

2018+ Mustang GT/Bullitt/Mach 1 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® 2018+ Mustang GT/Bullitt/Mach 1 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.

Required Tools and Supplies

- $\frac{3}{8}$ " Socket Set (standard & metric)
- Torx set
- Open End Wrench Set (standard & metric)
- $\frac{5}{16}$ " Nut Driver
- Hex Bit Set (allen) (standard & metric)
- Flat Screwdrivers
- Phillips Screwdrivers
- Plier Set
- Ford Engine Coolant (Pink)



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

 **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.*

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TUNING IS REQUIRED WHEN INSTALLING YOUR PROCHARGER SYSTEM. SEE SUPPLEMENTAL TUNING GUIDE FOR INSTRUCTIONS.

GETTING FAMILIAR



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

- (A) Engine Cover
- (B) Factory Air Inlet
- (C) Radiator Cover
- (D) Mass Air Flow (MAF) Sensor

! *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.*

AIR INLET REMOVAL

Models Equipped With a Strut Tower Bar:

- 1 Use an 8mm to remove the screw holding the wiring harness to the passenger's side strut tower.
- 2 Unhook the plastic wiring harness holder from the passenger's side strut tower stud.
- 3 Use a 15mm to remove the (4) nuts holding the strut tower bar. Remove strut tower bar.



Wiring Harness Screw (Passenger's Side)



Strut Tower Bar (Passenger's Side)

GT Models:

- 4 Remove the engine oil fill cap. Use flat screw driver to pop off the (2) round plastic caps on the engine cover. Use a 10mm socket to remove the nut below each cover. Remove cover.
- 5 Unplug the MAF connector by extending the red locking tab and squeezing the connector. Disconnect the harness from the front side of the airbox.



Engine Cover Cap

- 6 Remove the (1) small hose from the air inlet tube by squeezing the retaining clip and pulling back on the hose.
- 7 Disconnect the medium-size PCV hose by rotating the locking clip up and pulling back on the hose.
- 8 Use pliers to compress the clamp holding the large hose to the inlet tube. Disconnect the hose.
- 9 Using a 7mm nut driver, loosen the inlet connection to the throttle body.
- 10 Use a 10mm to remove the screw holding the air box to the body.
- 11 Remove airbox and inlet tube assembly.
- 12 Remove the plastic clip holding the air tube to the driver's side strut tower.
- 13 Locate the tab holding the air tube to the fuel line. Squeeze the tab to disconnect.
- 14 Locate the nut holding the air tube to the firewall, behind the engine on the driver's side. Using a 10mm socket, swivel, and extensions, remove the nut. Pull the air tube out of the driver's side firewall by pulling gently outwards.
- 15 Insert the supplied grommet found in the air inlet bag into the hole in the firewall.



Disconnect Air Inlet Hoses



Airbox Screw

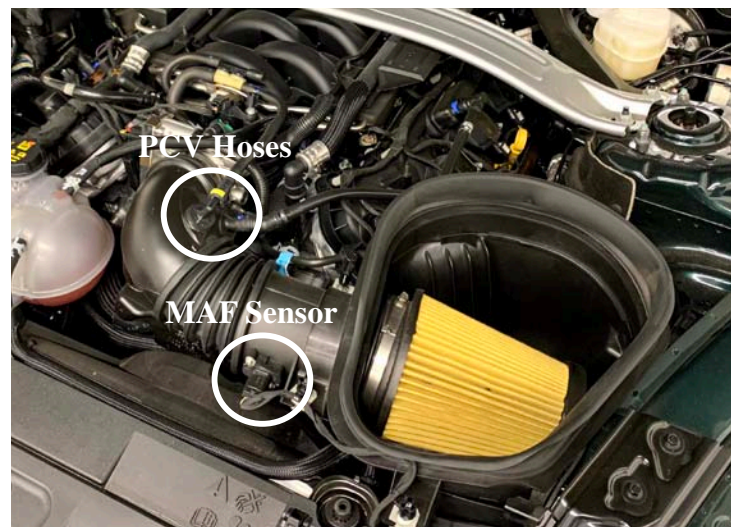


Firewall Nut

Air Inlet Removal

Bullitt / Mach 1 Models:

- 16 Disconnect the (2) PCV hoses from the air intake elbow.
- 17 Unplug the MAF connector by extending the red locking tab and squeezing the connector. Disconnect the harness from the front side of the air inlet tube.



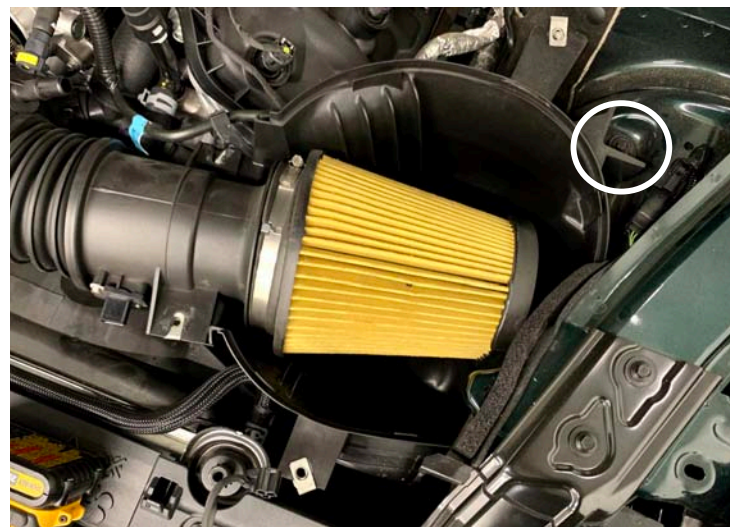
Disconnect Hoses/Plugs

- 18 Using a 10mm remove the (4) bolts securing the rubber hood seal to the factory air box.



Remove Rubber Hood Seal

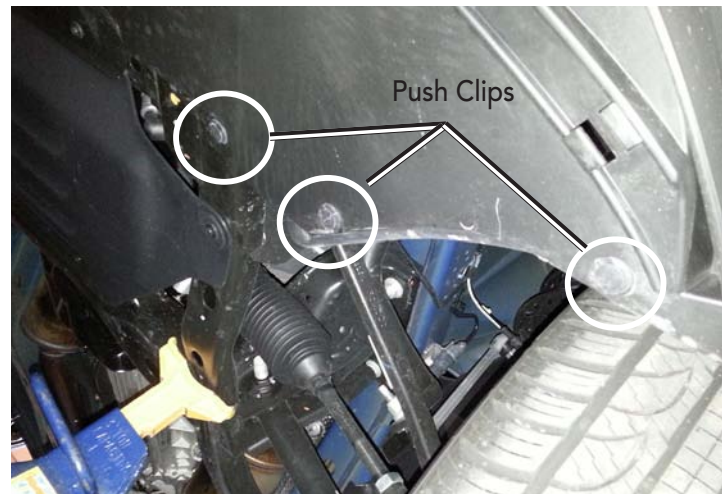
- 19 Using a 10mm remove the (1) bolt securing the air box to inner fender.
- 20 Using a 7mm nut driver, loosen the inlet connection to the throttle body.
- 21 Remove airbox and inlet tube assembly.



Air Box Bolt

FASCIA REMOVAL

- 1 Raise the vehicle just enough to access the undercladding hardware. Secure with jack stands.
- 2 Use a flat screw driver to remove the (8) plastic clips that secure the radiator cover. Remove cover.
- 3 Use a flat screw driver to remove the (6) undercladding plastic push-clips. (3 per side). And also remove the (2) push pins in the corners near the front tires.
- 4 Use a 7mm to remove the 18 screws holding the undercladding. Remove the undercladding.
- 5 Disconnect the fog light and turn signal connectors, (1) connector per side.
- 6 Use a flat screw driver to remove the plastic push-clips holding the wheel liner to the fascia in front of the tires. (3 per side).
- 7 Pull back the wheel liner to gain access to the fascia-to-fender mounting just in front of the tires. Use a 10mm to remove the (2) nuts. Push down on the plastic push clip to remove the plastic stud housing.



Driver's Side Push Clips



Remove Undercladding



Fender Nuts

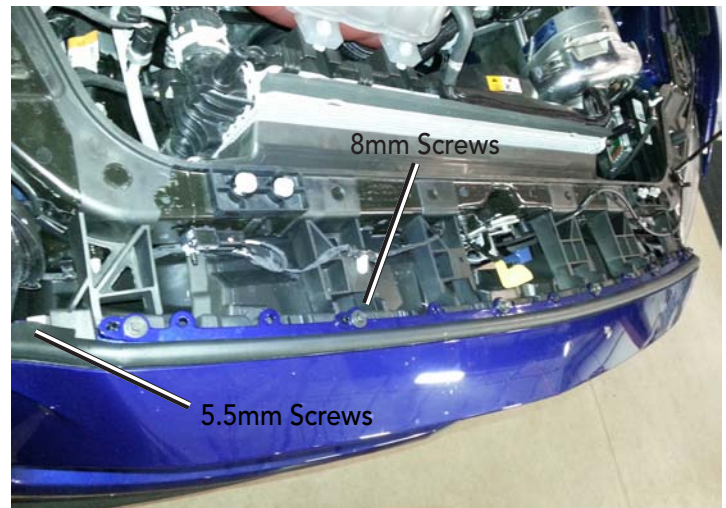
Fascia Removal

- 8 Push down on the plastic push clip to remove the plastic stud housing.



Plastic Stud Housing Removed

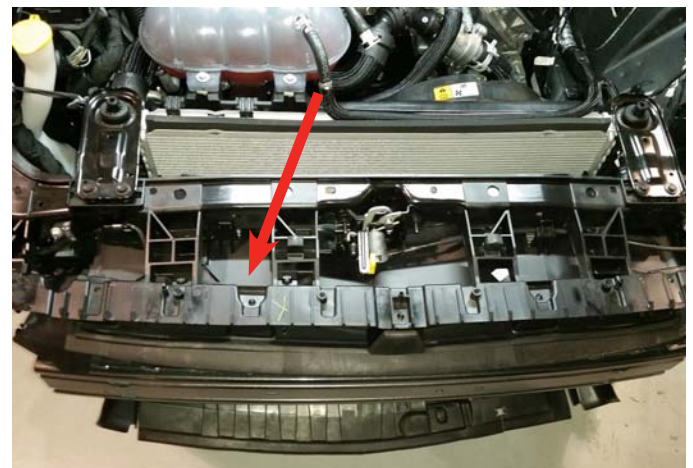
- 9 Use an 8mm to remove the (6) screws at the top of the fascia.
- 10 There are (2) screws (1 on each side) under the weather seal near the headlight. Pull back the weather seal and use a 5.5mm to remove the screws.
- 11 Remove the fascia.



Top Fascia Screws

If not equipped with active shutters:

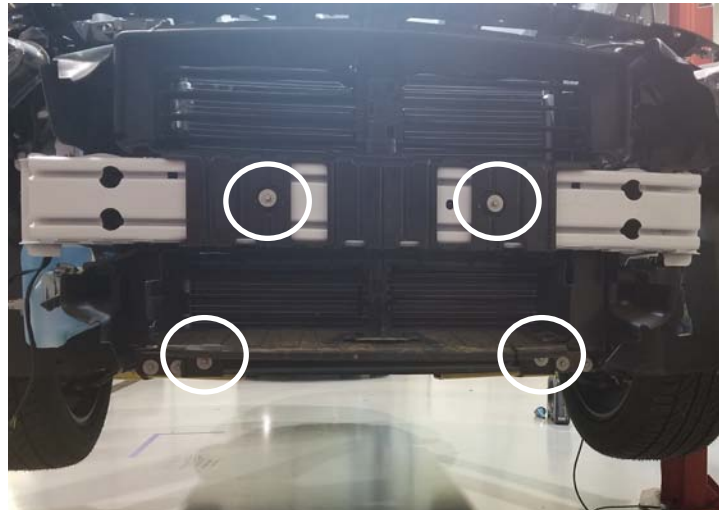
- 12 Remove the radiator air baffle by pushing down on the (6) clips that hold it to the plastic fascia mounting structure.



Remove Air Baffle

If equipped with active shutters:

- 13** Remove the active shutters from the vehicle by removing the (4) 10mm bolts and (2) push pins.
- 14** In order to release it from the vehicle remove the (2) 5.5mm bolts and the linkage from the backside of the crashbar.



Remove Active Shutters

Track Pack Models:

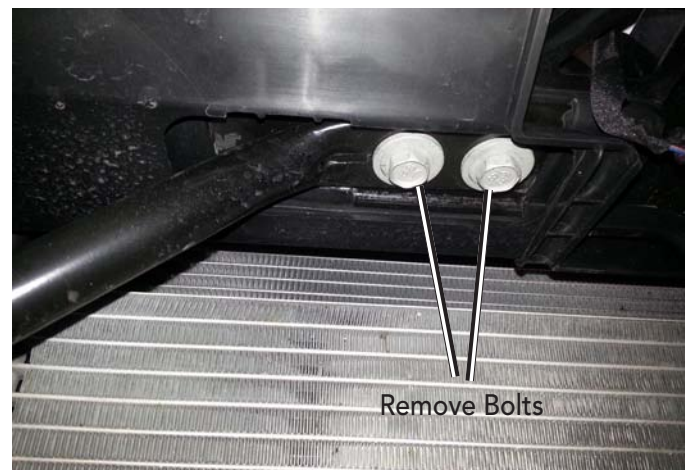
- 15** Use a 13mm to remove the (2) nuts holding the bumper brace to the back side of the bumper (each side).



Bumper Brace Nuts

- 16** Use a 13mm to remove the (2) bolts holding the bumper brace to the radiator core support (each side).

- 17** Remove each side bumper brace.



Radiator Core Support Bolts

All Models:

- 18 *2018 Models:* Disconnect the ambient air temperature sensor and its wiring harness from the front bumper.
- 19 Remove the driver's and passenger's side plastic radiator shrouds by removing the (2) push pins and pulling the shrouds out the front of the vehicle.
2018 Models will be connected by a panel along the bottom.
- 20 If equipped, remove condenser end tank covers.



Passenger's Radiator Shroud

COOLING SYSTEM

- 1 Drain the cooling system by loosening the petcock near the bottom passenger's side of the radiator. Save the coolant as it will be reused to refill the system.
- 2 Use pliers to compress the clamp holding the radiator hose to the thermostat housing neck. Disconnect the hose from the housing.
- 3 Use a 8mm to remove the (2) bolts attaching the thermostat housing neck to the housing body. Remove the lower housing neck.
- 4 If the thermostat comes out of the housing, put it back in place.
- 5 Using the factory hardware, install the new supplied thermostat housing neck.



Thermostat Housing



New Thermostat Housing Neck Installed

- 6 Locate the (2) supplied radiator hose pieces. Attach the hose with multiple bends to the outlet on the radiator. Secure with a #24 hose clamp.
- 7 Place the 1.5" aluminum coupler in the open end of the hose.



Lower Hose and Coupler

Cooling System

- 8 Attach the 90° section of hose from the coupler to the thermostat housing. Trim each end of the hose for proper fitment. Secure with the provided #24 hose clamps.



Upper Hose Section Installed

- 9 Reinstall the coolant hose onto the new thermostat housing neck.

- 10 Use pliers to disconnect the (3) hoses attached to the coolant reservoir.

- 11 Use a 10mm to remove the (2) screws holding the coolant reservoir to the fan shroud. Save these screws as they will be used in a later step. Remove the coolant reservoir.



Factory Coolant Reservoir

CRANK PULLEY

- ✓ **Note:** Sway bar removal (steps 1-4) may not be required on some models.
- ✓ **Tech Tip:** The sway bar will have to be removed when running the 10-rib crank pulley. If it is not removed the sway bar could contact the pulley.
- 1 Use an 18mm to remove the (2) front sway bar to frame bolts on the driver's side.



Driver's Front Sway Bar Bolt Removed

- 2 Use an 18mm to remove the (2) front sway bar to frame bolts on the passenger's side.



Passenger's Sway Bar Bolts Removed

- 3 Use an 18mm wrench and 5/16 socket to remove both sway bar end links from the sway bar.
- 4 Slide the sway bar out of the passenger's side wheel well until there is enough clearance to install the crank pulley.



Sway Bar End Links Removed

Crank Pulley

Automatic Transmission:

- 5 Remove the rubber flywheel access cover from the driver's side of the engine block.
- 6 Hold a 13mm socket and 6 inch extension on one of the converter bolts. This will prevent the motor from turning over when tightening or loosening the crank bolt.



Rubber Flywheel Cover

Manual Transmission:

- 7 Place the car in 6th gear and apply the emergency brake.
- 8 Use an 18mm and a breaker bar to remove the factory crankshaft balancer bolt.

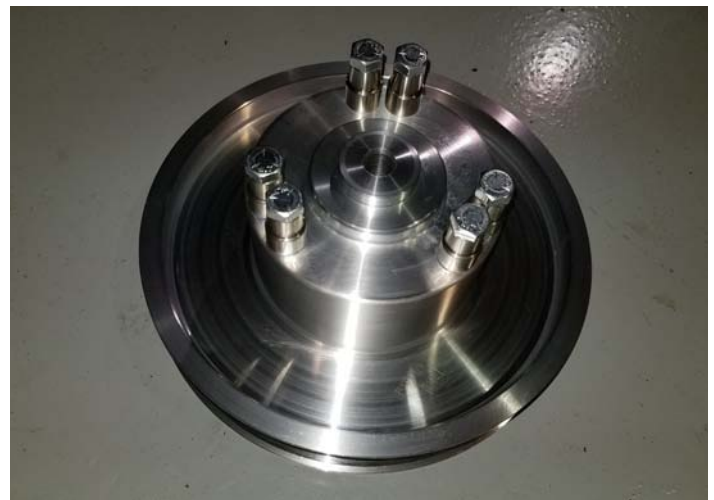
✓ **Tech Tip:** For vehicles utilizing an aftermarket ATI Performance Products balancer (part #918047), refer to the manufacturers installation instructions. The supplied crank pulley mounts to the damper using the (3) supplied 3/8-16 x 2.5" bolts and washers.



Converter Bolts

2020+ Model Years Skip to Step 12

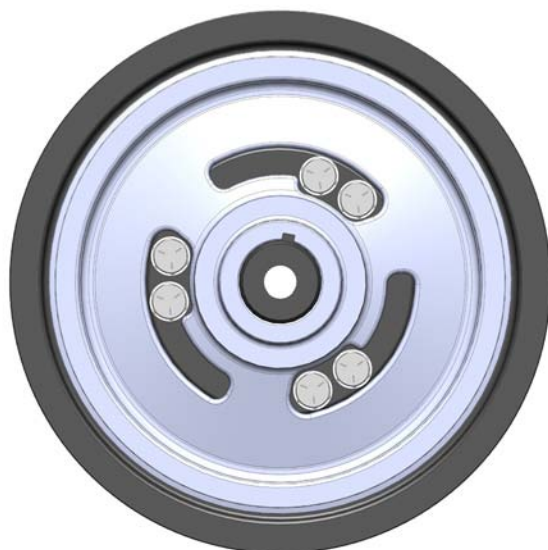
- 9 Insert the supplied crank pulley assembly into the factory balancer.
- 10 Rotate the crank pulley counterclockwise until the pins stop it from rotating.



Back View of Crank Pulley Assembly

✓ **Tech Tip:** The picture to the right shows how the supplied crank pulley locks into the factory damper.

- 11 Insert the supplied M12-1.5 x 120mm balancer bolt and washer.



Detailed View of Crank Pulley Installation

2018-19 Model Years Skip to Step 16

- 12 Attach the cam locks to the back side of the crank pulley using the supplied 5/16 x 1-3/4 bolts and washers. Make note of the 3 pairs of holes that are closer to one another. Each of these close pairs will straddle one of the balancer's webs. Rotate the cam locks to point away from its paired cam lock as shown. Snug the cam lock bolts.



Cam Locks Pointed Away From Each Other

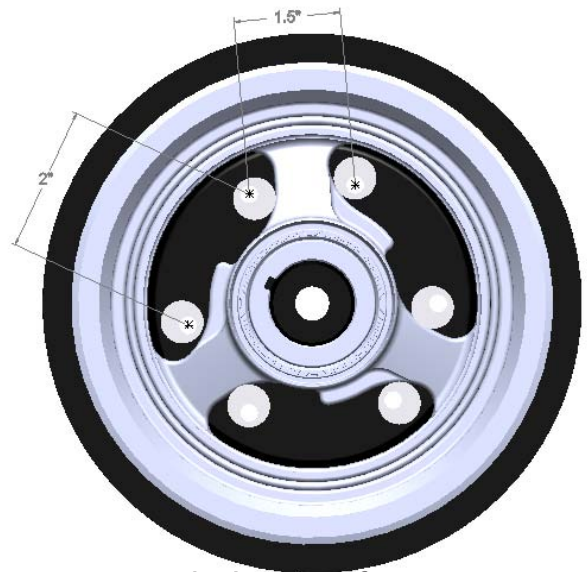
- 13 Mount the supplied crank pulley to the factory balancer. Insert the supplied M12-1.5 x 120mm balancer bolt and washer, but do not tighten. Loosen the cam lock bolts to allow the cam locks to relax.



Back View of Crank Pulley and Cam Locks

Crank Pulley

- 14 Rotate the crank pulley counterclockwise until the cam locks stop it from rotating.
- 15 Lightly tighten the supplied balancer bolt. Tighten the (6) cam lock bolts with a 1/2" socket.



Detailed View of Proper
Cam Lock Orientation

- 16 Tighten the supplied balancer bolt using a 19mm socket, torque to 35 ft-lbs, then tighten the bolt an additional 90°.
- 17 Use an 18mm to reinstall the sway bar bolts and sway bar end links.



Crank Pulley Installed

PROCHARGER BRACKET AND HEAD UNIT

- 1 Remove the (2) timing cover bolts and the alternator nut labeled in the image at right. The alternator nut can be removed by using a 15mm socket, the remaining (2) 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 (Driver's Side)

- 2 Use a 13mm to install the sub bracket with the supplied M8x70mm bolts and washers.



Sub Bracket Installed

- 3 Use a 13mm to remove the uppermost timing cover bolt on the driver's side, behind the coolant tube.

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



Uppermost Timing Cover Bolt

ProCharger Bracket and Head Unit

- 4 Use an 8mm to remove the upper thermostat housing bolt.
- 5 Use a 10mm to remove the (2) screws holding the factory upper radiator brackets (each side). Remove the brackets
- 6 Install the supplied rubber isolators over the top radiator mounting posts. Push the isolator down as far as it can go.
- 7 Install the supplied radiator brackets using the factory hardware. Position the radiator as far forward as possible.



Thermostat Housing Bolt



Radiator Bracket Installed

Plastic Idler Pulley as Pictured:

- 8 Use a 15mm to remove the bolt holding the idler pulley next to the water pump. Do not remove the pulley.
- 9 Locate the supplied idler shaft. Insert the short recessed portion of the shaft into the factory idler pulley.



Plastic Idler Pulley

Metal Idler Pulley as Pictured:

- 10 Use a 15mm to remove the bolt holding the idler pulley next to the water pump (be sure the factory washer is removed also).



New Idler Shaft Installed

- 11 Using a 15mm release the factory tensioner on the 6 rib belt. Flip the metal pulley backwards.
- 12 Locate the supplied idler shaft. Insert the short recessed portion of the shaft into the factory idler pulley.

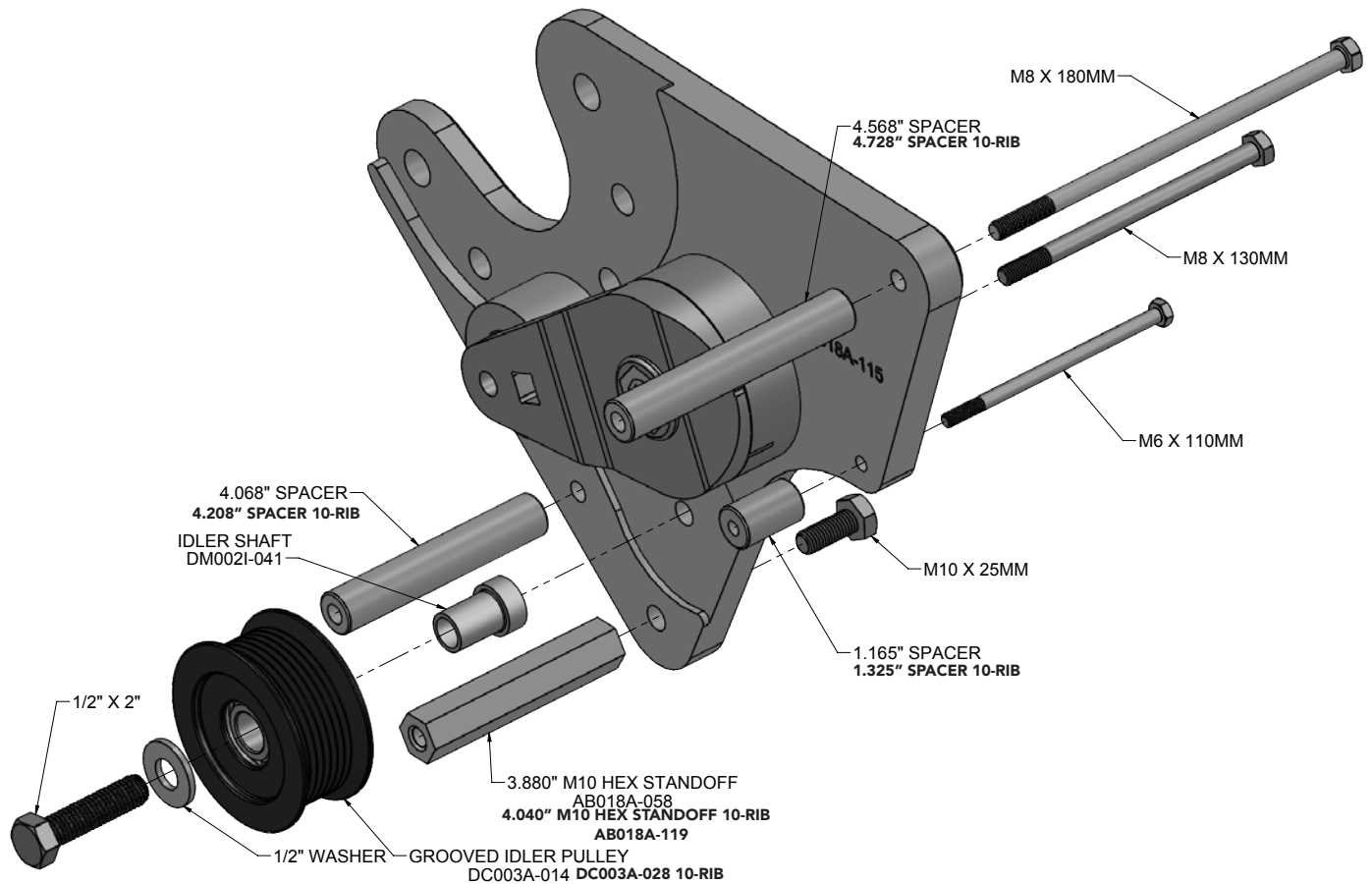


New Idler Shaft Installed

- 13 Slide the supplied idler pulley over the longer recessed portion of the shaft and secure with the supplied M8x70mm bolt and washer.

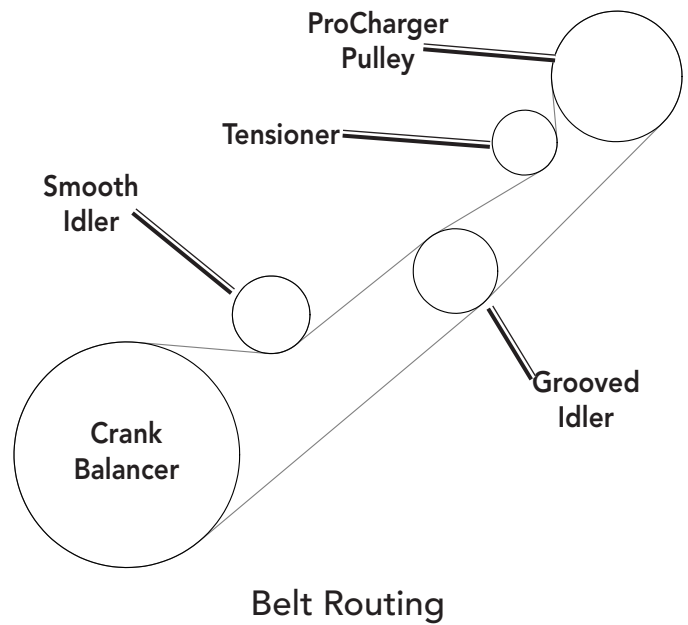


Smooth Idler Pulley



- 14 Install the hex standoff onto the alternator stud. Hold the bracket assembly in place in front of the motor.
- 15 Insert the M10x25mm bolt and washer through the bracket and into the hex standoff.
- 16 Place the 1.165" (1.325" 10-rib) spacer between the bracket and the thermostat housing. Fasten with the M6x110mm bolt.
- 17 Place the 4.568" (4.728" 10-rib) spacer between the bracket and the upper timing cover bolt hole near the coolant tube. Fasten with the M8x180mm bolt.
- 18 Place the 4.068" (4.208" 10-rib) spacer between the bracket and the sub bracket. Fasten with the M8x130mm bolt.
- 19 Install the oil drain line onto the supercharger. Verify the plug at the end of the drain line is tight.
- 20 Remove the oil fill reminder tag from the head unit. Fill the supercharger with (1) 6 ounce bottle of the supplied blower oil.
- 21 Mount the ProCharger onto the main bracket using the provided (4) 5/16-18 x 5/8" and (2) 3/8-16 x 7/8" SHCS's. Actuate the tensioner using a 1/2" socket on the brass collar to gain access to all of the supercharger bolts.
- 22 Route the oil drain line to the front of the vehicle under the driver's side headlight, and secure it with zip ties.

- 23 Route the belt over the crank pulley and up to the ProCharger pulley as shown.

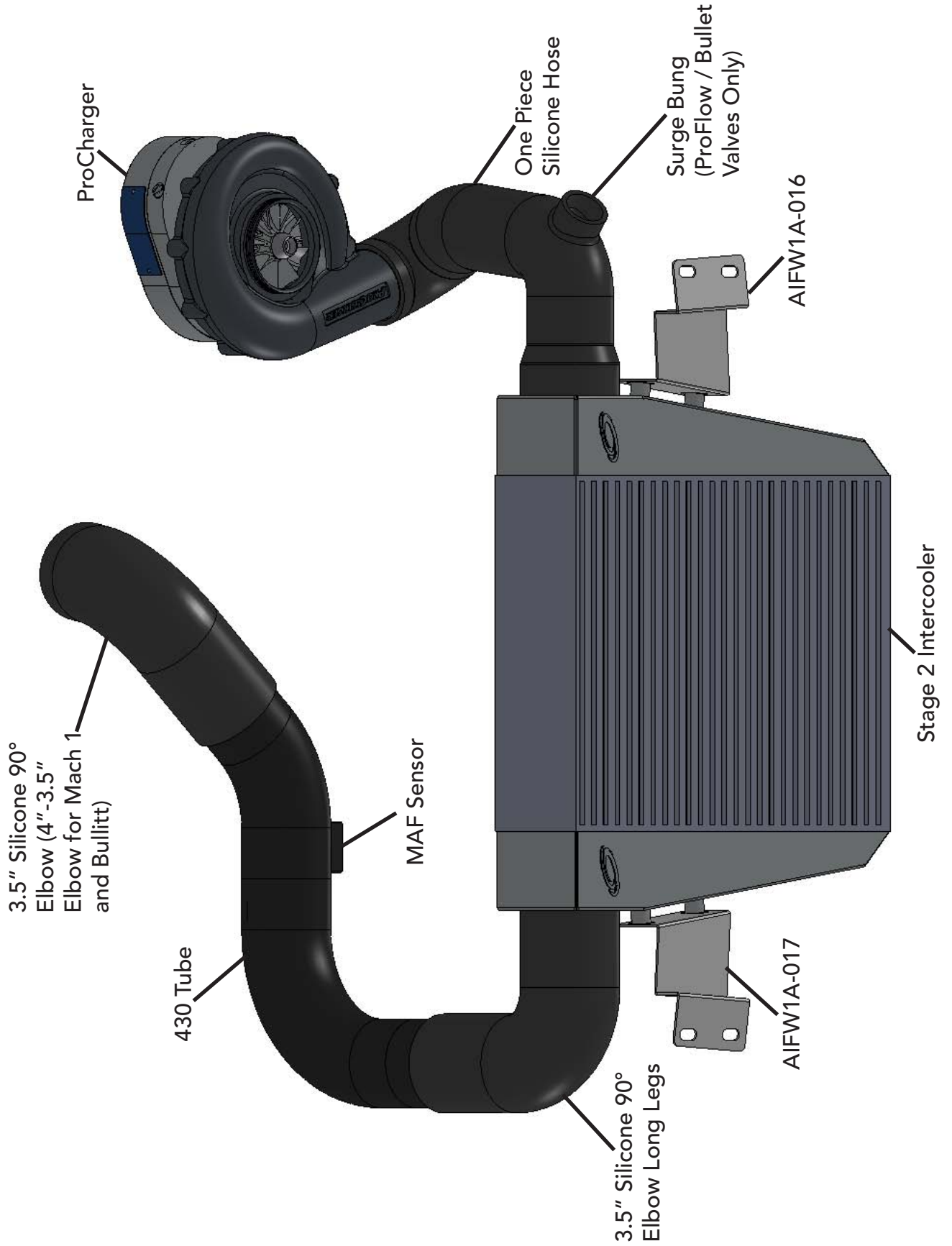


- 24 Insert a 1/2 drive ratchet/extension through the front hole of the main bracket and into the tensioner.
- 25 Rotate the tensioner counter clockwise.
- 26 Wrap the belt around the supercharger pulley.
- 27 Release the tensioner and remove the ratchet/extension.



Rotate Tensioner Counter Clockwise

STAGE 2 INTERCOOLER SCHEMATIC



- 1 Use a 8mm to remove the screw attaching the horns to the body.
- 2 Remove the panel nut and install it in the hole a few inches below at the bottom of the frame.
- 3 Use a 10mm to loosen the (2) nuts on each horn. Mount the horns to the panel nut using the factory bolt. The body of the horns should be faced toward the center of the car. Rotate the horns so they are pointing downward. Tighten the 10mm nuts.

✓ **Tech Tip:** Some models will need the tab on the horn bracket ground down in order to be mounted.

- 4 Disconnect the wiring harness retainers holding the main wiring harness behind the front bumper. Set the harness on top of the bumper to provide clearance for the intercooler.
- 5 *If optioned with a race valve:* Install the 90° pushlock fitting onto the valve.
- 6 *If optioned with a race valve:* Mount the race valve to the plenum on the intercooler using the supplied #10 screws and o-ring. Orient the pushlock fitting so it is towards the back side of the intercooler.



Horn Nut Relocated



Horns Relocated



Race Valve Mounted (Optional)



Wiring Harness Retainers

Intercooler and Tubing

- 7 Use the supplied 3/8" bolts and washers to attach the brackets to the intercooler mounting bosses using a 9/16. Leave these bolts loose.
- 8 Slide the intercooler up between the bumper and the condenser.

✓ **Tech Tip:** It may be necessary to loosen the (8) bumper to frame bolts using a 13mm to gain clearance for the intercooler and brackets.

- 9 The intercooler brackets slide over the end of the bumper to frame bolts on the back side of the bumper. Thread the supplied M8 nuts with washers onto the bumper bolts with a 13mm. (Both sides)

✓ **Tech Tip:** Leave the intercooler bracket hardware loose until all hardware has been installed and the intercooler has been adjusted. Adjust the intercooler as high and as far forward as possible before tightening.

- 10 Use a T15 torx to remove the (2) screws retaining the factory MAF sensor to the factory inlet tube.



Intercooler Mounted



Driver's Side Intercooler Bracket



MAF in Factory Air Inlet

- 11** Insert the MAF sensor into tube #430. The mounting holes are offset so the sensor can only be installed in one direction. Secure with the supplied M4 screws using a 7mm socket.



MAF Installed Into Tube #430

For Bullet And Proflow Valves Only, Race valve Equipped Cars Skip this Step.

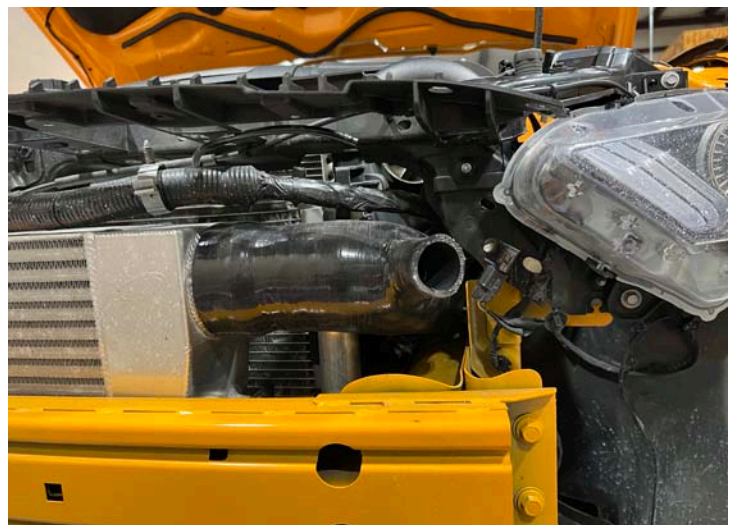
- 12** Install the 1.5" connector tube (found in the surge valve bag) into the bung on the one piece silicone hose. Secure with a #24 hose clamp.



1.5" Connector Tube Installed

- 13** Slide the large end of the one piece silicone hose over the inlet of the intercooler and pull the other end up onto the inlet of the supercharger.

- 14** Secure the supercharger connection with a 3.38" T-bolt clamp and the intercooler connection with a 3.75" T-bolt clamp.



One Piece Silicone Hose Installed

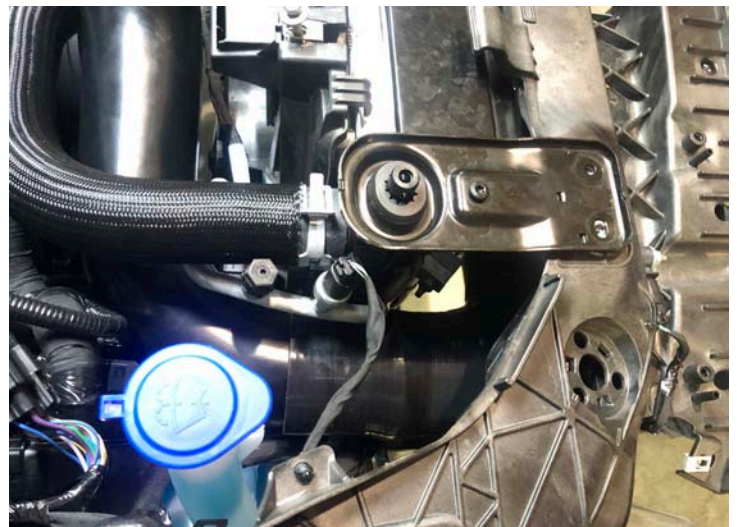
Intercooler and Tubing

- 15 Insert the short leg of the 3.5" 90° silicone elbow onto the passenger's side intercooler outlet. Secure with a #56 hose clamp.



3.5" 90° Silicone Elbow Installed

- 16 Insert the 90° leg of tube #430 into the open end of the 3.5" 90° rubber coupler. Secure with a #56 hose clamp.



Tube #430 Installed

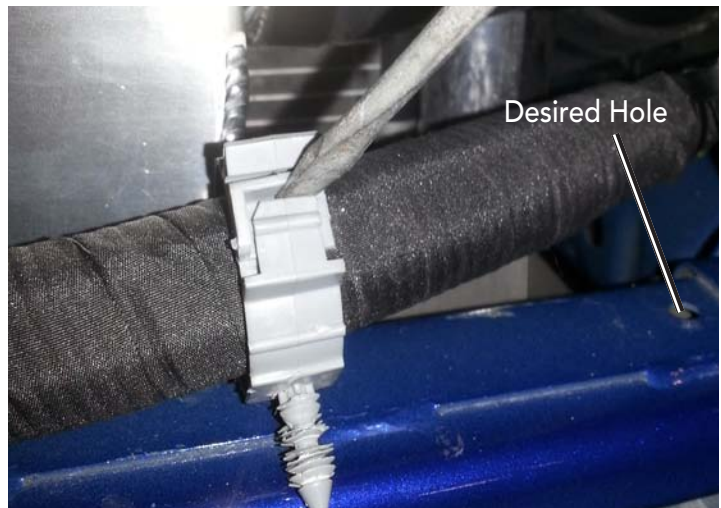
- 17 Connect tube #430 to the throttle body using the 3.5" 90° silicone elbow. Secure with 3.75" T-bolt clamps

✓ **Note: Bullitt / Mach 1 Models:** Use the 4"-3.5" 90° silicone elbow to complete the connection to the throttle body. Trim the 4" side in order to fit properly.



Throttle Body Elbow Installed

- 18 Use a flat screwdriver to unclip the driver's side wiring harness retainer. Slide the retainer down to line up with the hole on the top of the bumper.
- 19 Use a flat screwdriver to unclip the center wiring harness retainer. Remove the retainer. It will not be reused.



Unclip the Driver's Side Harness Retainer

- 20 Insert the passenger's side wiring harness retainer into the existing hole on the top of the bumper.



Wiring Harness Relocated

✓ **Note:** Some factory bumpers do not have available holes. If this is the case, remove the harness retainers and let the wiring harness sit on top of the bumper. No further retaining is necessary.

- 21 Use the supplied MAF extension harness to connect the factory MAF harness to the MAF sensor.

SURGE SYSTEM

- 1 Unwrap the foam covering the factory vacuum tree.
- 2 The port on the lower passenger's side has a line that previously ran to the factory air inlet tube. Remove this line from the vacuum tree.



Factory Vacuum Tree

- 3 Assemble the vacuum manifold using the provided barb fittings and plugs as shown.

✓ **Tech Tip:** If installing a boost gauge, replace one of the 1/8" plugs with the additional provided barb fitting. Route a vacuum line from the barb to the boost gauge.



Vacuum Manifold Assembled

✓ **Note:** For the Race Valve option, the supplied fittings are push-lock style instead of hose barb.

- 4 Attach the supplied 3/8" vacuum hose to the open port on the factory vacuum tree. Cut the hose to proper length and install the vacuum manifold onto the end of the hose. Secure with #6 hose clamps.



Vacuum Manifold Installed

Proflow / Bullet Surge Valve Only

For Race Valve Option Proceed to Step 9

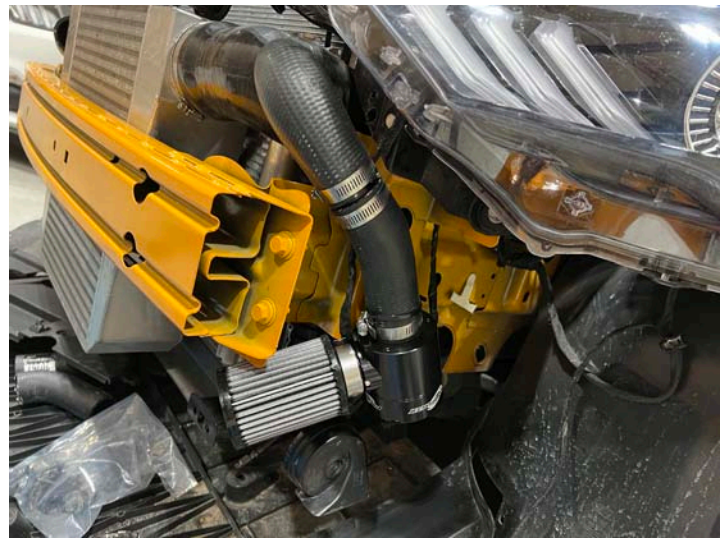
- 5 Install the 90° end of the 1.5" 90° rubber hose over the bung on the one piece silicone hose. Loosely secure with a #24 hose clamp.
- 6 Insert a 1.5" connector tube into the end of the 90° rubber hose, followed by the remaining section of rubber hose. Rotate the hose as shown to the right and loosely secure with #24 hose clamps.
- 7 Insert the surge valve into the open end of the 1.5" hose. Loosely Secure with #24 hose clamps.
- 8 Position the hose and the surge valve and secure the hose clamps at this time. Use the included zip-ties to secure the valve and hose to the radiator support.

ProFlow / Closed Bullet Valve's Only, Open Bullet Skip This Step.

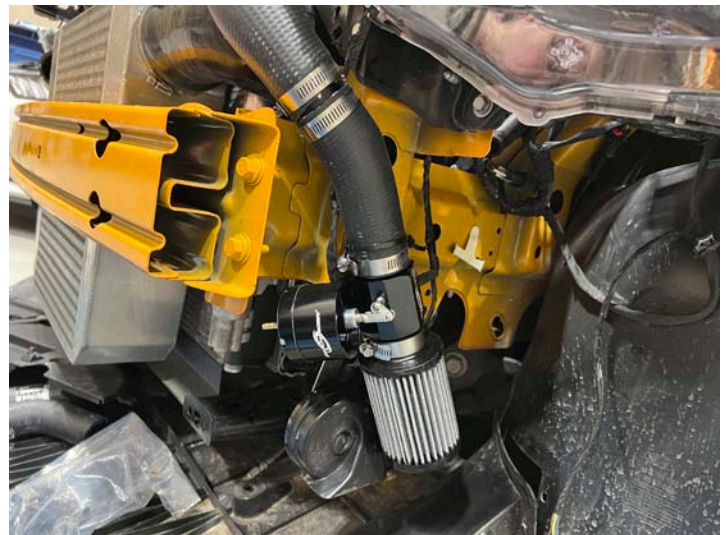
- 9 Install the filter on the open end of the surge valve. Secure with a #24 hose clamp.

✓ **Tech Tip:** Ensure the ProFlow surge valve's actuator linkage and vacuum barb are unobstructed when fascia is reinstalled.

- 10 Attach the supplied 3/16" vacuum hose to the 3/16" barb fitting on the vacuum manifold, then route and attach to the surge valve vacuum port. Ensure the surge valve line is free of any sharp bends and is clear of any moving parts.



Surge Valve Installed (Closed Bullet Shown)



Surge Valve Installed (ProFlow Shown)

Race Valve Option

- 11 Route the supplied 1/4" nylon hose from the push-lock fitting on the vacuum manifold to the fitting on the race valve.

AIR INLET AND PCV SYSTEM

GT And Bullitt Only Mach 1 Proceed To Page: 29

- 1 Locate the plastic inlet tube. Install the 90° brass fitting into the tube as shown.
- 2 Insert the supplied 4" section of 5/8 rubber hose onto the end of the brass fitting.
- 3 Install the supplied 5/8 plastic "T" fitting onto the other end of the 4" piece of hose. Secure with the provided hose clamps.
- 4 Install the 3" long 4" rubber coupler onto the plastic inlet tube. Secure with a #64 hose clamp.
- 5 Install the inlet tube onto the ProCharger inlet. Secure with a #60 hose clamp.
- 6 Slide the 4" 45° rubber coupler over the rotomold inlet tube. Secure with a #64 hose clamp.
- 7 Insert tube #384 into the rubber coupler. Install the air filter onto tube #384 using a #60 hose clamp.

✓ **Tech Tip:** It may be necessary to test fit the fascia on the vehicle to verify filter clearance.

✓ **Tech Tip:** It may be necessary to relocate the horns to a bumper support bolt where the intercooler brackets mount.

Continue To Page: 30



Inlet Tube Assembled



Inlet Elbow Installed



Air Filter Installed

Mach 1 Only

- 8 Drill a 1/2" hole in the end of the air filter. Install the 5/8" 90° barb fitting in the end of the air filter.
- 9 Install the 2-1/4" long 4" hose to the rotomold inlet tube as shown. Secure with a #60 hose clamp.



Plastic Inlet Installed

- 10 Slide the air filter behind the headlight as shown.
- 11 Slide tube #288 into the filter as shown and secure with a #60 hose clamp.



Tube #288 Installed

- 12 Slide the rotomold inlet tube and rubber coupler over tube #288. Secure with a #60 hose clamp.
- 13 Slide the rotomold inlet over the supercharger inlet. Secure with a #60 hose clamp.



Plastic Inlet Installed

Continue To Next Page

Air Inlet and PCV System

14 Remove the plastic PCV line going to the port behind the throttle body and to the valve cover on the passenger's side.

15 Use a razor blade to cut the plastic hose to remove the connectors from the PCV line that was removed in the previous step.

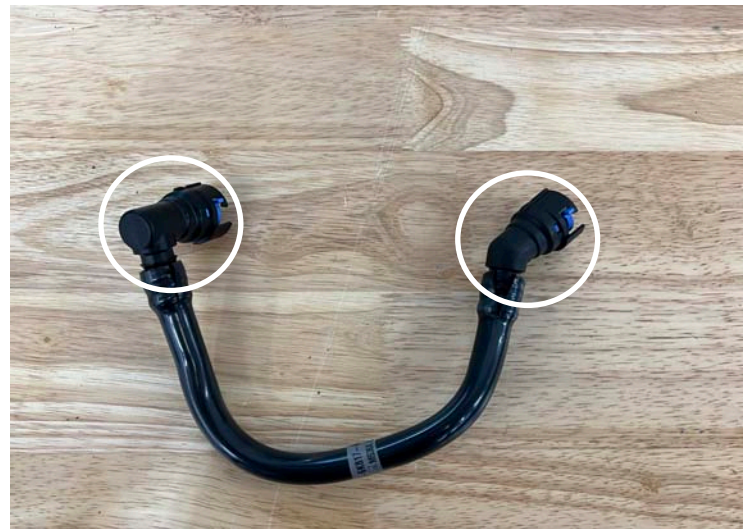


Factory PCV Line

✓ **Tech Tip:** Shrink clamps are included in with this supercharger system, use a heat source such as a heat gun to shrink the connectors onto the connection and be sure the connection is tight before placing it into use.

16 Locate the supplied 5/8" rubber hose (in the PCV bag), cut a 2-1/2" and a 6" section of hose. Insert the 6" section of hose over the 90° PCV fitting followed by 2 shrink clamps over the hose. Insert the compact one-way check valve into the hose, be sure the arrow on the check valve points away from the 90° fitting. Slide the 2-1/2" section of hose over the check valve barb followed by 2 more shrink clamps over the hose. Finish the line by installing the 45° fitting into the hose section.

17 Use a heat gun to shrink the shrink clamps over the connections being sure they are a secure connection.



Remove Fittings



PCV Line Assembled

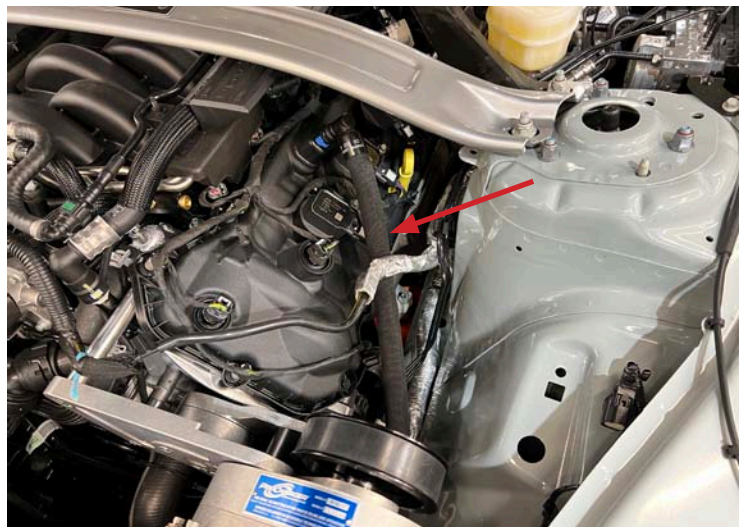
- 18 Install the new PCV assembly back into the car where it was removed initially.
- 19 Locate the drivers side plastic PCV line removed in an earlier section.
- 20 Cut one of the 90° fittings off of the plastic line with a razor blade.
- 21 Place the plastic fitting onto the factory PCV bung on the drivers side valve cover. Use the remaining 5/8" rubber hose and run the hose from the PCV fitting and to the bung on either the air filter or the barb fitting on the air inlet tube. Cut the hose to length.



PCV Line Installed

GT And Bullitt Only Mach 1 Proceed To next Next Page:

- 22 Inset the 90° PCV fitting onto the end of the length of 5/8" rubber hose, cut a section of the supplied abrasive resistant fabric about an inch longer than the 5/8" hose and place it over the rubber hose. Place a shrink connector over the fabric cover and over the fitting connection.
- 23 Use a heat gun to shrink the abrasive resistant fabric around the rubber hose and to shrink the shrink clamp over the fitting.
- 24 Connect the PCV hose to the drivers side valve cover and route the hose to the fitting on the air inlet and secure the hose to the barb fitting on the inlet with either the provided shrink clamp or the provided #10 hose clamp.



PCV Line Installed

Proceed to the next section.

Air Inlet and PCV System

Mach 1 Only:

- 22 Inset the 90° PCV fitting onto the end of the length of 5/8" rubber hose, cut a section of the supplied abrasive resistant fabric about an inch longer than the 5/8" hose and place it over the rubber hose. Place a shrink connector over the fabric cover and over the fitting connection.
- 23 Use a heat gun to shrink the abrasive resistant fabric around the rubber hose and to shrink the shrink clamp over the fitting.
- 24 Remove the 90° fitting from the end of the air filter and place it in the end of the new assembled PCV hose. Use the provided shrink connector to secure the fitting into the end of the hose.
- 25 Connect the PCV hose to the drivers side valve cover and route the hose to hole on the end of the air filter.



PCV Line Assembled



PCV Line Installed

FINISHING UP

- 1 Locate the supplied coolant reservoir tank. Using thread sealer, install the (2) 3/8" brass barb fittings into the 1/4" NPT bungs.
- 2 Using thread sealer, install the 3/4" 90° brass barb fitting into the 1/2" NPT on the bottom of the tank. The fitting should be oriented so that it is pointing towards the throttle body when installed.
- 3 Mount the coolant reservoir using the factory mounting location on the fan shroud, using the factory hardware. Connect the coolant lines to the barbs on the new tank and secure with the factory hose clamps.

✓ **Tech Tip:** The large (3/4") cooling hose may need to be re-routed to connect to the fitting on the bottom of the new coolant reservoir. Ensure this hose is out of the way of any moving parts.



Coolant Tank Bung Orientation



New Coolant Reservoir Mounted

- 4 Refill the cooling system. The coolant level should be approximately 2" below the cap.
- 5 Install the supplied coolant reservoir cap.
- 6 Test fit and trim the top radiator cover to clear the radiator post on both sides.



Radiator Cover Trimmed

- 7 Inspect 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.
- 8 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.
- 9 Remount the plastic undercladding.
- 10 Re-install the plastic radiator cover using the factory hardware.
- 11 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.

Mach 1 Only

- 12 The drivers side hood liner will have to be trimmed as to not make contact with the supercharger.
- 13 Locate the hood liner template and cut out the template as directed on the paper.
- 14 Be sure the template matches along the hood liner and tape it in place. Use a sharp knife to cut the hood liner as shown.



Drivers Side Hood Liner (Mach 1)



Hood Liner Template Installed (Mach 1)



Hood Liner Trimmed (Mach 1)



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

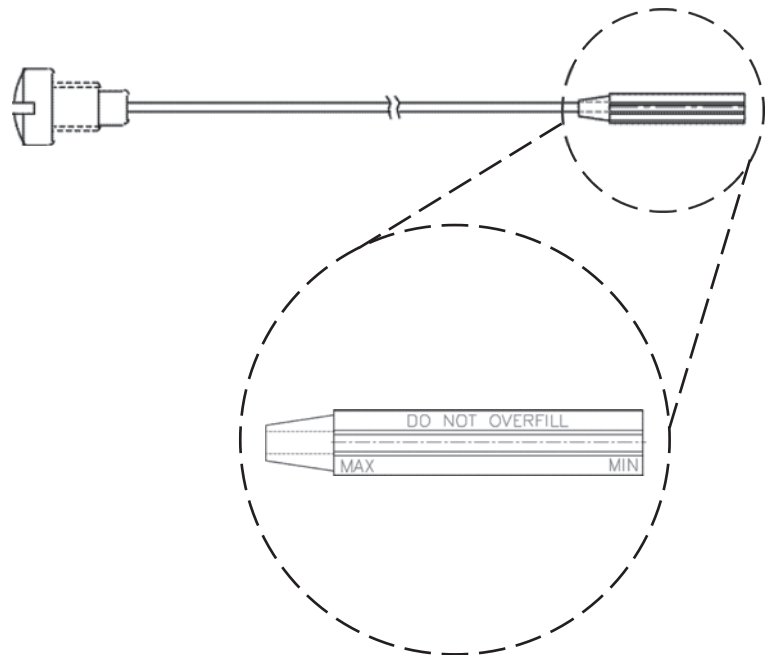
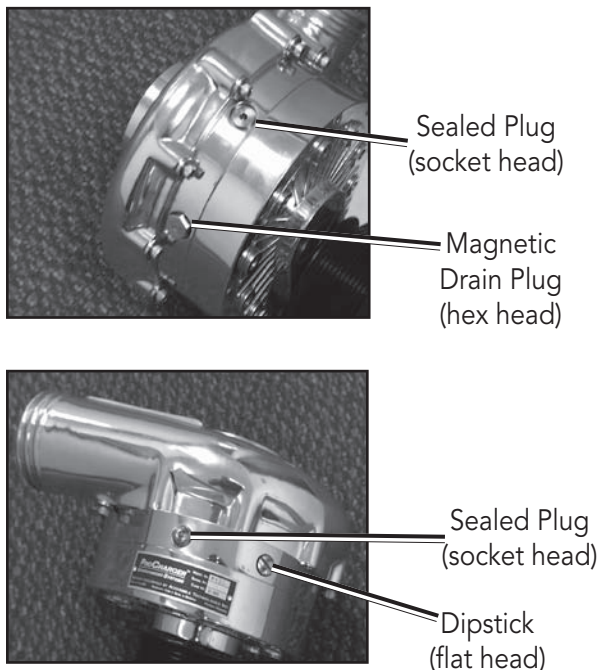
The ProCharger supercharger's oil level must be checked periodically to ensure the proper lubrication. The dipstick can be loosened using a flat blade screwdriver or a coin. When installed, the oil level should remain between the minimum (MIN) and maximum (MAX) indicators at all times.

! **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 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.

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



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**

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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, P-1X, 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.

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 PMFW1A-009 Rev. Q**

