# 2011-2014 F-150 5.0L
# HO/Stage 2 Intercooled System
# **Installation Guide**


PROCHARGER®
SUPERCHARGER SYSTEMS

**The ULTIMATE Power Adder™**

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



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.

Revised 1/20 Part Number PMFV1A-001 Rev. B Printed in the USA

# Introduction

Congratulations on purchasing your ProCharger® 2011+ F-150 5.0L HO/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 F-150 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.*

## 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" Extention
- T20 Torx Bit
- Open End Wrench Set (standard & metric)
- 5/16" Nut Driver
- 3/8" Hex Bit Set (allen head)
- Flat Screwdrivers
- Phillips Screwdrivers
- Plier Set
- Ford Engine Coolant

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

# Table of Contents



*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.*

# 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.*

1. Plug in the X3 handheld into the OBDII port. Proceed to Program Vehicle, Select Custom Tune, and Select Tune following 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

**Stage 2 Systems Only**

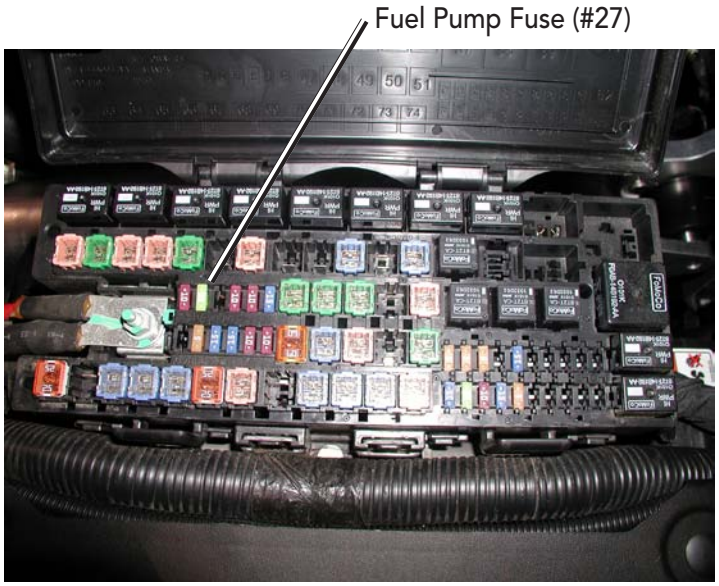
## HO Systems, proceed to next section

1. Open the fuse box cover in engine bay. Remove the fuel pump fuse located in position #27 by pulling the fuse up.

2. Crank the engine for 5 seconds to purge the fuel pressure from the fuel rails.

3. Turn the ignition off.

4. Replace the fuel pump fuse.




Fuel Pump Fuse Removal

# Getting Started


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

(A) Factory Air Filter Box

(B) Mass Airflow (MAF) Sensor

(C) Factory Inlet Pipe

1. Disconnect the negative battery cable from the battery (8mm).

2. Disconnect the Mass Airflow Meter (MAF) wiring harness from the intake tube by first pulling out the red locking tab and then pressing in the center tab and pulling out.

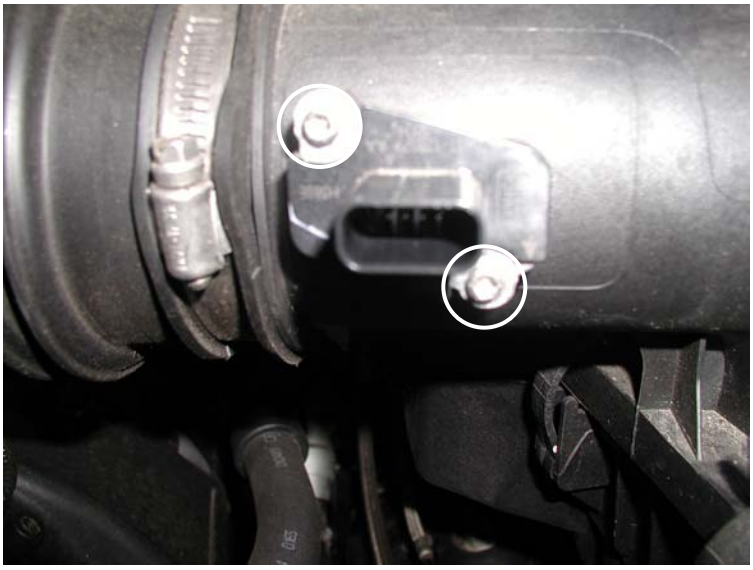
3. Disconnect the upper and lower vent hoses from the intake tube.

4. Loosen the two hose clamps (5/16") on the intake tube and remove the intake tube.

5. Unclip the retainers and remove the upper portion of the air filter box and the air filter.

6. Using a T20 Torx bit, remove the MAF sensor from the air filter box and set aside for reuse later. The rest of the intake system will not be re-installed.

Disconnect MAF Harness and Vent Hoses From Intake Tube & Remove Intake Tube



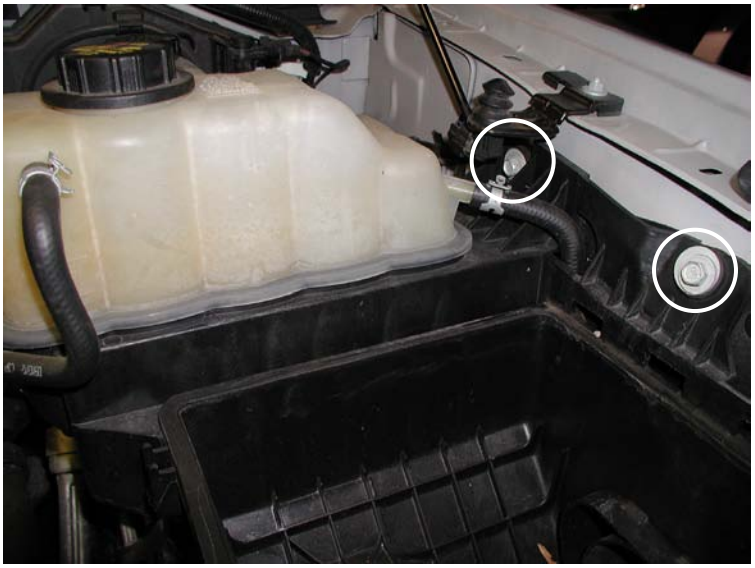
Remove MAF Sensor From Air Filter Box

7. Drain the coolant in the cooling system.

8. Disconnect the two upper overflow hoses, remove the lower supply hose, then remove the two mounting bolts (13mm) and remove the air filter box/ coolant reservoir.

9. Remove the driver side PCV line.

Remove Lower Supply Hose



Remove Air Filter Box/Coolant Reservoir

Driver Side PCV Line Removal

10 Remove the driver's side inner fender air deflector.

11 Remove the driver and passenger side air deflectors between headlights and radiator.

12 Remove both headlights by removing the three screws (10mm) and disconnecting the wiring harnesses.

Remove Inner Fender Air Deflector

Remove Driver & Passenger Side Air Deflectors

Remove Both Headlights

# Cooling System

1. Disconnect the lower radiator hose from water pump housing.

2. Install the supplied 1-1/2" section of coolant hose with the supplied coupler as shown to extend lower radiator hose to clear bracket spacer to be installed later. Secure with (2) #24 hose clamps and factory hose clamp (note position of tabs on top to clear bracket installation).

3. Trim the short leg of the supplied 3/4" ID 90° hose as short as possible to allow clearance between bracket to be installed later. Secure with a #12 hose clamp. Leave other end loose, it will be connected to the supplied coolant tank to be installed later.

Disconnect Lower Radiator Hose

Extend Lower Radiator Hose

Install Supplied Coolant Tank Line

4. Remove the upper radiator hose assembly. The spring clip on the lower plastic fitting must be released (pry on one end of clip with small screwdriver then slide clip out).

5. Cut the plastic ring clamp to remove, then remove fitting from upper radiator hose.

6. Re-install the fitting and secure with factory spring clip.

7. Install the supplied upper radiator hose as shown and secure with (2) #24 hose clamps.

Remove Upper Radiator Hose

Cut Plastic Ring Clamp to Remove Fitting

Re-install Fitting and Supplied Radiator Hose

# Fuel Injector Installation

**Stage 2 Systems Only**

***Tech Tip:*** *Stage 2 Tuner kits do not include fuel injectors. Contact ProCharger for correct size and availability of upgraded injectors.*

## HO Systems, proceed to next section

1. If you have not already done so, depressurize the fuel system by completing the steps outlined in section 1 of this manual.

2. Remove the two foam insulators from the top of the fuel rails.

3. Place a shop towel underneath the fitting on the driver's side fuel rail where the stainless steel fuel supply line and fuel rail join. Push the two tabs on the fitting together and pull the supply line from the fuel rail, being careful to minimize fuel leakage. Unclip hose bracket from fuel rail in front of fitting.

**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.**

4. 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 Insulators (2x)

Disconnect Fuel Supply Line

Unclip Hose Bracket From Fuel Rail

5. Remove the fuel rail attaching bolts with a 10mm socket (4x).

6. 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.

7. 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.**

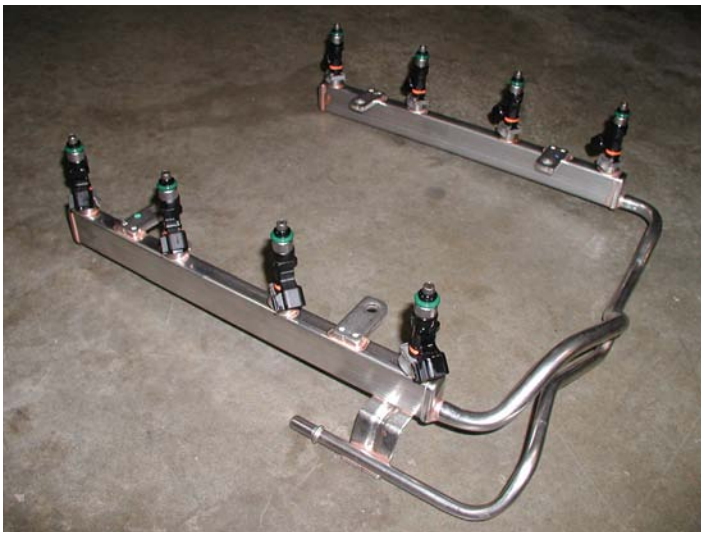
8. Install the retainer clips onto the new injectors. Push each injector into the fuel rail injector socket with the electrical connector facing outward. The retainer clip should lock onto a flange on the fuel rail.

9. Properly align and install the fuel rail assembly back into the vehicle. Secure the assembly using the (4x) supplied M8-1.5 x 80mm bolts and washers.

10. Reclip the electrical connectors to each fuel injector. Plug the supply line back into the rail. Clip the hose bracket onto fuel rail. Re-install the fuel rail insulators.

Remove Fuel Rail Mounting Bolts (4x)

Remove Fuel Rail Spacers (4x)



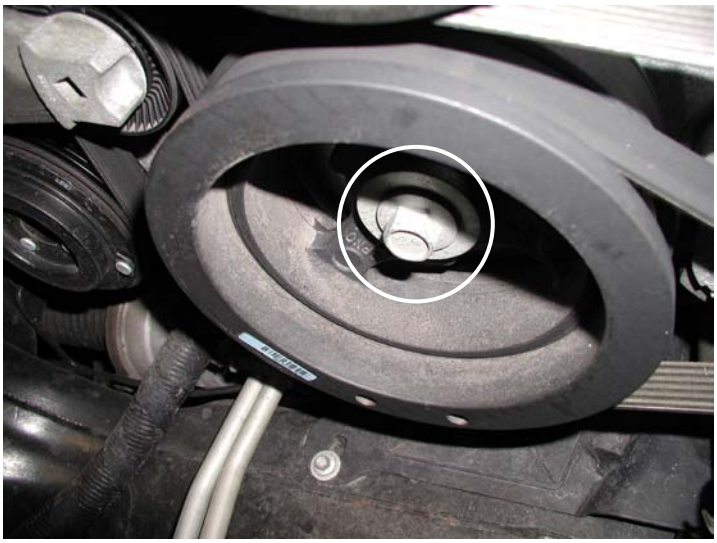
New Fuel Injectors Installed
Onto Fuel Rail Assembly

# Crank Pulley Installation

***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.*

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

2. 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 clockwise until the cam locks stop it from rotating.



Remove Factory Balancer Bolt

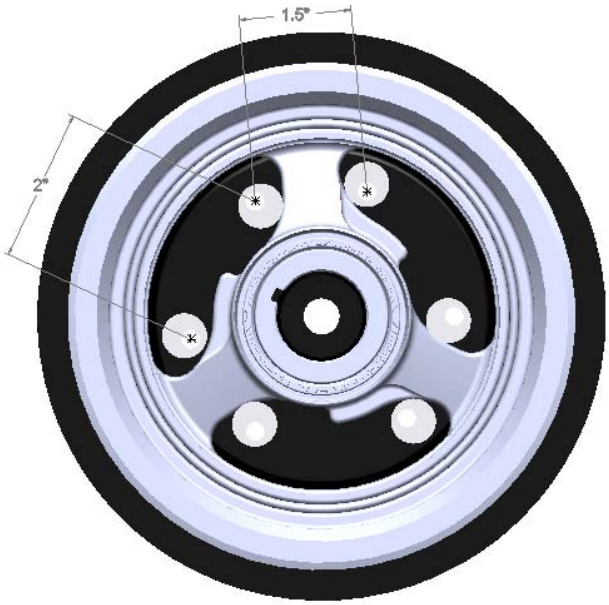
Back View of Crank Pulley and Cam Locks Installed

## Crank Pulley Installation

***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 at right for proper orientation).*

3. Slide the factory crank bolt washer onto the supplied M12-1.5 x 120mm bolt and flat washer; using a 19mm socket, torque to 35 ft-lbs, then tighten the bolt an additional 90°.

4. Tighten the (6) cam lock bolts with a 1/2" socket.

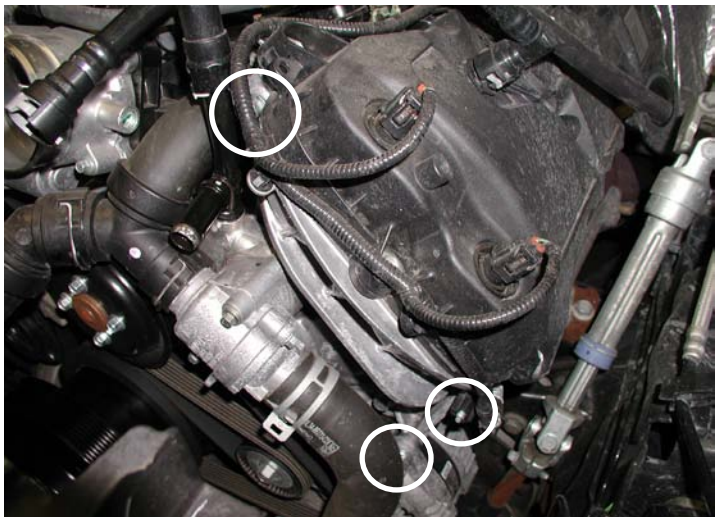



Detailed View of Proper Cam Lock Orientation

Crank Pulley Installed

# ProCharger Bracket and Head Unit

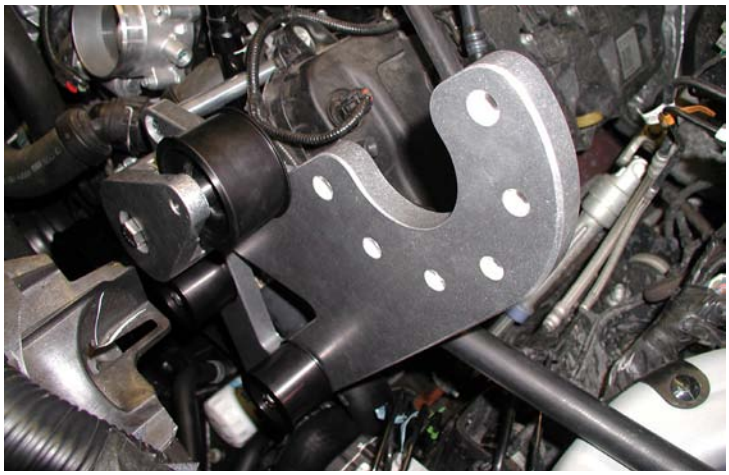
1. Remove the (3) pieces of hardware labeled in the image at right. The alternator stud can be removed by using a 15mm socket, the remaining (2) bolts use a 13mm socket (the upper right bolt will have a plastic cap that needs to be pulled off before accessing the bolt).



Remove Factory Hardware

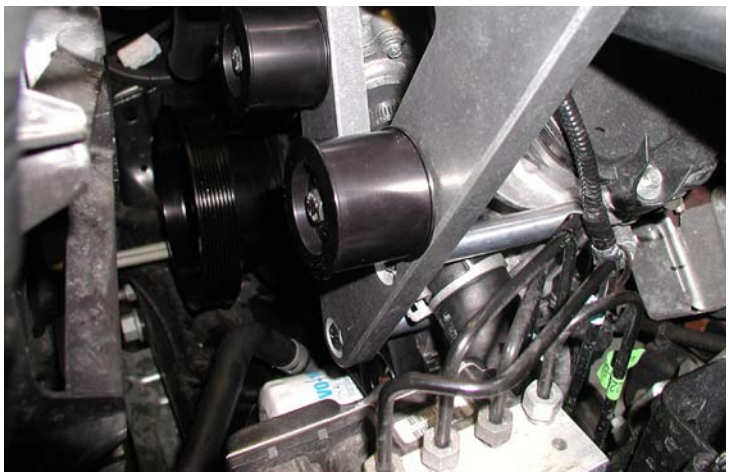
***Tech Tip:*** *The upper coolant tube may need to be bent slightly to remove the upper bolt.*

2. Mount the main bracket loosely into the vehicle by installing the M10-1.50 x 140mm bolt and washer through the bracket and 3.353" round spacer into the alternator mounting hole where the stud was removed earlier.



Main Bracket Installed

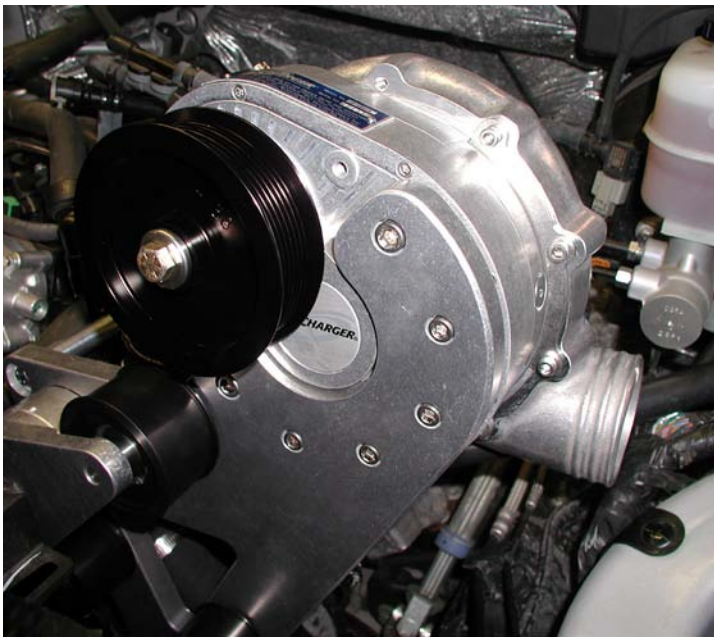
3. Slide the (2) 4.313" spacers between the bracket and engine front cover. Using the supplied M8-1.25 x 180mm bolts and washers, secure the assembly by tightening all three fasteners (13 & 17mm socket).



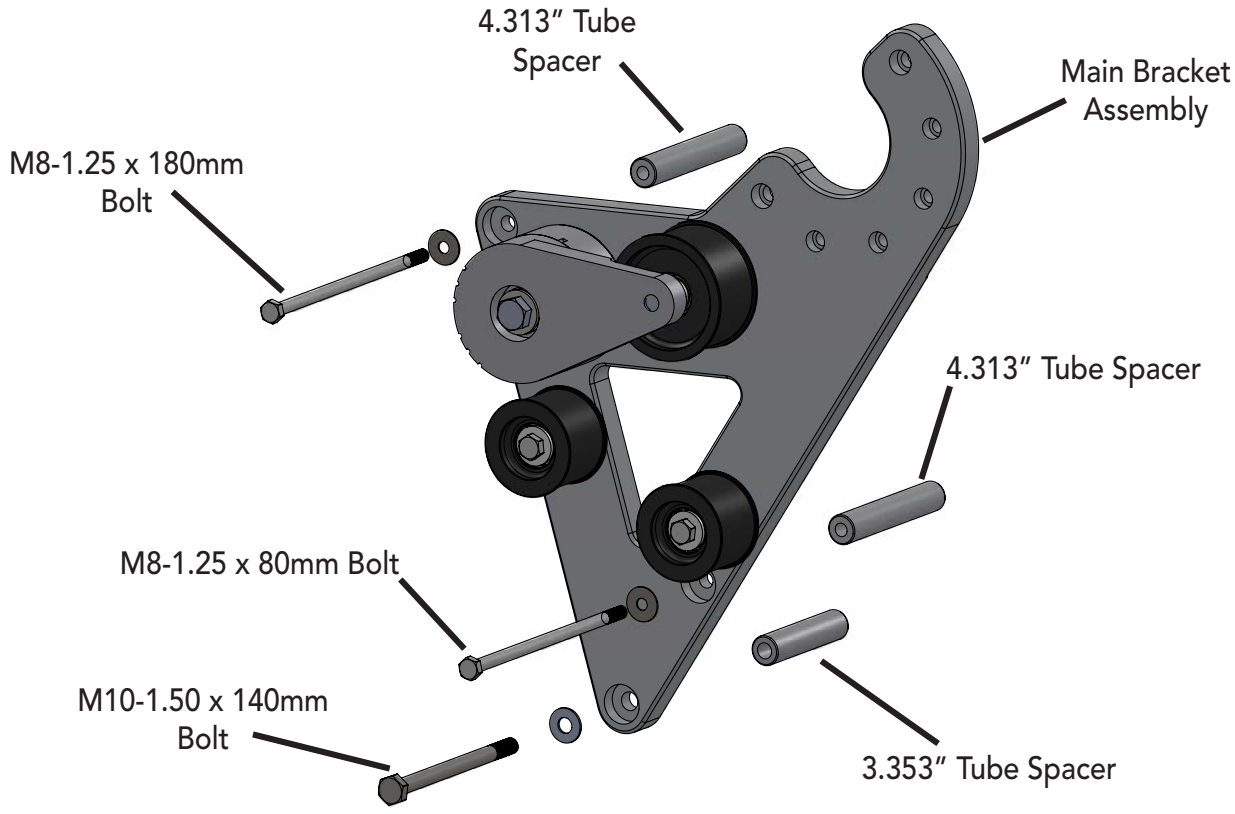
Main Bracket Installed (Lower Spacers)

4 Remove the oil fill reminder tag from the head unit. Fill the supercharger with (1) 6 ounce bottle of the supplied blower oil.

5 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 using a 1/4" and 5/16" hex bit.



Procharger Head Unit Installed




Main Bracket Schematic

6. Install the supplied supercharger belt. Refer to the supercharger belt schematic for proper routing.

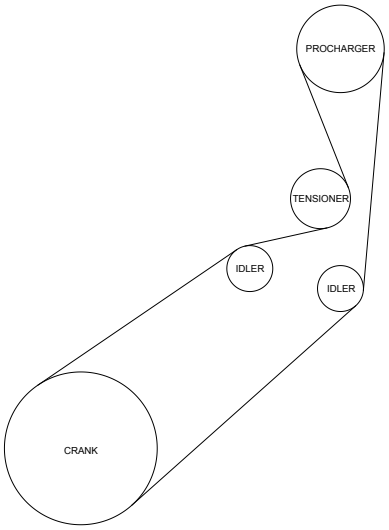
7. Loosen the (2) tensioner bolts (front and back) using a 3/4" wrench and 9/16" wrench.

8. Tighten the belt by rotating the brass tensioner collar clockwise using a 1/2" socket and extension from underneath supercharger as shown. Tension until first set of marks are nearly in line as shown in lower right picture.

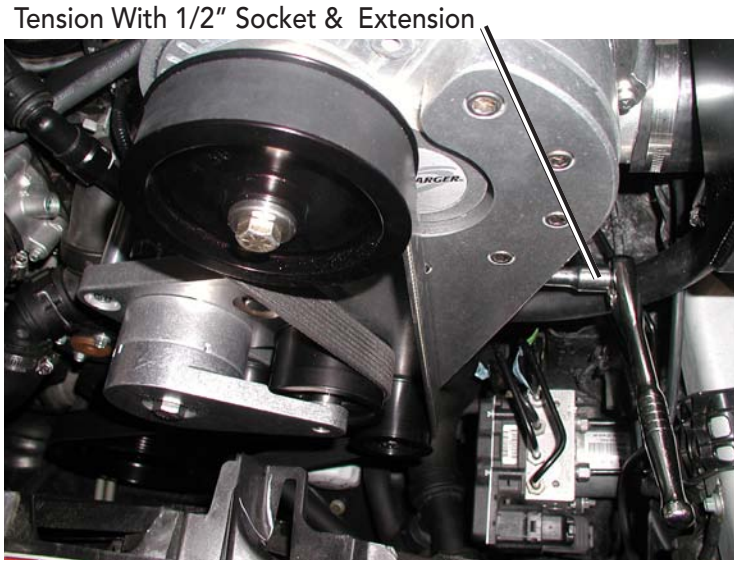
9. Tighten the (1) tensioner bolt (front) using a 3/4" wrench.

10. Using a 1/2" socket and extension turn the brass collar counter clockwise until the brass collar is loose.

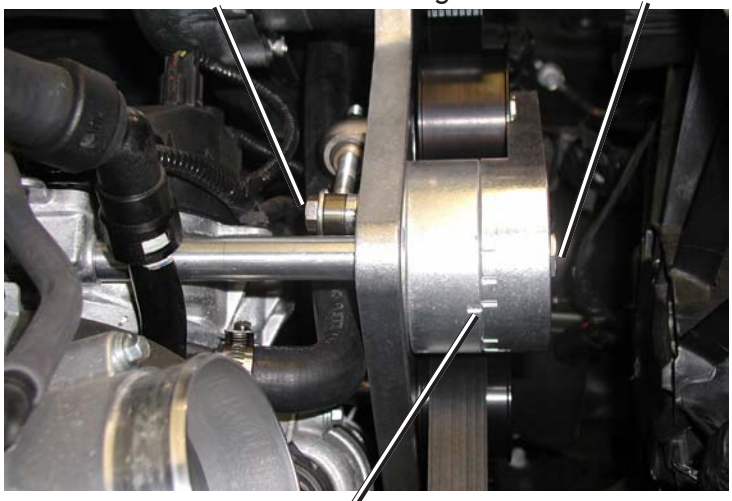
11. Tighten the (1) tensioner bolt (back) using a 9/16" wrench.




Supercharger Belt Schematic




Belt Tensioning (Brass Collar Access)

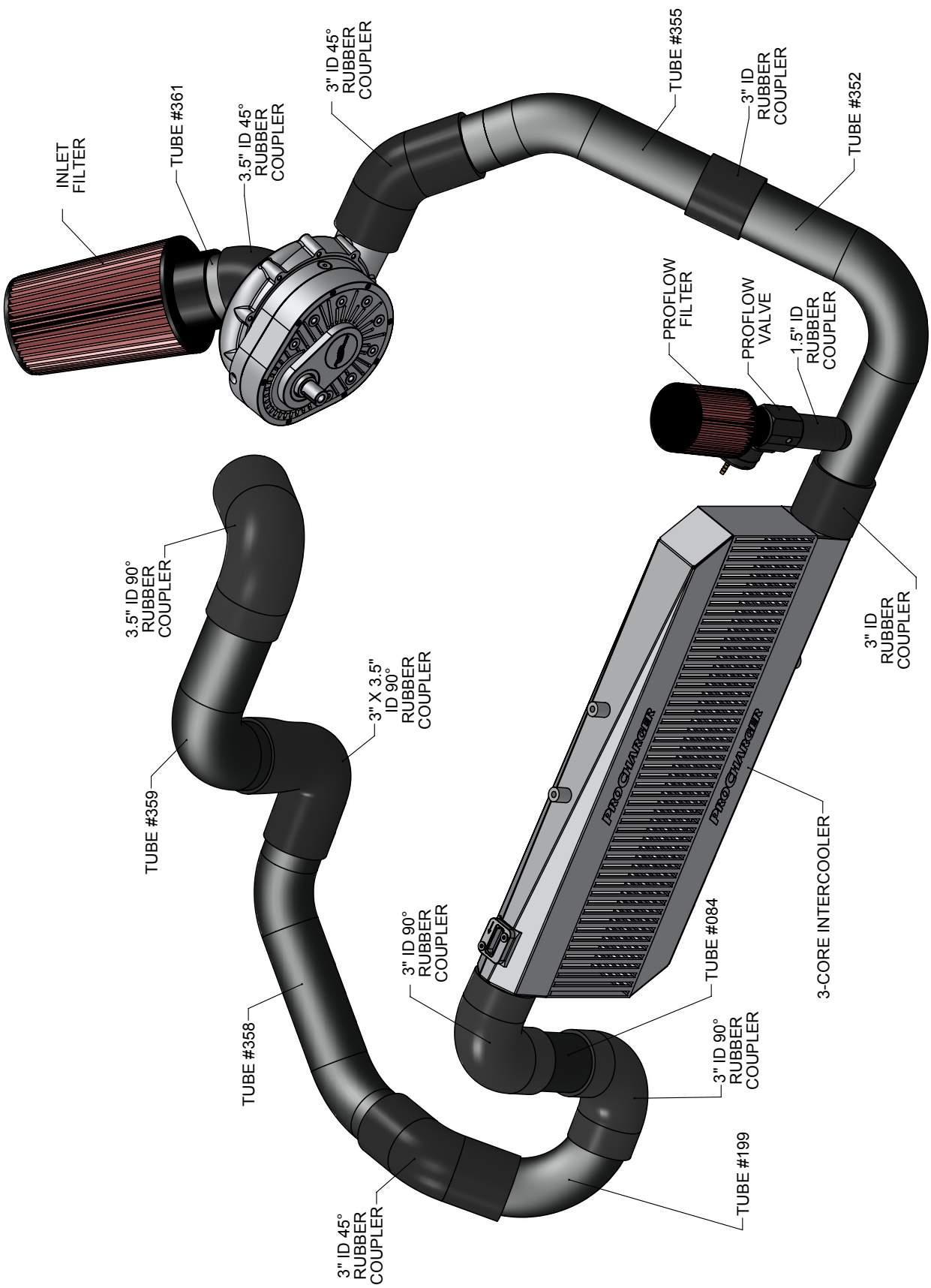



Tighten Rear Tensioner Bolts

This Page is Intentionally Left Blank

# 3 Core Intercooler Schematic

**(Shown with Rear Inlet)**



# 3 Core Intercooler and Installation

***Tech Tip:*** *To ease installation, leave hose clamps and brackets loose until all tubes have been positioned. Trim rubber connectors as desired after test fitting all tubing to determine proper length required.*

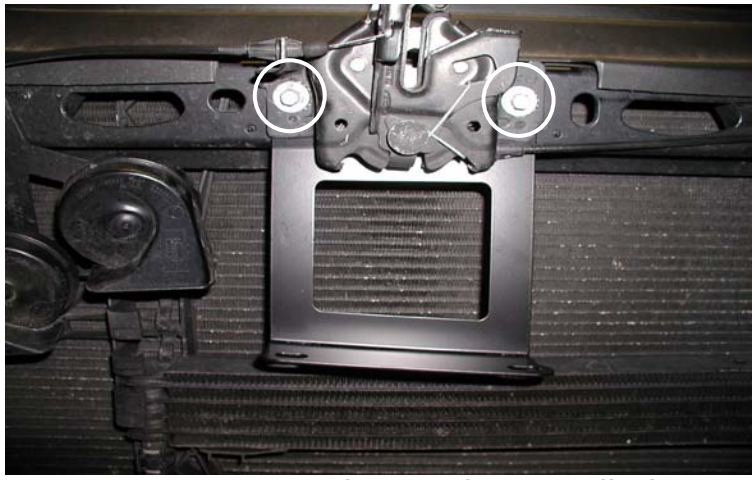
**Stage 2 Installation starts on page 20**

1. Mark the hood latch position, then remove the two bolts (10mm) from the hood latch. Install the upper intercooler bracket behind the hood latch and re-install the hood latch bolts.

2. Remove the two bolts (8mm) from the front bumper cover tabs.

3. Install the two lower intercooler brackets on top of the metal bracket and under the front bumper cover tabs and re-install the two bolts removed in the previous step. The longer bracket mounts on the driver's side.

4. Mount the intercooler using the four supplied 3/8"-16 X 7/8" socket head cap screws with washers (2 are on the bottom of the intercooler). The horn bracket may need to be bent back slightly to allow clearance.



Upper Intercooler Bracket Installed

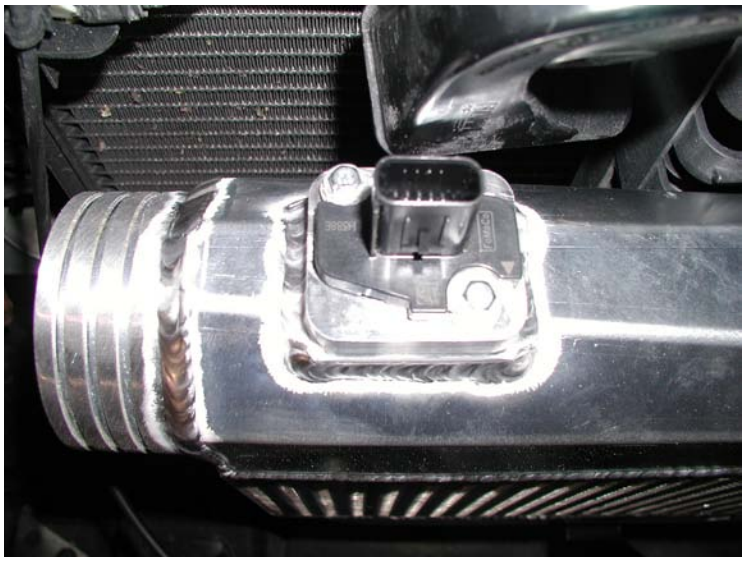
Lower Intercooler Brackets Installed

Intercooler Installed

5 Mount the factory MAF sensor to the bung located on the intercooler. Use the supplied M4 X 12mm hex head cap screw with a 7mm nut driver for installation. Ensure the MAF sensor is oriented so that the element is exposed on the driver's side.


MAF Sensor Element

6 Connect the supplied MAF extension harness to the factory harness, route along factory wiring along upper core support over to passenger side and connect to MAF sensor installed in intercooler. Secure the extension harness with zip ties as needed.



Factory MAF Installed in Intercooler

MAF Extension Connected to Factory Harness

MAF Extension Connected

***Tech Tip:*** *All hose connections for the intercooler tubing will utilize the #52 hose clamps except the couplers which connect to the 3-1/2" intake tube. Use the #64 hose clamps for this tube.*

7. Connect the ProCharger to the blower discharge tube (#355) using a 3" 45° rubber coupler and two #52 hose clamps.

8. Connect the 90° surge tube (#352) to the blower discharge tube (#355) using a 3" rubber coupler and two #52 hose clamps.

9. Connect the 90° surge tube (#352) to the intercooler inlet using a 3" rubber coupler and two #52 hose clamps.

10. Connect the 3" X 6" tube (#084) to the intercooler discharge using a 3" 90° rubber coupler and two #52 hose clamps.

11. Connect the short 90° tube (#199) to the 3" X 6" tube (#084) using a 3" 90° rubber coupler and two #52 hose clamps.

12. Connect the double 45° tube (#358) to the short 90° tube (#199) using a 3" 45° rubber coupler and two #52 hose clamps.

Blower Discharge

Intercooler Inlet

Intercooler Outlet

13 Connect the throttle body tube (#359) to the double 45° tube (#358) using a 3" to 3-1/2" 90° rubber coupler and one #52 and one #64 hose clamp.

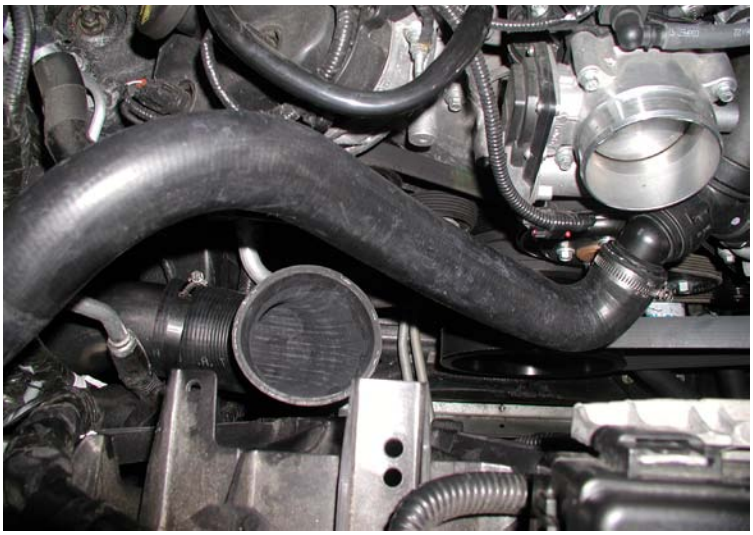
14 Connect the throttle body tube (#359) (longer leg horizontal) to the throttle body using a 3-1/2" 90° rubber coupler (longer leg to throttle body) and two #64 hose clamps.

15 Secure all connections with the provided hose clamps and tighten all intercooler bracket fasteners (5/16" hex bit), hood latch in previously marked position (10mm) and bumper cover screws (8mm).

***Tech Tip:*** *Any location where steel tubes could abrade on the chassis should be cushioned with the supplied self-adhesive rubber strips.*

16 Connect the ProFlow surge valve to the 1-1/2" bung on the 90° surge tube (#278) using the 1-1/2" rubber hose and two #24 hose clamps.

17 Install the supplied air filter onto the ProFlow surge valve and secure with the supplied hose clamp.



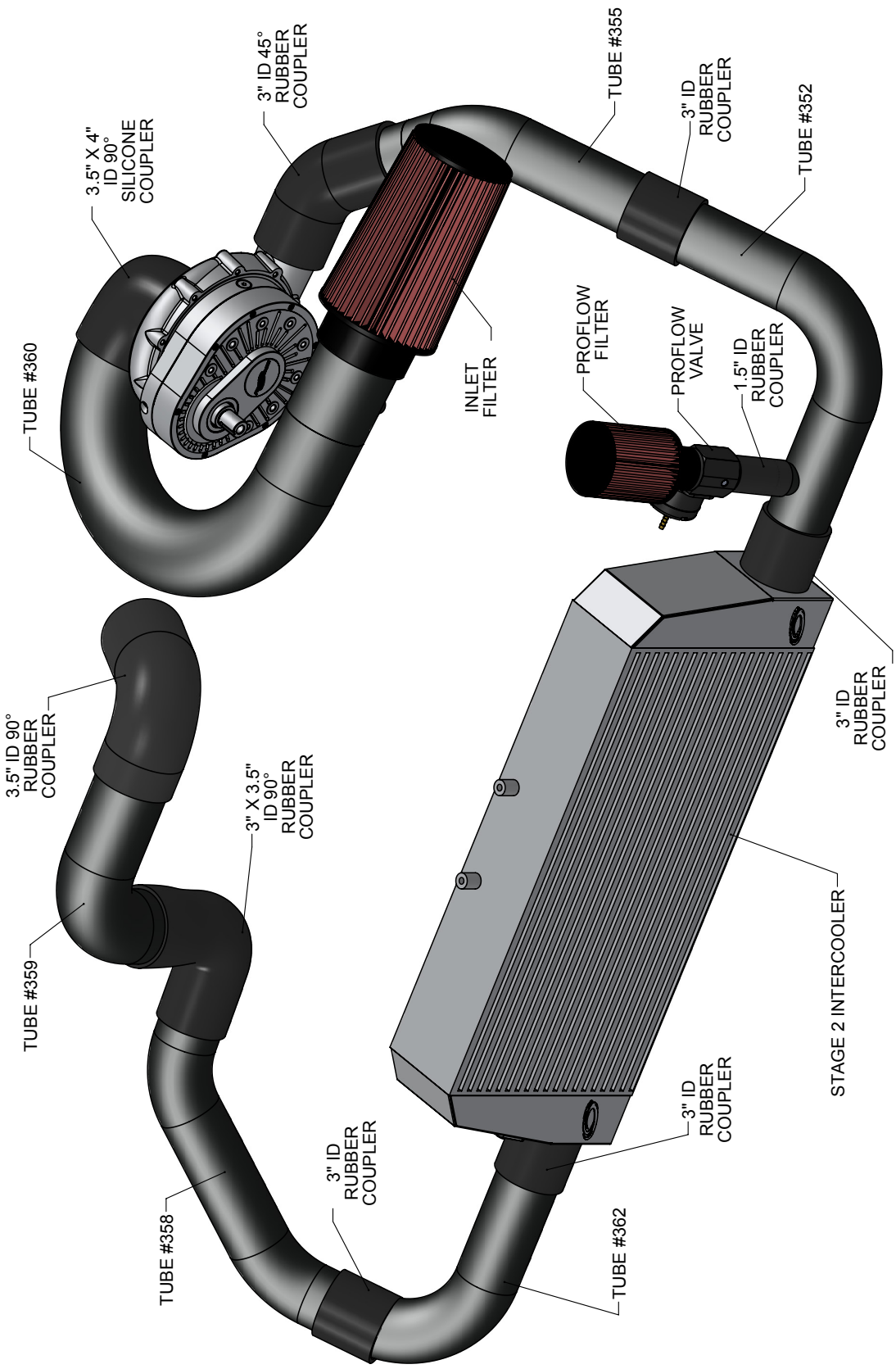
90° 3" to 3-1/2" Rubber Coupler

Throttle Body

ProFlow Installed

This Page is Intentionally Left Blank

# Stage 2 Intercooler Schematic
## (Shown with Optional Forward Inlet)



# Stage 2 Intercooler and Installation

***Tech Tip:*** *To ease installation, leave hose clamps and brackets loose until all tubes have been positioned. Trim rubber connectors as desired after test fitting all tubing to determine proper length required.*

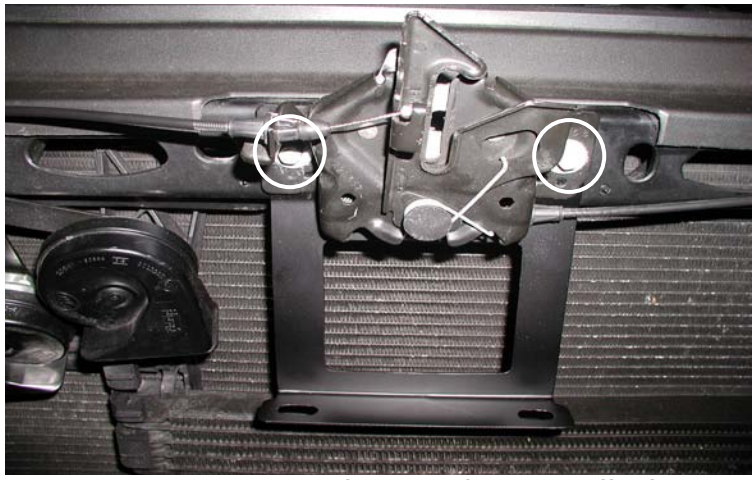
### 3 Core, proceed to next section

1. Mark the hood latch position, then remove the two bolts (10mm) from the hood latch. Install the upper intercooler bracket behind the hood latch and re-install the hood latch bolts.

2. Remove the two bolts (8mm) from the front bumper cover tabs.

3. Install the two lower intercooler brackets on top of the metal bracket and under the front bumper cover tabs and re-install the two bolts removed in the previous step.

4. Mount the intercooler using the four supplied 3/8"-16 X 7/8" socket head cap screws with washers (2 are on the bottom of the intercooler). The horn bracket may need to be bent back slightly to allow clearance.



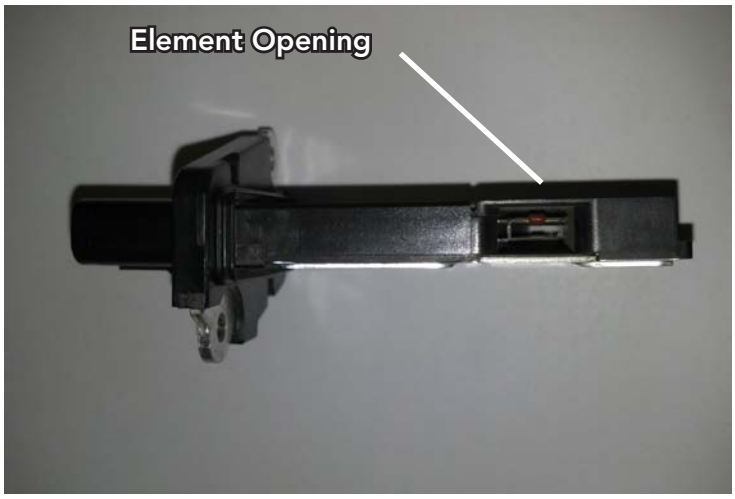
Upper Intercooler Bracket Installed

Lower Intercooler Brackets Installed

Intercooler Installed

5 Mount the factory MAF sensor to the bung located on the intercooler. Use the supplied M4 X 12mm hex head cap screw with a 7mm nut driver for installation. Ensure the MAF sensor is oriented so that the element is exposed on the top side.

6 Connect the supplied MAF extension harness to the factory harness, route along factory wiring along upper core support over to passenger side and connect to MAF sensor installed in intercooler. Secure the extension harness with zip ties as needed.



MAF Sensor Element


Factory MAF Installed in Intercooler


MAF Extension Connected to Factory Harness

***Tech Tip:*** *All hose connections for the intercooler tubing will utilize the #52 hose clamps except the couplers which connect to the 3-1/2" intake tube. Use the #64 hose clamps for this tube.*

7. Connect the ProCharger to the blower discharge tube (#355) using a 3" 45° rubber coupler and two #52 hose clamps.

8. Connect the 90° surge tube (#352) to the blower discharge tube (#355) using a 3" rubber coupler and two #52 hose clamps.

9. Connect the 90° surge tube (#352) to the intercooler inlet using a 3" rubber coupler and two #52 hose clamps.

10. Connect the 90° tube (#362) to the intercooler discharge using a 3" rubber coupler and two #52 hose clamps.

11. Connect the double 45° tube (#358) to the 90° tube (#362) using a 3" rubber coupler and two #52 hose clamps.

Blower Discharge

Intercooler Inlet

Intercooler Outlet

12. Connect the throttle body tube (#359) to the double 45° tube (#358) using a 3" to 3-1/2" 90° rubber coupler and one #52 and one #64 hose clamp.

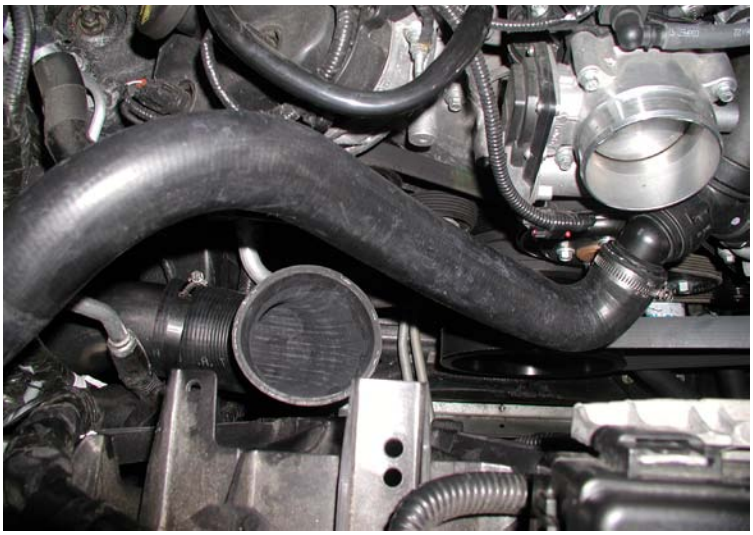
13. Connect the throttle body tube (#359) to the throttle body using a 3-1/2" 90° rubber coupler and two #64 hose clamps.

14. Secure all connections with the provided hose clamps and tighten all intercooler bracket fasteners (5/16" hex bit), hood latch in previously marked position (10mm) and bumper cover screws (8mm).

***Tech Tip:*** *Any location where steel tubes could abrade on the chassis should be cushioned with the supplied self-adhesive rubber strips.*

15. Connect the ProFlow surge valve to the 1-1/2" bung on the 90° surge tube (#278) using the 1-1/2" rubber hose and two #24 hose clamps.

16. Install the supplied air filter onto the ProFlow surge valve and secure with the supplied hose clamp.



90° 3" to 3-1/2" Rubber Coupler

Throttle Body

ProFlow Installed

# Vacuum Manifold

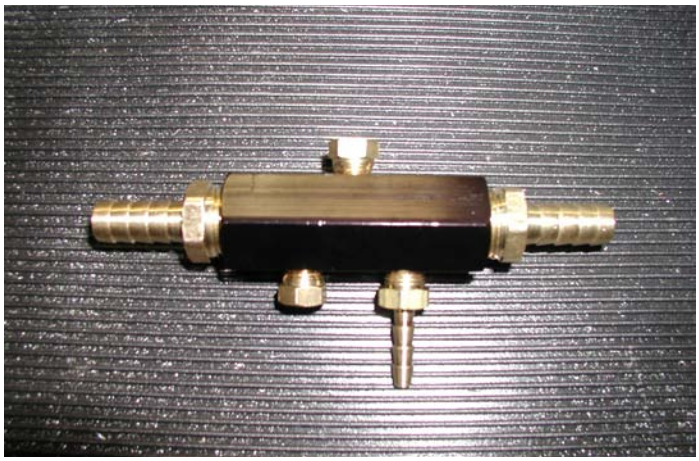
1. Remove the factory vacuum tree and lines from the intake manifold to the brake booster. Remove the factory vacuum tree from the lines.

2. Assemble the supplied vacuum manifold using the provided barb fittings and plugs. If you are not going to use a boost gauge, assemble with one 3/16" barb fitting, otherwise install two 3/16" barb fittings, then plug the remaining 1/8" port(s).

3. Cut a 10" section from the supplied 1/2" line, then install on the intake manifold. Route along the fuel rail, install the vacuum manifold and securely clamp in place using the supplied #8 hose clamps, making sure that there are no vacuum leaks at the splice points.

Vacuum Line Removal

Intake Manifold Connection



Vacuum Manifold Assembled

Vacuum Manifold Installed

4 Relocate the factory vacuum tree next along the fuel rail to the vacuum manifold with the remaining 1/2" hose. Verify the correct orientation before proceeding. The end of the tree with the factory cap should be on the front side of the tree. Install the supplied 3/8" vacuum cap to the lower open end of the tree. Attach the top port of the vacuum tree to the brake booster using the supplied 3/8" line and secure using the #6 hose clamps.


Vacuum Tree Orientation

***Warning:*** *Improper clamping on the brake booster fitting could cause a vacuum leak and could cause the power brakes to become inoperable. Use extreme caution in installing the vacuum manifold as well to prevent any possible leaks.*

***Tech Tip:*** *The brake booster fitting and lines may differ between models. The smaller top port should not be modified from the factory configuration (either a vacuum cap or additional vacuum line).*

Vacuum Hose Routing

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 (if installed) to the other 3⁄16" barb fitting.

6 Loosely secure the vacuum manifold and lines with zip ties as needed.

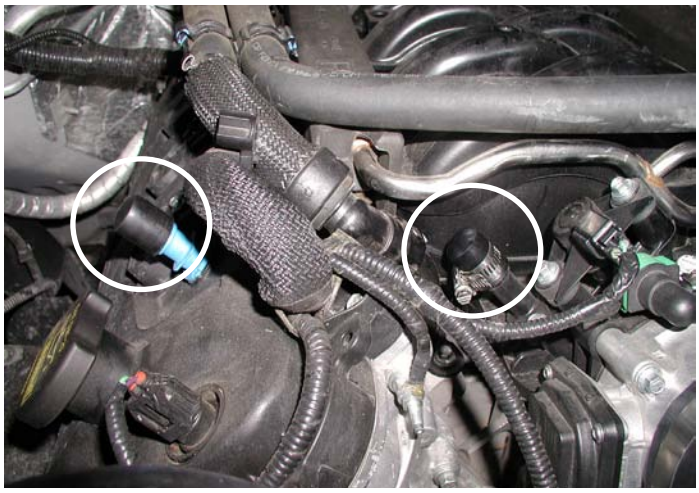
***Warning:*** *Ensure the vacuum line is free of kinks and is not pinched by zip ties or the ProFlow will be inoperable, which may result in damage to the ProCharger from surging.*

# PCV and Air Filter

1. Remove the passenger side PCV line.

2. 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.

Passenger Side PCV Line Removal



Rubber Caps Installed

## Forward Inlet, proceed to step 10

3. Locate the 5/8" hose. Trim the short 90° end to properly fit over the open bung on the driver's side valve cover, pushing it down over the ring on fitting to seal. The open end of the hose will be connected to the air filter in the following steps.

4. Locate the air inlet bag. Install the 45° rubber coupler onto the blower inlet with a #64 hose clamp but do not tighten.

5. Install the 3-1/2" coupler tube (#362) into the 45° rubber coupler with a #64 hose clamp but do not tighten.

6. 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.

7. Install the air filter with hose clamp onto the 3-1/2" coupler tube (#362). Trim and attach the 5/8" hose to the barb fitting in the air filter. Adjust the PCV line so there are no kinks.

8. Adjust the air filter position as needed for clearance, then tighten all the hose clamps.

## Rear Inlet, proceed to next section

PCV Line and Rear Inlet Coupler Installed

Rear Inlet and Air Filter Installed

## Forward Inlet Only

9. Locate the 5/8" hose. Trim the short 90° end to properly fit over the open bung on the driver's side valve cover, pushing it down over the ring on fitting to seal. The open end of the hose will be connected to the air filter in the following steps.

10. Locate the air inlet bag. Install the 3-1/2" to 4" 90° silicone coupler onto the blower inlet with a 4.00 T-bolt hose clamp but do not tighten.

11. Loosely attach the inlet tube bracket to the 4" inlet tube (#360) using the supplied 3/8"-16x7/8" SHCS and washer.

12. Install the 4" inlet tube (#360) into the 90° rubber coupler with a 4.25 T-bolt hose clamp but do not tighten. Place the bracket foot into the factory rubber bushing in the frame. Adjust the bracket position as needed, then tighten screw installed in previous step (5/16" hex bit).

13. 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.

14. Install the air filter with hose clamp onto the 4" inlet tube (#360). Trim and attach the 5/8" hose to the barb fitting in the air filter. Adjust the PCV line so there are no kinks.

15. Tighten all the hose clamps.

PCV Line and Forward Inlet Coupler Installed

Forward Inlet Tube & Bracket Installed

Forward Inlet and Air Filter Installed

# Coolant Tank

1. Place the supplied coolant tank along the driver's side inner fender, inserting the lower mounting pin into the factory rubber bushing in the frame.

2. Secure the tank to the inner fender using two M8 X 20mm bolts (13mm) with washers.

3. Attach the radiator overflow line to the front corner of the coolant tank, securing with a supplied #6 hose clamp.

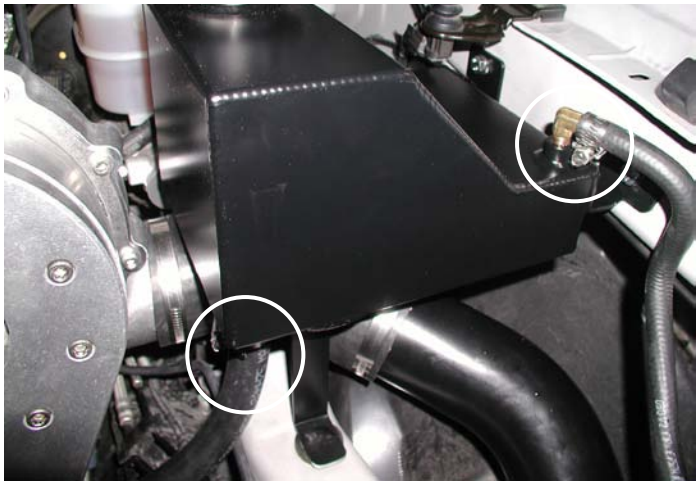
4. Trim the previously installed 3/4" supply line and attach to the bottom of the coolant tank, securing with the supplied #12 hose clamp.

5. Route the rear overflow line under the blower inlet and attach to the coolant tank, securing with a supplied #6 hose clamp.

6. Refill the coolant system by filling the coolant tank with approximately 1 gallon of a 50/50 blend of Ford approved engine coolant (refer to vehicle's owner's manual) and distilled water.

7. Install the factory radiator cap onto the coolant tank.

Coolant Tank Installed

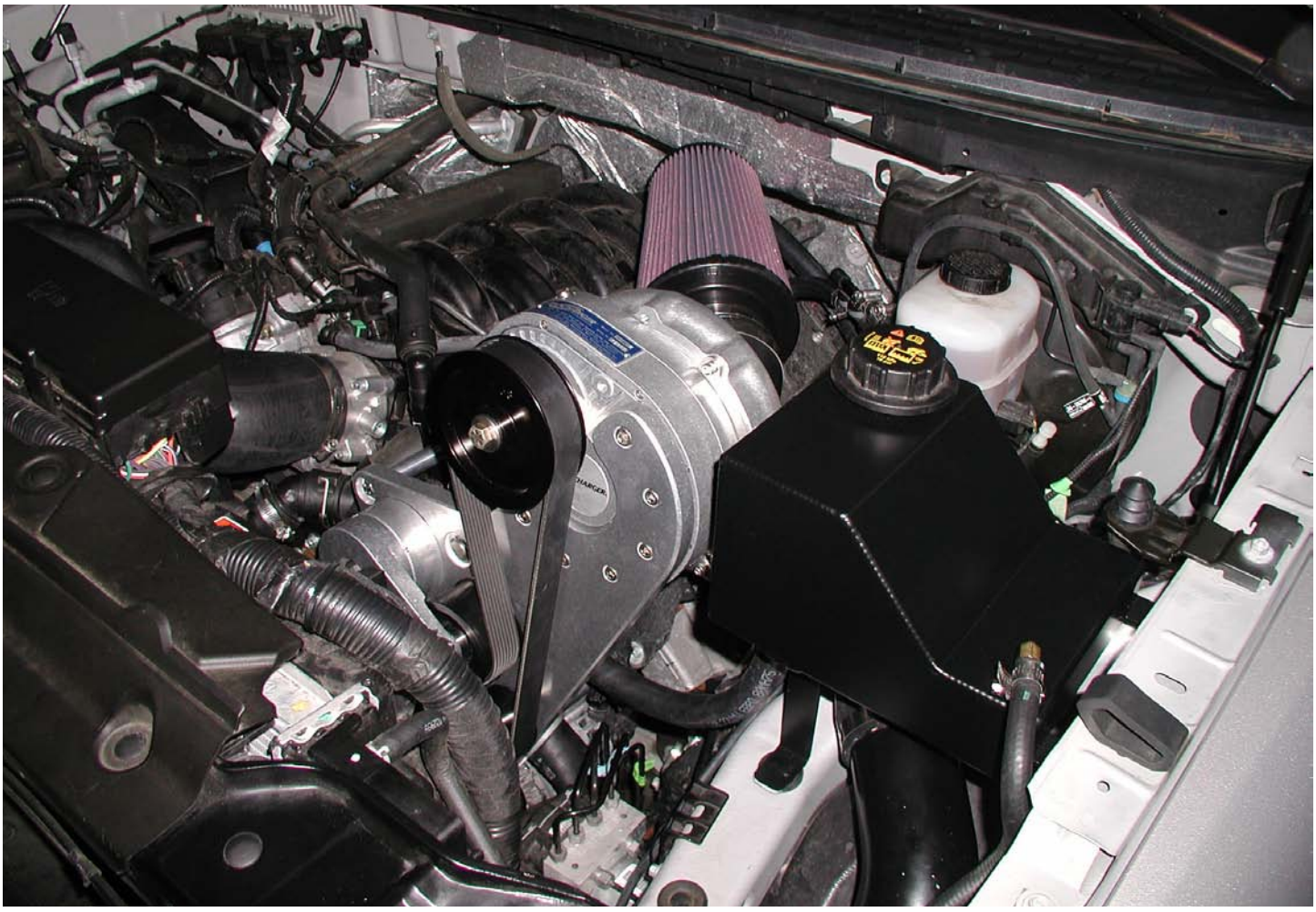


Radiator Overflow & Bottom Supply Line Connected

Rear Overflow Line Connected

# Final Assembly

1. 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.
2. Re-install the headlights.
3. Trim and re-install the air deflectors as desired.
4. Reconnect the negative battery cable to the battery.



**CONGRATULATIONS! YOU HAVE COMPLETED THE INSTALLATION OF YOUR NEW PROCHARGER SUPERCHARGER SYSTEM. FOR FULL SYSTEMS, TUNING INSTRUCTIONS ARE ON THE FOLLOWING PAGE. IF YOU DO NOT HAVE A FULL SYSTEM, ADDITIONAL TUNING WILL BE REQUIRED BEFORE STARTING THE VEHICLE. READ THE FOLLOWING PAGES CAREFULLY FOR OPERATION AND MAINTENANCE INSTRUCTIONS, AS WELL AS WARRANTY INFORMATION.**

# 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**

# 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

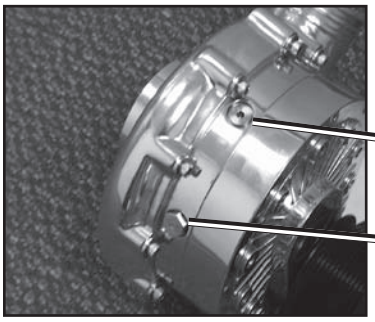
The ProCharger supercharger's oil level must be checked periodically to ensure the proper lubrication. The dipstick can be loosened using a flat blade screwdriver or a coin. When installed, the oil level should remain between the minimum (MIN) and maximum (MAX) indicators at all times.

***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.*

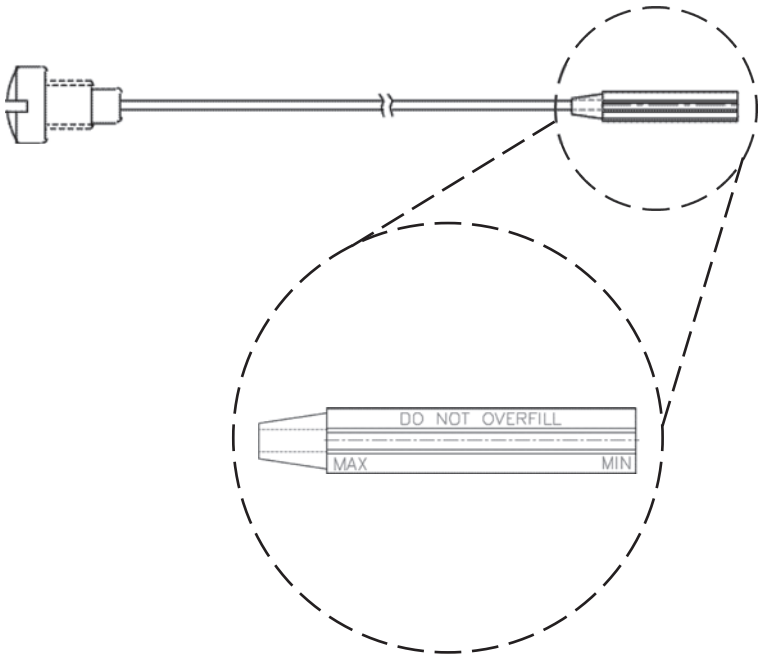
## General

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.







# 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, 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.

cut along the dotted line

# ProCharger Extended Coverage Program Registration Form

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

Name:_____

Address:_____

City:_____

State:_____ Zip:_____

Daytime phone:_____

Evening phone:_____

E-mail:_____

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

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

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

Date of Purchase:_____

Purchased From:_____

ProCharger Serial #:_____

Vehicle Year:_____

Vehicle Make:_____

Vehicle Model:_____

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

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

___ 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 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.

cut along the dotted line

This Page is Intentionally Left Blank

This Page is Intentionally Left Blank


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

**Accessible Technologies, Inc.**

**Part Number PMFV1A-001 Rev. B**