Supercharger Parts List 996/997

(1) Belt Dayco 5061025/6PK2605 1025K6
(1) Pulley non flange 89007
(1) MP90 4th generation 4.685 drive gm 2.5" 6 rib L3 port down
(1) Supercharger support brackets (1 main front support and 1 rear support)
(1) Intercooler Assembly (liquid to air)
(1) Water Tube, metal
(1) Supercharger discharge,Tube 3" O.D.
(1) Air Filter (#3550)
(1) Water Outlet Block Off Plate (part# 996 106 217 01)
(1) MAF Housing
(1) Supplemental Injector Manifold

Castings
(1) Supercharger Inlet Manifold
(1) Supercharger Discharge Manifold
(1) Water Discharge Manifold

Hoses
(1) 3"x2.5" silicone coupler
(2) 1.5"x2.5" silicone coupler
(1) 5/8" ID heater hose (25' length)
(1) 1" ID crank vent hose fc619-16 flex r4 (11"length)

Additional Components
(1) TPC License Plate Bracket
(1) 1/8" x 3/16" Barbed fitting (brass)
(4) 1/2" x 5/8" 90 degree Barbed fitting (brass)
(2) 3/4" to 1/2" reducer (brass)
(2) Fuel Injector Assembly w/ 5/8 compression fitting
(1) Uni-Q computer & harness
(1) Rubber cap (part# 944 106 103 03)
(1) Rubber sleeve, for 997 only (part# 996 110 685 52)
(1) Brass T-fitting, for 996 only
(1) Brass straight fitting, for 997 only
(1) Electric water pump

Hardware	Clamps
(15) 8x20x1.25 socket head	(6) -52
(1) 6x25x1.00 socket head	(5) -24
(1) 1/2x3/4x16 w /washer	(2) -16
(6) Large nylon tie wrap	(6) -12

996 only:

The following parts are necessary for the installation. These parts are NOT included with the Supercharger kit, they are available from you local dealer.

(1) Center Radiator, part # 996 106 037 51
(1) Upper Retaining frame, part# 996 504 487 02
(1) Lower Retaining frame, part# 996 504 485 02
(4) Rubber Mounts, part# 930 113 430 00
(2) Retaining clips, part# 999 507 550 02

**1998 and 1999 C2 will need an Intermediate Pipe, part# 996 110 116 00
**2002 and up cars will need a Hose, part# 996 106 640 54

997 only:

The following parts are necessary for the installation. These parts are NOT included with the Supercharger kit, they are available from you local dealer.

(1) Intake Manifold Rubber Sleeve, part # 996 110 685 52
(1) Center Radiator
(1) Upper Retaining frame
(1) Lower Retaining frame
Retaining frame hardware
Attaching hoses

Version 02.22.08

TPC 997 and 996 Supercharger Kit Installation Instructions

CAUTIONS:

Please read the instructions thoroughly. Do not start without completely reading and comprehending the instructions. If you have a question at any time during the installation process, CALL! Do Not Guess! Our telephone number is 410-799-7223.

The use of 93 Octane(RON+MON/2) or higher grade unleaded fuel is required. Please specify if 93 Octane fuel is not available in your area, a 91 Octane file is available. Using the wrong fuel or stale fuel will cause engine damage!

Clean and careful inspect all of the castings and pipes for loose debris before starting.

Use LOCTITE 518 anaerobic gasket maker or equivalent on all metal-to-metal surface connections.

1) Disconnect power from the battery.

2) Remove right side muffler and mounting bracket. Modify the muffler bracket by removing one layer from the bottom of the footing pad, as shown in **figure 1**. Install the supercharger rear bracket by placing it between the engine and the footing pad of the muffler using the original bolts. See **figure 2**. Do not reinstall the muffler at this time.

3) Remove the gearbox. Refer to factory workshop manual. The purpose of this step is to gain access to the main engine coolant pipe in the right side of the tunnel. You may omit this step if you use a reciprocating saw to cut the pipe in half. If you choose to cut the pipe, be aware that you will re-using the front half of the pipe. Again, if you choose to omit this step, please be carefully with the saw.

4) Drain the engine's coolant system. Remove the aluminum water pipe on the right hand side of the engine along with the aluminum housings. Install the supplied water block off plate and water discharge manifold with Loctite 518. The rear portion of the aluminum pipe will be replaced with the supplied water pipe. Cut off the rear portion of the aluminum pipe so that it can be coupled with the supplied steel pipe. Install the coupled pipes as shown in **figure 3**.

5) Reinstall the gearbox. Refer to factory workshop manual.

6) Remove the wiring going from the starter to the positive terminal under the deck lid (hot-shot terminal).

7) Remove air filter housing, throttle body, and serpentine belt. Make note of the routing of the serpentine belt.

8) Locate the oil pressure sending unit. Rotate the unit 90 degrees(or 1/4 turn) counter-clockwise so it will clear the supercharger. You may bend the tabs for additional clearance.

9) Remove the intake manifold center log to gain access to the A/C lines on the A/C compressor. Discharge A/C system. Remove both A/C lines from the A/C compressor to the H-block.

10) Modify the A/C lines as shown in **figure 5**. Welding and crimping is required for this step so you must have the proper equipment for this step. If you cannot perform this step please call us. We offer the service of modifying you're A/C lines at a fair price. If you are performing this step on your own you will have to cut the off the ends as shown in **figure 5.1** to **figure 5.5**, source the proper size weld fitting and flexible A/C hose from your local A/C supply shop. The goal is to replace the metal lines with flexible lines and keep the same fittings on both ends. The modified lines should be about the same length as the stock lines.

11) Reinstall A/C lines. The A/C lines are routed under the intake manifold to the A/C compressor. See **figure 5.6**. Make sure the A/C lines have sufficient clearance and that they are not chaffing against the chassis or the engine.

12) **997 only:** Replace the right side intake manifold rubber sleeve with part # 996 110 685 52(not included in kit). The new sleeve has provision for a vacuum port. See **figure 6**. Insert the supplied brass straight fitting into the new sleeve. The brass straight fitting must be inserted complete into the sleeve. This fitting will provide intake manifold reference to the computer.

996 only: Remove the hard plastic hose from the right side intake manifold rubber sleeve. Insert the supplied brass T-fitting into the rubber sleeve. Connect the hard plastic hose to one end of the brass T-fitting using a rubber coupler and nylon ties. The other end of the brass T-fitting will provide intake manifold reference to the computer.

13) Block off the vent port on the center log using the supplied rubber cap and a clamp. Reinstall the center log. The Make sure all the clamps are tight on the intake manifold including the clamps in the back. Wrap the supplied long nylon ties around the intake manifold plenums. See **figure 7**.

14) On the right side of the intake manifold, locate the fuel injector wiring harness. Remove plastic harness cover. Secure injector harness to fuel rail with nylon ties.

15) **997 only:** Locate the fuel pressure test ports on both the left and right fuel rails. Remove the test port caps and Schrader valve from both fuel rails. If the Schrader valves are not removed, engine damage will occur! Install the supplied fuel injector assemblies onto the fuel pressure test ports. The longer one is for the left side. For the moment, place the injectors toward the center of the engine so that they are no in the way.

996 only: Locate the fuel pressure test port on the ride side fuel rail. Remove the test port cap and Schrader valve. If the Schrader valve is not removed, engine damage will occur! Install the supplied fuel injector assembly onto the fuel pressure test port. For the moment, place the injectors toward the center of the engine so that they are no in the way.

16) Locate the supercharger from the kit. Carefully remove the supercharger drive pulley with a gear puller. Install the inlet manifold and discharge manifold onto the supercharger with the supplied M8x20 bolts as shown in **figure 8.** Use Loctite 518 between the mounting surfaces. Install a vacuum hose securely on the supercharger wastegate port. The length of the hose is approximately 56 inches or 142 cm. Secure the hose around the back of the supercharger with nylon ties as shown in **figure 8.1.** Now that the supercharger is built up to an assembly, it is ready to go into the car. Do not reinstall the drive pulley at this time. Tuck the hose between the supercharger and inlet manifold using masking tape. This way the hose is not in your way and will prevent damage to the hose during the installation. This hose will be connected to the Boost Control Circuit later.

17) Use a suitable supporting device for lowering the engine. Remove the two M12 engine mount nuts and lower the engine approximately 4".

18) Locate the P/S lines on the right side of the engine compartment. Separate the lines from the plastic clip on the body. Remove the plastic clip from the body. Carefully shift the lines toward the center of the engine to clear the supercharger. Make sure there are no kinks in the lines. See **figure 9**.

19) Clearance the body approximately 0.250" to avoid contact with the supercharger inlet casting. Contact will cause noise and vibration. See **figure 10**.

20) This step requires two people. Carefully install the supercharger assembly into the right side of the engine compartment from the top. It is a tight fit so please take your time. Make sure the plastic supercharger wastegate pod is not damaged. If the wastegate pod is damaged, the supercharger will not function properly and may cause engine damage! Rest the back of the assembly on top of the rear bracket. Your helper will guide the supercharger assembly from underneath so the rear mounting will line up. Then, your helper will start the supplied M8x20 socket head screw into the back of the supercharger assembly. Once the back screw is started, raise the engine up just enough so that the supercharger assembly sits flat on the rear bracket. Install front the front bracket with the idler pulley. When the supercharger assembly is seated properly on both the front and rear bracket, you may tighten all the fasteners.

21) Check to make sure that none of the A/C lines, P/S lines, and electrical wires is making contact with the supercharger assembly and brackets. Contact may cause chafing. Make adjustments to the lines & wires as needed. Use nylon ties to secure.

22) Install the supercharger pulley with Red Locite at 42 ft/lb or 57 Nm of torque. Do not over-torque! Install the supplied belt. Use the factory routing method and wrap the belt 120 degrees around the supercharger pulley. See **figure 11**.

23) Raise the engine completely and tighten the engine mount nuts to factory specification.

24) **997 only:** install supplied electric water pump in the left corner of the engine compartment using the supplied Adel clamp. See **figure 12**.

996 only: install supplied electric water pump on top side of the rear suspension cross member using the supplied Adel clamp and screw. The cross member is a thin flat aluminum bar fastened by two bolts. It is mounted on the top side so that the vehicle's ground clearance is not reduced. See **figure 13**.

25) The electric water pump requires a "Switched" 12-volt power supply. The Brown wire of the pump must be grounded to the body.

26) Remove the car's front bumper cover. Install the OEM center radiator and mounting brackets(not included in kit). Refer to factory workshop manual for the installation. The center radiator is used for the liquid-to-air intercooler in this application.

27) **997 only:** requires two OEM attaching coolant hoses(not included in kit) for the center radiator. Cut the hoses a few inches after the radiator connectors. Insert the supplied brass reducer fittings into the ends and secure with supplied hose clamps.

996 only: install the two supplied 1"I.D. x 6" Length hoses onto center radiator. Insert the supplied brass reducer fittings into the ends and secure with supplied hose clamps.

28) Use the supplied 5/8" I.D. hose to route two hoses from the brass reducer fittings(front of car) to the engine compartment(rear of car) following the factory coolant lines. The two hoses are

for the liquid-to-air intercooler system. It is extremely important that these two hose are not restricted and that they do not have direct contact with the factory engine coolant hoses. If so, the engine coolant hoses will transfer additional heat to the intercooler. Nylon ties may be used to secure the intercooler hoses away from the engine coolant hoses.

29) Install the intercooler assembly and supercharger charge pipe using the supplied 3" I.D. silicone couplers and clamps.

30) Route a 5/8" I.D. hose from top port(inlet port) of the electric water pump to the right side port of the intercooler. The left side port of the intercooler is to be connected to one of the hoses from the front. The remaining hose from the front is to be connected to the side port(outlet port) of the electric water pump. Use the supplied hose clamps for hoses in the liquid-to-air intercooler system. Double check to make sure that the routing of the intercooler coolant hoses is done correctly. If they are not routed exactly as described the engine performance will suffer!

31) Install the remaining 3" I.D. silicone coupler on the intercooler outlet. Slide the silicone coupler towards the back of the car. Install the supplied fuel injector manifold on the intake center log. Rotate the center log if necessary to line up with the intercooler outlet. Push the silicone coupler forward to connect the intercooler outlet to the fuel injector manifold. Used supplied clamps. See **figure 14**.

32) Install the two fuel injectors on the fuel injector manifold using the supplied compression fittings. The compression fittings must be sufficiently tightened. Make there are no kinks on the fuel lines and that they are not chafing against other parts. Use nylon ties to secure if necessary.

33) Install the throttle body to the supercharger inlet manifold using Loctite 518. Remove the OEM mass air flow sensor from the OEM air filter housing. Transfer the mass air flow sensor to the new mass air flow housing supplied in the kit. Locate the arrow on the new housing. The arrow indicates proper air flow direction. Connect the new mass air flow sensor to the throttle body with the OEM rubber inlet hose. The OEM rubber must be trimmed as shown in **figure 15**. Use a sealant such as RTV silicone between the mass air flow housing and the OEM rubber hose to prevent any air leaks.

34) The crankcase vent has to be relocated so that it does not pressurize the crankcase when the supercharger produces boost. Relocate the crankcase vent from the left side of the original intake center log location to the port on the supercharger inlet casting. The supplied aluminum vent tube is used to make this connection. See **figure 16**.

35) Reinstall the right side muffler. Fill engine cooling system with factory specified coolant. Fill intercooler cooling system with 50% anti-freeze and 50% water.

36) Mount the TPC/UniChip computer next to the factory DME as shown on **figure 17**. **IMPORTANT NOTE: Make sure all the connectors are firmly installed and all the contact pins are fully engaged in the wiring!** A manifold pressure reference source is required for the T-module(MAP sensor). Route a hose from the T-Module to the brass fitting on the right side intake manifold rubber sleeve in the engine compartment. **IMPORTANT NOTE: The reference hose must not be kinked, pinched, restricted, or chafed! Without a proper reference source, engine damage will occur!**

37) If you have the "Twin Injection" setup (two auxiliary fuel injectors), you will have to wire in a second fuel injector connector. Locate "Plug 1" from the harness, labeled "INJ". See **figure 18**. Use solder and shrink wrap for the two junctions.

38) Install the Boost Control Circuit, **figure 19**. Locate "Plug 2" from the harness, labeled "Boost". Connect "Plug 2" to a Bosch solenoid, part # 996 605 123 01. This solenoid is standard equipment on 997 S models for the OEM air filter housing. Locate the hose from the supercharger wastegate port and connect it to the "OUT" port of the Bosch solenoid.

On 997 S models, use the original hose that connects to the "IN" port of the solenoid. This hose provides vacuum from the OEM electric vacuum pump.

On standard 997(non-S) models, locate a vacuum-operated accessory which draws from the OEM electric vacuum pump. Use a T-fitting for junction in order to obtain a sufficient vacuum source for the "IN" port of the solenoid.

On 996 models, locate a vacuum-operated accessory. Use a T-fitting for junction to obtain a sufficient vacuum source for the "IN" port of the solenoid.

*** Plug 3 is not used in most applications ***

39) The TPC/UniChip must be tested before any road test or dyno test. A test can be performed with a simple noid light (test light). Start the engine and let it idle to warm up. Then a hard throttle snap test will produce approximately 5 psi of boost. The noid light should glow to indicate injector duty cycle. **Firmly** connect injector connector.

40) Check for any coolant leaks. If there are no leaks reinstall the front bumper cover. The center plastic insert of the bumper cover must be modified or removed so that the center radiator receives full air flow.

41) In order for the standard rear deck lid to close, the bolt heads of the wing motor must be shaved down. You may install a sheet of rubber with adhesive for insulation. See **figure 20**.

42) After completion of the supercharger system prior to road test a final check out on a **Dynamometer** with proper **Air/Fuel** (Uego / lambda) is highly recommended. Air fuel readings should be with in 11.3 to 11.7 : 1 on the high load maps.

Please contact us if you have any questions. Do Not Guess!

Telephone: 410-799-7223(USA) Email: info@tpcracing.net

Figure 1

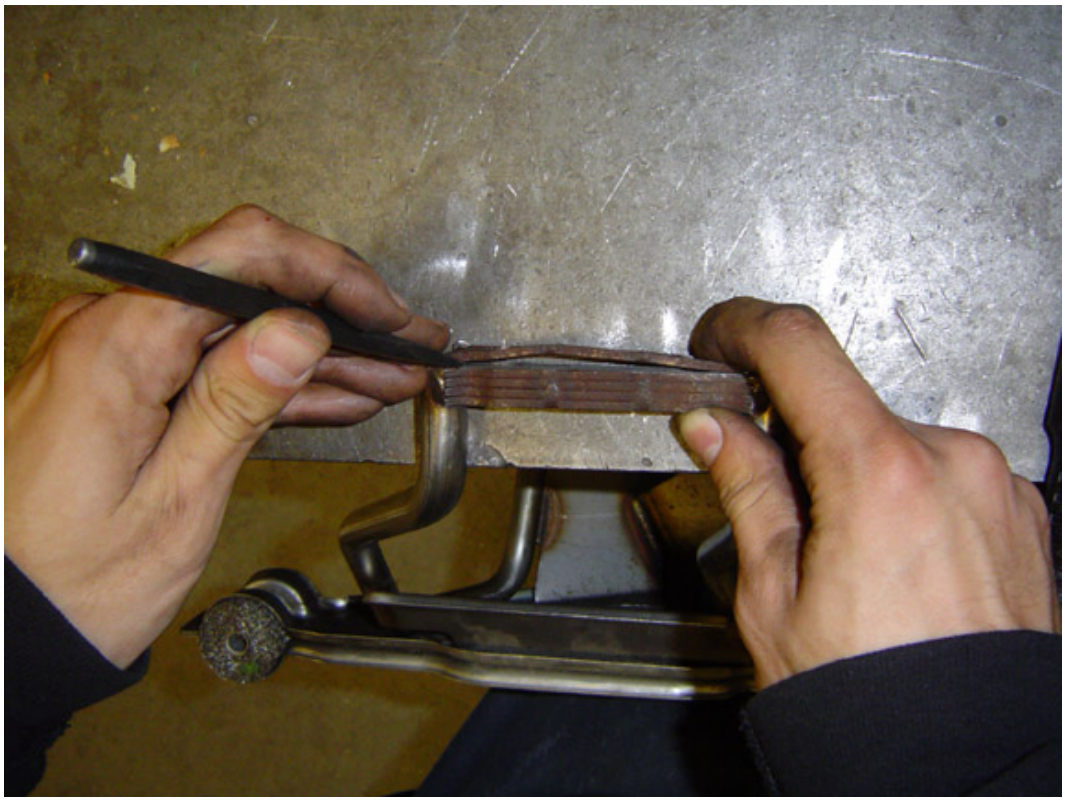

Figure 2

Figure 3.0

Figure 3.1

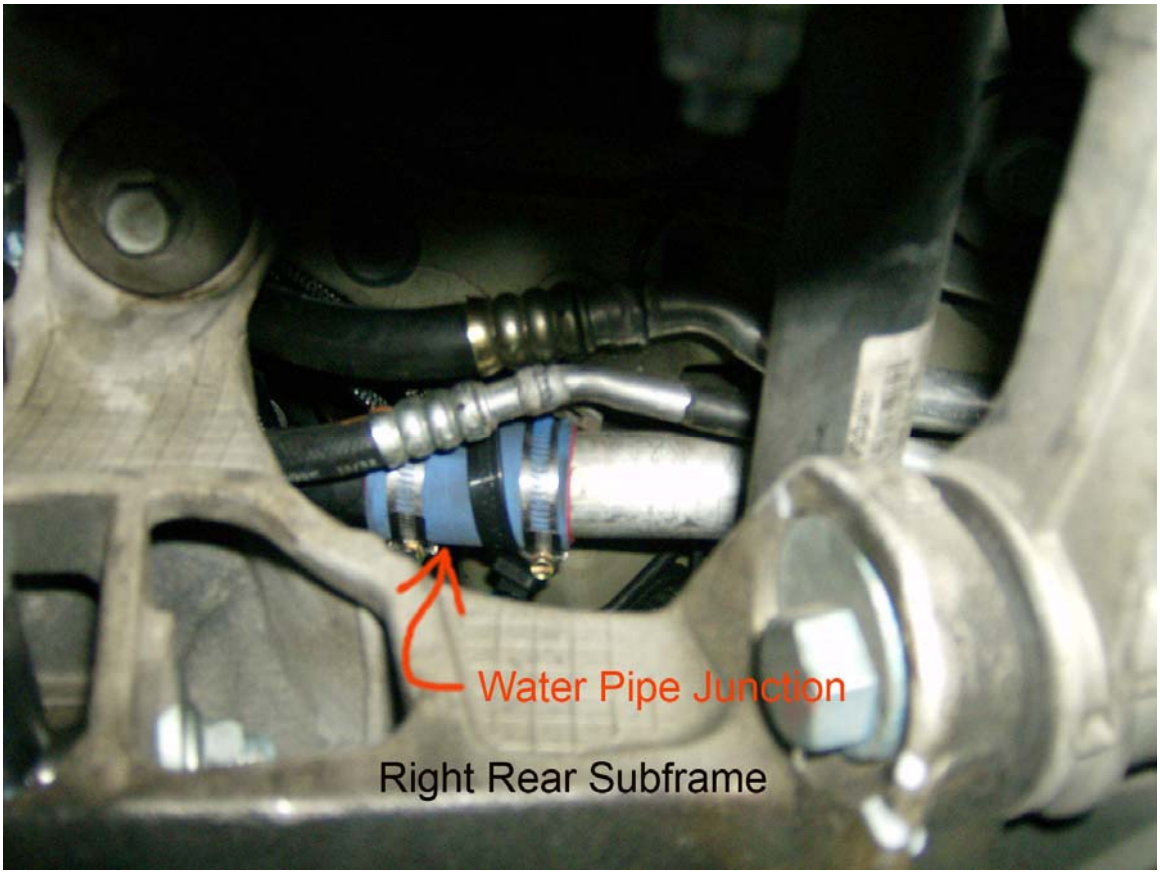

Figure 3.2

Figure 5.0 – Stock A/C Lines

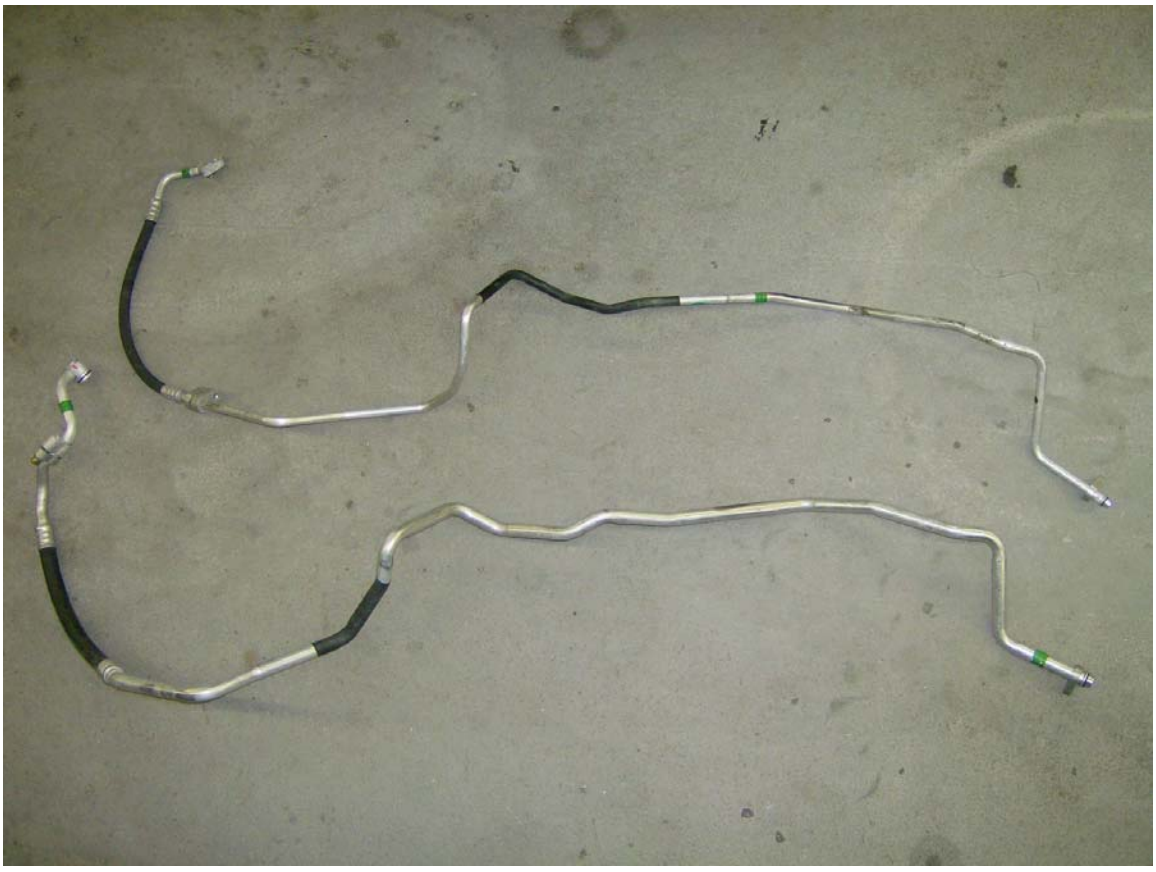

Figure 5.1 – Separate Compressor Fittings

Figure 5.2 – Cut-off the End at the Arrow

Figures 5.3a & 5.3b show 996 Compressor Fittings 1 & 2 (omitted here)

Figure 5.4a – 997 Compressor Fittings 1

Figure 5.4b – 997 Compressor Fittings 2

Figure 5.5 – Modified A/C Lines

Figure 5.6 – A/C Lines Routing

Figure 6.0 –

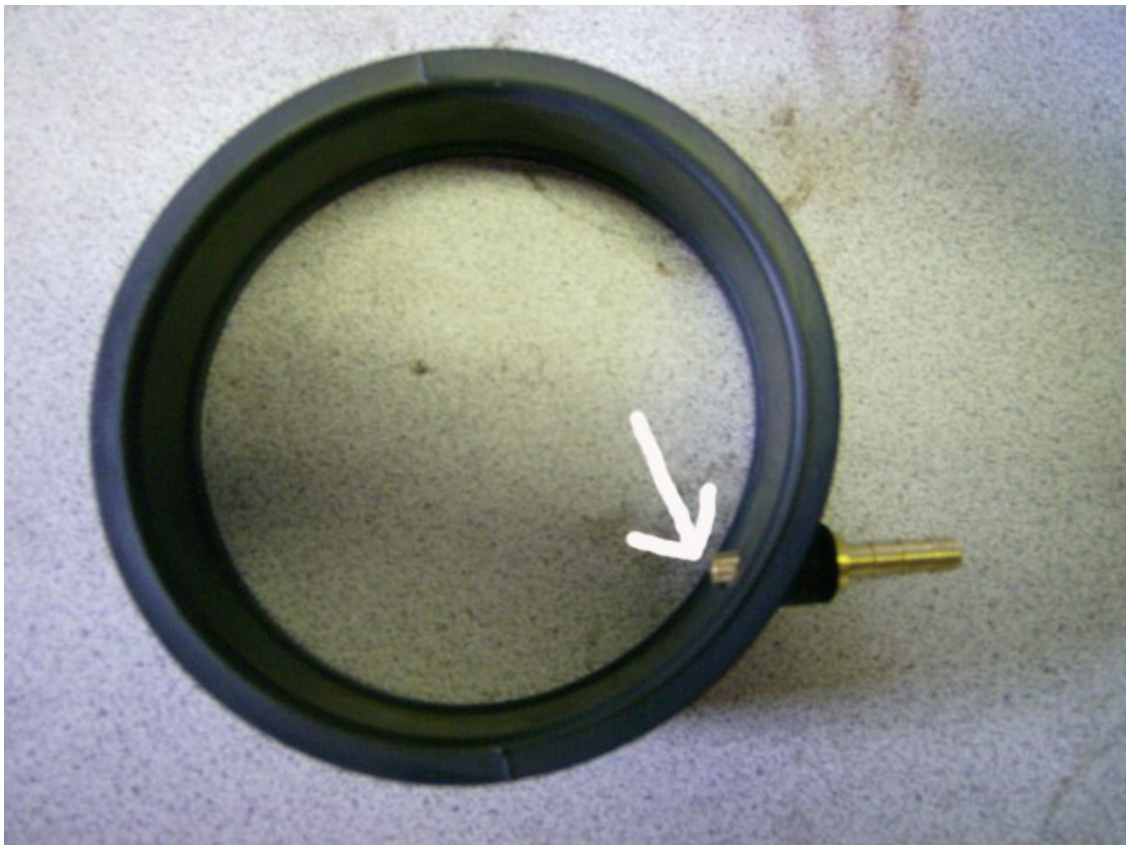

Figure 6.1

Figure 7.0 –

Figure 7.1 -

Figure 8.0 -

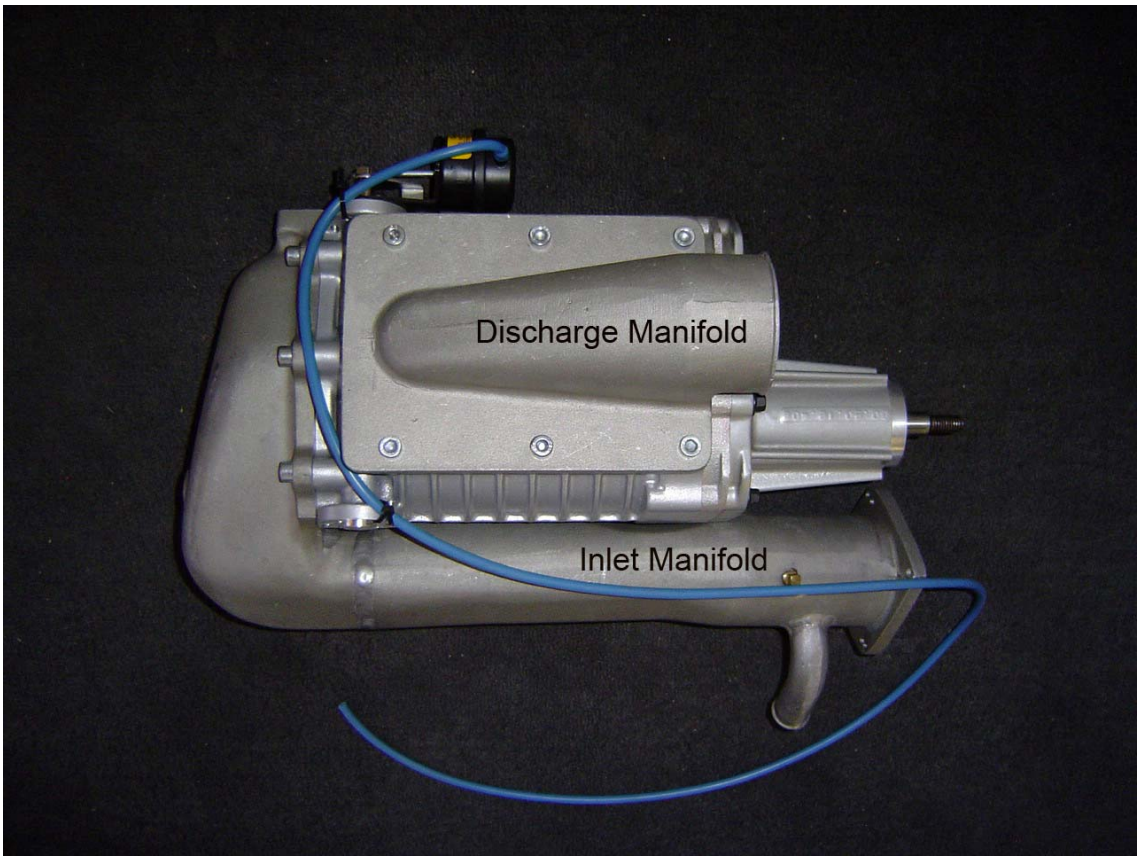

Figure 8.1 –

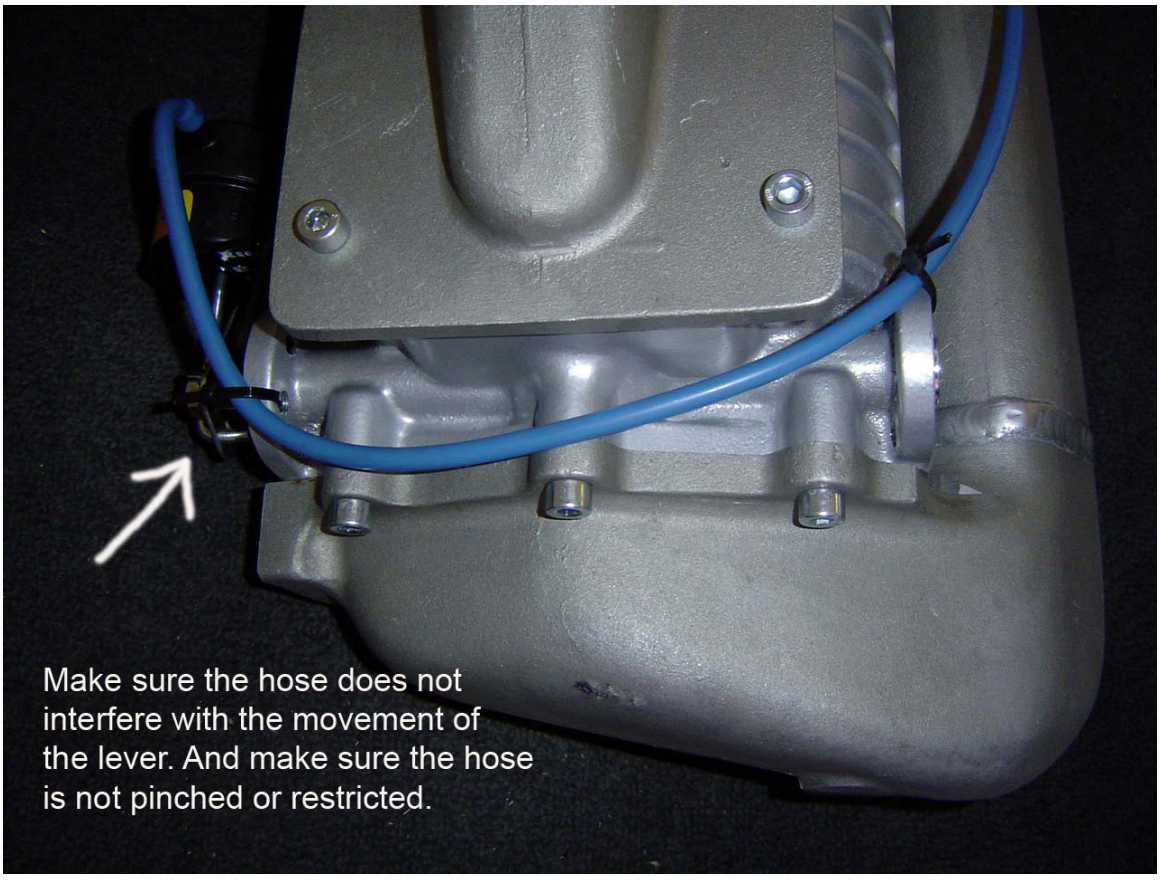

Figure 9.0 -

Figure 9.1 –

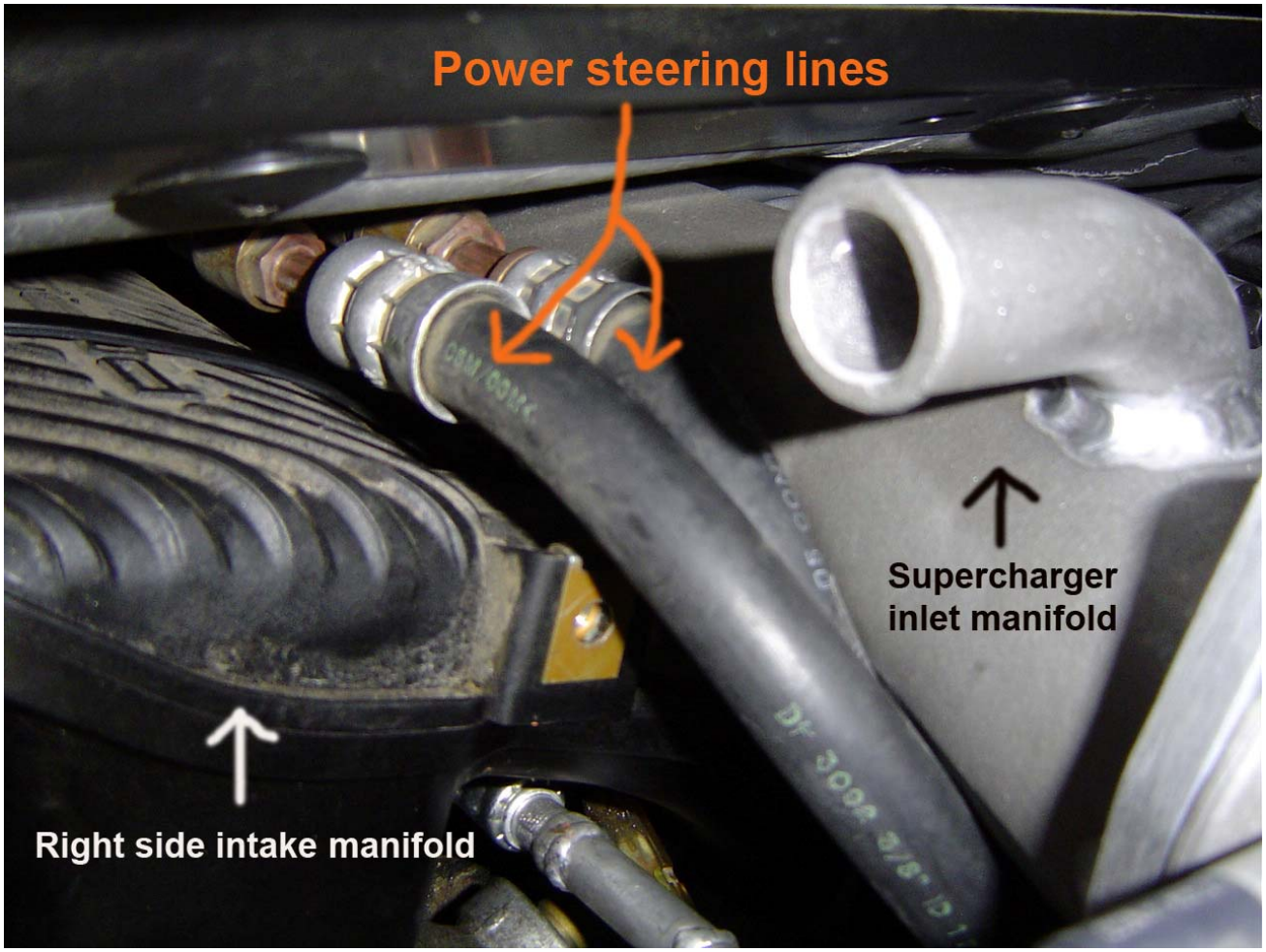

Figure 11 -

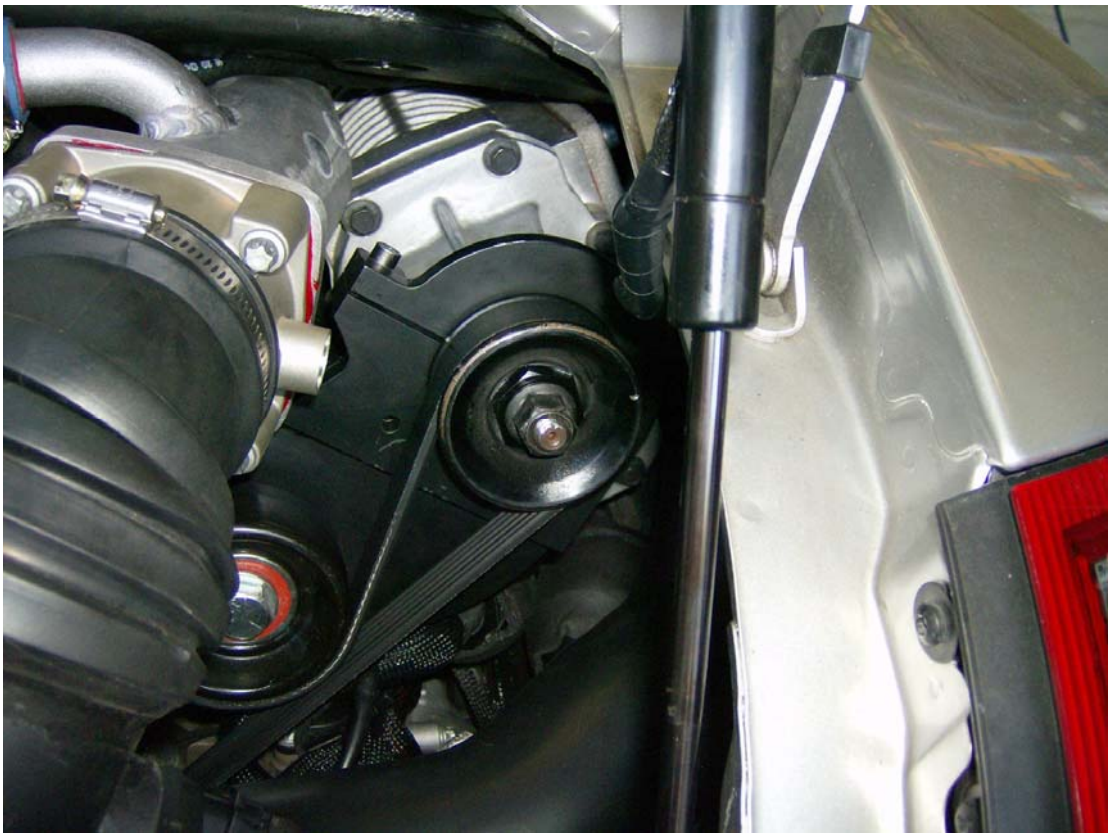

Figure 12.0 –

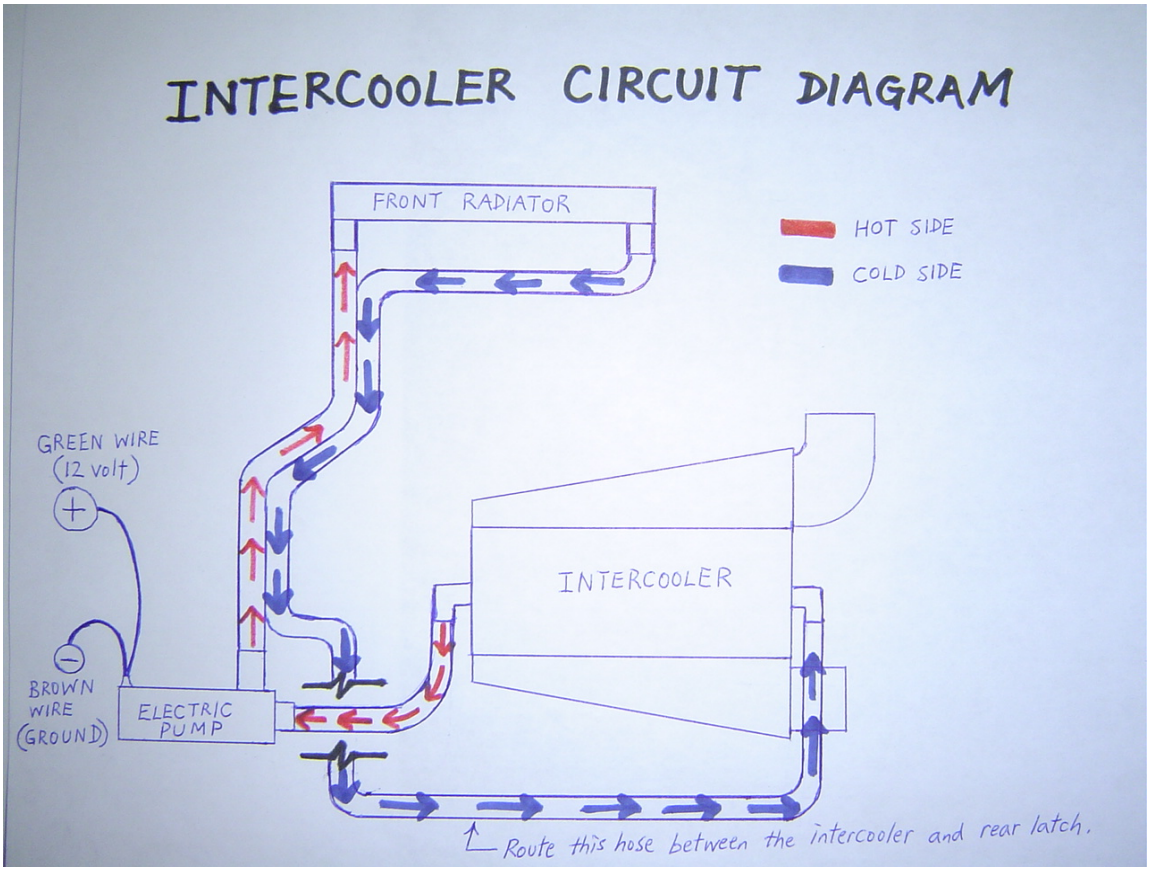

Figure 12.1 –

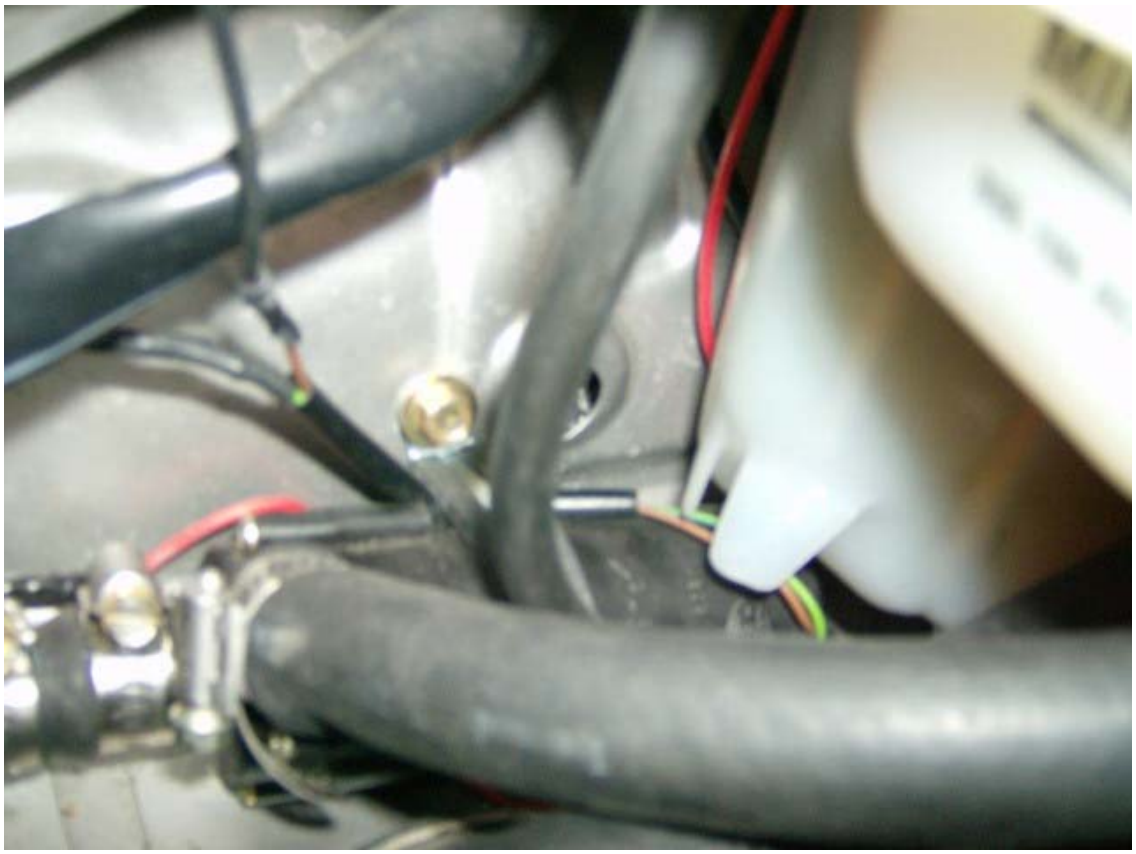

Figure 13 –

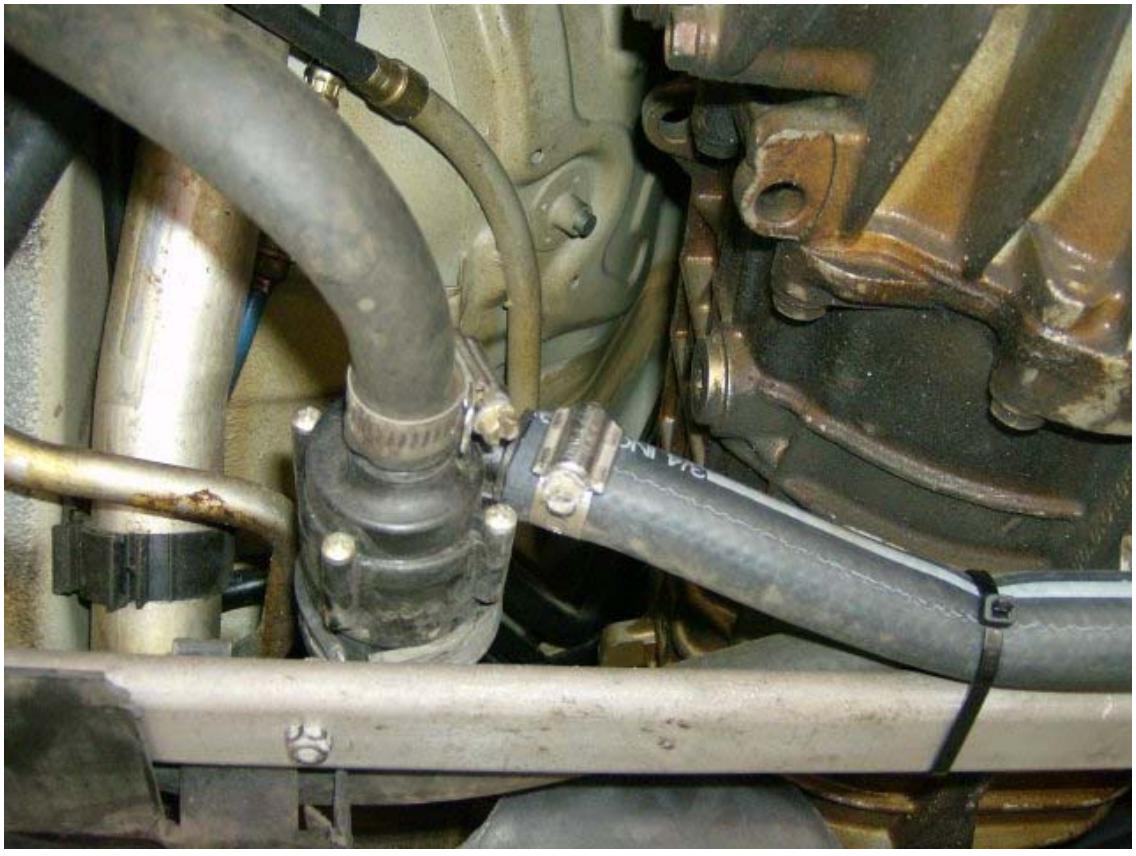

Figure 14 –

Figure 15 –

Figure 16 –

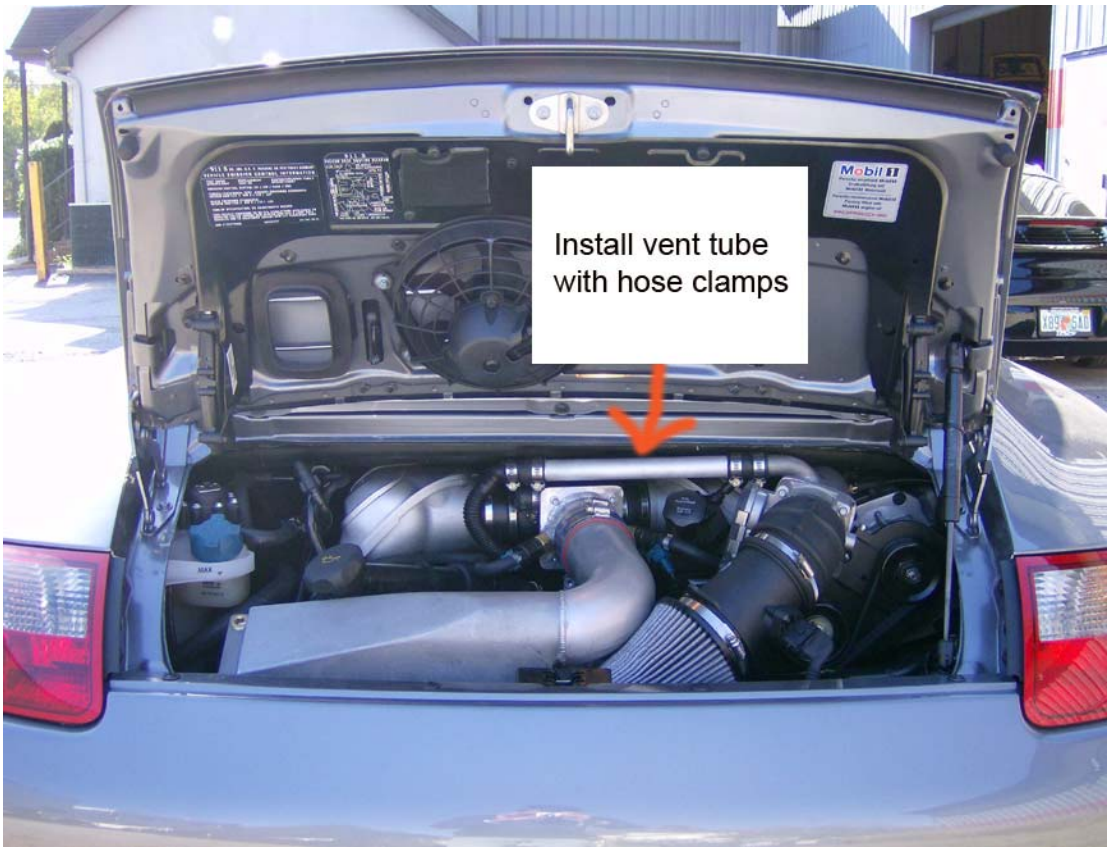

Figure 19.0 –

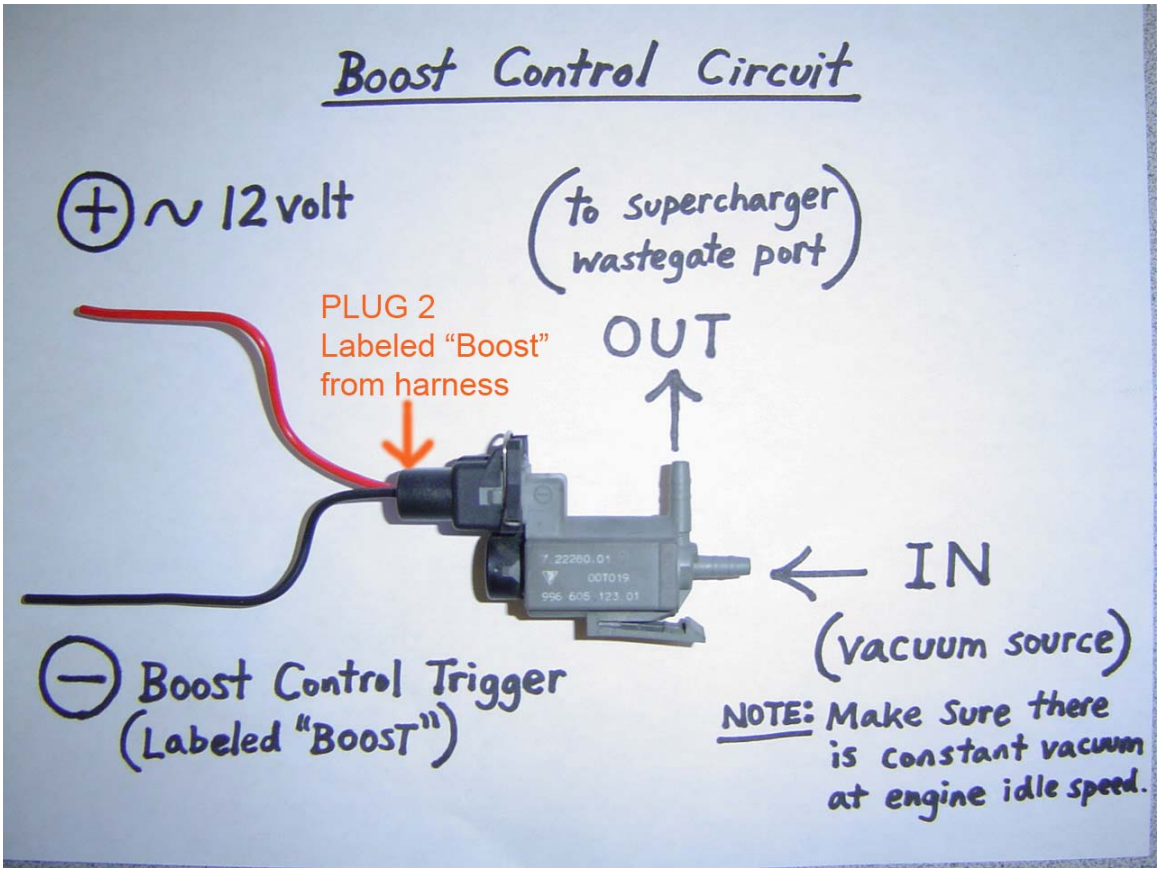

Figure 19.1 –

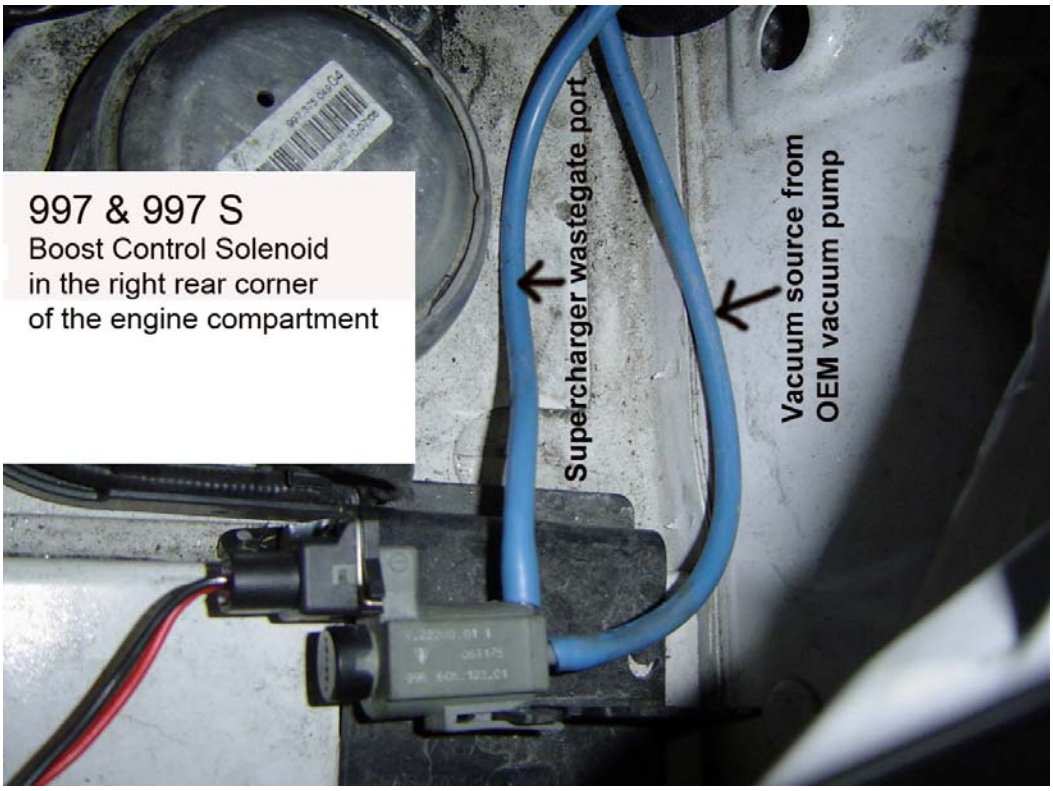

Figure 19.2 – Boost Control Solenoid for 996 (Omitted here)

Figure 20 –