

# 2008-2009 Pontiac G8 GT/GXP High Output Intercooled System **Installation Guide**



The **ULTIMATE** Power Adder™

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## INTRODUCTION

Congratulations on purchasing your ProCharger® 2008-2009 Pontiac G8 GT/GXP 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) 338-3086.

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.

### Required Tools and Supplies

- 3/8" & 1/2" Socket Set (standard & metric)
- 1/2" Impact Gun
- 1/2" Breaker Bar
- T30 Torx Bit
- Open End Wrench Set (standard & metric)
- 3/8" Hex Bit Set (allen head)
- Flat & Phillips Screwdrivers
- Plier Set
- Propane torch
- Loctite 242 and 272
- Drill



**Warning:** Your supercharged G8 must always be run on 91 octane or higher gas.

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, 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.** ATI ProCharger is not responsible for ECM tuning/programming on non-stock vehicles. ATI PROCHARGER recommends verifying that your vehicle has current ECM updates from the vehicle manufacturer before installation.

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

Tuning ..... 1

Getting Started..... 3

Coolant Overflow Reservoir Relocation ..... 9

Windshield Washer Reservoir Relocation..... 11

Power Steering Reservoir Relocation..... 13

Crank Pulley ..... 15

Intercooler and Procharger ..... 17

Fuel Injector Replacement ..... 23

PCV Modification ..... 25

Vacuum Manifold ..... 26

Final Assembly ..... 27

Operation and Maintenance ..... 30

Limited Warranty ..... 32

ProCharger Extended Coverage ..... 33

 For complete system installations, please review the Tuning Instructions and Fuel Injector Replacement section to ensure you have the proper components to complete the installation. Tuning for this vehicle is a multi-step process that should be initialized before the installation has begun. If there are any questions about this process, or any other step during your installation, please call ProCharger Technical Service at 913-338-2886.

# TUNING



**Note:** This section only applies to full systems, which include a hand-held tuner. If you do not have a full system, additional tuning will be required before starting the vehicle.

## inTune Programmer



**Warning:** Voltage fluctuations are a common cause of reflashing failure. Be sure your battery is fully charged, remove the cooling fan and fuel pump fuses, keep the stereo off, and do not open or close any doors or windows while reflashing.



**Warning:** During a reflashing, either stay in the vehicle or open a window prior to reflashing to prevent getting locked out.

- 1) Remove the inTune programmer from its box and review the included instructions for updating your device.
  - 1) Connect the inTune programmer to your PC with the provided USB cable. Allow the device to load drivers to the PC.
  - 2) Run the inTune updater software.
- 2) Connect the inTune programmer to the OBD-II port located below the steering column using the OBD-II cable included with your programmer.
- 3) Upload your stock tune from the ECM to the inTune programmer:
  - 1) Select **Tune Vehicle**
  - 2) When prompted turn the key to the on position without starting the engine
  - 3) Select Advanced Tune
  - 4) Select Install Standard Tune
  - 5) Select Modify Stock Tune
- 4) Follow the on screen prompts. Your original backup will be saved.
  - 1) Select Backup Only
- 5) Connect the inTune programmer to your PC with the provided USB cable. A window will appear showing the inTune as an additional storage device.
  - 1) Select Open Files
  - 2) Select Tunes
  - 3) Select VIN Folder
  - 4) Click and drag the Original Backup file to your PC's desktop or hard drive
- 6) Email the **Original Backup** file to [tuning@procharger.com](mailto:tuning@procharger.com) with the ProCharger serial number in the subject line.
- 7) You will receive the tune for your vehicle within 24 hours. Save the modified tune to your desktop or hard drive.

- 8 Connect the inTune programmer to your PC and open the inTune drive:
  - 1) Click and drag the ProCharger Tune file from your desktop or hard drive to the inTune drive.
  - 2) Allow the file time to load, do not disconnect before the file has finished loading
  
- 9 Connect the inTune programmer to the OBD-II port located below the steering column.
  
- 10 Download the modified tune from the inTune programmer to your vehicle:
  - 1) Select **Tune Vehicle**
  - 2) Select **Advanced Tune**
  - 3) **Install Custom Tune**
  - 4) **Select Procharger**
  - 5) **Select Apply Tune**
  
- 11 Follow the on-screen prompts:
  
- 12 The ProCharger tune will now be written to your vehicle. This process can take several minutes.



### **Troubleshooting:**

•If the programmer fails to install the tune to your vehicle for any reason, it will enter into "VEHICLE RECOVERY MODE." Reprogram the vehicle with the "RESTORE VEHICLE" option before attempting to install the ProCharger Tune again.

# GETTING STARTED



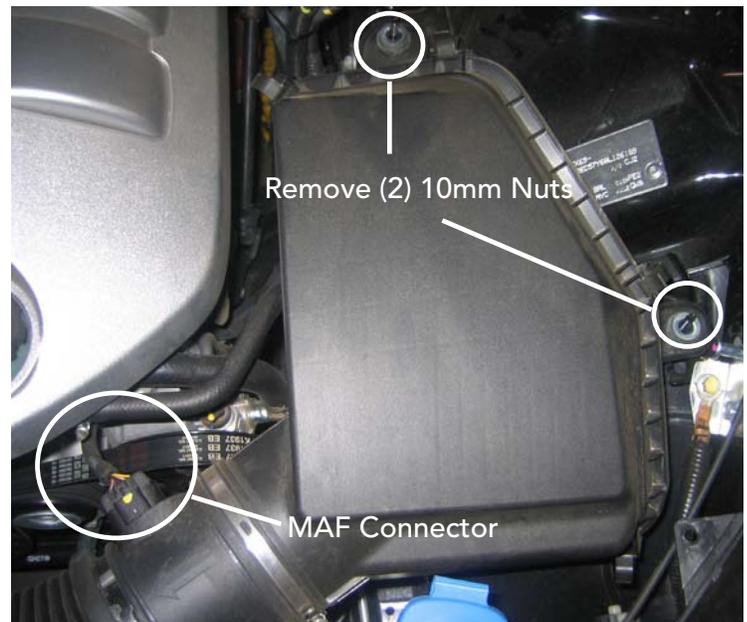
Completion of this section will configure the vehicle for system installation:

- (A) Factory Air Filter Box
- (B) Mass Airflow (MAF) sensor
- (C) Factory Inlet Pipe
- (D) Plastic Engine Cover

**!** **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 ProCharger warranty.

## Getting Started

- 1** Remove the gas cap to relieve fuel tank vapor pressure. 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 fuse.
- 2** Disconnect the negative battery cable from the battery located in the trunk using a 12mm wrench.
- 3** Remove the engine cover by pulling firmly upwards and out towards the front of the vehicle. Set the cover aside.
- 4** Remove the wiring connector from the Mass Airflow Meter (MAF).
- 5** Disconnect the PCV line running to the factory intake system by squeezing the fitting tightly and pulling out.
- 6** Using an 8mm nut driver, loosen the hose clamp holding the intake hose to the throttle body. Remove the (2) 10mm nuts securing the factory air filter box.
- 7** Firmly pull up on the air filter box and remove the entire factory air intake system from the vehicle.
- 8** Using an 8mm nut driver, loosen the (2) hose clamps securing the MAF to the airbox and inlet hose. Separate the components and set the MAF aside, it will be reused later. The rest of the intake system will not be re-installed.



Air Filter Box Assembly

- 9 Raise the front of the vehicle using car ramps, jackstands, or a vehicle lift.
- 10 Remove the (4) bolts securing the underside cladding to the front bumper with a 7mm nut driver.
- 11 Using a flat head screwdriver, remove the (10) push pins holding the underside cladding to the frame and splash panels (6 underneath vehicle, 2 connecting the cladding to the driver's side and 2 for the passenger's side splash panels). Remove the underside cladding from the vehicle.
- 12 Remove the (4) push pins connecting the front fascia to the splash panels (2 per side).
- 13 Unplug both fog lights.
- 14 Using a 10mm socket, remove the (2) bolts securing the front fascia to the vehicle. Remove the (2) push pins from the top of the fascia.



Remove (4) Bolts With 7mm Socket



Remove (2) Bolts With 10mm Socket and (2) Push Pins

## Getting Started

- 15 Loosen (but do not remove) the (4) bolts securing the front fascia to the fenders using a 10mm socket and extension (2 fasteners per side). These can be located by pulling the splash panels inward and looking up from inside of the wheel well. Once loosened, push the fascia forward on each side while pulling down, separating the fascia from the fender.
- 16 Release the front fascia retaining clips (2) located underneath each headlight, visible by slightly pulling down on the fascia under each headlight. Push the fascia down and in at the same time, releasing the clips. Remove the fascia from the vehicle.
- 17 Remove the (2) bolts holding the plastic shrouding located under the driver's side headlight using a 10mm socket. Pull the shrouding out, removing it from the vehicle.
- 18 With a 10mm socket, remove the (4) bolts securing the driver's side headlight to the vehicle. Unplug the headlight by prying up on the red securing tab with a flat head screwdriver to release it, and pulling the connector apart. Set the headlight aside.



Passenger's Side Fascia to Fender Fasteners



Driver's Side Headlight Shrouding Fasteners



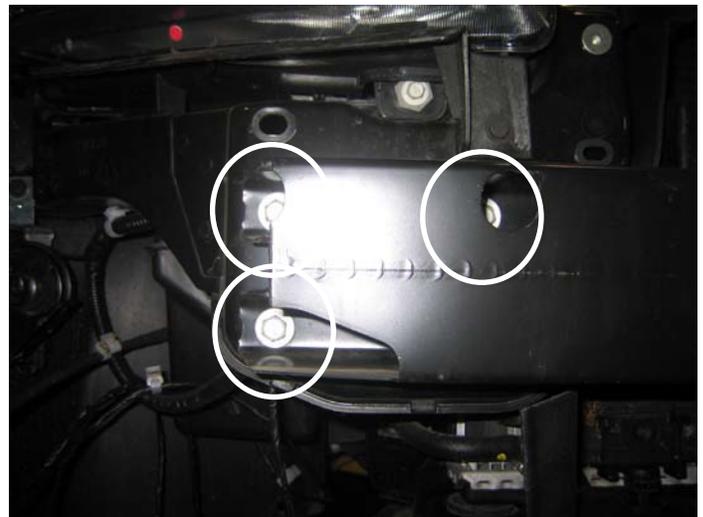
Headlight Securing Tab Release

- 19 Pull the plastic front bumper cladding off of the front bumper and set it aside.
- 20 Using a 13mm socket and extension, remove the (6) bolts on the front side of the front bumper (3 each on the driver's and passenger's sides).
- 21 Using a 10mm socket, remove the (2) fasteners on the back side of the bumper (1 on each side of the vehicle).

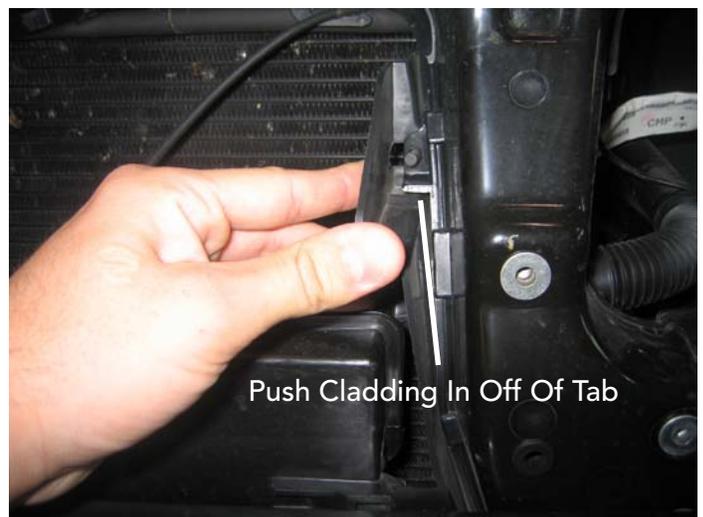


Front Bumper Cladding

- 22 The front bumper is still held in place by the radiator cladding. Push back on the cladding on the driver's side and pull the cladding off of the tab it is attached to.
- 23 The bumper can now be pulled out approx. 6 inches. Detach the wiring harness that is plugged into the washer motor. Pry off the ambient air temperature sensor from the passenger's side of the radiator cladding using a flathead screwdriver.

Front Bumper Fastener Removal  
(Passenger's Side)

- 24 Place a pan underneath the vehicle on the passenger's side under the washer reservoir. Pull the (2) windshield washer lines to detach them from the washer motor, located at the bottom passenger's side of the reservoir.



Radiator Cladding Removal

## Getting Started

- 25 Using a 10mm wrench, remove the filler neck bolt and pull the filler neck apart from the reservoir. Remove the filler neck from the vehicle.
- 26 Remove the entire front bumper assembly (including the radiator shrouding and windshield washer reservoir).
- 27 With the front bumper removed, using a 10mm socket, remove the (3) bolts securing the reservoir to the bumper. (there are (2) bolts on the passenger's side, (1) on the driver's side). Remove the reservoir/radiator cladding from the bumper. The reservoir/radiator cladding will no longer be used.



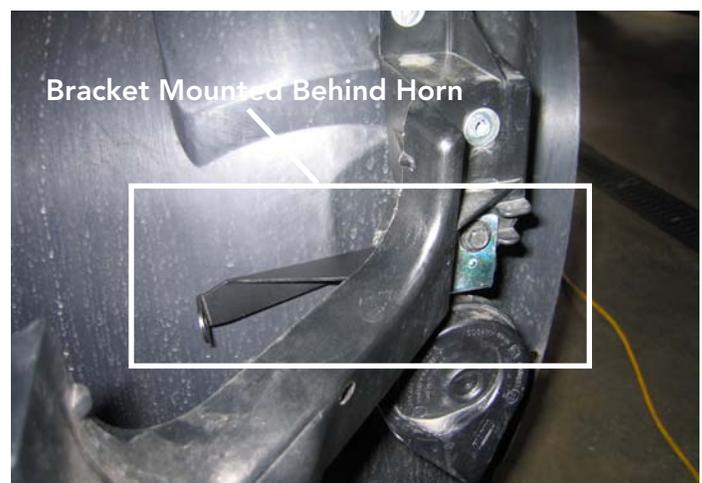
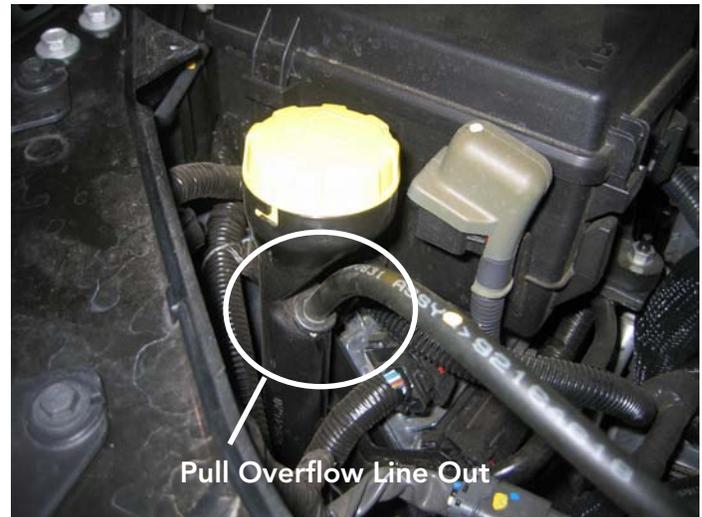
Remove Filler Neck Bolt



Front Bumper Assembly

# COOLANT OVERFLOW RESERVOIR RELOCATION

- 1 Pull the overflow line (held in by a rubber grommet) out of the factory overflow reservoir. Cut 22" of line off and set it aside for later in the install.
- 2 Using a 13mm socket, remove the (2) fasteners (accessible from beneath the car) holding the reservoir in place. Lift the reservoir up and out off of the frame rail, and pull the reservoir out from the bottom of the vehicle.
- 3 Using a flathead screwdriver, pry the wiring harness clip off of the reservoir. Remove the assembly from the vehicle. Be careful not to spill any coolant from the reservoir.
- 4 Remove the filler neck from the reservoir by pulling it straight out. This neck will be reused.
- 5 Remove the air cleaner stud using a T30 Torx bit. Place the supplied bracket over the threaded hole, and re-insert the air cleaner stud finger tight.
- 6 Remove the driver's side horn bolt using a 10mm socket. Place the supplied bracket behind the horn, re-insert the horn bolt and hand tighten.



## Coolant Overflow Reservoir Relocation

- 7 Using the (2) supplied 8mm bolts and washers, install the supplied coolant reservoir. Once positioned, tighten the hardware from steps 5 and 6.
- 8 Using the 22" piece of hose from step 1, attach it to the overflow barb fitting on the new reservoir and route it towards the front of the vehicle, away from any moving parts. It is advised that it not be routed directly in front of the front wheel.
- 9 Install the factory filler neck onto the new reservoir.
- 10 Pour the coolant from the factory reservoir into the new unit.
- 11 The markings on the coolant cap dip stick are compatible with the new reservoir. Be sure to check the fluid level once completed.



New Coolant Reservoir Mounted



New Coolant Reservoir Assembly

# WINDSHIELD WASHER RESERVOIR RELOCATION

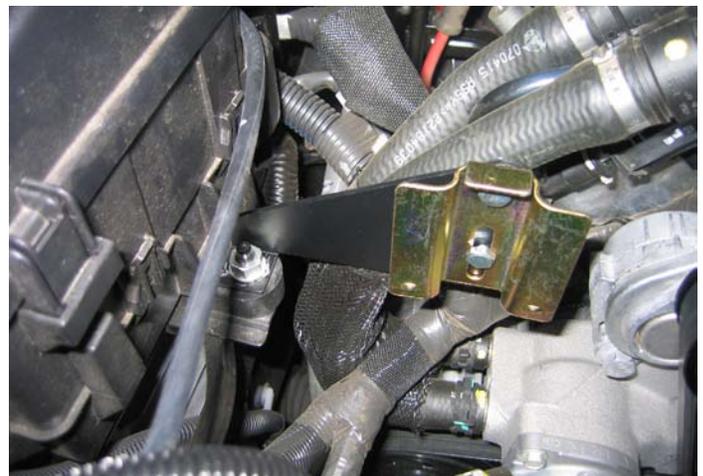
- 1 Unpackage the provided windshield washer reservoir kit. Using the supplied clear tubing, route a short section from the bottom of the new reservoir to the side nipple on the washer motor.
- 2 Slide the bracket off the back of the new reservoir. Mount it to the supplied black bracket using the supplied nuts and bolts with a 10mm socket and wrench.
- 3 Using a 13mm socket and extension, remove the nut closest to the driver's side securing the fuse box. Place the new bracket configuration onto the stud, replace the nut and tighten.
- 4 Cut the factory windshield washer electrical connector and strip both wires back approximately 1/2".
- 5 Route the washer motor wires to the front of the vehicle through the fan shroud, near the open ended wires that were stripped in step 4. Strip 1/2" from each wire.



Tube Routing From Reservoir to Washer Motor

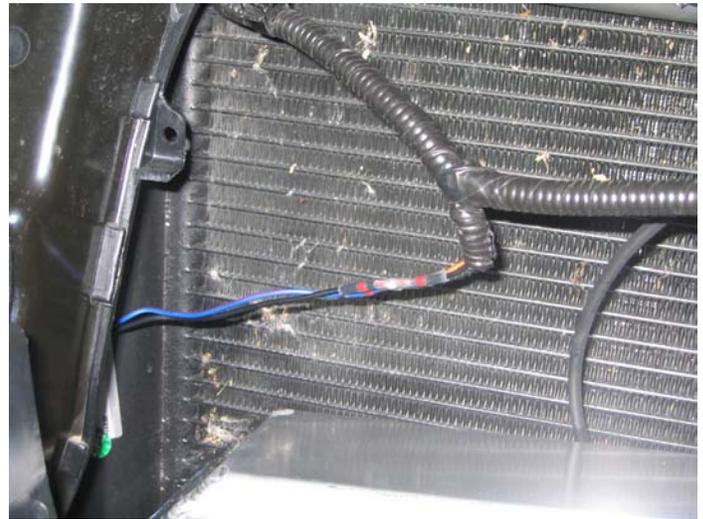


Fuse Box Nut



Reservoir Bracket Configuration

- 6 Using the provided solder butt connectors, connect the new washer motor wires to the factory wires. Solder connectors do not need to be crimped; apply a heat source to the center section of the connector with the wires both inserted to solder the wires together. Once the connections have been made, pull the loom over the wires and use electrical tape to help insulate and secure the wires. Zip tie the wires out of the way.
- 7 Remove the factory windshield washer breather line (the washer line not connected to the washer nozzles), and discard.
- 8 Route the main fluid line from the front of the vehicle and connect it to the open nipple on the top of the washer motor. Be sure to route it away from any belts or pulleys and secure with zip ties.
- 9 Fill the reservoir with washer fluid.
- 10 At this time, locate the ambient air temperature sensor located on the passenger's side front of the vehicle. Zip tie it to the front of the vehicle, so it has an open air path.



New Wiring Routed for Washer Motor



New Reservoir Mounted



Ambient Air Temp Sensor Mounted

# POWER STEERING RESERVOIR RELOCATION

- 1** Locate the power steering reservoir on the driver's side of the engine compartment. Unclip the reservoir from the factory bracket by using a flathead screwdriver and pulling the tab away from the reservoir. Lift up on the reservoir and set the reservoir to the side.
- 2** Disconnect the (2) wiring harnesses from the factory bracket. Pry one harness clip loose from the bracket. Open the second harness clip to release the wiring harness from the bracket.
- 3** Using a 15mm socket and extension, remove the (2) bolts securing the bracket to the cylinder head. Remove the bracket from the vehicle. The bracket and factory hardware will no longer be used.
- 4** Extend the smaller (3/8") reservoir line by pulling it out of the reservoir (loosen the factory hose clamp with a 7mm nut driver). Use the supplied 3/8" x 3/8" double barb to connect the additional (supplied) 6" section of 3/8" hose. Tighten the connection with the supplied hose clamps using a 6mm nut driver. Tighten the extended end to the reservoir with the factory clamp.



Release Factory Power Steering Reservoir



Extended 3/8" Hose Connection

## PowerSteeringReservoirRelocation

- 5 Remove the larger (5/8") line from the reservoir and pump and replace it with the supplied 19" long 5/8" hose. Use the factory clamps with a 7mm nut driver to tighten each end.
- 6 Using a 13mm socket, remove the nut securing the master cylinder to the firewall. Place the supplied bracket onto the stud, replace the nut and tighten.
- 7 Route the hoses down and out of the way, securing them with zip ties. Be sure to route them so neither hose is pinched or restricted.
- 8 Slide the reservoir onto the new bracket, pushing it all the way down to ensure proper fitment.
- 9 Refill the reservoir to the "COLD" full position.



New Power Steering Reservoir Location

# CRANK PULLEY

- 1 Locate the transmission access cover under the vehicle in front of the transmission. Remove the securing bolt with a 10mm socket, and set the cover aside.
- 2 Looking inside the transmission access hole, the flywheel should be visible. Using a large flathead screwdriver, place the screwdriver into one of the holes in the flywheel to keep the flywheel from spinning during the crank pulley bolt removal.
- 3 Using a 24mm socket and a breaker bar, remove the factory crank pulley bolt, remembering to ensure the flywheel is being held stationary.

✓ **Tech Tip:** Using a torch and heating the flange on the crank pulley bolt before removal makes removal easier. There is an adhesive on the back of the flange bolt which helps retain the bolt. Heating this breaks the adhesive.

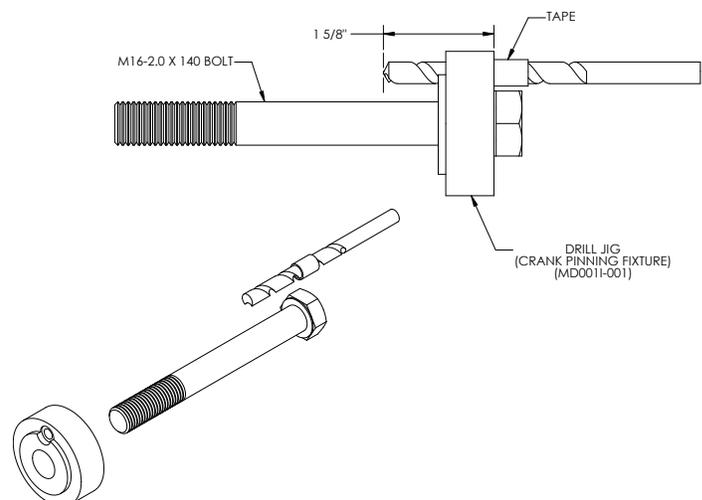
- 4 Following the diagram to the right, set up the drill bit, measuring 1-5/8" from the end and taping the bit for drill depth reference.
- 5 Place the provided bolt through the pinning fixture, and tighten onto the crankshaft with a 24mm socket.



Transmission Access Shield and Hardware



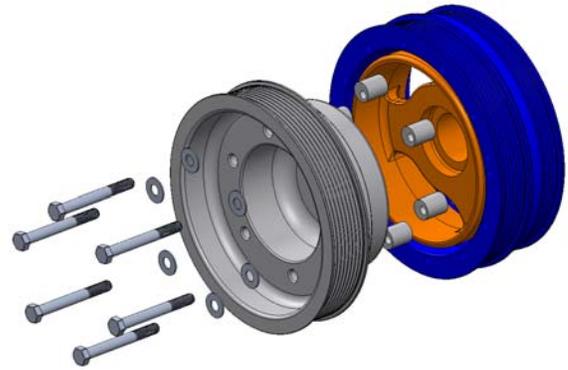
Crank Pulley Bolt Removed



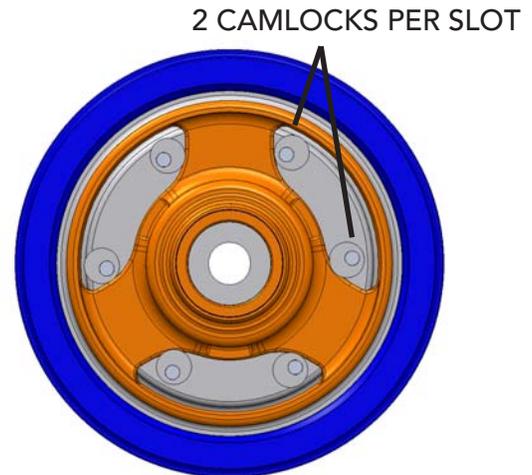
Crankshaft and Harmonic Balancer Pinning

## Crank Pulley

- 6 Drill the crank to the proper depth, then remove the bolt and fixture. Clean the area thoroughly, including the drilled hole.
- 7 Place the 1/4" pin into the crank. Be sure the pin is set all the way into the crank (tapping the pin with a rubber mallet is acceptable).
- 8 Insert the (6) 5/16-18 bolts and washers through the supplied pulley, and thread the (6) supplied cam locks onto the threads from behind the pulley. Hand tighten the cam locks.
- 9 Mount the crank pulley and cam locks onto the factory balancer, ensuring (2) cam locks are inserted into each slot on the balancer.
- 10 Activate the cam locks by tightening the (6) bolts; this will ensure the crank pulley and balancer spin together.
- 11 Place the provided cupped washer onto the new crank bolt, insert through the new crank pulley and into the crank. Tighten the bolt to 240 ft-lbs. Be sure the flathead that is holding the flywheel stationary is properly positioned for tightening.
- 12 Remove the screwdriver from the transmission access hole, replace the access shield, and tighten the bolt.



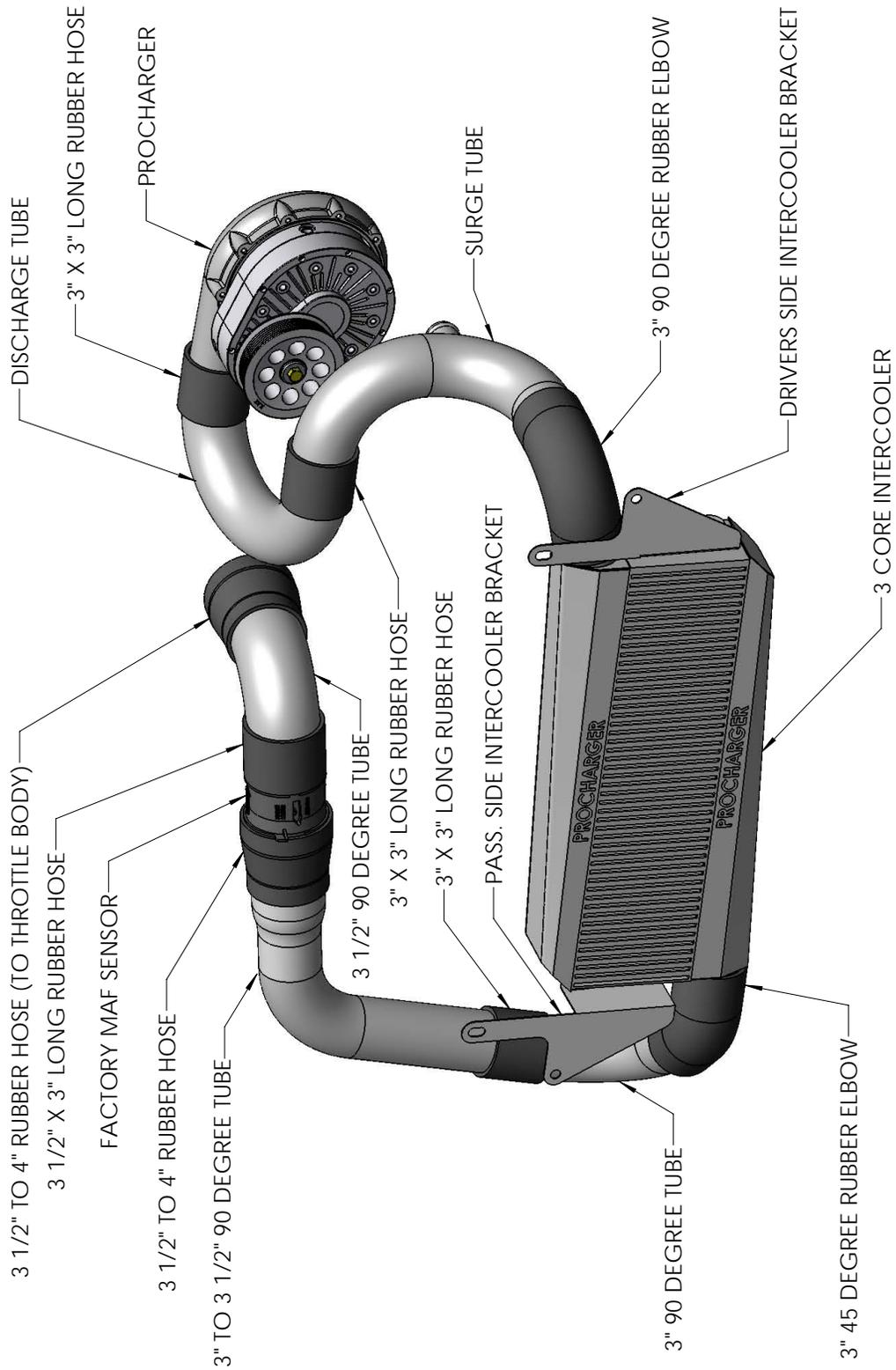
Crank Pulley and Cam Lock Assembly



Cam Lock Positions From Back Side View



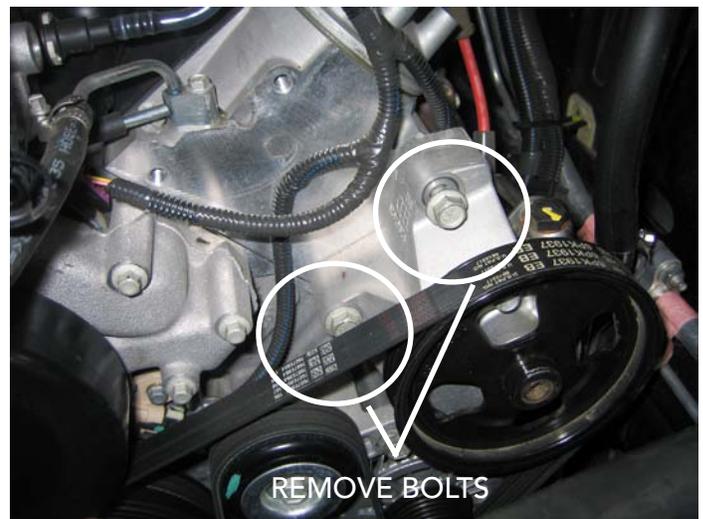
# 3 CORE INTERCOOLER SCHEMATIC



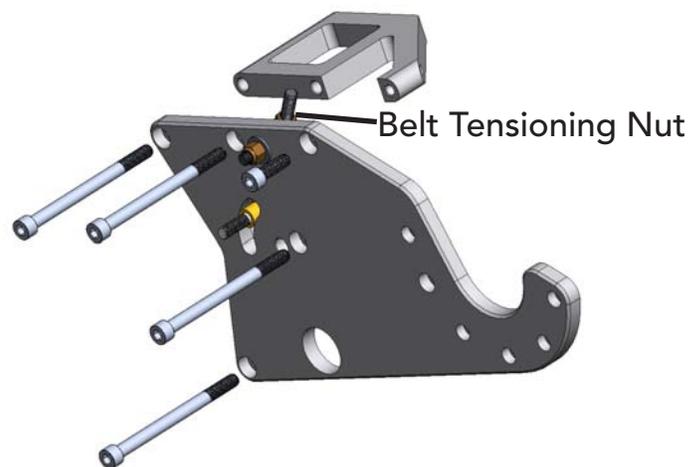
- 1 Thread the (4) 3/8-16 bolts through the driver's side and passenger's side intercooler brackets and into the intercooler. Hand tighten.
- 2 Loosely hang the intercooler onto the front of the car utilizing the top holes on each bracket, fastening through the threaded holes on the front carrier assembly using the factory hardware with a 10mm socket.
- 3 Re-install the front bumper (using the (6) factory bolts), sandwiching the intercooler bracket between the front bumper and the front carrier assembly. Tighten all bracket hardware at this time.
- 4 Using a 15mm socket, remove the (2) bolts indicated at right for use in mounting the main bracket.
- 5 Before mounting the main bracket, you must remove the idler and tensioner pulleys from the bracket.
- 6 Mount the main bracket using (4) M10 x 130mm fasteners and (1) M10 x 30mm fastener in the configuration found in the model to the right. The lower (2) locations require spacers behind the main bracket for proper alignment. Tighten all (4) fasteners.
- 7 Place red loctite on the idler pulley bolt, and tighten the idler pulley onto the main bracket assembly.



Intercooler Installed (3 Core I/C Shown)



Main Bracket Mounting Locations



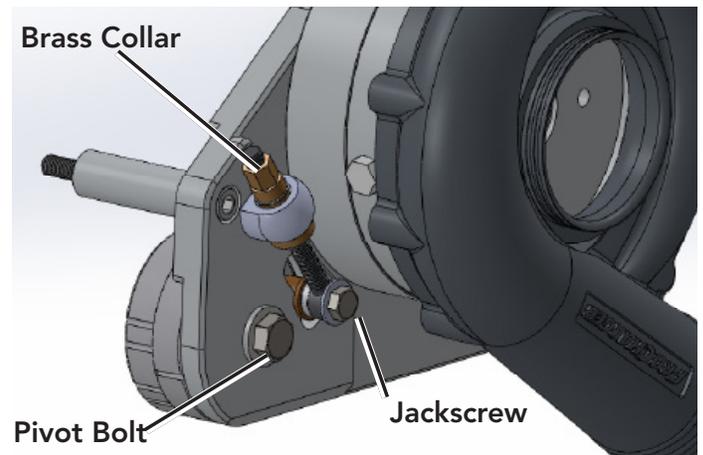
Main Bracket Assembly

## Intercooler and Procharger

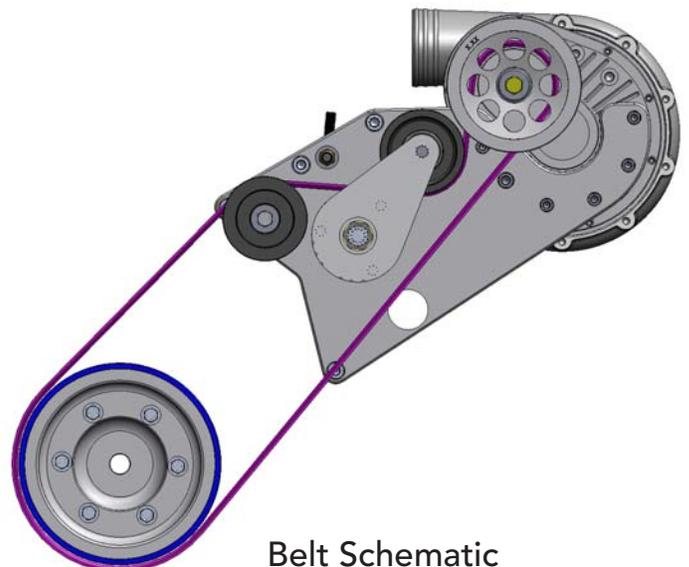
- 8 Using a flathead screwdriver, remove the dipstick fastener at the top of the blower. Dispense (1) full bottle of oil (6oz for P1SC-1 or D1SC), and tighten the dipstick into the blower.
- 9 Install the blower using (5) 5/16-18 SHCS (tighten with a 1/4" allen), and (1) 3/8-16 SHCS (tighten with a 5/16" allen) in the proper orientation. The serial plate on the blower should face up when installed properly.
- 10 Route the belt onto the pulleys as shown in the schematic to the right.
- 11 Place red loctite onto the tensioner pulley bolt, and mount the tensioner pulley onto the main bracket. Keep this bolt hand tight for the time being.
- 12 Use a 3/4" to loosen the tensioner by loosening the pivot bolt. Use a 9/16" to loosen the jackscrew mounting bolt. Using a 1/2", turn the brass collar counterclockwise to rotate the tensioner all the way up.
- 13 Tighten the belt by rotating the brass collar clockwise until the first set of etched marks on the tensioner body align. Use a 3/4" to tighten the pivot bolt. Ensure the bolt is tight enough to hold the tensioner from rotating. Turn the brass collar counterclockwise to release tension on the jackscrew. Use a 9/16" to tighten the jackscrew



Idler and Tensioner Pulley Mounted



Tensioner Assembly



Belt Schematic

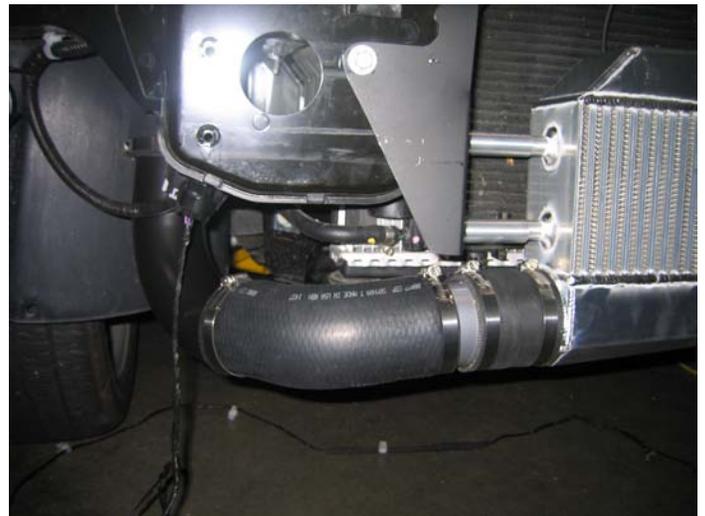
- 14 Starting on the driver's side, mount the discharge and surge tubes using the (2) 3" by 3" rubber hoses and (4) #52 hose clamps.
- 15 Install the 3" rubber 90° hose to the surge tube end, and onto the driver's side of the intercooler using #52 hose clamps.
- 16 Mount a 3-1/2" to 4" rubber reducer to the throttle body using a #64 hose clamp.
- 17 Mount the 3-1/2" 90° tube to the 3-1/2" to 4" rubber reducer. Attach the 3-1/2" x 3" rubber hose to the opposite end with #56 hose clamps.
- 18 Insert the factory MAF sensor into the 3-1/2" x 3" rubber hose using a #56 hose clamp. Be sure the MAF arrow is pointing toward the throttle body, and the electrical connection is pointing toward the firewall.
- 19 Connect a 3-1/2" to 4" rubber reducer onto the MAF using a #64 hose clamp. Insert the 3" to 3-1/2" 90° tube into the open end, tightening it with a #56 hose clamp.
- 20 Place a 3" x 3" rubber hose onto the open end, and insert the 3" 90° tube, tightening them with #52 hose clamps.



Driver's Side I/C Tubing Installed



Upper Passenger's Side I/C Tubing Installed



Lower Passenger's Side I/C Tubing Installed  
(2 Core)

## Intercooler and Procharger

- 21 Insert the 45° rubber hose onto the open end of the 3" 90° tube. Tighten with a #52 hose clamp.
- 22 **2 Core Intercooler:** Insert the 3" tube followed by the final 3" x 3" rubber hose and connect it to the intercooler. Use #52 hose clamps to secure these connections.
- 23 **3 Core Intercooler:** Insert the open end into the passenger's side intercooler opening. Secure with #52 hose clamps.
- 24 Verify all connections are tight before proceeding to the next step.
- 25 Re-install the front driver's side headlight and headlight cladding, front fascia, and underside cladding.



Lower Passenger's Side I/C Tubing Installed  
(3 Core)

✓ **Tech Tip:** The front fascia may need slight trimming for best fit when installing the 3 core intercooler.

# FUEL INJECTOR REPLACEMENT



**Tech Tip:** Tuner kits do not include fuel injectors. Contact ATI ProCharger for correct size and availability of upgraded injectors needed to complete the install.



**CAUTION:** The fuel system should be de-pressurized, but some fuel may leak out when the lines are disconnected. Take the necessary precautions to avoid injury or fire.

- 1 If you have not already done so, you should now de-pressurize the fuel system by completing steps 2-4. Otherwise, skip to step 5.
  - 2 Remove the gas cap to relieve vapor pressure in the fuel tank.
  - 3 Remove the fuel pump fuse from the underhood fuse block (in front of the battery). Crank the engine over for 5 seconds (the engine will not start) to bleed fuel pressure from the fuel lines and fuel rail assembly. Replace the fuel pump fuse. Remove the keys from the ignition.
  - 4 Disconnect the negative battery cable.
  - 5 Place a shop towel underneath the fitting on the driver's side of the fuel rail where the stainless steel fuel supply line and fuel rail join. Using the supplied fuel fitting quick-disconnect tool, remove the supply line from the fuel rail, being careful to minimize fuel leakage.
  - 6 Disconnect the fuel injector electrical connectors one at a time, labeling them by their corresponding injector location, to ensure proper sequential injector firing order after re-assembly.
  - 7 Disconnect the fuel rail wiring harness from the fuel rail. Remove the fuel rail attaching bolts.
  - 8 Remove the fuel rail assembly as one piece with the injectors still attached and place on a clean work surface, making sure to support the assembly to avoid damaging any of the components.
  - 9 Spread the injector retainer clips to release each injector from the fuel rail. Remove the old injectors and set aside.
  - 10 Lubricate each new injector o-ring seal with several drops of clean engine oil.
- CAUTION:** Never re-use fuel injector o-ring seals, as they lose elasticity over time and could cause a fuel leak and/or potential fire.

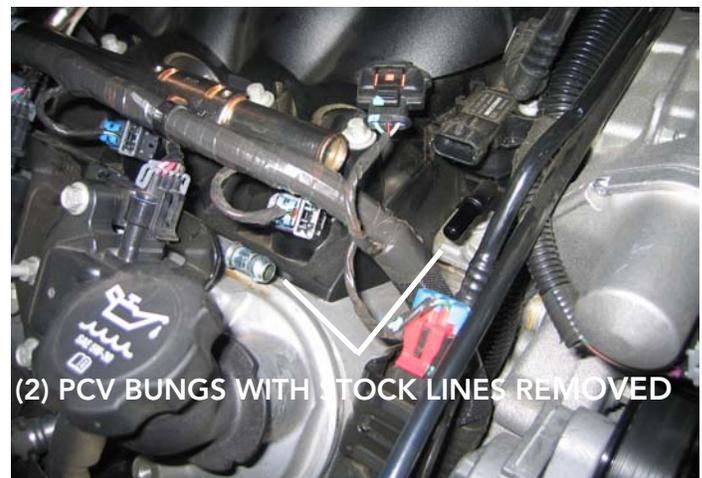
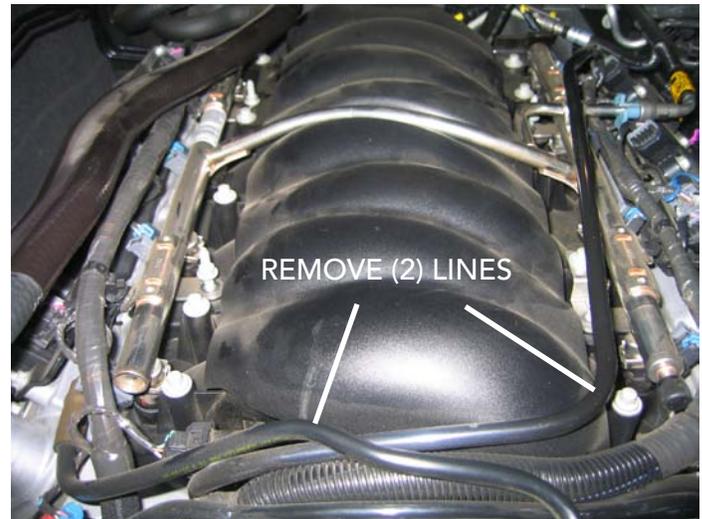
## Fuel Injector Replacement

- 11** Install the fuel rail assembly onto the intake manifold, making sure that the injectors are rotated to line up with their corresponding electrical connectors. Using Loctite 272™ (high temperature thread locker) or equivalent, install the fuel rail bolts and the supplied 1/2" spacers and torque to 90 in-lbs.
- 12** Connect each injector to the factory harness.
- 13** Replace the gas cap and negative battery cable. Re-install the fuel supply hose by pressing the fitting onto the fuel rail fitting until a snap is heard.
- 14** Check the new injectors for leaks by performing the following procedure:

  - A. Turn the ignition to the "on" position for 2 seconds. Don't start the engine!
  - B. Turn the ignition off for 10 seconds.
  - C. Turn the ignition to the "on" position.
  - D. Check for fuel leaks at both ends of each injector and at the fuel supply hose fittings.
- 15** Proceed to the next section if no leaks are detected, otherwise, review the installation and remedy any problems.

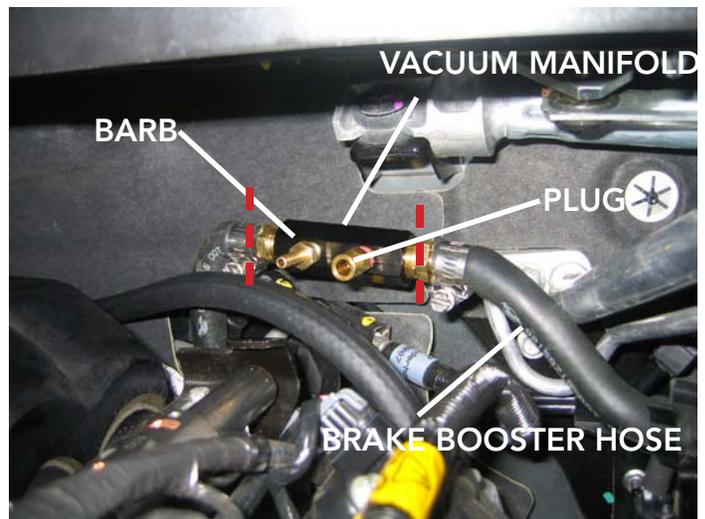
# PCV MODIFICATION

- 1 If not already done, remove the PCV line that runs from the air intake system to the passenger's side valve cover bung.
- 2 Install the supplied 36" long 3/8" hose from the passenger's side valve cover to the rear of the blower, on the inlet side of the supercharger. This line will be attached to the air inlet later in the install.
- 3 Remove the PCV line that runs from the intake manifold (just behind the throttle body and below the MAP sensor) to the rear of the driver's side valve cover and replace it with the supplied 40" long 3/8" hose.
- 4 Cut the hose in half and insert the supplied check valve, reconnecting these lines to each end of the check valve. Be certain the arrow on the check valve points towards the intake manifold connection, thus preventing boost from entering the valve cover.



# VACUUM MANIFOLD

- 1 Locate the  $\frac{1}{2}$ " ID brake booster hose that runs along the back side of the engine near the firewall. The line is connected to the brake booster located on the driver's side.
- 2 Using a utility knife or razor blade, remove a  $3\frac{1}{2}$ " long section of the hose.
- 3 Install the supplied vacuum manifold and securely clamp in place using the supplied #06 hose clamps, making sure that there are no vacuum leaks at the splice points.



Vacuum Manifold

**!** **Warning:** *Improper clamping of the splice into the brake booster hose could cause a vacuum leak and could cause the power brakes to become inoperable. Use extreme caution when installing the vacuum manifold to prevent any possible leaks.*

- 4 Attach the supplied  $\frac{3}{16}$ " vacuum hose to one of the  $\frac{3}{16}$ " barb fittings on the installed vacuum manifold, then route and attach to the ProFlow anti-surge valve vacuum port if not already done. Attach a boost gauge to the other  $\frac{3}{16}$ " barb fitting. If you are not going to use a boost gauge, remove the unused  $\frac{3}{16}$ " barb fitting and replace it with the supplied pipe plug.
- 5 Secure all vacuum hoses to their fittings with zip ties.

## FINAL ASSEMBLY

- 1 Install the surge valve by connecting the 3" long 1-1/2" rubber reinforced hose to one end of the valve, and the second supplied hose to the opposite end.
- 2 Attach the 3" long hose end to the bung located on the surge tube installed during the intercooler tubing section. The longer hose section should be routed under the blower and pulled up near the inlet of the blower for later connection to the air inlet. Secure these connections with the supplied #20 hose clamps.
- 3 Route the 3/16" vacuum line from the vacuum manifold to the surge valve bung. Route the hose out of the way of moving components and secure with wire ties.
- 4 The air inlet consists of a 90° rubber hose, a 1-1/2" bung, and a 3/8" bung. Inserted on one end is an aluminum adaptor used to mount the air filter to the inlet.
- 5 Using the supplied #20 hose clamp, insert and tighten the surge hose to the 1-1/2" bung. Position the bung straight down toward the bottom of the vehicle.
- 6 Install the inlet onto the inlet of the blower using a #64 hose clamp. Tighten the clamp and be sure the inlet is positioned so the surge bung points down.



Surge Valve Position



Air Inlet Installation

- 7 Insert the open end of the PCV line routed from the passenger's side valve cover into the 3/8" inlet bung. Route the hose behind the throttle body and intake manifold for engine cover clearance.
- 8 Plug in the provided MAF extension harness. This will extend the stock MAF wires to reach the new MAF location. Zip tie the harness securely to ensure it will not contact any belts or pulleys.
- 9 Trim the engine cover to fit around the intercooler tubing and main bracket assembly. The image to the right provides a guideline for trimming. It is best to set the engine cover in its correct location resting atop the interfering components, and marking the cover accurately yourself.
- 10 Place the engine cover in its correct position, test fit, and snap it into place once everything fits properly.
- 11 Install the air filter onto the air inlet using the attached hose clamp.
- 12 If installing a full system, once received, install the reflashed PCM into your vehicle.



Engine Cover Trimming Guide Lines



Installed Engine Cover

✓ **Note:** *If you do not have a full system, additional tuning will be required before starting the vehicle.*



**CONGRATULATIONS! YOU HAVE COMPLETED THE INSTALLATION OF YOUR NEW PROCHARGER SUPERCHARGER SYSTEM. READ THE FOLLOWING PAGES CAREFULLY FOR OPERATION AND MAINTENANCE INSTRUCTIONS, AS WELL AS WARRANTY INFORMATION.**

# OPERATION AND 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!

## Belt Replacement

The serpentine belt, which turns your ProCharger supercharger, will stretch after initial run-in, and should be re-tightened 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

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 drain plug before re-installing.

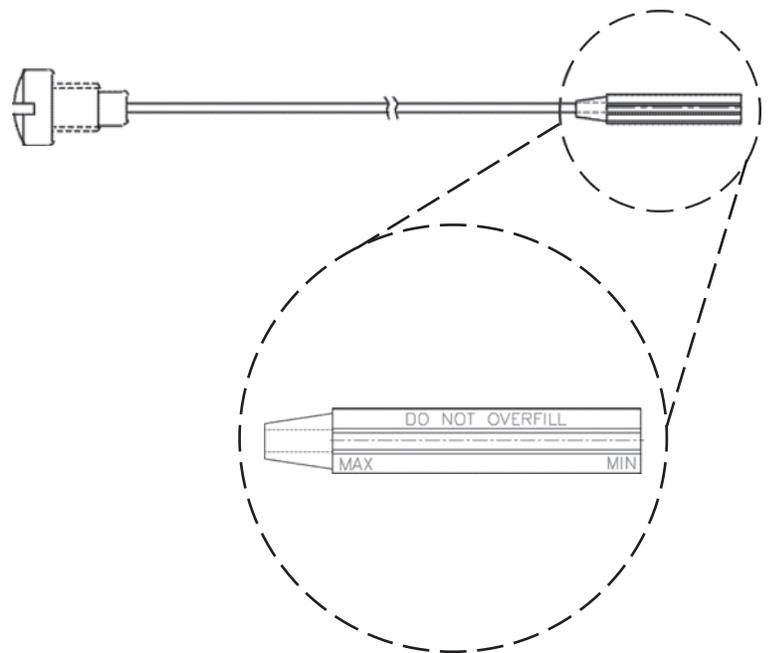
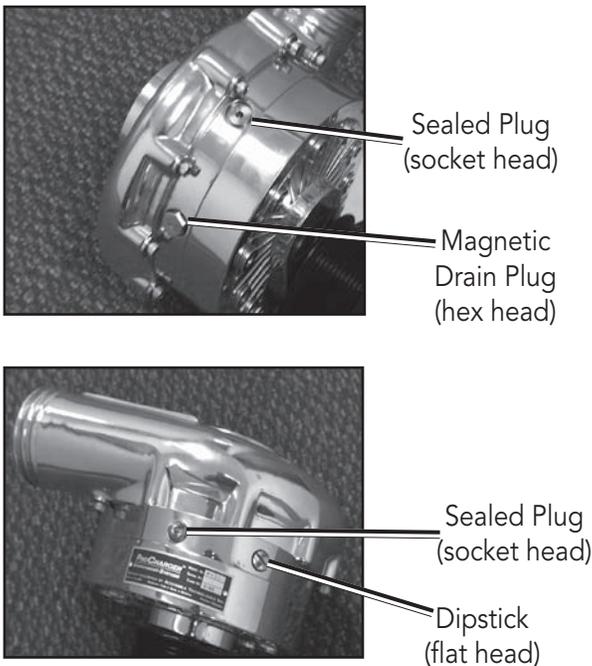
## ProCharger Oil Level

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.

**!** **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 from the dipstick, 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.



# LIMITED WARRANTY

Accessible Technologies, Inc. (ATI) provides a limited twelve (12) month warranty on the ProCharger supercharger 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 (913-338-3086) 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

The ProCharger Extended Coverage Program extends the ProCharger warranty coverage for your 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 \$99 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, P1-X, 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.

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# ProCharger Extended Coverage Program Registration Form

Return this completed form and a \$99 check within 30 days of original purchase.

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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
- Sport Truck
- 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 \$99, 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 \$99 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**

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Part Number PMGS1A-001 Rev. D**

