

1992-1996 LT1 Corvette H.O. Intercooled System **Installation Guide**





The Intercooled Supercharging Experts!®

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Torque Specification Chart	 Grade 5			 Grade 8		
	Thread Size	Torque (lb. ft.)			Torque (lb.ft.)	
1/4-20	11	8	7	16	12	10
1/4-26	13	10	8	18	14	11
5/16-18	23	17	14	33	25	20
5/16-24	26	19	15	36	27	22
3/8-16	41	31	25	58	44	35
3/8-24	47	35	28	66	49	39
7/16-14	66	49	40	93	70	56
7/16-20	74	55	44	104	78	62
1/2-13	101	75	60	142	106	85
1/2-20	113	85	68	160	120	96

INTRODUCTION

Congratulations on purchasing your ProCharger® 1992-1996 LT1 Corvette High Output Intercooled System. Read this entire manual before you attempt to install your ProCharger kit. It is imperative that you follow all of the instructions in the order they appear in this installation guide. If you have any questions regarding any aspect of this installation, call us at (913) 338-2886.

For best results, we recommend reviewing the installation instructions beforehand, and following the installation instructions closely and in sequence. A detailed packing list has been provided to assist you in identifying the components of your ProCharger system.



Warning: *Your supercharged Corvette must always be run on 91 octane or better gas.*

Required Tools and Supplies

- 3/8" & 1/2" Socket Set (standard & metric)
- 1/2" Breaker Bar & 4" Extension
- Adjustable Wrench
- 3/8" Torx Bit Set
- Open End Wrench Set (standard & metric)
- Flat & Phillips Screwdrivers
- Plier Set
- Torx Bits
- Factory Repair Manual

Required for Non-SC Applications

- Center Punch
- 9/16" Tapered Punch
- 3/8" NPT Tap
- Heavy Grease
- Silicone Sealer
- Oil Filter Wrench/Filter
- 5 Quarts Engine Oil (Synthetic Preferred)

You should also have the following gauges available to properly check the finished installation and monitor your vehicle's performance (especially for testing):

- Manifold Boost Pressure Gauge
- Fuel Pressure Gauge
- Wide Band Oxygen Sensor and Gauge

Gauges should be of a type that can be read from the cockpit while performing a wide-open throttle road test. Cockpit or hood-mounted gauges are preferable. In order to obtain usable readings, the gauges should measure pressure at the intake manifold and fuel rail. IF VEHICLE DOES NOT MAINTAIN PROPER FUEL PRESSURE (50-65 PSI), DECREASE THROTTLE APPLICATION IMMEDIATELY. In some cases, extra vehicle modifications can strain the stock fuel pump. If your vehicle has difficulty retaining adequate fuel pressure, contact ATI ProCharger about the availability of an upgraded fuel system.

The engine on which the ProCharger® is to be installed should retain the factory compression ratio. If it has been modified in any way, please consult ProCharger staff before proceeding with the installation. This supercharger system is intended for use on STOCK, strong, well-maintained engines/transmissions. Installation on a worn or troublesome powertrain should be reconsidered. ATI PROCHARGER WILL NOT BE HELD RESPONSIBLE FOR DAMAGE TO A VEHICLE'S POWERTRAIN.

For best performance and reliability, always use premium grade fuel (91 octane or higher) and listen closely for signs of detonation, which might sound like ball bearings rolling around in a tin can. IF DETONATION SHOULD OCCUR, OR IF YOU ARE UNSURE WHETHER WHAT YOU'RE HEARING IS DETONATION, DECREASE THROTTLE APPLICATION IMMEDIATELY and please consult ATI ProCharger staff. Detonation should not be an issue with a properly installed intercooled supercharger system, though OEM factory-shipped engine and parts inconsistencies are possible on any vehicle.

TABLE OF CONTENTS

Introduction i

Table of Contents.....ii

Getting Started..... 1

Oil Drain/Feed Setup..... 2

Fuel System 4

ProCharger and Bracket..... 8

Intercooler and Tubing..... 14

Finishing..... 18

Tuning 20


Installation Review/Safety Check 21


Operation and Maintenance 22

Limited Warranty 24

ProCharger Extended Coverage..... 25

Notes..... 26

 **Warning:** Read and understand all safety precautions in this manual before installation. Failure to comply with instructions in this manual could result in personal injury, property damage, and/or voiding your warranty.

 **CAUTION:** Never use a mechanical fuel pressure gauge inside the vehicle without a fluid separator, which will keep the fuel isolated to the engine compartment. Serious bodily injury or death could result from fuel inside the vehicle's passenger compartment.

GETTING STARTED



Note: Spark plugs should be replaced if they are platinum or have more than 10,000 miles of use. Plugs that are one heat range colder than stock are recommended.



Warning: Aftermarket ECM modules, unless specifically designed for use with a supercharger, advance timing at elevated rpm's, and in most cases will cause detonation and engine damage under boost conditions.

- 1 Evacuate the air conditioning system.



Note: Evacuation of the air conditioning system should be done by qualified personnel only, using a refrigerant recovery system.

- 6 Remove the hose clamp that retains the air inlet assembly to the throttle body. Remove the two thumb screws retaining the stock air intake assembly. Unplug the IAT (inlet air temperature, all model years) sensor and MAF (mass air flow, 1994-96 model years only) sensor and remove the entire air inlet assembly.

- 2 Remove the gas cap to relieve fuel tank vapor pressure.

- 7 Remove the stock 6-rib serpentine drive belt.

- 3 Remove the fuel pump fuse from the fuse block. Crank the engine for a few seconds (the engine will not start) to bleed fuel pressure from the fuel lines. Replace the fuel pump fuse.

- 8 Drain the engine coolant into a clean container for reuse.

- 4 Disconnect the negative battery cable from the battery.

- 9 Remove the radiator overflow tank from the passenger's side headlight well.

- 5 If installed, replace any aftermarket computer chip with the original stock chip.

OIL DRAIN/FEED SETUP

Oil Drain Setup

✓ **Note:** This section applies to oil-fed blowers only (ex: P600B or D1). For self contained (SC) applications, proceed to the next section.

! **Warning:** This is a gravity feed system; the oil-return line must be kink-free and run downhill for it's entire length, draining into the pan above the oil-level line.

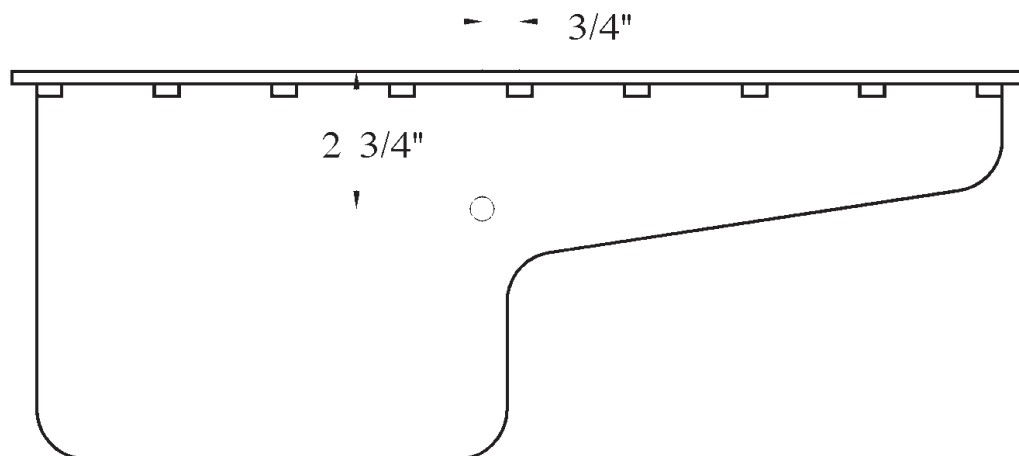
1 Raise the front end of the car and support with jack stands.

2 On the passenger's side of the motor, make a mark 2-3/4" down from the oil pan flange and 3/4" to the rear of the fifth pan bolt.

3 Using a center punch in a socket and extension, punch a small pilot hole in the previously marked location. Stepping up punch sizes sequentially, enlarge the pilot hole to approximately 9/16".

! **Warning:** Use the shortest penetrating punches as possible so as not to damage internal engine components.

4 Using a 3/8" NPT (National Pipe Thread) tap packed with heavy grease (to catch chips) tap the hole approximately 1/2" deep or until the oil return fitting can be installed. Remove the tap and thoroughly clean the hole.



Oil Drain Fitting Location
(Viewed from Passenger's Side Looking Inward)

- 5 Liberally apply silicone sealer and install the supplied oil return fitting into the pan.
- 6 Using the supplied 1/2" return line and clamp, attach the return line to the return fitting and route up towards the front of the motor.

- 7 Route the feed line along the side of the engine, across the front cross member and over towards the front passenger's side of the motor. Use wire ties to secure the line away from exhaust manifolds and heat sources, and to prevent chaffing.

! **Warning: Failure to secure the oil feed line can lead to burn-through and loss of oil pressure, resulting in severe engine damage.**

Oil Feed Setup

- 1 Locate the oil pressure sending unit directly above the oil filter on the driver's side of the motor. Unplug the electrical connector from the sending unit.

- 2 Using a 3/4" wrench, remove the sending unit from the block.

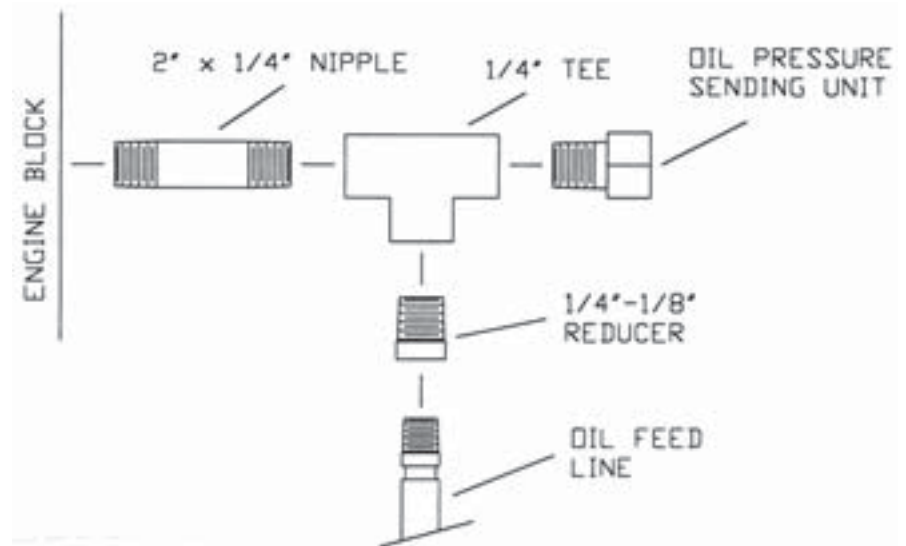
- 3 Install the sending unit into the end of the supplied oil "T" fitting.

- 4 Install the oil "T" fitting into the block. Position the fitting so that the middle port of the "T" is pointed forward, and an equal distance between the exhaust manifold and the catalytic converter.

- 5 Install the supplied 1/4" to 1/8" reducer into the center port of the "T".

- 6 Install the oil feed line into the reducer.

- 8 Perform an oil and filter change. While the drain plug is removed, pour approximately 1/2 quart of clean oil down the previously installed oil return line to flush any residue from the pan.

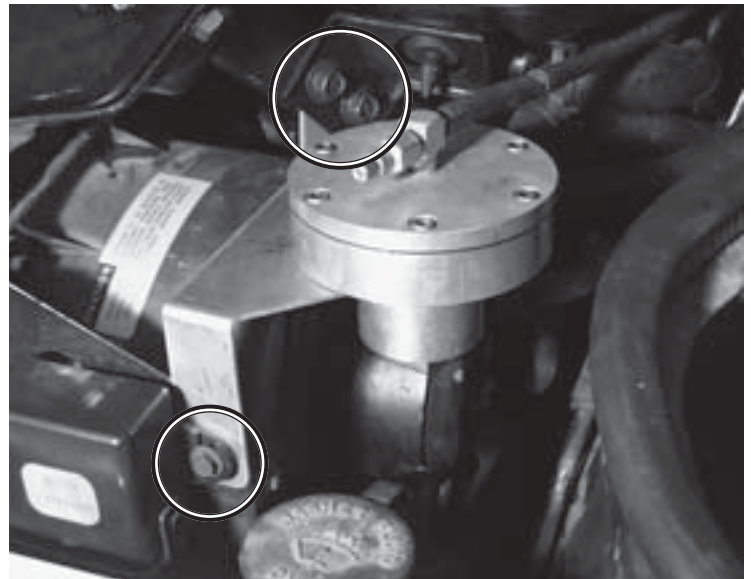


Oil Feed Installation

FUEL SYSTEM

✓ **Note:** This section only applies to full systems, which include a fuel management unit and an in-line fuel pump. If you do not have a full system, additional fuel system modifications will be required before starting the vehicle.

! **Warning:** When working on high pressure fuel systems, caution should be taken when handling high pressure lines, as residual pressure may cause fuel to spray unless relieved prior to disconnection. Take precaution to avoid injury or fire.

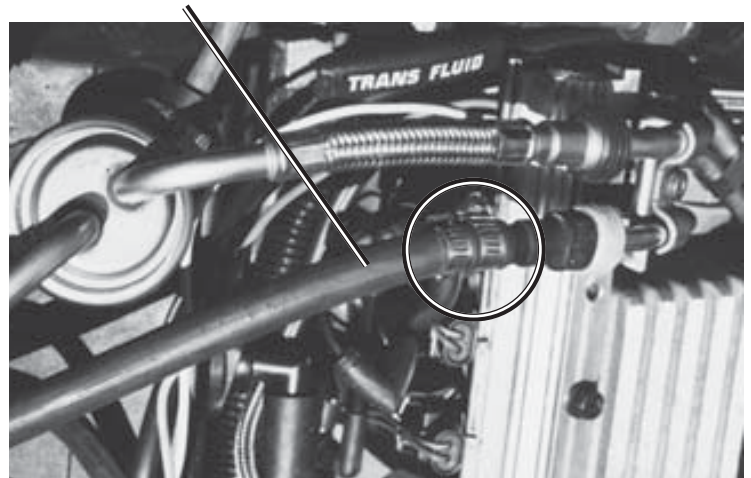


Fuel Management Unit Mounting Bolts

Fuel Management Unit

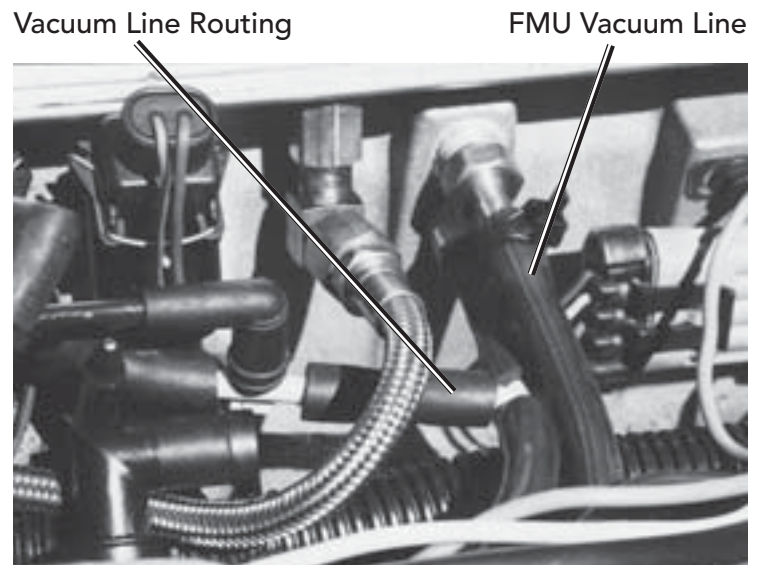
- 1 Remove the two bolts that hold the radiator reservoir support bracket to the hood latch brace. Remove the furthest forward screw that holds the relay to the blower fan motor. **Note:** On 94-96 cars you will need to install the supplied relay bracket.
- 2 Attach the supplied FMU bracket assembly using the three previously removed bolts/screws. The ears of the bracket should be positioned between the relay and support bracket and their respective mounting surfaces.
- 3 Remove the passenger's side plastic injector cover.

Fuel Line Going to Side of FMU



Fuel Rail Connection

- 4 Using the supplied spring lock release tool, disconnect the return fuel line (the furthest forward line) from the fuel rail.
- 5 Connect the FMU inlet line (female fitting, coming from the side of the FMU) to the stock fitting on the fuel rail. Attach the stock fuel return line to the line coming from the bottom of the FMU.
- 6 Remove the rubber elbow between the check valve and the upper nipple on the intake manifold. Using the supplied "T" and vacuum hose, "T" the check valve into the lower nipple currently occupied by the stock fuel pressure regulator line. Route and attach the FMU vacuum line to the upper vacuum nipple on the intake manifold.
- 7 Verify that the needle valve on the FMU is completely closed (clockwise).



FMU Vacuum Line Connection



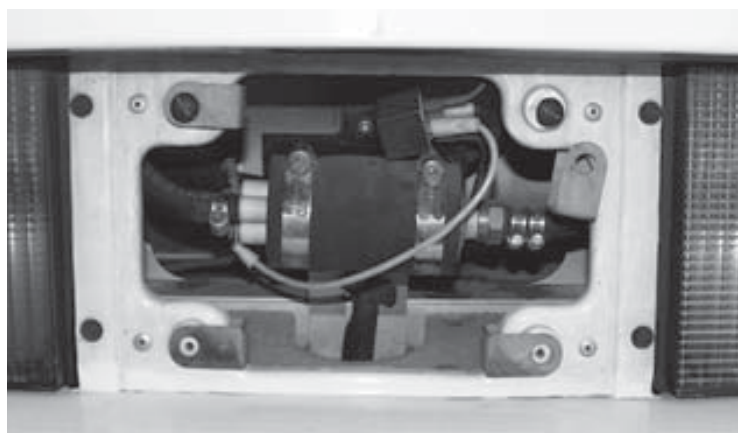
Fuel Filler Neck, Fuel Line and Wiring Connection

In-Line Fuel Pump

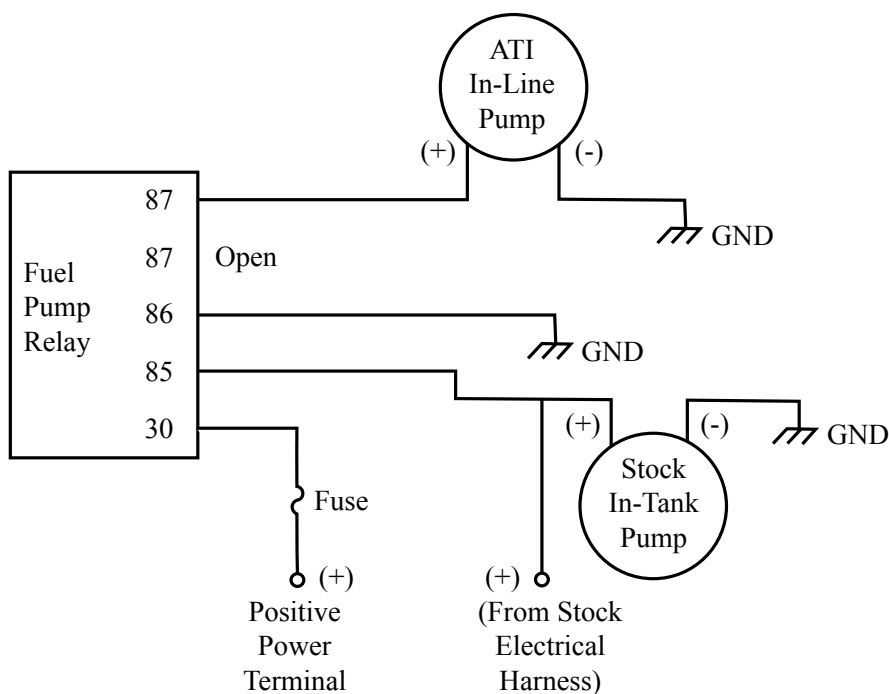
- 1 Remove the four screws that retain the fuel filler door assembly and remove the door assembly.
- 2 Remove the rubber spill tray surrounding the fuel filler neck.
- 3 Disconnect the fuel pump outlet line from the fuel pump. The outlet line is the largest (3/8") line, located at the forward passenger's corner of the pump assembly, and is usually secured with two hose clamps.

Fuel System

- 4 Remove the license plate.
- 5 Attach the yellow wire from relay terminal #87 to the positive terminal of the in-line pump.
- 6 Attach the ground wire from relay terminal #86 to the ground terminal of the in-line pump.
- 7 Install the fuel pump/relay bracket assembly to the support post in the license plate opening using the supplied 1/4" bolt/washer/nut assembly so that the large washer clamps the bracket to the support post.
- 8 Connect the line from the in-line pump inlet to the outlet of your stock in-tank pump and secure it with a clamp.

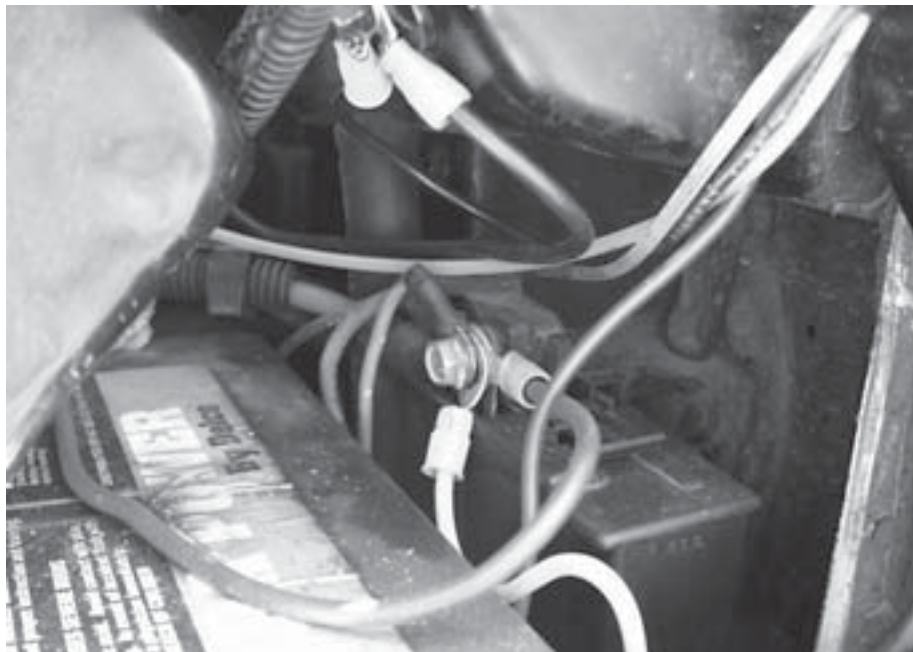


Fule Pump Installation
(Behind License Plate)



Fuel Pump Wiring Schematic

- 9 Connect the outlet of the in-line pump to the previously removed line, which runs to the engine, with the supplied hose barb and a hose clamp.
- 10 Using the supplied electrical connector, connect the green wire from relay terminal #85 to the grey wire at the in-tank pump (this should be the positive lead to your stock pump).
- 11 Drill a 5/32" diameter hole in the support post and attach the ground wire from the pump to the support post using the supplied screw.
- 12 Route the red wire from relay terminal #30 along the inside of the driver's side frame rail, securing with wire ties as needed, and attach it to the power terminal located just above the battery utilizing the supplied in-line fuse and ring connector.
- 13 Reconnect the negative battery terminal and start the car to check for any fuel leaks in the fuel pump and regulator areas. If leaks exist, repair as necessary.
- 14 Disconnect the negative battery terminal.

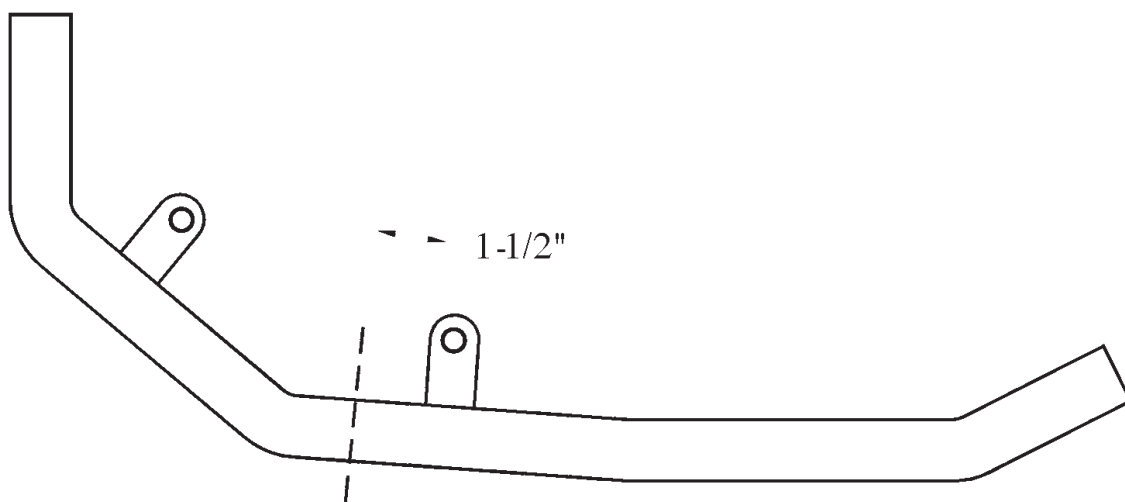


Power Terminal Connection
(Adjacent to Battery)

PROCHARGER AND BRACKET

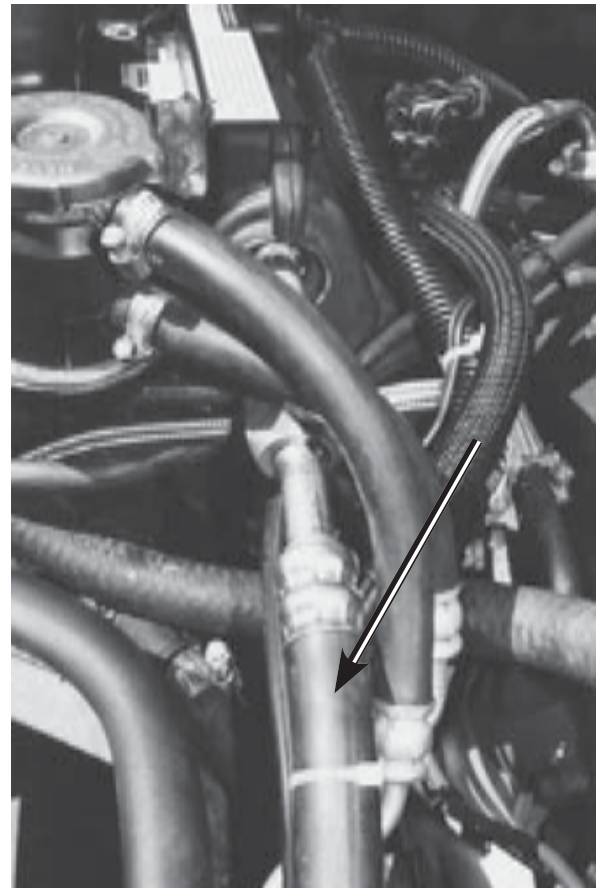
! **WARNING: Never strike the ProCharger pulley with a hammer or other tool under any circumstance! Evidence of such force will void the warranty, as serious damage to the precision bearings within the ProCharger could occur.**

- 1 Disconnect the power steering reservoir from the metal and rubber lines on the bottom of the reservoir. **Note:** Take precautions, fluid will drain from the reservoir. Lift the reservoir off of the bracket and set it aside.
- 2 Remove the power steering reservoir bracket. This bracket will not be reused.
- 3 Unbolt the two tabs that secure the 5/8" metal power steering line to the engine. Using a tube cutter, cut the metal reservoir line 1-1/2" above the lower mounting tab. Clean and deburr the tube. Attach the 5/8" x 10" rubber hose to the metal tube with the supplied clamp and reattach the metal line to the engine.
- 4 Extend the 3/8" line with the 3/8" x 7" rubber line, hose mender & clamps.
- 5 Remove the (2) bolts that hold the coil/ignition module assembly to the passenger's side cylinder head. Unplug the connectors and coil wire and set the assembly aside.



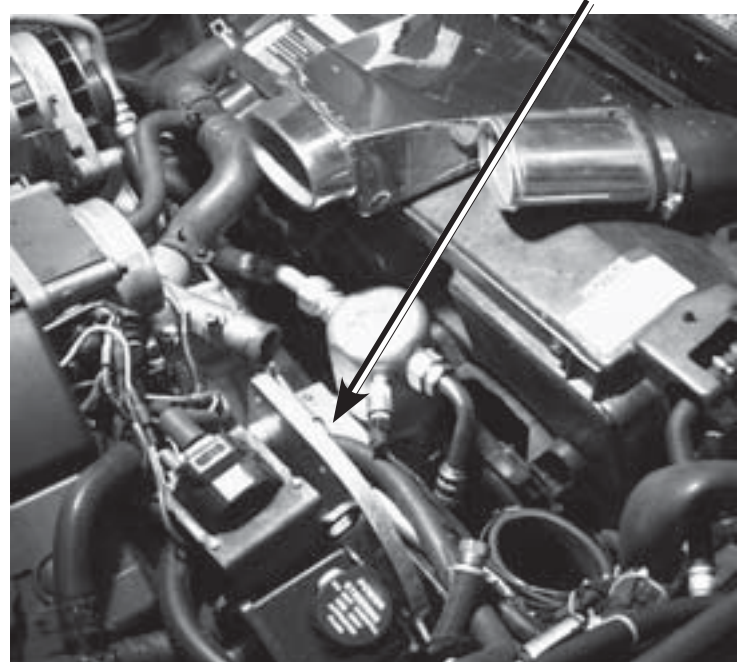
Power Steering Reservoir Line Modification

- 6 Remove the A/C hose connecting the accumulator to the evaporator. Replace this hose with the supplied hose but do not yet tighten.
- 7 Remove the accumulator bracket and replace it with the supplied bracket, reusing the front strap of the stock bracket. Using the supplied bracket as a template, drill two mounting holes into the cross member in front of the motor and re-mount the accumulator using the (2) supplied #12 x 3/4" self-tapping screws. **Note:** The passenger's side A/C line should point downward and the accumulator should be rotated so that this line is slightly angled forward.
- 8 Secure all A/C lines.



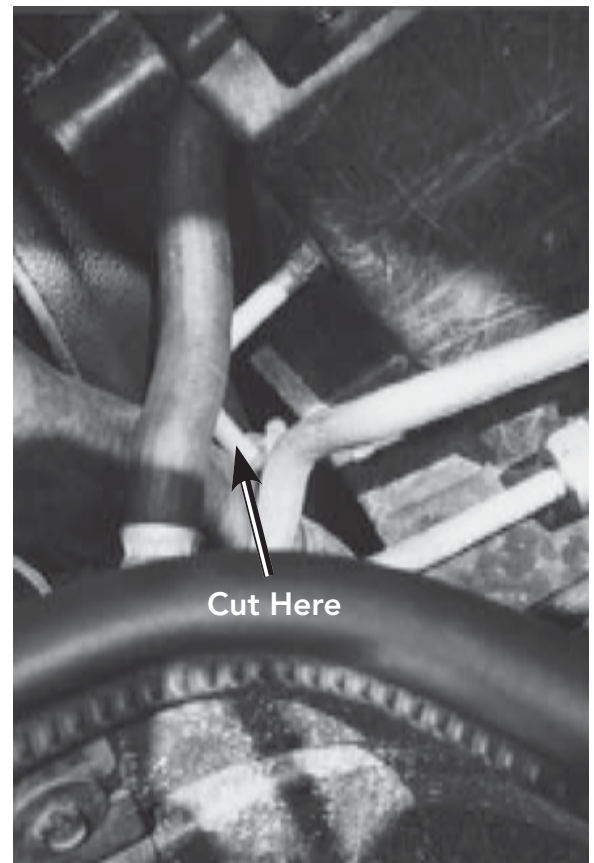
A/C Line Replaced

A/C Accumulator Bracket



A/C Accumulator Installation

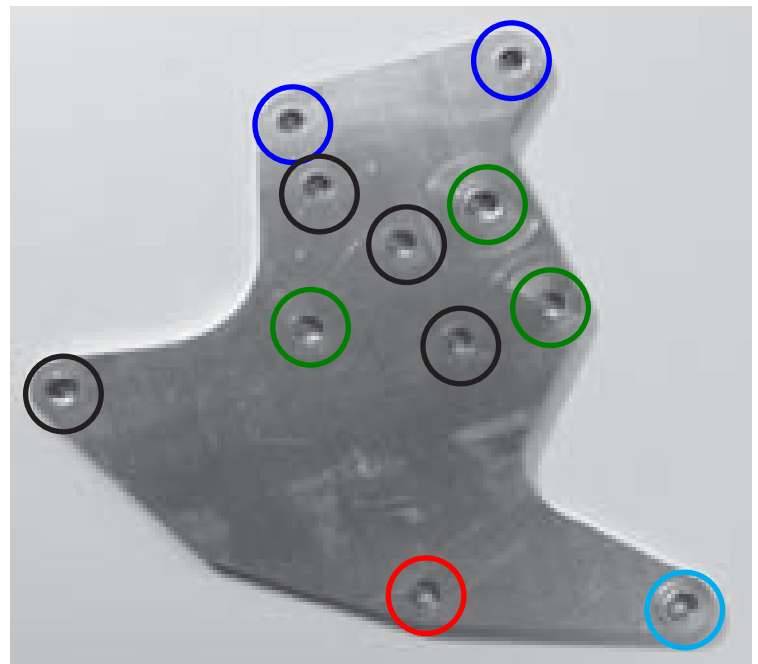
- 9 Disconnect the transmission cooler line from the passenger's side of the radiator. Cut the line 3" after it makes the 90° bend. Clean, deburr and flare the end piece of the line and re-attach it so that it points downward.
- 10 Cut the remaining section of the transmission cooler line (coming from the transmission) in the horizontal section, mid-span of the oil pan. Clean, deburr and flare the remaining line. Install the supplied 5/16" x 3 ft long hose between the two metal sections of the transmission cooler line.
- 11 Remove the radiator hose between the thermostat housing and the radiator lower passenger's side outlet.
- 12 Trim 1" off of the end of the radiator hose previously attached to the radiator. On the same end, cut the hose approximately 7" up from the 90° bend. Re-install the lower section onto the radiator so that the long end is pointing upward.
- 13 Remove and discard the heater hose attached to the 90° fitting on the water pump and remove the 90° fitting from the water pump. Install the supplied straight fitting in it's place. Install the supplied heater hose in place of the stock hose, routing it forward and across the front cross member to the water pump.
- 14 **1992 cars only:** Replace the serpentine style power steering and tensioner pulleys with the supplied smooth power steering and tensioner pulleys.



Transmission Cooler Line Modification

Coil Mounting Holes
Cylinder Head Mounting Holes
ProCharger Mounting Holes

Engine Block Mounting Hole
Idler Mounting Hole

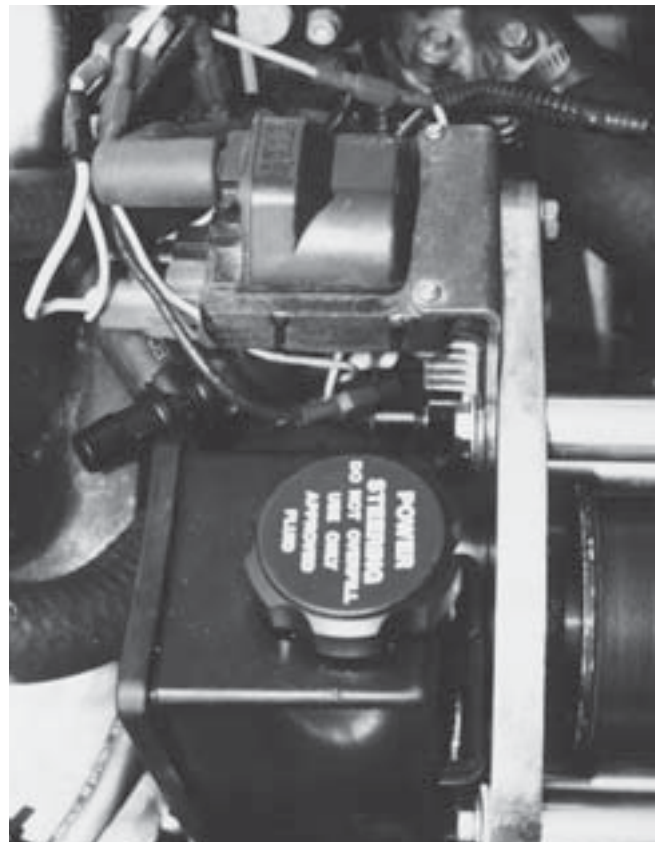


SC Main Bracket

- 15 Using the (4) 3/8"-16 x 5-1/2" bolts and (4) 4.1" spacers, bolt the main bracket to the passenger's side head (3 locations) and block (1 location). The idler pulley should be installed on the front side of the bracket.
- 16 Using the 4" clamp, loosely attach the supplied air inlet plenum to the ProCharger inlet. The plenum should be positioned so that the opening points downward when the ProCharger is installed.
- 17 **P600B only:** attach the oil return line (with clamp) and the oil feed line. It may be necessary to trim the oil return line.
- 18 Lower the ProCharger into it's approximate mounting position.
- 19 **P600B:** Using the (4) 5/16-18 x 3-1/2" bolts and (4) 2.2" spacers, bolt the ProCharger, power steering reservoir and coil assembly to the main bracket. Use the 3/8-16 x 1-1/2" bolts and nuts to secure the coil to the bracket at the inner most bolt location.

– OR –

- 19 **P-1SC:** Using the (3) 5/16"-18 x 3-1/2" bolts, (1) 3/8"-16 x 3-1/2" bolt and (4) 2.2" spacers, bolt the ProCharger, power steering reservoir and coil assembly to the main bracket.

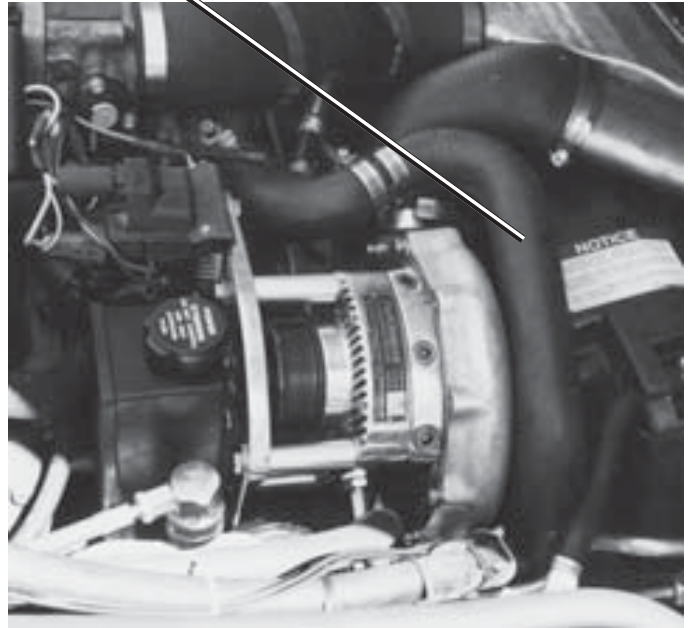


P/S Reservoir and Coil Installed

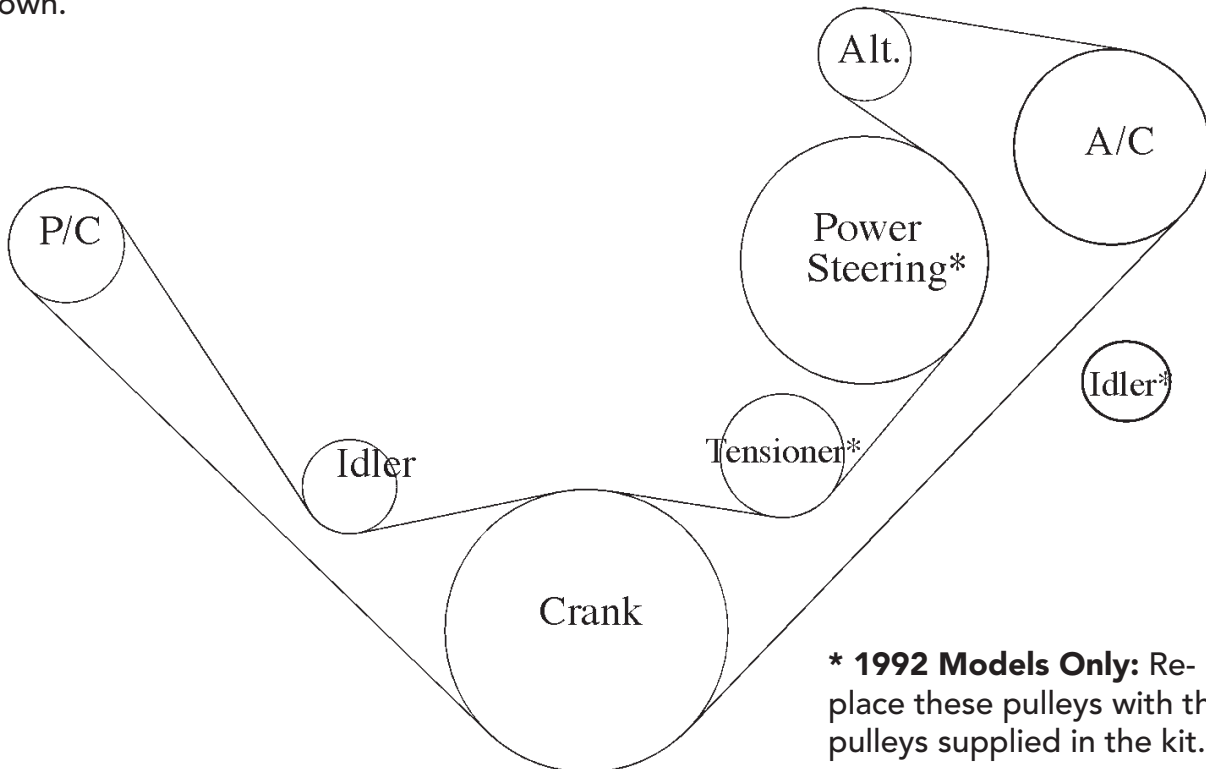
ProCharger and Bracket

- 20 Re-attach the power steering lines to the reservoir and install it onto the new bracket.
- 21 Re-attach the electrical connectors to the coil assembly.
- 22 Re-attach the two previously removed heater hoses to the water pump and throttle body, trimming as necessary.
- 23 Secure the clamp on the air inlet plenum.
- 24 Install the supplied radiator hose assembly between the thermostat housing and the trimmed stock radiator hose.
- 25 Install the supplied belt, routing as shown.

Supplied Radiator Hose



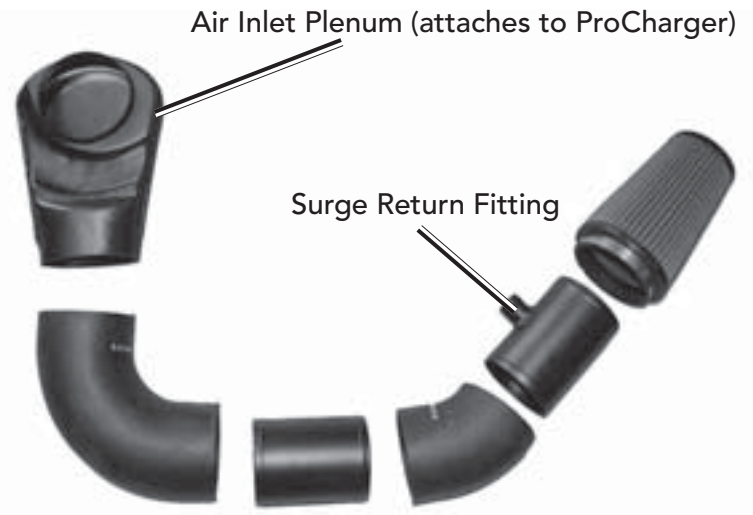
Radiator Hose Installed



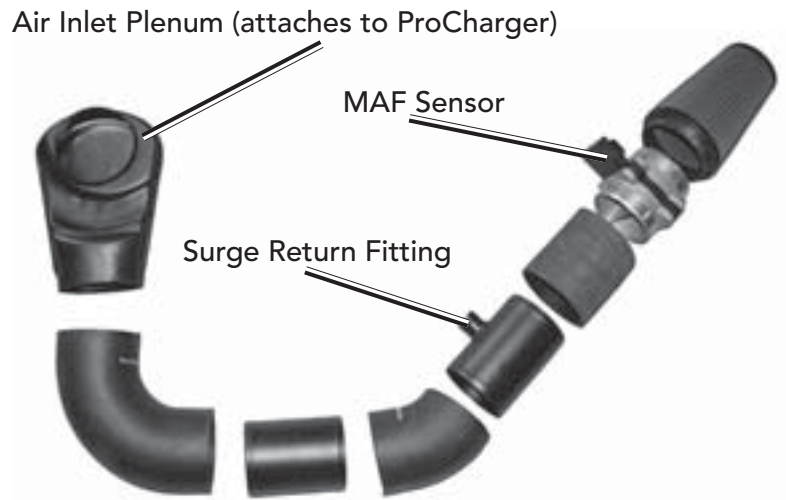
*** 1992 Models Only:** Replace these pulleys with the pulleys supplied in the kit.

Belt Routing Schematic

- 26 Using the supplied 3-1/2" tubing, install the air inlet system as shown. It will be necessary to trim the tab (approximately 1" x 4") off the innermost section of the fenderwell where it bends upward in front of the passenger's side front wheel.



1992-1993 Air Inlet System



1994-1996 Air Inlet System

INTERCOOLER AND TUBING

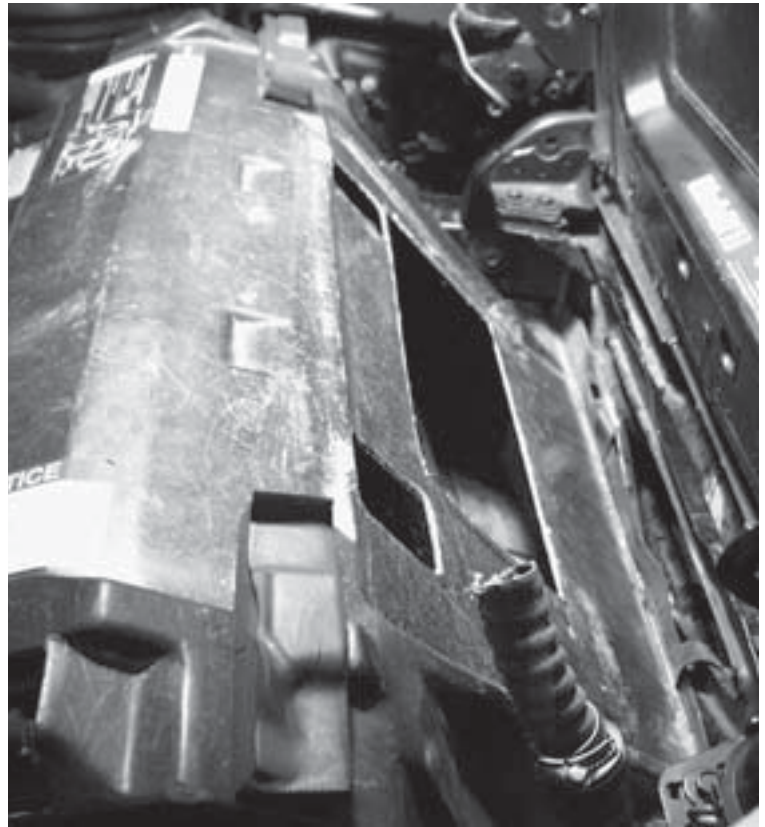
✓ **Note:** Leave all clamps loose until you have installed all of the tubes and hoses. Adjust each hose and tube for best fit and then tighten all clamps. Hose installation can be eased if you first wet the metal tubes and fittings with a solution of dishwashing soap and water. Some hoses may require trimming for optimal fit.

1 Using a solder gun with a cutting blade or a utility knife, cut out the two bumps in the upper radiator shroud surrounding the stock air filter nut plates.

! **WARNING:** Do not use a saw or other tool which might puncture the A/C condenser beneath the shroud.

2 Lay the intercooler assembly onto the radiator shroud so that it lays flat against the shroud and all the way over against the driver's side shroud rib.

3 Mark the four corner points of the core section of the intercooler. Remove the intercooler and connect the points to form a rectangle the size of the core section (approximately 6" x 13-1/2"). Draw a rectangle inside the existing rectangle 1/2" smaller on all sides (overall dimensions 5" x 12-1/2"). As above, cut out the smaller rectangle, being careful not to damage the A/C condenser.

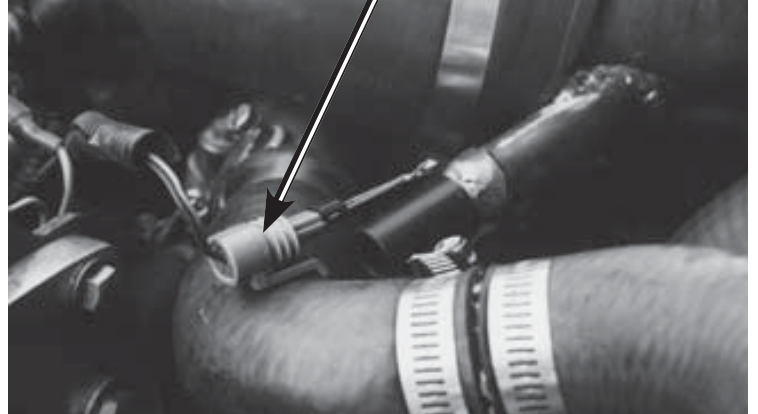
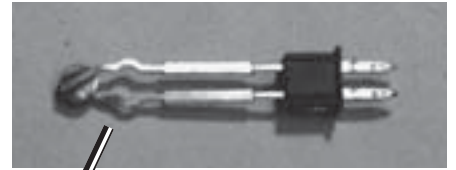


Radiator Shroud Modification

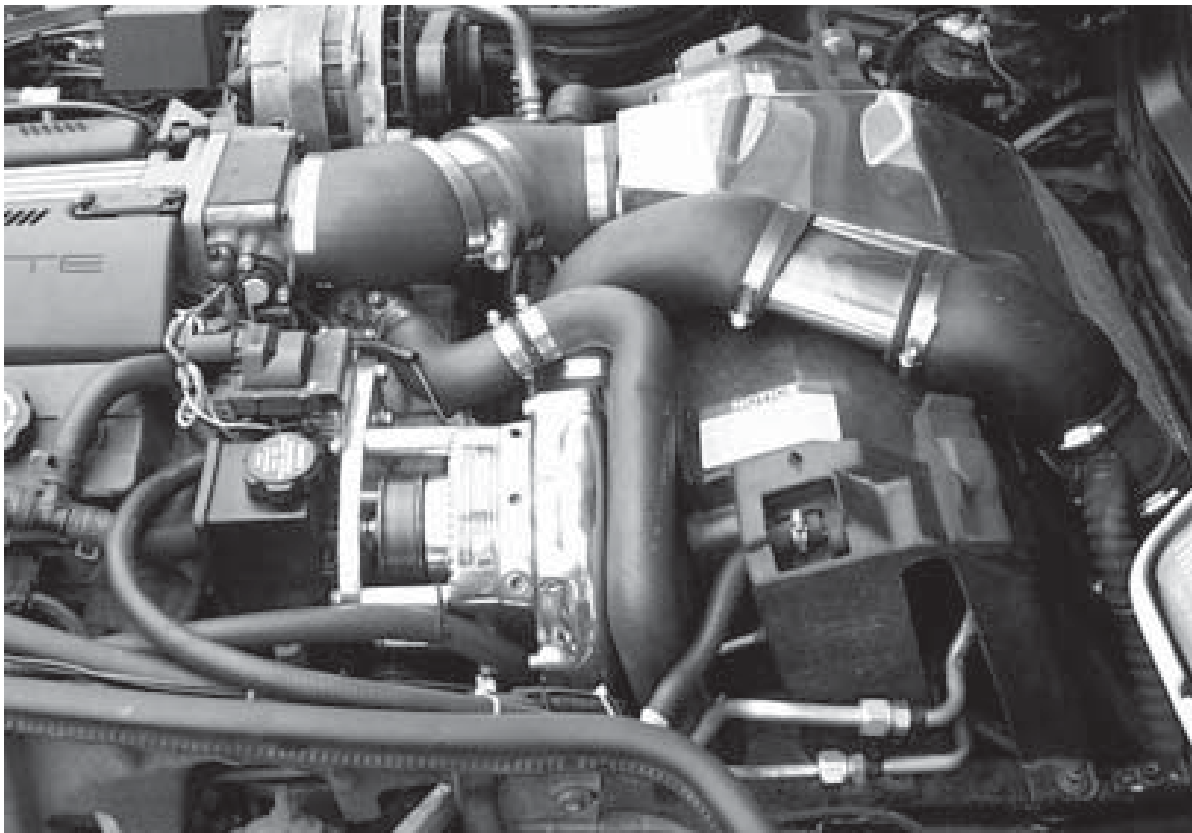
4 Apply the supplied foam tape around the opening to provide a seal for the intercooler.

5 Using the scrap from the intercooler cut-out, cut two pieces of shroud material approximately 1" larger than the two smaller holes previously cut. Using epoxy or weather-strip adhesive, glue these patches to the underside of the shroud to seal the openings.

- 6 Set the intercooler in place and install the tubing as shown below. **Note:** the two 4" 45° rubber elbows should be positioned (twisted) so that they hold the intercooler down against the radiator shroud.
- 7 Using a small flat screwdriver, remove the IAT sensor element from its plastic housing by pushing it out from the end with the crosshairs. Re-attach the electrical connector to the element and plug it into the plastic fitting on the intercooler tube as shown below.

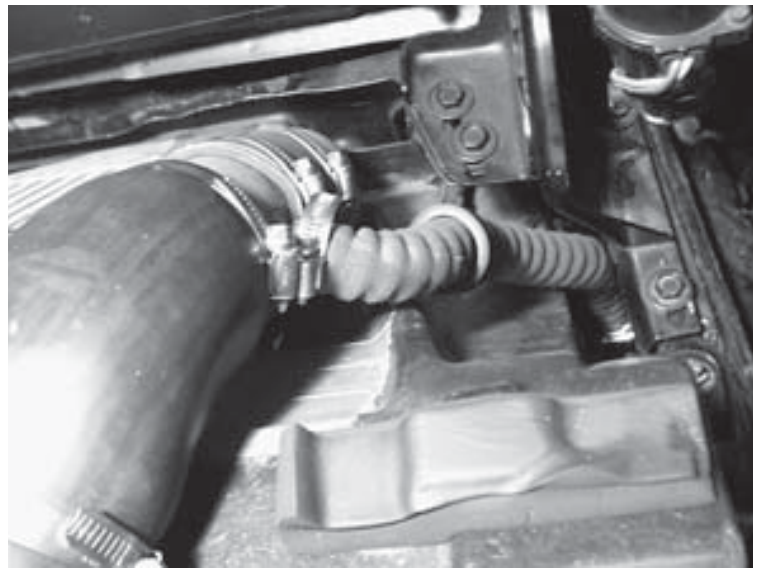


Inlet Air Temperature (IAT) Sensor



Intercooler Installation

- 8 Attach the surge valve to the intercooler fitting on tube #3 using the short hard rubber hose section, and secure it with hose clamps. Attach the long flexible surge hose to the surge valve and route it into the driver's side headlight well, securing the entire hose with wire ties.
- 9 Route the vacuum line from the surge valve to the vacuum port on the passenger's side near the back of the intake plenum; splice using the supplied "T" fitting.
- 10 **1994-1996 only:** Cut the original MAF sensor harness approximately 4" from the connector. Using the supplied three wire harness and connectors (or solder for a more secure connection), extend the harness down to the passenger's side headlight well (trim if necessary), adjacent to the MAF sensor. Tape any exposed wiring with electrical tape.

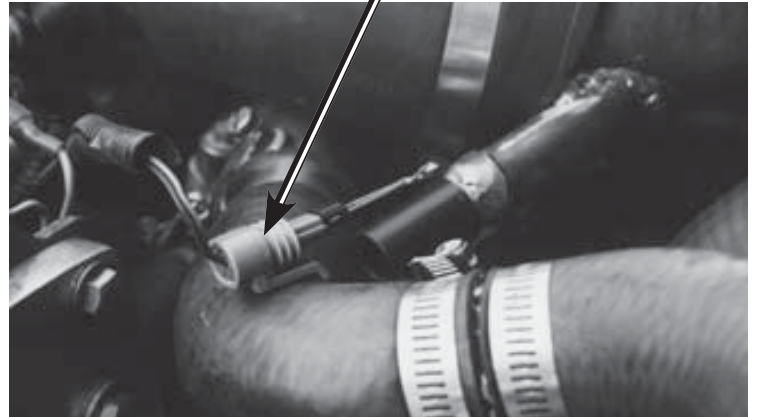


Surge Hose Installation

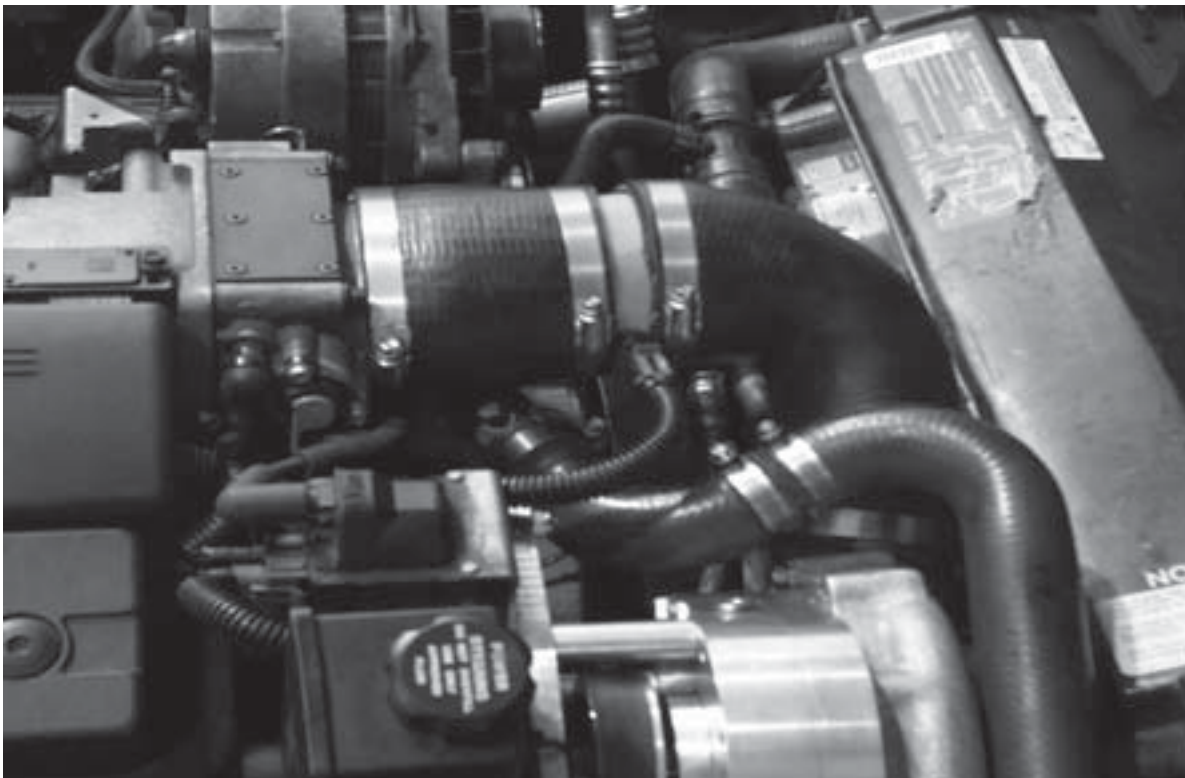
! **WARNING:** *Ensure the original wires are matched up correctly before powering up the car; crossing wires can damage the MAF sensor and/or the ECM.*

Non-Intercooled System

- 1 Assemble the supplied tubing as shown.
- 2 Tighten all hose clamps and connect the inlet air temperature sensor.
- 3 Connect the surge valve to the surge fitting using the rubber surge hose and vent it to the driver's side headlight well.



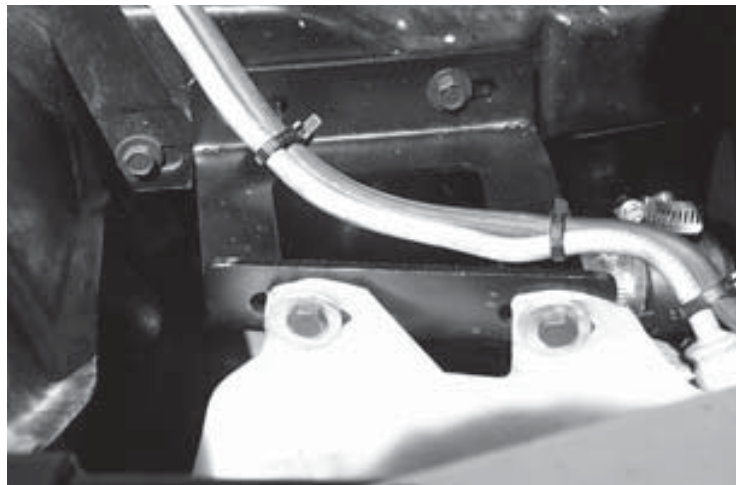
Inlet Air Temperature (IAT) Sensor



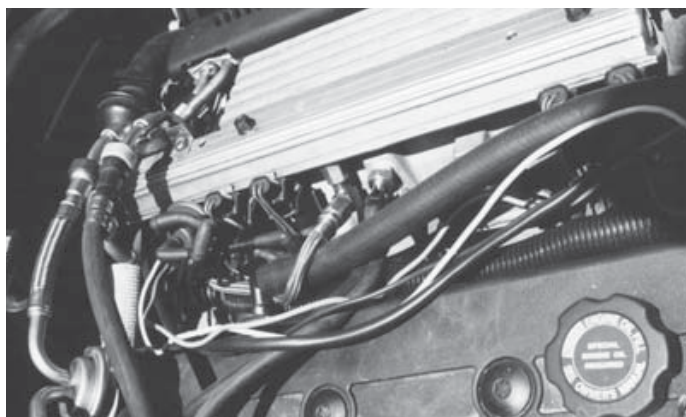
Non-Intercooled Installation

FINISHING

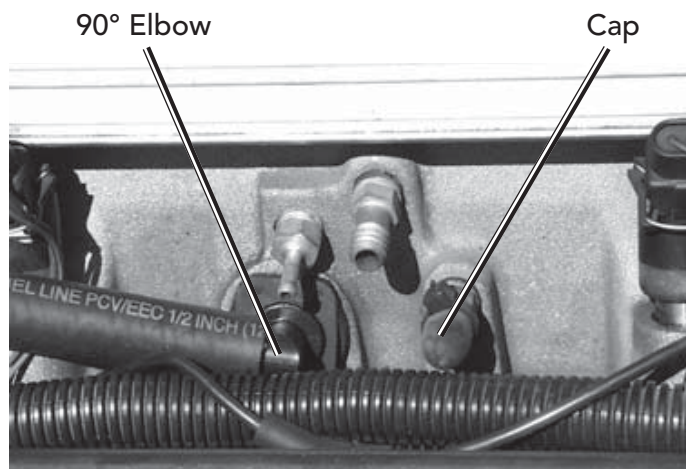
- 1 Using the two supplied brackets, re-install the radiator overflow bottle in the passenger's side headlight well. The larger bracket attaches to the original mounting holes (with the ears of the bracket on top). The smaller bracket mounts to the hood bumper at the back outer corner of the headlight well. Re-attach the coolant lines to the overflow bottle.
- 2 At the passenger's side valve cover (underneath the injector cover), remove the tube connected between the breather and the throttle body. Install the supplied 5/8" cap over the throttle body nipple and secure it with a wire tie. Install the supplied 90° fitting and 1/2" x 16" hose and route it up near the throttle body.
- 3 The PCV valve is on the driver's side intake manifold, underneath the injector cover. Remove the valve and disconnect the hose from the intake manifold nipple. Cap the nipple with the 3/8" cap and secure it with a wire tie. Install the other 90° fitting into the original PCV valve port, attach the 1/2" x 30" hose and route it to near the passenger's side vent hose. Connect the two lines together using the supplied "T". Attach the 1/2" x 48" hose to the other side of the "T" and route it down near the air filter. Drill a 3/8" hole in the rubber end of the air filter and attach the vent line using the 1/2" 90° elbow.
- 4 Add engine coolant.



Overflow Bottle Inner Bracket

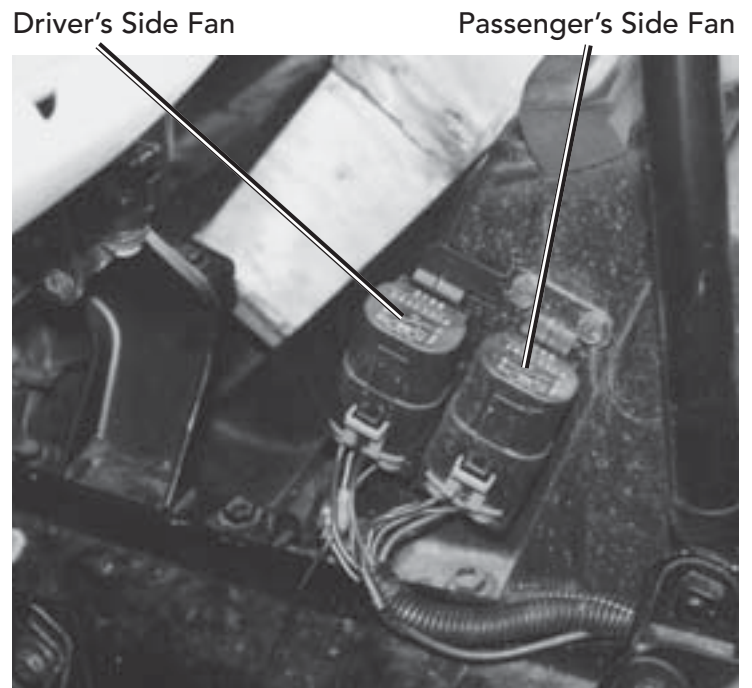


Passenger's Side Crankcase Vent

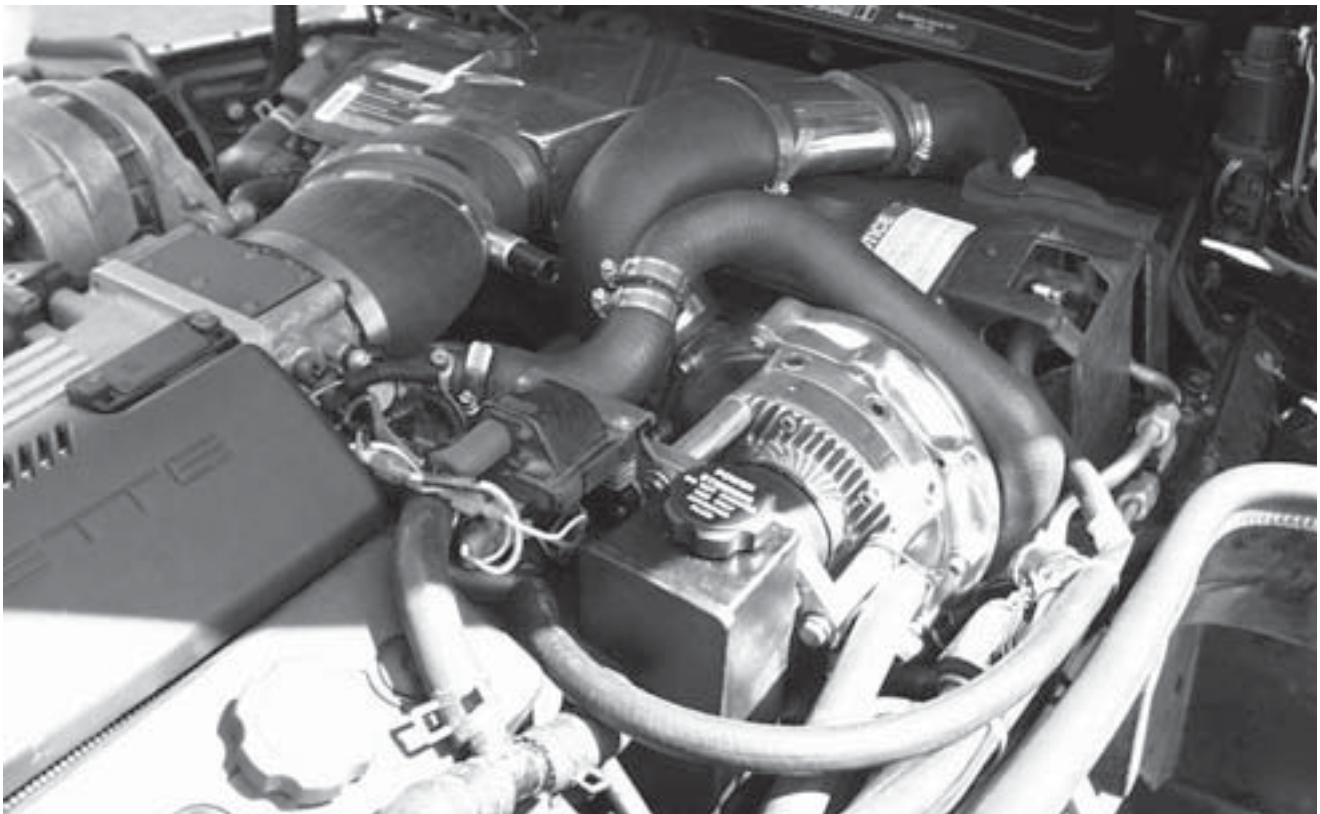


Driver's Side PCV Modification

- 5 Re-connect the negative battery cable.
- 6 Charge the air conditioning system.
- 7 Cars that operate in hotter climates may benefit from running one or both of the cooling fans (located on the driver's side of the radiator shroud) continuously. This can be achieved by grounding the green/white wire on the front relay (driver's side fan) and/or the blue/white wire on the rear relay (passenger's side fan).
Note: Grounding the relay(s) will cause the fans to run anytime the key is turned to the "ON" position.



Fan Relays (Driver's Side)



Congratulations! You have successfully completed the installation of your new ProCharger supercharger system!

Please continue reading the following pages for important information about how to maintain your system.

TUNING

✓ **Note:** Too much fuel will cause the car to hesitate, be sluggish, emit heavy black smoke and not attain intended boost levels. A lean condition will cause the car to detonate (which, under higher boost conditions, can cause blown head gaskets), run hot or break up. The FMU can be adjusted via the air bleed needle valve on the top of the unit. Since each car is different and engine and exhaust modifications will affect your final fuel pressure settings, the following is a guide offered to help you arrive at your final FMU setting.

22 lb/hr (stock) & 24 lb/hr Injectors

1 Your initial setting should read fully closed (cw). The vacuum line going to the FMU contains a white restrictor, which allows for very fine adjustment of boosted fuel pressure. Fuel pressure should increase linearly from the stock setting (40 psi) to approximately 90 psi at full boost conditions. If the car hesitates upon snap acceleration or heavy black smoke is emitted from the tail pipe, or the car cuts-out (injector lock-up) at high rpm (above 4,500 rpm), reduce fuel pressure by turning the needle valve ccw in 1/2 turn increments until the hesitation is gone.

✓ **Note:** Stock injectors will lock up at approximately 95 psi. It is best to run as much fuel pressure as possible without locking the injectors.

28 lb/hr Injectors (or larger)

2 Your initial setting should read 2 to 3 turns from fully closed (cw). The vacuum line going to the FMU contains a white restrictor, which allows for very fine adjustment of boosted fuel pressure. Fuel pressure should increase to 65 to 75 psi under full boost for 28 lb/hr injectors and 60 to 70 psi for 30 lb/hr injectors. If the car hesitates upon snap acceleration or heavy black smoke is emitted from the tailpipe, reduce fuel pressure by turning the needle valve ccw in 1/4 turn increments until the hesitation is gone. If the car detonates or breaks up under boost, increase fuel pressure by turning needle valve cw in 1/2 turn increments

Supplemental/Race/Off-road

3 Off-road, high boost applications require high energy ignition systems for proper combustion. If you are using a stock ignition system on such an application, the plug gap must be reduced to approximately .035" to avoid extinguishing the arc discharge. The use of spark plugs one heat range colder than stock is also advised.


✓ **Note:** For cars with automatic transmissions, it is necessary to operate the vehicle normally for approximately 30 minutes in order for the computer to reset and learn the new shift points.

INSTALLATION REVIEW/SAFETY CHECK


1 Carefully review the entire installation. Examine oil and fuel lines routed near moving parts and exhaust components to ensure that they are protected from chafing or abrasion, secure and free of twists and kinks. All wires and hoses should be firmly secured with clamps or wire ties.

2 Ensure that the air filter is installed.

3 Check and correct all fluid levels.


 **Note:** If you did not perform an oil and filter change after the oil drain setup, it should be performed now before proceeding further (oil-fed blowers only).


4 Start the engine and let it idle for a few minutes. Inspect for air or fluid leaks.

 **Warning:** Aftermarket chips, unless specifically designed for use with a supercharger, advance timing at elevated rpm's, and in most cases will cause detonation and engine damage under boost conditions.

5 Shut off the engine and check for fluid leakage, signs of rubbing parts, and other potential problems.

6 Be sure you have purchased and installed a fuel pressure gauge and/or fuel-air ratio meter to monitor fuel delivery while driving. Installation of a boost pressure gauge is also recommended.

 **Note:** Larger cities (especially in winter months) often use oxygenated or reformulated fuels to reduce pollution. Although these fuels have the same octane ratings as unaltered fuels, some people have experienced problems (detonation) with their use. If you experience similar problems, it is advised to reduce your timing or use octane booster to avoid detonation.

 **Warning:** The self-contained supercharger contains no oil from the factory. The unit must be filled prior to use. Use only ATI supplied oil in your ProCharger. The ATI oil has been specially formulated for the bearings in the ProCharger and use of oil other than that supplied by ATI will void your warranty.

OPERATION & MAINTENANCE

Cold Starting

Never race your engine and ProCharger supercharger when your engine is cold. Allow the water temperature to climb into operating range for several minutes before driving above 2,500 rpm, to ensure adequate oil lubrication.

Fuel Quality

With a properly installed intercooled ProCharger supercharger system, detonation should not occur. For the best performance and reliability, use premium grade fuel (91 octane or higher). Listen for signs of detonation after refueling, and after replacement or modification of any fuel system component(s). If detonation occurs, reduce the throttle and locate the source.

Ignition System Maintenance

If your spark plugs are more than a year old or have more than 10,000 miles logged, you should consider changing them before driving your vehicle under load. Spark plug wires should be changed if visibly damaged or when resistance exceeds factory specifications.

Air Filter Maintenance

Your air filters should be cleaned periodically, potentially as often as every 10,000 miles or 6 months, even though a service interval of 50,000 - 100,000 miles is quoted by the manufacturer under normal driving conditions. A clogged air filter will result in decreased boost levels and vehicle performance. Be sure to re-oil the cleaned filter before re-installing. Always operate your vehicle with an air filter; failure to do so may result in damage to your ProCharger supercharger and personal injury!

Oil & Filter Maintenance

For oil-fed blowers, always change your oil and filter every 2,500 - 3,000 miles. Synthetic oils are recommended. Delaying your oil change beyond 3,000 miles risks the health of both your engine and ProCharger.

Belt Replacement

The serpentine belt, which turns your ProCharger supercharger, will stretch after initial run-in, and should be retightened after the first hundred miles. Tighten the belt sufficiently to avoid slippage, but do not overtighten. Overtightening the belt could cause damage to the ProCharger supercharger's precision bearings. When re-installing the belt, use the belt routing diagram in this manual. If you reuse a thrown belt and find that it needs frequent re-tightening, the belt is damaged and should be replaced. Gates Micro-V belts can be bought from ATI or from your local parts store.

ProCharger Oil Change Intervals

For self-contained blowers, the first oil change should be performed at 500 miles and at 6,000 mile intervals thereafter. Clean the drain plug after every oil change. Drain oil by removing the drain plug. Clean off the drain plug before re-installing.

Impeller Speed

Maximum impeller speed should not exceed the redline stated for each model. Maximum impeller speed equals crankshaft pulley diameter (N1) divided by supercharger pulley diameter (N2) times step-up ratio times engine rpm at redline.

$$\text{Impeller RPM} = (\text{N1}/\text{N2}) \times \text{Step-up Ratio} \times \text{engine RPM}$$

Model	Max RPM	Step-Up Ratio
P600B*	60,000	3.05:1
P-1SC	62,000	4.10:1
D-1*	65,000	4.44:1
D-1SC	62,000	4.10:1

*oil-fed blower

SC Applications

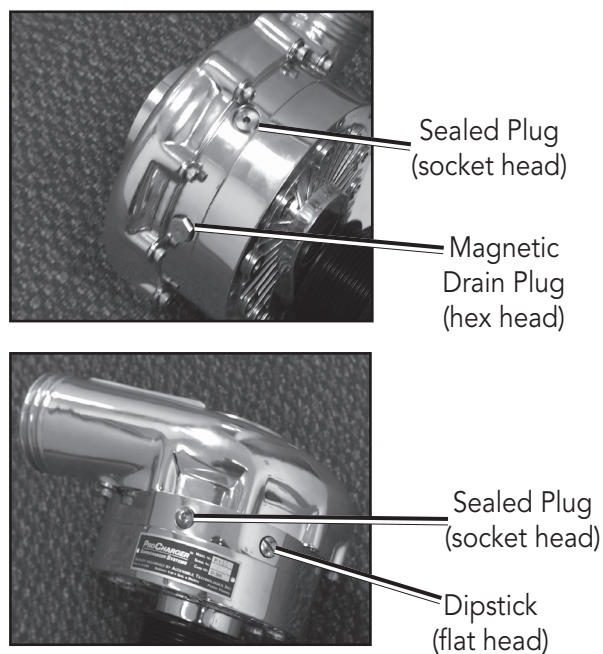
ProCharger Oil Level

The ProCharger supercharger's oil level must be checked periodically to ensure the proper lubrication. The dipstick can be loosened using a flat blade screwdriver or a coin. When installed, the oil level should remain between the minimum (MIN) and maximum (MAX) indicators at all times.

ProCharger Oil Change Intervals

The first oil change should be performed at 500 miles and at 6,000 mile intervals thereafter. Clean drain plug after every oil change. Drain oil by removing the drain plug. Clean off drain plug before re-installing.

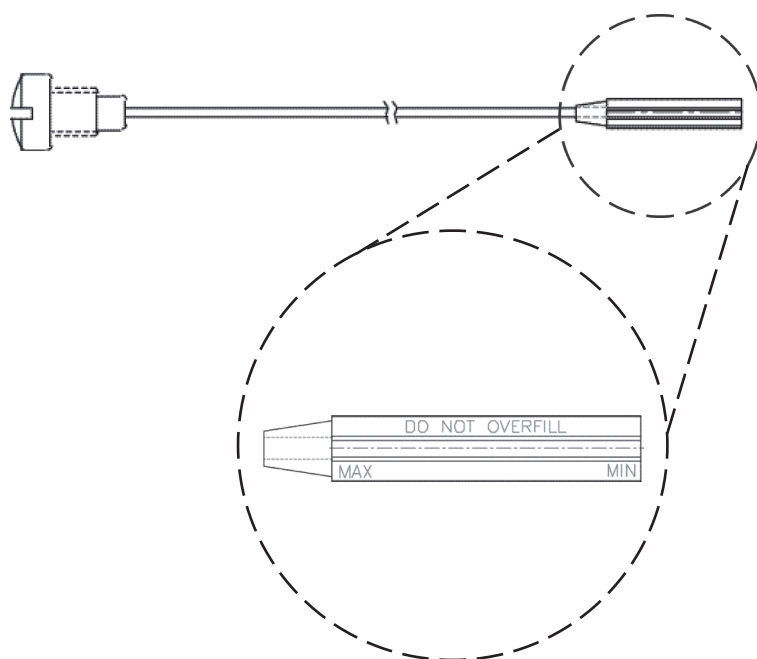
Warning: Filling the ProCharger higher than the maximum level on the dipstick can lead to bearing and seal damage. The supercharger is a sealed unit and should not normally require the addition of oil between service intervals. If excessive usage is noted, the unit should be sent to ATI for inspection and repair. The dipstick fitting should be firmly tightened after changing or checking the oil level.



General

When removing the warning tag, be sure to retain the nylon washer. A spare nylon washer and o-ring is included. Use only the ATI supplied nylon washer and o-ring when servicing the oil dipstick and drain plug. A discoloration of the oil and residue on the drain plug may occur during the initial oil changes. This is normal and will gradually decrease. For the proper positioning of the ProCharger supercharger, the serial tag should be pointing upwards. Installing the ProCharger supercharger in another position will cause inadequate oiling and supercharger failure. If you have any questions about the maintenance of your supercharger, contact ATI.

Warning: The supercharger contains no oil from the factory. The unit must be filled prior to use.



LIMITED WARRANTY

Accessible Technologies, Inc. (ATI) provides a limited twelve (12) month warranty on the ProCharger supercharger (36 months for P600B) against defects in materials and workmanship unless otherwise specified. This limited warranty starts on the date of original purchase from your local dealer, or date of shipment from the factory. This limited warranty coverage is extended only to the original owner and excludes hoses, sleeves, and electronic components manufactured by other companies. IF THE SUPERCHARGER'S DRIVE RATIO IS ALTERED IN ANY WAY FROM THE FACTORY SETTING, WARRANTY COVERAGE IS VOID. USE OF ANY PULLEY NOT MANUFACTURED OR SUPPLIED BY ATI VOIDS ALL WARRANTY COVERAGE. ATI's warranty obligations are limited to the terms below:

ATI agrees to honor a warranty claim at its sole discretion and only after inspection at the ATI factory. No warranty will be honored if any part of the product is found to have been improperly installed, tampered with, mishandled, or misused in any way. Disassembly of the ProCharger supercharger or removal of the ProCharger supercharger's serial plate voids all warranties. Claims for freight damages should be directed to the freight company.

If ATI's limited warranty applies, your product will be repaired or replaced at ATI's discretion and shipped back. If the limited warranty does not apply, ATI will advise you of the specific reason, cost of the repair, and delivery time. After advising you of this information we will, at your option, either proceed with repairs or return your product to you in the state in which it was received. In either case the product will be shipped to you, insured at replacement value. Therefore, you will pay the return shipping and insurance charges if ATI's limited warranty does not apply to your product.

THE WARRANTY AND REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHERS, ORAL OR WRITTEN, EXPRESS OR IMPLIED. THE DURATION OF ANY AND ALL WARRANTIES ON THE PRODUCTS DISCUSSED ARE LIMITED TO THE PERIOD IDENTIFIED ABOVE. ATI IS NOT RESPONSIBLE IN ANY EVENT FOR DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES. No ATI dealer, agent, or employee is authorized to make any modification, extension, or addition to this warranty.

To obtain service under this warranty you must do the following during the warranty period:

Phone ATI (913-338-2886) and provide us with the following information:

- ProCharger supercharger serial number.
- Vehicle year, make, model, engine modifications, and other modifications.
- Description of perceived issue.

If a solution to your issue can not be found after the above phone consultation, you will be assigned a return authorization number (RMA). You must then properly package and ship your product, at your expense, to the ATI factory. The product should be carefully packaged in a rugged box.

Include the following information inside the box with your product:

- Copy of your original invoice or receipt.
- Name, address, and daytime telephone number.
- Return authorization number (RMA).
- Vehicle year, make, model, engine modifications, and other modifications.
- Description of perceived issue.

Clearly mark the warranty claim number on the top and one side of the box in characters at least 2" tall. Properly package the product and ship it, prepaid and insured for the retail value of the component(s) being returned, to the following address:

**Accessible Technologies, 14801 West 114th Terrace,
Lenexa, Kansas 66215**

PROCHARGER EXTENDED COVERAGE (SC)

The ProCharger Extended Coverage Program extends the ProCharger warranty coverage for an additional twenty-four (24) months, for a total of thirty-six (36) months or three years of coverage. This extended coverage applies to parts for the ProCharger supercharger head unit only and does not include other system components. With your extended coverage registration, you will receive two (2) additional boxes of ProCharger Supercharger oil.

Under the extended coverage program, Accessible Technologies, Inc. (ATI) will repair or replace any component within the supercharger head unit which is found to be defective. Only the supercharger head unit itself is included in the extended coverage.

Service under the extended coverage program is obtained through the same process as described in the Limited Warranty.

Race kits are not eligible for the ProCharger Extended Coverage Plan

To qualify for the ProCharger Extended Coverage:

- Only the original owner of the ProCharger supercharger is eligible.
- Completion of the Extended Coverage Registration Form is required, along with a \$49 registration fee. This form must be completed in its entirety, and must be submitted along with payment within 30 days from the date of original purchase from your local dealer or date of shipment from the factory.
- Participants must have a ProCharger P-1SC, P-1SC-1, C1, or C2 supercharger head unit using the maximum warranted boost level. All terms and conditions within "The Limited Warranty" apply. Acts resulting in disqualification include but are not limited to the following:
 - Disassembly or modification the ProCharger supercharger.
 - Removal or attempted removal of the ProCharger drive pulley(s).
 - Removal or attempted removal of the ProCharger supercharger serial number plate.
 - Removal or attempted removal of the compressor housing or transmission case.
- Participants agree to properly maintain the ProCharger supercharger and provide proof of compliance with the following recommended maintenance:
 - Change the ProCharger supercharger oil after the initial break-in period of 500 miles (automotive) or 15 hours (marine).
 - Change the ProCharger supercharger oil every 6,000 miles after the initial break-in period.
 - Use only the specified amount of ProCharger Supercharger oil in the ProCharger supercharger.
 - Inspect and clean the magnetic drain plug at every ProCharger supercharger oil change.
 - Check the ProCharger supercharger oil level frequently.

ProCharger Extended Coverage Program Registration Form

Return this completed form and a \$49 check within 30 days of original purchase.

cut along the dotted line

Name: _____

Date of Purchase: _____

Address: _____

Purchased From: _____

City: _____

ProCharger Serial #: _____

State: _____ Zip: _____

Vehicle Year: _____

Daytime phone: _____

Vehicle Make: _____

Evening phone: _____

Vehicle Model: _____

E-mail: _____

Please rank in order of importance starting with 1 being most important.

Age 18 - 24 25 - 34 35 - 44
 45 - 54 55 and up

Which information sources most influenced your decision to purchase a ProCharger system?

Income \$15,000 - \$29,000 \$30,000 - \$44,000
 \$45,000 - \$69,000 \$70,000 and up

- ___ Magazine advertising
- ___ Dealer recommendation
- ___ ProCharger Brochures
- ___ Witnessed performance on a car
- ___ Test drive
- ___ Magazine editorials
- ___ Friends
- ___ Conversations with ATI technicians
- ___ Web Site (please specify) _____
- ___ Other (please specify) _____

What magazines do you read?

- Car & Driver
- Car Craft
- Chevy High Performance
- Four Wheel and Off Road
- Hot Rod
- Motor Trend
- Muscle Mustangs and Fast Fords
- GM High-Tech Performance
- 5.0 Mustang
- Super Street
- Mustang Monthly
- Truck Trends
- Popular Hot Rodding
- Road & Track
- Super Chevy
- Truckin'
- Street Truck

What most influenced your decision to purchase a ProCharger system?

- ___ Reliability
- ___ Standard warranty
- ___ Extended coverage warranty
- ___ Performance
- ___ Quiet operation
- ___ Removability (ability to return car to stock)
- ___ Cost
- ___ Ease of Installation

Who installed your ProCharger system? Self Dealer Other _____

Have you own a forced induction system previously? Yes No

If yes:

Supercharger: Brand(s) _____ Vehicle(s) _____

Turbocharger: Brand(s) _____ Vehicle(s) _____

I have read and understand the policy for the ProCharger Extended Coverage Program. I have not and will not modify my ProCharger supercharger in any way during my participation in the extended coverage program. I have read and answered all questions on this form. I have enclosed my check for \$49, payable to ATI, for enrolling my ProCharger supercharger (serial number indicated above) in the extended coverage program for an additional twenty-four (24) months beyond the standard limited warranty period of twelve (12) months.

Signature _____ Date _____

Mail this completed registration form with a \$49 check to ATI at: 14801 West 114th Terrace, Lenexa, KS 66215. If you have any questions, contact us at techserv@procharger.com or (913) 338-2886 8:30 AM - 5:30 PM CST, Monday - Friday.

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**Accessible Technologies, Inc.
14801 W. 114th Terrace
Lenexa, KS 66215
Phone: 913.338.2886
Fax: 913.338.2879
techserv@procharger.com**

**Accessible Technologies, Inc.
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Part Number PMGF1A-001 Rev. B**

