

2008-10 Dodge Challenger High Output Intercooled System **Installation Guide**





The **ULTIMATE** Power Adder™

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TORQUE SPECIFICATION CHART	 GRADE 5			 GRADE 8		
	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® Dodge Challenger 2008-10 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 and 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 and three panel fasteners from the front cladding. Remove the front cladding from vehicle.



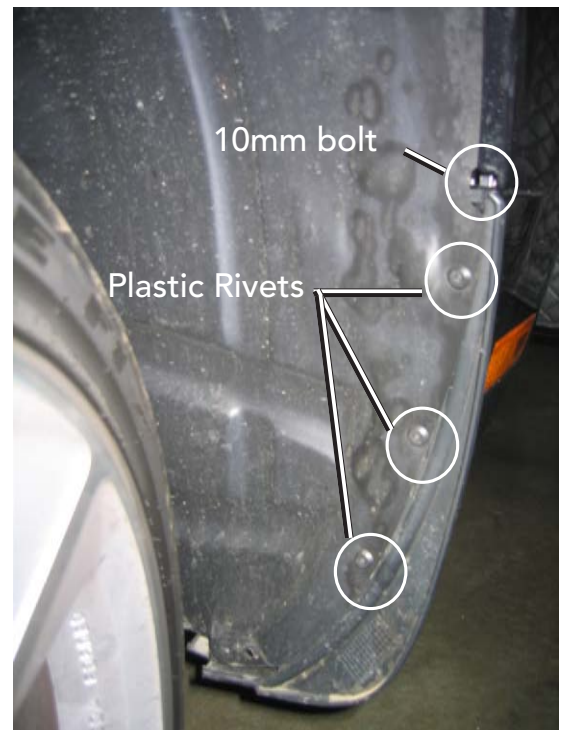
Underside Body Cladding



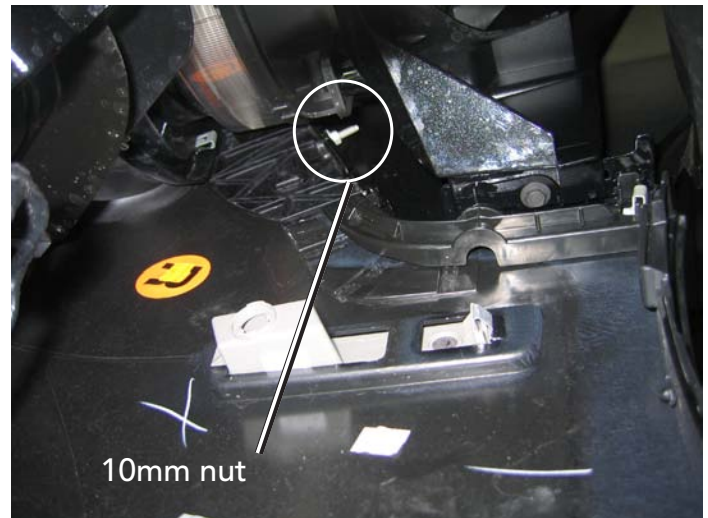
Underside Body Cladding Removed

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.
- 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)

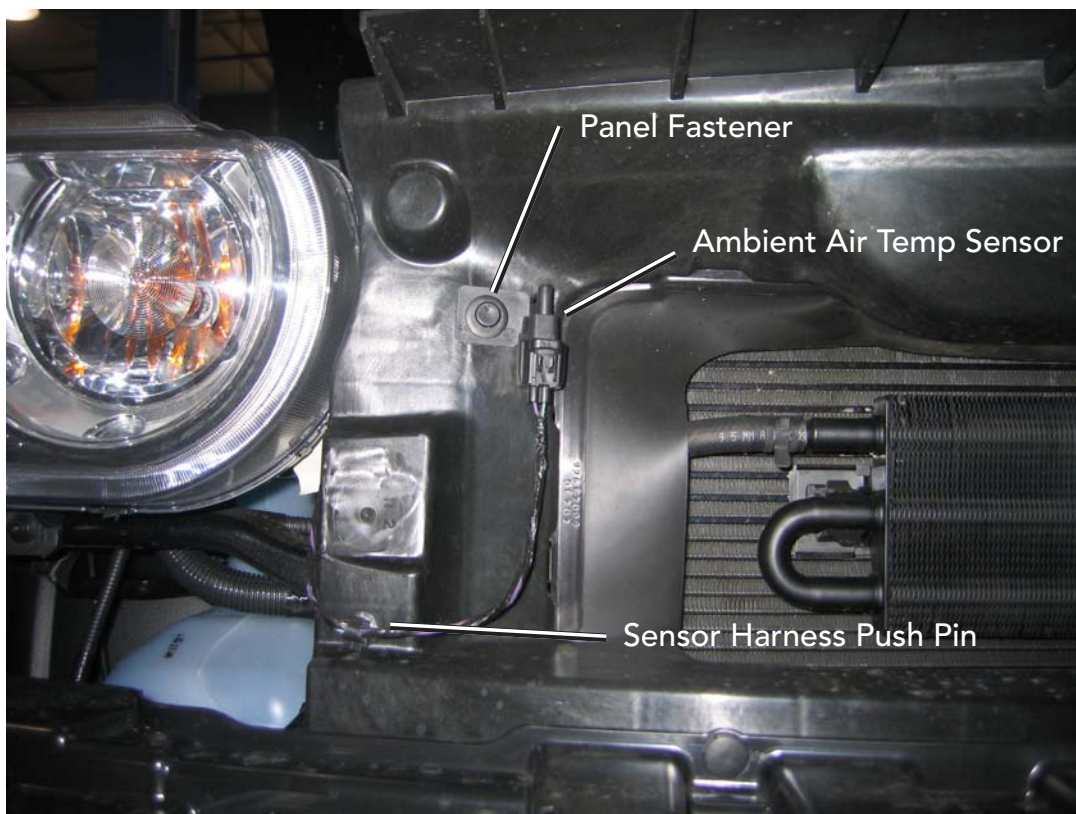


Fascia Connections (Pass. Side)

- 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.



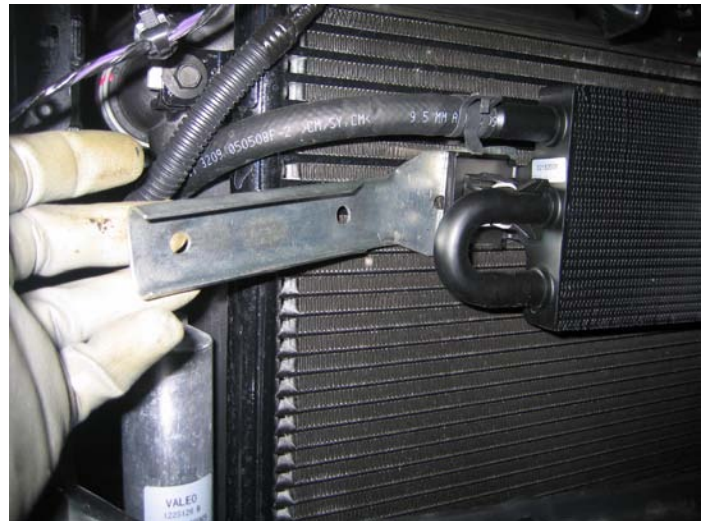
Remove Cladding
Plastic Bumper Cladding



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.



Power Steering Cooler Removal

✓ **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.



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.

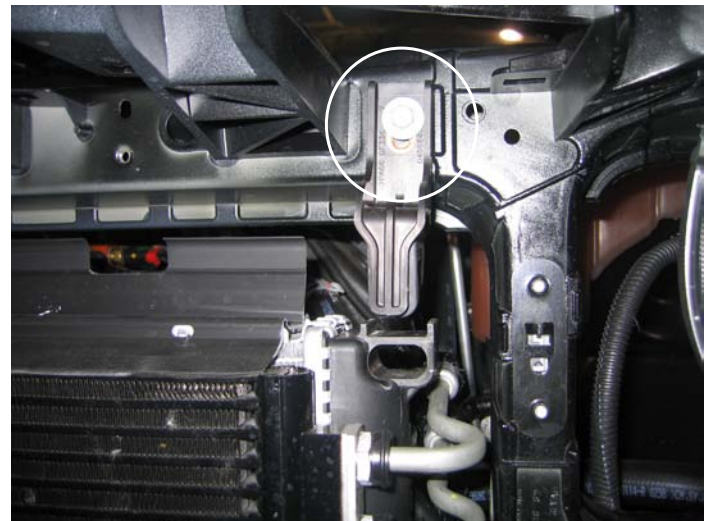
✓ **Tech Tip:** At this point, the radiator will be hanging with no support. Support this using a jack/jackstands/etc.



Radiator Cradle Bolts (Pass. Side)

- 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.

- 2 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 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.

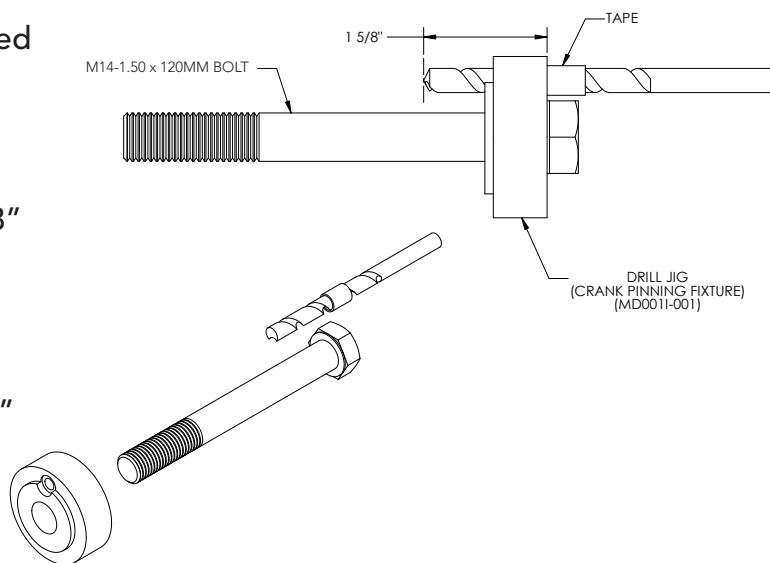
✓ **Tech Tip:** Use an impact for ease of removal. If not available, remove the access cover to the transmission and use a sufficient tool to lock the transmission in place for bolt removal.



Factory Crank Pulley and Bolt

- 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) 10mm bolts to secure the assembly. Reconnect the wiring harness to the fan.



Drill Jig Installed



Drilling the Crank



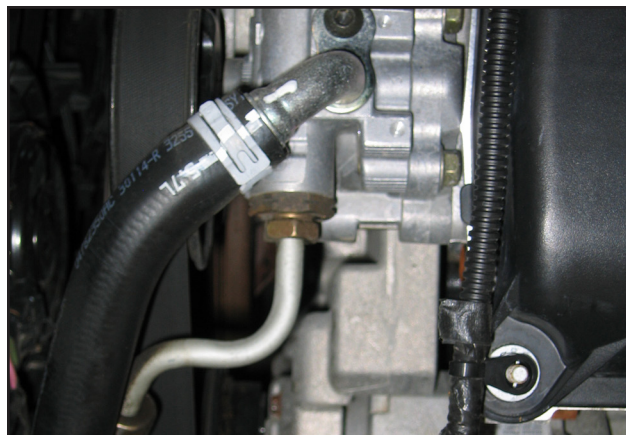
Crank Pulley Pinned to Crankshaft

SUPERCHARGER BRACKET

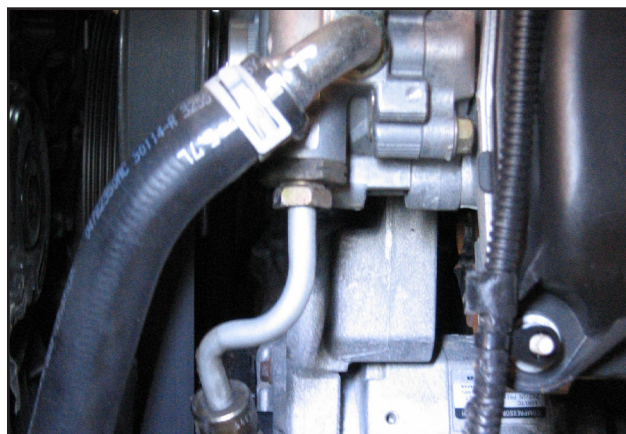
Power Steering Hose

- 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



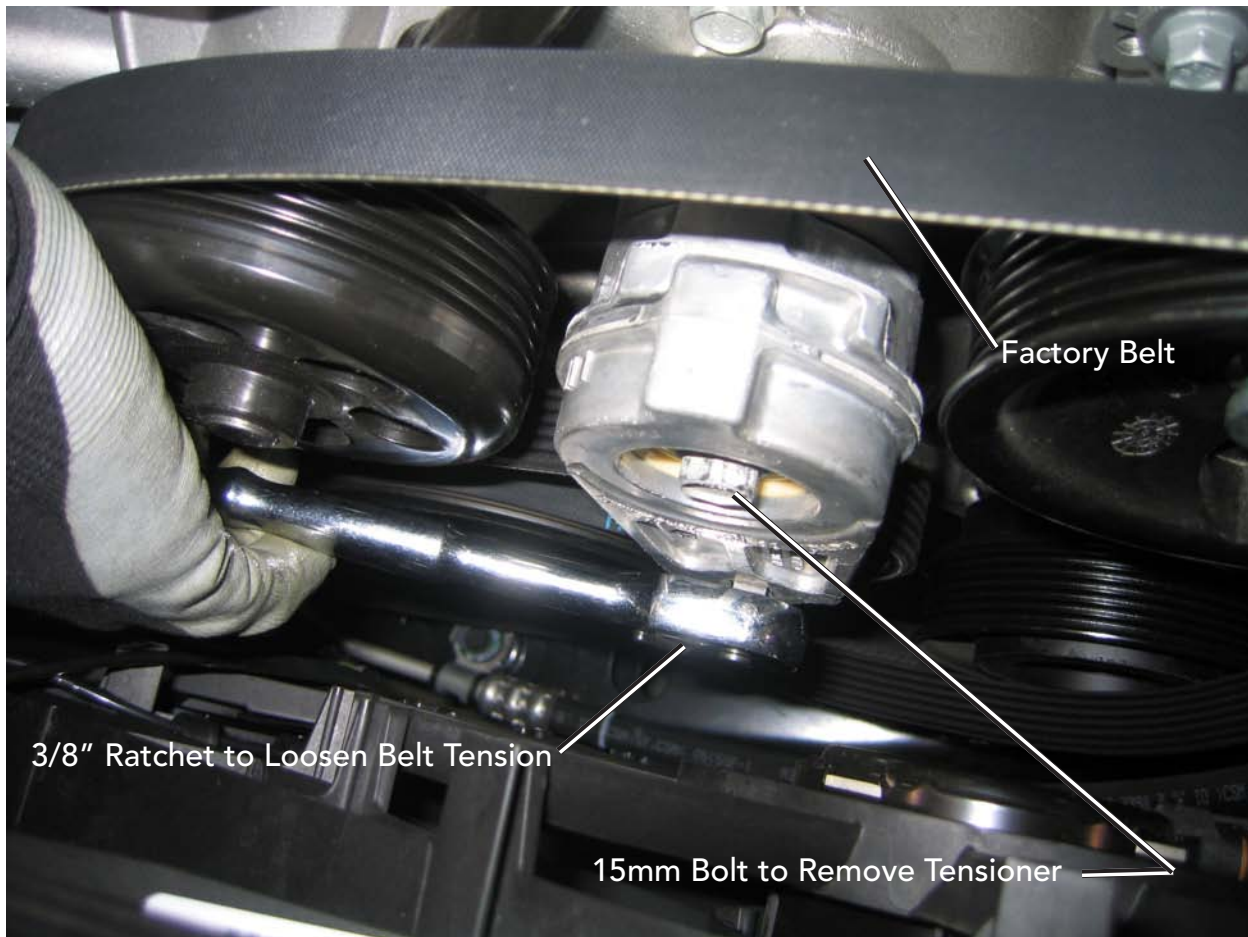
Power Steering Hose's New Position



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.



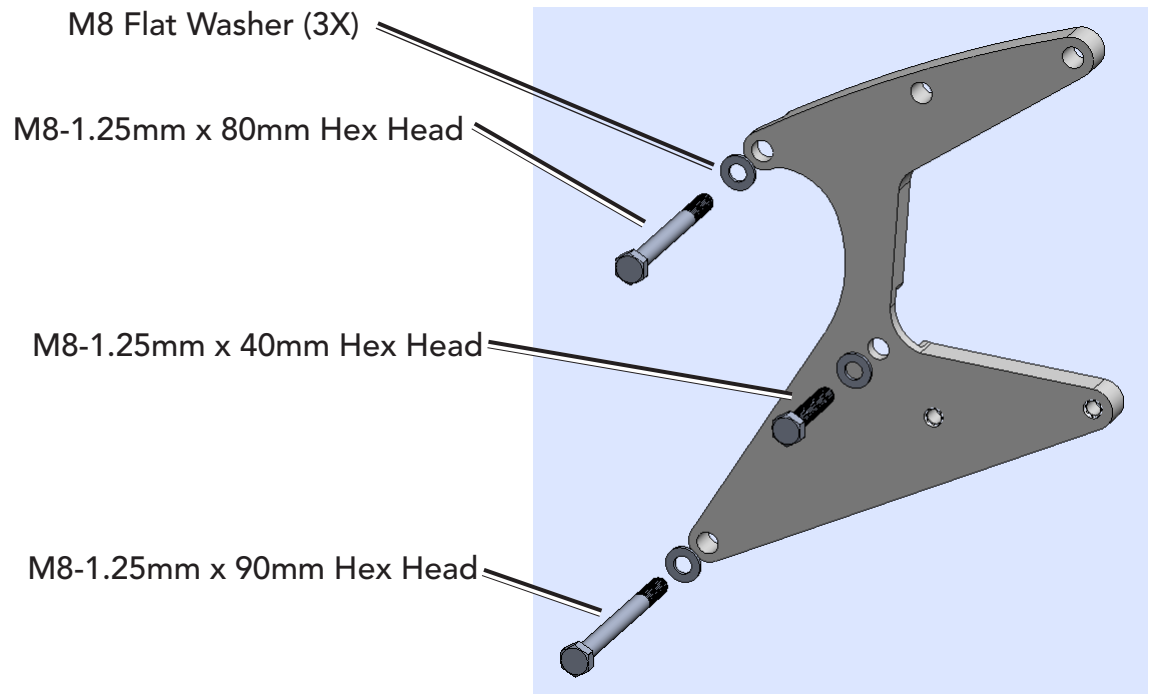
Factory Belt and Tensioner Removal

Sub-Bracket (6.1L Only)

- 1 Remove the three bolts used to mount the sub-bracket with a 13mm socket.
- 2 Install the sub-bracket using the three mounting locations from step 1. Each piece of hardware is a different length, refer to the illustration on the right for proper locations. Install the bracket loosely.



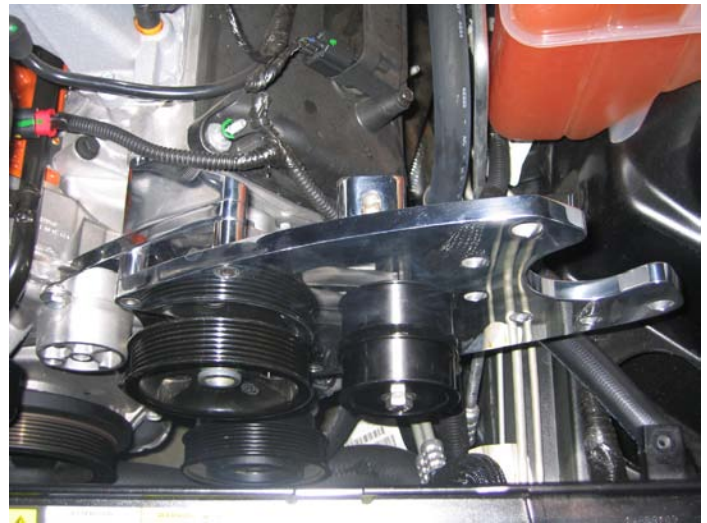
Remove 13mm Bolts For Sub-Bracket Install



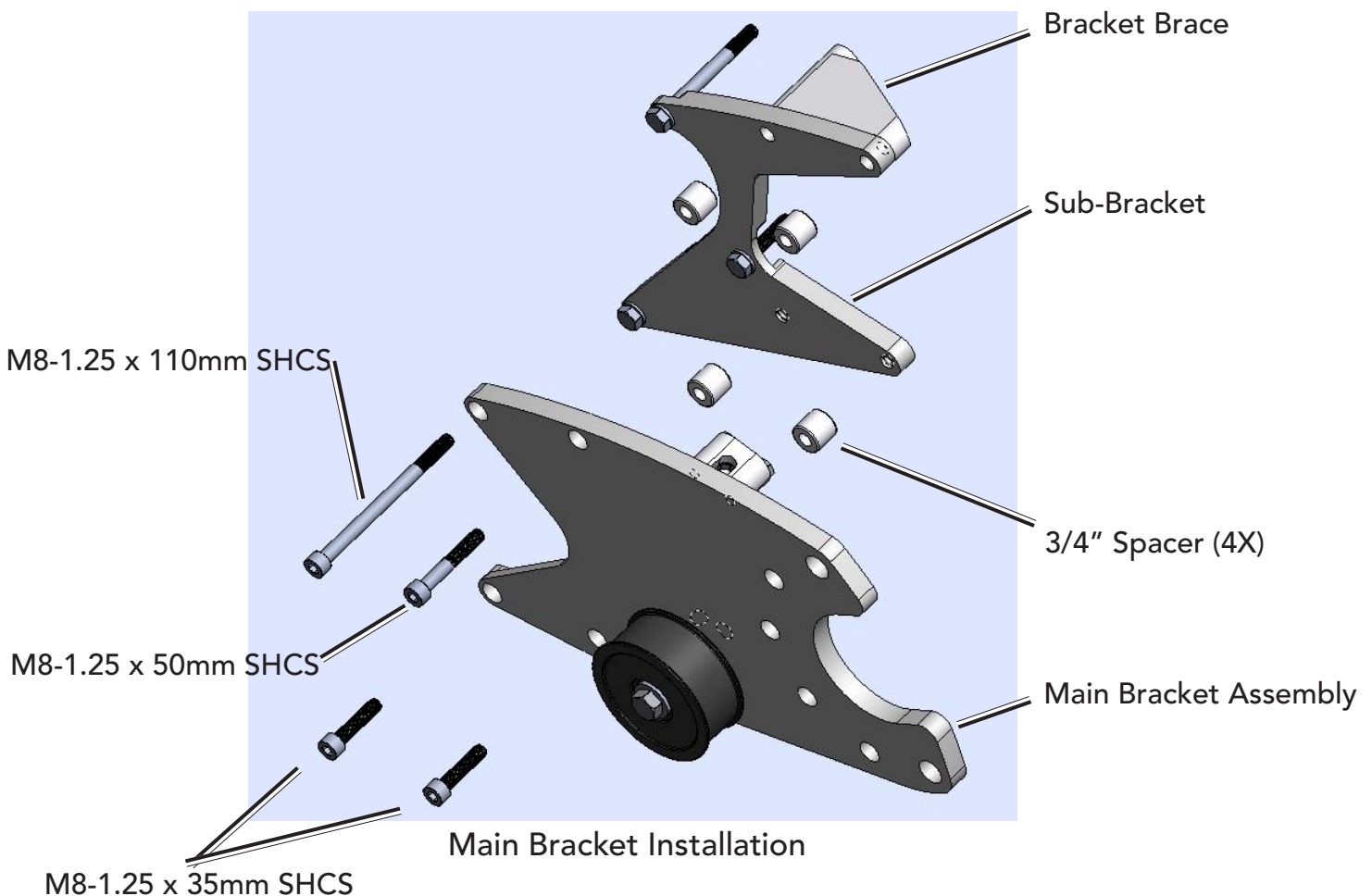
Sub-Bracket Installation

Main Bracket (6.1L Only)

- 1 Install the main bracket by inserting the 110mm bolt through the bracket, a 3/4" spacer, the sub-bracket, the bracket brace, and thread into the cylinder head. Install the remaining three fasteners; be sure to place a spacer between each bracket for all three fasteners. The 50mm fastener does not thread into the cylinder head, only the bracket brace.
- 2 Tighten the sub-bracket bolts. Complete the bracket installation by tightening the main bracket SHCS's.



Main Bracket Installed

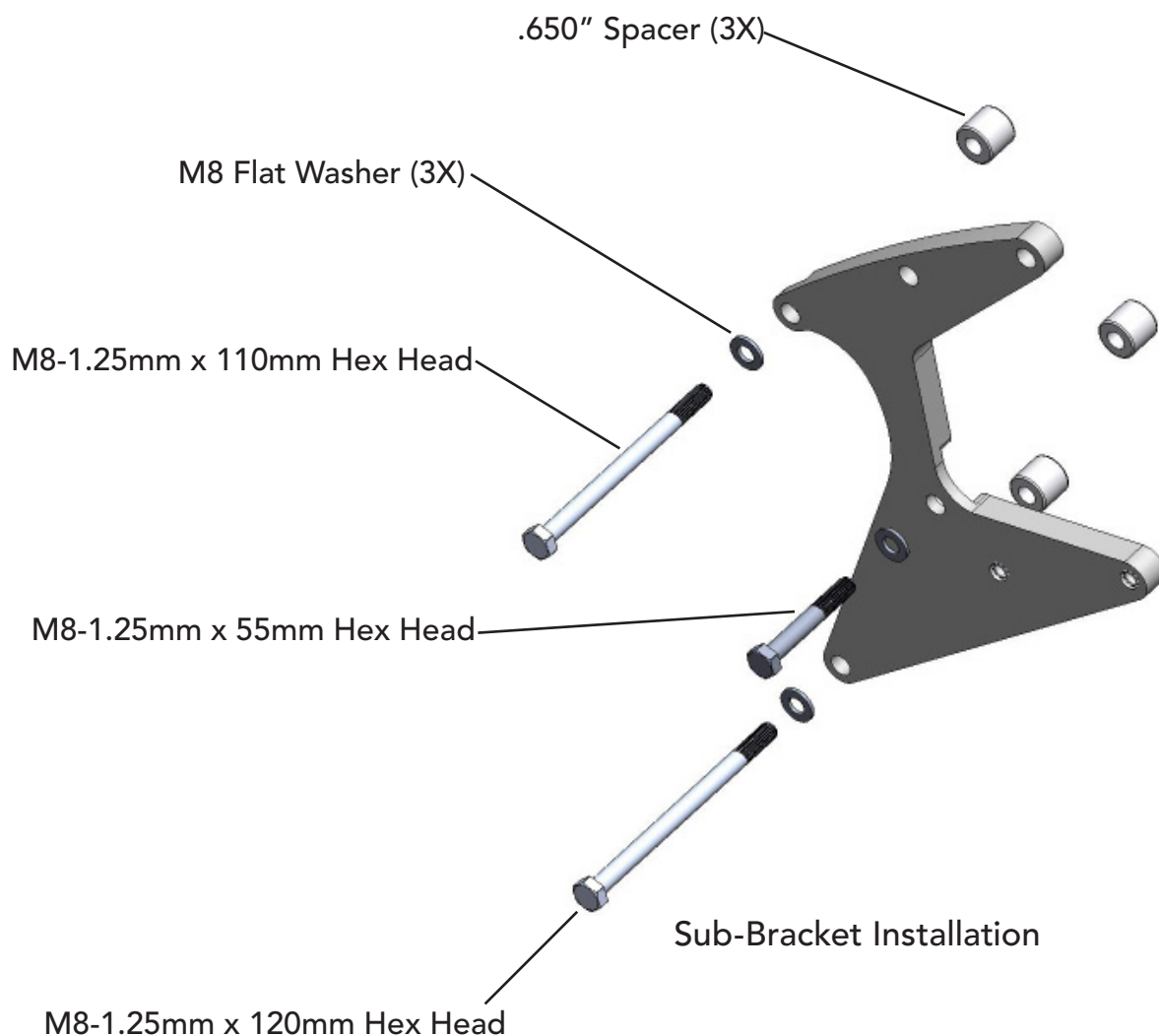


Sub-Bracket (5.7L Auto. Only)

- 1 Remove the three bolts used to mount the sub-bracket with a 13mm socket.
- 2 Install the sub-bracket using the three mounting locations from step 1. Each piece of hardware is a different length, refer to the illustration on the right for proper locations. Install the bracket loosely.

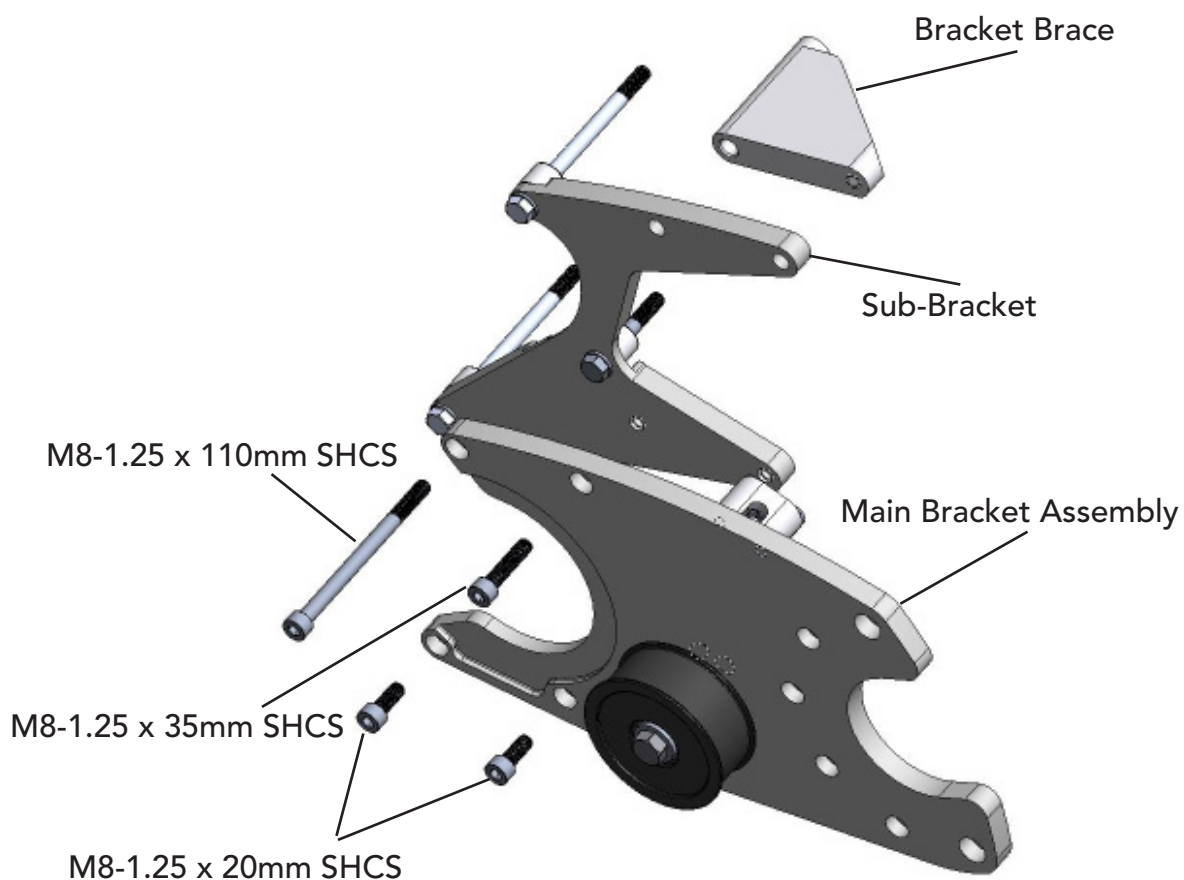


Remove 13mm Bolts For Sub-Bracket Install



Main Bracket (5.7L Auto. Only)

- 1 Install the main bracket by inserting the 110mm bolt through the bracket, the sub-bracket, the bracket brace, and threaded into the cylinder head. Install the remaining three fasteners; be sure to place a spacer between each bracket for all three fasteners. The 35mm fastener does not thread into the cylinder head, only the bracket brace.
- 2 Tighten the sub-bracket bolts. Complete the bracket installation by tightening the main bracket SHCS's.



Main Bracket Installation (5.7 Auto.)

Main Bracket (2009 5.7L Manual and 2010 5.7L Cars Only)

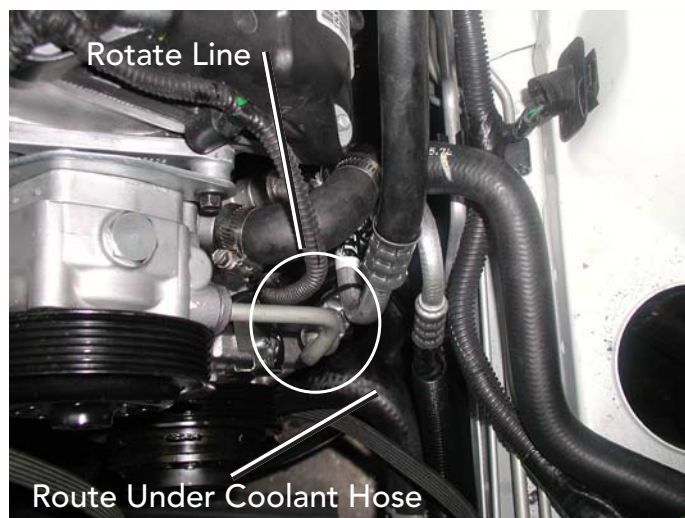
- 1 To re-route the power steering lines, remove the 3/4" hose by pressing the factory clip together and sliding it off of the power steering pump. Pull the hose off of the pump.
- 2 Slide the provided 90° rubber elbow (located in the power steering bag) onto the pump (trim if necessary), followed by 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.



Power Steering Line Modification
(Shown Disconnected From Pump)

✓ **Tech Tip:** It may be necessary to adjust the position of the pressure side power steering hose 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.

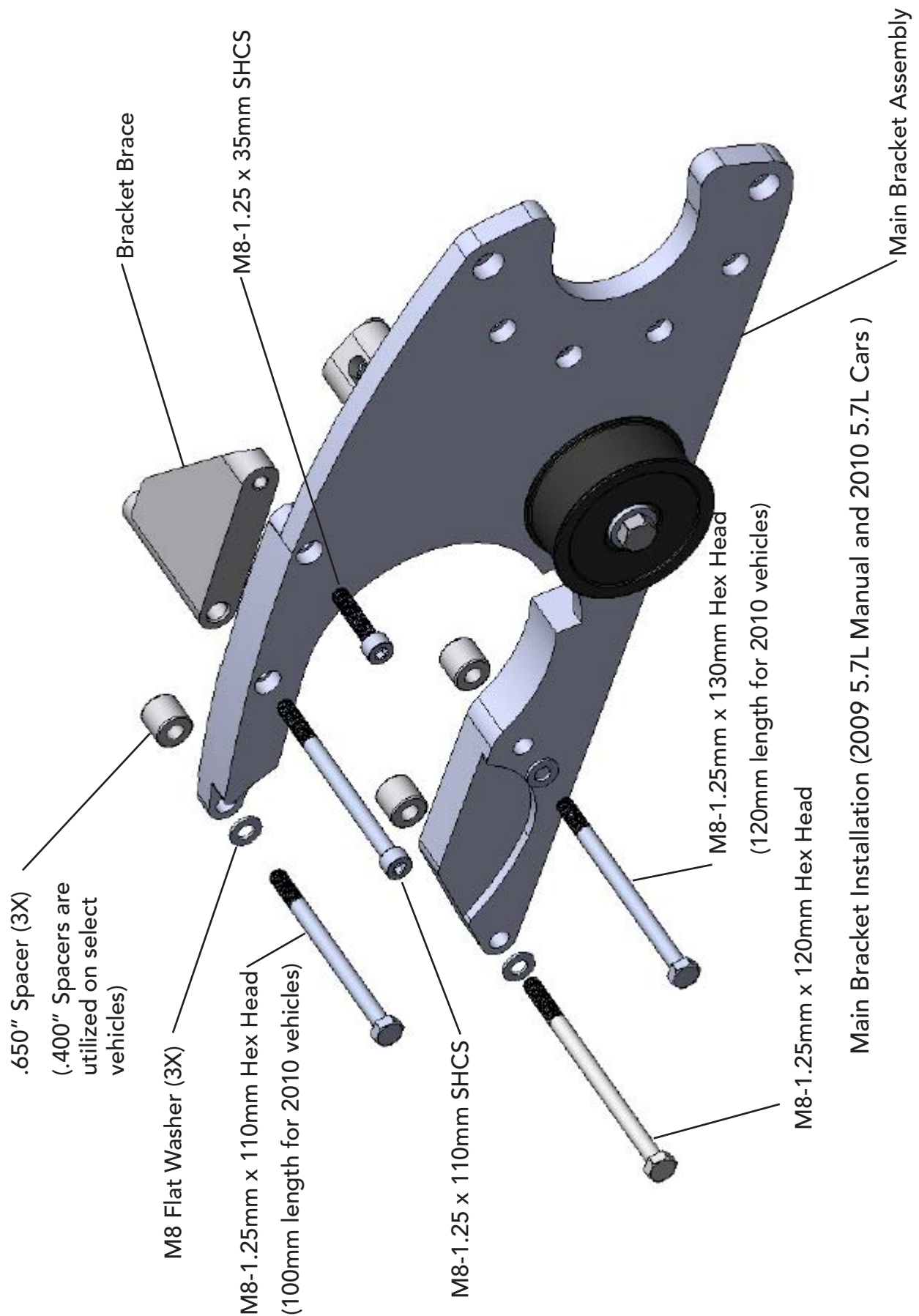
- 3 Remove the three bolts used to mount the bracket with a 13mm socket.
- 4 Install the main bracket assembly. Set the assembly in place around the power steering pump. Slide the hex bolts and washers through the bracket. Place a .650" (.400" spacers are also included for 2010 models and select 2009 vehicles) tube spacer behind the bracket in those locations. Begin threading the fasteners into place. Mount the bracket brace between the main bracket and cylinder head. Fasten the 110mm followed by the 35mm SHCS's into place. Tighten all main bracket fasteners at this time (see illustration on following page).



Rotate Line
Route Under Coolant Hose
Pressure Side Power Steering
Hose Adjustments



Remove 13mm Bolts For Bracket Install



PROCHARGER HEAD UNIT

Coolant Reservoir Removal

- 1 Remove the two 10mm bolts fastenening the coolant reservoir to the vehicle.
- 2 Lift up on the reservoir to gain clearance for the power steering reservoir to slide up and off of the coolant reservoir. There is a securing tab on the power steering reservoir that must be pushed for removal.
- 3 Move the coolant reservoir toward 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

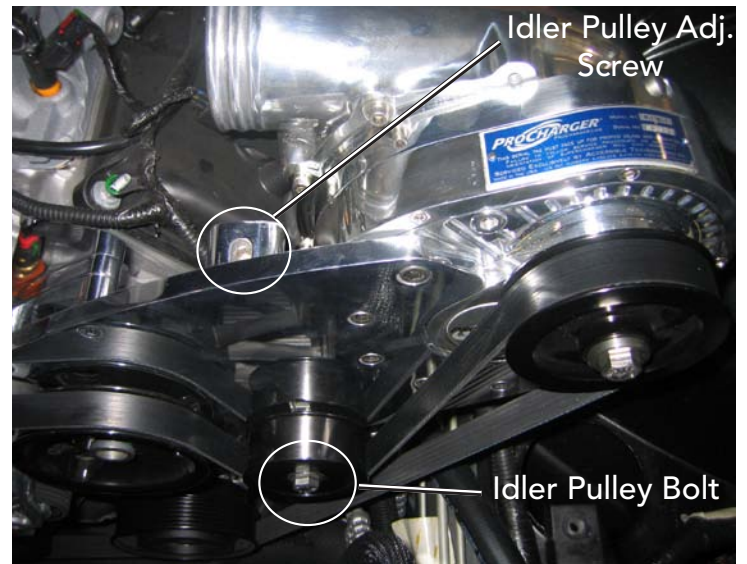
- 1 Remove the ProCharger oil fill reminder tag from the head unit.
- 2 Fit the supercharger into the bracket.
- 3 With the two $\frac{3}{8}$ -16 x 7/8" SHCS start mounting the supercharger onto the bracket. Thread in the remaining four $\frac{5}{16}$ -18 x 5/8" SHCS. Tighten all SHCS.
- 4 Fill the head 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.



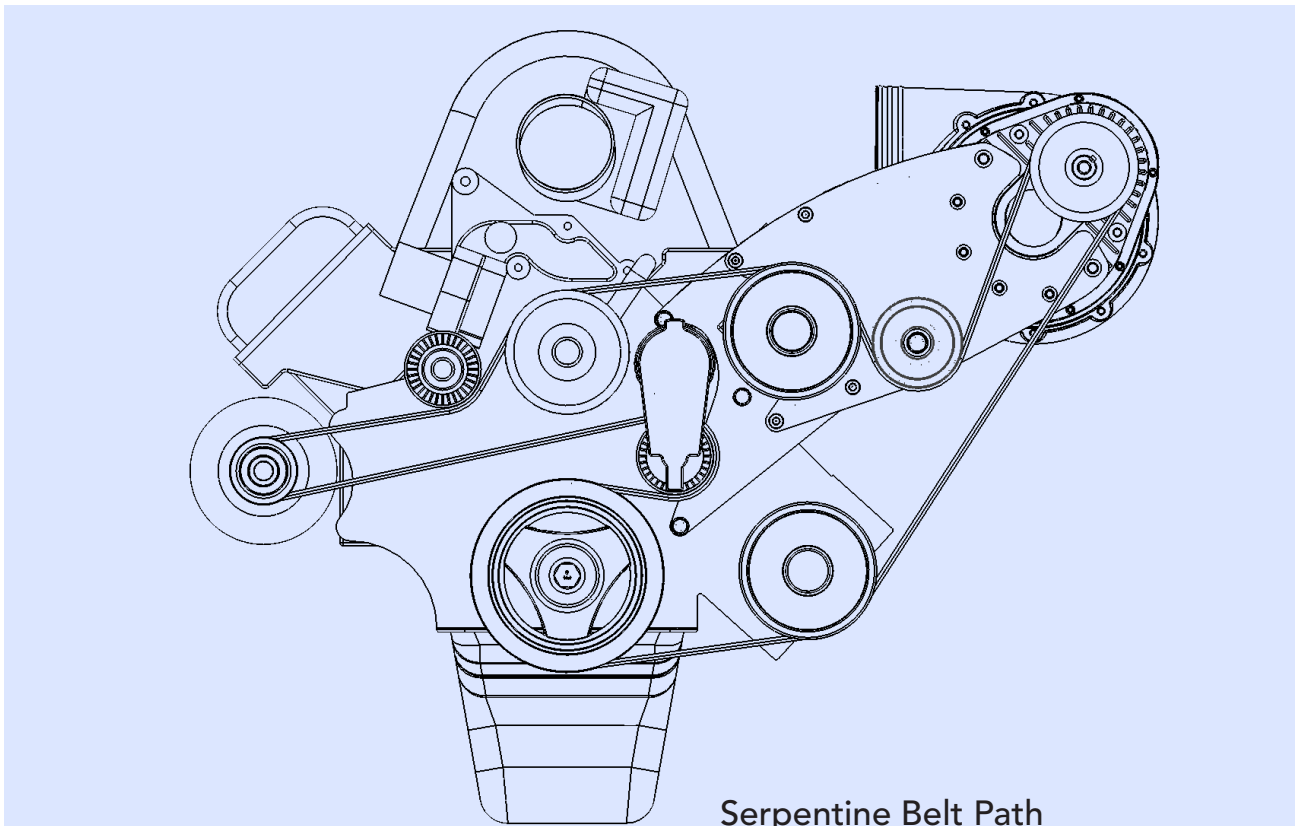
ProCharger Head Unit Installed

SERPENTINE BELT

- 1 Re-install the factory tensioner with the pulley aimed straight down and tighten the 15mm bolt.
- 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.



Serpentine Belt Installed

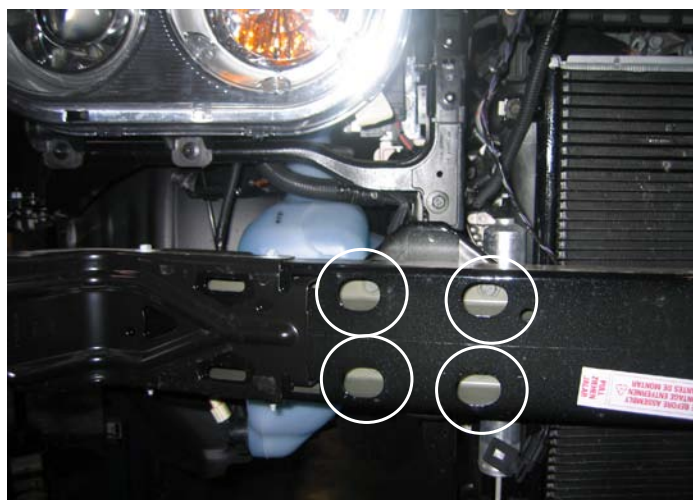


Serpentine Belt Path

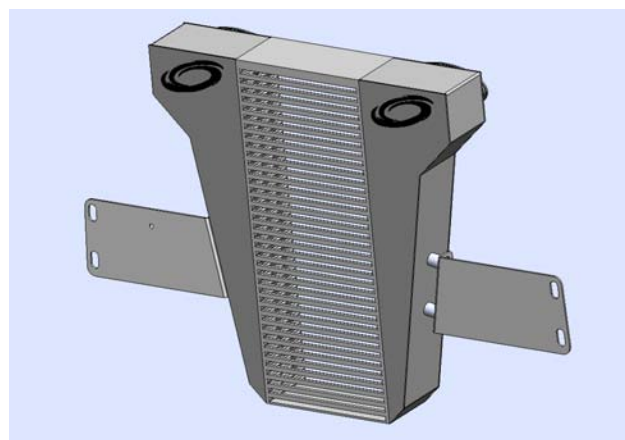
INTERCOOLER

Intercooler Installation

- 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 eight (four on each side of the vehicle) 13mm bolts securing the front bumper to the vehicle.
- 3 Slide the intercooler assembly with the ProCharger logo's facing the front of the car between the bumper and condenser (the front bumper may need to be pried out slightly for bracket installation). The holes on each intercooler bracket should line up with the holes in the front bumper for the bolts removed in step 2.



Front Bumper Bolt Locations (Pass. Side)



Intercooler and Bracket Orientation

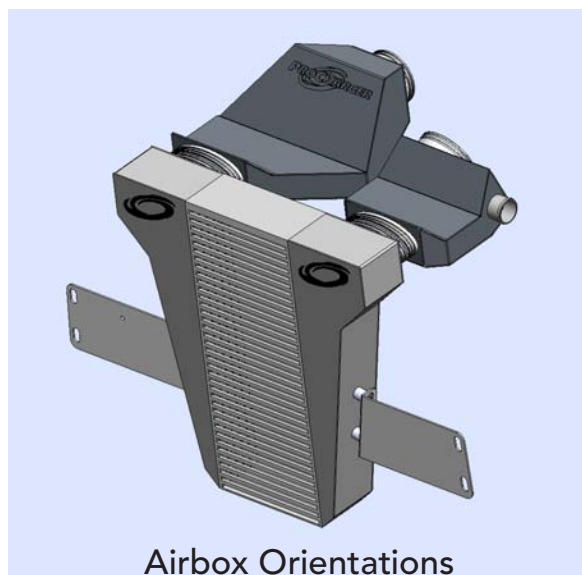
- 4 Two sections of rubber insulated tape have been included with the system. Place these behind the front bumper to protect the intercooler from making direct contact with the bumper. Place one piece of tape on each side (left and right) of the intercooler.
- 5 Re-install the front bumper bolts through 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

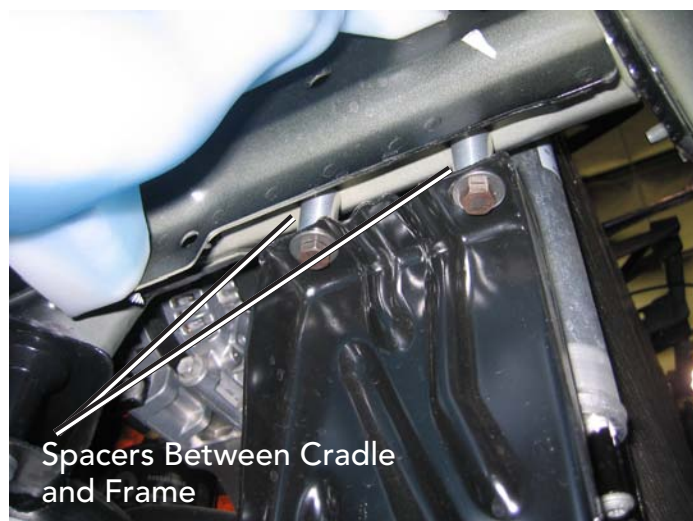


Airbox Orientations

Radiator Relocation

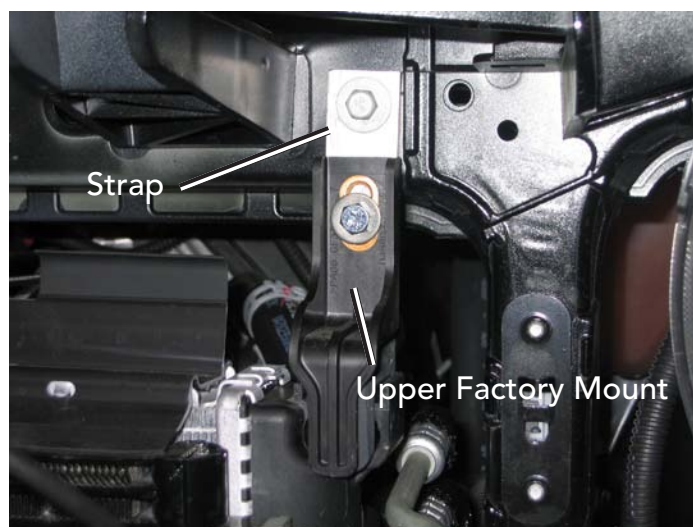
- 1 Mount the factory radiator cradle back onto the vehicle, spacing it downward using the provided 1-1/4" spacers (four total), M8 bolts and washers. Tighten the four bolts.

✓ **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.



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.



Upper Radiator Mount Relocation

Tubing and Hoses

- 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 drivers side airbox. Secure with #52 hose clamps.
- 3 Rotate the 90° tube down to line it up with the driver's side airbox. Slide the reducer onto the airbox opening.
- 4 Using the provided 3-1/2" diameter rubber hose, connect the passenger's side airbox to the throttle body connection, and secure the connections using two #56 hose clamps.
- 5 Tighten all hose clamps.
- 6 Insert the provided rubber grommet into the opening on the back side of the passenger's side airbox. Push the factory intake air temperature sensor into the grommet. Be sure the sensor is plugged in securely.



Tech Tip: Install the supplied grommet and sensor into the passenger's side airbox with caution. Improper installation could lead to the grommet or sensor falling into the airbox, requiring removal of the airbox to retrieve.



Tube and Reducer Installation



Throttle Body Connection

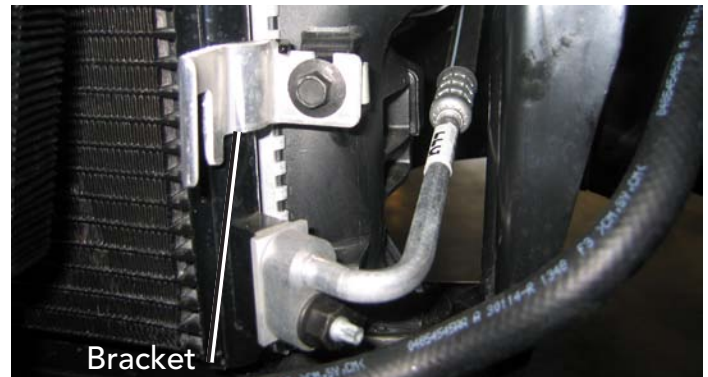


Intercooler and Tubing Installed

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)



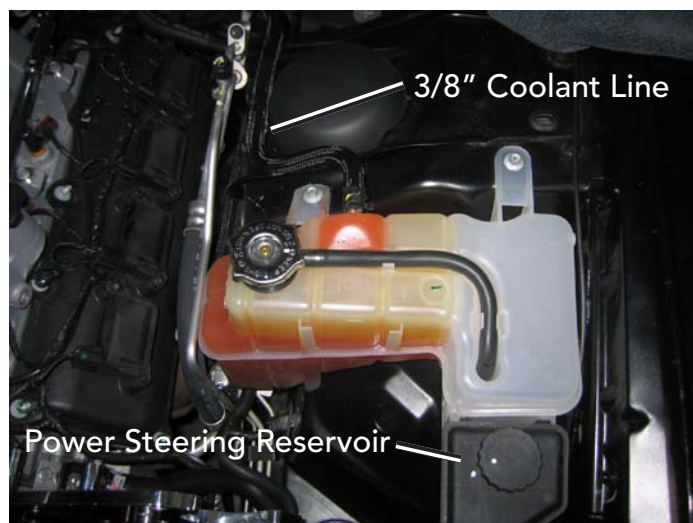
Note: Depending on vehicle model, you may need to position one horn on top, and one below on the provided bracket.



Horn Relocation

COOLANT RESERVOIR

- 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.



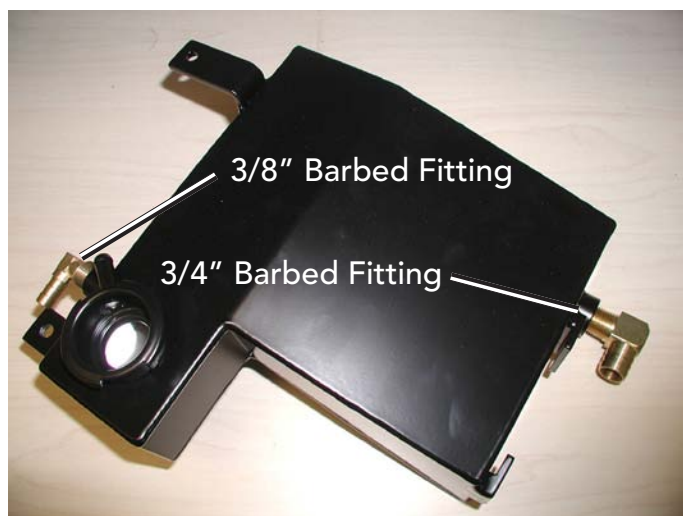
Factory Coolant Reservoir



3/4" Line Extended

Coolant Reservoir

- 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. Install the new supplied 16 psi radiator cap.



Supplied Coolant Reservoir



Coolant Hose Routing



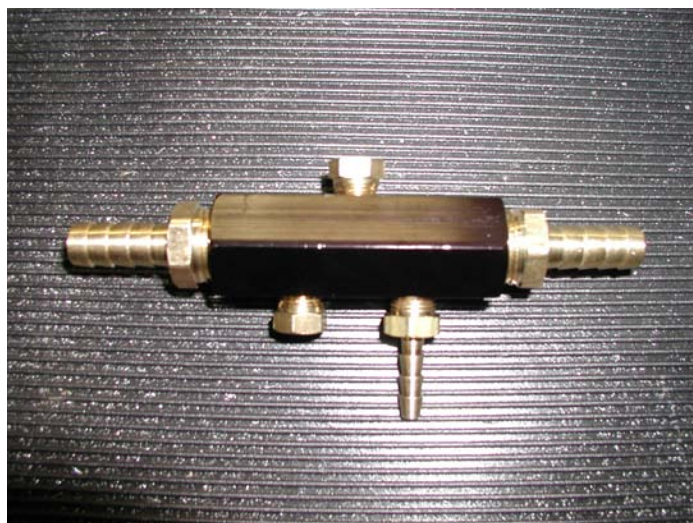
Warning: DO NOT OVERFILL THE COOLANT RESERVOIR. OVERFILLING CAN CAUSE PERMANENT DAMAGE TO THE RESERVOIR. FILL ONLY TO BOTTOM SEAM VISIBLE INSIDE THE COOLANT RESERVOIR.

VACUUM MANIFOLD

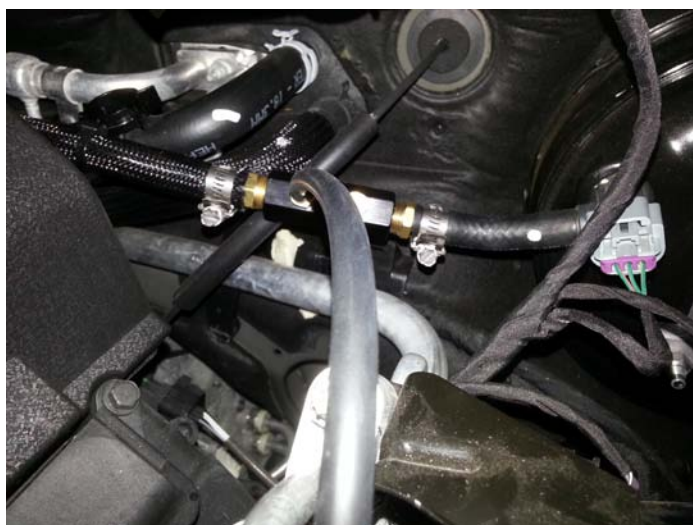
- 1 Assemble the supplied vacuum manifold as shown. If you have or are installing a boost gauge, do not install the plug, use an additional barb fitting. Thread each fitting into the manifold. Thread the 3/8" barbed fittings onto each end of the manifold.
- 2 Locate the brake booster hose on the driver's 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.

! **Warning:** Improper clamping of the splice into the brake booster hose could cause a vacuum leak and could cause the power brakes to become inoperable. Use extreme caution in installing the vacuum manifold to prevent any possible leaks.

- 5 Using the provided 3/16" vacuum line, connect one end onto the barb located on the surge valve, and route 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.



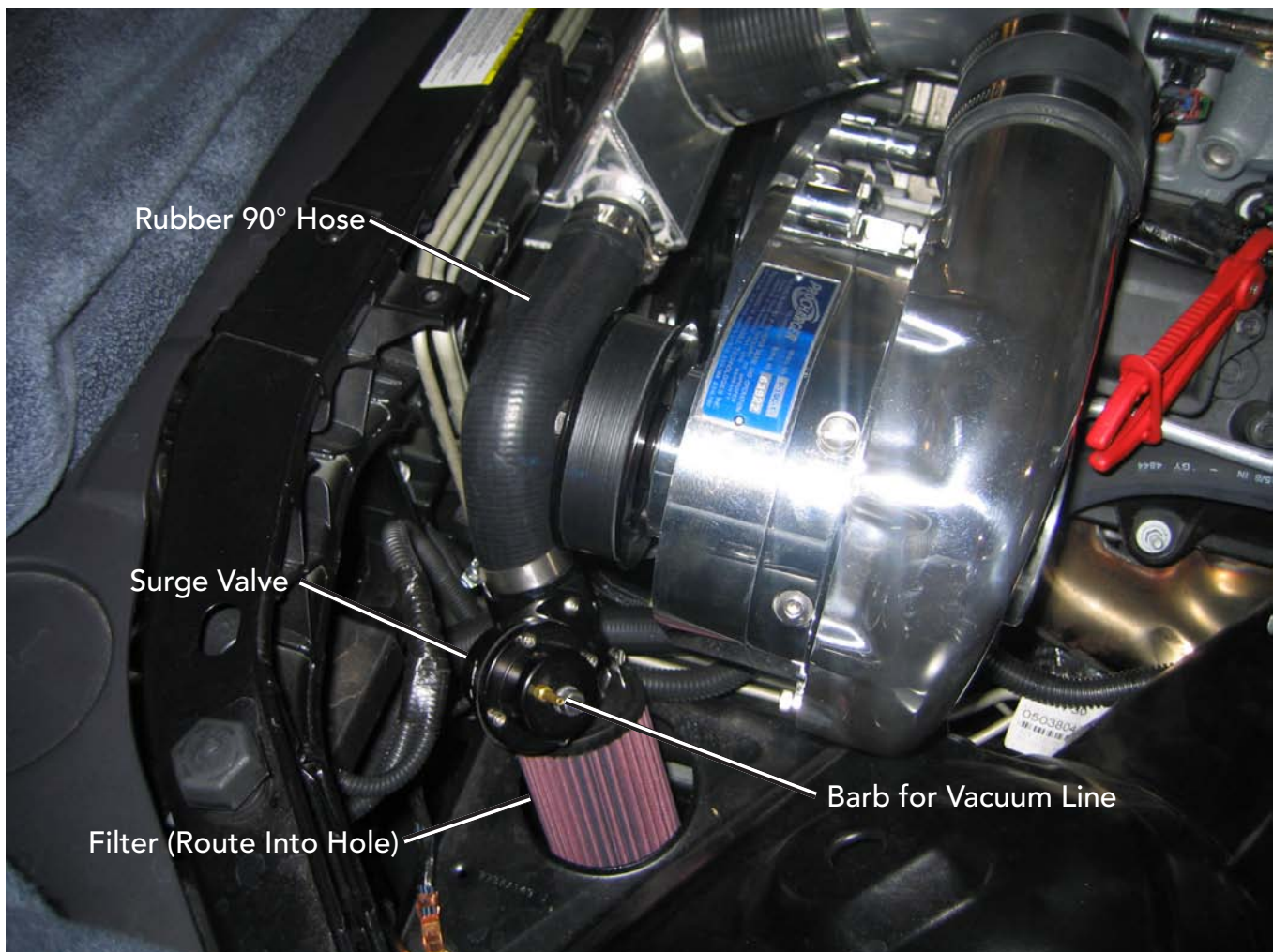
Vacuum Manifold Assembled



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

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.

Relay 46



Electrical Panel

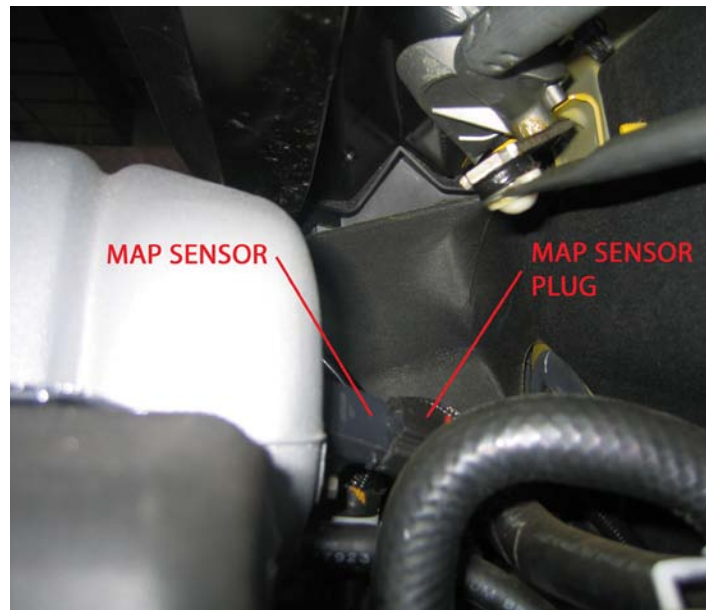
- 7 Install the new injectors, followed by the factory retaining clips.
- 8 Mount the spacers on the manifold, push the injector and rail assembly into place, and tighten the rails with the new hardware. Re-install each wiring harness to each injector.



Fuel Rails Installed

Map Sensor (6.1L Models)

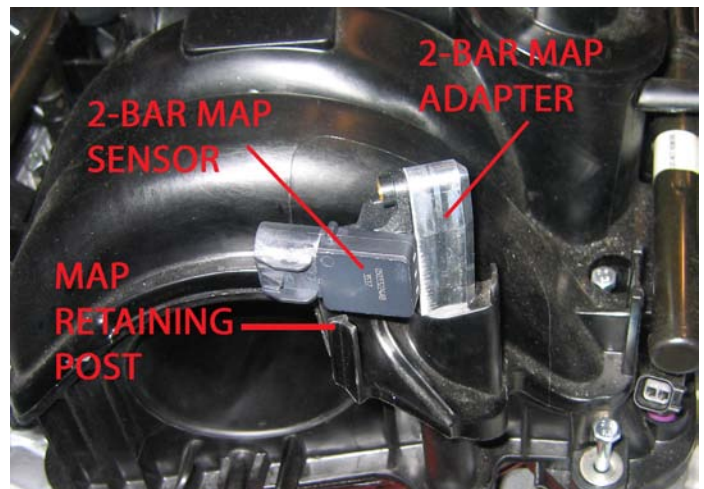
- 1 Remove the factory MAP sensor located on the back side of the intake manifold. Remove the electrical harness by sliding the red retaining tab back and disconnecting it from the sensor. Remove the two 8mm bolts and pull the factory MAP sensor out of the vehicle.
- 2 Install the new 2-bar MAP sensor, tighten the 8mm bolts, and connect the harness to the new sensor.



2 Bar MAP Sensor Installed (6.1L Model)

Map Sensor (5.7L Models)

- 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 (5.7L Model)

Fuel Pump

(6.1L Models ONLY)

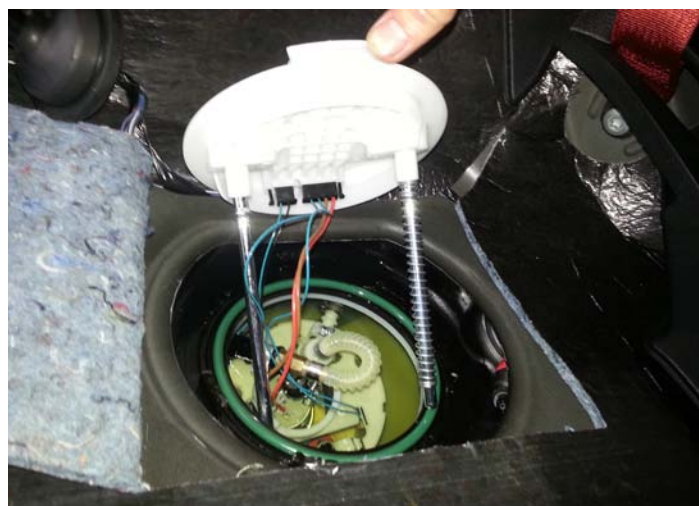
- 1 Make sure the ignition is off and the key is removed from the ignition.
- 2 Pull up on both sides of the rear seat cushion to remove.
- 3 Remove the plastic cover over the pump. Disconnect the fuel pump electrical connector.
- 4 Use a hammer and a punch to rotate the fuel pump locking ring counterclockwise.
- 5 Pull the fuel pump lid up to gain access to the (2) electrical connectors. Disconnect them.
- 6 Push the clip on the fuel pump feed line to disconnect it from the pump.



Fuel Pump Cover



Fuel Pump Locking Ring



Electrical Connectors Under Pump Lid

Fuel System

- 7 Pop the (2) plastic lines off the top of the pump.
- 8 Pull up on the fuel pump basket assembly and remove it from the tank.



Fuel Pump Removed

- 9 Disconnect the fuel pump electrical connector.
- 10 Remove the plastic pump cover by pulling out on the (3) locking tabs.



Cover Locking Tab

- 11 Use a pick tool to pry back the fuel pump locking tabs and slide the pump up as far as it can go.
- 12 Reach into the basket and pop the fuel pump sock and the blue plastic siphon part. Remove pump from basket.



Fuel Pump Locking Tabs

- 13 Trim fuel pump locking tabs to accept the new larger fuel pump.



Trimmed Tabs

- 14 Use a pick tool to compress the locking tabs on the fuel pump spade connectors. Slide the spade connectors out of the connector housing



Spade Connectors Removed

- 15 Snap the new fuel sock onto the new pump.



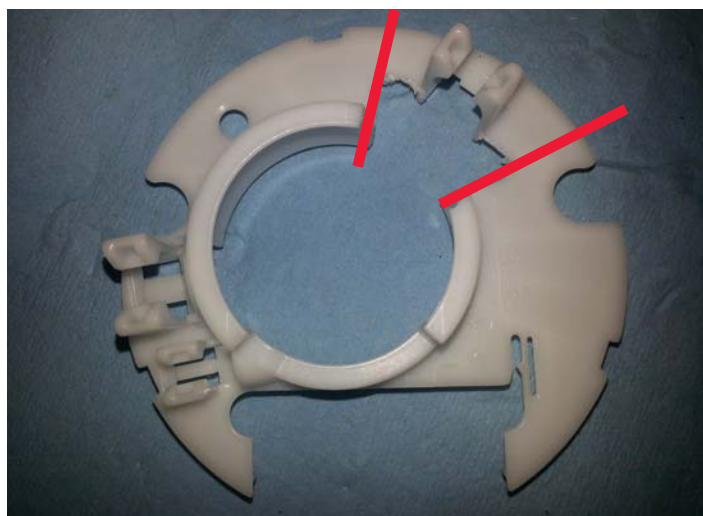
New Fuel Sock Installed

- 16** Insert the new pump into the fuel basket, oriented as shown.



Fuel Pump Orientation

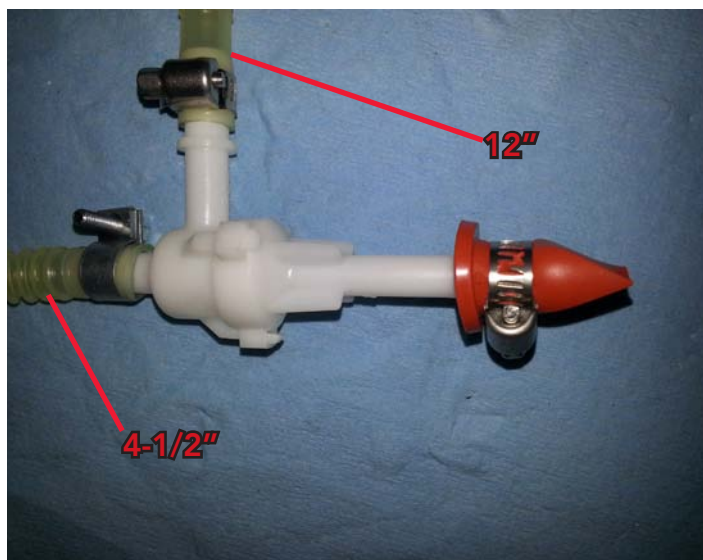
- 17** Trim the pump cover as shown (trim where the red lines are shown). Removing the section in between the two lines. Reinstall the cover.



Cut and Remove Pump Cover Section

- 18** Trim the siphon tube back to where the ribs end. Connect the orange rubber damper to the end of the siphon tube. Secure with a hose clamp.

- 19** Connect the 12" section of flexible fuel hose to the perpendicular barbs on the jet siphon. Connect the 4-1/2" section of flexible hose to the parallel barbs on the siphon. Secure with hose clamps.



Siphon Tube Trimmed & Damper Installed

- 20 Insert the supplied brass "T" into the open end of the 4-1/2" section of flexible hose on the siphon tube.
- 21 Locate the supplied sections of submersible 3/8 fuel hose. Slide the 1-1/2" section onto the perpendicular barb of the "T". Slide the 2" section of hose onto the parallel barb of the "T". Secure with hose clamps.
- 22 Slide the aluminum adapter into the open end of the 2" hose. Secure with a hose clamp.
- 23 Slide the jet siphon into the fuel basket. The orange damper should be pointing downward.

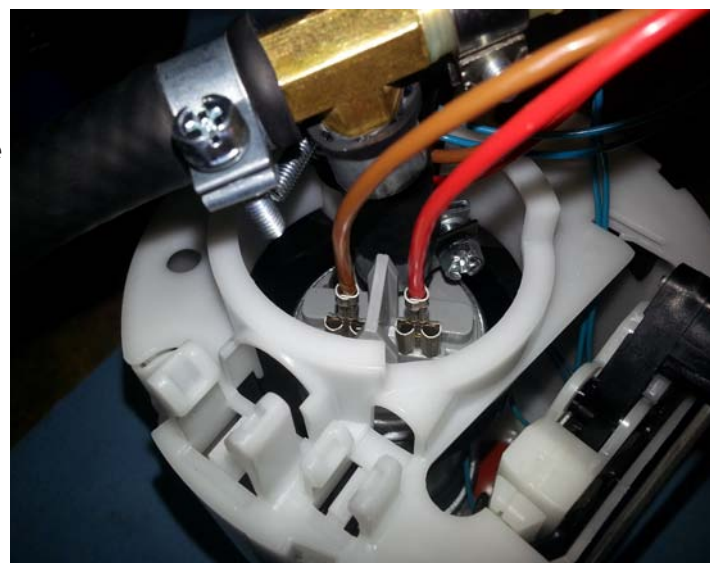


Fuel Hose Routing



Jet Siphon Installed in Basket

- 24 Slide the shorter section of rubber 3/8 hose over the fuel pump outlet. Secure with a hose clamp.
- 25 Connect the fuel pump wires. The orange wire is positive (+), the brown wire is negative (-).



Pump Hose & Wiring Connections

- 26** Drill a small hole in the base of the basket. Use a zip tie to attach the 12" section of flexible hose to the basket as shown. This will keep the hose in an optimal position to reach the fuel.



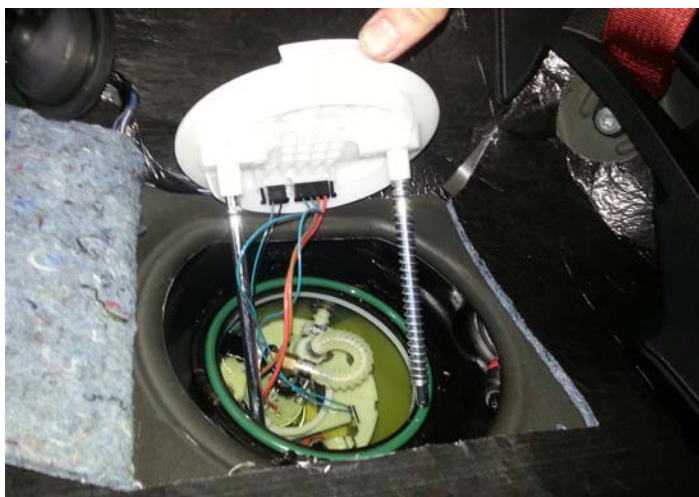
Suction Hose Attached to Basket

- 27** Drop the fuel pump assembly down into the tank.
- 28** Reconnect the factory fuel feed line to aluminum fitting.
- 29** Reconnect the electrical connectors.



Pump Assembly Into Tank

- 30** Line up the lid with the basket and push the lid on.
- 31** Reinstall the locking ring. Make sure it is fully seated.
- 32** Reinstall the plastic cover. Reconnect the electrical connector.
- 33** Reinstall the rear seat cushion.

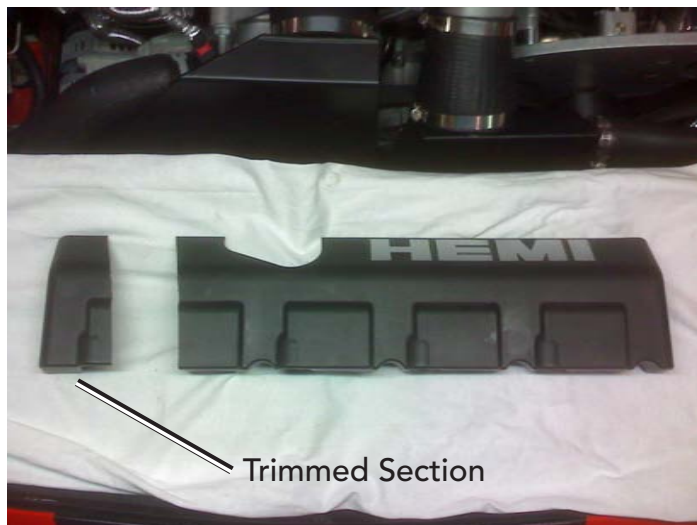


Reinstall Lid

FINISHING

Engine Cover Trimming (6.1L Models)

- 1 Trim the driver's side engine cover for tubing clearance. Refer to the image on the right for proper trimming.
- 2 Replace the engine covers onto the vehicle. Snap them into place.



Trimmed Driver's Side Engine Cover (6.1L)

Engine Cover Trimming (5.7L Models)

- 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 (5.7L)

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.



PCV Bung Rotated

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 undercar 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.



PCV Installed



**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.

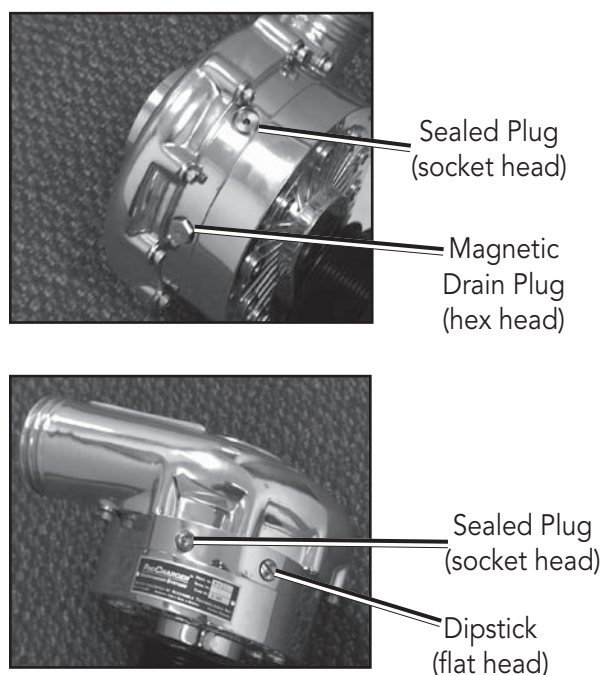
ProCharger Oil Change Intervals

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

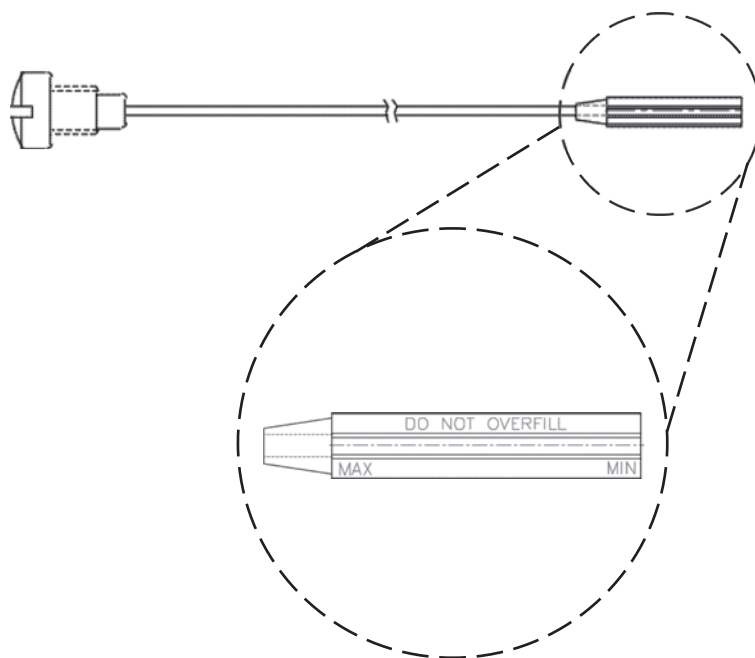
The ProCharger supercharger's oil level must be checked periodically to ensure the proper lubrication. The dipstick can be loosened using a flat blade screwdriver or a coin. When installed, the oil level should remain between the minimum (MIN) and maximum (MAX) indicators at all times.

! **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
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Phone: 913.338.2886
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techserv@procharger.com

Accessible Technologies, Inc.
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Part Number PMDF1A-001 Rev. S

