

2011-14 Dodge 5.7L
Challenger/Charger/300C
High Output 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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TORQUE SPECIFICATION CHART	 GRADE 5			 GRADE 8		
	Thread Size	Torque (lb.ft.)			Torque (lb.ft.)	
1/4-20	11	8	7	16	12	10
1/4-28	13	10	8	18	14	11
5/16-18	23	17	14	33	25	20
5/16-24	26	19	15	36	27	22
3/8-16	41	31	25	58	44	35
3/8-24	47	35	28	66	49	39
7/16-14	66	49	40	93	70	56
1/2-13	101	75	60	142	106	85
1/2-20	113	85	68	160	120	96

INTRODUCTION

Congratulations on purchasing your ProCharger® 2011-14 Dodge 5.7L Challenger/Charger/300C H.O. Intercooled System. Read this entire manual before you attempt to install your ProCharger kit. It is imperative that you follow all of the instructions in the order they appear in this installation guide. If you have any questions regarding any aspect of this installation, call us at (913) 338-3086.

For best results, we recommend reviewing the installation instructions beforehand, and following the installation instructions closely and in sequence. A detailed packing list has been provided to assist you in identifying the components of your ProCharger system.

Required Tools and Supplies

- 3/8" Socket Set (standard & metric)
- 1/2" Socket Set (standard & metric)
- Open End Wrench Set (standard & metric)
- 3/8" Hex Bit Set (allen head)
- Flat Screwdrivers
- Phillips Screwdrivers
- Plier Set
- Coolant
- Pipe Thread Sealant



Warning: *Your supercharged Challenger must always be run on 91 octane or higher gas. Do not run vehicle at wide-open throttle if you have less than 1/4 tank of gas.*

You should also have the following gauges available to properly check the finished installation and monitor your vehicle's performance (especially for testing):

- Manifold Boost Pressure Gauge
- Fuel Pressure Gauge
- Wide Band Oxygen Sensor and Gauge

Gauges should be of a type that can be read from the cockpit while performing a wide-open throttle road test. Cockpit or hood-mounted gauges are preferable. In order to obtain usable readings, the gauges should measure pressure at the intake manifold and fuel rail. **IF VEHICLE DOES NOT MAINTAIN PROPER FUEL PRESSURE (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.

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TUNING IS REQUIRED WHEN INSTALLING YOUR PROCHARGER SYSTEM. IF A COMPLETE SYSTEM WAS PURCHASED. SEE SUPPLEMENTAL TUNING GUIDE. IF A TUNER KIT WAS PURCHASED. TUNING WILL HAVE TO BE PERFORMED BEFORE OPERATING THE VEHICLE.

 **Tech Tip:** Spark plugs that are one heat range cooler than stock are recommended for use with this system. We suggest replacing your factory plugs at this time.

STOCK COMPONENT REMOVAL



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

(A) Factory Air Filter Box

(B) Intake Air Temp. Sensor

(C) PCV Tube

(D) Plastic Engine Cover(s)

! **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.

Engine Air Filter

- 1 Disconnect the battery ground.
- 2 Remove the Engine Cover(s).
- 3 Remove the IAT (Intake Air Temperature) Sensor.
- 4 Remove the PCV Tube from the intake manifold.
- 5 Remove the Engine Air Filter Assembly bolt with a 10mm socket.
- 6 Loosen the band clamp from the Air Filter housing to throttle body connection with an 8mm nut driver.
- 7 Remove the entire Air Filter Assembly from the vehicle.
- 8 Remove the radiator cavity covers (2x) by pulling up and toward the center of the vehicle.



Engine Air Filter Removed



Radiator Cavity Covers Removed

Underside Body Cladding

- 1 Raise the vehicle.
- 2 Remove the six panel fasteners, three in each front fender well, with a flat head screwdriver.
- 3 Remove four 10mm bolts and remove the back cladding.
- 4 Remove ten 7mm bolts (some models have 5) and three panel fasteners from the front cladding. Remove the front cladding from vehicle.



Underside Body Cladding



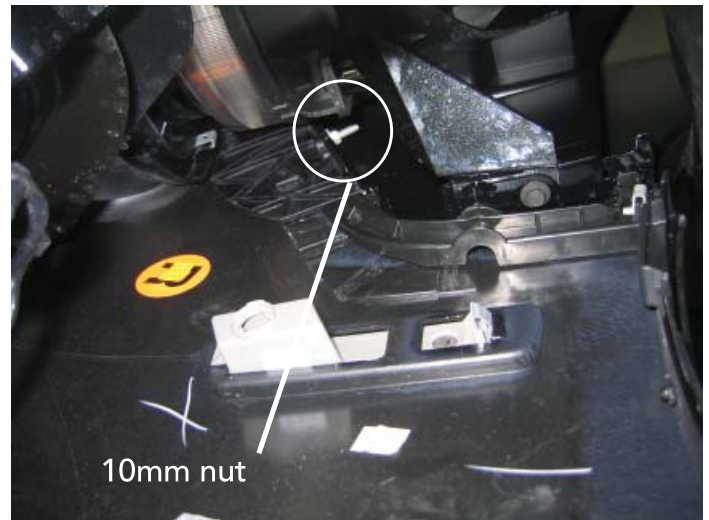
Underside Body Cladding Removed

Front Fascia

- 1 Remove the six panel fasteners from the top side of the front fascia.
- 2 Using a 1/4" drill bit, drill out the six (three on each side) plastic pop rivets connecting the front fender wells to the front fascia (2013+ models have plastic push pins).
- 3 Remove the two 10mm bolts (one on each side) from the lower fascia. Midway up the fascia, from the back side, remove the two 10mm nuts (one on each side).
- 4 Remove the remaining two 10mm nuts (one on each side) from the front fascia, located on the top corner of the fascia, accessed from the engine bay.
- 5 On the passenger's side of the vehicle, disconnect the wiring harness running to the front fascia. This will eliminate having to unplug the fog lamps and turn signals separately.
- 6 Remove the front fascia from the vehicle by pulling out on each side, unsnapping the fascia, then pulling the fascia straight off the front of the vehicle.



Fascia Connections (Pass. Side)

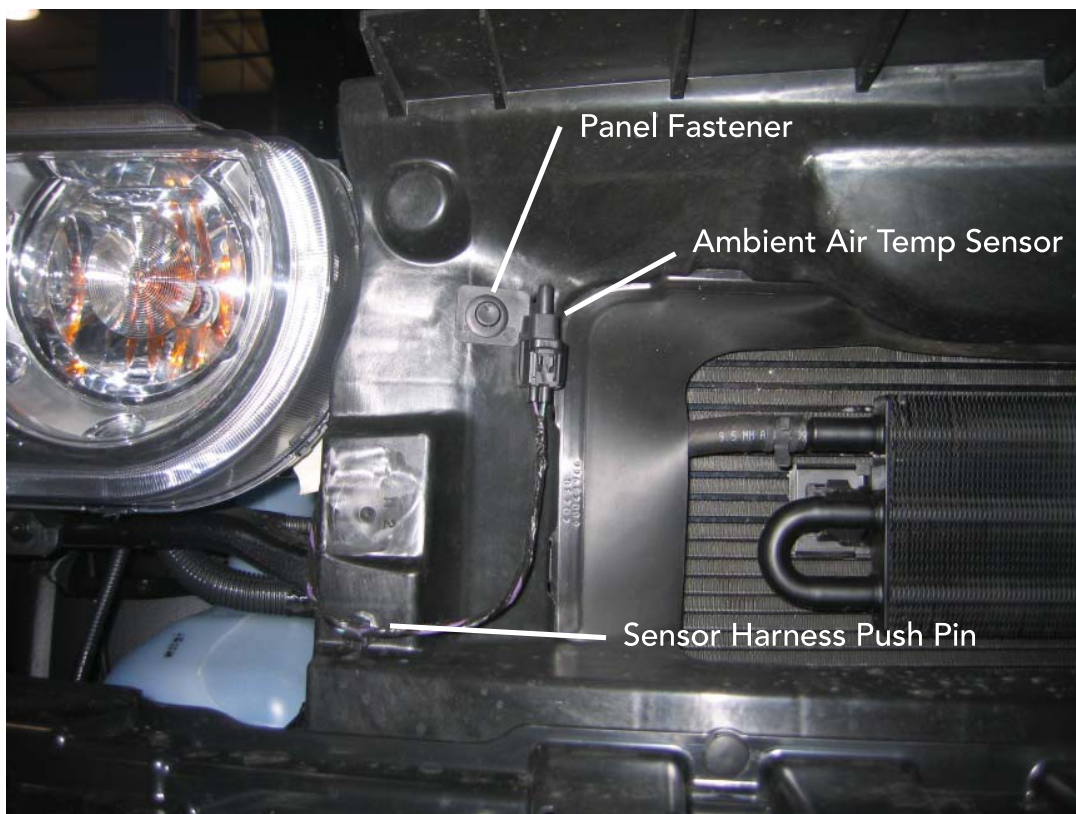


Fascia Connections (Pass. Side)

- 7 Remove the plastic bumper cladding by removing the three panel fasteners, then squeezing the four clips together, releasing it from the bumper.
- 8 Remove the plastic radiator shroud located behind the front bumper (this shroud will not be re-used). Remove the seven panel fasteners (three lower, four upper), the panel fastener holding the ambient air temp. sensor to the shroud, and pull the push pin securing the ambient air temp. sensor wiring harness to the shroud.



Plastic Bumper Cladding



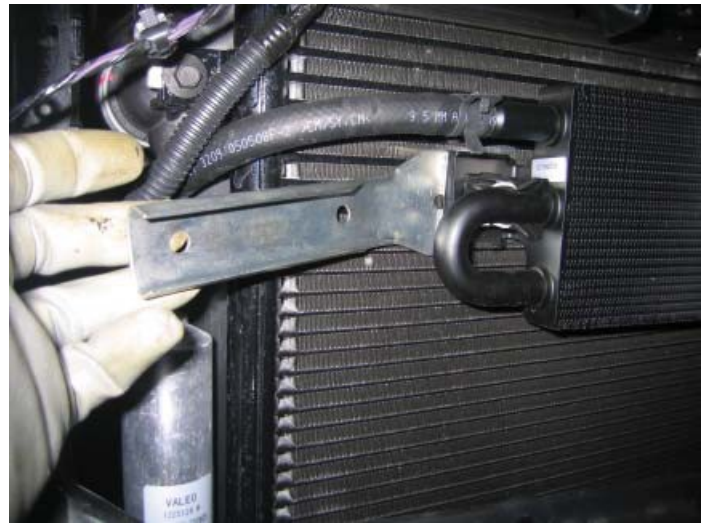
Radiator Shroud Removal

Power Steering Cooler (If Equipped)

- 1 Remove the power steering cooler from the condenser by placing the appropriate tool behind the bracket and prying off (both sides). Do not damage the condenser core.
- 2 Unclip the power steering line on each side of the cooler from the plastic clips, located on each side of the radiator.

✓ **Tech Tip:** It is easiest to disconnect the power steering line from the driver's side of the cooler, route the line below the frame rail, and reconnect the line until later modifications (allowing the cooler to hang below the vehicle). This gives more room to work, and decreases the chances of damaging the cooler during intercooler installation.

- 3 Using a 10mm socket, remove the factory horns and horn brackets (one on each side). Unplug the wiring harnesses from the horns and remove the horns from the brackets using a 13mm wrench. The brackets will no longer be used, however, retain the factory hardware for later use.



Power Steering Cooler Removal



Factory Horn Locations

Radiator

- 1 Remove the four 13mm bolts securing the radiator cradle (two on each side of the vehicle). Pull the cradle straight down and out of the vehicle.

✓ **Tech Tip:** At this point, the radiator will be hanging with no support. Support this using a jack/jackstands/etc.

- 2 Remove the two 10mm bolts (one on each side of the vehicle) securing the upper radiator mounts. Remove the mounts from the vehicle for later use.

- 3 Remove the upper radiator plastic trim by pulling the trim away from the sheetmetal tabs securing it to the radiator. This will not be re-installed.



Radiator Cradle Bolts (Pass. Side)



Radiator Upper Mount Bolts (Driver's Side)



Upper Radiator Plastic Trim

CRANK PULLEY PINNING

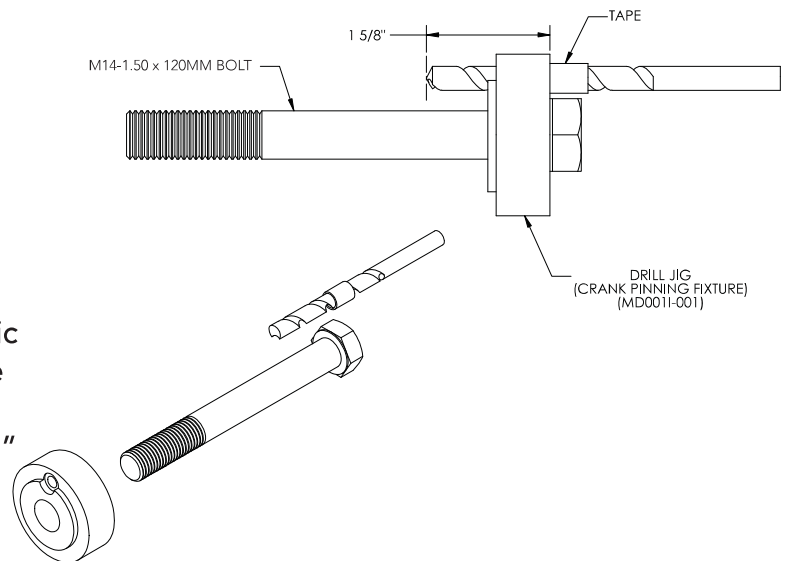
- 1 Remove the factory fan assembly by removing the (2) 10mm bolts located on each side of the fan assembly, accessible from the top of the vehicle. Disconnect the electrical connection to the fan. Lift the fan up off of the lower supports, then out the bottom of the vehicle for removal.
- 2 Remove the 21mm crank pulley bolt.



Factory Crank Pulley and Bolt

- ✓ **Tech Tip:** Use an impact for ease of removal. If not available, remove the access cover to the transmission and use a sufficient tool to lock the transmission in place for bolt removal.

- 3 Place the drill jig onto the crank pulley, and tighten it into place using the supplied M14-1.50 x 120mm hex head bolt and washer.
- 4 Tape the supplied 1/4" HSS drill bit 1-5/8" from the tip. Using this taped bit, drill a hole in the crankshaft and harmonic balancer, stopping at the tape edge. The hole will be centered on the OD of the crankshaft. Do not drill deeper than .800" into the face of the crankshaft.



Crankshaft and Harmonic Balancer Drill Jig

- 5 Remove the pinning tool and set aside. Clean the chips from inside the drilled hole and the surrounding area thoroughly.
- 6 Install the supplied 1/4" OD x .75" long stainless steel dowel pin in the hole. Re-install the crank pulley bolt and tighten to 129 ft-lbs.
- 7 Replace the fan assembly into the vehicle. Tighten the (2) 8mm bolts to secure the assembly. Reconnect the wiring harness to the fan.



Drill Jig Installed



Drilling the Crank



Crank Pulley Pinned to Crankshaft

SUPERCHARGER BRACKET

Power Steering Hose (If Equipped)

- 1 With an 18mm wrench, loosen the power steering pressure side hose. Rotate the hose as shown, until the line is as close to the block as possible. Tighten hose.
- 2 Remove the SHCS (socket head cap screw) from the power steering return hose with a 5mm hex bit socket. Rotate the power steering line and install the retaining bracket (3DDPS-001) as shown with a 13mm socket.

✓ **Tech Tip:** Some vehicles utilize a fixed power steering hose, which will not use the provided retaining bracket from the previous step. Simply swivel and push the return hose back to gain clearance for the supercharger belt. Zip tie the line to ensure no contact will be made with the belt.



Power Steering Hose's Original Position



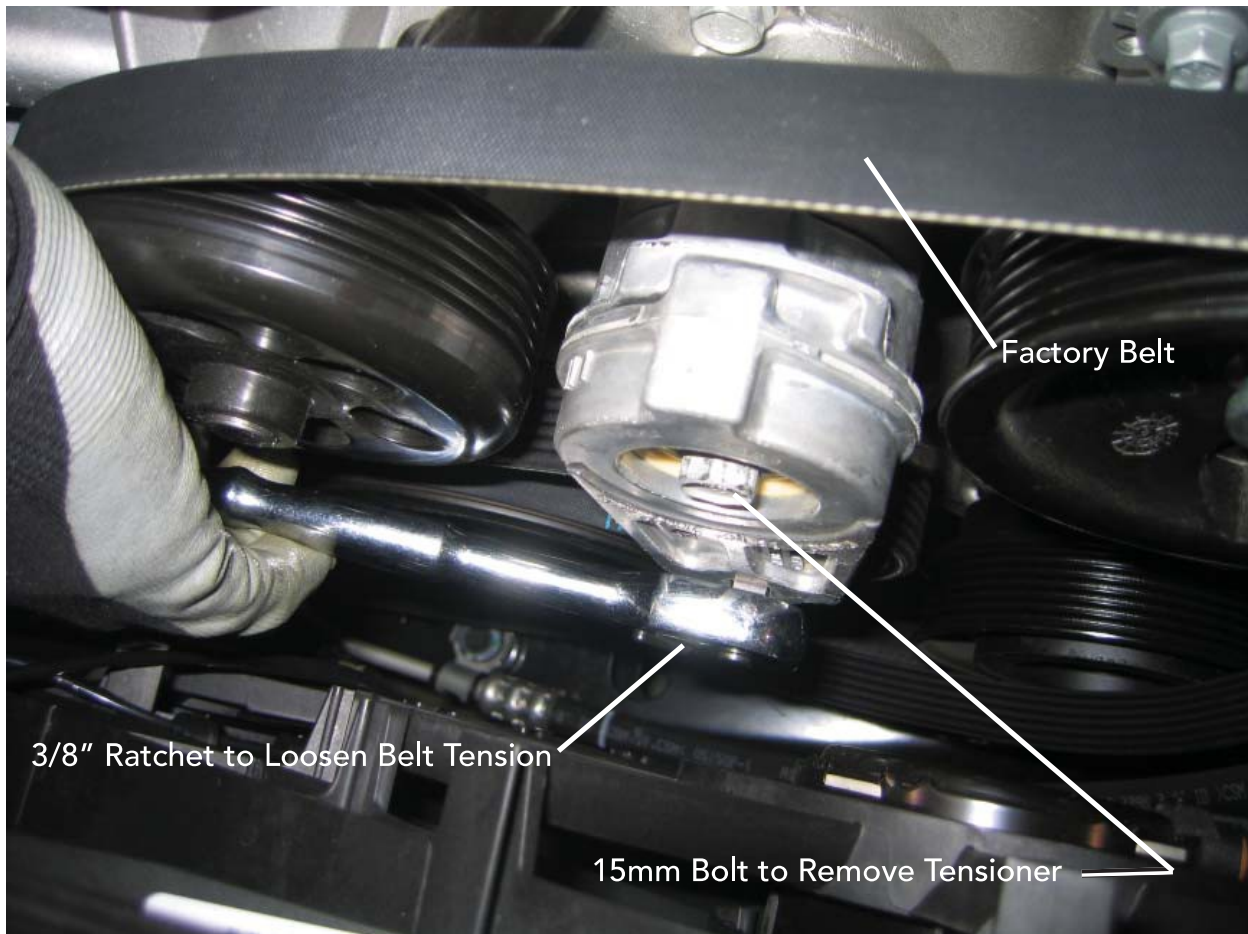
Power Steering Hose's New Position



Power Steering Return Hose's
New Position with Retaining Bracket

Tensioner and Belt

- 1 Remove the serpentine belt.
- 2 Remove the factory automatic belt tensioner using a 15mm socket (some vehicles require a 16mm socket); this will be reused later in the install.



Factory Belt and Tensioner Removal

Main Bracket

✓ **Tech Tip:** Standard power steering pumps require the following 2 steps. If you are installing onto a vehicle with an electric pump, proceed to step 3.

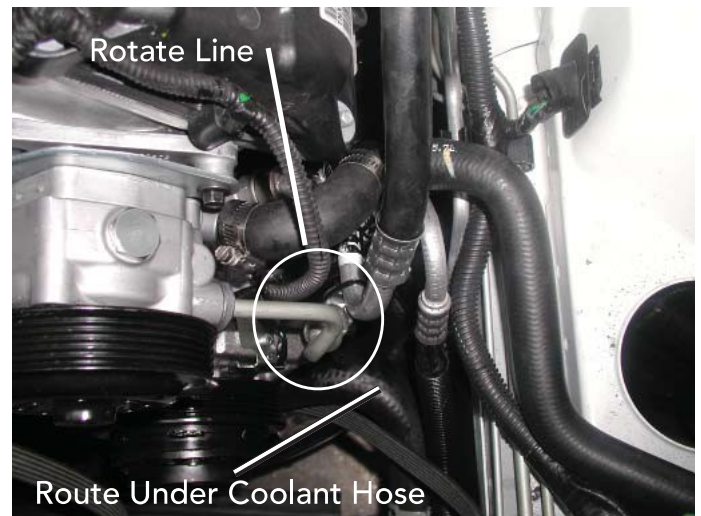
- 1 Remove the 3/4" hose by pressing the factory clip together and sliding it off of the power steering pump. Pull the hose off of the pump.
- 2 Slide the provided 90° rubber elbow (located in the power steering bag) onto the pump (trim if necessary), followed by the plastic 90° barb fitting. Slide the factory hose onto the open end of the plastic barb fitting. Tighten each connection with the (3) provided #12 hose clamps.

✓ **Tech Tip:** For additional belt clearance, remove the line from the pump with a 10mm socket, and run the line under the coolant hose. Reconnect the line to the pump, rotate the line toward the firewall, and zip tie it out of the way.

- 3 Remove the three bolts used to mount the bracket with a 13mm socket.
- 4 Set the main bracket assembly in place around the power steering pump. Slide the hex bolts and washers through the bracket. For electric power steering vehicles, place a .920" tube spacer behind the upper mounting hole location, and the (2x) 1.120" tube spacers behind the lower mounting hole locations. Standard power steering vehicles will utilize (3x) .650" or .400" spacers. Begin threading the fasteners into place. Mount the bracket brace between the main bracket and cylinder head. Tighten all main bracket fasteners at this time (see



Power Steering Line Modification
(Shown Disconnected From Pump)

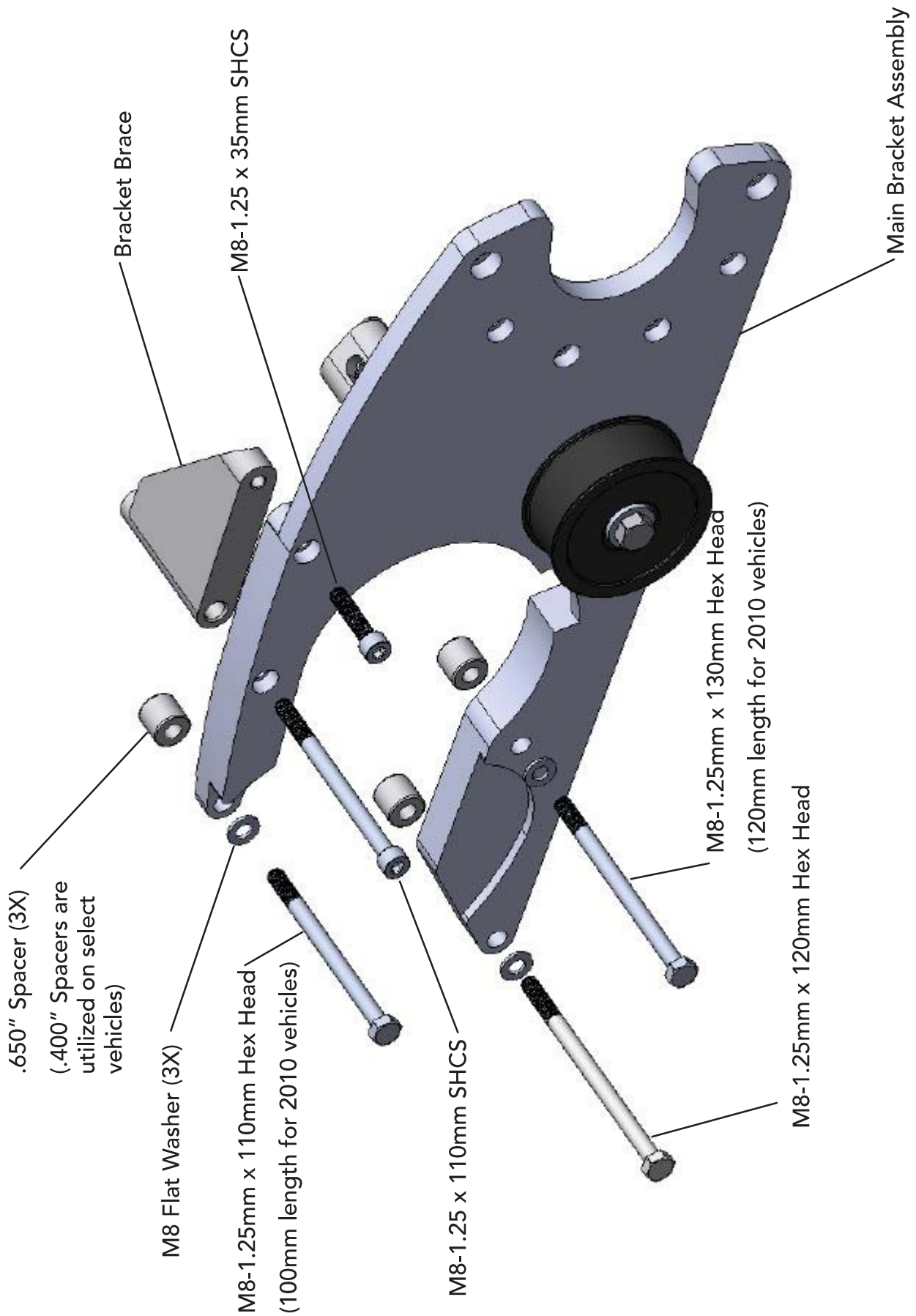


Pressure Side Power Steering
Hose Adjustments

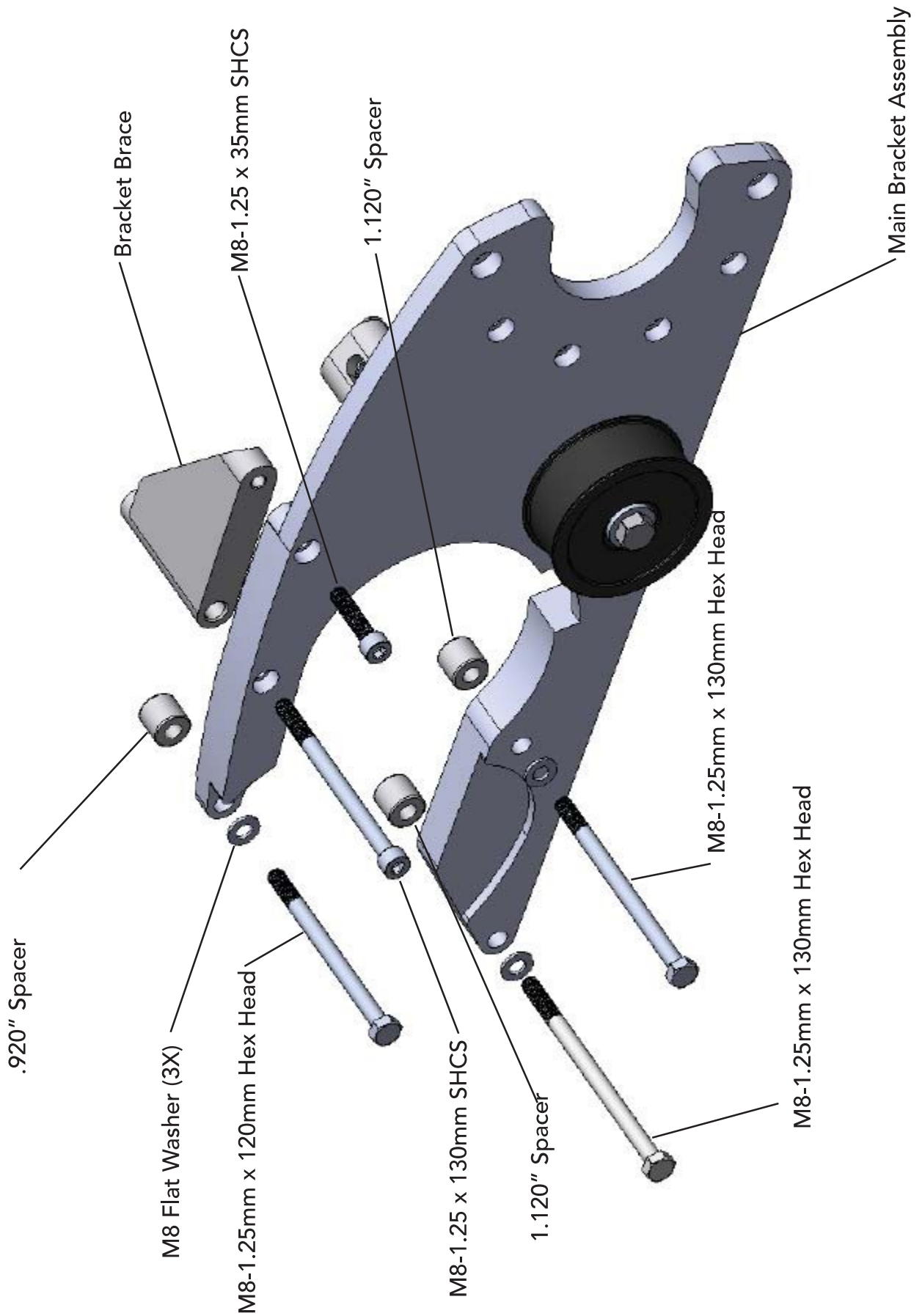


Remove 13mm Bolts For Bracket Install

2011+ BRACKET ASSEMBLY WITH STANDARD POWER STEERING



2011+ BRACKET ASSEMBLY WITH ELETRIC POWER STEERING



PROCHARGER HEAD UNIT

Coolant Reservoir Removal

- 1 Remove the two 10mm bolts fastening the coolant reservoir to the vehicle.
- 2 Lift up on the coolant reservoir, push the securing tab on the power steering reservoir and slide the power steering reservoir up and off of the coolant reservoir.
- 3 Move the coolant reservoir towards the firewall for proper clearance for the supercharger to be installed. The reservoir will be disconnected and removed in a later step.



Remove Coolant Reservoir Bolts

ProCharger Installation

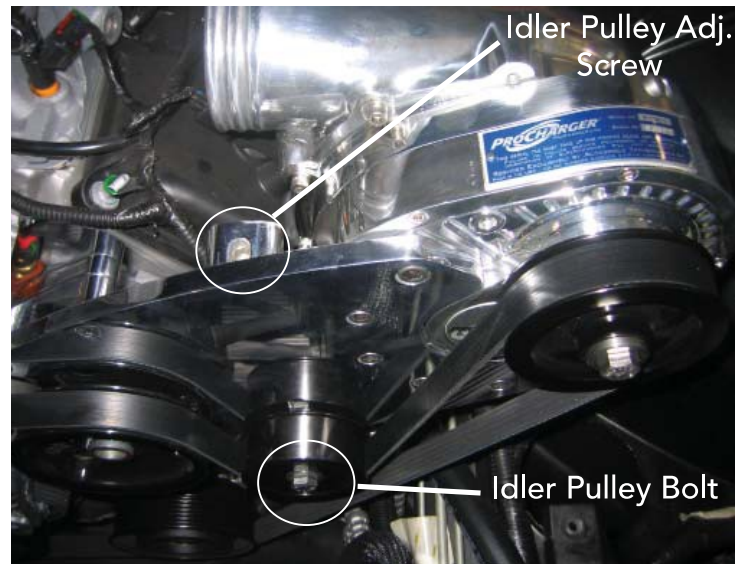
- 1 Remove the ProCharger oil fill reminder tag from the head unit. Install the oil drain line and ensure all fittings are tight.
- 2 Fit the supercharger into the bracket.
- 3 With the two $\frac{3}{8}$ -16 x $\frac{7}{8}$ " SHCS start mounting the supercharger onto the bracket. Thread in the remaining four $\frac{5}{16}$ -18 x $\frac{5}{8}$ " SHCS. Tighten all SHCS.
- 4 Fill the head unit with one of the supplied bottles of ProCharger Supercharger oil. You will need to remove the fill plug/dipstick using a flat headed screwdriver. After filling the head unit with oil, replace the fill plug/dipstick.



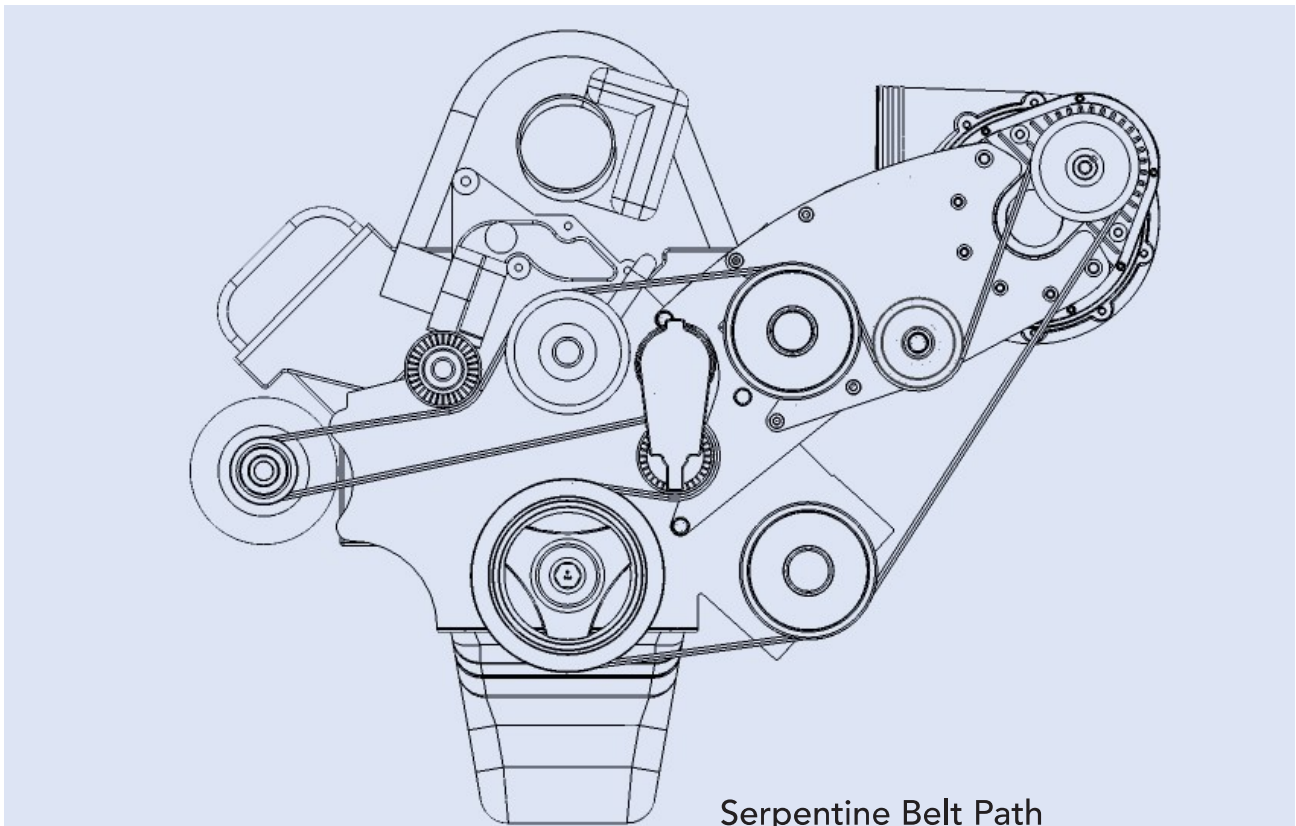
ProCharger Head Unit Installed

SERPENTINE BELT

- 1 Re-install the factory tensioner with the pulley aimed straight down and tighten the 15mm bolt (some vehicles have a 16mm bolt).
- 2 Install the serpentine belt as shown below.
- 3 Tension the serpentine belt by adjusting the idler pulley adjustment screw using a 5/16" hex bit.
- 4 Using a 5/8" wrench, tighten the bolt at the front of the pulley to lock the idler pulley in place. position by rotating the drive transfer housing counter-clockwise.



Serpentine Belt Installed



Serpentine Belt Path

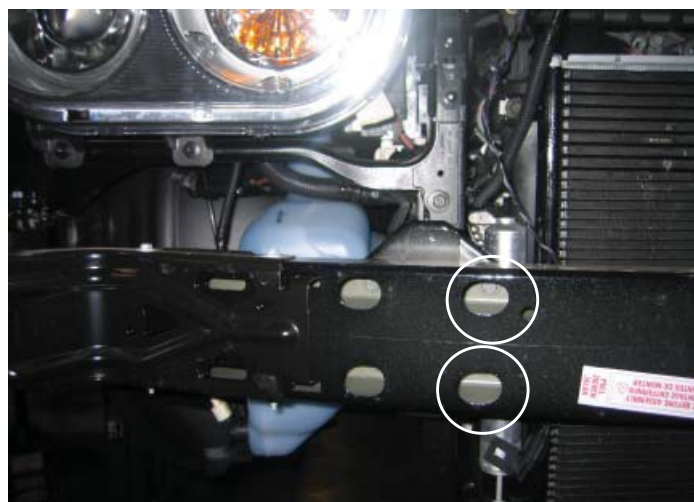
INTERCOOLER

Intercooler Installation H.O.

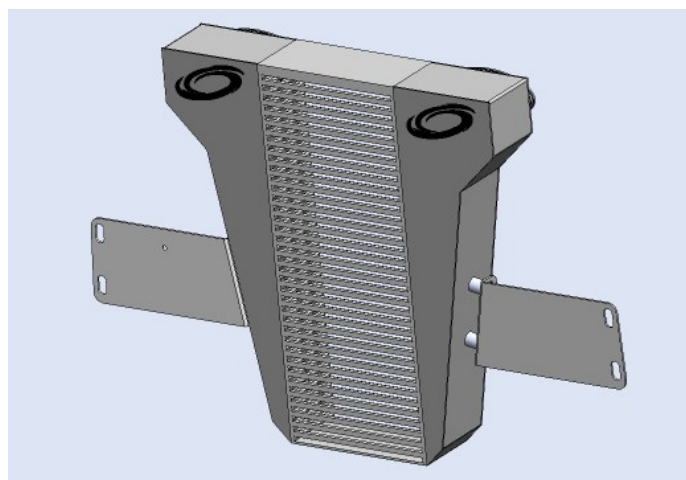
For Race Intercooler Skip to Page 19

- 1 Mount the brackets to the intercooler loosely using the four supplied 3/8-16 x 3/4" bolts and washers. Be sure to mount the brackets in the proper orientation (see image at right).
- 2 Remove the four (two on each side of the vehicle) 13mm bolts securing the front bumper to the vehicle. Install the supplied (4x) longer bolts and tighten. The intercooler brackets will mount over the extended length of the thread on the backside.
- 3 Slide the intercooler assembly with the ProCharger logo's facing the front of the car over the extended thread length between the bumper support and condenser. Using the (4x) M8 washers and locknuts, tighten hardware to secure the intercooler. The intercooler brackets are slotted, adjust it to eliminate interference with the bumper support, condenser, or any other hardware.

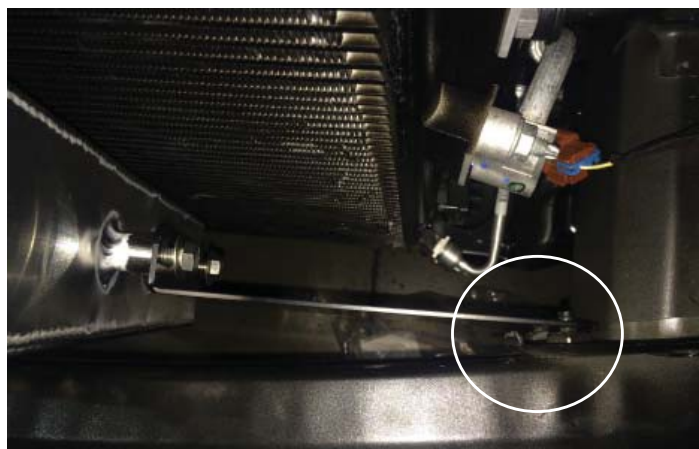
✓ **Tech Tip:** If needed there are 0.300" tube spacers provided to place in between the intercooler brackets and the intercooler.



Front Bumper Bolt Locations (Pass. Side)



Intercooler and Bracket Orientation



Intercooler Mounted Over Extended Hardware

Intercooler

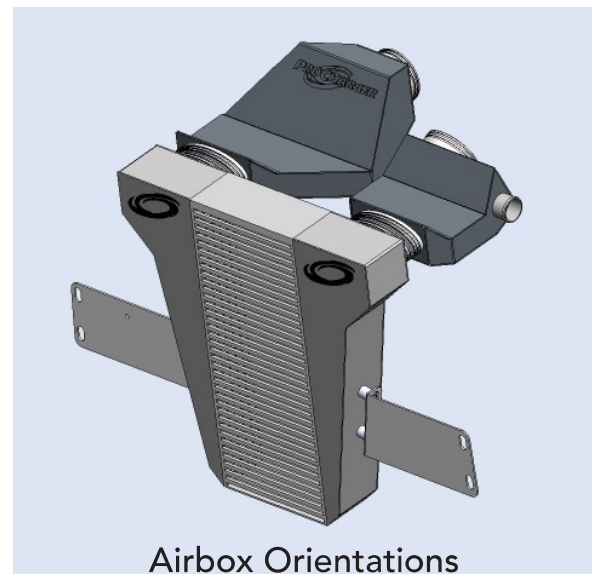
- 4 Two sections of rubber insulated tape have been included with the system. Place these behind the front bumper to protect the intercooler from making direct contact with the bumper. Place one piece of tape on each side (left and right) of the intercooler.
- 5 Re-install the front bumper bolts through the intercooler bracket holes and tighten.
- 6 Install the supplied airboxes. It is easiest to slide the 2" sections of rubber hose onto the end of each airbox where it will mount up to the intercooler first. Slide the four #64 hose clamps (2 on each hose) onto the hose at this time as well. The airboxes mount in the opening above the radiator.
- 7 With the intercooler and airboxes in position, tighten the intercooler bolts from step 1.



Place Tape Between Intercooler and Front Bumper for Insulation

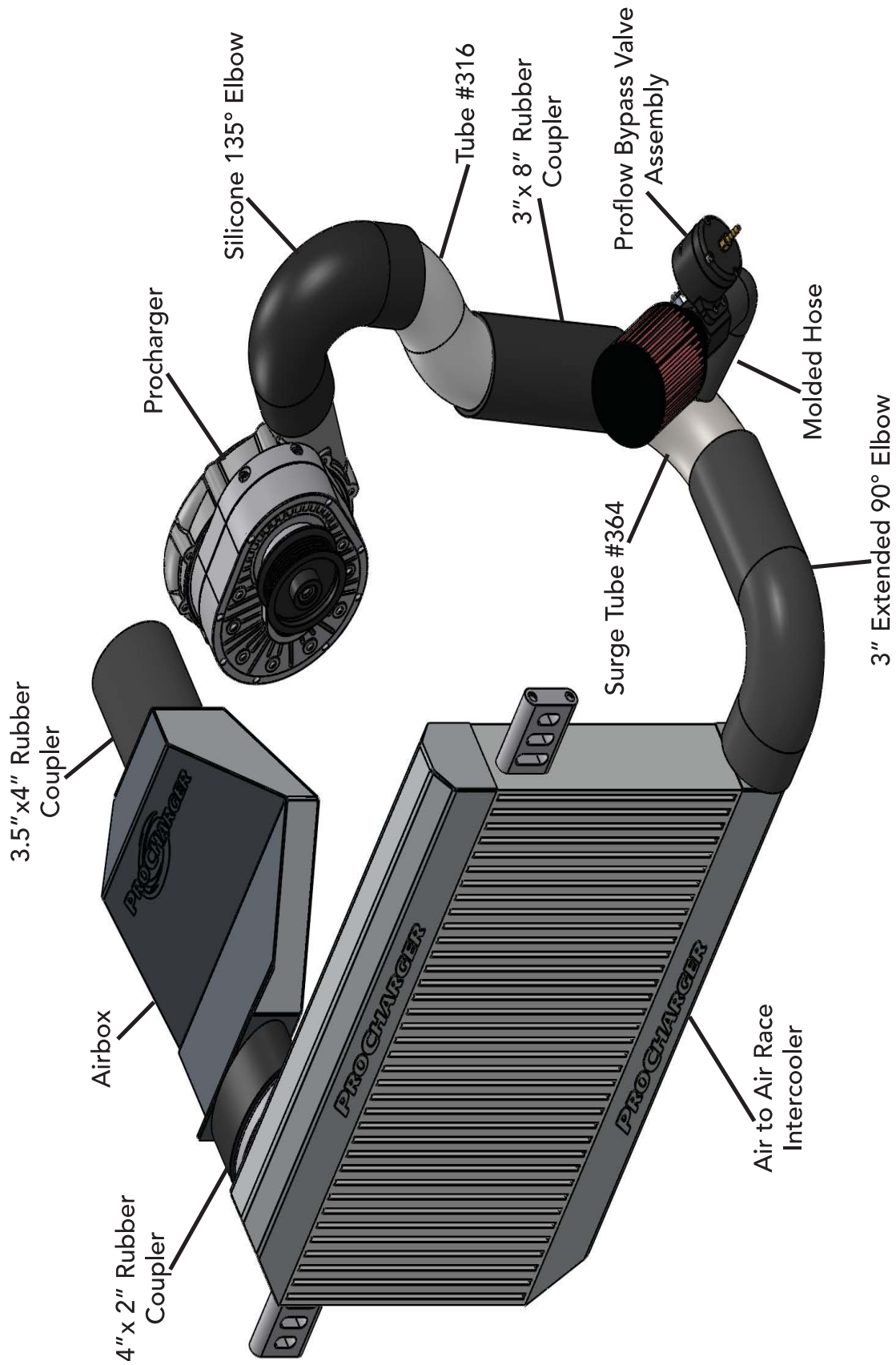


Intercooler Mounted



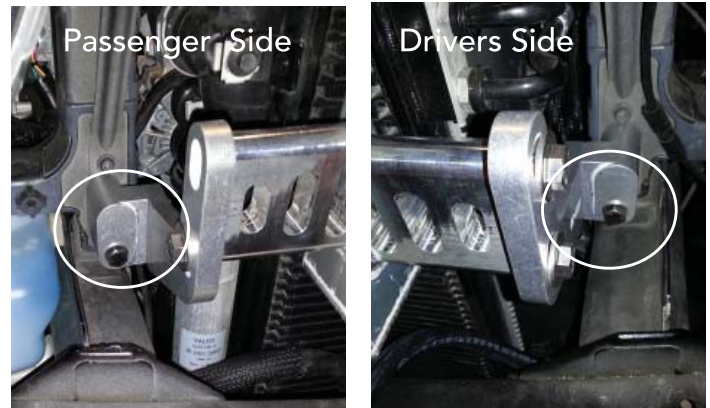
Airbox Orientations

RACE INTERCOOLER AND TUBING SCHEMATIC

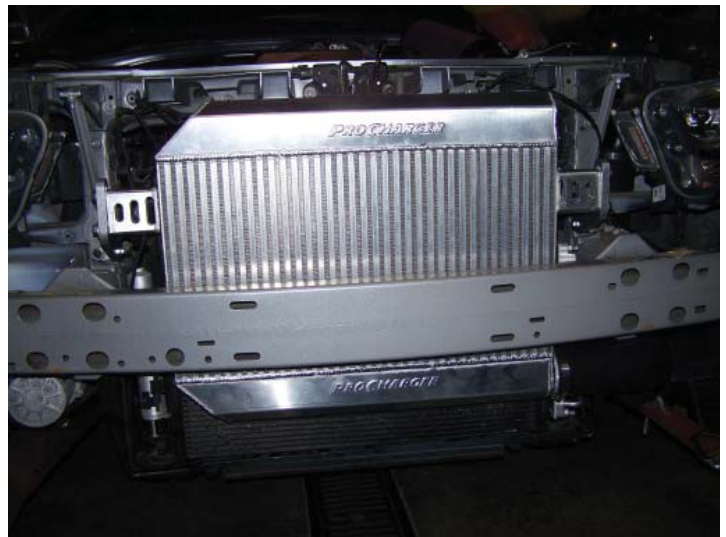


Race Intercooler Installation

- 1** Assemble the intercooler brackets (see picture for proper orientation). The offset portion of the intercooler brackets goes towards the back, to push the intercooler out from the vehicle to gain room from the condenser. Use the (4) M6 x 25mm bolts and washers for assembly.
- 2** Use a 13mm to remove the factory bolt where the brackets will be mounted. Mount the brackets to the vehicle using the two M8 x 60mm bolts and washers.
- 3** Mount the intercooler to the brackets using the four 3/8-16 x 1" bolts and washers. Before installing the passenger's side upper bolt and washer, slide the horn relocation bracket between the bolt and intercooler bracket. Tighten the assembly.
- 4** Install the supplied airbox. It is easiest to slide the 2" section of rubber hose onto the end of the airbox where it will mount up to the intercooler first. Slide the (2) #64 hose clamps onto the hose at this time as well. The airbox mounts in the opening above the radiator.



Remove bolt and install Intercooler Brackets



Intercooler Installed



Airbox Installed

Radiator Relocation

- 1 Mount the factory radiator cradle back onto the vehicle, spacing it downward using the provided 1-1/4" spacers (four total), M8 bolts and washers. Tighten the four bolts.

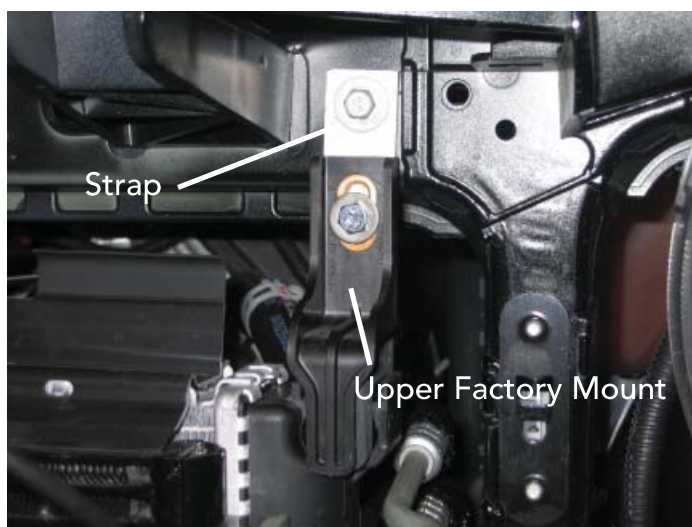
✓ **Tech Tip:** Use the provided 3/8" thick washers on the front two cradle bolts if additional spacing is required for clearance between the radiator and intercooler.



Spacers Between Cradle and Frame

Radiator Cradle Spacing (Pass. Side)

- 2 Mount the provided straps (two total) to the upper radiator mount bolt hole locations using the factory hardware.
- 3 Using the two provided M6 x 35mm bolts, washers, and locknuts, mount the factory upper radiator mount to the bottom of the straps from step 2. Be sure to slide the rubber mounts over the top of the radiator to securely hold it in place. Push down on the mount so it makes maximum contact with the radiator, and tighten the bolts.



Strap

Upper Factory Mount

Upper Radiator Mount Relocation

Tubing and Hoses H.O.

For Race Intercooler Skip to Page 23

- 1 Slide the short leg of the extended 90° silicone coupler over the volute of the procharger. Secure with #52 hose clamps.
- 2 Slide the long leg of the extended 90° silicone coupler over the driver's side airbox. Secure with #52 hose clamps.
- 3 Using the provided 3-1/2" diameter rubber hose, connect the passenger's side airbox to the throttle body connection, and secure using two #56 hose clamps.
- 4 Tighten all hose clamps.
- 5 Install the intake air temp sensor into the bung on the back side of the passenger's side airbox. Use a small amount of WD-40 or silicon paste on the sensor o-ring to assist installation of the sensor. Note the orientation of the locking tab on the sensor and the notch on the bung. The sensor must be inserted into the bung, then turned clockwise until the sensor locking tab slides over the notch on the bung.



Tube and Reducer Installation



Throttle Body Connection



Intercooler and Tubing Installed

Tubing and Hoses Race Intercooler



Tech Tip: All 3" hose connections utilize #52 hose clamps.

- 1 Slide the 3" extended 90° rubber elbow onto the inlet of the intercooler (short leg).
- 2 Insert surge tube #364 into the open end of the 90° tube.
- 3 Slide the 3" x 8" rubber coupler onto the end of the surge tube #364.
- 4 Insert tube #316 into the open end of the 3" x 8" rubber coupler.
- 5 Slide one end of the 135° silicone elbow onto tube #316 and the other end onto the discharge of the supercharger. Secure both connections with a 3.38" T-bolt clamp.
- 6 Using the provided 3-1/2" diameter rubber hose, connect the passenger's side airbox to the throttle body connection, and secure using two #56 hose clamps.
- 7 Tighten all hose clamps.
- 6 Install the intake air temp sensor into the bung on the back side of the passenger's side airbox. Use a small amount of WD-40 or silicon paste on the sensor o-ring to assist installation of the sensor. Note the orientation of the locking tab on the sensor and the notch on the bung. The sensor must be inserted into the bung, then turned clockwise until the sensor locking tab slides over the notch on the bung.



Lower Intecooler Tubing Installed



Silicone 135° Elbow Installed

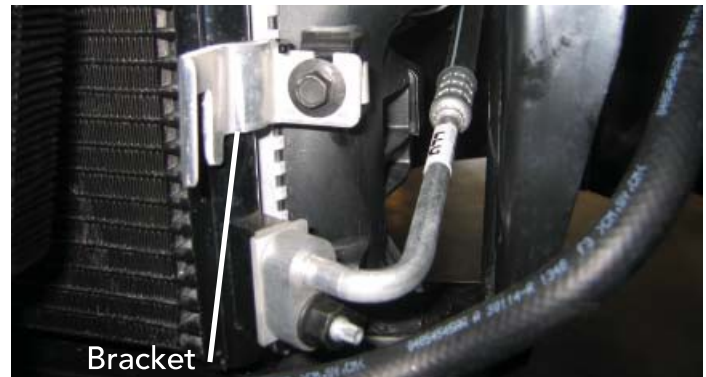


Airbox Tubing Installed

POWER STEERING COOLER

Power Steering Cooler Relocation (if Equipped)

- 1 Remove the factory bracket located on the lower driver's side of the radiator with a 10mm socket (see image on right).
- 2 Disconnect the line on the passenger's side of the cooler.
- 3 Rotate the cooler vertically and zip tie the top and bottom of the cooler to the radiator end (see image on right).
- 4 Use the supplied 3/8" x 3/8" barb connector to connect the 24" long section of 3/8" hose to the passenger's side power steering cooler. Secure the connections with #6 hose clamps.
- 5 Route the line behind the intercooler.
- 6 Slide the 4" section of 3/8" hose to the open connection on the power steering cooler. Slide the provided 90° 3/8" barbed fitting onto the hose section, and connect the opposite end to the hose routed in step 5. Secure each connection with #6 hose clamps.



Bracket

Remove Factory Bracket



Lower Zip Tie



Hose Connections (Pass. Side)



Upper Zip Tie and Hose Connection

HORN RELOCATION

- 1 Mount the factory horns with the factory hardware (13mm bolts and washers) onto the supplied horn relocation bracket.
- 2 Remove the 13mm bolt from the frame rail (pass. side). Mount the horn relocation bracket and re-use the factory bolt to secure it in place.
- 3 Route the factory horn harnesses to the new horn location and plug them in.
- 4 Mount the ambient air temperature sensor onto the horn bracket and use the factory push pin to secure it in place.



Frame Rail Bolt (For Horn Bracket Mounting)



Note: Depending on vehicle model, you may need to position one horn on top, and one below on the provided bracket.



Horn Relocation Race Intercooler

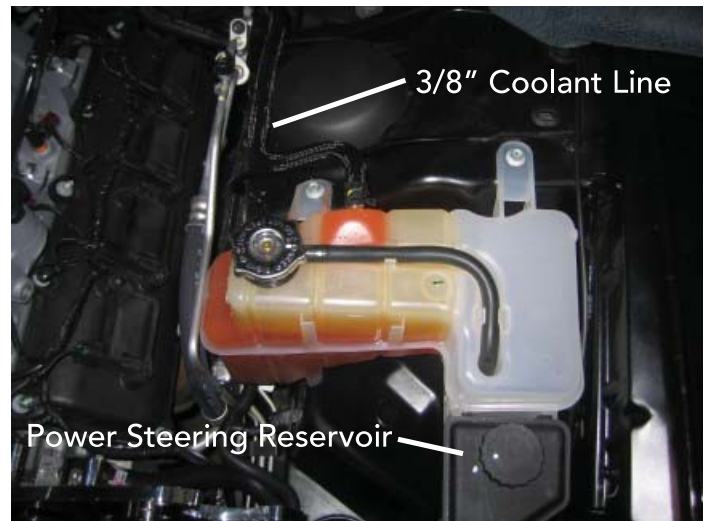


Horn Relocation H.O.

COOLANT RESERVOIR H.O.

For Race Intercooler Skip to Page 28.

- 1** The hoses running to the factory coolant reservoir must be removed in order to install the new coolant reservoir. The easiest and cleanest way to do this swap is to empty the factory coolant reservoir, and crimp the two hoses running to the reservoir.
- 2** Press the factory clamps together and pull the 3/4" and 3/8" factory coolant lines off of the factory coolant reservoir.
- 3** The 3/4" line must be lengthened to reach the outlet on the new reservoir. Install the 3/4" by 3/4" barbed fitting onto the 3/4" factory coolant line. Slide the supplied section of 3/4" hose onto the open end of the barb. Secure the connections with the provided #12 hose clamps.
- 4** Mount and tighten the 3/4" 90° brass barbed fitting to the front of the new reservoir. Repeat with the 3/8" 90° fitting and install this onto the back of the reservoir. Be sure the fittings point toward the passenger's side of the vehicle once tightened. Use thread sealant to ensure a proper seal on these connections.
- 5** Run the 3/4" coolant line under the blower, and slide it onto the 3/4" barbed fitting on the front of the new reservoir. Secure the connection with a #12 hose clamp.

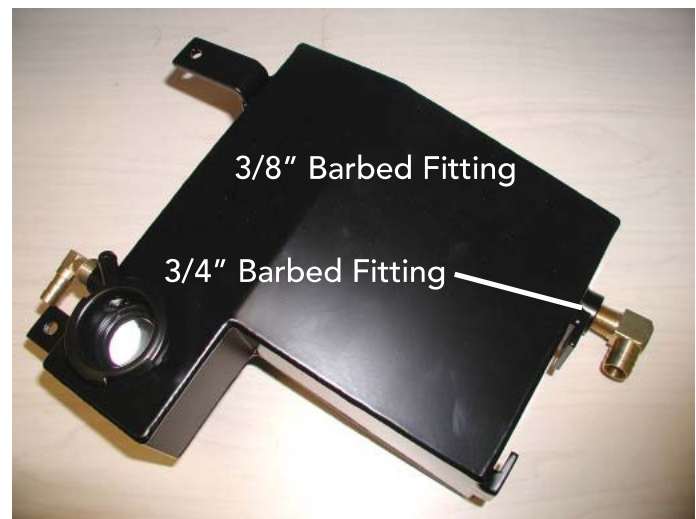


Factory Coolant Reservoir



3/4" Line Extended

- 6 Mount the reservoir, lining up the brackets with the factory mounting locations. Tighten the reservoir in place using the two factory 10mm bolts.
- 7 Run the factory 3/8" feed line to the back of the reservoir and slide the hose onto the barbed fitting. The factory line may need to be trimmed for proper fitment. Secure the connection with the supplied #6 hose clamp.
- 8 Slide the provided 24" long section of 3/8" hose onto the filler neck port. Route the hose around the back of the reservoir, along the driver's side frame rail, and down behind the headlight. Secure the hose to the filler neck with the supplied #6 hose clamp.
- 9 Slide the power steering reservoir onto the front of the new coolant reservoir.
- 10 Verify that all of the coolant lines and power steering lines are not kinked, and all have clearance from belts and pulleys. Zip tie lines for protection.
- 11 Mount the supplied plastic coolant reservoir cover to the reservoir using the four supplied 8-32 flathead screws. Do not overtighten these fasteners.
- 12 Fill the reservoir to the seam that is visible by looking into the filler neck. This seam represents the factory coolant marking.
- 13 Install the new supplied 16 psi reservoir cap.



Supplied Coolant Reservoir



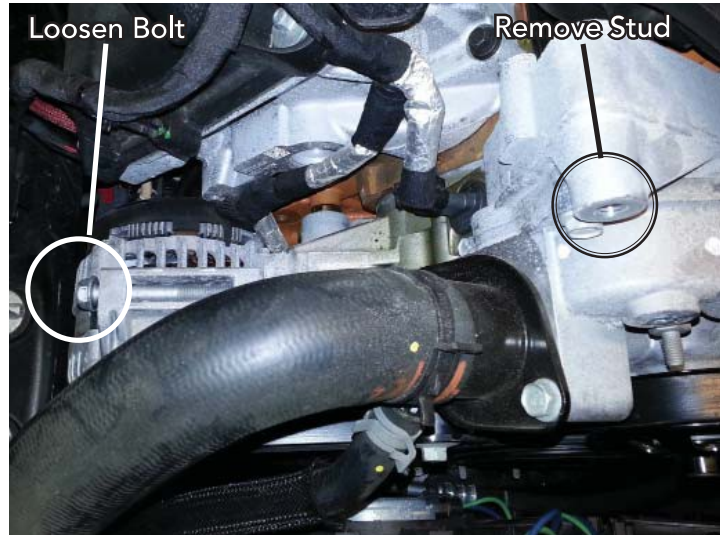
Coolant Hose Routing



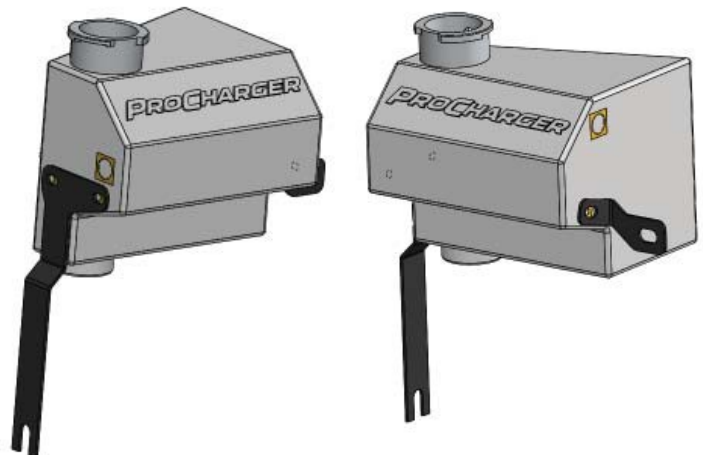
Warning: DO NOT OVERFILL THE COOLANT RESERVOIR. OVERFILLING CAN CAUSE PERMANENT DAMAGE TO THE RESERVOIR. FILL ONLY TO BOTTOM SEAM VISIBLE INSIDE THE COOLANT RESERVOIR.

COOLANT RESERVOIR RACE INTERCOOLER

- 1 Remove the stud on the front cover of the engine with a 15mm wrench. Loosen but do not remove the top alternator bolt with a 16mm wrench (see image at right).
- 2 Mount and tighten the 3/4" 90° brass barbed fitting onto the bottom of the new reservoir aimed towards the passenger's side of the vehicle, clearing the ABS module and lines. Repeat with the 3/8" straight barb fitting and install this onto the side of the reservoir. Install the final 3/8" 90° brass barb fitting onto the back of the tank and aim it down and towards the passenger's side of the vehicle. Use thread sealant to ensure a proper seal on these connections.
- 3 Install the brackets onto the coolant tank (shown to the right) using the provided 1/4" bolts and washers.
- 4 Mount the reservoir, sliding the slotted bracket between the head of the upper alternator bolt and alternator unit. Align the upper bracket with the hole in the front cover where the stud was removed. Using the factory hardware, secure the reservoir to the vehicle.
- 5 The hoses running to the factory coolant reservoir must be removed in order to install the new coolant reservoir. The easiest and cleanest way to do this swap is to empty the factory coolant reservoir (if not already completed), and crimp the two hoses running to the reservoir.
- 6 Press the factory clamps together and pull the 3/4" and 3/8" factory coolant lines off of the factory coolant reservoir. Remove the reservoir from the vehicle, it will no longer be used.



Hardware Removal for Remote Coolant Reservoir

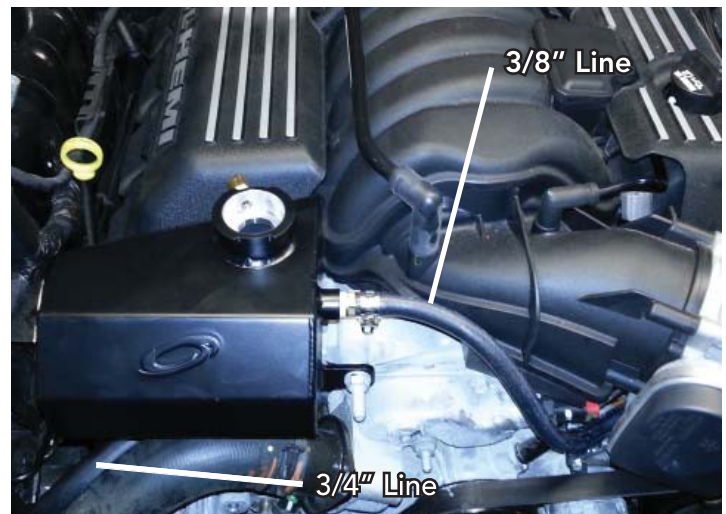


Remote Reservoir Brackets Mounted



Remote Reservoir Mounted

- 7 The lines must be lengthened to reach the outlet on the new reservoir. Install the 3/4" x 3/4" barbed fitting onto the 3/4" factory coolant line. Slide the supplied section of 3/4" hose onto the open end of the barb. Secure connections with #12 hose clamps.
- 8 Run the 3/4" coolant line under the blower, along the bottom of the cooling fan, and up the passenger's side of the vehicle. Slide it onto the 3/4" barbed fitting on the bottom of the new reservoir. Secure with a #12 hose clamp.
- 9 Install the 3/8" x 3/8" barbed fitting onto the 3/8" factory coolant line. Slide the longer supplied section of 3/8" hose onto the open end of the barb. Secure connections with #6 hose clamps.
- 10 Run the factory 3/8" line under the front of the intake manifold and to the side of the reservoir and slide the hose onto the barbed fitting. Secure the connection with a #6 hose clamp.
- 11 Slide the short section of 3/8" hose onto the open barb on the back side of the reservoir. Route the hose around the back of the reservoir, and down towards the ground. Secure the hose to the filler neck with a #6 hose clamp.
- 12 Verify that all of the coolant lines and power steering lines are not kinked, and all have clearance from belts and pulleys. Zip tie lines for protection.
- 13 Fill the reservoir to the line indicated on the label found on the side of the reservoir. Install the new supplied 16 psi reservoir cap.



Coolant Hose Routing

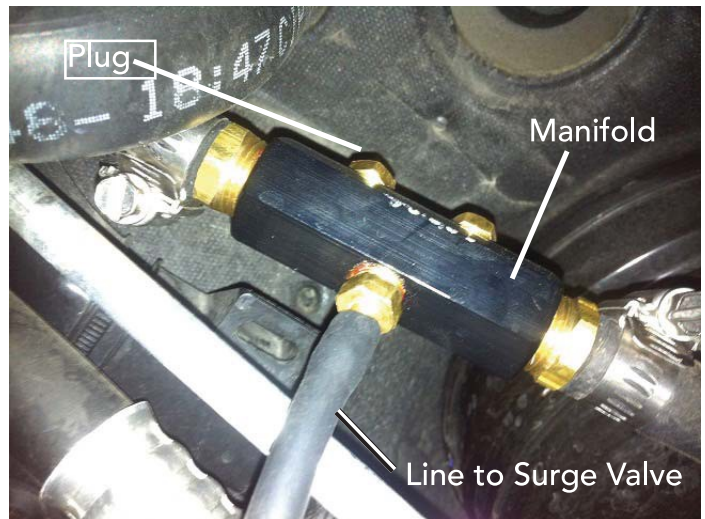


Pressure Relief Line Routing & Fill Line

! Warning: DO NOT OVERFILL THE COOLANT RESERVOIR. OVERFILLING CAN CAUSE PERMANENT DAMAGE TO THE RESERVOIR. FILL ONLY TO THE INDICATION LINE FOUND ON THE SIDE OF THE RESERVOIR.

VACUUM MANIFOLD

- 1** Assemble the supplied vacuum manifold as shown. If you have or are installing a boost gage, do not install the plug, use an additional barb fitting. Thread each fitting into the manifold. Thread the 3/8" barbed fittings onto each end of the manifold.
- 2** Locate the brake booster hose on the driver's side near the firewall. Remove a 3-1/2" section of this hose in order to place the manifold in-line.
- 3** Mount the manifold by sliding each barbed fitting into the open ends of the brake booster hose. Secure the connections with the provided #06 hose clamps.
- 4** Be sure the brake booster hose connections are tight; verify the connection to the booster did not come loose as well.



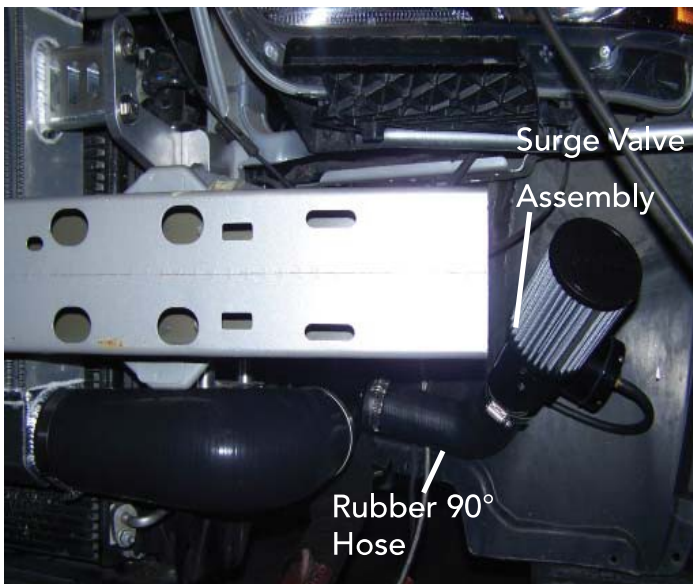
Vacuum Manifold Assembly



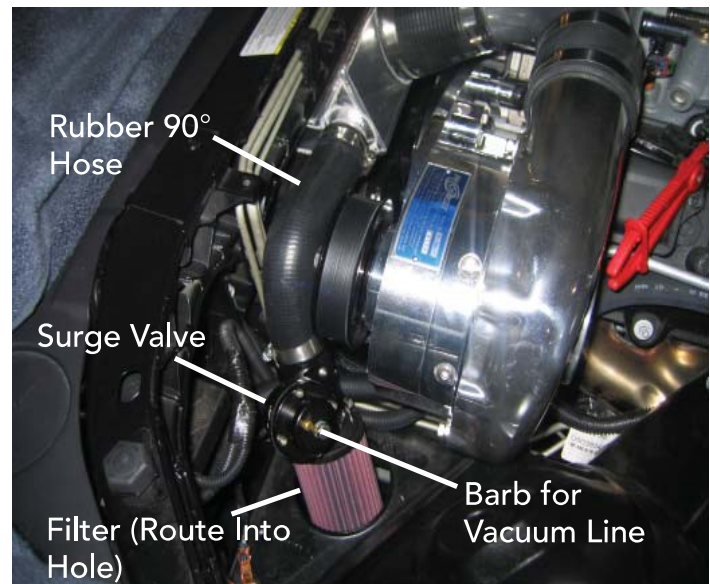
Vacuum Manifold Installed

SURGE SYSTEM

- 1 Slide the provided 90° rubber elbow onto the open 1-1/2" bung located on the driver's side airbox.
- 2 Slide the surge valve onto the open end of the rubber elbow. Place the filter onto the end of the valve.
- 3 Secure the connections with the provided #20 hose clamps.
- 4 Using the provided 3/16" vacuum line, connect one end onto the barb located on the surge valve, and route it under the blower. Connect it to the open barb located on the vacuum manifold. Be sure to zip tie the line for clearance from moving components, as well as the exhaust manifold.



Surge System Assembly Race Intercooler



Surge System Assembly H.O.

FUEL SYSTEM

✓ **Note:** This section only applies to full systems, which include upgraded fuel system components and tuning. If you do not have a full system, an upgraded fuel system and tuning will be required before starting the vehicle.

Fuel Injectors

- 1 Reconnect the battery.
- 2 Remove relay 46 from the panel in the trunk.

✓ **Tech Tip:** Check your owners manual to ensure you are pulling the proper relay. Some models require the removal of the #6 20 amp fuse located in the trunk for power to the fuel pump to be off.

- 3 Crank the engine for 15 seconds.
- 4 Disconnect the battery.
- 5 Unclip the wiring harnesses from each injector. Remove the four 10mm bolts securing the fuel rails to the manifold. Pull the fuel rails up off of the manifold to gain access to the fuel injectors.
- 6 Remove the fuel injector retaining clips from the injectors and rails. Remove the injectors by pulling them straight out of the rails.



Electrical Panel

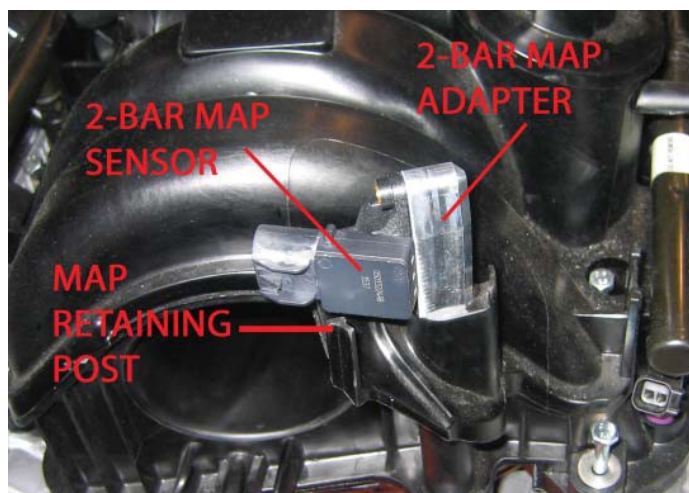
- 7 Install the new injectors, followed by the factory retaining clips.
- 8 Mount the spacers on the manifold, push the injector and rail assembly into place, and tighten the rails with the new hardware. Re-install each wiring harness to each injector.



Fuel Rails Installed

Map Sensor

- 1** Remove the factory MAP sensor located on the back side of the intake manifold. Remove the electrical harness by sliding the red retaining harness tab back and disconnecting it from the sensor. Remove the two 8mm bolts and pull the factory MAP sensor out of the vehicle.
- 2** Install the supplied o-ring onto the MAP adaptor. Install the MAP adaptor onto the manifold, followed by the supplied 2-bar MAP sensor. Re-install the 8mm bolts, and plug in the harness.



2 Bar MAP Sensor Installed

FINISHING

Challenger/Charger Only 300C go to page: 38

Engine Cover Trimming

- 1 Trim the two sections on the engine cover. Refer to the image on the right for proper trimming.
- 2 Replace the engine cover onto the vehicle. Snap it into place.



Trimmed Engine Cover

Air Inlet

- 1 Drill a 1/2" hole into the rubber inlet elbow. Refer to the image on the right for proper placement. For reference, with the filter, tube, and elbow placed onto the inlet of the blower, the hole should be drilled on the bottom of the rubber elbow, centered.
- 2 Insert the supplied plastic 90° barbed fitting into the drilled hole.
- 3 Install the rubber elbow onto the blower, followed by the inlet tube, and finally the filter. Be sure to rotate this assembly toward the engine cover to ensure proper clearance from the hood liner.
- 4 Tighten the connections using the supplied hose clamps.



Plastic Fitting Location



Air Inlet Installed

PCV System

- 1 Rotate the PCV bung located on the driver's side of the intake manifold toward the air inlet installed in the previous step.
- 2 Slide the supplied 1/2" rubber hose onto the bung, route the line to the underside of the inlet and connect it to the plastic barb fitting. The hose may need to be trimmed for proper positioning.

Continue to page: 39



PCV Bung Rotated



PCV Installed

300C Only

Engine Cover Trimming

- 1 Trim the engine cover as needed.
- 2 Replace the engine cover onto the vehicle. Snap it into place.

Air Inlet

- 1 Install the supplied air filter onto the supplied rotomold inlet tube. Be sure the barb fitting is installed into the inlet tube.
- 2 Slide the supplied 90° rubber hose onto the barb fitting as shown to the right.
- 3 Install the inlet tube onto the inlet of the supercharger, secure with a #64 hose clamp. Tighten the airfilter hose clamp.
- 4 Slide the 90° rubber hose that is attached to the air inlet onto the PCV bung located on the drivers side intake manifold.



Air Inlet Assembly



Air Inlet Installed

Finishing Up

- 1 Mount the front bumper cladding back onto the front bumper. Snap it into place.
- 2 Mount the front fascia back onto the vehicle. Connect the wiring harness on the passenger's side of the vehicle that is attached to the fascia. Tighten all hardware.
- 3 Replace the factory underside cladding using the factory hardware for under car connections. Use the supplied push pins for the fender well connections where the factory pop rivets were drilled out.
- 4 Place the radiator cavity covers in position and snap them into place.
- 5 Reconnect the battery.



CONGRATULATIONS! YOU HAVE SUCCESSFULLY COMPLETED THE INSTALLATION OF YOUR NEW PROCHARGER SUPERCHARGER SYSTEM! PLEASE CONTINUE READING THE FOLLOWING PAGES FOR IMPORTANT INFORMATION ABOUT HOW TO MAINTAIN YOUR SC SYSTEM.

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.

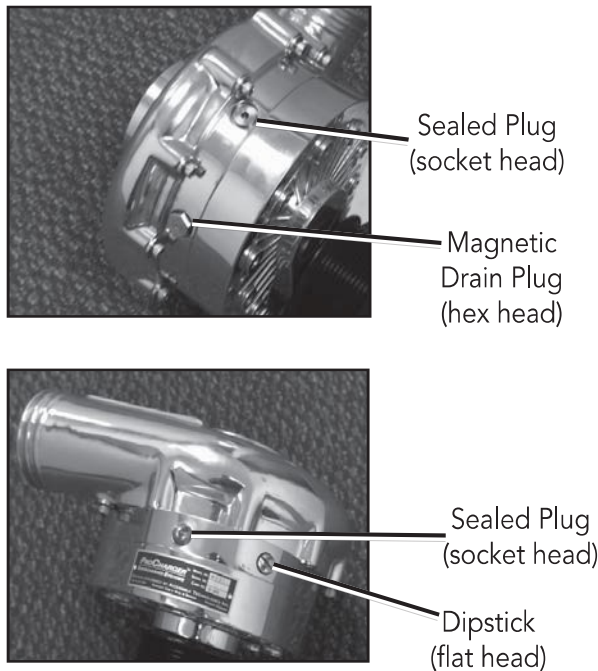
ProCharger Oil Change Intervals

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

ProCharger Oil Level

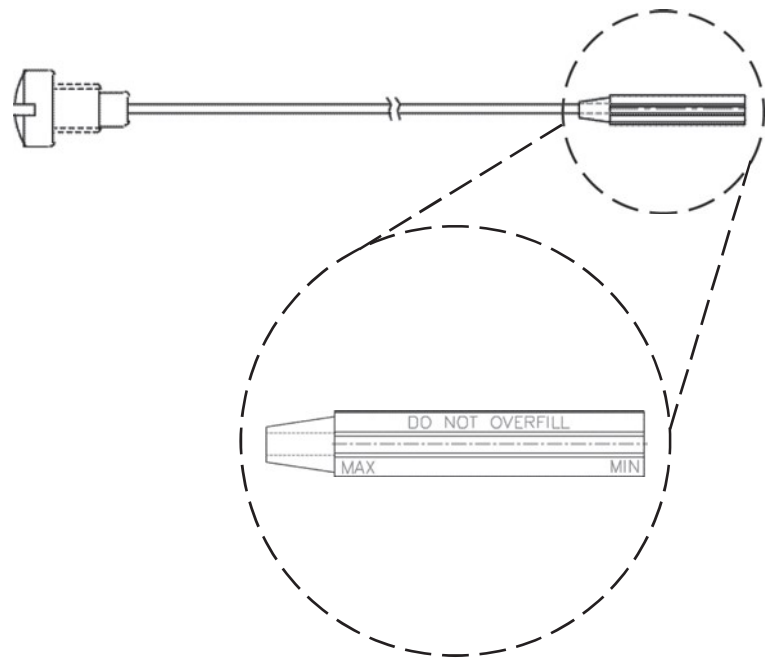
The ProCharger supercharger's oil level must be checked periodically to ensure the proper lubrication. The dipstick can be loosened using a flat blade screwdriver or a coin. When installed, the oil level should remain between the minimum (MIN) and maximum (MAX) indicators at all times.

! **Warning:** *Filling the ProCharger higher than the maximum level on the dipstick can lead to bearing and seal damage. The supercharger is a sealed unit and should not normally require the addition of oil between service intervals. If excessive usage is noted, the unit should be sent to ATI for inspection and repair. The dipstick fitting should be firmly tightened after changing or checking the oil level.*



General

When removing the warning tag from the dipstick, be sure to retain the nylon washer. A spare nylon washer and o-ring is included. Use only the ATI supplied nylon washer and o-ring when servicing the oil dipstick and drain plug. A discoloration of the oil and residue on the drain plug may occur during the initial oil changes. This is normal and will gradually decrease. For the proper positioning of the ProCharger supercharger, the serial tag should be pointing upwards. Installing the ProCharger supercharger in another position will cause inadequate oiling and supercharger failure. If you have any questions about the maintenance of your supercharger, contact ATI.



LIMITED WARRANTY

Accessible Technologies, Inc. (ATI) provides a limited twelve (12) month warranty on the ProCharger supercharger against defects in materials and workmanship unless otherwise specified. This limited warranty starts on the date of original purchase from your local dealer, or date of shipment from the factory. This limited warranty coverage is extended only to the original owner and excludes hoses, sleeves, and electronic components manufactured by other companies. **IF THE SUPERCHARGER'S DRIVE RATIO IS ALTERED IN ANY WAY FROM THE FACTORY SETTING, WARRANTY COVERAGE IS VOID. USE OF ANY PULLEY NOT MANUFACTURED OR SUPPLIED BY ATI VOIDS ALL WARRANTY COVERAGE.** ATI's warranty obligations are limited to the terms below:

ATI agrees to honor a warranty claim at its sole discretion and only after inspection at the ATI factory. No warranty will be honored if any part of the product is found to have been improperly installed, tampered with, mishandled, or misused in any way. Disassembly of the ProCharger supercharger or removal of the ProCharger supercharger's serial plate voids all warranties. Claims for freight damages should be directed to the freight company.

If ATI's limited warranty applies, your product will be repaired or replaced at ATI's discretion and shipped back. If the limited warranty does not apply, ATI will advise you of the specific reason, cost of the repair, and delivery time. After advising you of this information we will, at your option, either proceed with repairs or return your product to you in the state in which it was received. In either case the product will be shipped to you, insured at replacement value. Therefore, you will pay the return shipping and insurance charges if ATI's limited warranty does not apply to your product.

THE WARRANTY AND REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHERS, ORAL OR WRITTEN, EXPRESS OR IMPLIED. THE DURATION OF ANY AND ALL WARRANTIES ON THE PRODUCTS DISCUSSED ARE LIMITED TO THE PERIOD IDENTIFIED ABOVE. ATI IS NOT RESPONSIBLE IN ANY EVENT FOR DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES. No ATI dealer, agent, or employee is authorized to make any modification, extension, or addition to this warranty.

To obtain service under this warranty you must do the following during the warranty period:

Phone ATI (913-338-3086) and provide us with the following information:

- ProCharger supercharger serial number.
- Vehicle year, make, model, engine modifications, and other modifications.
- Description of perceived issue.

If a solution to your issue can not be found after the above phone consultation, you will be assigned a return authorization number (RMA). You must then properly package and ship your product, at your expense, to the ATI factory. The product should be carefully packaged in a rugged box.

Include the following information inside the box with your product:

- Copy of your original invoice or receipt.
- Name, address, and daytime telephone number.
- Return authorization number (RMA).
- Vehicle year, make, model, engine modifications, and other modifications.
- Description of perceived issue.

Clearly mark the warranty claim number on the top and one side of the box in characters at least 2" tall. Properly package the product and ship it, prepaid and insured for the retail value of the component(s) being returned, to the following address:

**Accessible Technologies, 14801 West 114th Terrace,
Lenexa, Kansas 66215**

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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 PMDF1A-004 Rev. K**

