

# 2014+ C7 Corvette Intercooled System **Installation Guide**



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

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ProCharger is a registered trademark and The Intercooled Supercharging Experts!<sup>TM</sup> and Designed to Blow Away the Competition<sup>TM</sup> are trademarks of Accessible Technologies, Inc. and may not be used without express permission.

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<sup>®</sup> 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® 2014+ C7 Corvette 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

- Open End Wrench Set (standard & metric)
- 3/8" & 1/2" Socket Sets (standard & metric)
- 3/8" Hex Bit Set (standard & metric)
- 7mm & 8mm nut driver
- T15, T25, T30 Torx driver
- Propane torch
- Pry Bar
- 1/2" Impact Gun
- 1/2" Breaker Bar
- Flat & Phillips Screwdrivers
- Plier Set



**Tech Tip:** *Installing spark plugs that are one heat range 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 Corvette 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.*

# TABLE OF CONTENTS

Introduction ..... i

Table of Contents.....ii

Tuning ..... 1

Getting Started..... 4

Crank Pulley ..... 12

ProCharger Installation ..... 16

Intercooler and Tubing..... 19

Suge System ..... 27

PCV System..... 30

Air Inlet ..... 34

Final Assembly ..... 37

Operation and Maintenance ..... 39

Limited Warranty ..... 41

ProCharger Extended Coverage..... 42

**TUNING THESE VEHICLES IS A MULTI-STEP PROCESS THAT SHOULD BE INITIATED BEFORE SYSTEM INSTALLATION BEGINS. CONTACT ATI WITH ANY QUESTIONS REGARDING TUNING FOR THESE VEHICLES.**

# TUNING



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

## 2014-2016 Model Years ONLY (2017+ Model Years Skip to Step 13)

### inTune Programmer



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



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

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

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

### **Troubleshooting:**

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

- 13 Install the provided OBD-II port cover (shown below) into the OBD-II port. This will alert any person doing service work to the vehicle to not re-flash the ecm possibly causing severe engine damage or harm.



OBD-II Port Cover

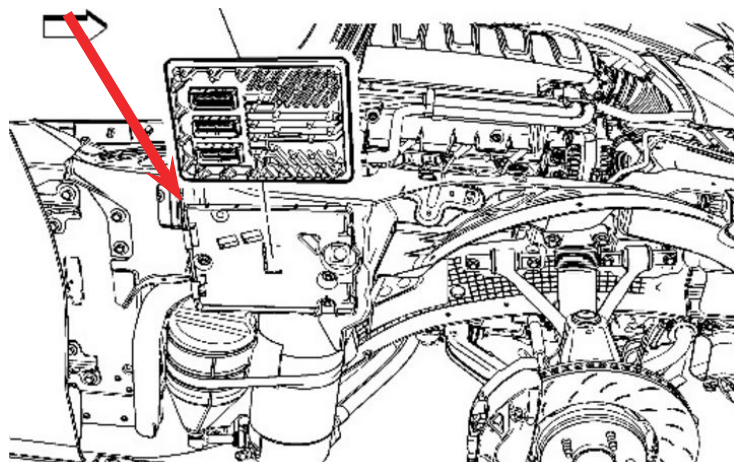
## 2017+ Model Years ONLY

(2014-2016 Models Skip to Next Section)

- 13 Disconnect the negative battery cable.
- 14 The PCM is in the fender on the passenger's side.
- 15 Remove the wheel liner on the passenger's side.
- 16 Press the locking tabs to release the PCM from the bracket.
- 17 Disconnect the electrical connectors from the PCM.

✓ **Tech Tip:** If additional room is needed, remove the lower fender bolts. Loosen the upper fender bolts, but do not remove.

- 18 A tuning certificate is included which involves mailing in your PCM to be reprogrammed.



PCM Location

# GETTING STARTED



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

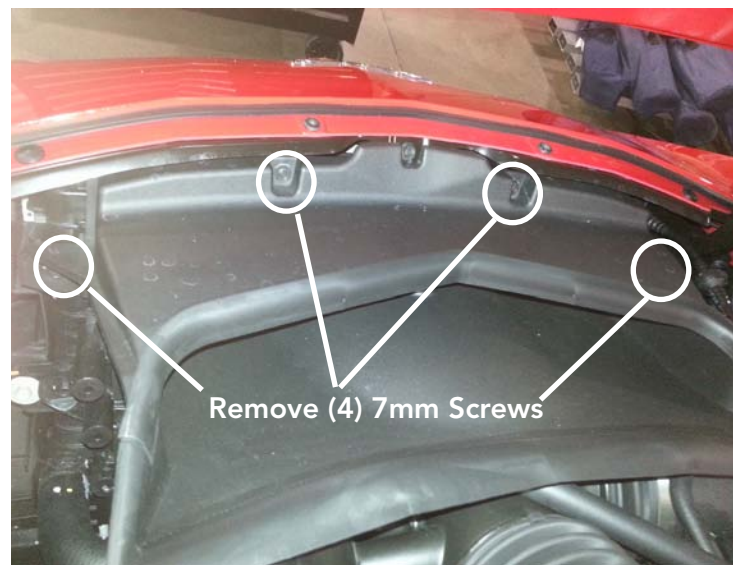
- (A) Factory Air Filter Box
- (B) Mass Airflow (MAF) sensor
- (C) Factory Air Inlet
- (D) Plastic Coil Covers

**!** *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.*



1 Disconnect the negative battery cable from the battery.

2 Use a 7mm to remove the (4) screws holding the air scoop to the radiator.



Remove Air Scoop Screws

3 Disconnect the MAF (Mass Air Flow) sensor.

4 Remove the coil covers on both sides.



Disconnect MAF Harness From Intake Tube

5 Disconnect the PCV hose on the driver's side valve cover by squeezing the clip and pulling up.

6 **Wet sump vehicles:** Remove the PCV hose on the passenger's side that goes from the passenger's valve cover to the air inlet box.

7 **All Dry sump vehicles:** Remove the PCV hose on the passenger's side that goes from the dry sump oil reservoir to the air inlet box.



Remove PCV Hose (All Dry Sump)

## Getting Started

- 8** *2017+ Dry sump vehicles only:* Disconnect the hose connection near the dry sump oil reservoir.



Disconnect Hose (2017+ Dry Sump)

- 9** *2017+ Dry sump vehicles only:* Remove the line that goes from the driver's side valve cover to the oil reservoir that was disconnected in the previous step.



Remove Line (2017+ Dry Sump)

- 10** *2017+ Dry sump vehicles only:* Remove the line from the oil reservoir that runs from the passenger valve cover to the dry sump tank.

- 11** *2017+ Dry sump vehicles only:* Place the supplied rubber cap over the open bung on the oil reservoir. Secure with a hose clamp.

- 12** *2017+ Dry sump vehicles only:* Connect the line removed from the oil reservoir in step 10 to the loose hose removed in step 8 above.

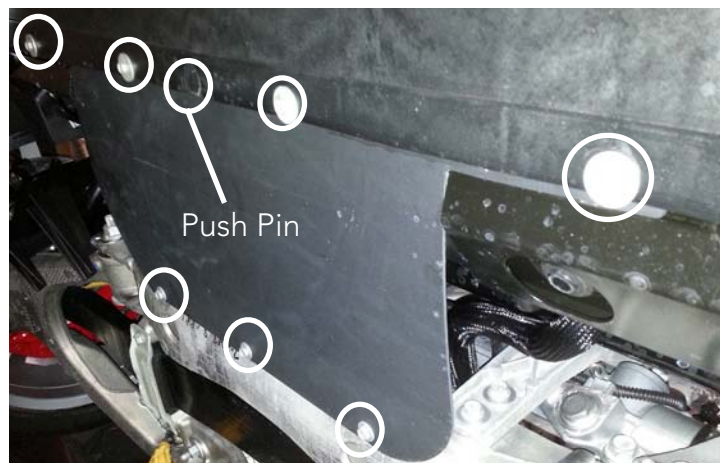


Cap Oil Reservoir (2017+ Dry Sump)

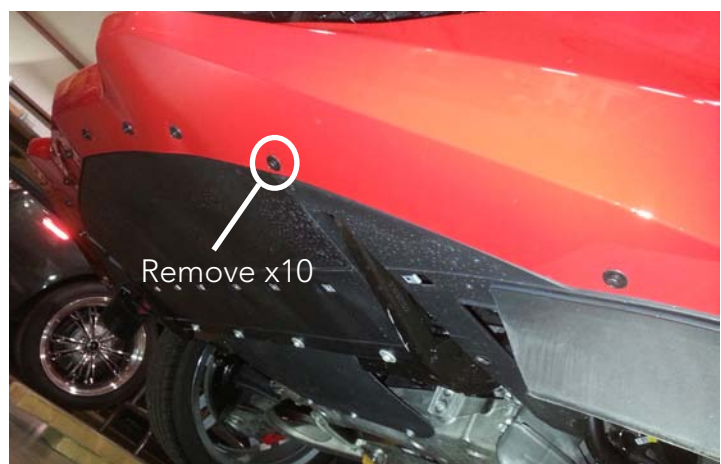
- 13 Use an 8mm to loosen the hose clamps at the throttle body and at the MAF tube. Remove the air inlet assembly.
- 14 Use a T20 Torx to remove the (2) screws holding the MAF tube to the air filter box.
- 15 Use a 10mm to remove the (2) bolts holding the air box to the fender. Remove the air filter box from the car.
- 16 Ensure the parking brake is fully engaged. Raise the front of the vehicle. Support with jack stands
- 17 Remove the front wheels from the vehicle.
- 18 Use a 10mm to remove the (7) screws and (1) plastic push-pin that hold the rubber panel under the car.
- 19 Use a 7mm to remove the 10 screws on the bottom of the front fascia. Remove the hard plastic skid panel.



Loosen Clamps and Remove Fasteners



Rubber Panel Screws



Front Fascia Lower Screws (x10)

## Getting Started

- 20 Use a T15 Torx to remove the screws that attach the wheel liner to the fascia (3 per side).
- 21 Reach through the opening in the bottom of the wheel liner to gain access to the turn signal harness. Unlock the safety clip and unplug the connector on each side.



Wheel Liner Screws (3 Per Side)

- 22 Use a 7mm to remove the 5 screws that hold the plastic shroud to the fascia.



Fascia to Shroud Screws (x5)

- 23 Unclip and remove the plastic covers in the corner of the fascia and fender on each side.



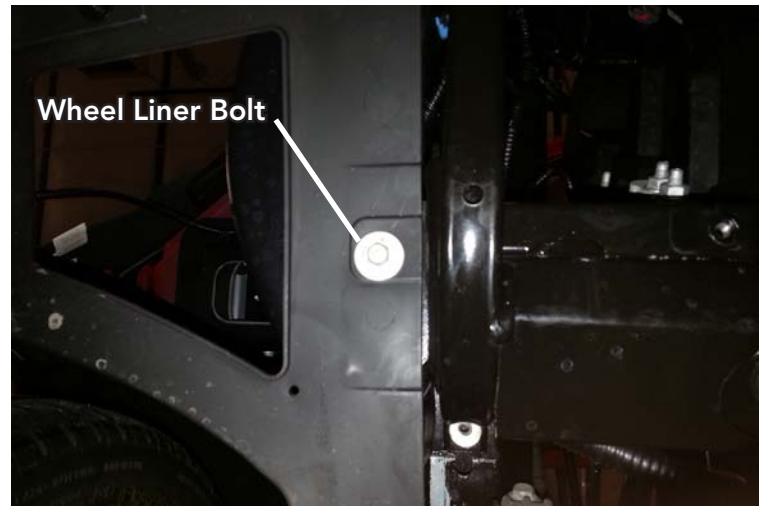
Plastic Corner Covers

- 24** Remove the 2 plastic clips and (4) T30 Torx screws at the top of the fascia.
- 25** Pull up on the fascia near the headlights to unclip. Remove the fascia. If equipped, unplug the front camera from the fascia.



Top Fascia Fasteners

- 26** Use a 10mm to remove the bolt that attaches the wheel liner to the cradle (each side).



Wheel Liner to Cradle Bolt (x2)

- 27** If equipped with brake cooling ducts, use a 10mm to remove the bolts that hold the duct to the cradle (each side).



Brake Cooling Duct Bolt (x2)

- 28 Use zip ties to hold the radiator in place before removing the cradle. Leave the zip ties very loose to allow for radiator movement in later steps.



Zip Tie Radiator

- 29 Use a 13mm to remove the (2) radiator to plastic shroud bolts.
- 30 Use a 10mm to remove the (2) cooling fan bolts. Detach the (2) radiator hose clips and wiring harness clips from the fan.
- 31 Remove the fan.



Radiator and Fan Bolts (x2)

- 32 Use a 10mm to remove the (2) bolts that hold the plastic shroud to the cradle from the back side.



Shroud to Cradle Bolt (x2)

**33** Detach the wiring harness from the cradle on the passenger's side. Use a 13mm to remove the (4) cradle bolts and remove the cradle.



Cradle Bolts (x4)

**34** If equipped, remove the (4) plastic push-clips that hold the plastic shroud to the bottom of the front bumper support.

**35** From the top, use a 13mm to remove the (3) bolts holding the shroud to the bumper support.



Shroud to Bumper Support Bolts

**36** If equipped with a transmission cooler, use a 10mm to remove the (4) screws holding the cooler to the plastic shroud. Hang the cooler out of the way

**37** Remove the ambient air temperature sensor from the plastic shroud.

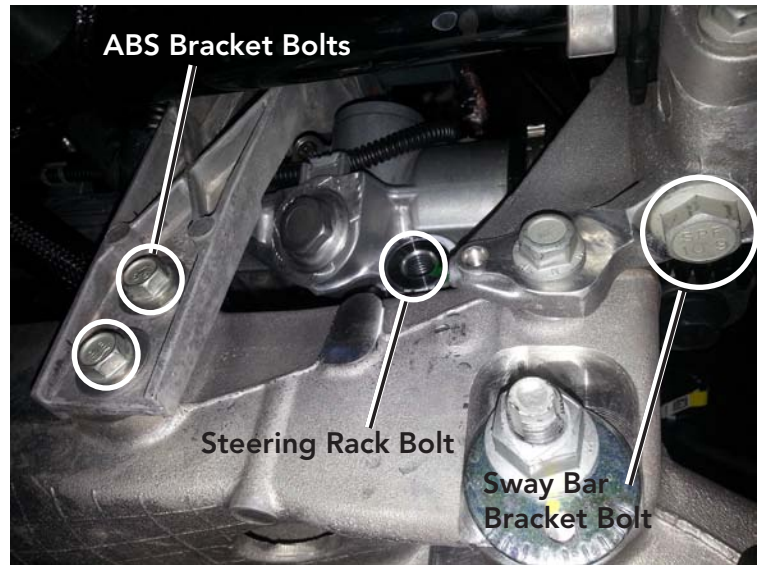


Ambient Air Temperature Sensor Removed

**38** Push the radiator up and towards the engine. Maneuver the plastic shroud down and out of the car.

## CRANK PULLEY

- 1 Use a 13mm to remove the (2) ABS bracket bolts.
- 2 Use an 18mm to remove the (2) steering rack bolts.
- 3 Use an 18mm to remove the (2) bolts that hold the sway bar bracket to the frame.



ABS and Steering Rack Bolts

- 4 Use a 21mm to loosen the (4) K-member bolts. Back the bolts as far out as possible, leaving only a few threads engaged.



K-member Bolt (x4)

- 5 Use a pry bar to separate the k-member from the frame. While separated, insert the supplied 1" spacer in between the k-member and the frame at the front bolt. Repeat for the other side.

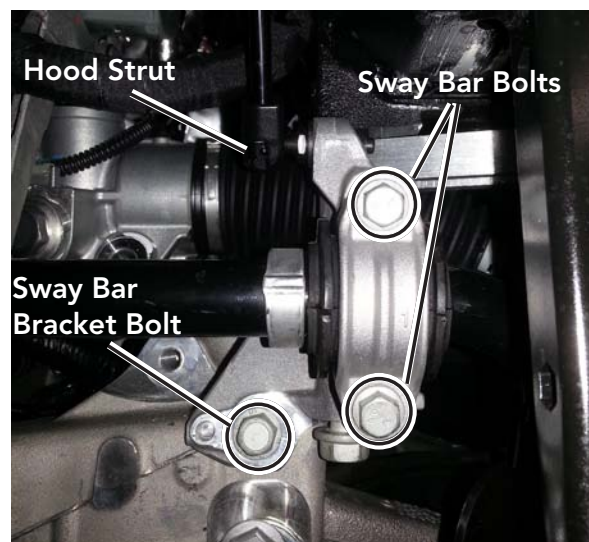


Spacer Between K-member and Frame



- 6 Use a 13mm to remove the (4) bolts that hold the caps on the sway bar bushings. Push the sway bar up and toward the front of the car.

- 7 Prop the hood up. Remove the hood struts where they mount to the sway bar bracket by prying back the locking clip. Use a 15mm to remove the sway bar bracket bolt on each side. Remove the sway bar bracket.



Sway Bar Bolts

- 8 Push the steering rack up to gain access to the crankshaft balancer bolt.

- 9 Use a 24mm socket and an impact gun to remove the balancer bolt.

- ✓ **Tech Tip:** Using a torch to heat the crank balancer bolt makes removal easier. If an impact gun won't remove the balancer bolt, put the car in a high gear and have someone apply the brakes. Use a breaker bar and extension to loosen the balancer bolt.



Crankshaft Balancer Bolt

- ✓ **Tech Tip:** For vehicles utilizing the ATI Performance Products balancer, refer to manufacturer's instructions for proper installation.

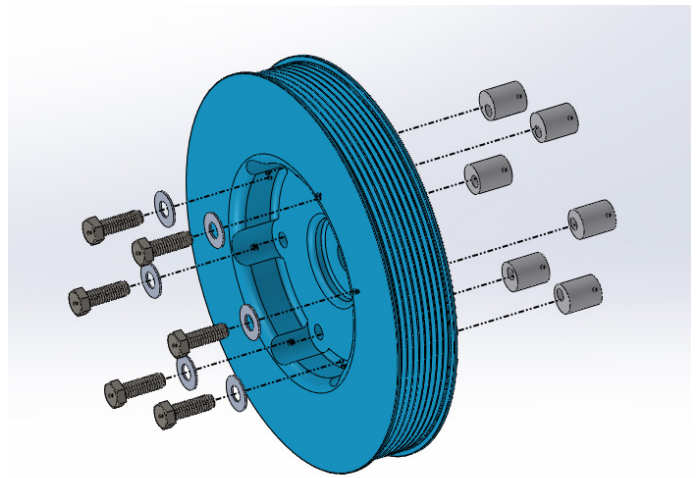
## Crank Pulley

- ✓ **Tech Tip:** *Inspect the outer edge of the machined washer surface on the factory balancer. This surface is critical for centering the drive pulley. Use a file and sandpaper to removed any burrs or sharp edges.*

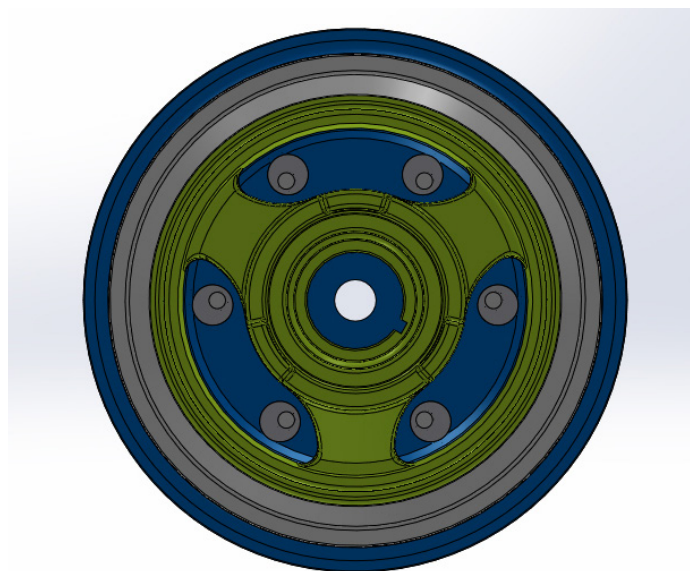


Clean Factory Balancer Edge

- 10 Insert the (6) 5/16 bolts and washers through the supplied crank pulley. Apply Loctite 272 to the bolts and thread the (6) supplied cam locks onto the threads from behind the pulley.
- 11 Use a 1/2" socket to lightly tighten the cam locks with the lobe end facing away from the center of the pulley and slightly towards an adjacent cam lock (as shown). This will provide clearance between the cam locks and the balancer webs.
- 12 Insert the crank pulley over the balancer. Rotate the pulley until it sits up against the balancer.
- 13 Insert the supplied crankshaft bolt and washer. Thread the bolt in until hand tight.
- 14 Back the cam lock bolts off approximately 1 turn. Rotate the crank pulley counterclockwise until the cam locks stop the pulley.



Crank Pulley and Cam Lock Assembly



Cam Lock Assembly Direction

- 15 Use a 24mm to tighten the crank bolt to 240 ft-lbs. Compare spacing to the image at the right to ensure the pulley is properly seated against the balancer.
- 16 Use a 1/2" socket to tighten the cam lock bolts.
- 17 Insert the supplied 8 rib belt over the crank pulley.
- 18 Reinstall the sway bar brackets to the k-member. Reinstall the hood struts.
- 19 Put the sway bar back into place and reinstall the sway bar caps.
- 20 Use a pry bar to separate the k-member from the frame and remove the spacer from each side.
- 21 Tighten the (4) k-member bolts.
- 22 Reinstall the (2) sway bar bracket bolts.
- 23 Reinstall the (2) steering rack bolts.
- 24 Reinstall the (2) ABS bracket bolts.



Crank Pulley Installed

# PROCHARGER INSTALLATION

## 2015+ Models Only

2014 Skip to page 15

- 1 Use a 13mm socket to remove the water pump bolt pictured to the right. When removing the 13mm bolt make sure to not lose the rubber sealing washer from the water pump (sealing washer is in the bolt hole).



Sub Bracket Mounting Holes

- 2 Using the 1.340" Spacer, M10x 25 SHCS, and M8x120 SHCS, mount the sub bracket to the water pump as shown.



Sub Bracket Installed

## All Models

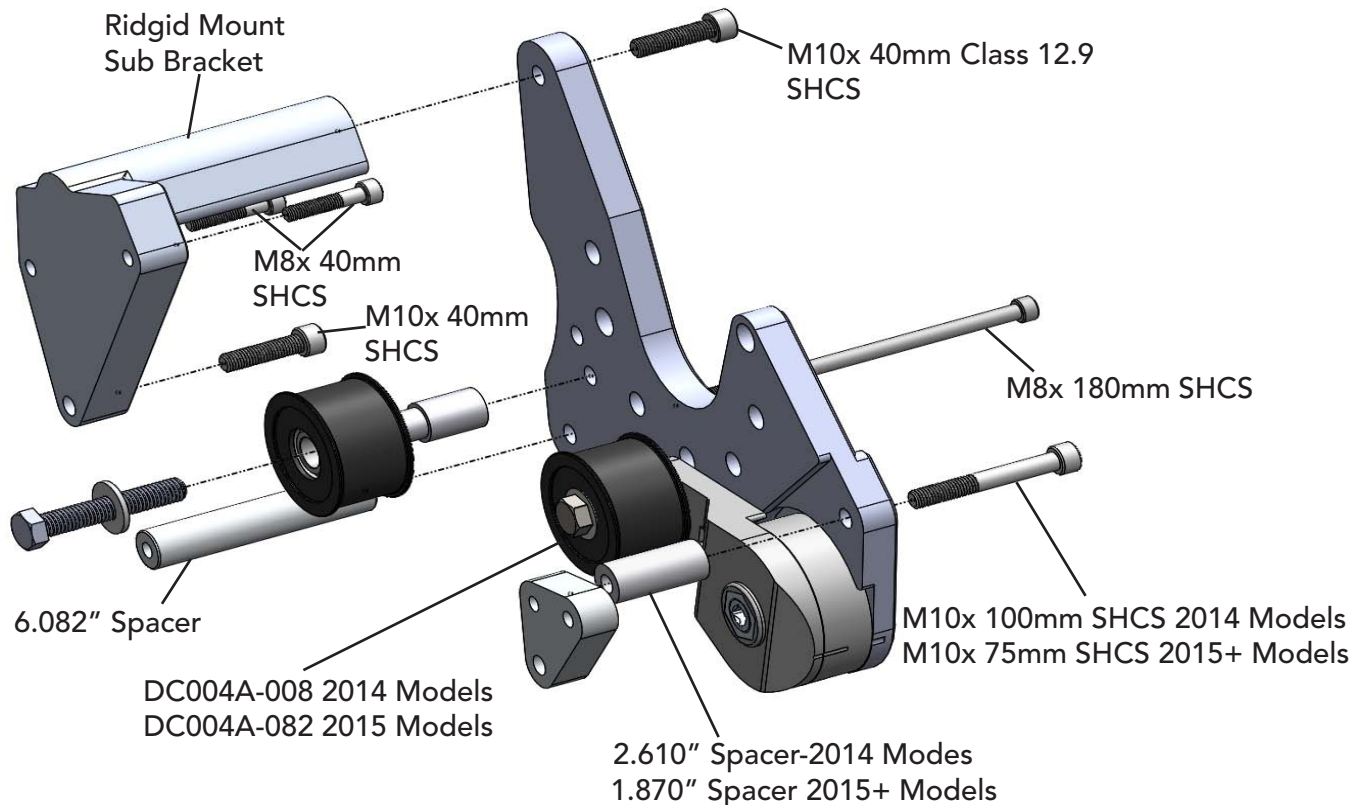
- 3 Install the supplied supercharger belt around the crankshaft damper.
- 4 Install the oil drain line onto the supercharger. Fill the supercharger with (1) 6 ounce bottle of supplied blower oil.
- 5 Mount the ProCharger onto the main bracket using the provided 5/16" and 3/8" SHCS's. Tighten the fasteners.



ProCharger Mounted to Bracket

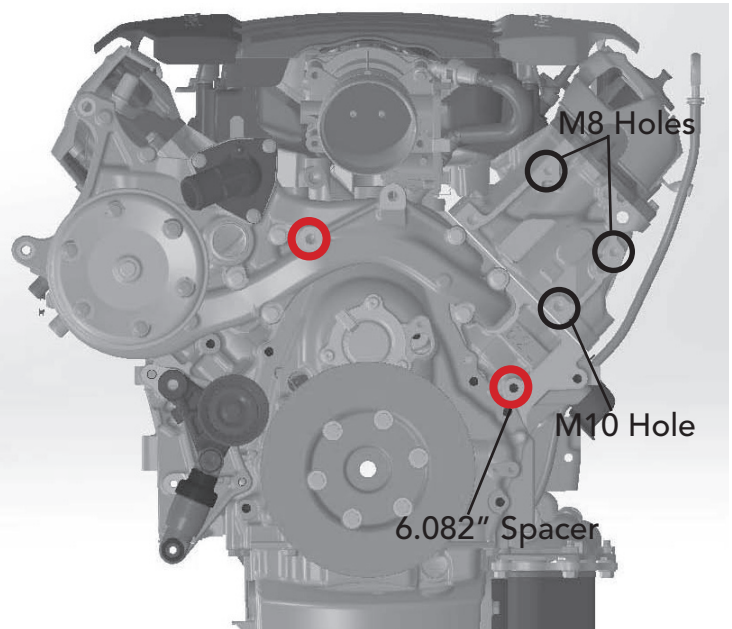
✓ **Tech Tip:** The tensioner will have to be rotated up and down to gain clearance for the supercharger bolts. Insert a 3/8 driver ratchet into the center of the tensioner and rotate clockwise.

✓ **Note:** The idler does not need to be installed at this time.



### Main Bracket Assembly

- Assemble the main bracket as shown. The longest spacer (6.082") goes on the bottom and aligns with a threaded hole near the balancer. Slide the rigid mount sub bracket between the main bracket and the cylinder head and secure to the holes circled in black to the right using the stainless steel SHCS. The M10x 40mm Class 12.9 SHCS bolts secures the top corner of the bracket to the rigid mount sub bracket. The shortest spacer goes in the middle on the passenger's side and aligns with a tapped hole on the water pump. On 2015+ models the spacer aligns with the mounting hole in the sub bracket.

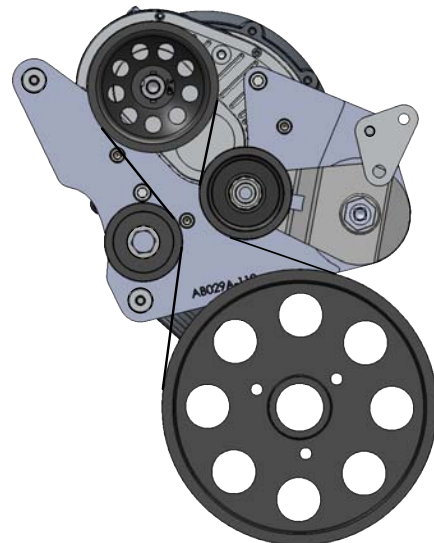


Bracket Mounting Holes

- Use a 6mm on the M8SHCS and a 8mm allen on the M10 SHCS. Tighten these bolts down evenly.
- Insert a 1/2 drive ratchet/extension into the tensioner through the bracket as shown. Rotate the tensioner counter clockwise.
- Wrap the belt around the supercharger pulley.
- There are 2 holes for mounting the idler. If possible, mount the idler on the innermost hole. Tighten with a 3/4".
- Release the tensioner and remove the ratchet/extension.

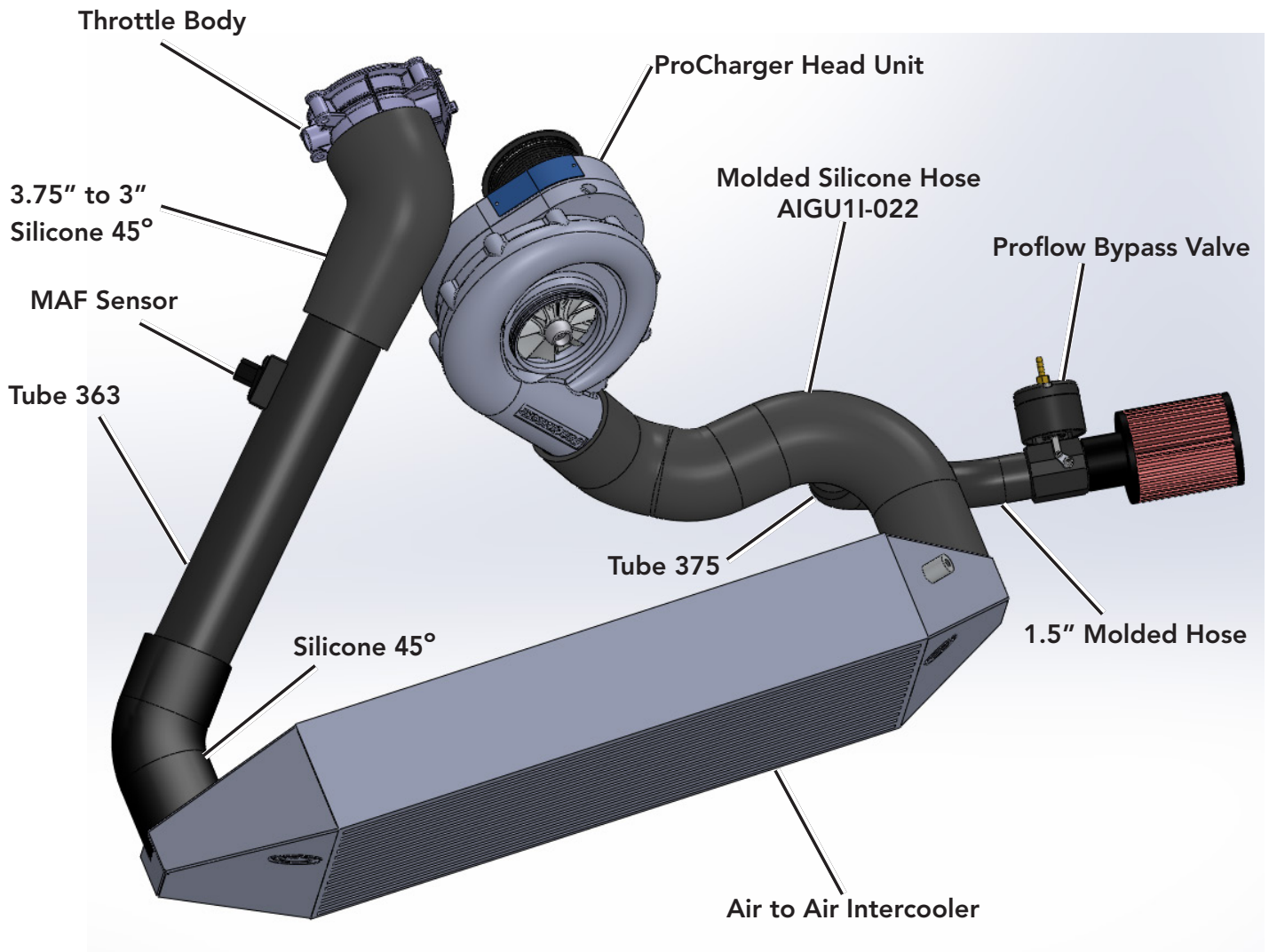


Rotate Tensioner Counter Clockwise



Belt Routing

# VERTICAL INTERCOOLER AND TUBE ROUTING



✓ **Tech Tip:** Use the supplied rubber tape to eliminate possible vibrations.

### Vertical Intercooler Only

For Horizontal Intercooler Option, Skip to Page 21

- 1 Install the supplied modified plastic shroud. It does not need to be bolted down at this time.
  - 2 If equipped with a factory transmission cooler, route the cooler and lines through the cradle before mounting the cradle.
  - 3 Install the intercooler brackets by placing them between the cradle and the frame.
  - 4 Use a 13mm to reinstall the cradle using the (4) factory bolts. Leave the bolts loose to allow intercooler adjustment.
- ✓ **Tech Tip:** Ensure the wiring harness on each side does not get caught between the intercooler bracket and the frame.



Modified Plastic Shroud Installed



Transmission Cooler Lines



Intercooler Bracket Installed (Driver's Side)



- 5 Set the intercooler in place. Use a 9/16 to start (2) of the supplied intercooler bolts (3/8 x 3/4" long HCS) in the lower mounting locations.



Lower Intercooler Bolts Installed

- 6 Start the other (2) supplied intercooler bolts (3/8 x 3/4" long HCS) in the upper mounting locations.



Upper Intercooler Bolts Installed

- 7 Adjust the intercooler as high and back as possible without contacting the condenser. Use a 13mm to tighten the (4) cradle bolts. Leave the intercooler bolts loose until all intercooler tubing has been connected.

- 8 Reinstall the ambient air temperature sensor.



Intercooler Installed

## Intercooler and Tubing

- 9 If equipped with a factory transmission cooler, attach the trans cooler brackets to the bungs on the intercooler using the supplied 3/8" bolts and washers.



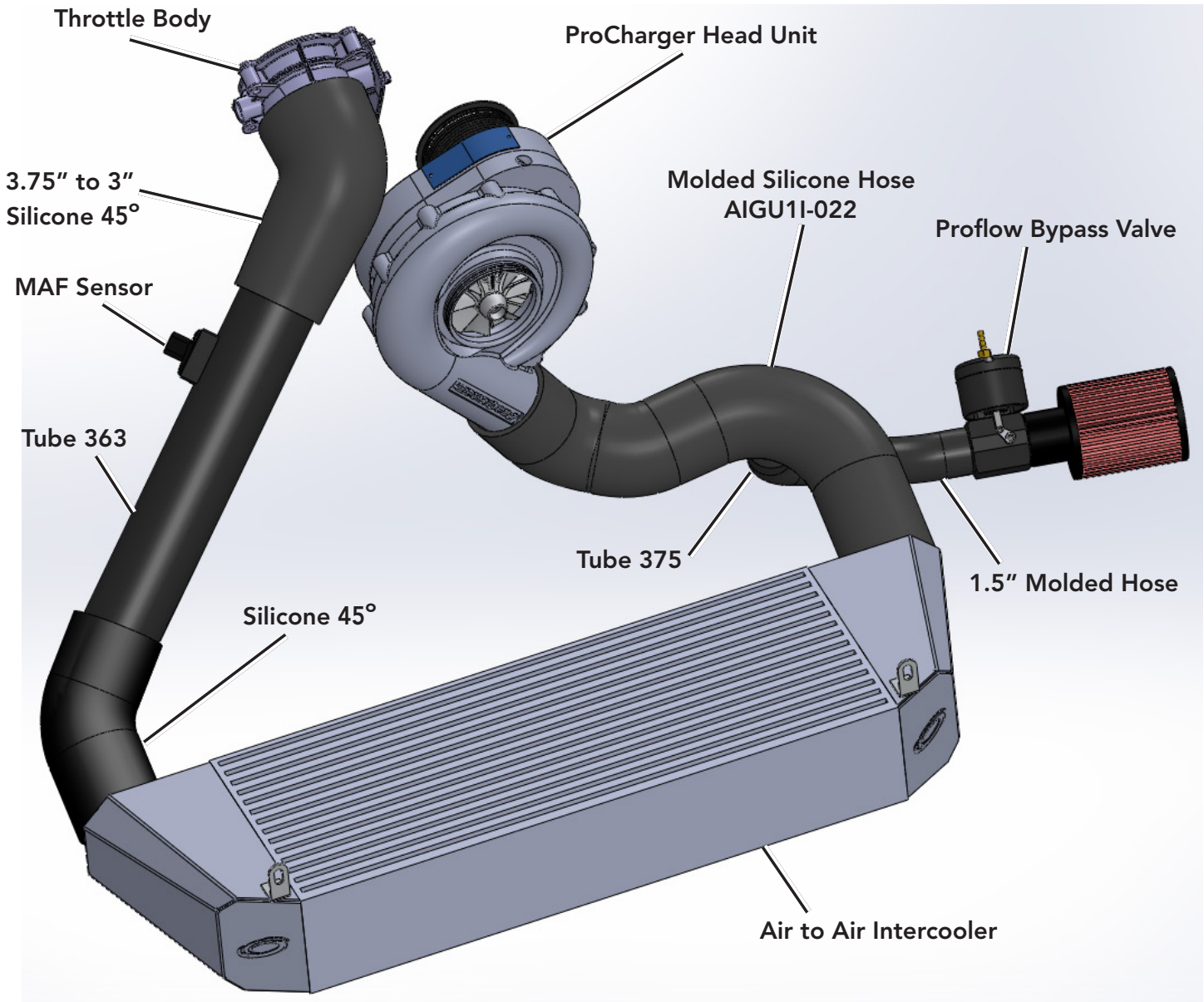
Trans Cooler Brackets

- 10 Use a 7/16" to mount the transmission cooler to the brackets using the supplied 1/4" bolts, washers, and locknuts.



Trans Cooler Mounted (If Equipped)

# HORIZONTAL INTERCOOLER AND TUBE ROUTING

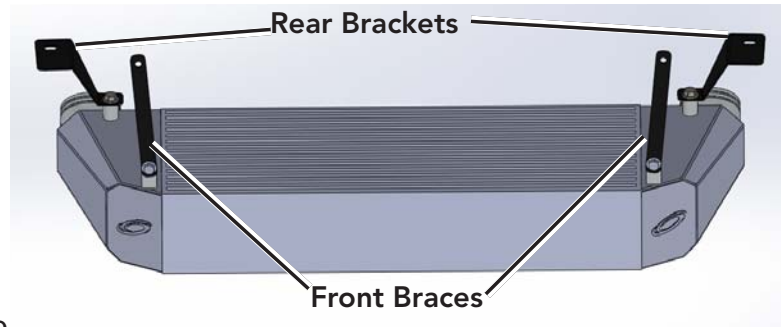


✓ **Tech Tip:** Use the supplied rubber tape to eliminate possible vibrations.

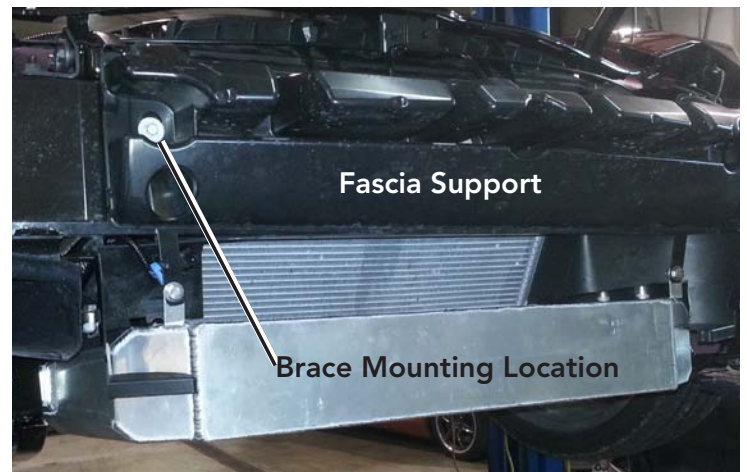
### Horizontal Intercooler Only

For Vertical Intercooler Option, Skip to Page 25

- 1 Install the supplied modified plastic shroud. It does not need to be bolted down at this time.
- 2 Install the rear intercooler brackets by placing them between the cradle and the frame at the front bolt on each side.
- 3 Use a 13mm to reinstall the cradle using the factory bolts. Leave the bolts loose to allow intercooler adjustment.
- 4 Use a 10mm to remove the (2) outer bolts that fasten the plastic fascia support. Slide the supplied braces behind the fascia support and reinstall the factory bolt. Leave the bolts loose for adjustment.
- 5 Set the intercooler in place. Use a 9/16" to start (2) of the supplied 3/8 x 3/4" long bolts in the rear mounting locations. Connect the braces to the front intercooler tabs using the provided 5/16" bolts, washers, and nuts using a 1/2" socket and wrench.
- 6 Adjust the intercooler and tighten the hardware. The bolts for the rear brackets can be reached from above the car.
- 7 Use a zip tie to secure the ambient air temperature sensor to the intercooler brace.



Horizontal Intercooler with Brackets



Intercooler Installed



Ambient Air Temperature Sensor Installed

## All Models

- 1 Bolt down air shroud using the factory hardware. (3) bolts on top of bumper, (2) bolts at the radiator, and (2) bolts at the cradle.

✓ **Tech Tip:** Applying a small amount of WD40 on connections will help with installation.

- 2 Locate the molded silicone hose. Slide the 90° end onto the intercooler inlet on the driver's side.

- 3 Slide the other end onto the discharge of the ProCharger. Secure both ends with #52 hose clamps. The hose may be trimmed on the supercharger end to reduce contact with the sway bar.

✓ **Tech Tip:** If equipped with the race valve option, the molded silicone hose will need to be cut to install tube #368. Install the valve onto the tube at this time using the supplied o-ring and (6) #10 SHCSs.

✓ **Optional:** Cut the (2) bosses shown on the cooling fan flush with the body of the fan. Cut the rib above the fan motor (not present on some models) flush with the surrounding material. Unclip the fan electrical connector from the fan's base. This will provide easier fan installation and more room for tubing.



Top View of Driver's Side I/C Hose



Optional Race Valve Installed



Fan Modification

## Intercooler and Tubing

- 4 Reinstall the fan. This is most easily done by sliding the driver's side down first. Keep the radiator hose on the driver's side pulled up and out of the way during installation. Pull the radiator hose on the passenger's side towards the fender to allow the mounting ears on the fan to pass by. Make sure the tabs on the lower part of the fan get set into the hooks on the radiator. Tighten the (2) fan bolts with a 10mm.
- 5 Slide the silicone 45° coupler onto the outlet of the intercooler.
- 6 Slide tube #363 into the 45° coupler. Tube #363 must be oriented with the MAF bung closest to the throttle body.
- 7 Install the silicone 3.75" to 3" 45° reducer onto the throttle body.
- 8 Slide tube #363 into the silicone reducer.
- 9 Tighten the provided 4.00" T-bolt clamp on the silicone coupler at the throttle body. Tighten the 3.38" T-bolt clamp on the silicone coupler at the connection with tube #363. Tighten all hose clamps.
- 10 From underneath the vehicle, slide tube #375 into the molded silicone hose. Secure with a #24 hose clamp.
- 11 Use a 9/16" to tighten the (4) intercooler bolts.



Cooling Fan Installed



MAF Sensor Towards Throttle Body



Tube 375 Installed

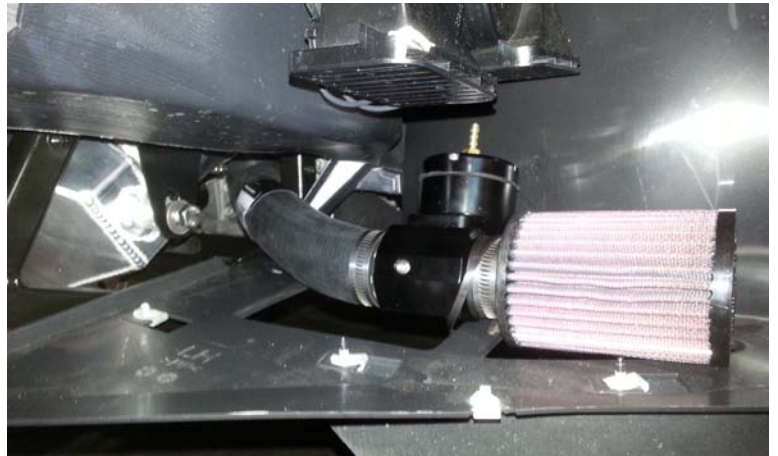
## SURGE SYSTEM

- 1 Install the supplied 1-1/2" rubber hose onto tube #375 and route around the cradle in front of the driver's wheel liner. Tighten with a #24 hose clamp.



Surge Valve Hose Routing

- 2 Install the surge valve onto the end of the rubber tube. Install the filter on the other end. Point the barb fitting to where it can be reached by a vacuum line. Tighten both # 24 hose clamps.



Surge Valve Installed

- 4 Remove the short factory PCV hose behind the throttle body on the driver's side.



Factory Vent Hose

## Surge System

✓ **Tech Tip:** When installing a race valve, the assembly utilizes push lock fittings and nylon hose, replacing the standard barb fitting and rubber hose. Thread the push lock fitting onto the vacuum manifold and race valve, and simply push the nylon line into each fitting to create a secure connection.

5 Assemble the vacuum manifold with a straight 3/8" barb fitting on one end and a 90 degree 3/8" barb fitting on the other end of the manifold. Plug (2) of the 1/8" ports with the 1/8" brass plugs. Install the 1/8" barb fitting in the remaining 1/8" port.

6 Connect the supplied 3/8" rubber hose to the top port on the intake manifold.

7 Cut the 3/8" rubber hose to the appropriate length and insert the vacuum manifold into the open end. Tighten both connections with the supplied hose clamps.

8 Route the supplied vacuum line from the 1/8" barb on the vacuum manifold down to the barb fitting on the Proflow valve.

9 Connect the additional supplied 3/8" rubber hose to the lower PCV port.

10 Cut the 3/8" rubber hose to the appropriate length such that it can be routed to the vacuum manifold.



Vacuum Manifold Assembled



Vacuum Manifold Top Port Installed

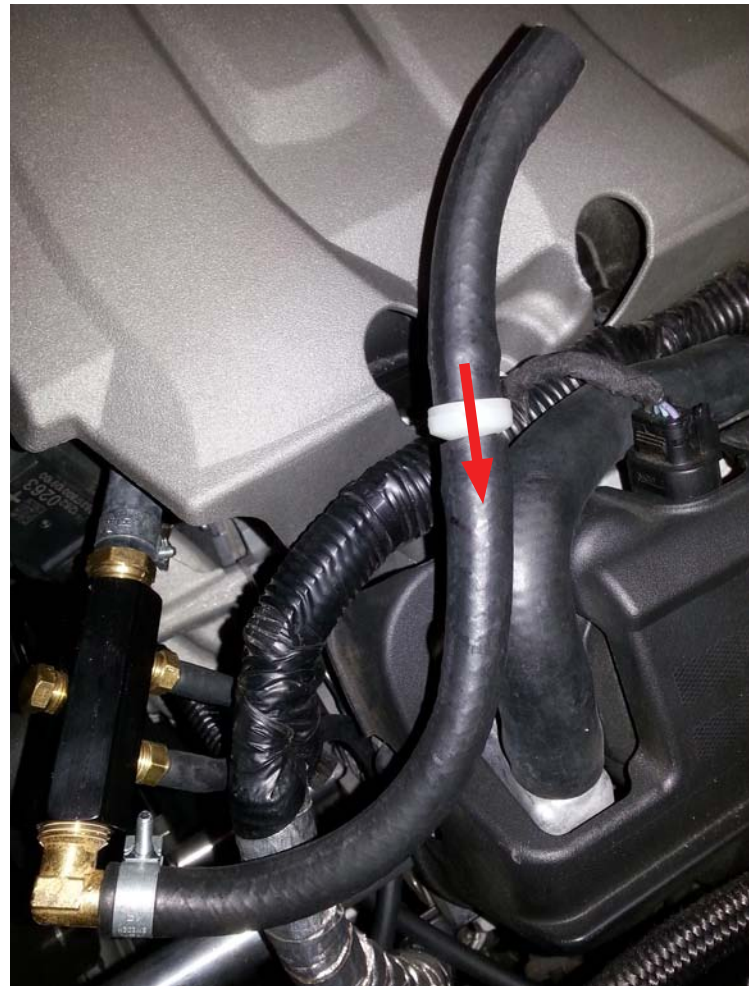


Vacuum Manifold Lower Port



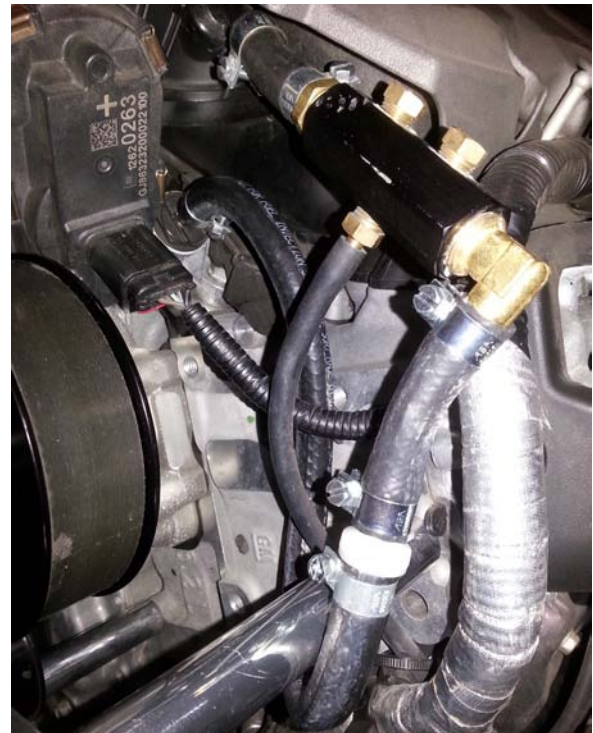
- 11 Splice the provided check valve into the middle of the 3/8" rubber hose running from the lower port to the vacuum manifold.

✓ **Tech Tip:** When installing the check valve into the hose make sure the arrow points towards the vacuum manifold (as pictured). There is an arrow on the check valve to identify direction.



Check Valve Install

- 12 Connect the 3/8" rubber hose to the 3/8" 90 degree barb fitting on the vacuum manifold. Tighten all connections with the supplied hose clamps.



Vacuum Manifold Installed

# PCV SYSTEM

## All Models

- 1 Cut the short end of the 5/8" rubber hose to properly fit over the driver's valve cover vent.



Driver's Side PCV Hose

- 1a *Optional method:* Unclip the coil pack connectors. Route the supplied 5/8" rubber hose tight along the valve cover. Reconnect the coil connectors. Trim the coil cover to fit over the hose.



Optional: Hose Routed Under Coil Cover

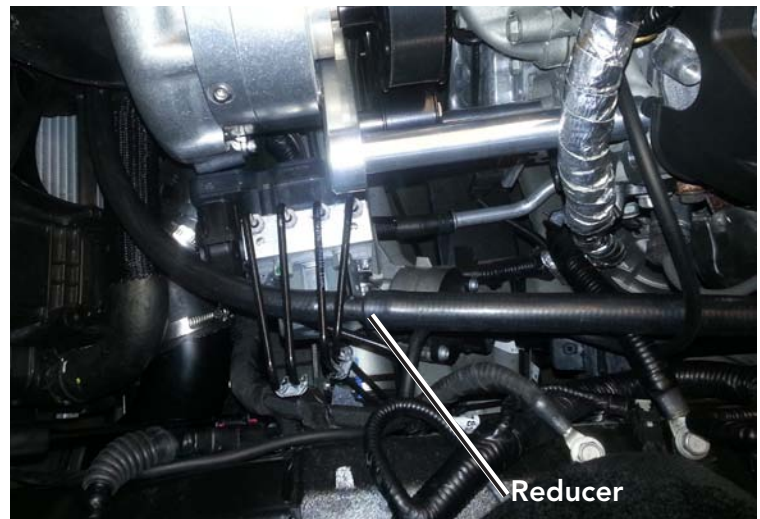


Optional: Trimmed Coil Cover

## Dry Sump Models Only

Wet Sump Models proceed to step 9

- 2 Insert the provided 5/8 to 1/2 plastic reducer into the open end of the hose.
- 3 Attach a supplied section of 1/2" hose to the plastic reducer. Route the hose in front of the fan. Make sure it is free from any moving components.
- 4 Cut the short end of the supplied 3/8" rubber hose to properly fit over the open vent on the dry sump reservoir.
- 5 Route the 3/8 hose along the fender towards the front of the car. Insert the 3/8 to 1/2 plastic reducer in the open end of the hose.
- 6 Attach the supplied section of 1/2" hose to the plastic reducer. Route the hose in front of the cooling fan.
- 7 Connect the driver's and passenger's side PCV lines with the supplied 1/2" plastic "T".
- 8 Attach a short piece of 1/2" hose to the open port on the "T". This will be connected to the inlet tube in a later step.



Driver's Side PCV Routing



Passenger's Side PCV Routing

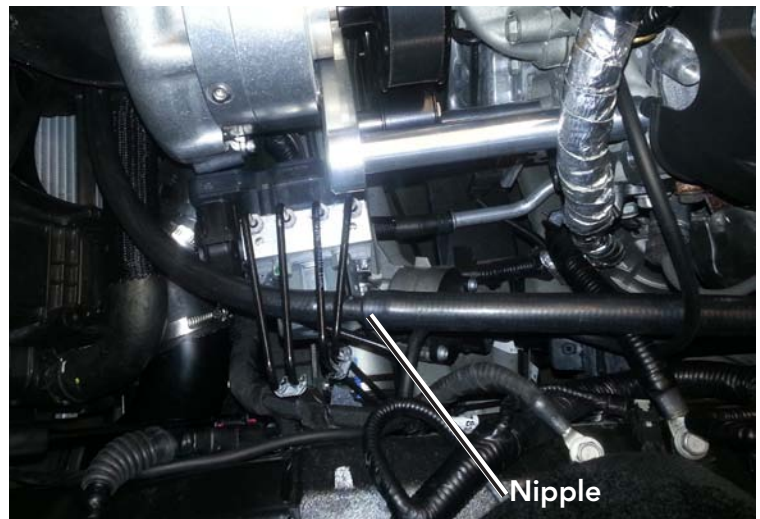


PCV Hose "T"

### Wet Sump Models Only

Dry Sump Models Proceed to Next Section.

- 9 Insert the provided 5/8 straight hose nipple into the open end of the hose on the driver's side.
- 10 Attach a supplied section of 5/8" hose to the 5/8 nipple. Route the hose in front of the fan. Make sure it is free from any moving components.
- 11 Cut the short end of the supplied 5/8" rubber hose to properly fit over the passenger's side valve cover vent.
- 12 Route the 5/8 hose over the accessory drive and towards the front of the car.



Driver's Side PCV Routing



Passenger's Side PCV Routing

- 13 Connect the driver's and passenger's side PCV lines with the supplied 5/8" plastic "T".
- 14 Attach a short piece of 5/8" hose to the open port on the "T". This will be connected to the inlet tube in a later step.



PCV Hose "T"

- 15 If not factory installed, secure the coolant line to the body using the supplied hose loop clamp and push pin.



Coolant Hose Loop Clamp Installed

# AIR INLET

## H.O. Inlet

All Other Inlet Options Proceed to Next Section

- 1 Place the factory air filter box back in its' factory location but do not start the bolts.
- 2 Insert the supplied high-flow air filter into the factory box.
- 3 Install the brass hose barb fitting into tube #369.
- 4 Attach tube #369 to the factory air filter box by tilting the tube down to insert the tabs on the tube into the slots on the air box.
- 5 Secure the tube to the factory air box using the factory screws and a T25 torx.
- 6 Install the factory bolts that hold the air box to the fender using a 10mm.
- 7 Attach the hose from the PCV "T" to the barb fitting on tube #369.
- 8 Slide the 4" end of the silicone elbow over the tube and secure with a 4.25" T-bolt clamp.
- 9 Slide the 3.5" end of the silicone elbow over the inlet of the blower and secure with a #60 hose clamp.



Connecting the Inlet Tube to Factory Air Box



Inlet Tube Installed

## Stage 2 Inlet

All Other Inlet Options Proceed to Next Section

✓ **Note:** If optioned with a stage 2 inlet and a 4" inlet supercharger (F1A-94, F1C, F1C-94, or F1R), you will receive universal inlet components.

- 1 Locate the plastic air inlet tube. Install the brass hose barb fitting into the threaded port on the tube.
- 2 Slide the supplied air filter onto the 45° end of the plastic inlet tube.
- 3 Slide the 90° end of the plastic inlet elbow onto the inlet of the supercharger.
- 4 Attach the hose from the PCV "T" to the barb fitting on the inlet tube. Secure with a hose clamp.
- 5 Adjust the inlet tube and filter for best fitment and secure with the provided hose clamps.



Stage 2 Air Inlet Installed

### Rotomold Air Inlet

All Other Options Proceed to Next Section

#### F1, F1A, F1A-94, F1D, F1C, F1C-94, F1R

- 1 Secure the inlet adapter to the supercharger using the supplied T bolt clamp.
- 2 Secure the rotomold tube to the adapter using the supplied T bolt clamp.
- 3 Secure the air filter to the rotomold tube using the supplied hose clamp.



Rotomold Air Inlet Installed

#### F1X, F2

- 1 Secure the rotomold tube to the supercharger using the supplied T bolt clamp.
- 2 Secure the air filter to the rotomold tube using the supplied hose clamp.

### Bellmouth Inlet

All Other Options Proceed to Next Section

- 1 If equipped with a bellmouth option, slide the bellmouth over the inlet of the supercharger. Tighten using the supplied T-bolt clamp.



Bellmouth Installed (F1X Option Shown)



# FINAL ASSEMBLY

- 1 Reinstall the front fascia.
- 2 Reinstall the plastic corner covers.
- 3 Use a 7mm to install the screws that hold the modified plastic shroud to the fascia (1 each side).



Plastic Shroud to Fascia Screw (x2)

- ✓ **Tech Tip:** *If the supplied modified skid panel does not have panel nuts, remove the panel nuts from your factory skid panel and install them onto the new skid panel before installation.*

- 4 Use a 10mm to reinstall the rubber splash panel. Leave the front (4) bolts out as these holes are shared with the plastic skid panel.
- 5 Install the supplied modified skid panel. Use a 7mm to attach the skid panel to the fascia using the factory screws. Use a 10mm to secure the skid panel and the splash panel to the frame.



Modified Skid Panel Installed (Horizontal I/C)



Modified Skid Panel Installed (Vertical I/C)

## Final Assembly

- 6 Use a Phillips screwdriver to remove the factory MAF (Mass Air Flow) sensor from the factory inlet tube.
  - 7 Using a 7mm, install the MAF sensor into the tube with the supplied M4 screws.
  - 8 Connect the MAF sensor to the factory connector using the supplied MAF extension harness.
  - 9 Route the harness away from any moving parts. Use zip ties to secure.
- ✓ **Tech Tip:** It is highly recommended that colder heat range spark plugs are installed. NGK 6510 spark plugs are recommended for most applications.
- 10 Reinstall the air scoop.
  - 11 Check hood clearance.



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

# OPERATION AND MAINTENANCE

## Cold Starting

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

## Fuel Quality

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

## Ignition System Maintenance

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

## Air Filter Maintenance

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

## Belt Replacement

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

## ProCharger Oil Change Intervals

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

## ProCharger Oil Level

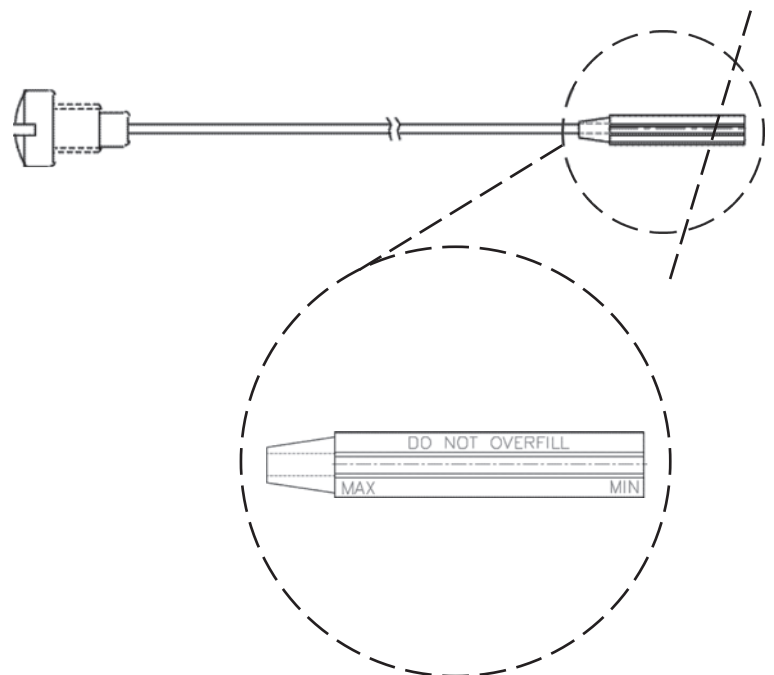
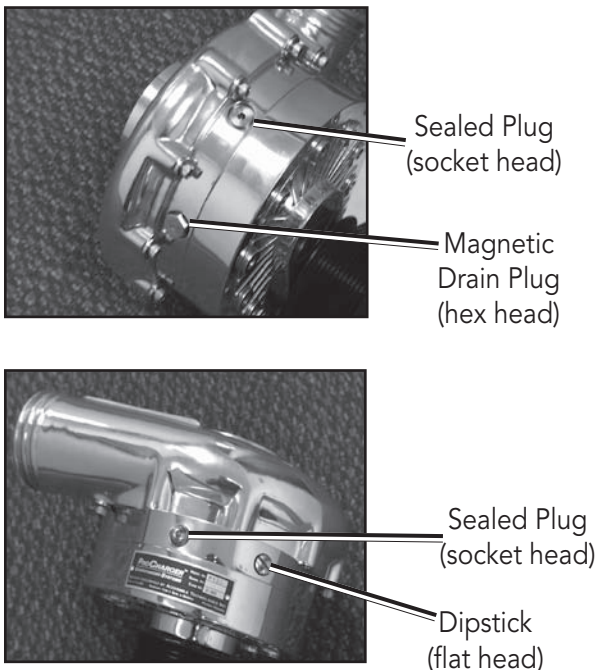
The ProCharger supercharger's oil level must be checked periodically to ensure the proper lubrication. The dipstick can be loosened using a flat blade screwdriver or a coin. When installed, the oil level should remain between the minimum (MIN) and maximum (MAX) indicators at all times.

**!** **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**

# PROCHARGER EXTENDED COVERAGE

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

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

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

Race kits are not eligible for the ProCharger Extended Coverage Plan

### To qualify for the ProCharger Extended Coverage:

- Only the original owner of the ProCharger supercharger is eligible.
- Completion of the Extended Coverage Registration Form is required, along with a \$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 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: \_\_\_\_\_

Country: \_\_\_\_\_

Vehicle Make: \_\_\_\_\_

Daytime phone: \_\_\_\_\_

Vehicle Model: \_\_\_\_\_

Evening phone: \_\_\_\_\_

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

E-mail: \_\_\_\_\_

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

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

- \_\_\_ 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 PMGU1A-001 Rev. X**

