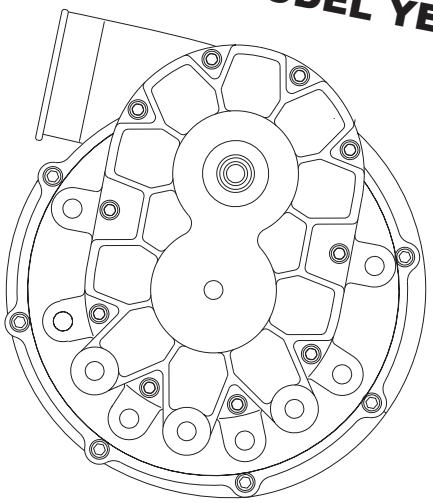
Chevrolet Camaro SS

Supercharger System Installation Instructions

2010-2013 MODEL YEAR*



*Legal in California only for racing vehicles which may never be used upon a highway.

VORTECH®

ENGINEERING, INC

1650 Pacific Avenue, Channel Islands CA 93033-9901 • Phone: 805-247-0226

Fax: 805-247-0669 • www.vortechsuperchargers.com • M-F 7:00AM - 3:30PM (PST)

DP/N: 4GE020-010 - v4.0 12/12/2012

FOREWORD

This manual provides information on the installation, maintenance and service of the Vortech supercharger kit expressly designed for this vehicle. All information, illustrations and specifications contained herein are based on the latest product information available at the time of this publication. Changes to the manual may be made at any time without notice. Contact Vortech Engineering for any additional information regarding this kit and any of these modifications at (805) 247-0226 7:00am-3:30pm PST.

Take note of the following before proceeding:

1. Proper installation of this supercharger kit requires general automotive mechanic knowledge and experience. Please browse through each step of this instruction manual prior to beginning the installation to determine if you should refer the job to a professional installer/technician. Please contact your dealer or Vortech Engineering for possible installers in your area.

2. **This product was designed for use on stock (*un-modified, OEM*) vehicles.** The PCM (*computer*), engine, transmission, drive axle ratios and tire O.D. must be stock. If the vehicle or engine has been modified in any way, check with Vortech prior to installation and use of this product.

3. Use only premium grade fuel with a minimum of 91 octane (*R+M/2*).

4. Always listen for any sign of detonation (*knocking/pinging*) and discontinue hard use (*no boost*) until the problem is resolved.

5. Vortech is not responsible for any clutch, transmission, drive-line or engine damage.

Exclusions from Vortech warranty coverage considerations include, but not limited to:

1. Neglect, abuse, lack of maintenance, abnormal operation or improper installation.

2. Continued operation with an impaired vehicle or sub-system.

3. The combined use of Vortech components with other modifications such as, but not limited to, exhaust headers, aftermarket camshafts, nitrous oxide, third party PCM programming or other such changes.

P/N: 4GE020-010 v4.0, 2012-12-12

TABLE OF CONTENTS

P/N: 4GE020-010 v4.0, 2012-12-12

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P/N: 4GE020-010 v4.0, 2012-12-12

CHEVROLET 2010-2013 CAMARO SS

Installation Instructions

Congratulations on selecting the best performing and best backed automotive supercharger available today... the VORTECH® Supercharger!

Before beginning this installation, please read through this entire instruction booklet and the Street Supercharger System Owner's Manual which includes the Automotive Limited Warranties Program and the Warranty Registration form.

Vortech supercharger systems are performance improving devices. In most cases, increases in torque of 30-35% and horsepower of 35-45% can be expected with the boost levels specified by Vortech Engineering. This product is intended for use on healthy, well maintained engines. Installation on a worn-out or damaged engine is not recommended and may result in failure of the engine as well as the supercharger. Vortech Engineering is not responsible for engine damage.

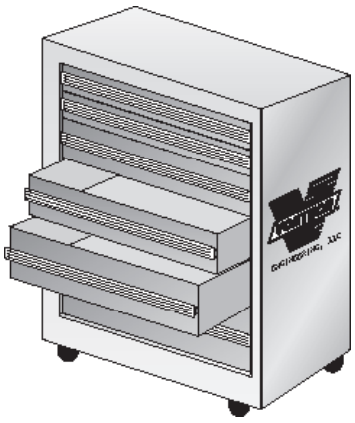
Installation on new vehicles will not harm or adversely affect the break-in period so long as factory break-in procedures are followed.

For best performance and continued durability, please take note of the following key points:

1. Use only premium grade fuel 91 octane or higher (R+M/2).
2. The engine must have stock compression ratio.
3. If the engine has been modified in any way, check with Vortech prior to using this product.
4. Always listen for any sign of detonation (pinging) and discontinue hard use (no boost) until problem is resolved.
5. Perform an oil and filter change upon completion of this installation and prior to test driving your vehicle. Thereafter, always use a manufacture-rated, high grade engine oil or a high quality synthetic, and change the oil and filter every 3,000 miles or less. Never attempt to extend the oil change interval beyond 3,000 miles, regardless of oil manufacturer's claims as potential damage to the supercharger may result.
6. Before beginning installation, replace all spark plugs that are older than 1 year or 15,000 miles with original heat range plugs as specified by the manufacturer and reset timing to factory specifications (follow the procedures indicated within the factory repair manual and/or as indicated on the factory underhood emissions tag). Do not use platinum spark plugs unless they are original equipment. Change spark plugs every at least 15,000 miles and spark plug wires at least every 50,000 miles.

TOOL & SUPPLY REQUIREMENTS

- Factory Repair Manual
- 3/8" Socket and Drive Set: SAE & Metric
- 1/2" Socket and Drive Set: SAE & Metric
- 3/8" NPT Tap, 1/4 NPT Tap and Handle
- Adjustable Wrench
- Open End Wrenches: 3/8", 7/16", 1/2", 9/16", 7/8”, 10mm
- Center Punch and a 5/8" Tapered Punch (oil fed kits V-7 kits only)
- 3/8” Springlock Fuel Fitting Disconnect Tool
- 8 Quarts manufacturer specified Engine Oil (oil fed V-7 kits only)
- Oil Filter and Wrench (oil fed V-7 kits only)
- Flat #2 Screwdriver
- Phillips #2 Screwdriver
- Heavy Grease (oil fed V-7 kits only)
- Silicone Sealer
- Drill Motor
- 11/64", 7/16", 37/64" Drill Bits
- 5/16" Allen Wrench
- Wire Strippers and Crimpers
- Utility Knife
- Crank damper installation and removal tools



If your vehicle has in excess of 15,000 miles since its last spark plug change, then you will also need:

- Spark Plug Socket
- NEW Spark Plugs

P/N: 4GE020-010 v4.0, 2012-12-12

2010-11 CAMARO SS, V-3 SYSTEM

Part No. 4GE218-010L

PARTS LIST

ENGINEERING, INC

IMPORTANT: Before beginning installation, verify that all parts are included in the kit. Report any shortages or damaged parts immediately.

PART NO.	DESCRIPTION	QTY
008110	**SMALL SILVER DIE CUT DECAL**	**2**
008130	**LICENSE PLATE FRAME, VORTECH**	**1**
008447	**1 YR S/C STRT INFO PKG ASY VOR**	**1**
009035	**S/C LUBE, BOTTLED, VORT 3-PACK**	**1**
2F328-060	**V3 S/C ASY, 2010 CAMARO SS**	**1**
4GE020-010	**INSTR. MANUAL, 2010 CAMARO SS**	**1**
8F060-068	**FUEL INJ, 65 LB, LS3 USCAR**	**8**
4GE110-044	**MTG BRKT ASSY, 10-13 CAMARO SS**	**1**
2A017-875-23	SPACER, .875 OD X .404 ID X 2.	3
2A017-875-24	SPACER, .875 OD X .404 ID X 3.	6
2A017-875-25	SPACER, .875 OD X .404 ID X 1.	9
2A017-875-26	SPACER, .875 OD X .404 ID X .0	2
4GE010-010	BRACKET, CYLINDER HEAD, 2010	1
4GE010-020	BRACKET, P/S MOUNTING, 2010	1
4GE010-034	BRACKET, TENSIONER 2010 CAMARO	1
4GE010-044	BRACKET, S/C MOUNTING PLATE,	1
7A375-126	3/8-16 X 1.25 HHCS, GR8, PLT	3
7A375-275	3/8-16 X 2-3/4 HXCSG8P ZINC	3
7A375-300	3/8-16 X 3" HXCSG5P	1
7A375-400	3/8-16 X 4" BOLT HXHD GR8	1
7A375-451	3/8-16 X 4.50" HXHD GR5 ZINC	6
7A375-625	3/8-16 X 6-1/4 HX HD	1
7C010-030	M10 X 1.5 X 30 HXHD CL10.9	4
7C010-057	M10 X 1.5 X 55MM HX HD CL10.9	3
7C010-092	M10 X 1.5 X 90 BUTTON HD	1
7C010-120	M10 X 1.50 X 120 HXHD, CL10.9	1
7C012-022	M12 X 1.75 X 20MM THIN HD	1
7K375-040	3/8 AN960 FLAT WASHR PLATED	16
7K437-001	7/16" AN WASHER	10
7A375-475	3/8-16 X 4.75" HXHD GR8 PLTD	1
4PFG016-150	IDLER PULLEY, 6-GROOVE (2013 ONLY)	1
2A017-016	BEARING PILOT, IDLER (2013 ONLY)	1
4PCX017-085	IDLER SPACER (2013 ONLY)	1
7F437-017	NUT, 3/8-16, NYLOCK (2013 ONLY)	1
4GE112-010	**AIR INLET ASM, 10-13 CAMARO**	**1**
4GE012-010	INLET DUCT, CAMARO, 2010	1
8H040-235	AIR FILTER, 4" FLG X 7.0L	1
7R002-056	#56 SAE TYPE F SS HOSE CLAMP	1
7R002-064	#64 SAE TYPE F SS HOSE CLAMP	1
7U030-056	3/8 PCV/VAC RUBBER HOSE	5FT
7P375-008	ELBOW, PLASTIC 3/8 X 90° UNION	1
7PS400-351	SLEEVE,4.0 X 3.5 X 2.35L	1
4GE112-030	**AIR DISCH ASM, 10-13 CAMARO**	**1**
4GE012-030	DISCH TUBE A, 6.2 CAMARO SAT	1
4GE012-050	4.0" TUBE, 70 DEG, DISCH, SAT,	1
4GE112-040	ASM, DISC TUBE B, 6.2 CAMARO S	1
4GL012-051	DISCH TUBE B, 6.0 COOLER	1
4GL012-070	DISCH TUBE B, 07 ESCALADE SAT	1
7A312-050	5/16-18 X 1/2 HXHD, GR5, ZINC	4
7C040-008	M4-.7X8MM SCHD SS	2
7J312-000	5/16 FLAT WASHER-SAE	4
7PS275-092	ELBOW, 2.75 X 90° SILICONE BLK	1
7PS300-045	ELBOW, BLK-SIL 3" X 45°	2
7PS300-300	SLEEVE, BLACK, 3.00D X 3.00	2
7PS300-400	BUMP HOSE, 3.00D X 4.00L	1
7PS400-200	SLEEVE, BLACK 4.0D X 2.0	1
7PS400-300	SLEEVE, BLACK 4.0D X 3.0	1
7PS400-301	REDUCER, HUMP, PROG 3.0 X 4.0	1
7R002-044	#44 SAE TYPE F SS HOSE CLAMP	2
7R002-048	#48 SAE TYPE F SS HOSE CLAMP	11
7R002-056	#56 SAE TYPE F SS HOSE CLAMP	1
7R002-064	#64 SAE TYPE F SS HOSE CLAMP	5
7S300-274	REDUCER, ALUM TUBE, 3.0 X 2.75	1
7S350-220	ASM, FLOW STRAIGHTENER, 3.5 OD	1
8A003-071	MAF, 3.8 I.D., 05 MUSTANG GT,	1
8D204-010	RACE BYPASS VALVE-BLACK	1
8H040-175	FILTER, 1.75" I.D., RACE BYPAS	1
8N010-350	BRKT, CAC, D.SIDE 2010 CAMARO	1
8N010-360	BRKT, CAC, P.SIDE 2010 CAMARO	1
4GE116-010	**DRIVE ASSY, 10-RIB, 10-13 CAM**	**1**
2A017-016	PILOT, 6203/5 BRG, M10 3/8 SCR	2
2A041-635	BELT, 5100635 DAYCO 10-RIB	1
4FM011-052	SPRING TENSIONER, 5.4	1
4GE016-010	DAMPER, CRANK, 2010 CAMARO SS	1
4GE017-011	IDLER SPACER, 10-RIB, 2010 CAM	1
4GE017-021	SPACER, CRANK PULLEY, 2010 CAM	1
4GR110-110	ASSY, DAMPER PIN, LS1-LS2-LS6	1
4MA018-051	CRANK PLY, 7", UNIVERSAL	1
4GE116-021	IDLER, SMOOTH, 10-RIB	2
7A375-250	3/8-16 X 2.5" GR8 HX	3
7A375-325	3/8-16 X 3-1/4 HX HD	3
7C010-057	M10 X 1.5 X 55MM HX HD CL10.9	1
7C010-111	M10 X 1.5 X 110 HXHD, ZINC	1
7C010-120	M10 X 1.50 X 120 HXHD, CL10.9	1
7J010-002	10MM WASHER, ZINC PLATED	2
7J625-030	SHIM, Ø.692" ID X .030" THK X	1
7K375-040	3/8 AN960 FLAT WASHR PLATED	6
7T100-250	DRILL BIT, Ø1/4" X 6" LONG HSS	1
4GE139-096	**PCV ASM, 10-13 CAMARO SS 6.2L**	**1**
7U375-051	1/8" VAC CAP	1
7U032-016	3/8" EFI FUEL HSE HI-PSR	4FT
7P375-008	ELBOW, PLASTIC 3/8 X 90° UNION	1
7R004-002	STEPLESS CLAMP, 17.0-70	2
7R002-006	#6 STNLS HOSE CLAMP	1
7P375-378	VALVE, CHECK, 3/8 BARB X 3/8 B	1
4GE155-010	**SUPRT ITEMS, 10-13 CAMARO SS**	**1**
7U033-020	HOSE, 5/8"ID CLASS 1 EMISSIONS	0.29FT
7P625-016	5/8" HOSE UNION, BARBED ENDS	1
7R004-004	STEPLESS CLAMP, 1.0 OD HOSE	2
7U030-046	5/32" VACUUM LINE	5FT
7P500-016	TEE, .5X.5X1/16NPT, METAL	1
7P062-187	1/16NPT X 3/16 HOSE BARB	1
4GE010-070	BRKT, PWR TERMINAL , 2010 CAMA	1
7J006-093	6MM WASHER, PLATED	1
7F006-093	NUT, M6 X 1.0, NYLOCK, PLATED	1
7U100-055	TIE WRAP, 7.5" NYLON	12
7T560-001	CUTTER,9/16" ROTABROACH	1
7T560-002	ARBOR,ROTABROACH	1
4GE055-010	TANK, WSHR FLUID INTEGRAL, 2 Q	1
4GE055-020	CAP, BUTTRESS THRD UNVENTED 2-	1
4GE055-030	TANK, REMOTE FILL WSHR FLUID,	1
4GE055-040	TANK, COOLANT PLAIN, 2.0 QT	1
4GE055-050	CAP, ENG, THRD TOP VENTED 2-1/	1
7U033-000	5/8" PCV HOSE	2FT
7R002-010	#10 SAE TYPE F SS HOSE CLAMP	2

P/N: 4GE020-010 v4.0, 2012-12-12

IMPORTANT: *Before beginning installation, verify that all parts are included in the kit. Report any shortages or damaged parts immediately.*

PART NO.	DESCRIPTION	QTY	PART NO.	DESCRIPTION	QTY
7P375-625	3/8 NPT X 5/8 HOSE BARB	1			
7P250-078	1/4 NPT X 5/16 BARB X 90°	1			
7A250-063	1/4-20 X .63 HHCS SS	10			
7J250-001	1/4 WASHER, SAE, PLTD	10			
7E010-050	#12 X 1/2 SHEET METAL SCREW	5			
4GE010-080	BRKT, WSHR RESVR, 2010 CAMARO	1			
4GE010-090	BRKT, REMOTE FILL, 2010 CAMARO	1			
4GE010-100	BRKT, CLNT OVRFLW, 2010 CAMARO	1			
7R004-687	STEPLESS CLAMP	2			
7R007-002	NYLON RATCHET CLAMP .90"	2			
7R001-008	38 STNLS HOSE CLAMP	2			
8N108-030	**CAC ASSY, 2010 CAMARO**	**1**			

P/N: 4GE020-010 v4.0, 2012-12-12

2010-13 CAMARO, V-7 TUNER KIT

Part No. 4GE218-120

PARTS LIST

VORTECH ENGINEERING, INC

IMPORTANT: *Before beginning installation, verify that all parts are included in the kit. Report any shortages or damaged parts immediately.*

PART NO.	DESCRIPTION	QTY
008110	**SMALL SILVER DIE CUT DECAL**	**2**
008130	**LICENSE PLATE FRAME, VORTECH**	**1**
008447	**1 YR S/C STRT INFO PKG ASY VOR**	**1**
2A258-070	**S/C ASY, V7 YSI, 10-13 CAMARO**	**1**
4GE130-026	**OIL FEED ASSY, 10-13 CAMARO**	**1**
7P016-125	M16 X 1.5 MALE TO 1/8 NPT FEM	1
7P125-004	1/8 NPT 90° X -4 JIC FTG STL	1
7P125-005	1/8 NPT STR. X -4 JIC FTG STL	1
7U100-055	TIE WRAP, 7.5" NYLON	5
7U100-066	TIE WRAP, 11" NYLON	2
7U250-090-260	OIL FEED HOSE, 26" -4X90°	1
4FA130-036	**OIL DRAIN ASSY**	**1**
7U030-036	1/2" OIL DRAIN HOSE	2.33FT
7P375-017	3/8NPT X 1/2 BEADED HSE BRB	1
7R001-008	#8 STNLS HOSE CLAMP	2
70000	INSPECTOR NUMBER	0
4GE110-044	**MTG BRKT ASSY, 10-13 CAMARO SS**	**1**
2A017-875-23	SPACER, .875 OD X .404 ID X 2.	3
2A017-875-24	SPACER, .875 OD X .404 ID X 3.	6
2A017-875-25	SPACER, .875 OD X .404 ID X 1.	9
2A017-875-26	SPACER, .875 OD X .404 ID X .0	2
4GE010-010	BRACKET, CYLINDER HEAD, 2010 C	1
4GE010-020	BRACKET, P/S MOUNTING, 2010 CA	1
4GE010-034	BRACKET, TENSIONER 2010 CAMARO	1
4GE010-044	BRACKET, S/C MOUNTING PLATE, 2	1
7A375-126	3/8-16 X 1.25 HHCS, GR8, PLT	3
7A375-275	3/8-16 X 2-3/4 HXCSG8P ZINC	2
7A375-300	3/8-16 X 3" HXCSG5P	1
7A375-400	3/8-16 X 4" BOLT HXHD GR8	1
7A375-451	3/8-16 X 4.50" HXHD GR5 ZINC	6
7A375-625	3/8-16 X 6-1/4 HX HD	1
7C010-030	M10 X 1.5 X 30 HXHD CL10.9	4
7C010-057	M10 X 1.5 X 55MM HX HD CL10.9	3
7C010-092	M10 X 1.5 X 90 BUTTON HD	1
7C010-120	M10 X 1.50 X 120 HXHD, CL10.9	1
7C012-022	M12 X 1.75 X 20MM THIN HD	1
7K375-040	3/8 AN960 FLAT WASHR PLATED	14
7K437-001	7/16" AN WASHER	10
7A375-475	3/8-16 X 4.75" HXHD GR8 PLTD	1
4PFG016-150	IDLER PULLEY, 6-GROOVE (2013 ONLY)	1
2A017-016	BEARING PILOT, IDLER (2013 ONLY)	1
4PCX017-085	IDLER SPACER (2013 ONLY)	1
7F437-017	NUT, 3/8-16, NYLOCK (2013 ONLY)	1
4GE112-010	**AIR INLET ASM, 10-13 CAMARO**	**1**
4GE012-010	INLET DUCT, CAMARO, 2010	1
8H040-235	AIR FILTER, 4" FLG X 7.0L	1
7R002-056	#56 SAE TYPE F SS HOSE CLAMP	1
7R002-064	#64 SAE TYPE F SS HOSE CLAMP	1
7U030-056	3/8 PCV/VAC RUBBER HOSE	5FT
7P375-008	ELBOW, PLASTIC 3/8 X 90° UNION	1
7PS400-351	SLEEVE,4.0 X 3.5 X 2.35L	1
4GE112-030	**AIR DISCHARGE ASM, 10-13 CAM**	**1**
4GE012-030	DISCH TUBE A, 6.2 CAMARO SAT	1
4GE012-050	4.0" TUBE, 70 DEG, DISCH, SAT,	1
4GE112-040	ASM, DISC TUBE B, 6.2 CAMARO S	1
4GL012-051	DISCH TUBE B, 6.0 COOLER	1
4GL012-070	DISCH TUBE B, 07 ESCALADE SAT	1
7A312-050	5/16-18 X 1/2 HXHD, GR5, ZINC	4
7C040-008	M4-.7X8MM SCHD SS	2
7J312-000	5/16 FLAT WASHER-SAE	4
7PS275-092	ELBOW, 2.75 X 90° SILICONE BLK	1
7PS300-045	ELBOW, BLK-SIL 3" X 45°	2
7PS300-300	SLEEVE, BLACK, 3.00D X 3.00	2
7PS300-400	BUMP HOSE, 3.00D X 4.00L	1
7PS400-200	SLEEVE, BLACK 4.0D X 2.0	1
7PS400-300	SLEEVE, BLACK 4.0D X 3.0	1
7PS400-301	REDUCER, HUMP, PROG 3.0 X 4.0	1
7R002-044	#44 SAE TYPE F SS HOSE CLAMP	2
7R002-048	#48 SAE TYPE F SS HOSE CLAMP	11
7R002-056	#56 SAE TYPE F SS HOSE CLAMP	1
7R002-064	#64 SAE TYPE F SS HOSE CLAMP	5
7S300-274	REDUCER, ALUM TUBE, 3.0 X 2.75	1
7S350-220	ASM, FLOW STRAIGHTENER, 3.5 OD	1
8A003-071	MAF, 3.8 I.D., 05 MUSTANG GT,	1
8D204-010	RACE BYPASS VALVE-BLACK	1
8H040-175	FILTER, 1.75" I.D., RACE BYPAS	1
8N010-350	BRKT, CAC, D.SIDE 2010 CAMARO	1
8N010-360	BRKT, CAC, P.SIDE 2010 CAMARO	1
4GE116-010	**DRIVE ASSY, 10-RIB, 10-13 CAMAR**	**1**
2A017-016	PILOT, 6203/5 BRG, M10 3/8 SCR	2
2A041-635	BELT, 5100635 DAYCO 10-RIB	1
4FM011-052	SPRING TENSIONER, 5.4	1
4GE016-010	DAMPER, CRANK, 2010 CAMARO SS	1
4GE017-011	IDLER SPACER, 10-RIB, 2010 CAM	1
4GE017-021	SPACER, CRANK PULLEY, 2010 CAM	1
4GR110-110	ASSY, DAMPER PIN, LS1-LS2-LS6	1
4MA018-051	CRANK PLY, 7", UNIVERSAL	1
4GE116-021	IDLER, SMOOTH, 10-RIB	2
7A375-250	3/8-16 X 2.5" GR8 HX	3
7A375-325	3/8-16 X 3-1/4 HX HD	3
7C010-057	M10 X 1.5 X 55MM HX HD CL10.9	1
7C010-111	M10 X 1.5 X 110 HXHD, ZINC	1
7C010-120	M10 X 1.50 X 120 HXHD, CL10.9	1
7J010-002	10MM WASHER, ZINC PLATED	2
7J625-030	SHIM, Ø.692" ID X .030" THK X	1
7K375-040	3/8 AN960 FLAT WASHR PLATED	6
7T100-250	DRILL BIT, Ø1/4" X 6" LONG HSS	1
4GE130-026	OIL FEED ASSY, 2010 CAMARO	1
7P016-125	M16 X 1.5 MALE TO 1/8 NPT FEM	1
7P125-004	1/8 NPT 90° X -4 JIC FTG STL	1
7P125-005	1/8 NPT STR. X -4 JIC FTG STL	1
7U100-055	TIE WRAP, 7.5" NYLON	5
7U100-066	TIE WRAP, 11" NYLON	2
7U250-090-260	OIL FEED HOSE, 26" -4X90°	1
4GE139-096	**PCV ASM, 10-13 CAMARO SS 6.2L**	**1**
7U375-051	1/8" VAC CAP	1
7U032-016	3/8" EFI FUEL HSE HI-PSR	4FT
7P375-008	ELBOW, PLASTIC 3/8 X 90° UNION	1
7R004-002	STEPLESS CLAMP, 17.0-70	2
7R002-006	#6 STNLS HOSE CLAMP	1
7P375-378	VALVE, CHECK, 3/8 BARB X 3/8 B	1
4GE155-010	**SUPRT ITEMS, 10-13 CAMARO SS**	**1**
7U033-020	HOSE, 5/8"ID CLASS 1 EMISSIONS	0.29FT
7P625-016	5/8" HOSE UNION, BARBED ENDS	1
7R004-004	STEPLESS CLAMP, 1.0 OD HOSE	2

P/N: 4GE020-010 v4.0, 2012-12-12

IMPORTANT: *Before beginning installation, verify that all parts are included in the kit. Report any shortages or damaged parts immediately.*

PART NO.	DESCRIPTION	QTY
7U030-046	5/32" VACUUM LINE	5FT
7P500-016	TEE, .5X.5X1/16NPT, METAL	1
7P062-187	1/16NPT X 3/16 HOSE BARB	1
4GE010-070	BRKT, PWR TERMINAL , 2010 CAMA	1
7J006-093	6MM WASHER, PLATED	1
7F006-093	NUT, M6 X 1.0, NYLOCK, PLATED	1
7U100-055	TIE WRAP, 7.5" NYLON	12
7T560-001	CUTTER,9/16" ROTABROACH	1
7T560-002	ARBOR,ROTABROACH	1
4GE055-010	TANK, WSHR FLUID INTEGRAL, 2 Q	1
4GE055-020	CAP, BUTTRESS THRD UNVENTED 2-	1
4GE055-030	TANK, REMOTE FILL WSHR FLUID,	1
4GE055-040	TANK, COOLANT PLAIN, 2.0 QT	1
4GE055-050	CAP, ENG, THRD TOP VENTED 2-1/	1
7U033-000	5/8" PCV HOSE	2FT
7R002-010	#10 SAE TYPE F SS HOSE CLAMP	2
7P375-625	3/8 NPT X 5/8 HOSE BARB	1
7P250-078	1/4 NPT X 5/16 BARB X 90°	1
7A250-063	1/4-20 X .63 HHCS SS	10
7J250-001	1/4 WASHER, SAE, PLTD	10
7E010-050	#12 X 1/2 SHEET METAL SCREW	5
4GE010-080	BRKT, WSHR RESVR, 2010 CAMARO	1
4GE010-090	BRKT, REMOTE FILL, 2010 CAMARO	1
4GE010-100	BRKT, CLNT OVRFLW, 2010 CAMARO	1
7R004-687	STEPLESS CLAMP	2
7R007-002	NYLON RATCHET CLAMP .90"	2
7R001-008	38 STNLS HOSE CLAMP	2
8N108-030	**CAC ASSY, 2010 CAMARO**	**1**
4GE155-020	**SUPRT ITEMS, YSI, 2010 CAMARO**	**1**
7PS300-090	ELBOW, BLK, 3" X 90° SILICONE	1
7PS400-200	SLEEVE, BLACK 4.0D X 2.0	1
7R002-048	#48 SAE TYPE F SS HOSE CLAMP	2
7R002-064	#64 SAE TYPE F SS HOSE CLAMP	2
7S300-301	UNION, 3" OD X 3" L, AL.UM	1

PART NO.	DESCRIPTION	QTY

P/N: 4GE020-010 v4.0, 2012-12-12

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1. PREPARATION/REMOVAL

A. Remove the Front Bumper Cover (FBC):

1. Remove the two (2) 10mm-headed screws from the bottom of the FBC.

2. Remove three (3) T20 Torx screws securing each splash guard to the FBC (6 total). These screws are located in the wheel wells just forward of the front wheels along the outer edge.

3. Remove two (2) of the plastic pins securing each splash guard to the inner fender structure (4 total). One is adjacent to the strut and the other is directly above the wheel.

4. Pull the splash shield away so it rests against the tire, revealing the fasteners at the leading edge of the fender as shown in Figure 1A.

5. Remove the four (4) 10mm-headed screws and one (1) 7mm-headed screw attaching the FBC to the leading edge of the fender on each side (see Fig. 1B, LH side shown).

6. Disconnect the FBC electrical connector located between the passenger side driving light and headlight. Access the connector via the wheel well.

7. Remove the two (2) 10mm-headed screws and six (6) plastic pins along the top edge of the FBC.

8. Remove the FBC by sliding it forward and away from the car.

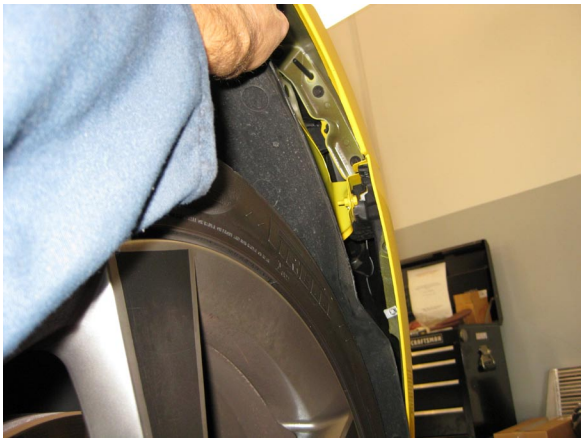


Fig 1A

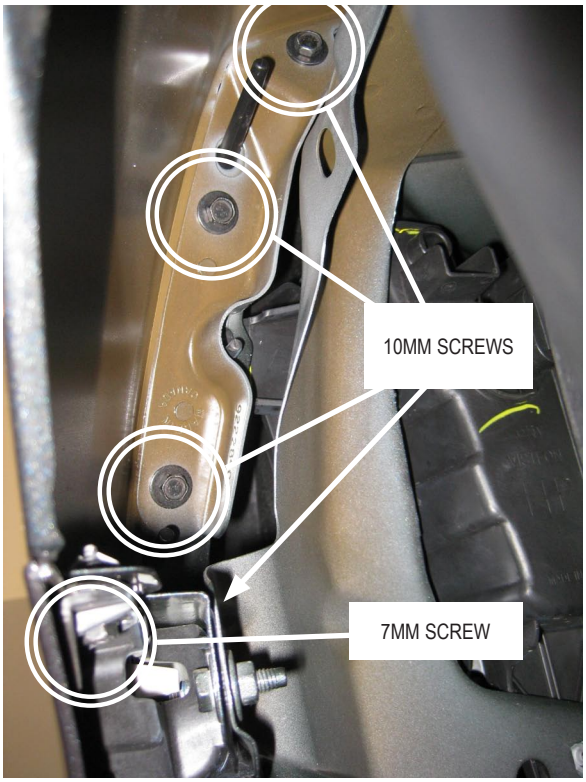


Fig 1B

P/N: 4GE020-010 v4.0, 2012-12-12

B. Disconnect the negative battery terminal (located in the trunk) using a 10mm socket. Remove the trunk carpet, loosen the large plastic wing nut in the center of the floor and lift the trunk floor out. Remove the tire repair kit to reveal the battery.

C. Remove the oil fill cap on the passenger side valve cover to allow removal of the engine cover. Lift the engine cover from the front and then pull it out toward the front of the vehicle. Temporarily reinstall the oil fill cap to prevent contamination.

P/N: 4GE020-010 v4.0, 2012-12-12

D. Disconnect the MAF electrical connector from the meter in the intake air tube as shown in Fig. 1C.

E. Disconnect the vent line running to the intake air tube from the front of the passenger side valve cover.

F. Remove the small vent hose assembly running between a fitting on the intake manifold just behind the throttle body on the passenger side and a fitting on the engine just below. This hose will not be reused.

Fig 1C

G. Use an 8mm socket or flat-tip screwdriver to loosen the hose clamp securing the intake air tube to the throttle body and pull the tube away from the throttle body. Remove the two 10mm nuts securing the air box as shown in Fig. 1D. Pull the air box straight up to release it from the retaining grommet on the bottom and remove the entire assembly (as shown in Fig. 1E) from the vehicle.

H. Use a 7mm socket to remove the MAF sensor element from the air box assembly as shown in Fig. 1F. Set aside for reinstallation in a later step.

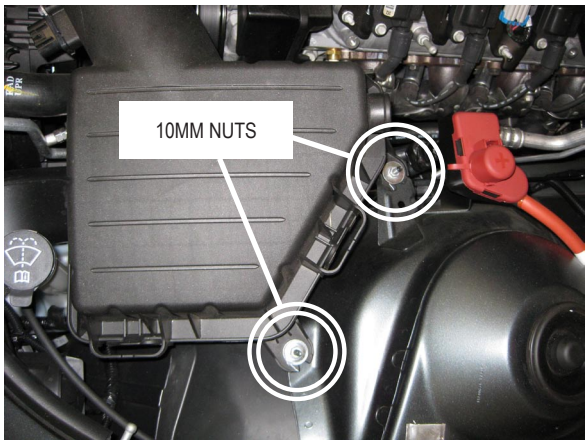


Fig 1D

Fig 1E

Fig 1F

I. On the driver side strut tower, release the red power terminal cover from the black housing as shown in Fig. 1G. Detach the black housing from the steel mounting bracket as shown in Fig. 1H and set back to be remounted later.

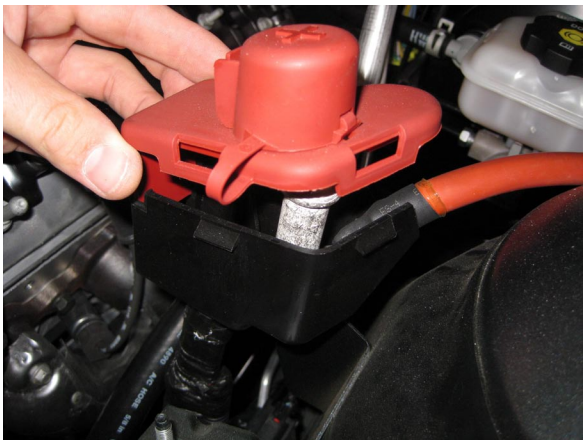


Fig 1G

Fig 1H

J. Use a 15mm wrench or socket to release the tension from the 6-rib belt with the OEM belt tensioner as shown in Fig. 1I. Remove the belt and set aside for reinstallation in a later step.

K. Remove the three (3) 13mm-headed screws securing the power steering pump to its cast mounting bracket (through the holes in the pulley) and set them aside for later reuse. Lay the pump aside as shown in Fig. 1J, leaving the lines attached.

> **NOTE:** 2013 models only: 2013 models are not equipped with a P/S pump. Remove the cast idler bracket assembly from the cylider head and set aside.

L. Remove the three (3) 15mm-headed bolts securing the cast power steering bracket to the cylinder head. The cast bracket and fasteners will not be reused.

M. Remove the 15mm-headed screw from the alternator shown in Fig. 1K. It will not be reused.

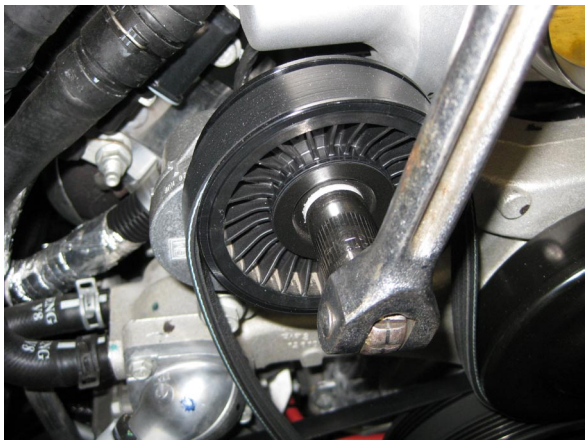


Fig 1I

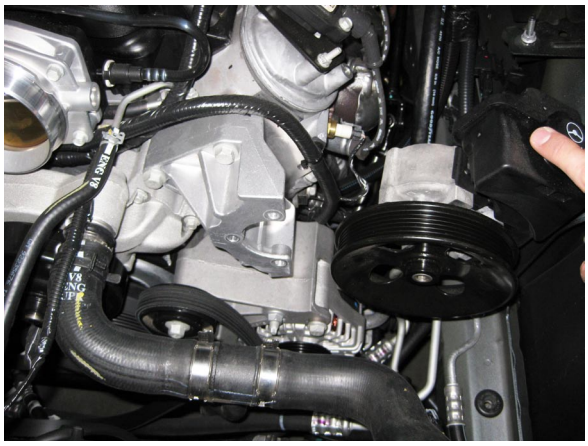


Fig 1J

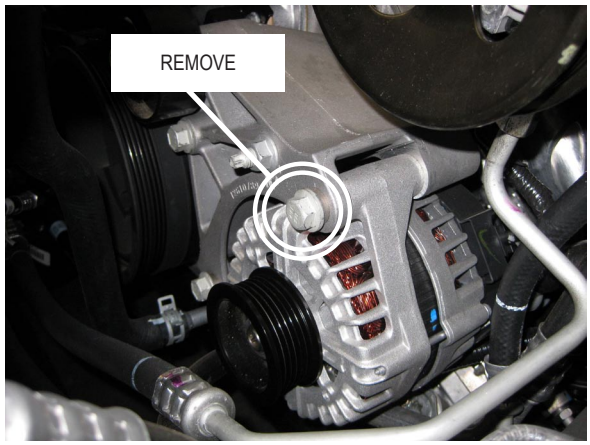


Fig 1K

N. Unplug the ambient air temperature sensor located on the passenger side of the lower radiator shroud just behind the bumper (See Fig. 1L). Remove the sensor and set it aside for future relocation.

O. Remove the four (4) plastic pins securing the lower radiator shroud and set the shroud aside, as it will not be reused (see Fig. 1M).

P. Remove the six (6) 13mm-headed screws (3 per side) securing the front bumper and set the screws and bumper aside for later reinstallation.

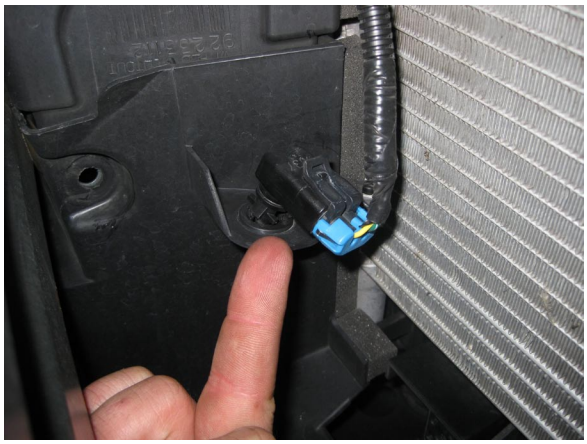


Fig 1L

Fig 1M

P/N: 4GE020-010 v4.0, 2012-12-12

Q. Drain the engine coolant into a clean container to be reused in a later step. There is a drain valve at the driver side bottom of the radiator, and removing the radiator cap will improve flow.

R. Once the coolant is drained, remove the factory clamps securing the upper radiator hose at the engine and the radiator. Remove the clamp that secures the 5/8" hose located on the driver side of the harmonic balancer. Set hoses aside to be modified in a future step. See Fig 1N.

S. Locate the windshield washer reservoir (under the driver side headlight) and disconnect the electrical connector from the pump.

T. Drain the reservoir by removing the pump from its grommet and retaining saddle and catching the fluid in a large, clean open container or funnel as shown in Figure 1O. Keep the fluid for later reuse. Remove the washer hose from the 90º fitting near the pump and free it from the attachment points on the reservoir. Remove the grommet from the reservoir and retain for later use.

U. Remove the three (3) 13mm-headed screws mounting the windshield washer reservoir and set the reservoir aside. It will be replaced in a later step.

V. Disconnect the small hose near the cap of the engine coolant reservoir located on the passenger side, opposite the windshield washer reservoir. Remove the two (2) 13mm-headed screws mounting the coolant reservoir and set the reservoir aside. It will be replaced in a later step.

Fig 1N

Fig 1O

W. Remove the steel power terminal mounting bracket from the driver side strut tower as follows:

   a. Center punch each spot weld securing the bracket to the strut tower as shown in Figure 1P.

   b. Use the supplied Rotobroach tool to drill each spot weld and remove bracket (see Fig. 1Q).

   c. Use a file or grinder to clean up the remainder of the spot welds and touch up with paint of your choice to prevent corrosion. The area will be hidden when supercharger installation is complete.

X. Remove the 4-rib A/C stretch belt by rotating the crankshaft clockwise with a 15/16" or 24mm socket while pushing the belt toward the rear of the vehicle as shown in Fig. 1R.

NOTE: Be sure to place manual transmission cars in neutral.

Fig 1P

Fig 1Q

Fig 1R

Y. Lock the engine from rotating and remove the OEM damper pulley bolt.

> **NOTE:** **Automatic** transmission cars can lock the engine through the trans dust cover with an open end wrench to one of the torque converter mounting bosses on the flex plate.
>
> **Manual** transmission cars place car in 6th gear with wheels on the ground and apply parking brake.

Z. Remove the crank pulley/damper assembly using the appropriate tool as shown in Fig. 1S.

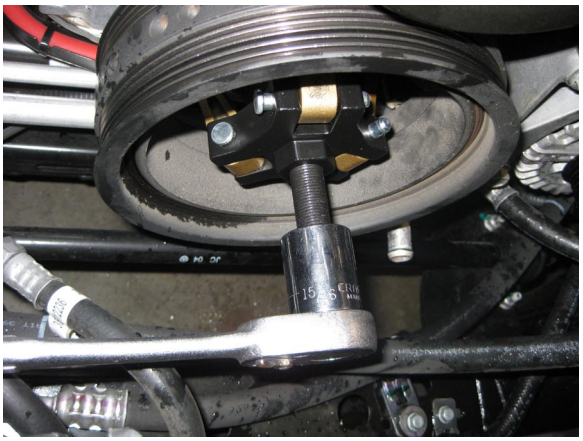


Fig 1S

2. DAMPER & PULLEY INSTALLATION

A. Assemble the supplied ATI Super Damper assembly as follows:

i. Insert the hub into the back of the damper making sure to line up the “OFFSET HOLE” in the hub and damper as shown in Fig. 2A. This hole is labeled on the damper sticker, and there is also an indicator machined into both the damper and the hub.

> **NOTE:** Make sure that all mating surfaces of the parts are clean.

ii. Install the six (6) Torx T40 flat head screws, using blue threadlocker on each, and torque to 16 ft-lb. See Figures 2B & 2C.

Fig 2A

Fig 2B

Fig 2C

P/N: 4GE020-010 v4.0, 2012-12-12

iii. Temporarily assemble the aluminum A/C pulley onto the back of the hub with the pulley's "snout" facing toward the damper. Insert the three (3) 3/8-16 x 2.5" 12-pt cap screws (supplied with damper) into the three unthreaded holes passing through the hub and thread them into the three (3) 3/8-16 holes in the A/C pulley. Do not tighten. See Fig. 2D.

B. Transfer the OEM rubber seal from the OEM damper assembly to the corresponding location on the new damper assembly as shown in Figures 2E & 2F.

Fig 2D

Fig 2E

Fig 2F

C. Install the supplied damper onto the crankshaft using a proper damper installation tool with thrust bearing. See Fig 2G, 2H.

NOTE: DO NOT use the crank bolt to “pull” the damper onto the crankshaft. Use only an appropriate damper installation tool such as ATI kit part number 918999 with 918999SC extension.

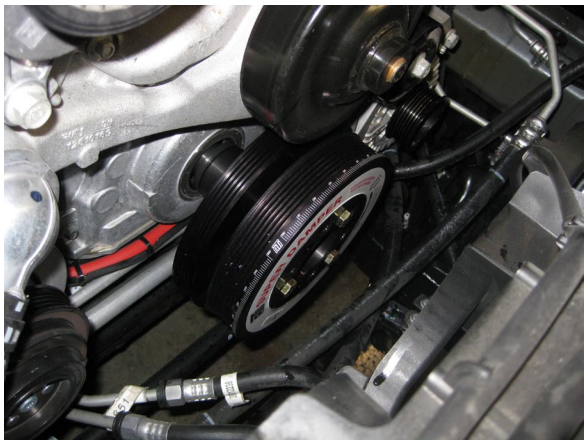


Fig 2G

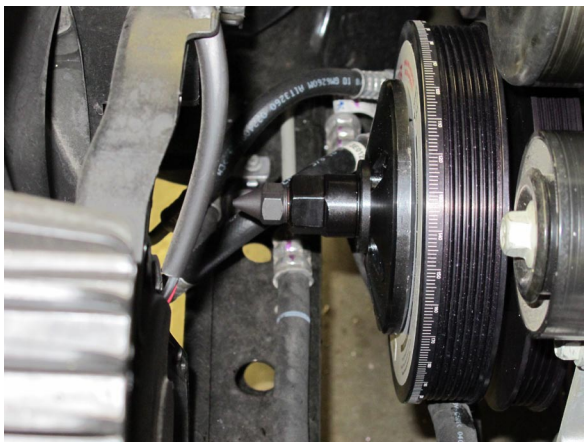


Fig 2H

D. After the new damper is fully seated, remove the installation tool.

E. Install the supplied drill guide with the raised section piloting in the damper bore. Temporarily secure in place by installing the supplied socket head cap screw. Do not over-tighten the screw as it may distort the drill guide (its purpose is just to hold the guide in place while drilling).

F. Mark the supplied ¼" drill bit with tape or use a drill stop at a point 3.85" from the tip as shown in Fig. 2J.

G. Using an angle drill or small drill motor, drill into the crankshaft/damper hub assembly through the bushing in the drill guide, taking care to keep the tool perpendicular to the damper. Stop when the mark on the drill bit is even with the face of the damper – this will yield a hole depth of ½". See Figures 2I & 2J.

Fig 2I

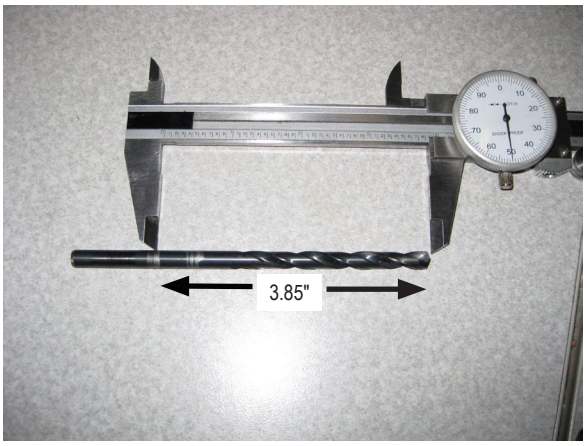


Fig 2J

H. Remove the socket head cap screw and drill guide. Carefully remove any metal chips from the area with compressed air. The drilled 1/4" hole should appear as in Fig. 2K.

I. Install the supplied Ø1/4" x 1/2" long dowel pin into the drilled hole with the chamfered end pointed toward the front of the vehicle.

J. Verify that the dowel pin is recessed slightly from the damper face.

K. Install the supplied new damper retaining bolt as follows:

   i. Lightly coat the threads of the new retaining bolt with red threadlocker. Install and torque to 37 ft-lb.

   ii. Using a ½" drive or larger breaker bar, tighten the retaining bolt an additional 120º or torque to 250 ft-lb. See Fig. 2L.

L. Temporarily remove the three (3) 12-pt cap screws previously used to secure the A/C pulley. These screws will be used in the next step.

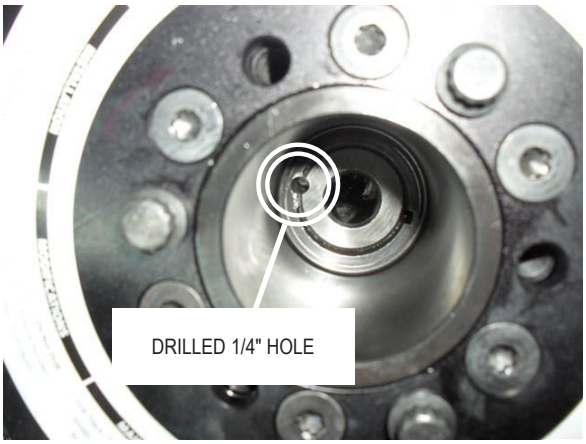


Fig 2K

Fig 2L

P/N: 4GE020-010 v4.0, 2012-12-12

M. Assemble the supplied crank pulley spacer and 10-rib crank pulley onto the front of the newly installed damper. See Figures 2M and 2N.

> **NOTE:** Apply 1 drop of blue threadlocker onto the threads of each fastener prior to final assembly.

> **NOTE:** Make sure that the damper decal does not interfere with proper seating of the pulley spacer. Cut away the damper decal if necessary.

i. Secure the pulleys and spacer to the damper using the three supplied 3/8-16 X 3.25" screws with washers. The 3.25" long screws will pass through the entire assembly and thread into the A/C pulley.

ii. Thread the previously removed 3/8-16 X 2.5" 12-pt screws with washers through the S/C pulley and spacer and into the damper hub.

N. Tighten all hardware evenly, using a progressive, criss-cross pattern. Torque fasteners to 35 ft/lb.

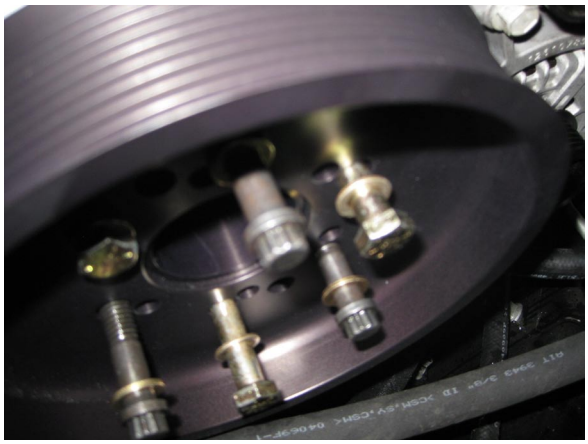


Fig 2M

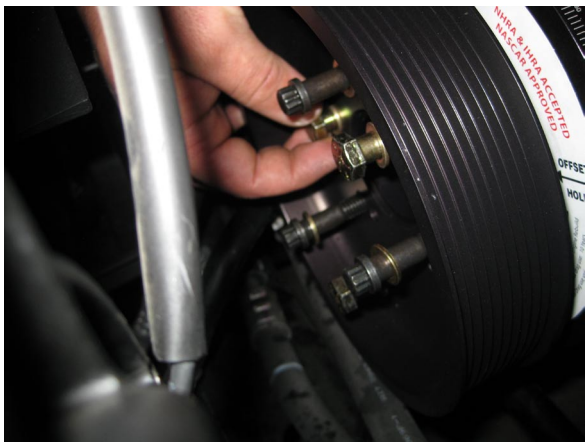


Fig 2N

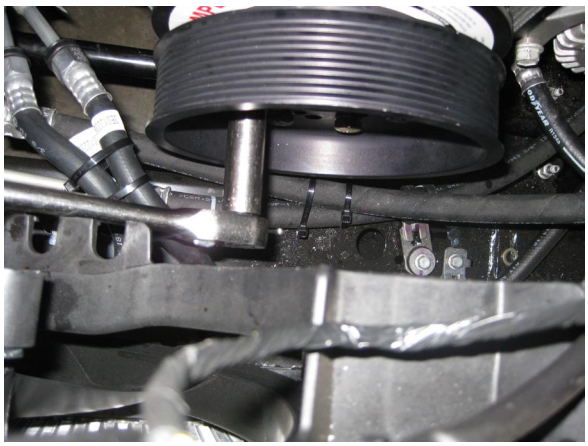


Fig 2O

O. **Automatic Transmission**: “Unlock” the engine from turning by removing the previously-installed wrench holding the flex plate and replace the dust cover.

Manual Transmission: Place the transmission in Neutral.

P. Reinstall the 4-rib A/C stretch belt as follows (See Fig. 2P):

i. Route the belt over and then behind the crank pulley.

ii. Route the belt securely onto the A/C compressor pulley.

iii. Start the belt onto the top of the corresponding 4-rib A/C pulley that is part of the new damper assembly.

iv. While holding the belt in place, rotate the crankshaft clockwise using a 15/16” or 24mm socket and ratchet on the center crankshaft bolt head until the 4-rib belt is fully seated.

v. Confirm proper installation of the 4-rib belt to both the crankshaft pulley and A/C compressor pulley.

Q. Loosen the two clamps securing the lower power steering pressure line to the cross member. Slide the line towards the driver side and retighten the clamps. See Fig 2Q.

R. Secure the two transmission cooler lines together with two or more zip ties to keep them away from the newly-installed 10-rib supercharger pulley as shown in Fig. 2R.

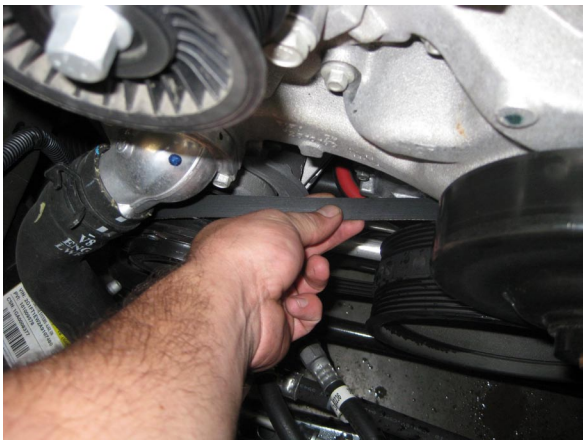


Fig 2P

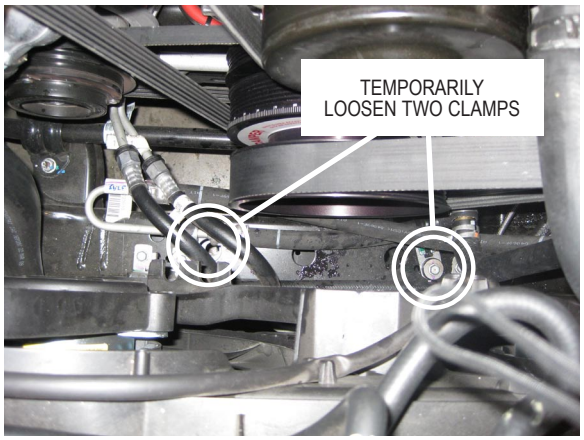


Fig 2Q

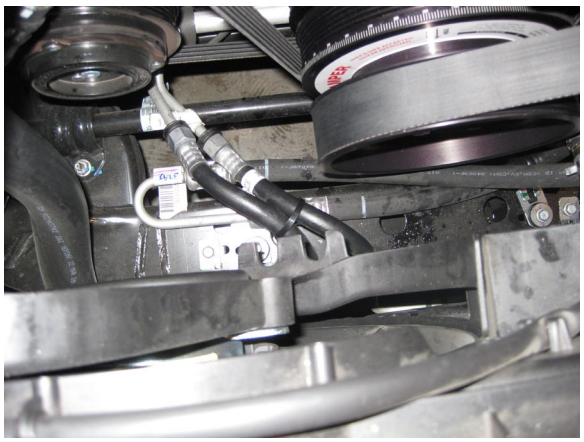


Fig 2R

3. FUEL INJECTOR REPLACEMENT

NOTE: Caution should be used when working on the fuel system. Fuel may be under high pressure. Fuel injector replacement should be performed in a well ventilated area free of any possible ignition source. It is recommended that you have a fire extinguisher nearby.

A. Remove the fuel tank cap. Relieve the fuel system pressure at the fuel rail by carefully depressing the schrader valve. Use a rag to cover the valve to avoid fuel spray. See Fig 3A.

B. Disconnect the eight fuel injector wiring clips and metal retainers from the injectors. See Fig 3B.

C. Remove the fuel rail assembly as follows:

   i. Remove the nut securing the black plastic engine cover support to the rear section of the intake manifold. Pivot the support upward and snap it off of the passenger side fuel rail.

   ii. Remove the nut securing the fuel feed line to the front passenger side fuel rail stud.

   iii. Remove the screw securing the small bracket that sandwiches the front driver side fuel rail mounting tab.

   iv. Remove the safety clip and disconnect the fuel feed line from the fuel rail assembly using the appropriate disconnect tool. Take care to absorb any fuel spillage.

   v. Remove the four (4) 10mm-headed stud screws securing the fuel rail assembly to the intake manifold.

   vi. Lift up on the rails evenly and remove the assembly, complete with the fuel injectors, from the vehicle.

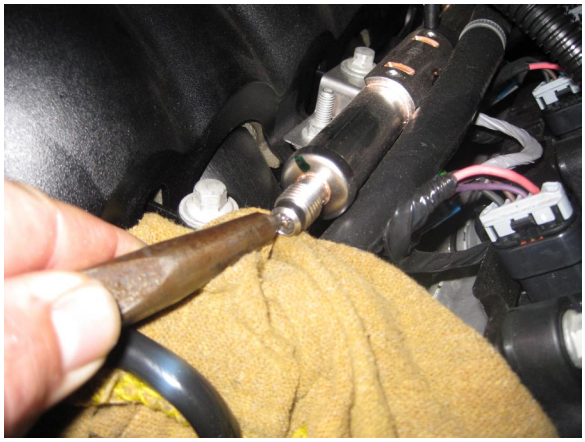


Fig 3A

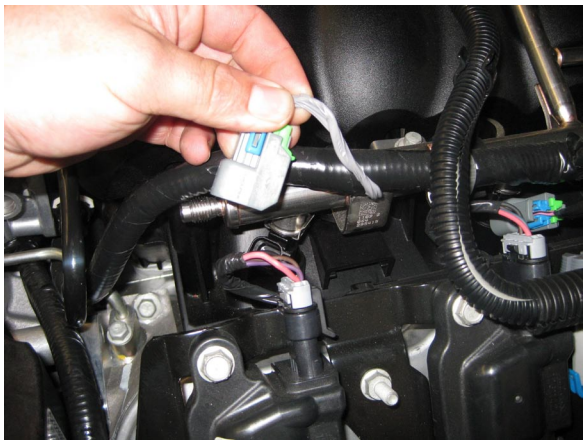


Fig 3B

D. Remove the retaining clips securing each injector to the fuel rail and carefully pull each injector out of the rail. Set the OEM injectors aside as they will not be reused.

> **NOTE:** The OEM and new replacement fuel injectors are very similar in appearance. Take care not to mix them up.

E. Lightly lubricate the O-rings at each end of the supplied fuel injectors with clean motor oil.

F. Install the new fuel injectors into the fuel rails with the electrical connectors facing outward. Secure with the OEM retaining clips. See Fig. 3C.

G. Carefully lower the fuel rail/injector assembly down onto the intake manifold, ensuring that each injector seats properly into its bore.

H. Reinstall all of the fuel rail and fuel line fasteners and the black plastic engine cover support.

I. Reconnect the fuel line and reinstall the safety clip.

J. Reconnect each fuel injector electrical connector.

K. Reinstall the fuel tank cap.

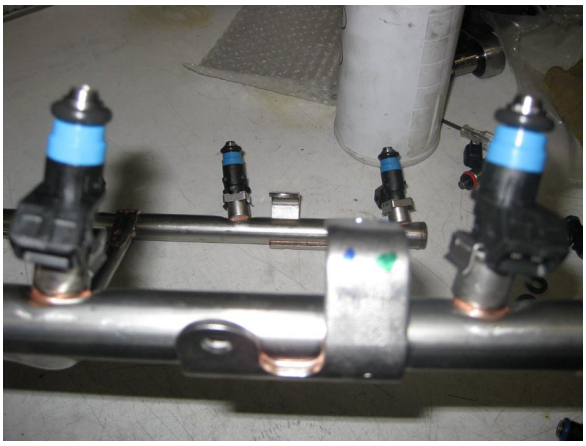


Fig 3C

4. OIL FEED INSTALLATION (ENGINE OIL-FED UNITS ONLY)

1. Disconnect the charging wire and plug located on the back side of the alternator. Remove alternator and alternator bracket (the factory mounting stud must be removed to allow removal of alternator). See Fig 4A, 4B.

2. Remove oil galley plug located next to the timing chain cover on the front driver side of the engine block. Set aside plug, as it will not be reused. See Fig 4C.

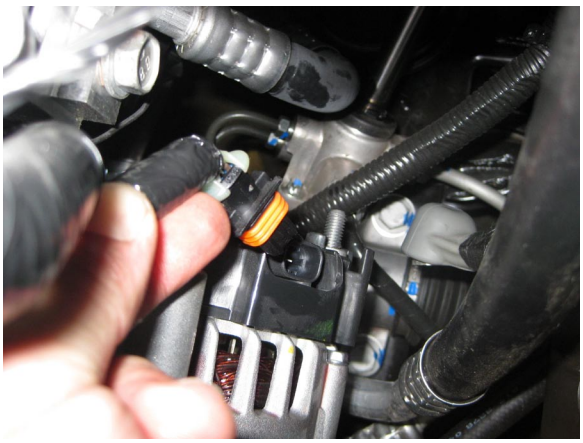


Fig 4A

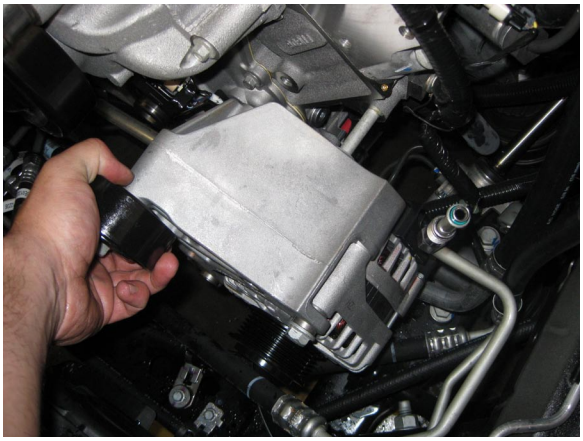


Fig 4B

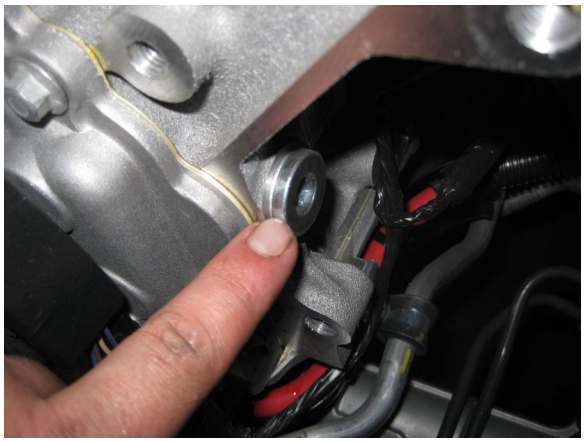


Fig 4C

P/N: 4GE020-010 v4.0, 2012-12-12

3. Install supplied M16 X 1/8 NPT fitting into oil galley hole using supplied sealing washer. Tighten fitting. See Fig 4D.

4. Install 1/8NPT to -4 90° fitting into previously installed fitting. Clock the fitting so that it points towards the rear of the vehicle. Tighten fitting. See Fig 4D.

NOTE: Use only clean engine oil on the pipe threads. Teflon tape or pipe sealant is not recommended as it might loosen and cause blockage of the small oil feed orifice resulting in possible supercharger failure.

5. Install 90° end of supplied oil feed hose onto -4 fitting. Clock oil feed line so that it points downward. Tighten fitting. See Fig 4E.

6. Reinstall alternator and re-attach all electrical connections. Route open end of oil feed hose around the back of the alternator and up toward the supercharger mounting position. Temporarily cap the hose to prevent internal hose contamination.

Fig 4D

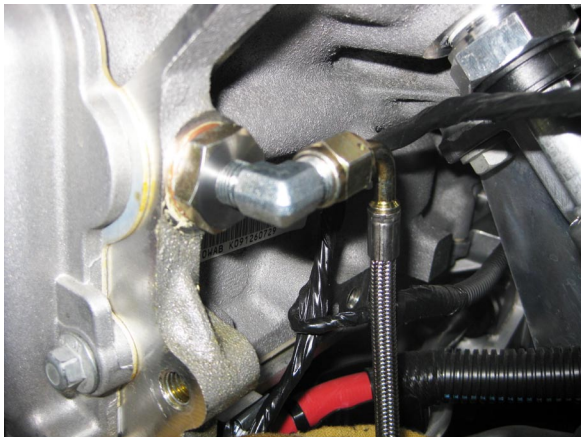


Fig 4E

P/N: 4GE020-010 v4.0, 2012-12-12

5. OIL DRAIN INSTALLATION (ENGINE OIL-FED UNITS ONLY)

1. To provide an oil drain for the supercharger, it is necessary to make a hole in the side of the oil pan. The drain fitting location MUST allow the oil to drain back ABOVE the oil level in the pan.

2. Locate the forward-most oil pan bolt on the driver side of the engine block.

3. From the center of that bolt, measure 2.5” toward the rear of the pan and mark the pan for the oil return line fitting. See Fig 5A.

   NOTE: Mark the hole for drilling so that it is as close to the top of the pan as possible, while still allowing enough clearance to install the fitting so that it clears the rail on the pan.

4. Drill 1/8" pilot hole at the marked location.

5. Use the supplied 9/16" Roto-Broach to drill hole in oil pan. Break through pan carefully so the cut out piece does not go into the pan

6. Thread the hole with a 3/8" NPT tap to approximately 1/2" deep or until fitting can be started. Pack the flutes of the tap with heavy grease to hold any loose chips.

7. Thoroughly clean the threaded area. Reach inside oil pan and retrieve any stray chips.

8. Install the 3/8" NPT to 1/2" barb fitting into the tapped hole. Temporarily cover oil drain barb fitting to keep out debris.

9. Drain the engine oil, install a new filter and refill with fresh oil.

10. Remove the blue plastic shipping cap from the 1/2" drain fitting on the supercharger Attach the supplied fabric braided 1/2" oil return line to the 1/2" fitting and secure with #8 Hose Clamp.

NOTE: Oil drain hose must be routed downhill with minimal bends and no kinking. The supercharger relies on a free-flowing gravity drain for proper operation. Uphill hose routing will result in improper drainage and possibly supercharger failure.

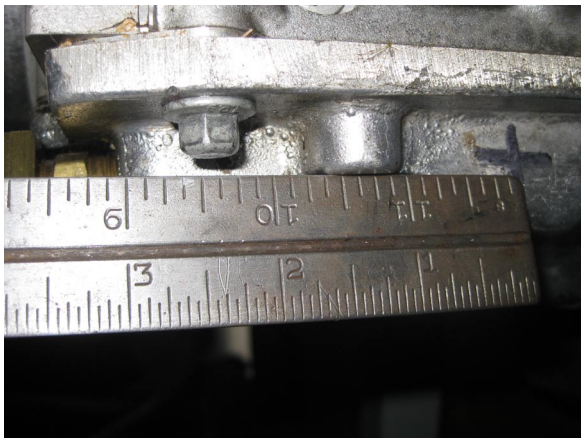


Fig 5A

P/N: 4GE020-010 v4.0, 2012-12-12

6. MOUNTING BRACKET AND SUPERCHARGER INSTALLATION

A. Locate the 4GE110-044 supercharger mounting bracket assembly.

B. Install the supplied M10-1.5 x 90mm button head screw into the upper alternator screw location from which the OEM screw was previously removed. See Fig. 6A.

C. Make sure that the front face of the driver side cylinder head is clean and smooth. Mount the cylinder head plate to this face using four (4) M10 x 30mm screws and washers in the locations shown in Fig. 6B. Route the nearby wiring harness behind the plate, creating extra slack to the extent possible, taking care not to excessively pinch or deform it. Tighten the screws.

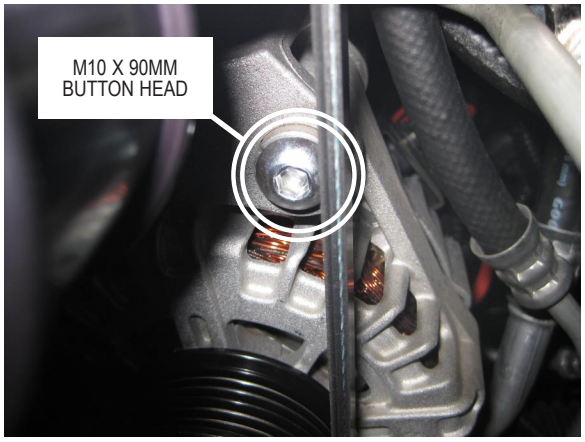


Fig 6A

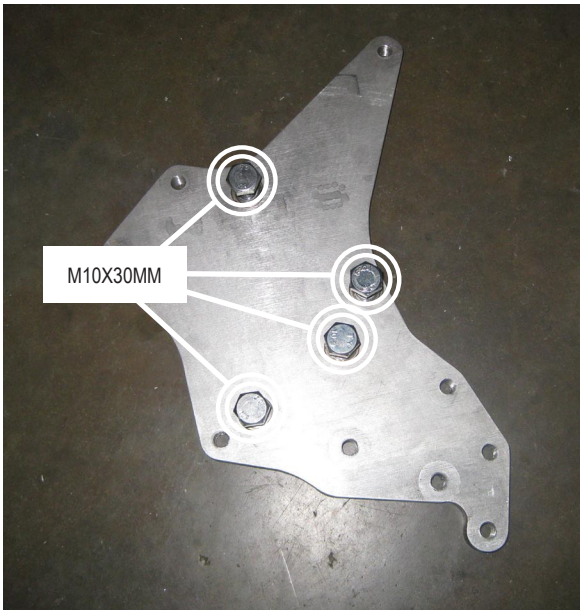


Fig 6B

D. Locate the P/S support plate, three (3) 2.981” long spacers, one (1) M10 x 120mm screw, one 3/8-16 x 4.0” screw, and one (1) 3/8-16 x 4.5” screw and their associated washers. See Fig. 6C.

E. Position the P/S plate and screws as shown and secure plate by tightening only M10 x 120mm and 3/8-16 x 4.0” screws. Leave the remaining 3/8-16 x 4.5” screw loosely installed.

F. **2013 models only:** Install the supplied 6-rib idler pulley and .85" idler spacer into position as shown. Secure the idler using the supplied bearing pilot, 3/8-16 x 2.75" screw, washers and nylock nut. See Fig. 6D, 6E.

G. **2010-2012 models only:** Install the P/S pump using the OEM fasteners. See Fig. 6F.

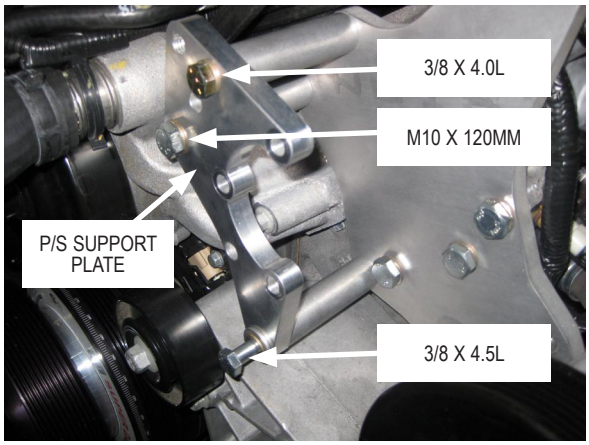
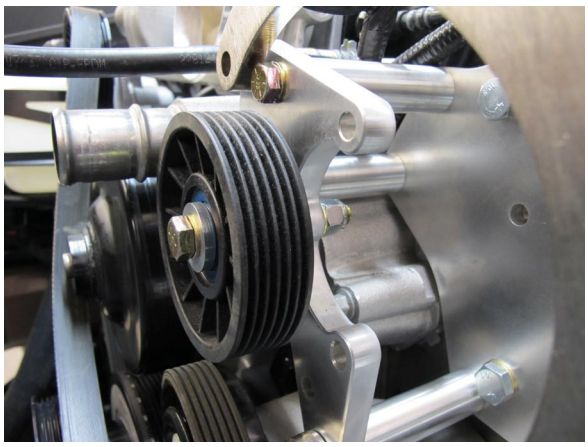
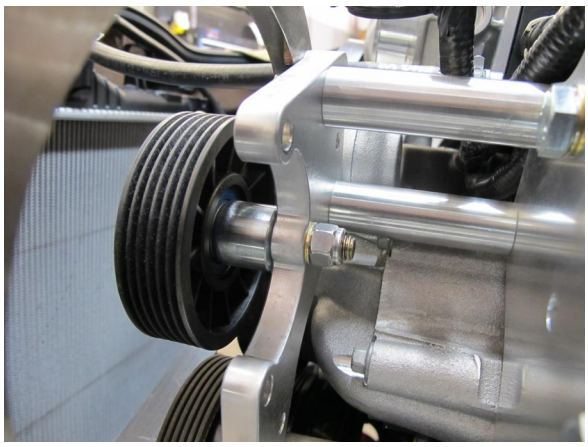


Fig 6C



(2013 models only) Fig 6D

Fig 6F



(2013 models only) Fig 6E

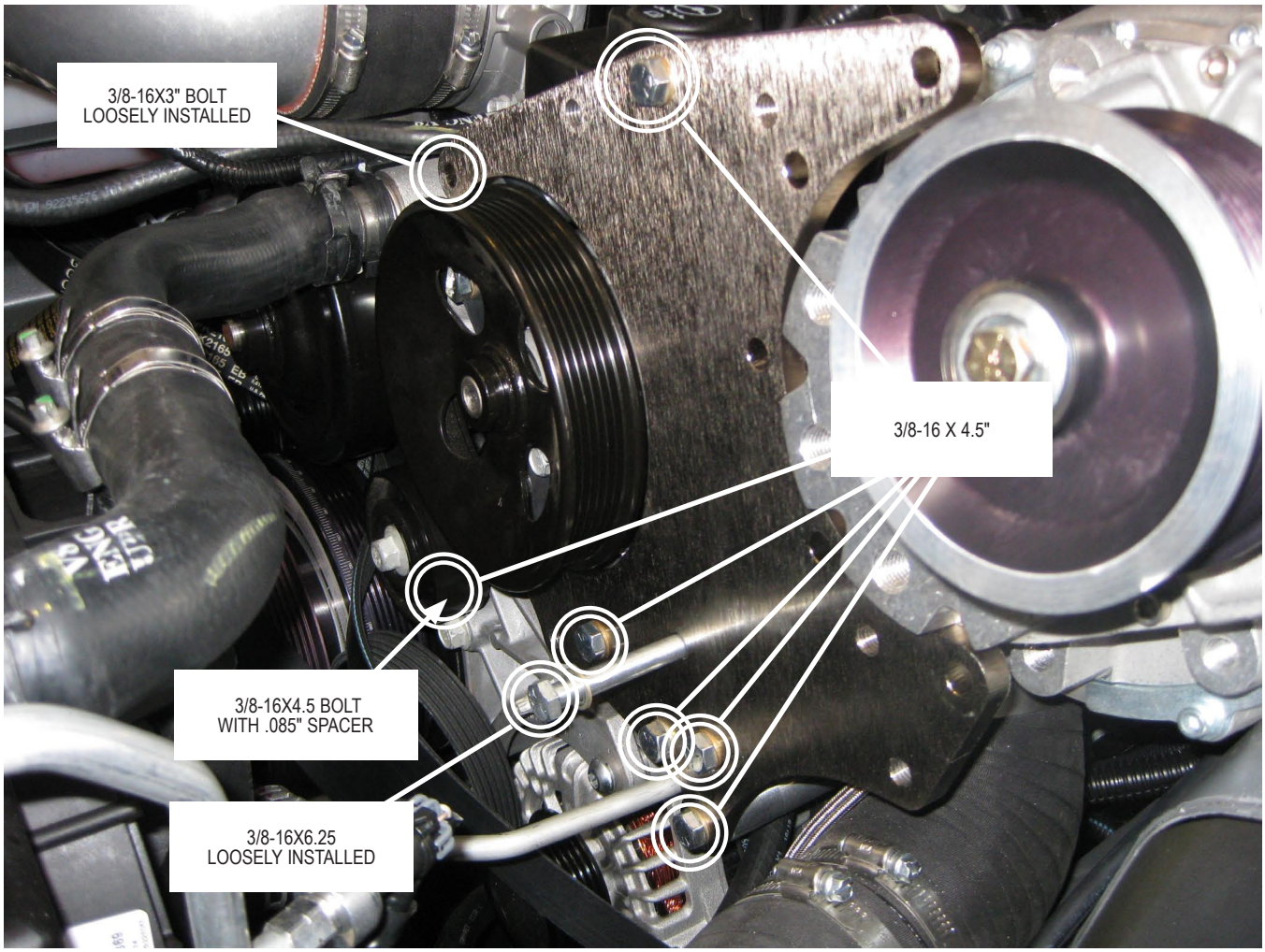


Fig 6G

H. Locate the S/C mounting plate and one .085" long spacer, six 3.566" long spacers, five 3/8-16 x 4.5” screws, one 3/8-16 x 3” screw, one 3/8-16 x 6.25" screw, and their associated washers. Position the hardware and spacers in the plate as shown. See Fig 6G.

I. Remove loosely installed 3/8-16 x 4.5” screw from prior installation of P/S bracket.

J. Lower the supercharger plate into position, making sure to start each screw into the appropriate hole with the 3.566” spacers. See Figures 6J & 6K.

P/N: 4GE020-010 v4.0, 2012-12-12

K. Make sure to sandwich the two (2) .085” spacers between the steel bracket and the aluminum P/S bracket at either end of the C-shaped section of the steel bracket that fits around the P/S pulley. See Figures 6H & 6I.

L. Tighten the six 3/8-16 x 4.5” screws, leaving the remaining hardware loose for the next step.

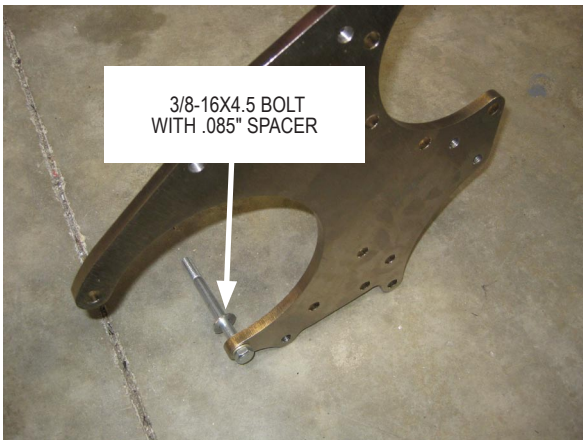


Fig 6H

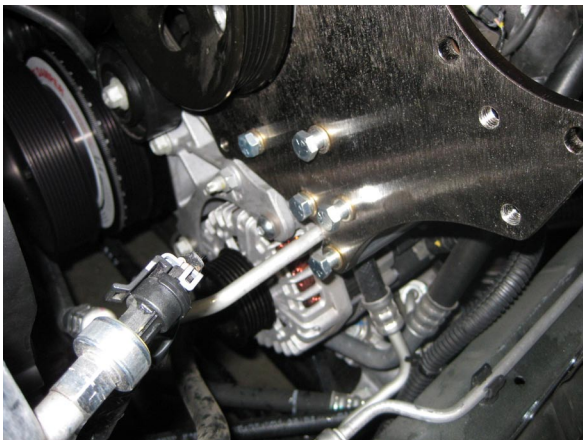


Fig 6J

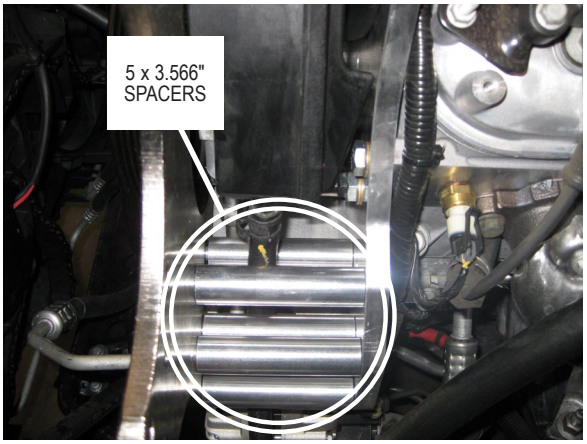


Fig 6K

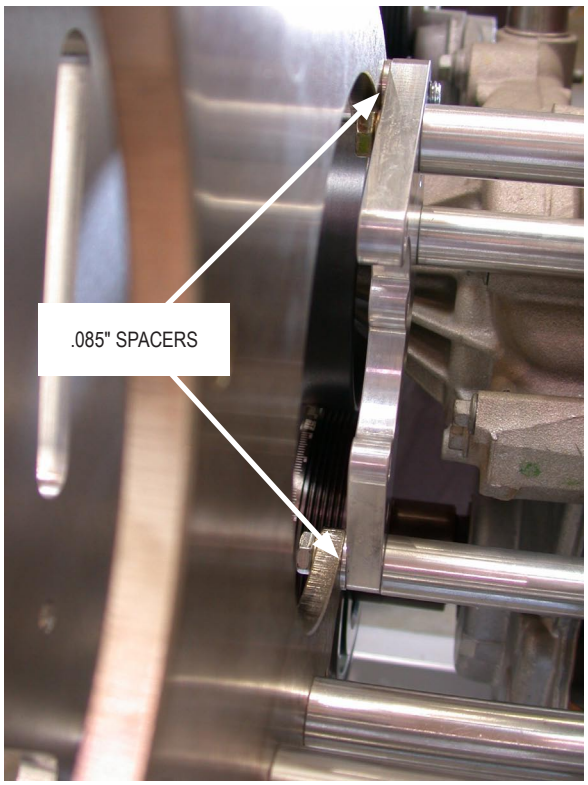


Fig 6I

M. Use three (3) 3/8-16 x 1.25” screws with washers to mount the supercharger to the S/C plate using the three holes closest to the center of the arc (see Fig. 6L), and tighten these screws.

N. Reinstall the OEM 6-rib accessory drive belt following the original belt routing. There is a diagram in the owner’s manual for reference (see also Fig. 6M).

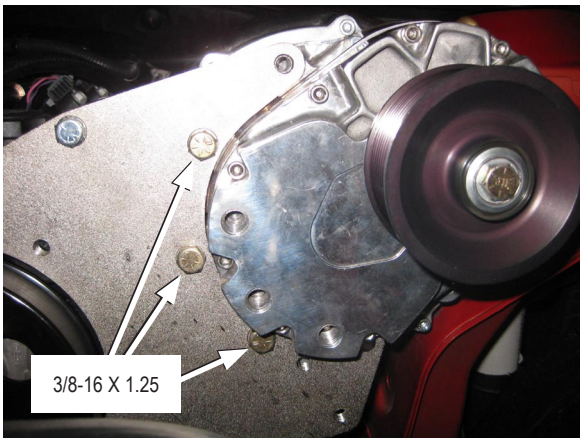
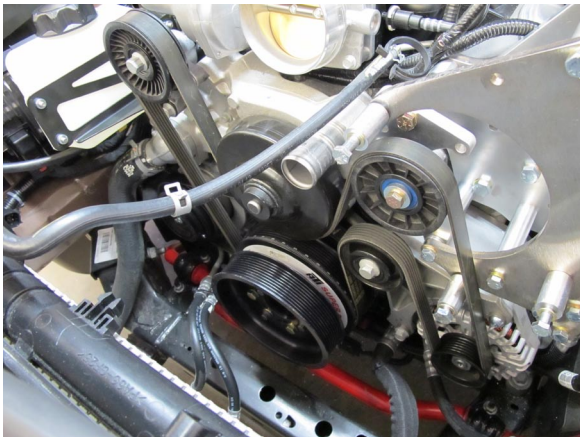


Fig 6L



(2013 model shown) Fig 6M

O. Locate the front tensioner support plate with the following (see Figures 6N, 6O, 6P):

i. Nine (9) 1.434” spacers

ii. Two (2) 3/8-16 x 2.75” screws with washers

iii. One (1) M12-1.75 x 20mm screw (no washer)

iv. Three (3) M10-1.5 x 55mm screws with washers

v. One (1) M10-1.5 x 120mm screw with washer (from the drive assembly)

vi. One (1) M10-1.5 x 110mm screw with washer (from the drive assembly)

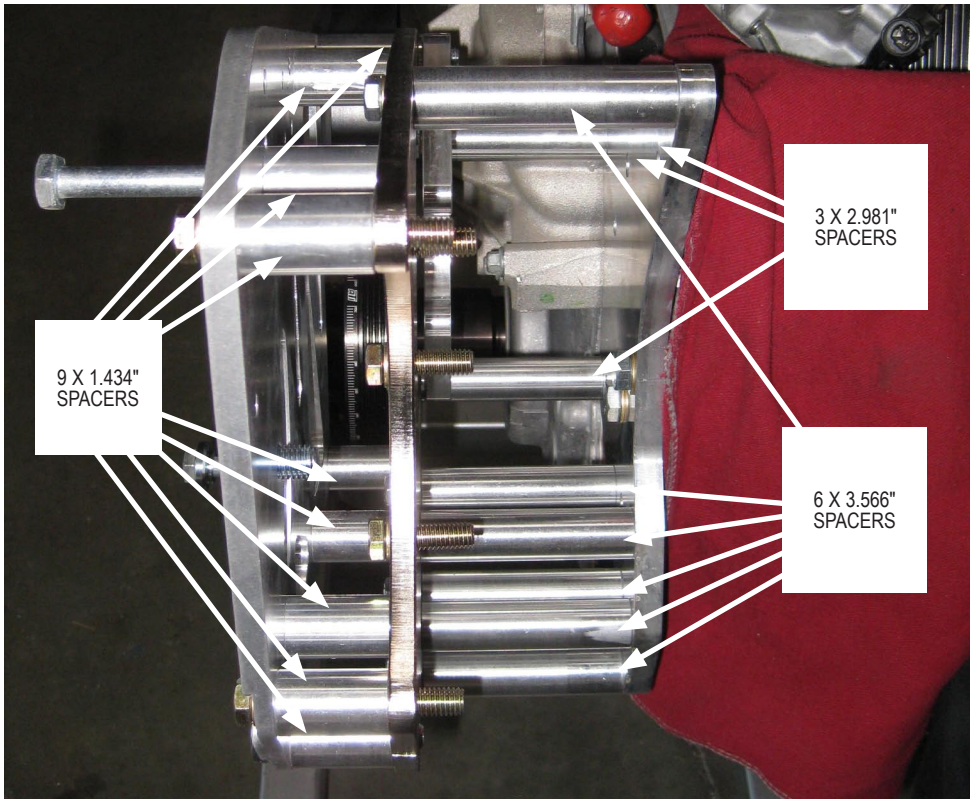


Fig 6N

P. Remove the one (1) 3/8-16 x 3” and one (1) 3/8-16 x 6.25” screw previously loosely installed. Take care not to lose the .085” spacer sandwiched between the steel plate and the aluminum P/S bracket in the location of the 3” screw. Install the front tensioner support plate using all of the hardware and spacers in the previous step. Reinstall the one (1) 3/8-16 x 3” and one (1) 3/8-16 x 6.25” screw, again taking care not to lose the .085” spacer.

P/N: 4GE020-010 v4.0, 2012-12-12

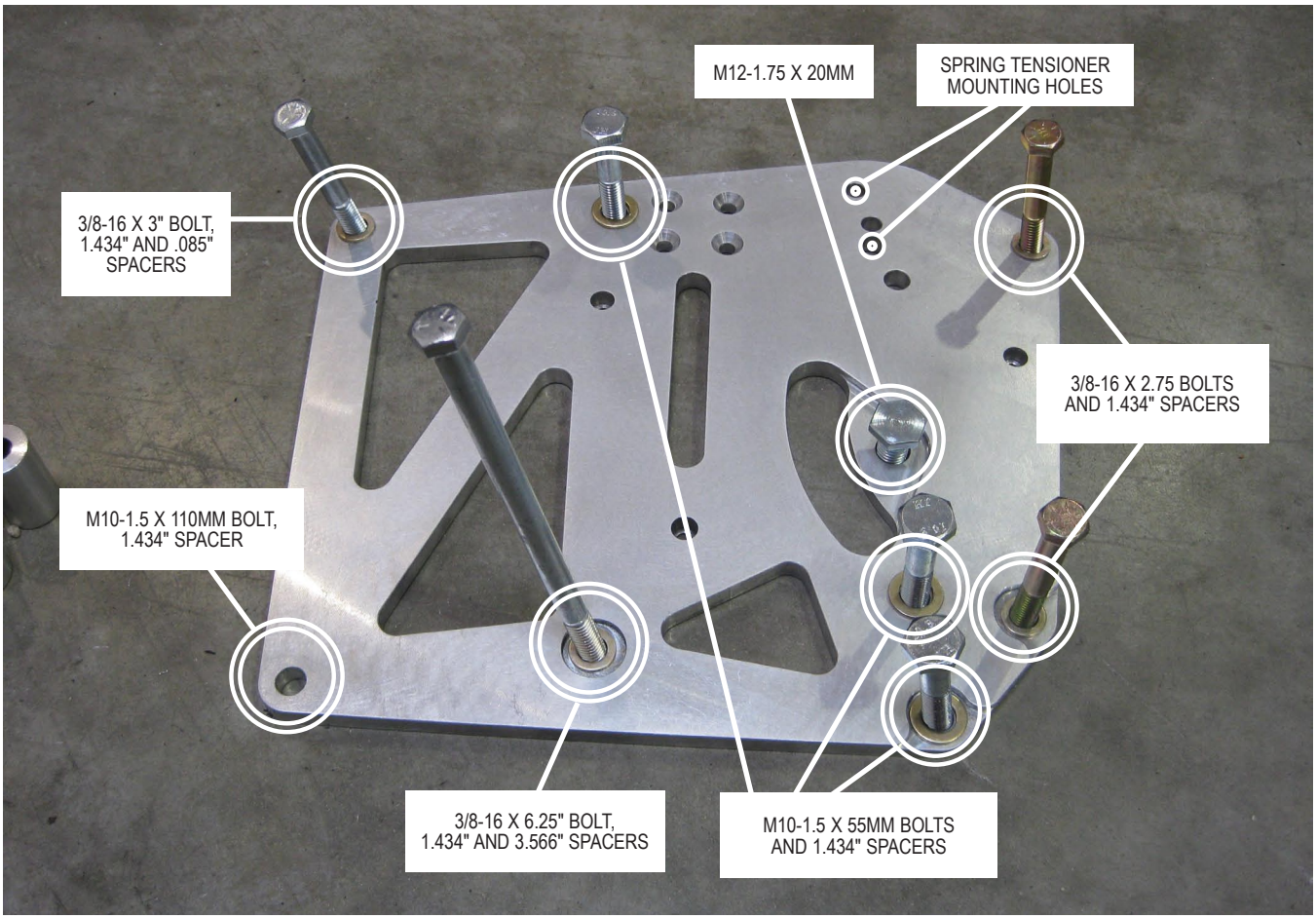


Fig 6O

Q. Tighten all fasteners with the exception of the M10-1.5 x 120mm and M10-1.5 x 110mm screws. See Figures 6O & 6P.

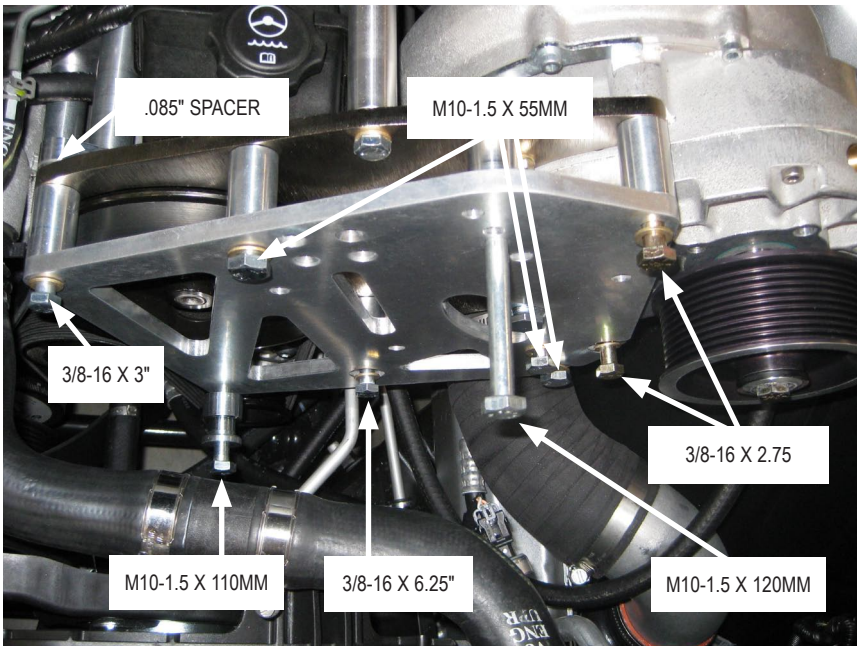


Fig 6P

P/N: 4GE020-010 v4.0, 2012-12-12

R. Assemble the supplied smooth idler, M10-1.5 x 110mm screw, idler pilot spacer, and idler pilot washer **with the head of the screw on the snap ring side** of the idler as shown in Fig. 6S. Install the idler assembly into the lower left-hand hole in the tensioner support plate as shown in Figure 6Q.

S. Remove temporarily installed M10-1.5 X 120mm screw and use to install the pre-assembled spring tensioner into the upper set of holes located on the front tensioner plate. See Fig 6R.

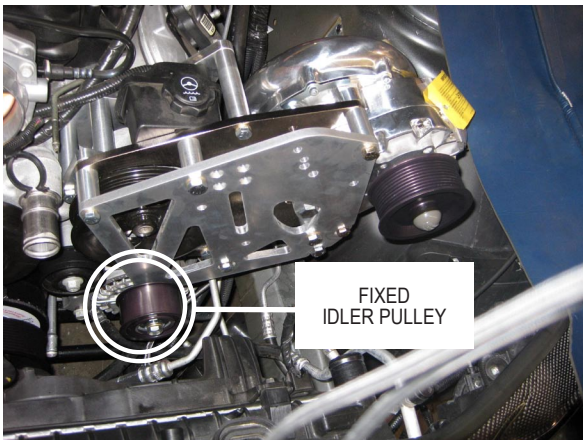


Fig 6Q

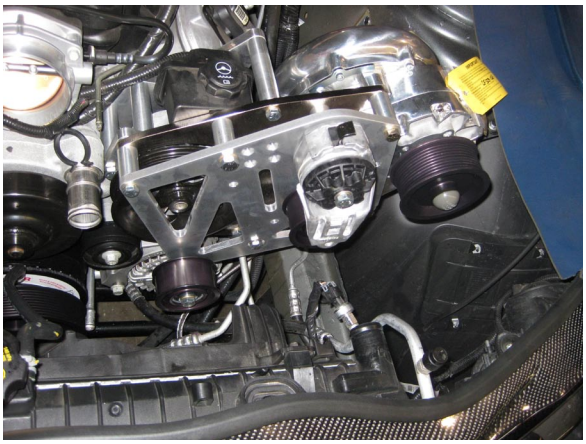


Fig 6R

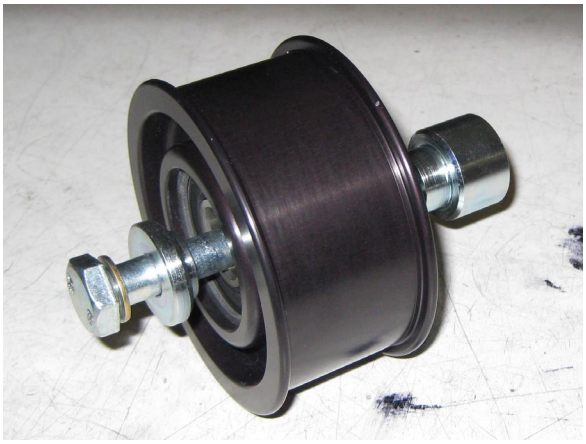


Fig 6S

T. Using a ½" ratchet or breaker bar, de-tension the spring tensioner and install the supplied 10-rib belt as follows:

   i. Around the 10-rib crank pulley.

   ii. Under the spring tensioner.

   iii. Around the supercharger pulley.

   iv. On top side of the fixed idler.

   See Fig 6T, 6U, 6V.

Fig 6T

U. Oil Drain:

   i. ***Self-Contained units only***: Route the end of the remote drain line from the bottom of the supercharger to a location where it can be conveniently be accessed to perform oil changes. Use zip ties to secure the line away from moving parts, hot surfaces, and sharp edges.

   ii. ***Oil-Fed units only***: Route the oil drain hose down to the ½" fitting previously installed into the oil pan. The hose must be routed "downhill" free from kinks and tight bends, and secured away from moving parts, hot surfaces, and sharp edges. Trim hose if necessary.

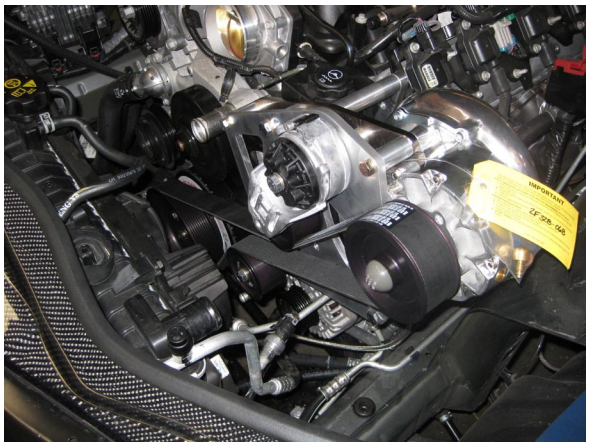


Fig 6U

Fig 6V

7. RADIATOR HOSE MODIFICATION

A. Locate the upper radiator hose assembly previously removed.

B. Install supplied 5/8" barb union fitting into lower radiator hose and secure with the factory clamp. See Fig 7A.

C. Install the supplied Ø5/8 x 3.5” hose onto the open end of the barbed fitting and secure with the supplied stepless clamp or black nylon ratchet clamp.

D. Locate the clamp attaching the 5/8” hose to the factory plastic union tee. Loosen this clamp so that the hose can be rotated 180° from its original location. Reattach clamp. See Fig. 7B.

Fig 7A

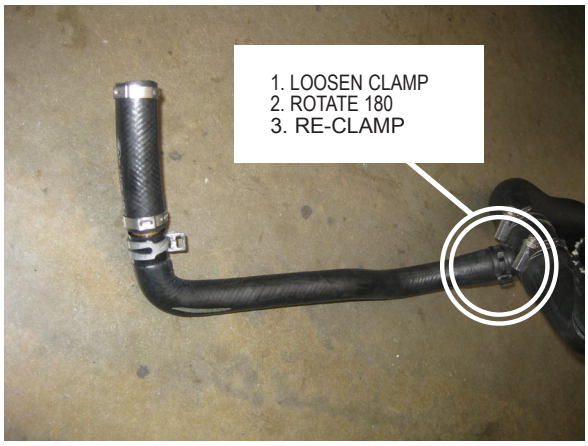


Fig 7B

E. Locate the end of the radiator hose marked UPR RAD. Use a hose cutter to cut the hose just before the bend, approximately as shown in figures 7C and 7D, leaving the hose as long as possible.

F. Transfer the OEM radiator hose clamp from the newly-cut fragment back to the main hose opposite the cut.

Fig 7C

Fig 7D

G. Install the modified radiator hose assembly so that the end of the hose marked V8 ENG UPR is now attached to the radiator inlet as shown in Fig. 7E.

H. Secure the extended Ø5/8” branch of the radiator hose to its original port using the remaining supplied clamp as shown in Fig. 7F. Secure the ends of the upper radiator hose with the OEM clamps.

Fig 7E

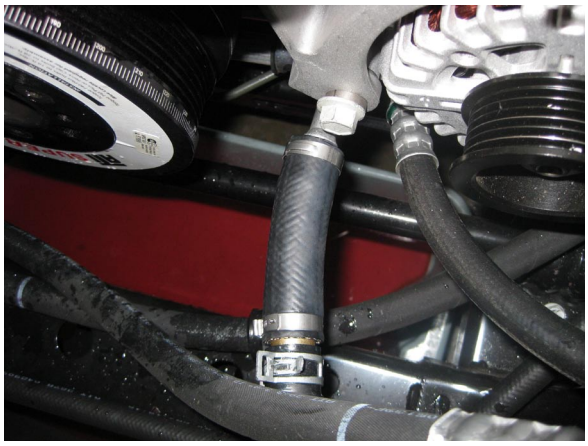


Fig 7F

8. CHARGE AIR COOLER INSTALLATION

Fig 8A

A. Locate the Discharge Assembly (4GE112-030 / -038) See Fig 8A

B. Locate the four 5/16-18 X .5" screws and washers, welded CAC (Charge Air Cooler) assembly, and the supplied mounting brackets.

C. Apply some RTV sealant onto the threads of each bolt. Attach the brackets on to the CAC end tanks as shown. Leave the screws loose to allow for final adjustment at a later step.

D. Set the CAC with brackets in place in front of the radiator. See Fig 8B.

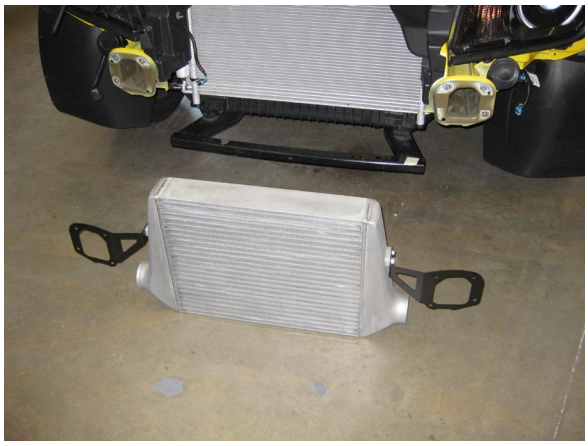


Fig 8B

P/N: 4GE020-010 v4.0, 2012-12-12

E. While lining up each bracket with the front bumper mounting holes, re-install the front metal bumper beam with factory hardware, sandwiching the CAC support brackets in between. Tighten all six factory fasteners at this time. See Fig 8C.

F. Adjust the height of the CAC so that it is parallel to and suspended above the lower support rail. It is helpful to set it on some ~1/4" spacers. Tighten the 5/16-18 x 0.5" hardware. See Figures 8D and 8E.

Fig 8C

Fig 8D

Fig 8E

G. Attach the supplied 2.75” x 90º silicone elbow to the outlet of the supercharger so that it faces toward the front of the vehicle. Be sure to remove the blue shipping cap from the supercharger discharge. See Figures Figs 8F & 8G.

H. Install the end of the aluminum tube union that measures 2.75” in diameter to the other end of the coupler. Secure both ends of the elbow with #44 clamps. See Fig 8G, 8H.

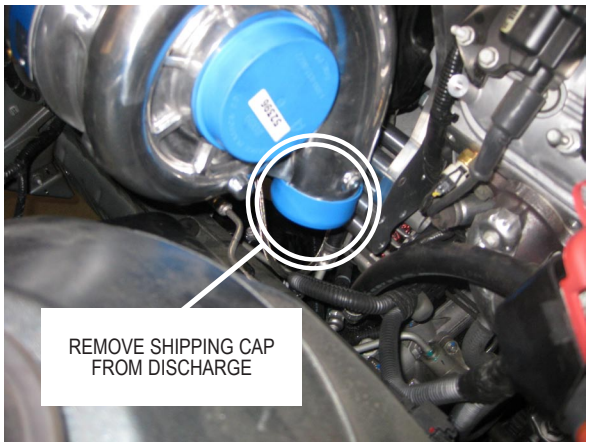


Fig 8F

Fig 8G

Fig 8H

I. Locate the supplied 3” X 45° silicone elbow and attach it to the open end of the tube union. Clock the elbow so that it points toward the outside of the vehicle, crossing over the top of the subframe rail. Secure with a #48 clamp. See Fig 8I, 8J.

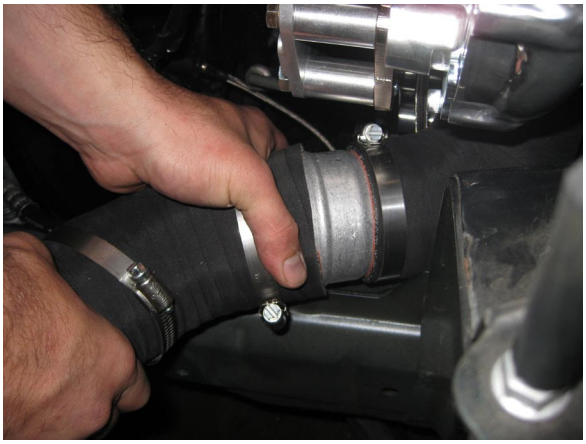


Fig 8I

Fig 8J

J. Locate the shorter of the two supplied 3” 90º “dog leg” tubes. Install the shorter leg into the end of the 45º silicone elbow with the end of the tube pointed down. Secure the connection with a #48 hose clamp. See Figures 8K & 8L.

K. On the other, downward-facing, end of the 90º tube install a bump hose coupler and secure the connection with a #48 hose clamp. See Figure 8M.

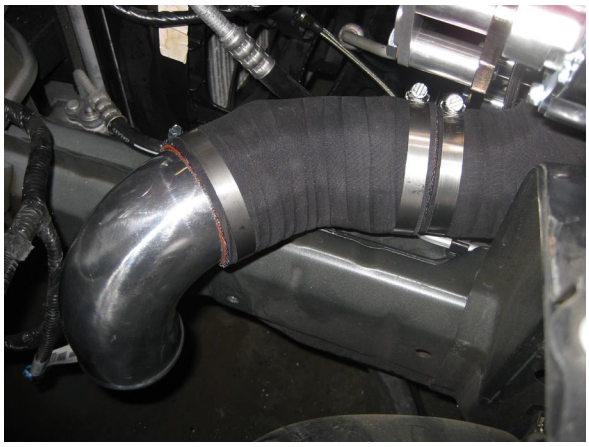


Fig 8K

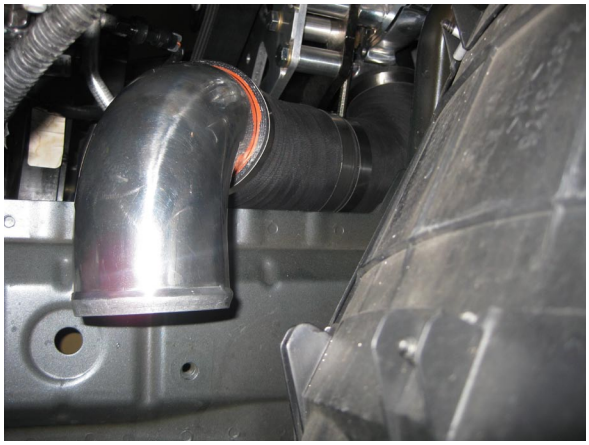


Fig 8L

Fig 8M

L. Install a Ø3” x 3” silicone sleeve onto the CAC inlet and secure it with a #48 hose clamp as shown in Fig. 8N.

M. Locate the supplied tube with the provision for the bypass valve (BPV). Install the tube with the 90º section fitting into the silicone sleeve on the CAC and the other end fitting into the bump hose coupler. Secure each end with a #48 hose clamp. See Figures 8O, 8P, & 8Q.

Fig 8N

Fig 8O

Fig 8P

N. Install the BPV and filter with the supplied hardware and gasket onto the previously installed tube. Clock the BPV so that the outlet faces the rear of the vehicle. Install the supplied outlet filter onto the BPV. See Fig 8R.

Fig 8Q

Fig 8R

O. Locate the remaining CAC outlet tube and install the 90º end to the CAC outlet using 3” silicone sleeves and #48 hose clamps. Orient the tube so that the open end points upward, outside the passenger side sub-frame rail as shown in Fig. 8S.

P. Install the remaining 45º silicone elbow onto the open end of the CAC outlet tube pointed slightly to the front of the vehicle and secure with a #48 clamp.See Fig 8T

Q. Install the remaining dog leg tube so that the longer end attaches to the open end of the 45º silicone elbow. Clock the tube so that it exits between the fuse box and the upper passenger side corner of the radiator. Secure with a #48 clamp. See Fig 8U

R. Locate the progressive hump coupler that measures 3” on one end and 4.0” on the other. Install the coupler onto the open end of the dog leg tube. Secure with #48 clamp. See Fig 8U.

Fig 8S

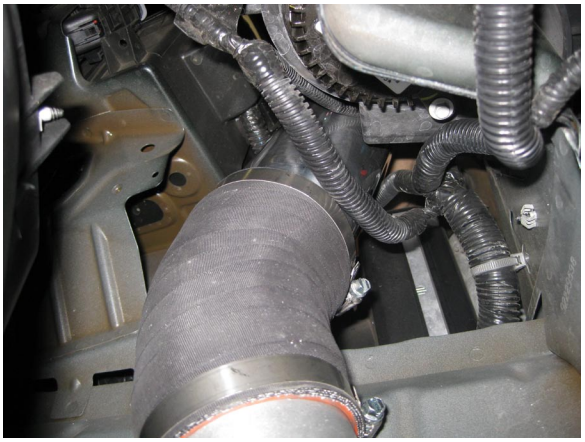


Fig 8T

Fig 8U

S. Make sure the honeycomb airflow straightener is installed as close to the 3” end of the progressive coupler as possible and secured with a single #56 hose clamp as shown in Fig. 8V.

NOTE: The airflow straightener is a critical device to ensure optimal fueling. Failure to install this device can cause engine damage or failure and void any warranties/

T. Locate the supplied MAF housing and install the previously-removed MAF sensor using the supplied M4 hardware. Install this MAF assembly into the open end of the progressive coupler so that the MAF sensor remains horizontal and the electrical connector points toward the front of the car. Be sure that the flow direction arrow printed on the MAF sensor points toward the throttle body. Secure with a #64 hose clamp. See Figures 8W & 8X.

NOTE: Failure to properly install this device can result in engine damage or poor fuel economy.

Fig 8V

Fig 8W

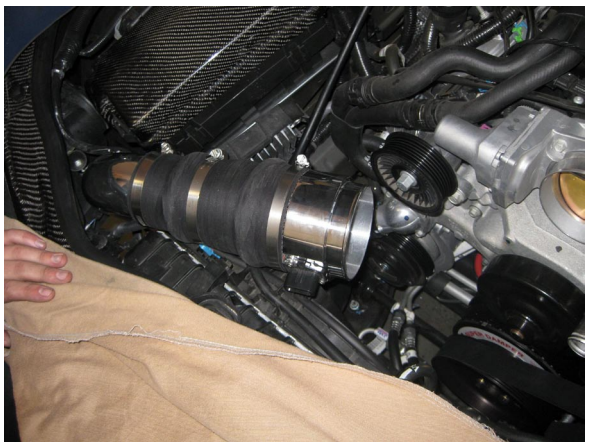


Fig 8X

U. Install the 4” X 3” long silicone sleeve onto the throttle body and secure to throttle body with #64 clamp. See Fig 8Y.

V. Locate the remaining 4” elbow and Ø4” x 2” silicone sleeve. Install the tube so that the longer end attaches to the MAF and the shorter end attaches to the throttle body and secure with #64 hose clamps. See Figures 8Y, 8Z, 8AA.

Fig 8Y

Fig 8Z

Fig 8AA

P/N: 4GE020-010 v4.0, 2012-12-12

9. MISCELLANEOUS MODIFICATION AND ASSEMBLY

A. Locate the supplied ½” barbed union fitting with the 1/16” NPT threaded port in the side. Apply a very small amount of pipe paste to the threads of the supplied 1/16” NPT hose nipple fitting and install it into the threaded port.

B. Use a drill bit that fits the inside diameter of the ½” barbed union fitting (typically 5/16”) to drill out the bore of the ½” barbed union. You will be removing the portion of the 1/16” NPT hose nipple that protrudes into the bore.

C. Locate the OEM brake booster vacuum hose running between the back of the engine and the brake booster on the driver side of the firewall.

D. Cut the brake booster hose approximately 2.5” from the end that attaches to the brake booster. Slide one of the included stepless or worm gear clamps over each cut end of the hose and install the ½” barbed union assembly with the small hose nipple facing forward. Secure with the clamps. See Fig. 9A.

E. Locate the supplied length of 5/32” vacuum line. Attach one end to the small hose nipple and route it forward, away from moving parts, hot surfaces, and sharp edges, to the BPV.

F. Trim the vacuum line to the appropriate length and attach to the nipple on the BPV.

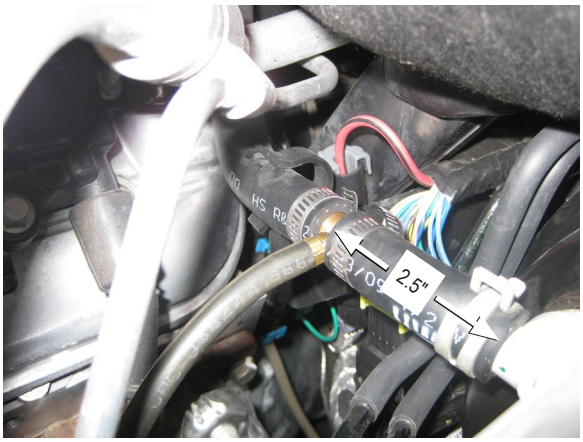


Fig 9A

G. Secure the supplied remote battery terminal relocation bracket to the existing stud on the driver side strut tower using the supplied M6 nylock nut and washer as shown in Fig. 9B.

H. Snap the black remote battery terminal housing securely onto the bracket and reattach the red cover. Pay special attention to the battery cable routing, as it will have moved and must be kept away from moving parts such as the steering linkage, hot surfaces, and sharp edges. See Fig. 9C.

I. Use a 1.5” piece of 5/32” vacuum line to cover the OEM airbox stud on the front of the driver side strut tower as shown in Fig. 9D.

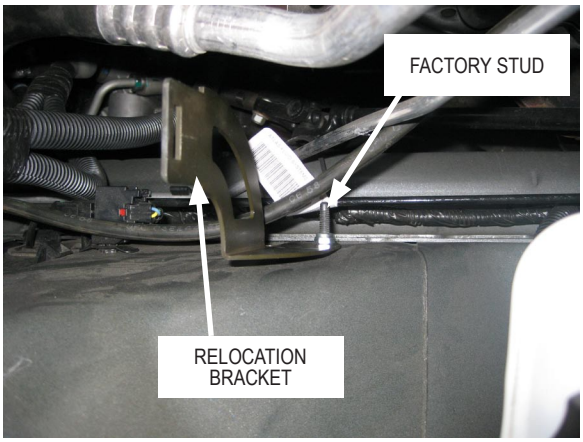


Fig 9B

Fig 9C

Fig 9D

J. Relocate the previously-removed ambient air temperature sensor as follows:

i. Drill a 15/32” hole through the plastic shroud on the passenger side of the CAC as shown in Fig. 9E.

ii. Snap the temperature sensor into the hole from the CAC side. Make sure it clips securely into place.

iii. Reconnect the OEM electrical connector to the sensor. See Fig. 9F.

Fig 9E

Fig 9F

10. AIR INLET INSTALLATION

A. Locate the supplied air intake assembly and configure as shown in Fig. 10A:

   i. Insert one end of the supplied plastic 90º hose elbow into the supplied length of 3/8” hose.

   ii. Insert the other end of the plastic 90º hose elbow into the small hole in the end of the supplied air filter.

   iii. Install the air filter onto the air intake duct with the supplied hose clamp.

B. Locate the 3.5” x 4” silicone reducer sleeve and attach the smaller end to the super-charger inlet with the supplied #56 hose clamp.

C. Install the complete air intake assembly into the larger end of the reducer sleeve and secure with the supplied #64 hose clamp. Orient the assembly for clearance between the air filter and the supercharger drive pul-ley, loosening and adjusting the air filter if necessary. See Fig. 10B.

D. Route the 3/8” breather hose to the front of the passenger side cylinder head, routing and securing it away from moving parts, hot surfaces, and sharp edges.

E. Connect the 3/8” breather hose to the open port just inboard of the engine oil filler neck as shown in Fig. 10C.

Fig 10A

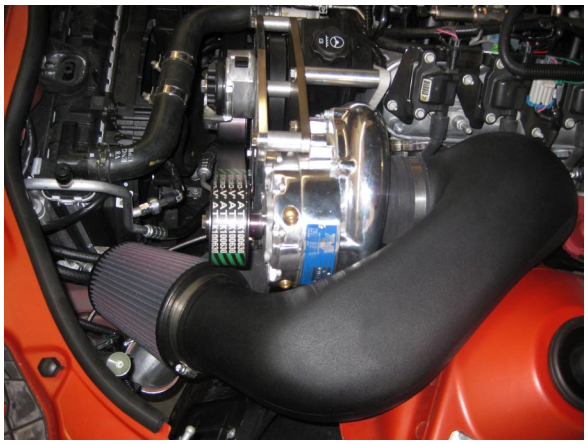


Fig 10B

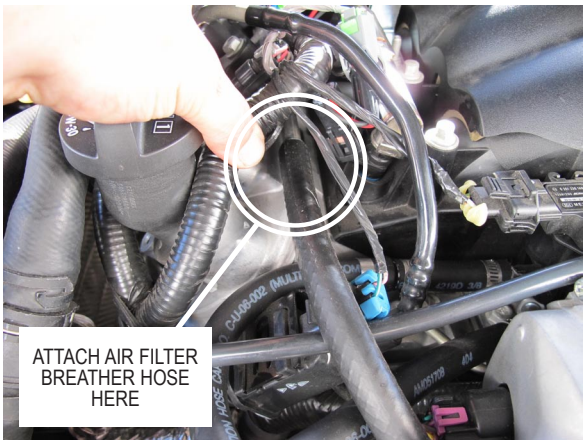


Fig 10C

11. PCV VALVE INSTALLATION

A. Locate the 4GE139-096 PCV assembly.

B. Cut a 2” segment of the supplied 3/8” hose and assemble it onto the end of the supplied check valve with the FLOW arrow pointing toward it. PROPER ORIENTATION IS CRITICAL.

C. Assemble the remainder of the 3/8” hose onto the other end of the check valve.

P/N: 4GE020-010 v4.0, 2012-12-12

D. Connect the SHORT 2” end of the 3/8” hose/ check valve assembly to the open port on the intake manifold just behind the throttle body and secure with one of the supplied #6 worm gear or 17.0 stepless clamps. Make sure the FLOW arrow points toward the intake manifold. See Fig. 11A.

NOTE: If necessary it may help to temporarily remove the MAP sensor located on the manifold in order to properly secure the clamps.

E. AUTOMATIC TRANSMISSION ONLY

i. Smoothly route the 3/8” hose toward the rear of the engine parallel to the passenger side fuel rail and around to the port at the rear of the driver side valve cover. Take care to avoid kinks, using the supplied plastic 90º fitting if needed.

ii. Secure the hose to the port with one of the remaining hose clamps. See Fig. 11B.

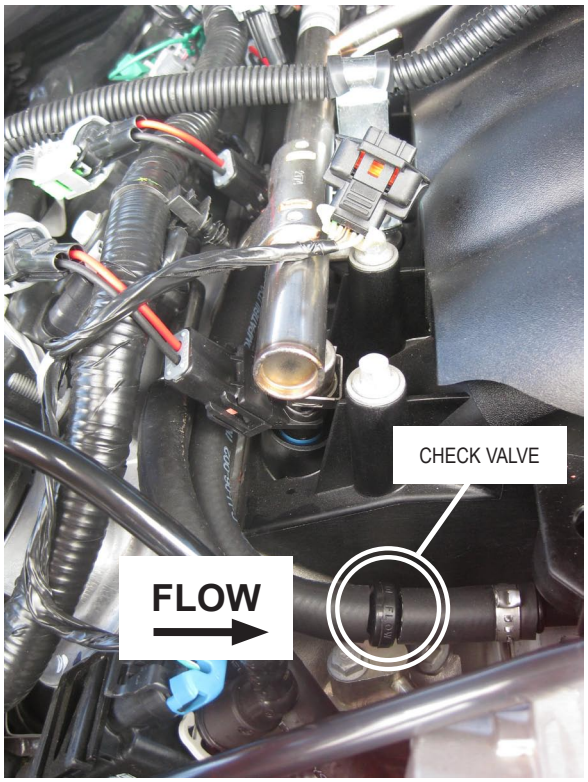


Fig 11A

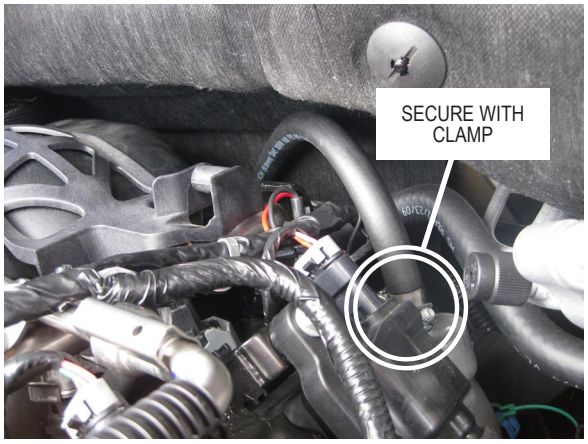


Fig 11B

F. MANUAL TRANSMISSION ONLY

i. Cut the long end of the 3/8” hose/check valve assembly approximately 4.5” from the check valve.

ii. Insert the supplied plastic 90º fitting into the open end of the hose.

iii. Connect the remaining length of 3/8” hose to the open port leading to the crank case just below the front of the intake manifold and secure with one of the remaining hose clamps.

iv. Route the hose to the open end of the plastic 90º fitting. Assemble the hose to the fitting, trimming as appropriate. See Fig. 11C.

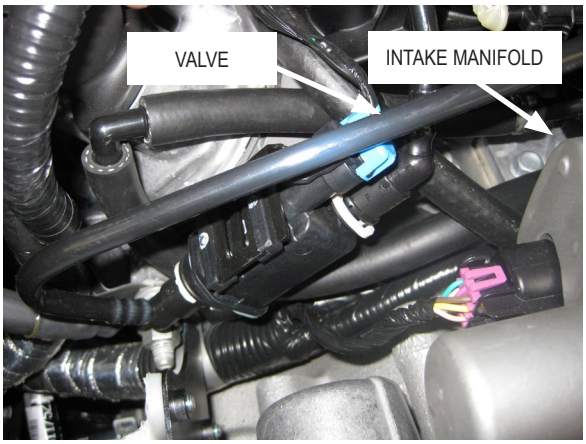


Fig 11C

12. ENGINE COOLANT OVERFLOW

A. Locate the supplied engine coolant reservoir and ensure that the ¼ NPT x 5/16 90º fitting is installed and clocked as shown in Fig. 12A. Install the supplied cap with retaining cord.

B. Install the supplied bracket onto the reservoir using the supplied ¼-20 bolts and washers as shown in Fig. 12A.

C. Remove the 15mm-headed OEM belt tensioner bolt located toward the passenger side as well as the 15mm nut on the passenger side cylinder head stud where the ground strap attaches. See Fig. 12B.

Fig 12A

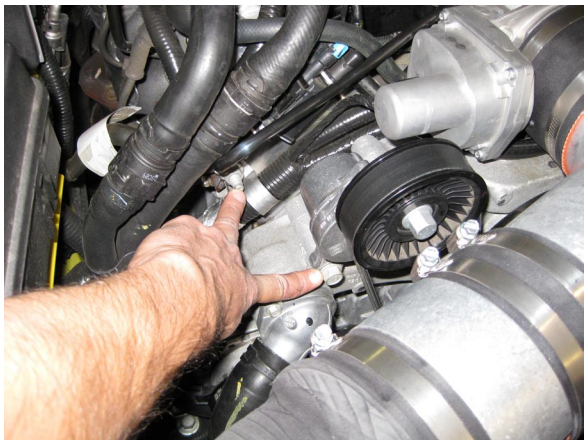


Fig 12B

D. Install the assembled bracket onto the stud and line the other mounting hole up with the hole located in the factory idler. Use the previously removed factory hardware to secure the assembled bracket. See Figs. 12C & 12D.

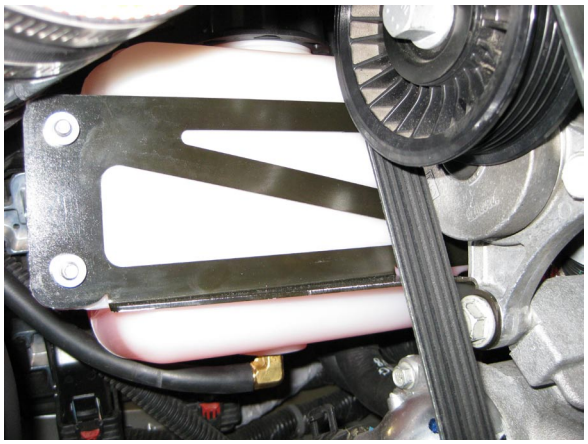


Fig 12C

Fig 12D

E. Route the OEM radiator overflow hose to the barb fitting on the bottom of the new reservoir. Trim as appropriate and attach as shown in Fig. 12E.

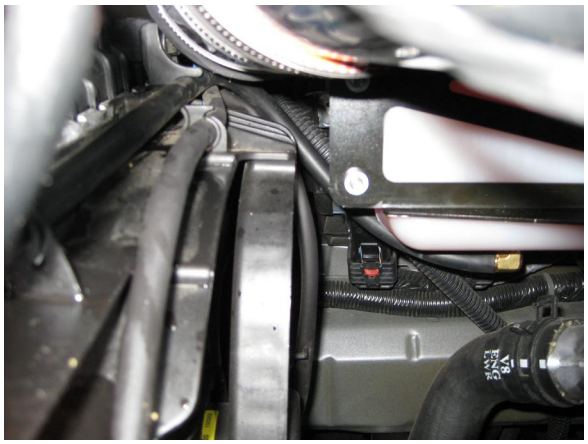


Fig 12E

P/N: 4GE020-010 v4.0, 2012-12-12

13. WINDSHIELD WASHER RESERVOIR

A. Locate the supplied washer fluid tank and ensure that the straight 5/8” barb fitting is installed as shown in Fig. 13A.

B. Install the previously-removed OEM washer pump and grommet into the similar location on the new reservoir. See Fig. 13B.

C. Install the supplied bracket onto the reservoir using the supplied ¼-20 bolts and washers as shown in Fig. 13A.

D. Install the plain cap onto the reservoir and tighten securely.

E. Place the reservoir assembly onto the driver side frame rail with the bracket seating squarely against the underside as shown in Fig. 13D. Mark the position of the three (3) mounting holes onto the underside of the frame rail.

Fig 13A

Fig 13B

F. Set the reservoir assembly aside and drill in the three marked locations with an 11/64” – 3/16” drill bit. See Fig. 13C.

G. Attach the supplied 5/8” hose to the barb on top of the reservoir and secure with a supplied hose clamp.

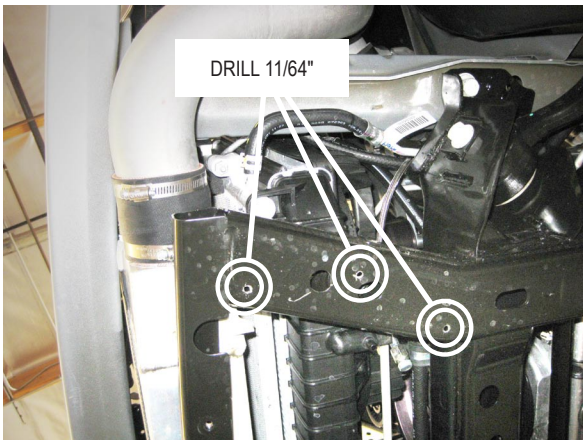


Fig 13C

H. Routing the 5/8” hose upward, place the reservoir assembly back into position and secure with the supplied #12 sheet metal screws. See Fig. 13D.

I. Locate the supplied remote fill spout with cap. Assemble it to the supplied mounting bracket using the supplied ¼-20 bolts and washers as shown in Fig. 13E.

J. Place the remote fill spout assembly in the location shown on the driver side radiator core support, ensuring there is adequate clearance to the air filter. Mark the mounting hole locations and drill with an 11/64” drill bit.

K. Mount the assembly as shown using the supplied #12 sheet metal screws. See Fig. 13E.

Fig 13D

Fig 13E

L. Trim the 5/8” hose as necessary and connect it to the bottom of the remote fill spout, securing it with the included clamps. See Fig. 13F.

M. Reconnect the OEM electrical connector to the washer pump.

N. Reconnect the washer fluid feed hose to the washer pump.

Fig 13F

14. FINAL ASSEMBLY

A. Reinstall the Front Bumper Cover (FBC) in reverse order from removal making sure to reinstall:

   i. Two (2) 10mm-headed screws through the bottom of the FBC.

   ii. The FBC electrical connector located between the passenger side driving light and headlight. Access the connector via the wheel well.

   iii. Four (4) 10mm-headed screws and one (1) 7mm-headed screw attaching the FBC to the leading edge of the fender on each side (8 and 2 total).

   iv. Three (3) T20 Torx screws securing each splash guard to the FBC (6 total). These screws are located in the wheel wells just forward of the front wheels along the outer edge.

   v. Two (2) plastic pins securing each splash guard to the inner fender structure (4 total). One is adjacent to the strut and the other is directly above the wheel.

   vi. Two (2) 10mm-headed screws and six (6) plastic pins along the top edge of the FBC.

B. Slowly refill the engine coolant through the spout located at the top of the radiator, allowing any air to escape as the radiator fills. Fill the new engine coolant reservoir about 2/3 full.

C. Using the washer fluid previously drained, fill the washer fluid via the new remote fill spout. Fill only so that the lower tank is filled.

P/N: 4GE020-010 v4.0, 2012-12-12

D. Trim the driver side front corner of the engine cover as necessary to allow reinstallation. See Figures 14A and 14B for one possible configuration. Reinstall the engine cover, snapping it securely into place.

Fig 14A

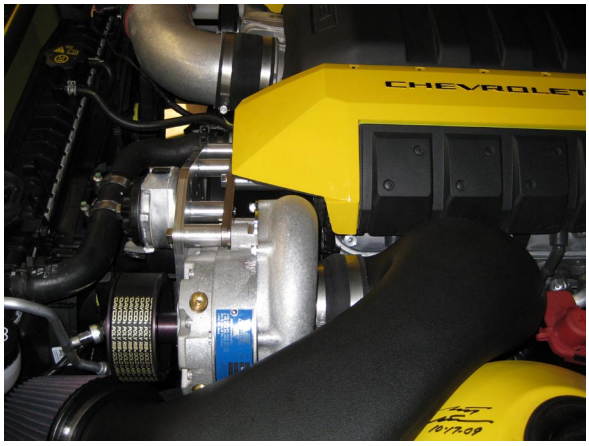


Fig 14B

15. REFLASH COMPUTER

IMPORTANT! To ensure trouble-free programming of your vehicle's computer:

- Make sure the vehicle's battery is sufficiently charged.
- Turn off all accessories and close doors to prevent unnecessary drain on the battery.
- Locate "exterior" fuse panel and remove Qty 1 INFO, Qty 1 RADIO and Qty 1RADIO AMP labeled fuses. (If applicable)
- Do not attempt to program your vehicle while a battery charger is connected
- Improper battery voltage will result in failure of the programming process.
- Do not disconnect the cable or turn off the ignition during programming.

Fig. 14A

A. Reconnect the battery if previously disconnected.

B. Locate the vehicle's OBD2 connector located under the dash on the driver side of the vehicle. See Fig 14B

C. Attach the OBD2 connector from the Flash tool that is provided in the kit to the vehicle's OBD2 port. Make sure this connector is seated all the way in the vehicle's OBD2 port. You don't want this connector to disconnect during programming or damage may occur to the vehicle's ECM. See Fig 14C

NOTE: • All vehicles equipped with On-star that have aftermarket stereos will experience problems with the ability to re-program the vehicle's ECM. It is necessary to disconnect the aftermarket stereo from the factory wiring harness before continuing with the programming procedure.

• Do not disturb the cable or turn the ignition off during this time. If the programming is disrupted, the computer will not start or run your vehicle!

Fig 14B

Fig 14C

NOTE: If you have any questions throughout this procedure, please contact our service department for further assistance.

D. The reflash tool should power up and display PROGRAM VEHICLE at the top of the screen. Press the SELECT button. See Fig 14D

E. PREPROGRAMED TUNE will be displayed at the top of the screen. Press the SELECT button. See Fig 14E

F. Read the disclaimer entirely, then press the SELECT button if you agree with the terms of the disclaimer. See Fig 14F

G. At this point you will need to turn the ignition to the ON position (do not start the vehicle). Set the parking brake and press the SELECT button to continue. See Fig 14G

H. The reflash tool will proceed to check the Operating System (OS) part number of the vehicles ECU. See Fig 14H

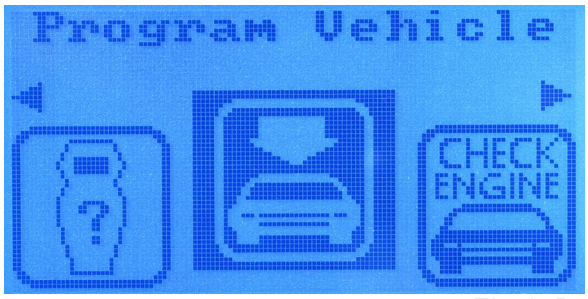


Fig 14D

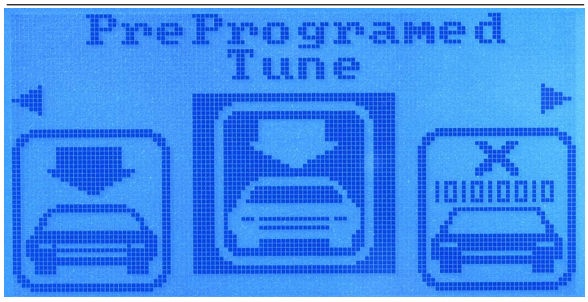


Fig 14E

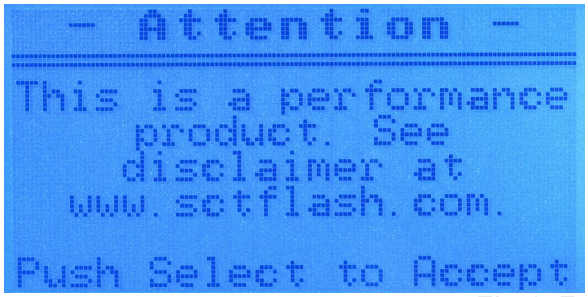


Fig 14F

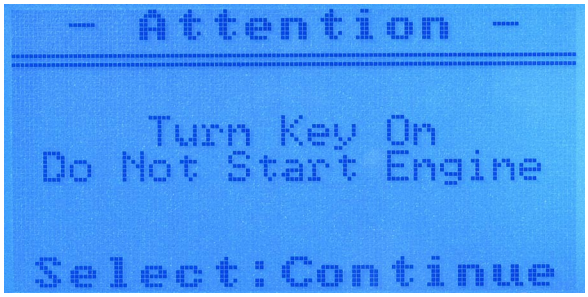


Fig 14G

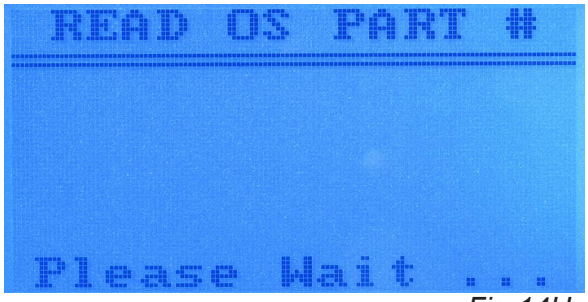


Fig 14H

P/N: 4GE020-010 v4.0, 2012-12-12

I. Once the tool has identified the OS of the ECU, you will see SELECT AUTO displayed at the top of the screen, and a list of available tunes below. Use the arrow keys (up and down) to select the appropriate tune for your vehicle and press the SELECT button.

NOTE:

If the vehicle is equipped with an automatic transmission, select: "**VORTECH CAMARO A6**" (see Fig 14I)

If the vehicle is equipped with a manual transmission, select: **"VORTECH CAMARO M6**"

J. ADJUST OPTIONS will be displayed at the top of the screen. Arrow down to SKIP OPTIONS and press the SELECT button. See Fig 14J

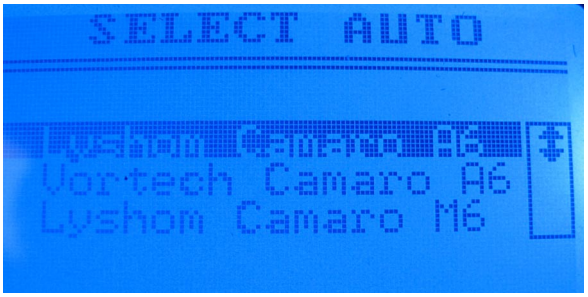


Fig 14I

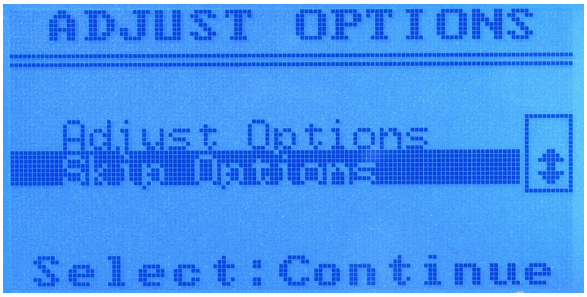


Fig14J

K. PROGRAM VEHICLE will be displayed at the top of the screen. At this time make sure you have turned off any additional accessories that may cause unnecessary draw on the vehicles battery (headlights, radio, etc.).Press the SELECT button to proceed with BEGIN PROGRAM. See Fig 14K

L. Automatic vehicles will require a second selection. See Fig 14L.

NOTE: Once the programming sequence has been started use care NOT to disturb the cable, or turn the ignition or any accessories on or off during this time. Throughout the programming sequence it is normal for the Reflash tool to AUTOMATICALLY cycle the vehicles power on and off. If the programming is disrupted, permanent damage to the vehicles computer may result!

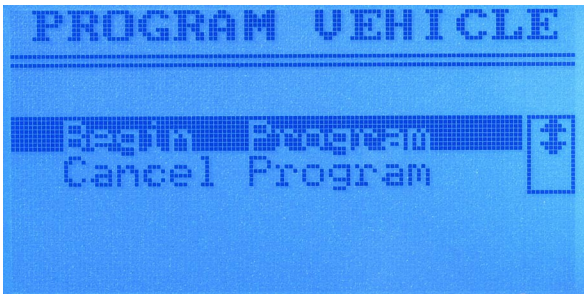


Fig 14K

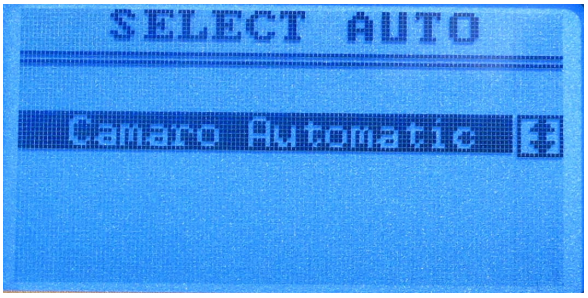


Fig 14L

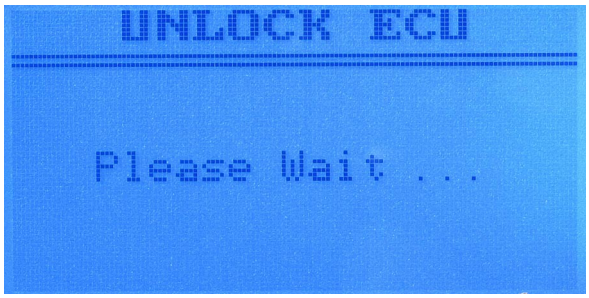


Fig 14M

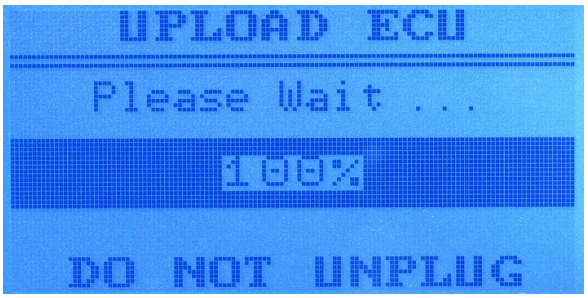


Fig 14N

M. The reflash tool will then automatically proceed through the following screens during the programming process. See Fig 14M thru 14S

i. Unlock ECU

ii. Upload ECU

iii. Setup Device

iv. Make Adjustments

v. Calculate Checksums

vi. Unlock ECU

vii. Download tune

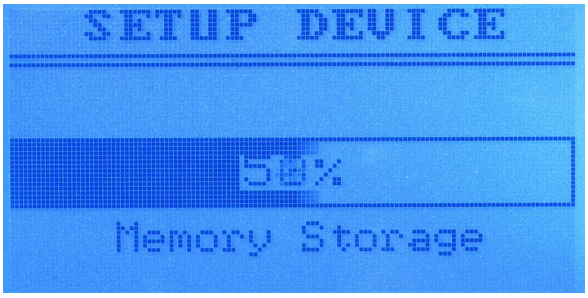


Fig 14O

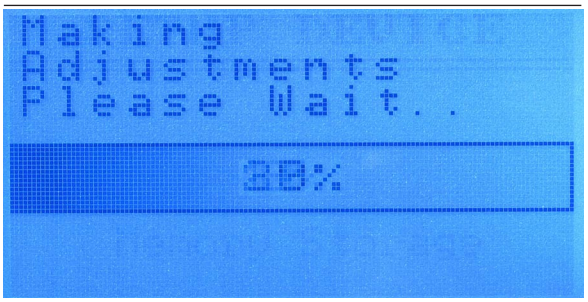


Fig 14P

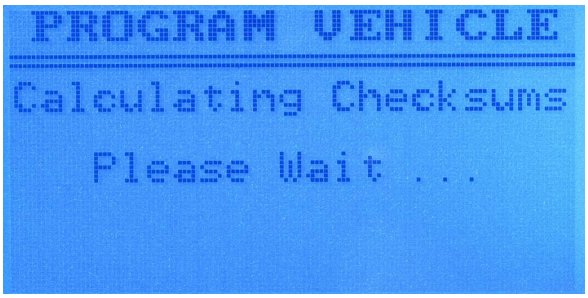


Fig 14Q

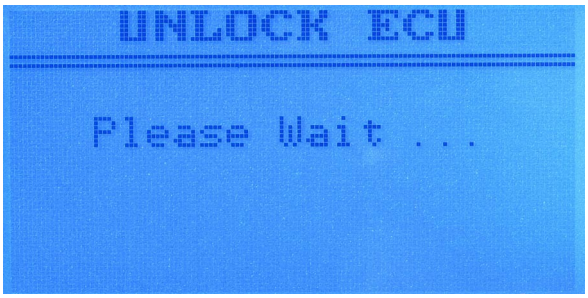


Fig 14R

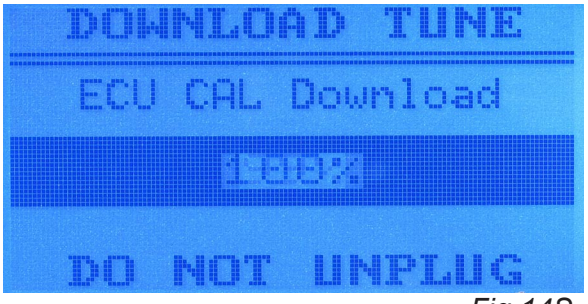


Fig 14S

N. Once the reflash tool has completed the DOWNLOAD TUNE process the screen should read "Turn Key Off And Remove key." At this time remove the key and press the SELECT button to continue. See Fig 14T

O. Once the tool has successfully completed the POWER DOWN ECU sequence you will see "Download Complete" displayed on the screen. Press the SELECT BUTTON. See Fig 14U, 14V

P. CONGRATULATIONS! You have successfully completed reflashing the vehicles ECU with the Vortech Supercharger Calibration. You may now unplug the reflash tool from the vehicles OBD2 port.

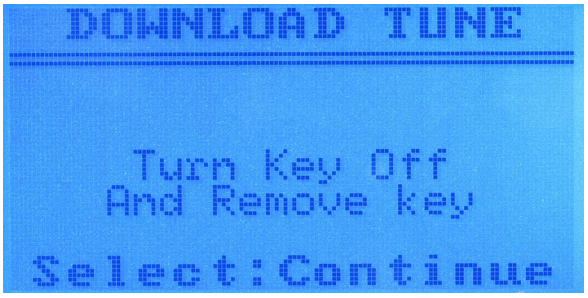


Fig 14T

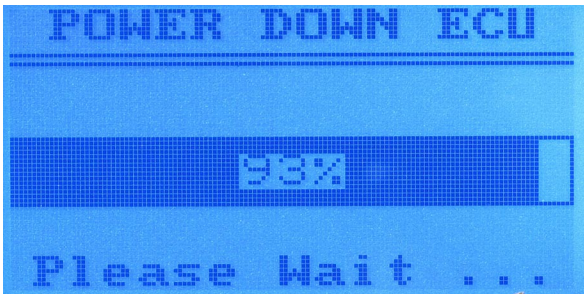


Fig 14U

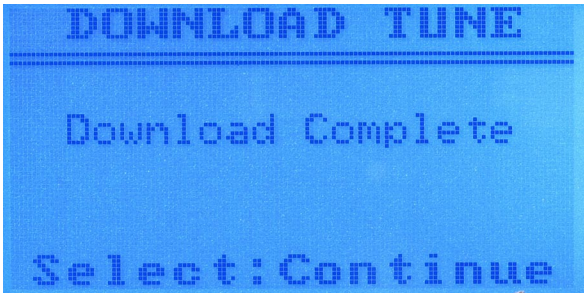


Fig 14V

16. FINAL CHECK

WARNING: Do not attempt to operate the vehicle until all components are installed and all operations are completed including the final check.

A. If your vehicle has gone over 15,000 miles since its last spark plug change, you will need to change the spark plugs now before test driving the vehicle.

B. Check all fitting, nuts, bolts and clamps for tightness. Pay particular attention to oil and fuel lines around moving parts, sharp edges and exhaust system parts. Make sure all wires and lines are properly secured with clamps or tie-wraps.

C. Check all fluid levels, making sure that your fuel tank is filled with 91 octane or higher fuel before commencing test drive.

D. With the radiator cap still off start the engine and allow to idle a few minutes, then shut-off.

E. Re-check to be sure that no hoses, wires, etc. are near exhaust headers or moving parts. Look also for any signs of fluid leakage.

F. With the radiator cap removed, start the engine and allow to idle bringing the engine up to operating temperature. Watch the fluid level at the radiator spout and fill as necessary.

G. Once the engine is up to normal operating temperature you can shut the car off and replace the radiator cap. Check the overflow reservior level and fill as necessary.

H. PLEASE TAKE SPECIAL NOTE: operating the vehicle without ALL the subassemblies completely and properly installed may cause FAILURE OF MAJOR COMPONENTS.

I. Test drive the vehicle.

J. Always listen carefully for engine detonation. Discontinue heavy throttle usage if detonation is heard.

K. Read the STREET SUPERCHARGER SYSTEM OWNER'S MANUAL AND RETURN THE WARRANTY REGISTRATION FORM within thirty (30) days of purchasing your supercharger system to qualify.

P/N: 4GE020-010 v4.0, 2012-12-12

FOR INTERNALLY LUBRICATED V-3 UNITS ONLY

This supercharger has been factory pre-filled with special Vortech synthetic lubricant. Oil does not need to be added to a brand new unit; however a fluid level check should be performed.

Prior to operating the supercharger on the vehicle and after installation onto the vehicle:

Remove the factory installed flat-head brass shipping plug (not the dipstick) from the top of the supercharger case. Replace the sealed shipping plug with the supplied “vented” plug. Do not operate the supercharger without it. Check the supercharger fluid level.

Fluid level checking procedure:

1. Ensure that the .06” copper sealing washer is located on the dipstick base.
2. Thread the clean dipstick into the unit until it seats.
3. Once the dipstick has seated, remove the dipstick from the unit. Fluid should register in the cross-hatched area on the dipstick.
4. DO NOT OVERFILL!!! Drain excess fluid from the unit if it is above the maximum level on the dipstick.

Check the fluid level using the dipstick at least every 2,500 miles.

Initial supercharger fluid change must be performed at 2,500 miles. The supercharger fluid must be changed at least every 7,500 miles.

Drain the fluid, refill the unit with 4 oz. of Vortech V3 lubricating fluid and then confirm proper oil level using the dipstick. DO NOT OVERFILL!!!

WARNING: Use of any other fluid other than the special Vortech lubricant will void the warranty and may cause component failure.

P/N: 4GE020-010 v4.0, 2012-12-12

ENGINEERING, INC

1650 PACIFIC AVENUE • CHANNEL ISLANDS, CA 93033-9901 • (805) 247-0226
FAX (805) 247-0669 • www.vortechsuperchargers.com • M-F 7:00 AM - 3:30 PM PST

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