Installation Instructions for:
CORVETTE SUPERCHARGER SYSTEM
INTERCOOLER UPGRADE
1997 TO 2003
C5 CORVETTE

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

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Magna Charger Corvette Intercooler Supercharger System Upgrade Overview:

MAGNA CHARGER PROVIDES

The Magna Charger Corvette intercooler supercharger system upgrade received by the customer will consist of the following:

- One large shipping box containing packaging materials.
- Pre-paid UPS shipping label to return the non-intercooled supercharger system for upgrade.
- One smaller box containing all of the intercooler support components and instruction manual.

CUSTOMER PROVIDES

The customer will be required to remove and return to Magna Charger the complete supercharger system from the engine, which includes the following:

- Supercharger & manifold assembly
- Auxiliary drive system
- Inlet manifold
- Throttle body
- Electrical sensors
- Fuel rails
- Injectors
- ***SuperChips*** **Micro-tuner.**

Attention must be paid to the proper preparation of the supercharger manifold system prior to shipping; specifically, blocking off of the fuel system and double bagging the entire manifold assembly. Magna Charger will refuse any supercharger system sent to us that is not packaged according to our directions called out in the Upgrade Installation Manual. **This is designed to prevent you from being billed for Toxic Waste Clean Up!**

A new intercooled supercharger manifold assembly and new auxiliary drive belt will be assembled utilizing the customers existing supercharger and related components. All the customer-supplied components will be inspected for wear or damage, should any wear or damage be noted Magnuson Products will notify customer and advise accordingly. The old, non-intercooled manifold will not be returned to the customer.

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

Make a quick parts check to make certain your kit is complete (See the shipping parts list in this manual) If you discover shipping damage or a parts shortage, please contact our office immediately at (805) 642-8833.

Take a good look at exactly what you are going to need in terms of tools (see tools list), time, and experience.

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 or broken 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 maybe released when servicing the fuel lines or connections. In order to reduce the risk of personal injury, cover the fuel 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.

Warranty Information

The warranty will remain in effect from the original date of non-intercooled system purchase.

Magna Charger has seen a variance in stock rear wheel horsepower. Numbers between 280 RWHP and 320 RWHP have been recorded on our in-house chassis dynamometer. Depending on year, transmission, or presence of other installed aftermarket products, RWHP numbers of up to approximately 450 at 7 lbs. of boost can be achieved with the installation of the Magna Charger Corvette intercooled supercharger system. Horsepower numbers are reflected by base RWHP numbers and altitude. 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 systems 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 to driveline or any other related components.

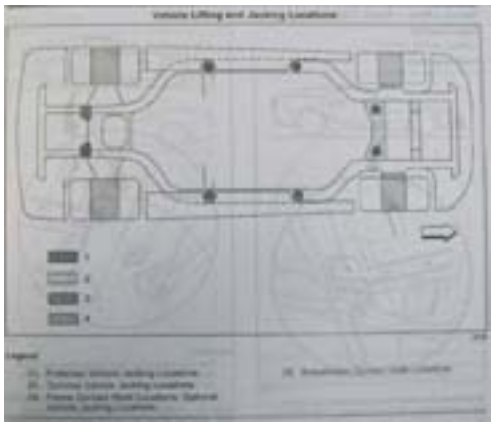
Aftermarket engine recalibration devices that modify fuel and ignition curve (including, but not limited to programmers) are not recommended and may cause engine damage or failure. Use of non-Magna Charger approved programming will void all warranties. If you have any questions, call us.

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 sparkplugs and gap is recommended.
- Recommended supercharger drive belt is a Gates #K061058
- Recommended air filter is a K&N 33-2111

INTERCOOLED CORVETTE UPGRADE

	Parts List	
PART#	**DESCRIPTION**	**QTY**
31-14-59-050	**S/A CORVETTE I/C UPGRADE SHIPPING MATERIALS**	
89-89-57-004	I/C UPGRADE INSTRUCTIONS	1
69-57-00-030	PLATE, FUEL RAIL BLOCKOFF	1
71-00-06-010	BOLT-HEX FLANGE M6 X 1.0 X 10	1
80-62-31-112	O-RING, (FUEL MAINFOLD AT RAIL)	1
69-12-57-001	TOOL, FUEL RAIL DISCONNECT	1
69-90-24-004	TIE WRAP, 7 1/2"	2
90-80-28-050	SHIPPING BAG FOR S/C ASSY, 28" X 50"	2
90-80-16-024	SHIPPING BAG FOR MICRO TUNER, 16 X 24"	1
90-01-02-010	SHIPPING BOX AND MATERIAL FOR S/C ASSY	1
31-14-59-038	**S/A CORVETTE I/C SYSTEM**	
68-01-00-082	HEAT EXCHANGER	1
72-08-12-016	BOLT, RND HEAD, M8 X 1.25 X 16	4
77-10-08-010	NUT, FLANGE HEAD, M8 X 1.25	8
65-12-57-021	HEAT EXCHANGER BRACKET R/H	1
65-12-57-022	HEAT EXCHANGER BRACKET L/H	1
71-08-12-026	BOLT-HEX FLANGE HEAD, M8 X 1.25 X 25	4
68-14-59-002	I/C PUMP	1
48-46-10-038	CLAMP, ADEL #38	1
71-06-10-020	BOLT-HEX FLANGE HEAD, M6 X 1.0 X 20	1
75-00-06-020	WASHER, M6	1
77-73-46-001	NUT, FLANGE HEAD, M6 X 1.0	1
68-01-03-010	I/C COOLANT RESERVOIR	1
68-01-03-002	RESERVOIR CAP,	1
85-55-00-007	3/4" HOSE (72")	1
48-46-10-003	CLAMP, #10	8
90-72-00-002	FOAM TAPE (4" LONG)	1
69-90-24-004	TIE WRAP	12
85-55-80-003	I/C PUMP RELAY WIRING ASSEMBLY	1
82-55-50-115	FUSE, 15 AMP (INSTALLED IN ABOVE)	1
82-55-60-108	CHRIMP/SHRINK CONNECTOR 16-14 GA.	1
89-90-57-001	**LITERATURE KIT**	
91-01-01-001	6" MAGNA CHARGER STICKER	1
91-91-10-001	PREMIUM FUEL ONLY LABEL	1
89-89-00-004	WARRANTY CARD	1
83-91-00-013	LUBRIPLATE GREASE 3/8OZ	1
31-14-59-047	**S/A S/C TO CYL HEAD BOLTS**	
71-06-10-065	BOLT-HEX FLANGE M6 X 1.0 X 65	9
31-41-59-034	**S/A KNOCK PLATE ASSY**	
69-57-00-000	PLATE, ENGINE VALLEY COVER (KNOCK PLATE)	1
81-00-00-007	SEAL, VALLEY COVER (INSTALLED IN ABOVE)	2
80-59-10-309	O-RING, #309	6
72-08-10-025	BOLT, SKT HD, CSUNK/FTHD M8 X 1.25 X 25	10
31-14-59-039	**S/A BELT TENSIONER, I/C CORVETTE**	1
31-14-59-039	BRACKET, TENSIONER	1
56-50-53-006	TENSIONER & PULLEY	1
71-12-17-090	BOLT-HEX, FLANGED M12 X 1.75 X 90	2



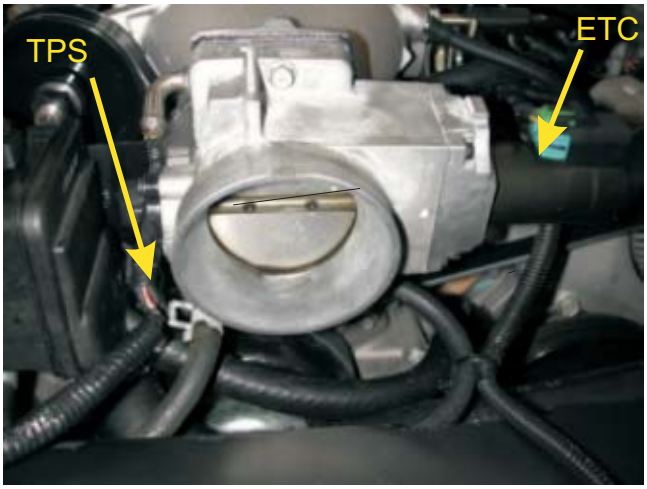
1. Raise the vehicle on a automotive hoist using the factory recommended lift points. Refer to the owners manual or shop guide for these locations.

3. With a cool engine remove the radiator cap and drain the coolant into a clean drain pan for reuse later. (Be careful not to remove the radiator cap if the engine is still hot).

2. Remove the stock hood by disconnecting the hood lamp electrical connector, unclipping the small gas charged hood shocks and removing the four bolts with a 13mm socket wrench.

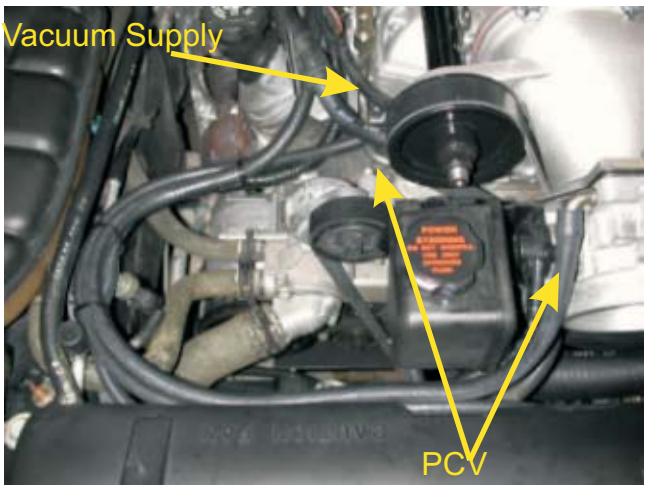
4. With a 8mm wrench disconnect the (-) negative battery cable. Make sure the cable is far enough away from the battery that it does not accidentally touch the battery and make connection during the installation. (Wrap negative cable connector with electrical tape)

5. Remove the air duct from between the throttle body and the mass airflow meter.

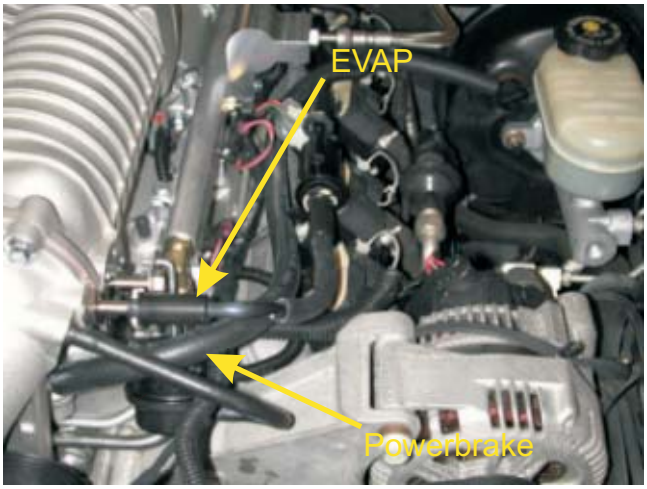


7. Disconnect the throttle body TPS and ETC electrical connectors.

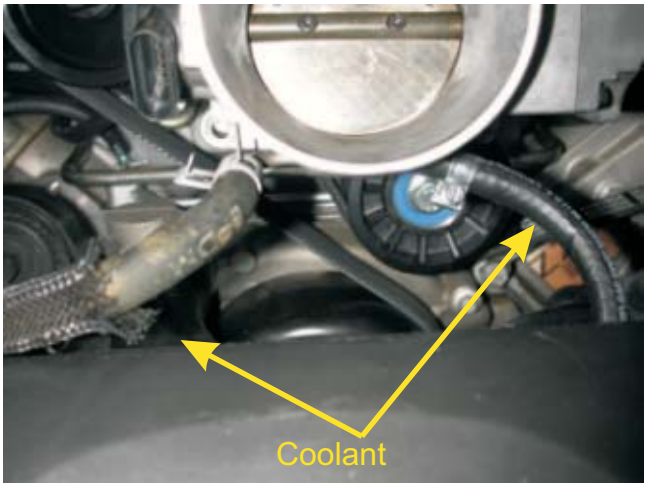
6. Remove the power steering fluid reservoir from the mounting bracket. Temporarily position the reservoir to one side so that it will not tilt and leak.



8. On the right (passenger) side of the inlet manifold disconnect the two PCV hoses and the vacuum supply hose.

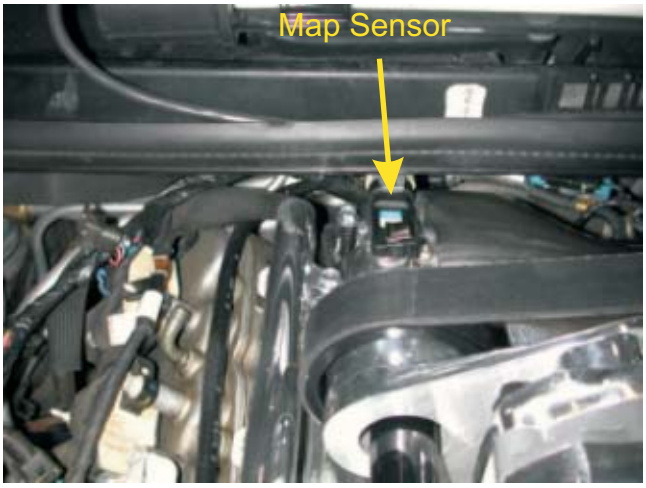


9. On the left (drivers) side of the inlet manifold disconnect the power brake and EVAP solenoid hoses; leave the hose to the bypass connected.

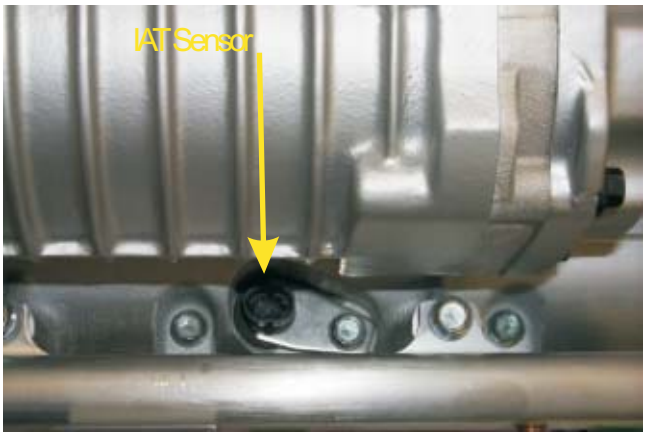


10. Disconnect the two coolant hoses to the bottom of the throttle body.

11. Use a 15mm tensioner wrench to relieve the belt tension so you can remove the belt from the supercharger and idler pulleys. (Shown with throttle body removed for clarity).



12. Unplug in the MAP sensor electrical connector at the rear of the supercharger manifold.

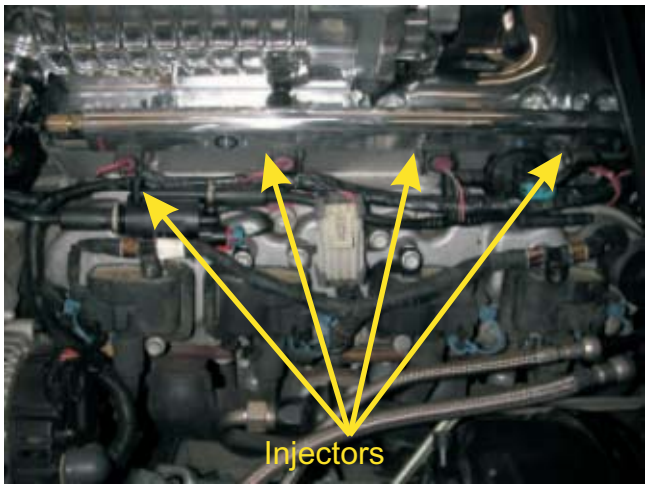


13. Unplug the IAT sensor electrical connector on the left side of the supercharger.

15. Remove the fuel regulator manifold with a 10mm socket wrench. Ensure that the o-ring remains in the fuel rail.

14. Using the white plastic tool supplied, remove the fuel lines from the fuel manifold.

16. Install the supplied fuel block-off plate with it's fasteners on the fuel rail.



17. Unplug the four fuel injector connectors on each side of the supercharger, eight total.

19. With the aid of an assistant, lift the supercharger and manifold assembly free from the engine. Do not lift the assembly by the black bypass canister.

18. Unscrew the ten bolts that secure the supercharger manifold to the cylinder head with a 10mm socket wrench. Note: You will be unable to completely remove the bolts from several of the holes.

20. From the shipping box supplied use one of the large plastic bags to package the supercharger assembly. Seal the bag with a Ty-wrap strap.

21. Use the second plastic bag to double bag the supercharger assembly and seal it with a Ty-wrap strap. Place your original Micro Tuner in the supplied bag and return it in the box along with the supercharger assembly.

22. Place the bagged supercharger assembly and Micro Tuner in the shipping box with the molded packaging materials around it. Seal the box closed with packing tape.

23. Enclosed in the plastic shipping invoice envelope is a prepaid UPS return shipping label. Place this label on the top of the box and return the boxed supercharger to any UPS location.

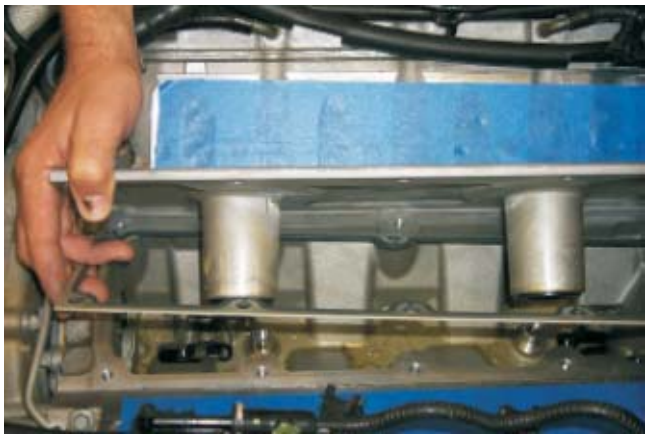
24. Using a vacuum cleaner, remove any dirt or debris from the intake port area. (Be careful not to get any dirt in the intake ports).

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

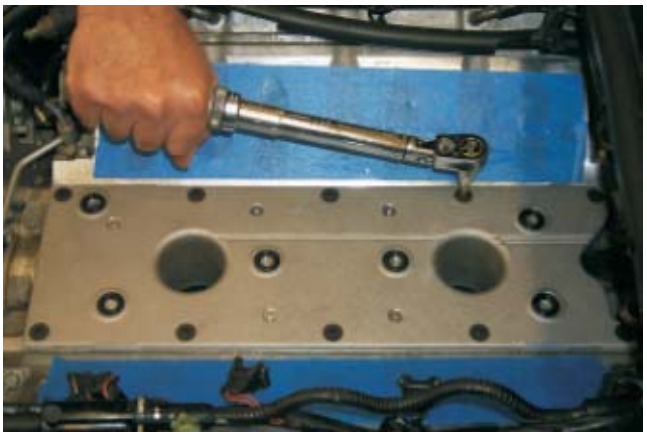
27. Remove the two knock sensors by using a ratchet and a deep 22mm socket.

26. On the engine valley cover, remove the two black rubber knock sensor covers by gently prying them up using a small straight blade screwdriver. Disconnect the electrical connectors by squeezing the side of plugs with a pair of long jaw or needle nose pliers and pulling up.

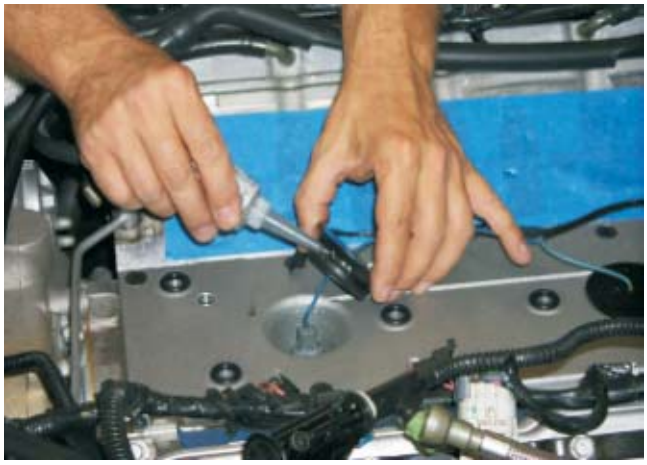
28. Remove the engine valley cover and gasket by removing the ten bolts with a ratchet and 10mm socket.



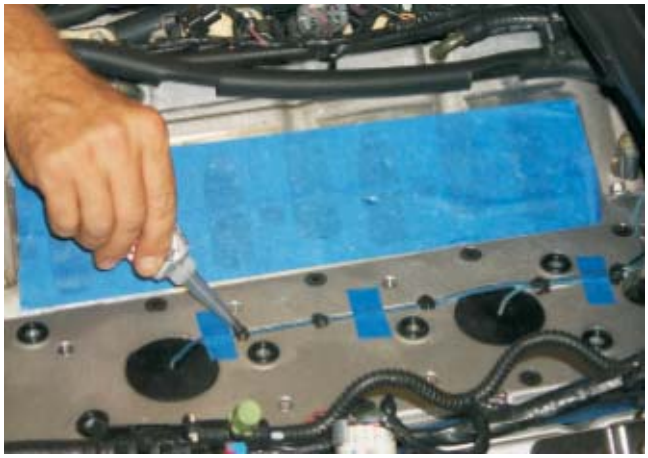
29. The gasket will be reused, the original valley cover and bolts will not. Inspect the gasket for any damage and then reinstall, note that it will only fit correctly in one position.



30. 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.



31. Reinstall the knock sensors and torque them to15 lb ft. Reattach the electrical connectors by pushing the plug down firmly till a “click” is heard. Before installing the covers, apply a bead of the silicone adhesive supplied to the side of each of the covers. Finally push the covers back into place.



32. Remove the existing tape from the knock sensor wires so that they can be installed on the grooves in the top of the new valley cover. Use some tape to hold the wires in place temporarily, and then use some of the silicone adhesive to retain the wires permanently.

33. Remove the protective tape from the cylinder heads and supercharger. (Make sure that there is no debris in the ports). Also at this time install the new supplied intake gaskets (8) into the lower intake manifold.

34. Spray silicone or some mild soap and water solution on the cylinder head surface to lubricate. This makes the intake manifold slide around a little to help line up the holes. (Do not use anything that will damage the intake gaskets, petroleum based products, etc.)

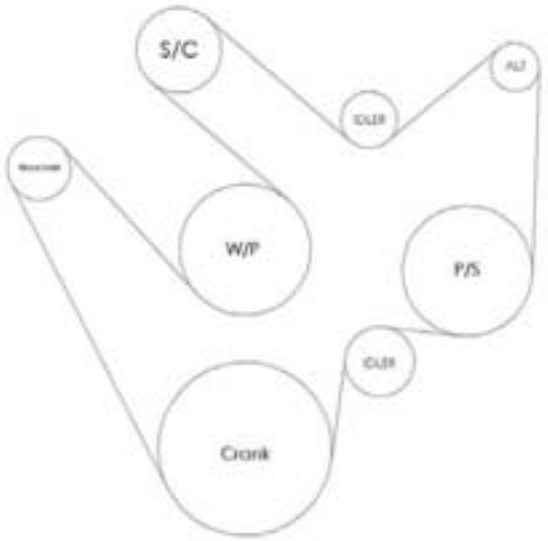
35. Carefully, set the supercharger assembly on the engine, line up the bolt holes with the holes in the cylinder heads. (Be careful of the one bolt that's under the rear supercharger pulley on the passenger side as it hangs out a little and must be aligned first).

36. Plug in the (MAP) sensor electrical connector at the rear of the supercharger manifold.

37. Remove the black plastic sleeves that hold the intake bolts up and start all ten intake bolts by hand, do not tighten until all the bolts are started. (Be careful not to cross thread the bolts).

38. Torque the supercharger manifold bolts, working from the center out to 89 lb-in using a 10mm socket and a inch pound torque wrench.

39. Reinstall the supercharger and accessary fan belt with a 15mm tensioner wrench, using the new supplied belt routing diagram below.



Belt Routing Diagram

40. Reconnect the throttle body electrical connectors (TPS) & (ETC).

41. Reinstall the throttle body coolant hose.

42. Reinstall the EVAP hose as shown in the picture, then plug in the eight fuel injector electrical connectors.

43. Using a small amount of grease install the fuel manifold O-ring to the driver's side fuel rail.

44. Reinstall the fuel manifold to the drivers side fuel rail using the supplied O-ring and two 6mm bolts. Using a 10mm socket wrench, torque the bolts to 106 lb-in. Be careful not to pinch the O-ring.

45. Push the stock fuel lines (one or two) onto the new fuel manifold fittings. Make sure that they are locked on by pushing and pulling on them lightly.

46. Route the IAT harness under the fuel rail and plug the IAT harness connector into the IAT sensor.

47. Reconnect the vacuum supply hose that comes from the back of the engine compartment to the ¼" hose barb on the supercharger, connect the (PCV) hose to the 3/8" hose barb on the supercharger.

48. Reconnect the PCV hose to the throttle body.

49. Reinstall the power brake booster hose.

50. If the supercharger system has over 25,000 miles since its original installation, service the K&N air filter as described in the manufacturer's instructions.

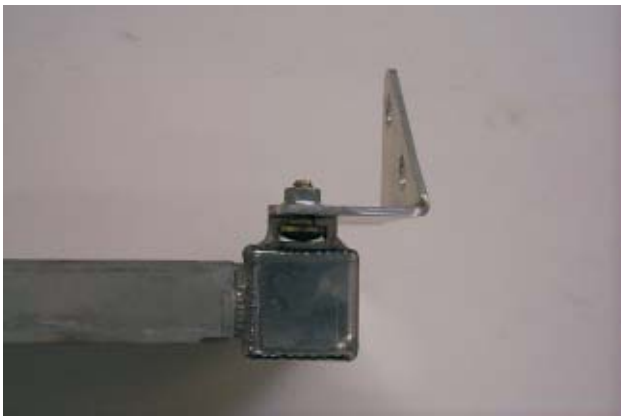
51. Reinstall the air duct from the throttle body to the (MAF) meter. Make sure that there are no air leaks.

52. Remove the center section of the front spoiler and the two aluminum center supports by removing the four bolts with a ratchet and 10mm socket.

53. Temporarily place the heat exchanger in the mouth of the radiator shroud with it's barbs towards the right hand (passenger's) side. Push the heat exchanger up so that it's top surface is flush with the inside surface of the radiator shroud. Locate the bottom, forward edge of the heat exchanger side tanks so that they are centered in the frame extension cross bar. Slide the heat exchanger over to the left (driver's) side so that the barbs touch the side of the radiator shroud. This is the position the heat exchanger will be mounted in.

54. With the heat exchanger in position, use a pen or scribe to make a mark on the side of the radiator shroud for a hole at least 1" in diameter at the upper barb. Remove the heat exchanger and using a hole-saw or sharp knife make the hole in radiator shroud for the heat exchanger barb.

55. Attach the mounting brackets to the heat exchanger using the round-headed carriage bolts supplied.



56. The brackets attach to the heat exchanger by sliding into the open ends of the channel on the front face of the heat exchanger side tanks. The square portion of the bolt shaft must be aligned with the side channel. Tighten the mounting nuts to lock the brackets in position.

57. Replace the heat exchanger in it's previous position in the mouth of the radiator shroud. Using the mounting brackets as a template, mark the sides of the radiator shroud for the bracket holes. Remove the heat exchanger and drill four 3/8" holes in the radiator shroud for the mounting bolts.

58. Replace the heat exchanger after drilling the mounting holes. Using the 8x25mm bolts and flange nuts supplied, bolt the heat exchanger in place on the left side only. Loosen the mounting bracket nuts on the right side only and temporarily slide the bracket down so that you can install the heat exchanger hose and #10 clamp on the upper barb.

59. Using the long molded "L" hose supplied, pass the short leg of the "L" through the new hole in the side of the radiator shroud to the upper barb of the I/C heat exchanger. Attach the hose with one of the #10 clamps supplied. Route the long leg of the "L" hose along the frame rail, under the coolant reservoir and along side the engine for now, you will attach this end in a later step. After the hose is attached to the heat exchanger, slide the mounting bracket back into position and bolt it into the radiator shroud with the 8x25mm bolts and nuts supplied.

60. Here is the heat exchanger bolted in position with the hoses installed.

61. Remove the right hand (passenger's side) corner of the front spoiler by removing the four mounting bolts and washers with a ratchet and 7mm socket.

62. Remove the right hand splash panel by removing the two mounting bolts and washers on the bottom surface and the two along the bottom edge of the wheel well with a ratchet and 7mm socket.

63. After removing the right hand splash panel, remove the horn assembly by unbolting its mounting bracket with a ratchet and 13mm socket. Pull the assembly free then disconnect the electrical connection.

64. On the inside of the frame extension tab, remove the bolt and clip nut that secures the inner flap of nose cover with a ratchet and 7mm socket. Pull the nose cover flap down and out.

65. Here is the coolant pump complete with its mounting clamp; short hose and fasteners. Assemble your pump this way. From the length of hose supplied, cut a length 4” long and attach it to the outlet barb of the pump with the #10 clamps supplied. Position the mounting clamp so its mounting tabs are on the same side of the pump as the outlet barb.

66. Pull the loose edge of the nose cover down so you can install the pump on top of the frame extension with the electrical connection pointing forward towards the front of the car. Slide the pump outlet hose on to the lower barb of the heat exchanger and secure it with a #10 clamp. The mounting clamp tabs should be pointing towards the center of the car.

67. Here is a view from the other side of the pump installed with the outside edge of the nose cover pulled back. The pump will be mounted by passing the mounting clamp bolt through the hole in the frame extension tab (where you previously removed the clip nut from step # 41.) Then through the nose cover flap to be secured with the nut and washer on the bottom of the car.

68. To secure the pump clamp bolt, slide a thin 10mm wrench in the gap between the nose cover flap and radiator shroud to hold the head of the clamp bolt. Tighten the nut securely with a ratchet and 10mm socket. Note the position of the short hose and clamps. The horns, splash panel and corner of the spoiler will be replaced later after the pump wiring is installed. Ensure that the short hose from the coolant pump will reach the lower barb of the heat exchanger . If necessary loosen the pump clamp bolt and rotate the pump so the hose will reach.

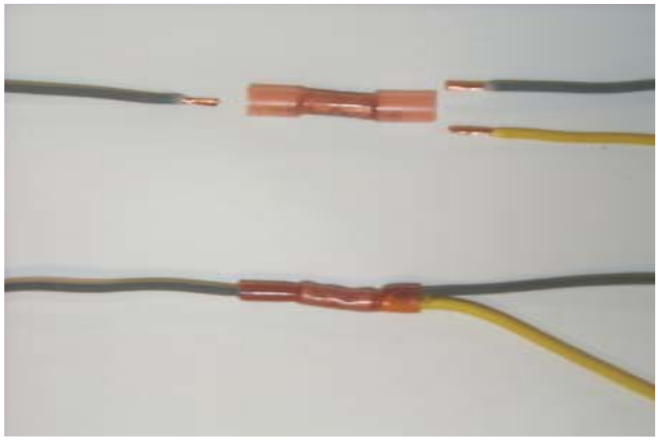
69. To ensure proper airflow to the heat exchanger modify the center section of the front spoiler. From the backside using the mounting bracket as a guide, cut the upper rubber portion off along the top edge of the mounting bracket. Reinstall the front spoiler with its two aluminum center supports and four mounting bolts with a ratchet and 10mm socket.

70. This is the intercooler heat exchanger relay and wiring (Split-loom removed for clarity).

71. On the right (passenger) side of the engine compartment is the fuse/relay center. Remove the B+ terminal cover by pulling up on it.

72. Detach the fuse relay center from its base by gently prying open the four retaining clips. Pull up firmly on the fuse relay center to expose the three wiring blocks located on the bottom.

73. Note that the three wiring blocks are three different colors, black, grey and white. On the white block, locate the grey wires. On early cars 1997 to 2000 there will be three grey wires of small, medium and large sizes. 2001-on cars will have only two grey wires, a small and a large. On early cars select the medium of the three; on the later cars select the smaller of the two. Into the selected grey wire, install a crimp/shrink connector with the yellow wire from the relay. This photo shows the relay wiring installed.



74. Install the crimp/shrink connector by cutting the grey wire and stripping a ¼" of insulation off each end. Insert one end of the grey wire into the crimp/shrink connector and crimp it securely. Into the other end of the connector, insert the remaining end of the grey wire and the stripped end of the yellow wire from the relay and crimp it securely. Using a heat gun or a blow-dryer set on high, shrink the plastic covering of the connector until the clear sealant from the inside of the connector can be seen oozing out from under the plastic covering. **Crimping the connector alone is not enough to insure a permanent connection; <u>you must shrink the plastic covering!</u>**

75. Here is the crimp/shrink connector and yellow wire installed on the grey wire of the white-wiring block.

76. Route the large red wire and fuse holder out from under the F/R center base through the same hole as the smaller branches of the factory harness. (Note: split-loom has been removed in this photo for clarity) remove the nut from the B+ terminal on the F/R center with a ratchet and deep 13mm socket. Place the ring connector on the B+ terminal and reinstall the nut securely. Once all four electrical connections are made, use a Ty-wrap supplied to secure the relay to the existing wiring and gently tuck it into the F/R center base. Finally snap the F/R center back into its original location and replace the B+ cover.

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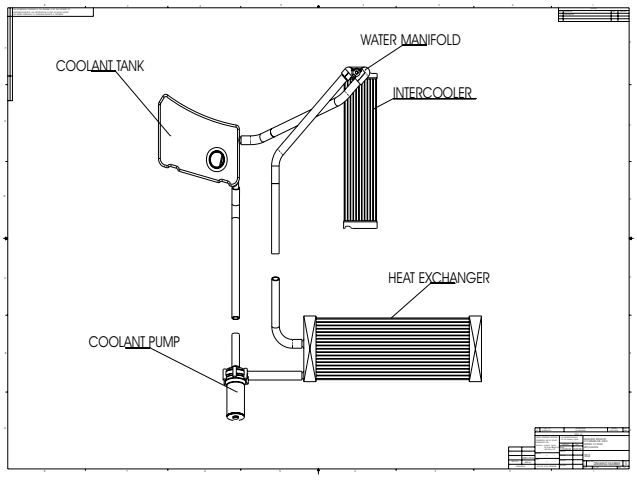


78. This is a diagram of complete intercooler system plumbing. Note, the various connections, this is very important.

79. Temporarily position the intercooler reservoir on top of the battery and remove the rubber strip along the top edge of the surrounding partition. Using a pair of tin-snips, mark and cut a notch in the top edge of the partition so that a hose can pass through to the upper barb of the reservoir. Reattach the rubber seal along the top of the partition.

80. In the lower corner just ahead of the F/R center, cut a hole at least 1” in diameter on the partition floor so a hose can pass through to the lower barb of the reservoir.

81. Using the peel-and-stick pad supplied, attach it to the side of the hood latch next to the battery. This will act as a cushion for the reservoir.

82. Starting at the reservoir cut a length of 5/8" hose supplied that will connect from the top barb of the I/C reservoir to the left hand (driver side) barb on the I/C coolant manifold. Route the hose through your new notch in the battery partition, over the fuel rail and away from the supercharger pulleys. From the remaining hose, cut a length that will connect the lower barb of the I/C reservoir to the inlet (center) barb on the I/C coolant pump. Route this hose through your new hole in the lower corner of the partition. Continue the hose under the radiator reservoir, along the side of the frame rail and radiator shroud to the pump. Connect the remaining end of the long "L" hose to the right hand barb on the I/C coolant manifold. Secure both hoses with the #10 hose clamps supplied. Reinstall the horn assembly by first plugging in the horn electrical connector and then attaching the horn bracket to the frame extension with its bolt using a 13mm socket and ratchet. Reinstall the splash panel and corner of the spoiler to the underside of the nose with their eight mounting bolts, using a 7mm socket and ratchet.

83. Fill the inner cooler reservoir with a mixture of water and "Water Wetter" supplied. The inner cooler 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. 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.

Warning:
Before attempting installation of the new upgraded fuel pump, ensure that the fuel tank is less than 1/8th 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 is strongly recommended.

84. Here is the new upgraded fuel pump assembly. Note the new crimp type hose clamp that is taped to the body; remove it now for later installation.

86. Pull down, but do not remove the large bottom panel by removing the next two bolts and only loosening two forward most fasteners with a ratchet and 13mm socket.

85. Remove the right rear wheel to gain better access to the fuel pump assembly on the driver side. Using a ratchet, 10 and 13mm sockets remove the two fasteners that retain the end cap on the fuel tank panels.

87. Remove the three fuel lines by pushing their plastic connectors firmly towards the steel tubes, then squeezing the blue or green release triggers. Note that just behind the connectors on the fuel lines are colored flags. These flags (black, blue and green) match a colored dot on each of the steel tubes, if the dots are not visible: the names of the colors are stamped into the access cover near the base of the pipes.

88. Remove the six bolts that secure the access panel with a ratchet and a 7mm socket. Pull the access cover and pump assembly out of the tank four to six inches and stop. Note the white plastic fuel level transmitter mounted near the top of the access panel and its thin, metal float arm going back into the tank. Carefully move the float arm through it full range of motion and notice how far it moves.

89. Detach the fuel level transmitter from the mount by pushing in on the two tabs on the backside of its mount.

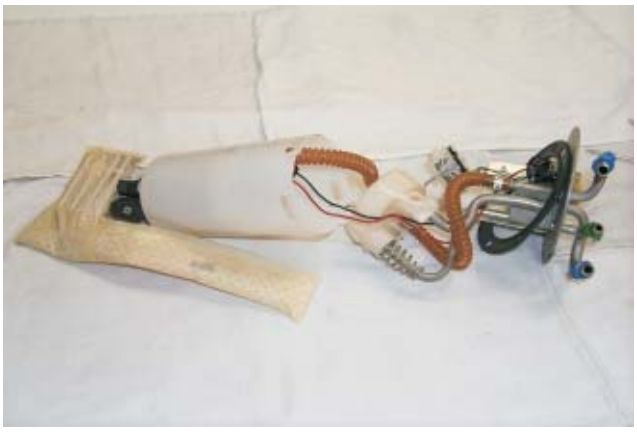
90. With the fuel level transmitter loose, reach into the opening and pull out the loop of orange plastic fuel line, this will ease removal of the pump assembly.

91. Pull the pump and transmitter assembly up at about a 45-degree angle and out towards the outside of the car. Note that there is a large fuel strainer attached to the end of the white plastic can, and even with the tank empty it will be dripping with gasoline when you remove the pump assembly. Use a large shop towel or drain pan to catch this excess fuel.

92. Prepare a clean work space and lay the complete pump assembly on clean dry shop towels to catch any residual fuel as you disassemble it.

93. Disassemble the pump assembly by separating the “can” or body from its lid. Do this by gently prying up at the three retaining points.

94. When removing the lid from the can, it can be helpful to use three small screwdrivers as wedges to hold the edges of the can up as you pull the lid free.

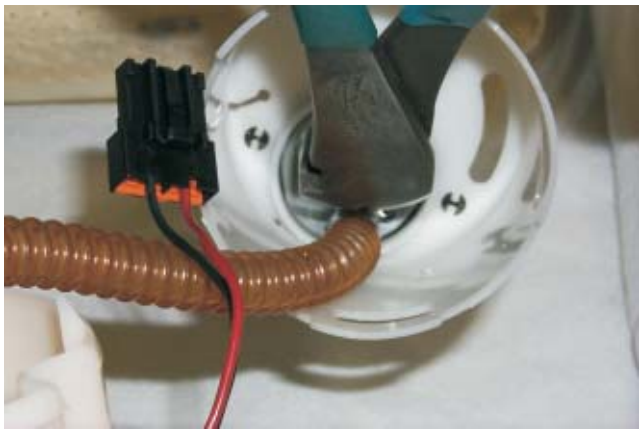


95. Here is the pump assembly with the lid removed. Unclip the black and red wires from the side of the lid and slide the lid up along the orange fuel line.

96. Sliding the lid up the fuel line reveals the fuel pump connections. Remove the electrical connector by squeezing and pulling it out.

97. Remove the fuel line connection by carefully spreading the “loop” in the clamp. Do this by using a small tool such as a scribe or small screwdriver and some patience. Take care not to damage the fuel line itself, as it must be reused on the new pump, the clamp will re replaced.

98. This is an end view of the new pump and can assembly, it is identical to the one just removed.



99. Install the fuel line on the new pump by sliding the new clamp (taped to the can previously) over the end of the fuel line. Slide the fuel line on the nipple of the pump and crimp the loop tightly.

100. Use a pair of side cutting pliers to crimp the loop of the new clamp around the fuel line. Take care not to cut the loop but only tighten it. Finally install the electrical connector.

101. After installing the fuel line and electrical connector, clip the red and black wires back into their slot on the side of the lid. Slide the lid down the fuel line until it snaps into place on the new can. Insert the fuel strainer of the pump can into the opening of the fuel tank first, followed by the float arm of the transmitter. Slide the arm and can in the opening together in the same position as you pulled them out. Before pushing the can all the way in, snap the transmitter back into it's original position and move the float arm through it's full range of motion to insure that it is not restricted in the tank. Push the pump in until the access cover is up against the gasket in its original position. Install the six retaining bolts and torque them to 62 in-lbs. Reattach the three fuel lines by lining up the release triggers with the slots on the connectors. Match the colored flags on the lines to the colored dots on the pipes. If the dots are not visible, the names of the colors are stamped into the access cover near the base of the pipes. Disregard the color of the release triggers. Ensure that you replace the fuel lines in the correct position. Reattach the electrical connection on the access cover. Push the lower fuel tank panel back into place and reinstall the two fasteners you removed. Reinstall the tank end panel with its fasteners and torque all the panel fasteners to 12 ft-lbs. Refill the fuel tank with 91 or greater octane unleaded fuel.

102. Close the radiator petcock and reinstall the coolant saved from step 3. If more coolant is needed, only use coolant recommended by GM.

104. Cycle ignition switch several times to fill the fuel rails. Check for any leaks in the fuel system at this time.

Warning the fuel line fittings are not pressure tested during assembly , make sure to check for fuel leaks now and tighten fittings immediately.

103. Reconnect the negative (-) battery cable using a 8mm wrench.

105. Using the supplied instructions included with the Superchips Micro Tuner download the modified program into the vehicles computer. NOTE: It is very important that the instructions for the programmer are carefully read and understood. All steps should be followed to a “T”. If you have any questions, contact Superchips or Magnuson Products immediately.

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

107. Check the vehicle over one more time, double checking for any problems.

108. 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.

109. 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. Double check the installation one more time and make sure that 91 or higher octane fuel is in the tank. If the problem continues call the Magna Charger tech line. Enjoy your new Magna Charger supercharger.