003 Only

Notes:

1. Fuse Center use Positive Lug for RED Positive Wire's.

2. Yellow Wire's Tee/Splice to Bulb scotch lock on Gray fuel pump wire.
2004 - 2006
Only

Notes:

1. Under Fuse Center use Positive (6mm stud) for RED Positive Wire.

2. Yellow Wire Tee/Splice to Blue Scotch Lock on Gray Fuel Pump Signal Wire.

INTERCOOLER WIRE ROUTING DIAGRAM