

2011+ Mustang GT / Boss 302 Stage 2 Intercooled System **Installation Guide**



The ULTIMATE Power Adder™

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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. 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.


INTRODUCTION

Congratulations on purchasing your ProCharger® 2011+ Mustang GT / Boss 302 Stage 2 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:** 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.

 **Warning:** Your supercharged Mustang must always be run on 91 octane or better gas. The best way to insure this is to run the tank near empty (below 1/4) and fill with 91 octane for several tanks prior to installing the supercharger.

 **Warning:** Tune provided for Boss 302 full systems will not work with optional TrackKey.

Required Tools and Supplies

- 3/8" Socket Set (standard & metric)
- 1/2" Socket Set (standard & metric)
- 1/2" Impact Gun
- 1/2" Breaker Bar and 4" Extension
- #20 Torx Wrench
- Open End Wrench Set (standard & metric)
- 5/16" Nut Driver
- 3/8" Hex Bit Set (allen head)
- Flat Screwdrivers
- Phillips Screwdrivers
- Plier Set
- Soldering Iron and Solder
- Heat Gun
- Ford Engine Coolant



Tech Tip: Installing spark plugs that are one heat ranger colder than stock and gapping your plugs to .035" is recommended.

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TUNING



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



Warning: Tune provided for Boss 302 full systems will not work with optional TrackKey.



Plug the SCT handheld into the OBDII port:

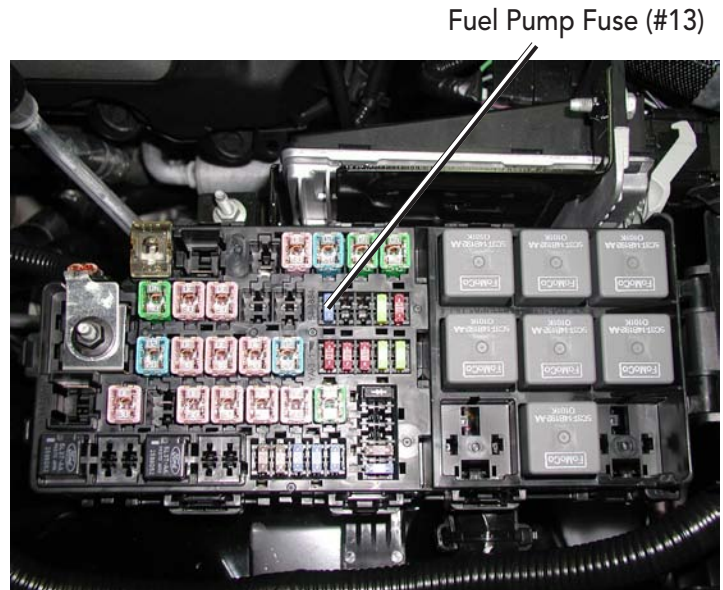
- 1) Select **Program Vehicle**
- 2) Select **Custom Tune**
- 3) Select **Tune** (follow the on- screen prompts)



Note: Tuning your vehicle correctly is extremely important and is necessary for proper vehicle operation and safety. If you have any questions regarding tuning your vehicle or with any steps outlined in these instructions, call a technical service representative at (913) 338-2886.

FUEL SYSTEM PURGE

- 1 Open the fuse box cover. Remove the fuel pump fuse located in position #13 by pulling the fuse up.
- 2 Start the engine and allow it to idle until it stalls. Crank the engine for 5 seconds after it stalls to purge the remaining fuel pressure from the fuel rails.
- 3 Lower both windows $\frac{1}{2}$ " to allow the door to close correctly after the battery is disconnected.
- 4 Turn the ignition off.
- 5 Disconnect the battery ground.
- 6 Replace the fuel pump fuse.



Fuel Pump Fuse Removal

AIR INLET AND BOX REMOVAL

✓ **Tech Tip:** Some vehicles are equipped with an upper strut tower brace. Use a 13mm socket to remove the (4) fasteners securing the brace; remove the brace from the vehicle.

Optional Upper Strut Tower Brace



Engine Cover

Engine Compartment

1 Remove the engine cover. Pull the cover straight up and remove from the vehicle (GT only).

2 Using a 5/16" nut driver, loosen the inlet connection to the throttle body.

3 Using a 10mm socket, remove the fastener securing the inlet line running to the driver's side firewall. Pull the line out of the driver's side firewall by pulling gently outwards.



Factory Airbox

Remove Inlet Line To Firewall



Fastener For Inlet Line Running To Driver's Side Firewall

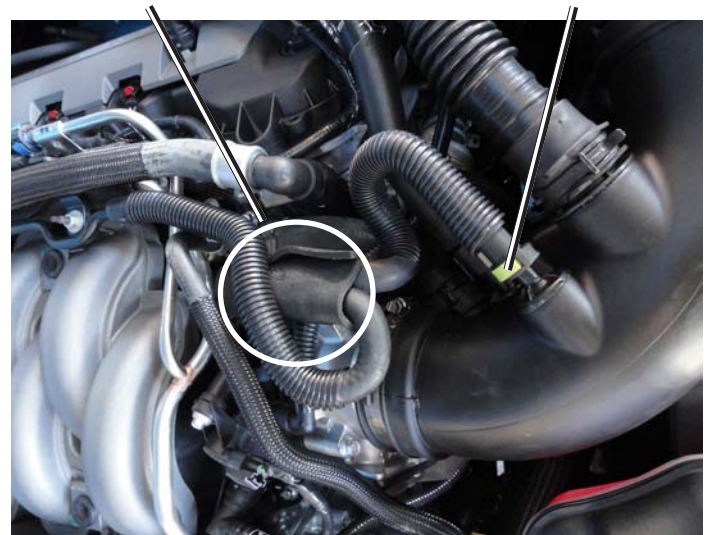
Air Inlet and Box Removal

- 4 Mount the supplied grommet found in the air inlet bag (3FRAI-001) into the hole in the firewall.
- 5 Unplug the PCV line connected to the driver's side cylinder head. Unplug the wiring harness for the MAF sensor and remove the push pin that secures the MAF harness to the intake tube.
- 6 **Automatic transmissions only:** Unplug the vacuum line from the factory air intake. Unwrap and remove the foam from the factory vacuum tree (see image at right).
- 7 Remove the airbox assembly from the vehicle. Using a 10mm socket and extension, remove the fastener securing the lower portion of the airbox to the vehicle. Lift the lower portion of the airbox up and out of the vehicle at this time.
- 8 Remove the cold air inlet from the vehicle.

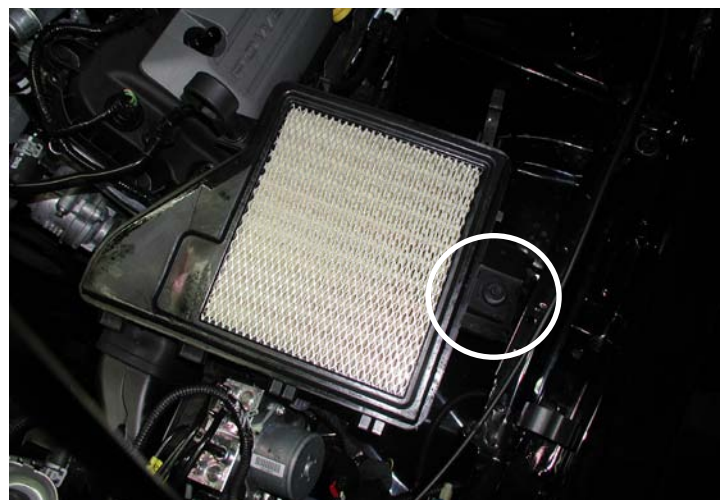


Supplied Grommet Installed

Unwrap and Remove Foam Unplug Vacuum Line From Air Inlet



Vacuum Line Removal (Automatic Only)



Remove Lower Airbox Fastener

BUMPER COVER REMOVAL

1 Remove the upper trim piece by removing the (8) push pins.

2 Raise the vehicle.

✓ **Tech Tip:** Removing the front wheels allows for extra room for front fascia removal. Use a 21mm socket and impact to remove the front wheels if desired.

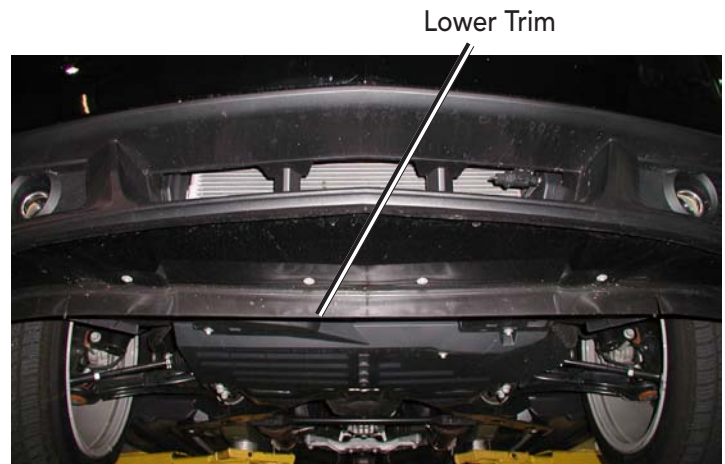


Remove Upper Trim Piece

3a **2011-2012:** Remove the lower trim by removing the (9) fasteners securing it to the vehicle with a 7mm socket.

3b **2013 GT:** Remove the lower trim by removing the (11) 7mm and (6) 8mm fasteners securing it to the vehicle.

4 Remove the inner fender well screws, (2) per side, with a 7mm socket.



Remove Lower Trim Piece

✓ **Note:** Remove the upper and lower fender well screws for 2013-2014 GT models. There is no need to remove the center screw.



Remove Inner Fender Well Screws
(Driver's Side Shown)

Bumper Cover Removal

- 5** Remove the fasteners securing the oil service panel using an 8mm socket for (3) screws. Flip the oil service panel open and allow it to hang down.
- 6a** **2011-2012:** Remove the (2) upper bumper cover bolts using an 8mm socket.
- 6b** **2013-2014 GT:** Remove the (4) upper bumper cover bolts and the (2) inner bolts using an 8mm socket.



Remove Oil Service Panel Fasteners



Remove Top Bumper Cover Bolts
(Passenger's Side Shown)



Upper Bumper Cover Bolts (2013-14)
(viewed from above the vehicle)



Inner Bumper Cover Bolts (2013-14)
(viewed from beneath the vehicle)

- 7** From beneath the vehicle, unplug the fog lights and side markers, and unclip the ambient air temperature sensor from the fascia. Remove the bumper cover by pulling it up and out at each wheel well. Set the bumper cover aside and out of the way.

- 8a** **2011-2012:** Remove the driver's and passenger's side plastic radiator shrouds by removing the push pins (2 per side) and pulling the shrouds out the front of the vehicle.



Bumper Cover (2013-14 GT)

- 8** **2013-2014:** Remove the driver's and passenger's side plastic radiator shrouds by removing the 8mm bolts (1 per side) and push pins (1 per side) and pulling the shrouds out the front of the vehicle.

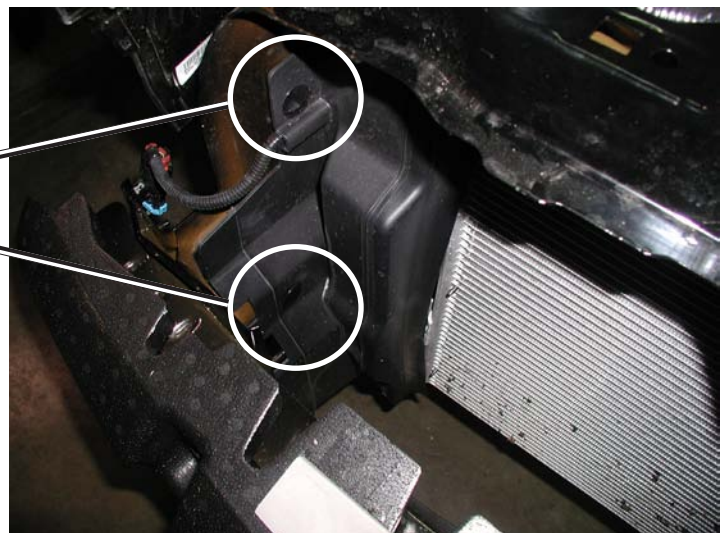
- 9** Lower the vehicle.

Remove Push Pins



Plastic Radiator Shroud (Driver's Side)

Remove Push Pins



Plastic Radiator Shroud (Passenger's Side)

FUEL INJECTOR INSTALLATION

Full Systems Only



Tech Tip: Tuner kits do not include fuel injectors. Contact ProCharger for correct size and availability of upgraded injectors.

- 1 If you have not already done so, de-pressurize the fuel system by completing the steps outlined in section 1 of this manual.
- 2 Using a 10mm socket, remove the (4) nuts securing the plastic fuel rail insulation bracket. Remove the bracket and the foam insulators wrapped over the fuel rails. Pull the insulators up and out of the vehicle for removal.
- 3 Lift up the coolant lines that run over the top of the fuel rails and adjust out of the way.
- 4 Place a shop towel underneath the fitting on the driver's side fuel rail where it joins the stainless steel fuel supply line. Push the two tabs on the fitting together and pull the supply line from the fuel rail, being careful to minimize fuel leakage.



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.

- 5 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.



Remove Fuel Rail Insulation Nuts (4x)



Adjust Coolant Lines For Fuel Rail Removal



Disconnect Fuel Supply Line

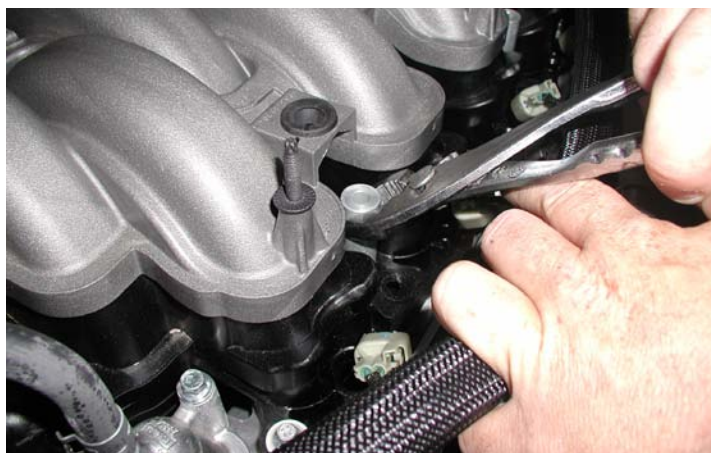
- 6 Remove the (4) fuel rail attaching bolts with a 10mm socket.
- 7 Remove the fuel rail assembly as one piece with the injectors still attached and place on a clean work surface, making sure to support the assembly to avoid damaging any of the components.
- 8 Spread the injector retainer clips to release each injector from the fuel rail. Remove the old injectors and set aside. 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.*

- 9 Install the retainer clips onto the new injectors. Push each injector into the fuel rail injector socket with the electrical connector facing outward. The retainer clip should lock onto a flange on the fuel rail.
- 10 Using a pair of pliers, remove the (4) factory fuel rail spacers by pulling straight up while applying moderate force.
- 11 Insert the supplied fuel rail spacers. Properly align and install the fuel rail assembly back into the vehicle. Secure the assembly using the (4) supplied M8-1.5 x 80mm bolts and washers.
- 12 Reclip the electrical connectors to each fuel injector. Plug the supply line back into the rail. Re-install the fuel rail insulation and plastic brackets at this time..



Remove Fuel Rail Mounting Bolts (4x)



Fuel Rail Spacer Removal (4x)



New Fuel Injectors Installed
Onto Fuel Rail Assembly

CRANK PULLEY INSTALLATION

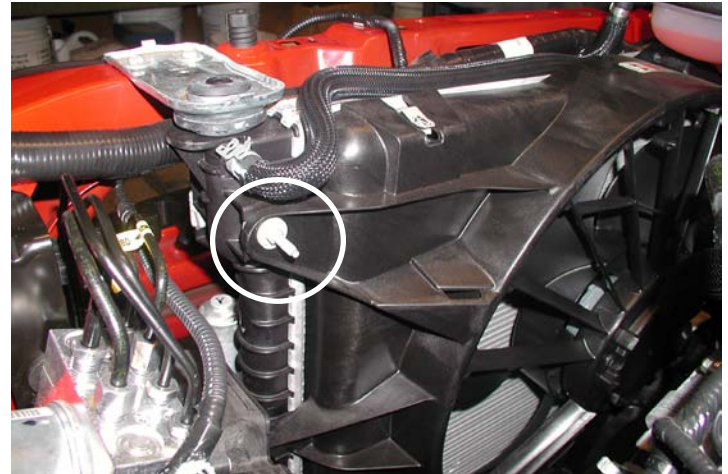
✓ **Tech Tip:** Removal of the factory coolant overflow tank and radiator fan is necessary for clearance during supercharger crank pulley installation.

1 Using a 10mm socket, remove the (2) bolts securing the coolant overflow tank to the plastic radiator fan shroud. Slide the tank up and off of the shroud, and set it off to the side.



Remove Overflow Tank Bolts (2X)

2 Unplug the cooling fan harness located on the cooling fan on the passenger's side of the vehicle. Using a 10mm socket, remove the (2) bolts securing the fan to the radiator. If you are installing this on an **automatic transmission** vehicle, remove the 10mm bolt retaining the transmission cooling lines to the fan. Lift the cooling fan up and pull it out of the vehicle. Be careful not to damage the radiator during removal.



Remove Cooling Fan Bolts (Driver's Side View)

✓ **Tech Tip:** For vehicles utilizing an aftermarket ATI Performance Products balancer (part #918047), refer to the manufacturers installation instructions. The supplied crank pulley mounts to the damper using the (3) supplied 3/8-16 x 2.5" bolts and washers.

3 Using an impact and 18mm socket, remove the factory balancer bolt.



Remove Factory Balancer Bolt

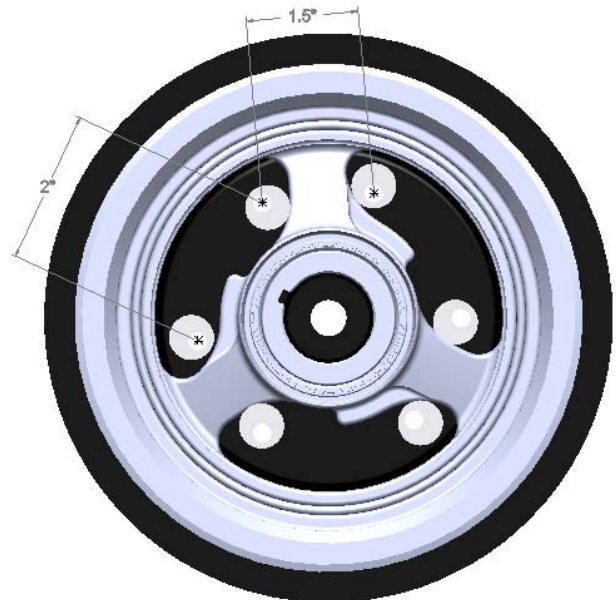
✓ **Tech Tip:** Proceed to step 7 for installations utilizing an ATI Performance Products balancer.

- 4 Mount the supplied crank pulley to the factory balancer. The crank pulley uses a cam lock design to ensure the pulley locks in place and does not freely spin. With the cams loose, slide the pulley onto the balancer, making sure the cam locks are aligned properly between the factory balancer spokes. Rotate the crank pulley counterclockwise until the cam locks stop it from rotating.



Back View of Crank Pulley and Cam Locks Installed

✓ **Tech Tip:** Be sure the crank pulley is installed so it has minimal rotational play. Mount with the cam locks indexed so the further center distance between cam locks is in the same spoke pocket, see image to right for proper orientation.



Detailed View of Proper Cam Lock Orientation

- 5 Slide the factory crank bolt washer onto the supplied M12-1.5 x 120mm bolt, using a 19mm socket, torque to 35 ft-lbs, then tighten the bolt an additional 90°.
- 6 Tighten the (6) cam lock bolts with a 1/2" socket.



Crank Pulley Installed

Crank Pulley Installation

- 7 For vehicles utilizing an aftermarket ATI Performance Products balancer (part #918047), refer to the manufacturers installation instructions for proper installation.
- 8 For 8 and 12 rib serpentine systems, mount the supplied crank pulley onto the ATI balancer by centering the center bores and mounting holes, then securing it into place using the (3) 3/8-16 x 2.5" bolts and washers. Tighten fasteners at this time.
- 9 For cog pulley installations, slide the supplied adaptor with the side labeled (OUT) towards the front of the vehicle. Center the bores on the adaptor and balancer. Slide the cog crank pulley onto the adaptor, centering the bores, and secure the components using the supplied 3/8-16 x 3.25" bolts and washers. Tighten all hardware at this time.



8/12 Rib Installed Onto ATI Balancer



Cog Adaptor Installed



Cog Adaptor and Pulley Installed

COOLING SYSTEM

- 1 Unplug and remove the fan controller from the factory fan.
- 2 Mount the fan controller to the fan shroud using the supplied 1/4-20 x 5/8" SHCS and washer.
- 3 Mount the supplied fan to the supplied fan shroud. Note the orientation of the fan wiring.

Insert the fan into the shroud from the radiator side. Secure with the (4) 5/16 bolts, (4) nuts, and (8) washers. The bolts should be installed from the radiator side, with the threaded end towards the engine.

- 4 Connect the fan to the fan controller:
 - a. Modify the spade terminals of the fan to fit into the stock fan controller by removing the spades from the fan plug using a small flat blade screwdriver and grinding the edges slightly (not necessary on 2013 models) to make it narrower until it plugs into the fan controller harness (red in red & black in black). Secure & insulate the spade terminals using electrical tape.

Or

- b. Cut, strip, and solder together the fan and fan controller wires (red on red and black on black). Insulate solder joints using heat shrink insulation or electrical tape. Secure wires away from belts with zip ties.



Fan Controller Installed



Fan Mounted to Shroud

Cooling System

- 5 Install the fan shroud in the same manner as the factory fan shroud and secure using the factory retaining bolts.

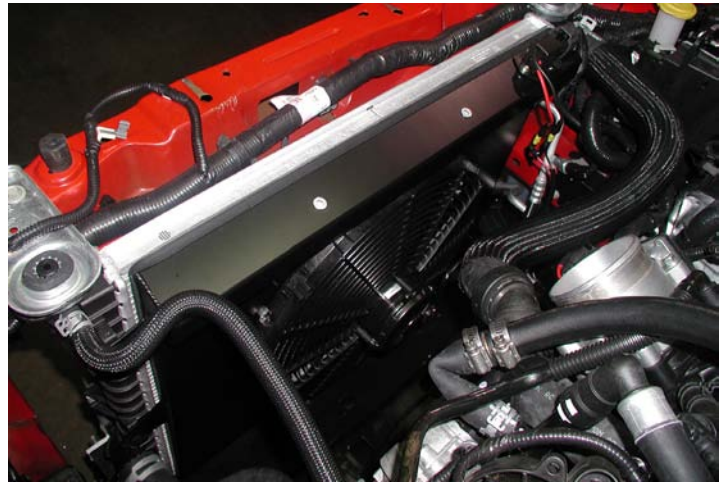
✓ **Tech Tip:** Note orientation of the fan wiring harness on the passenger's side of the assembly.

- 6 Install the (3) supplied brass hose barbs (2-3/8" brass elbows for upper connections and 1-3/4" elbow for lower coolant line connection) onto the coolant reservoir. Be sure to use a thread sealant on pipe threads.

- 7 Drain the coolant in the cooling system if not already done.

- 8 Cut the factory coolant reservoir coolant hoses to fit the ATI supplied coolant reservoir. Be sure the hose is long enough to securely attach to the degas tank and short enough so it does not have any clearance issues with the belts or pulleys. Secure each connection with the supplied #6 hose clamps for the 3/8" rubber lines, and the #12 hose clamp for the lower 3/4" line.

- 9 Mount the coolant reservoir to the sheetmetal radiator shroud using the (2) 1/4-20 x 5/8" SHCS's as shown on the image at right.



Fan Shroud and Fan Installed



Coolant Reservoir Installed

✓ **Tech Tip:** Before proceeding, verify coolant lines are clear of belts/pulleys.

! **Boss 302 or GT with Track Pack, proceed to step 11 on next page**

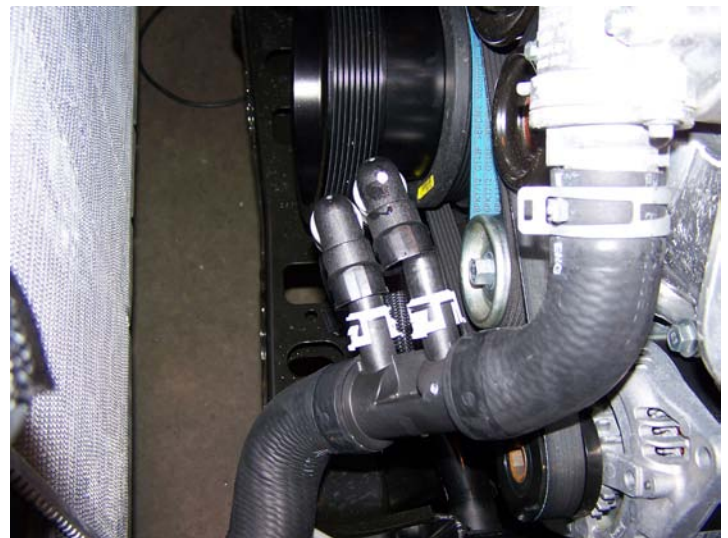
- 10 Standard GT models:** Fill the coolant reservoir with the proper coolant mix or recovered coolant, if saved during preparation. Place the factory cap onto the coolant reservoir. Additional coolant may need to be added after initial startup, once the vehicle has been run through a heat cycle.

Boss 302 or GT with Track Pack only, standard GT proceed to the next section



Cut Plastic Ring Clamps on Lower Radiator

- 11** Cut the two plastic ring clamps on the lower radiator hose securing the engine oil cooler line tee.
- 12** Disconnect the two engine oil cooler lines from the lower radiator hose by compressing the two tabs on the clip and pulling the line straight off the fitting.
- 13** Remove the lower radiator hose assembly and remove the engine oil cooler tee from the factory hose.
- 14** Refer to the picture and trim out the middle section of the supplied hose.



Disconnect O/C Lines from Lower Radiator

Cut Lines



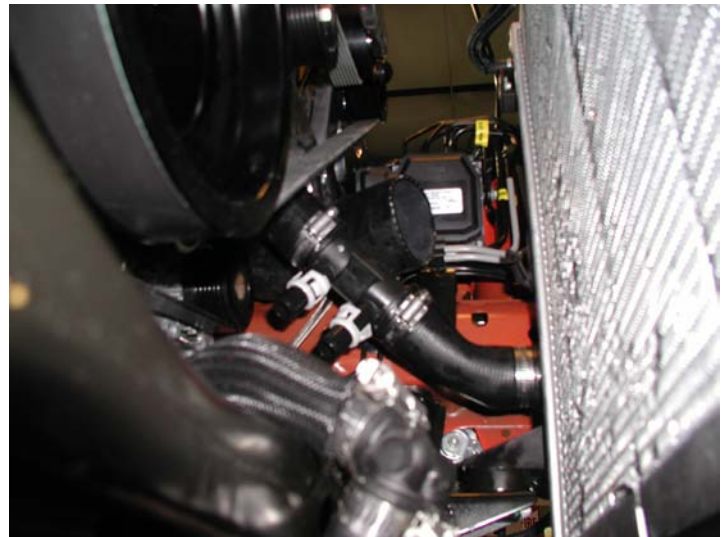
Cut Supplied Hose as Shown

Cooling System

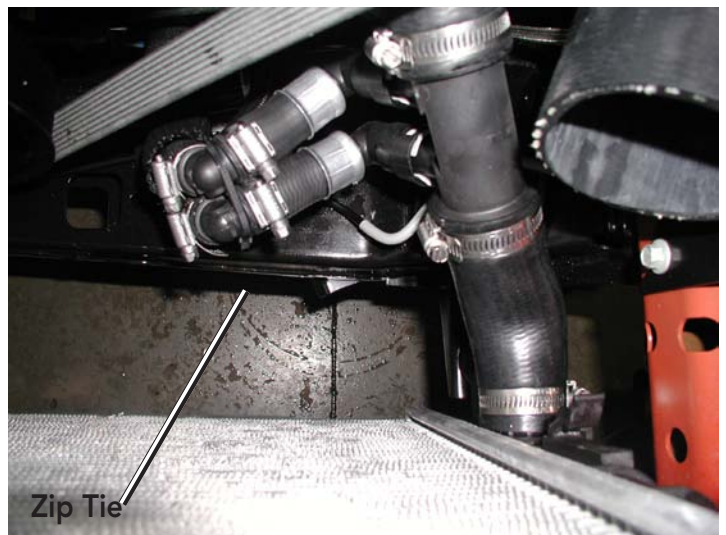
- 15 Install the two sections of hose onto the engine oil cooler tee and loosely secure with (2) #24 hose clamps.
- 16 Slide a #24 hose clamp onto each end of the lower radiator hose assembly and install. Rotate the tee down and pointing towards the center of the vehicle.
- 17 Cut the factory engine oil cooler lines 1-1/2" back from metal sleeve. Install a supplied 90° 5/8" plastic barb fitting into each and loosely secure with #10 hose clamps.
- 18 Reconnect the lines to the lower radiator hose tee.
- 19 Position the engine oil cooler lines as shown and tighten all hose clamps on the radiator hose and the oil cooler lines. Zip tie the two lines together as shown to prevent interference with tubing and belt to be installed later.
- 20 Fill the coolant reservoir with the proper coolant mix or recovered coolant, if saved during preparation. Place the factory cap onto the coolant reservoir. Additional coolant may need to be added after initial startup, once the vehicle has been run through a heat cycle.



Assemble Lower Radiator Hose



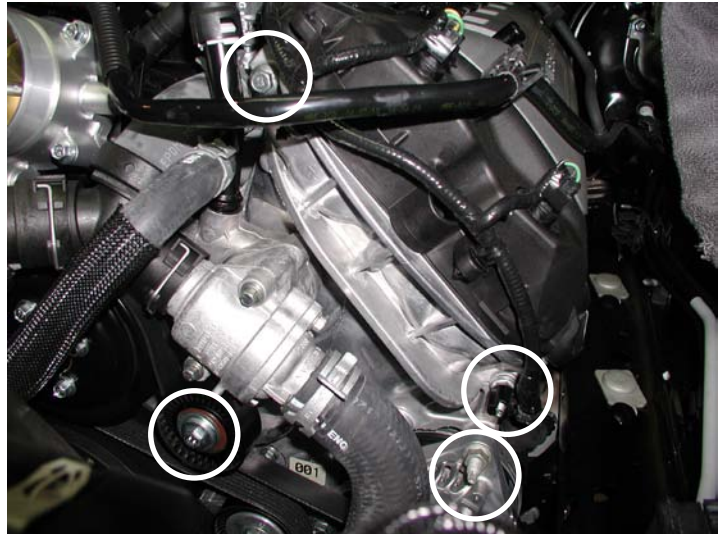
Lower Radiator Hose Installed
(viewed from below)



Modified O/C Lines Installed
(viewed from above)

PROCHARGER BRACKET AND HEAD UNIT

- 1 Remove the (4) pieces of hardware labeled in the image at right. The alternator nut (GT) or stud (Boss 302 or 2013-14 with Track Pack) can be removed by using a 15mm socket, the remaining (3) bolts use a 13mm socket (the lower right bolt will have a plastic cap that needs to be pulled off before accessing the bolt).



Remove Factory Hardware

✓ **Tech Tip:** The upper coolant tube may need to be bent slightly to remove the upper bolt.

✓ **Tech Tip:** The optional cog bracket utilizes the same mounting locations. Refer to the following instructions for bracket mounting, and proceed to the end of this section for details about tensioner adjustment.

- 2 **2011-2012 GT only:** Thread and tighten the supplied 3.625" long hex spacer onto the stud you removed the nut from in the previous step. Use a 3/4" wrench to tighten the spacer.

ProCharger Bracket and Head Unit

- 3 Install the oil drain line onto the supercharger (if included). Verify the plug at the end of the drain line is tight.

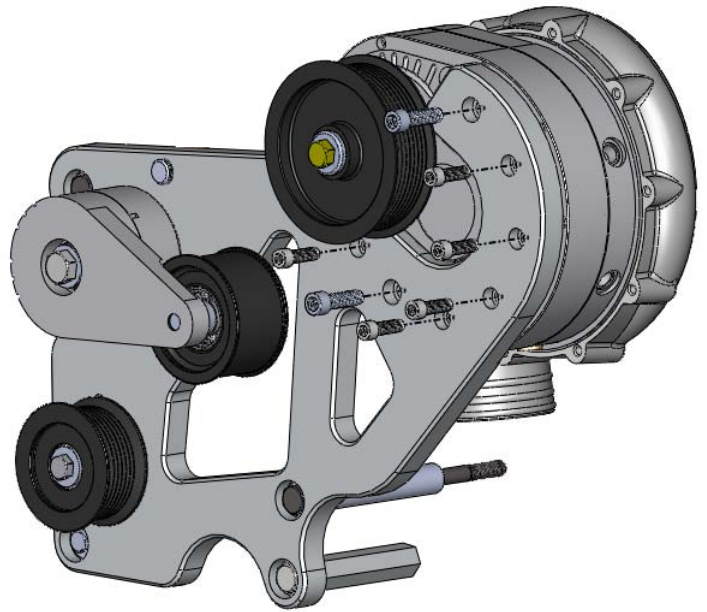
✓ **Tech Tip:** Oil drain lines are available for P1SC-1 and D1SC superchargers only.

- 4 Mount the ProCharger onto the main bracket using the provided (4) 5/16-18 x 1" and (2) 3/8-16 x 1.25" SHCS's. Tighten the fasteners.

✓ **Tech Tip:** The rubber coupler that will attach to the blower discharge may be easier to adjust and tighten before securing the head unit to the bracket assembly (use a 90° elbow, short end mounted to the discharge). Reference the intercooler installation in the next section for proper component usage and orientation of the coupler (see image at right).

- 5 Mount the main bracket loosely into the vehicle by loosely tightening the M10-1.25 x 25mm bolt and washer into the hex spacer (GT) or M10-1.50 x 140mm bolt and washer through the bracket and 3.625" round spacer into the alternator mounting hole where the stud was removed earlier (Boss 302).

- 6 Slide the 1.745" idler shaft/spacer between the bracket and the stock idler pulley. Secure with the supplied M8-1.25 x 80mm bolt and washer.

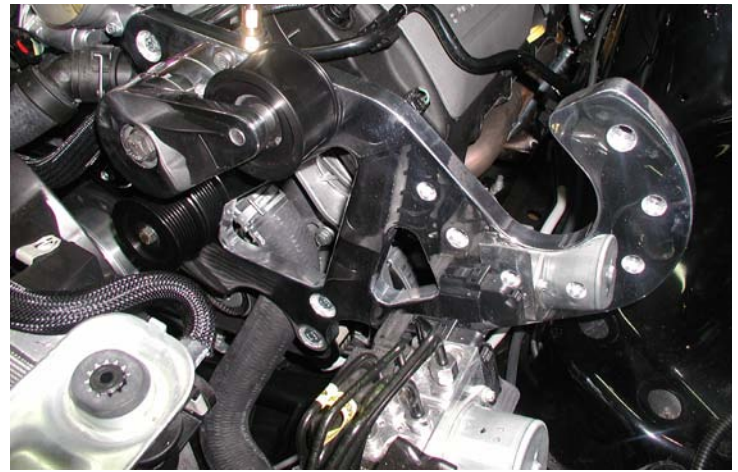


Procharger Head Unit Installation

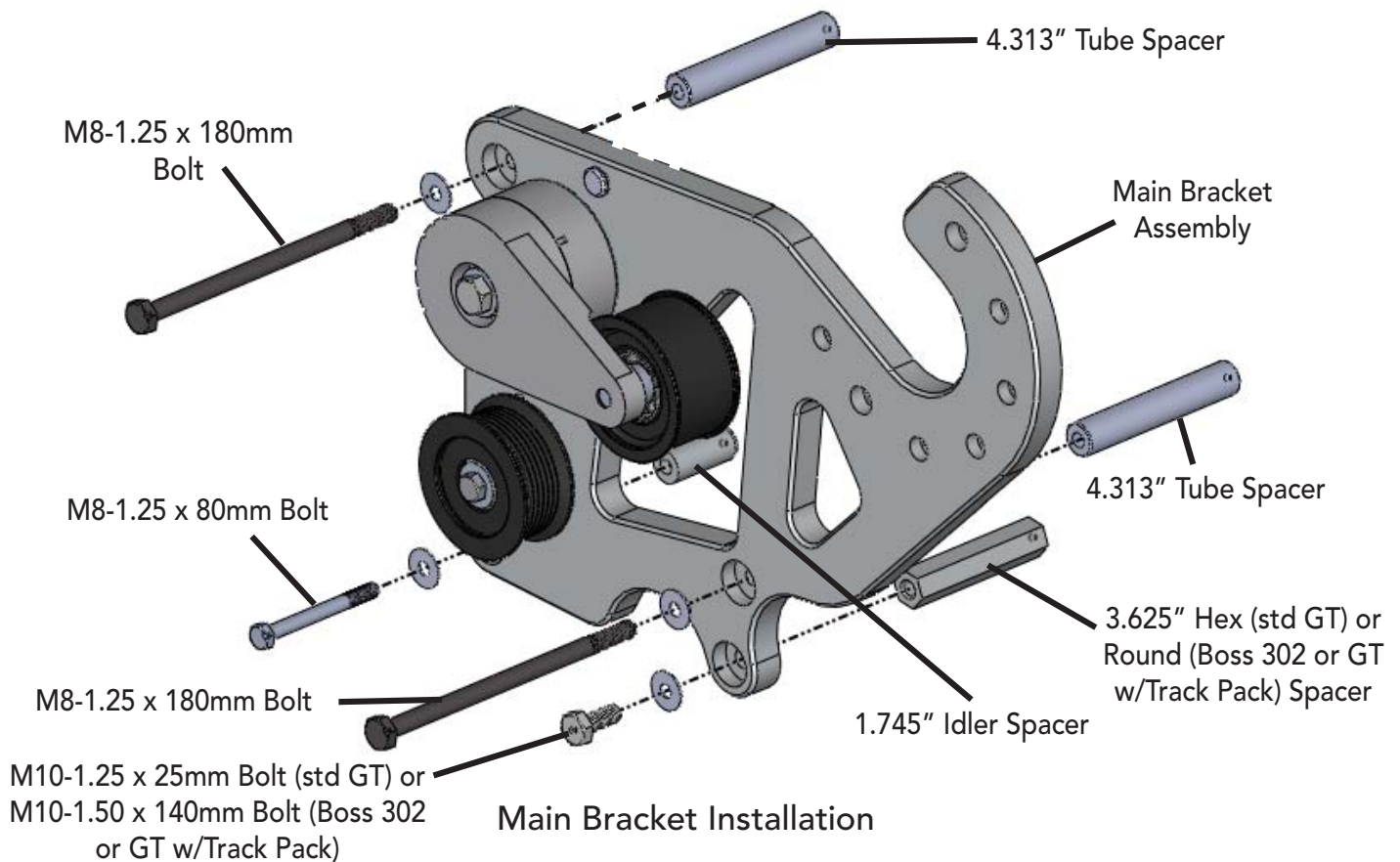


Rubber Coupler Installed Onto Head Unit

- 7 Slide the (2) 4.313" spacers between the bracket and engine front cover. Using the supplied M8-1.25 x 180mm bolts and washers, tighten the assembly. Tighten the fasteners from the previous (2) steps at this time.
- 8 Remove the oil fill reminder tag from the head unit. Fill the supercharger with (1) 6 ounce bottle of the supplied blower oil. Route the oil drain line to the front of the vehicle under the driver's side headlight, and secure it with zip ties.



Main Bracket Installed
(Blower Removed for Clarity)



ProCharger Bracket and Head Unit



Tech Tip: Proceed to step 10 for installations utilizing the optional cog bracket.

9

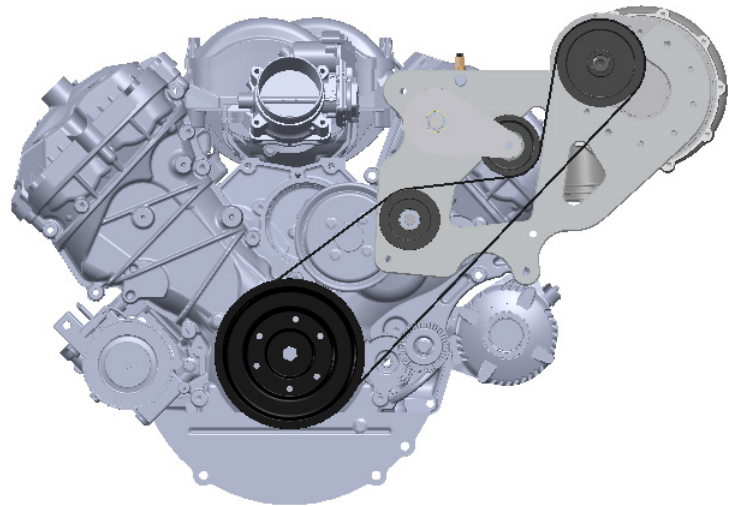
Using a 1/2" breaker bar rotate the tensioner counter-clockwise and install the supplied supercharger belt, release the tensioner. Refer to the supercharger belt schematic for proper routing.



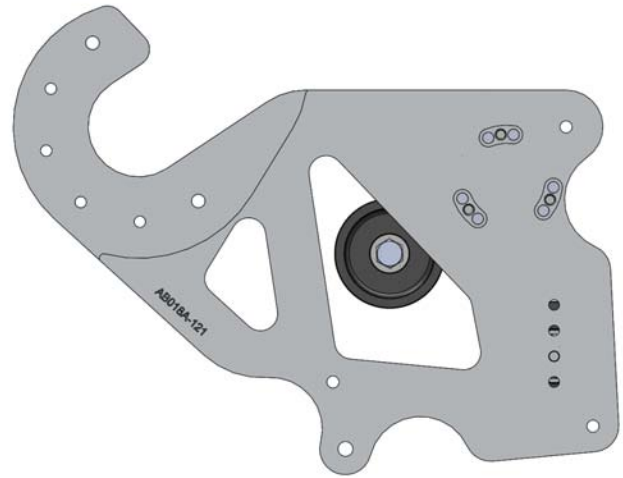
Tech Tip: If the belt is too loose/tight to install, remove the idler pulley. Mount the belt onto the crank, blower, and tensioner pulleys. Slide the idler pulley under the belt and into place. There are (4) locations for the idler pulley to mount to. The tensioner has (2) alternate locations also for further belt adjustment. Use Loctite 272 on the bolts before tightening.



Tech Tip: Before proceeding on Boss 302 or GT w/Track Pack, verify modified engine oil cooler lines are clear of belts and pulleys.



Supercharger Belt Schematic



Tensioner And Idler Locations

(OPTIONAL COG BRACKET BELT INSTALLATION)

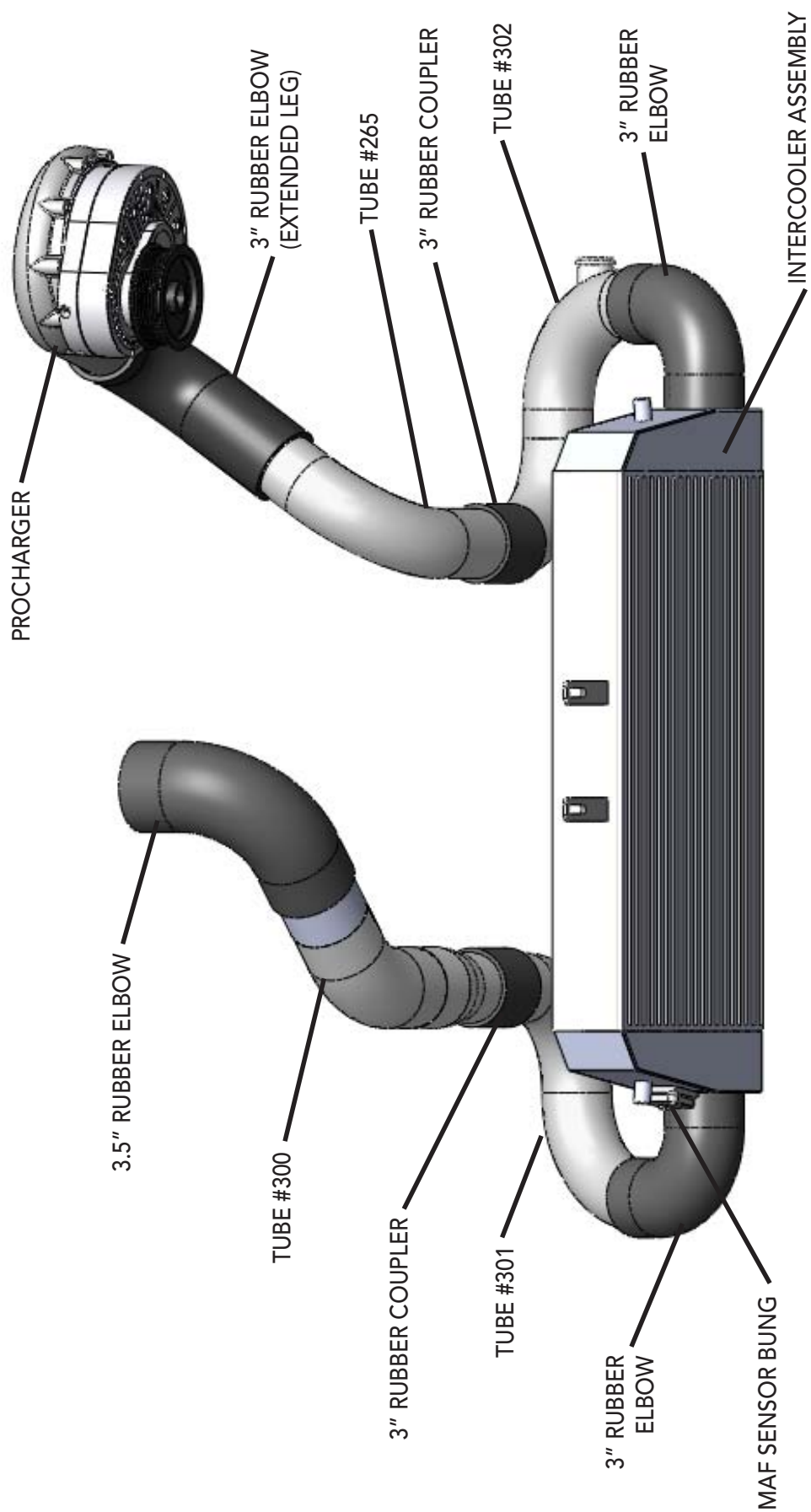
- 10** If not already installed, mount the supplied cog pulley by centering it onto the hub located on the input shaft of the supercharger. Using the supplied (6X) 5/16-24 x 1.25 hex bolts and washers, tighten the pulley onto the hub. Use Loctite 272 on the threads before installation.
- 11** Install the supplied supercharger cog belt over the crank pulley, supercharger pulley, and under both the idler and tensioner pulleys.



Cog Belt Installed

- ✓ **Tech Tip:** If the belt is too loose/tight to install, remove the idler pulley using a 3/4" socket. Mount the belt onto the crank, blower, and tensioner pulleys. Slide the idler pulley over the cog belt and into place. There are (4) locations for the idler pulley to mount to. Use Loctite 272 on the bolt before tightening.
- 11** Using a 3/4" socket, loosen the tensioner pulley from the bracket. Using a 1/4" allen wrench, rotate the tensioner screw (located on the upper back side of the bracket) counter clockwise until the desired tension is achieved. Tighten the tensioner pulley bolt to secure it to the bracket.
- ✓ **Tech Tip:** Rotate the belt over a few times to ensure proper tension is achieved. Repeat step 11 if the tension spec is not correct.

INTERCOOLER SYSTEM SCHEMATIC



INTERCOOLER

INTERCOOLER

- 1 Remove the mass airflow sensor (MAF) from the factory airbox assembly using a T20 torx bit. Slide the sensor out of the assembly and slide it into the supplied intercooler. Tighten the sensor to the intercooler using the supplied M4-.7 x 12mm bolts. Make sure the arrow on the MAF points down and towards the passenger's side of the vehicle.



MAF Sensor Installed

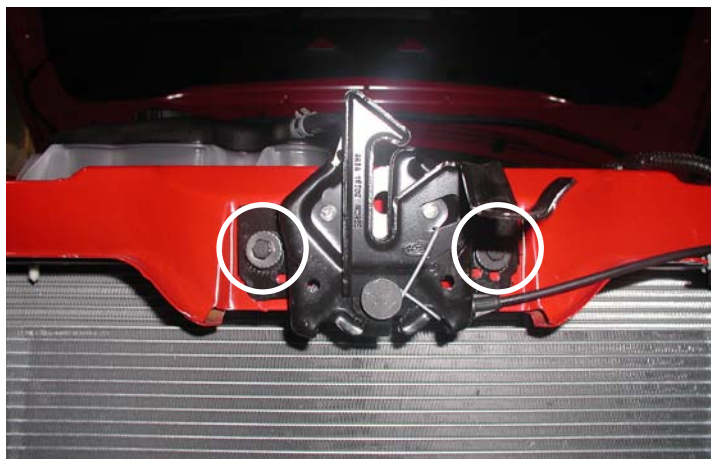
- 2 Install the provided sheetmetal bracket to the upper tabs located on the top of the intercooler using the supplied 3/8-16 x 1" hex bolts, washers, and lock nuts. Do not tighten at this point.



Upper Intercooler Bracket Installed

- ✓ **Tech Tip:** Be sure to mark the position of the hood latch bracket before removal to insure proper reassembly.

- 3 Remove the (2) fasteners securing the hood latch to the vehicle using a 10mm socket. Swing the latch assembly out of the way.

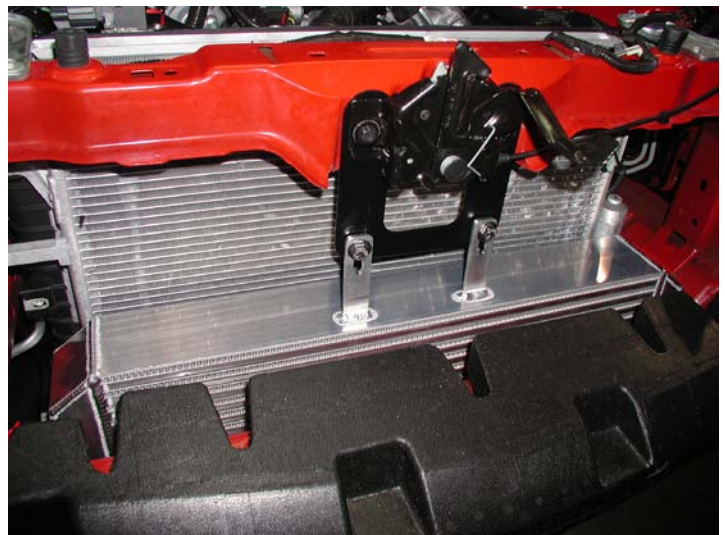


Remove Hood Latch Bolts (2x)

- 4 Mount the assembly to the vehicle by lining up the upper intercooler bracket with the two tapped holes located under the hood latch assembly. Mount but do not tighten the upper bracket fasteners at this time, utilizing the factory hardware.



Tech Tip: Push the intercooler assembly up as high as possible in order to allow for maximum clearance from the fascia. Verify the hood latch assembly is still completely operational. Mounting the intercooler too high can cause interference with the hood latch linkage.



Intercooler Mounted Into Vehicle

- 5 Locate the lower intercooler brackets. Mount the driver's side intercooler bracket to the intercooler using the provided 5/16-18 x 1" bolts, washers, and lock nuts. Place a spacer on the back side of the longest bolt holding the bumper onto the vehicle. Slide the open end of the bracket onto the bolt end, and tighten using the provided M8 washer and lock nut.



Lower Intercooler Bracket Installed
(Driver's Side)

- 6 Repeat the previous step for the passenger's side. Test fit the fascia for clearance and tighten all of the intercooler bracket fasteners.
- 7 Plug the supplied MAF wiring harness extension into the factory plug. Route the harness behind the intercooler and plug the MAF Sensor harness into the sensor at this time.

INTERCOOLER TUBING

- ✓ **Tech Tip:** Refer to the intercooler assembly schematic on page 19.
- ✓ **Tech Tip:** Secure each coupler connection with a #52 hose clamp with the exception of the throttle body tube, which utilizes (2) 3.75" t-bolt clamps. Slide the hose clamps over the couplers, keeping them loose until all of the connections have been made and adjusted. Due to differences in installation, rubber couplers may need additional trimming for proper fitment.

- 1 Install (1) of the 90° 3" elbow couplers onto the discharge of the supercharger if not already done. Mount the short end of the elbow onto the supercharger and route the long end under the main bracket assembly (see image at upper right). There is a cutout in the main bracket for the coupler to route through.
- 2 Install the shorter straight end of the blower discharge tube (tube #303) into the open end of the coupler from the previous step. Slide the longer section of 3" rubber coupler onto the end of this tube.
- 3 Relocate the horn mounting bracket up to clear tubing. Point horns downward.
- 4 Mount the surge tube (tube #302) onto the open end of the rubber coupler from the previous step. Complete the connection to the intercooler using one of the 90° rubber elbows.

Route Coupler Under Bracket



Blower Discharge Coupler Installed



Boss 302 Only Oil Cooler Line Positioning



Surge Tube Installed and Horns Relocated

Intercooler Tubing

- 5 Mount the 3" 90° rubber coupler onto the discharge of the intercooler.
- 6 Mount the double 90° tube (tube #301) onto the open ended rubber coupler from the previous step. Attach the 3" diameter, 3" long rubber coupler to the end of this tube.
- 7 Slide the throttle body tube (tube #300) onto the open end of the rubber coupler from the previous step. Slide the 3.5" rubber 90° coupler onto the end of the tube, and connect it to the throttle body.
- 8 After adjusting all tubes and couplers, tighten all hose clamps and t-bolt clamps.
- 9 Locate the surge system bag. Slide the 1-1/2" rubber 90° coupler onto the open bung on the surge tube. Slide the surge valve onto the open end of the coupler, followed by the provided surge filter. Tighten the connections with the provided #24 hose clamps.



Intercooler Discharge Coupler Installed



Throttle Body Tube installed

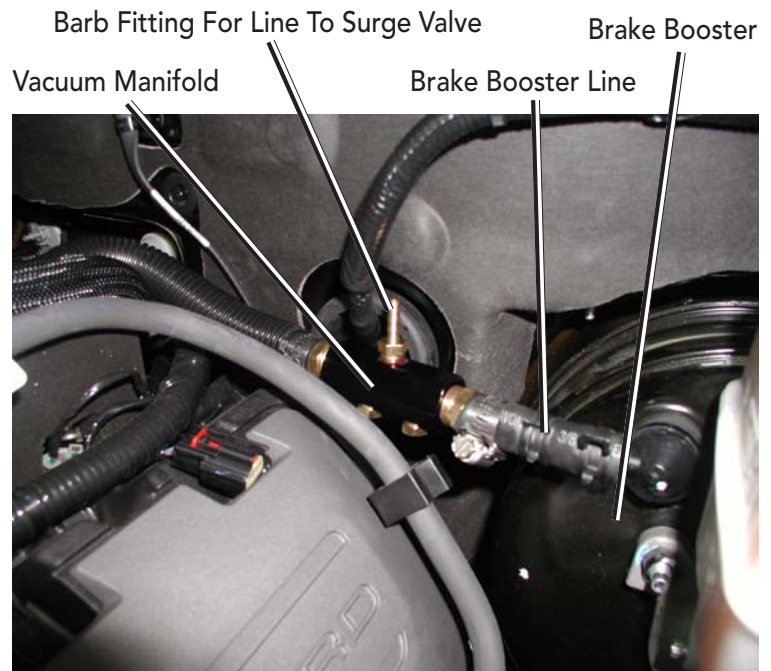


Surge Valve Installed

VACUUM MANIFOLD

- 1 Locate the 3/8" 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 hose cutter, remove a 3-1/2" long section of the hose.

(Manual transmission vehicles only; proceed to the next page for automatic transmission vehicles)



Vacuum Manifold Installed

- 3 Assemble the vacuum manifold using the provided barb fittings and plugs. Install the supplied vacuum manifold and securely clamp in place using the supplied #6 hose clamps, making sure that there are no vacuum leaks at the splice points.
- 4 Attach the supplied 3/16" vacuum hose to one of the 3/16" barb fittings on the installed vacuum manifold, then route and attach to the surge valve vacuum port. Attach a boost gauge to the other 3/16" barb fitting. If you are not going to use a boost gauge, remove the 3/16" barb fitting that isn't being used and replace it with the supplied pipe plug.
- 5 Secure all vacuum hoses to their fittings with zip ties.

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 in installing the vacuum manifold to prevent any possible leaks.

(Automatic transmission vehicles only)

- 3** Relocate the factory vacuum tree that was mounted near the factory air intake next to the throttle body. Mount the tree between the open ends from the previous step. Use the supplied #6 hose clamps to secure each line. Verify the correct orientation before proceeding. The end of the tree with the factory cap should be on the passenger's side of the tree. Mount the supplied 3/8" vacuum cap to the open end of the tree. See image at upper right.
- 4** Assemble the vacuum manifold using the provided barb fittings and plugs. Install the supplied vacuum manifold between the open vacuum lines near the throttle body and securely clamp in place using the supplied #6 hose clamps, making sure that there are no vacuum leaks at the splice points.
- 5** Attach the supplied 3/16" vacuum hose to one of the 3/16" barb fittings on the installed vacuum manifold, then route and attach to the surge valve vacuum port. Attach a boost gauge to the other 3/16" barb fitting. If you are not going to use a boost gauge, remove the 3/16" barb fitting that isn't being used and replace with the supplied pipe plug.
- 6** Secure all vacuum hoses to their fittings with zip ties.



Vacuum Line Removal (Automatic Only)



Vacuum Manifold Installed



Vacuum Manifold Installed
(Passenger's Side View)

PCV AND AIR FILTER

1 Locate the PCV bag. Slide a 5/8" rubber cap onto each open bung located on the intake manifold and the passenger's side valve cover. Secure the cap on the intake manifold with the a #10 hose clamp.

2 Locate the 5/8" hose. Trim the 90° end to properly fit over the open bung on the driver's side valve cover. The open end of the hose will be connected to the air filter in the following steps.

3 Locate the air inlet bag. Slide the provided air filter onto the end of the rotomolded intake tube. Slide the section of 3-3/4" rubber coupler onto the other end of the intake tube (see image at right for orientation).

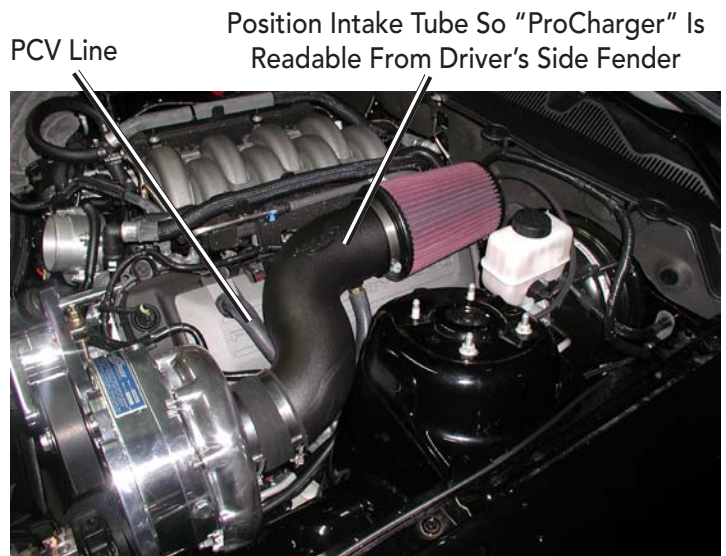
4 Trim the 5/8" PCV hose from step #2 to properly fit onto the brass bung located on the intake tube. Slide the intake tube into place, sliding the open end of the 3-3/4" coupler onto the inlet of the supercharger. Adjust the PCV line so there are no kinks.



Rubber Caps Installed



Air Intake Installed With Upper Strut Bar



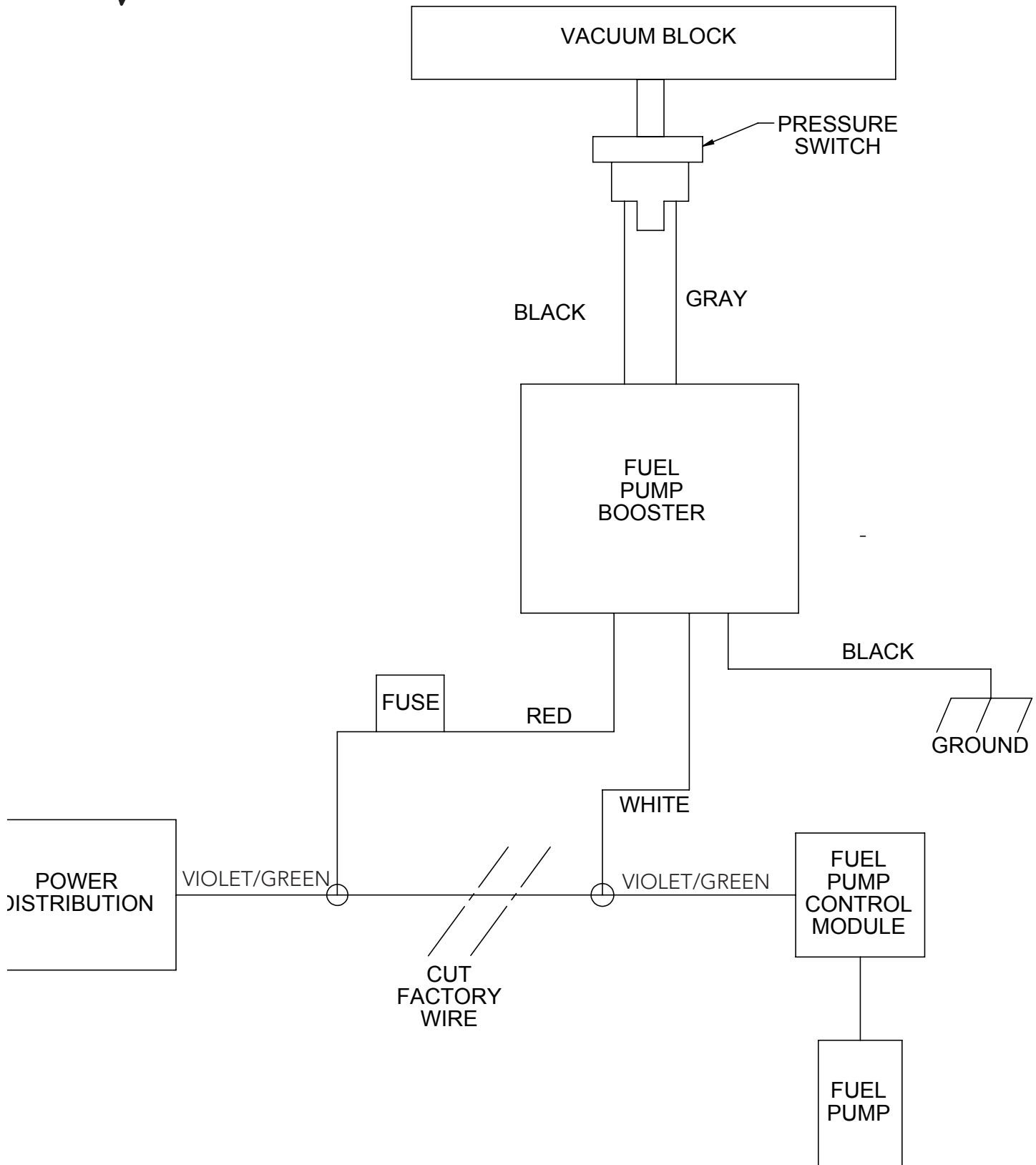
Air Intake System Installed

✓ **Tech Tip:** For vehicles with upper strut tower bars, be sure the intake tube is rotated down all the way and the filter is extended out on the rotomolded tube as far as possible.

5 Secure the intake tube connections with the supplied #64 hose clamps.

FUEL PUMP BOOSTER

✓ **Note:** Fuel pump booster installations are for Boss models only.

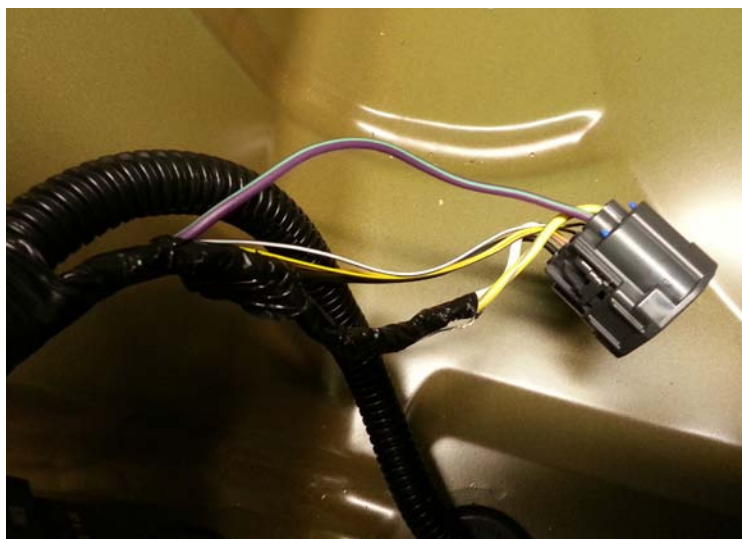


Warning: This fuel pump booster has been configured to work properly with your application. Changing the settings could result in fuel pump or engine damage.

- 1 Remove carpet and spare tire from trunk.
- 2 Remove the back panel by removing the two plastic push clips and two plastic nuts. Pull upward on the panel to release the clips underneath. Unplug the connector attached to the light.
- 3 Locate the fuel pump driver module (FPDM) in the spare tire well. Disconnect the connector on the module.
- 4 Pull back the electrical tape from the wiring going to the connector to expose the purple wire with green tracer. Cut the wire 4.5" back from the connector and strip both cut ends.
- 5 Connect the end of the purple/green wire coming from the connector to the white wire on the pump booster.
- 6 Connect the end of the purple/green wire coming from the wire loom to the red wire on the pump booster.
- 7 Connect black wire on the pump booster to a good ground.



Fuel Pump Driver Module (FPDM)



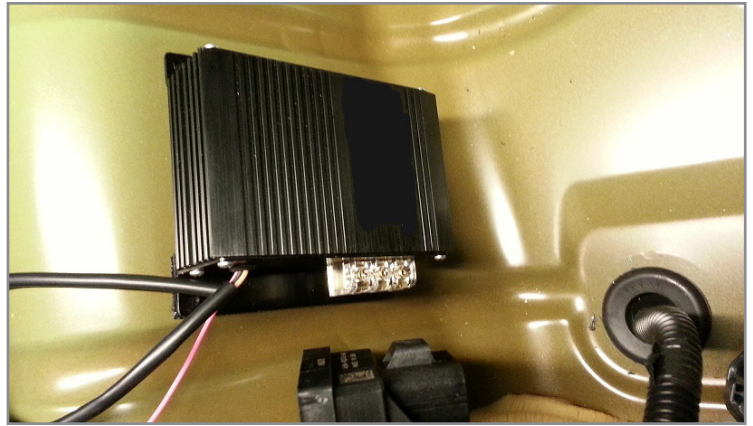
Fuel Pump Wire Exposed



Ground Location

Fuel Pump Booster

- 8 Mount the fuel pump booster next to the FPDM using the supplied screws or supplied velcro strips.
- 9 Connect the supplied pressure switch to one of the plugged ports on the vacuum manifold.
- 10 In the engine compartment, connect the eyelet connectors on the gray and black wires to the terminals on the pressure switch.
- 11 Route the harness containing the gray and black wires through the firewall on the driver's side, behind the kick panel, under the carpet along the driver's seat, underneath the back seat, and into the trunk. Plug the harness into the fuel pump booster. The additional connectors on the harness will not be used.
- 12 Replace the factory fuel pump fuse with the supplied 30 amp fuse.



Fuel Pump Booster Mounted



Pressure Switch and Wires



Installation Complete

FINISHING UP

- 1 Inspect the belts and pulleys for clearance from all wires and hoses. Adjust and secure any hoses or wires that may be caught or abraded by the belts or pulleys. Verify the belt is properly tensioned. Any locations where steel tubes could abrade on the chassis should be cushioned with the supplied self-adhesive rubber strips.
 - 2 Using the factory hardware, re-install the front bumper cover. Plug the fog light and turning signal harnesses back into the proper locations on the front bumper cover. Clip the ambient air temperature sensor back onto the bumper cover as well.
 - 3 Remount the oil service panel and lower plastic trim using the factory hardware.
 - 4 Re-install the wheels at this time if removed.
 - 5 Re-install the upper plastic trim using the factory hardware.
 - 6 Re-install the engine cover by aligning the cover over the engine and pushing downward until all four corners of the cover snap into place.
 - 7 If your vehicle was equipped with an upper strut tower bar, re-install this component at this time using the factory hardware.
 - 8 Reconnect the battery.
- ✓ **Tech Tip:** Due to the size of the Stage 2 intercooler, trimming to the front bumper cover is necessary on all models as well as the fog light mounting tabs on the Boss 302. It is easiest to slide the cover on and measure, trimming small amounts to eliminate excess material being removed.
- ✓ **Tech Tip:** After the vehicle has been through one full heat cycle, check the coolant level and add as necessary.

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/or 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 purchased 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 the oil by removing the drain plug. Clean off the drain plug before re-installing.

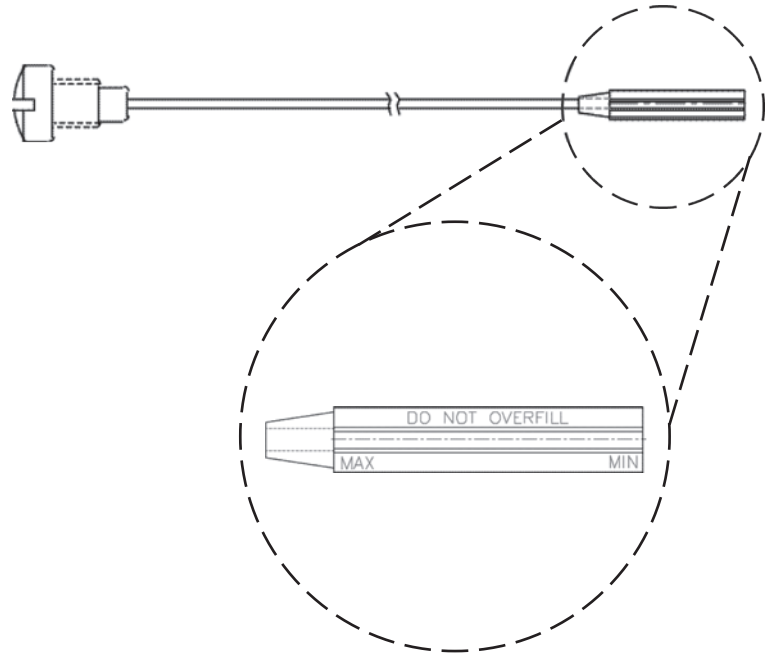
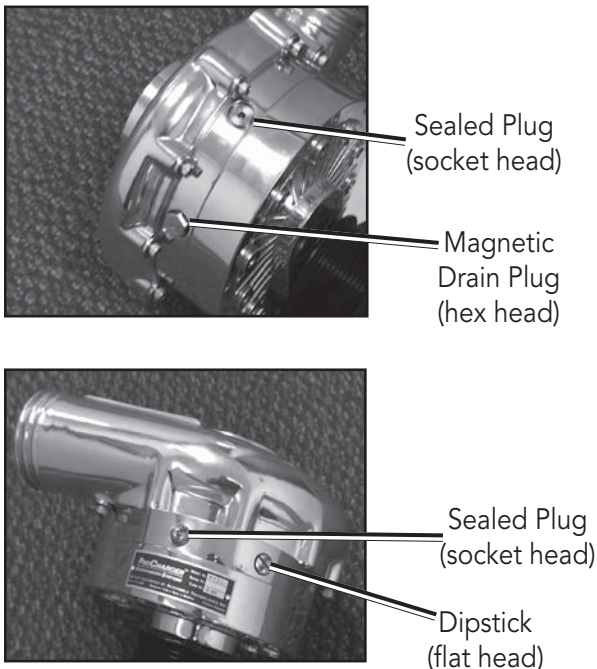
ProCharger Oil Level

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, 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 (913-338-2886) 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

The ProCharger Extended Coverage Program extends the ProCharger warranty coverage for your supercharger 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 of 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.

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 \$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 PMFR1A-002 Rev. H**

