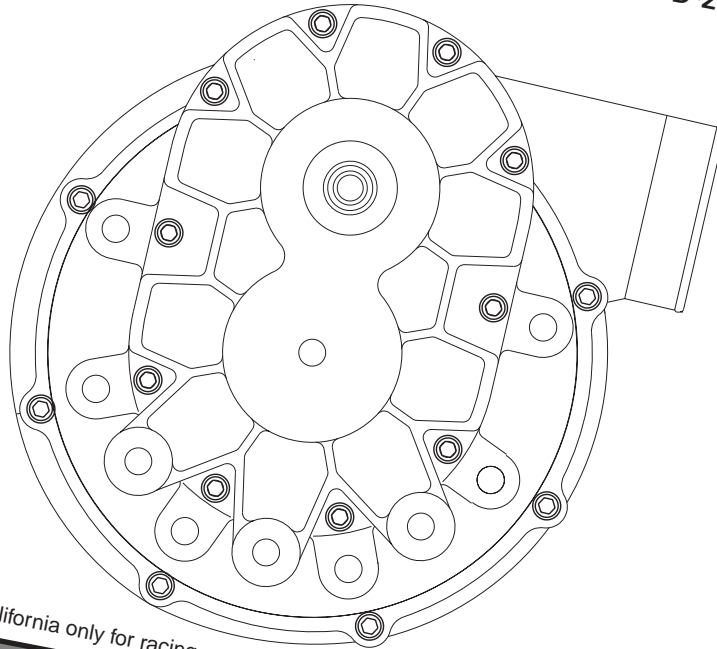


Honda S2000

Supercharger System Installation Instructions

2000-2004 Model Years

2000-2003 50 STATE SMOG LEGAL PER CARB EO #D-213-21
*2004 Models



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



ENGINEERING, LLC

1650 PACIFIC AVENUE • CHANNEL ISLANDS, CA 93033-9901 • (805) 247-0226
FAX (805) 247-0669 • www.vortechsuperchargers.com • M-F 8:00 AM - 4:30 PM PST

FOREWORD

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 call Vortech Engineering for installers in your area.

NOTE:

Due to the horsepower and torque that your vehicle will produce after installation of this supercharger system, it is strongly suggested that the factory clutch be replaced with a high-capacity aftermarket unit.

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2000-2004 HONDA S2000 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 high grade SF rated 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 2 years or 20,000 miles with original heat range plugs as specified by the manufacturer and retard timing from 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
- 3/8" Swivel Head Ratchet
- 1/2" Socket and Drive Set: SAE & Metric
- 3/8" NPT Tap and Handle
- Adjustable Wrench
- Open End Wrenches: SAE & Metric
- Center Punch
- 5 Quarts SH/CF Rated Quality Engine Oil
- Oil Filter and Wrench
- Flat #2 Screwdriver
- Phillips #2 Screwdriver
- Heavy Grease
- Silicone Sealer
- Drill Motor
- 1/8", 3/16" Drill Bits
- Hex Key Wrench Set
- Wire Strippers and Crimpers
- Utility Knife
- Hand Held Grinder
- Blue Loctite
- 07JAB-001020A (Damper Tool) Available at Honda Dealer
- 07NAB-001040A (Damper Tool) Available at Honda Dealer
- Honda Bond (Sealer) Available at Honda Dealer

If your vehicle has in excess of 10,000 miles since its last spark plug change, then you will also need:

- Spark Plug Socket
- New Spark Plugs



ENGINEERING, LLC

2000-2003 HONDA S2000

Part No. 4HS218-010SQ/018SQ

PARTS LIST

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

PART #	DESCRIPTION	QTY	PART #	DESCRIPTION	QTY	
2E229-180	SUPERCHARGER ASSY		1	7P375-004	3/8" NPTF x -8 SAE FLARE FITTING	1
4HS111-021	MOUNTING BRACKET ASSY		1	7P500-050	FTG, -8 JIC TUBE x 90° W/BARB	1
4HS010-011	MTG. PLATE BLOCK	1	7T560-001	CUTTER, 9/16" ROTABROACH	1	
4HS010-021	LOWER S/C PLATE SPACER	1	7T560-002	ARBOR, 9/16" ROTABROACH	1	
4HS010-034	UPPER S/C SUPPORT PLATE	1	7P375-041	3/8" NPT x 1.5" HEX NIPPLE	1	
4HS010-044	S/C MOUNTING PLATE	1	4HS130-026	OIL FEED ASSEMBLY	1	
4HS010-051	LATERAL S/C MOUNTING PLATE SUPPORT	1	7U250-000-360	OIL FEED HOSE	1	
7A250-075	1/4-20 x .75 SHCS	2	7P125-004	#4 JIC x 90 x 1/8 NPT FTG	1	
4PFA010-031	TENSIONER ADJ. SCREW LOCATOR	1	7P125-101	#4 JIC x 45 x 1/8 NPT FTG	1	
7PA375-500	TENSIONER SCREW	1	7P125-125	1/8 NPT FEM x 1/8 BSPT	1	
7B500-325	TENSIONER ARBOR	1	7P125-034	1/8 STREET TEE	1	
4HS017-051	TENSIONER SPACER	1	7U100-055	6" ZIP-TIE	4	
4HS017-011	RIBBED IDLER SPACER	1	4HS112-010	AIR INLET ASSEMBLY	1	
4HS017-031	UPPER S/C PLATE SPACER	4	8H040-022	3/4" BREATHER FITTING	1	
4HS017-021	12mm S/C BOSS SPACER	1	8H040-040	3.5" AIR FILTER	1	
4HS017-041	S/C PLATE SPACER (TO STOCK IDLER)	1	7S350-200	3.5 x 2" SLEEVE	1	
7F375-028	3/8-24 PRESS NUTS	4	7R002-056	#56 CLAMPS	2	
7B375-350	3/8-24 x 3.50	4	7R002-052	#52 CLAMP	2	
7C010-115	M10 X 1.25 x 115 BOLT	1	7U030-016	1/4" COOLANT HOSE	16"	
7J010-002	M10 WASHER (.080 THK.)	2	4HS013-010	AIR BOX	1	
7C060-622	M6 x 1.00 x 158 STUD	2	7A250-050	1/4-20 x .5 SHCS	8	
7C010-049	M10 x 1.25 x 50 BOLT	1	7U035-001	3.5" FLEX HOSE	5"	
7C060-080	M6 x 1.00 x 80 BOLT	3	7U030-036	OIL DRAIN HOSE	36"	
7C012-050	M12 x 1.75 x 50 BOLT	1	4HS110-060	AIR FILTER MOUNTING FLANGE ASSY	1	
7A375-124	3/8-16 x 1.25	7	4HS012-011	3.5" PLASTIC INLET ELBOW	1	
7A375-350	3/8-16 x 3.50	1	7P375-017	3/8" NPT x 1/2" BEADED HOSE BARB	1	
7K375-040	3/8 AN WASHER	12	7E010-049	#10 SHEETMETAL SCREW	2	
7J006-093	M6 WASHER	5	7C060-020	M6 x 1.0 x 20 HXHD	1	
7F006-093	M6 NUTS	2	4HS010-110	AIR BOX MOUNTING TAB, UPPER	1	
7J012-092	M12 WASHER	2	4HS010-120	AIR BOX MOUNTING TAB, LOWER	1	
7F500-030	1/2-20 JAM LOCK NUT	1	8N401-010	POWERCOOLER/DISCH. ASSY	1	
2A017-016	3/8 ID BEARING PILOT (6203 BRG)	1	7A250-050	1/4-20 x .5 SHCS	2	
4GF016-160	RIBBED 3" IDLER	1	8H040-175	RACE BYPASS FILTER	1	
4FH016-150	SMOOTH 3" IDLER	1	8N055-050	SURGE TANK CAP	1	
4HS040-050	V-TECH SOLENOID GASKET	1	7S275-200	2.75 SLEEVE x 2 SLEEVE	1	
7C080-046	M8 x 1.25 x 45 SHCS	2	7S275-300	2.75 SLEEVE x 3 SLEEVE	1	
7A312-100	5/16-18 x 1.0 HXHD	2	7R002-044	#44 CLAMP	4	
7K312-001	5/16 AN WASHER	2	7P500-026	3/4 HOSE BARB x 1/2 NPT x 90 FTGS	2	
4HS116-011	S/C DRIVE ASSEMBLY		7U030-046	5/32" VACUUM HOSE	24"	
4HS016-011	CRANK PULLEY	1	7P156-082	5/32 TEE	1	
7C010-050	10-24 x .50 SHCS GR8	6	7U030-030	1/4" VACUUM HOSE	36"	
4HS016-021	MODIFIED DAMPER PULLEY	1	7P250-033	5/32 - 1/4 REDUCER	1	
2A046-510	S/C DRIVE BELT	1	008341	POWERCOOLER DECAL	1	
4HS238-068	FMU assembly		8N301-140	WELDED COOLER CORE ASSY	1	
6Z110-144	FMU ASSY	1	8N106-110	WATER COOLER ASSY	1	
7U030-016	1/4 FUEL HOSE-FMU "IN"	34"	4HS010-080	WATER RESERVOIR MNTG BRKT	1	
7U030-016	1/4 FUEL HOSE-FMU "OUT"	28"	4HS010-090	WATER COOLER MNTG BRKT, UPPER	1	
7R001-004	#4 HOSE CLAMP	2	4HS010-100	WATER COOLER MNTG BRKT, LOWER	2	
7U030-046	5/32" VACUUM HOSE	28"	5W001-002	FUSE TAP	1	
7P156-082	5/32 TEE	1	5W001-009	SLIDE CONNECTOR - 18GA MALE	1	
7R004-003	14.5 STEPLESS CLAMP	2	5W001-011	16-14 GA EYELET	2	
4HS130-036	OIL DRAIN ASSEMBLY		5W001-014	FUSE HOLDER 10 GA	1	
7U030-036	OIL DRAIN HOSE	18"	5W001-015	FUSE, BLADE TYPE 20A	1	
7R001-008	#8 CLAMP	2	5W001-017	12GA RING TERMINAL	1	
			5W001-019	12GA SOLDERLESS CONNECTOR	1	



ENGINEERING, LLC

2000-2003 HONDA S2000

Part No. 4HS218-010SQ/-018SQ

PARTS LIST, *cont'd*

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

PART #	DESCRIPTION	QTY
7A250-050	1/4-20 x .50" SHCS	2
7A250-075	1/4-20 x 3/4 SHCS PLTD	3
7E010-049	#10 x 3/4 HXHD SLF TAPNG ST MTL	9
7F250-021	1/4-20 NYLOCK NUT ZINC PLTD	3
7J250-001	1/4 SAE WASHER, PLTD	10
7P375-075	3/4" HOSE UNION	1
7P500-026	1/2NPT-3/4 BARB 90°	3
7P500-078	1/2NPT x 3/4 HOSE FIT STRT	1
7R003-015	ADEL CLAMP, 15/16".406 EYELET	1
7R007-001	NYLON CLAMP 1-1/8"	10
7U038-000	3/4" HEATER HOSE	12
7U038-012	HOSE, Ø3/4" 90°, 4 x 12"	2
8F001-402	PUMP, WATER	2
8F101-310	RELAY ASSY, HONDA	1
8N006-010	WATER COOLER	1
8N055-030	TANK, LT1 AFTERCOOLER	1
5A201-001	ELECTRONICS UPGRADE ASSY	
4HS010-070	BRKT, FTC MNTG S2K	2
5A001-051	TIMING CONTROL BOX	1
5A101-020	MAP CLAMP	1
5W001-009	16-14GA MALE SLIDE INSULATED	11
5W001-010	16-14GA FEMALE SLIDE INSULATED	8
5W001-022	T-TAP CONN, 14-16 AWG	3
7C008-050	8-32 x 1/2 SHCS	2
7E010-049	#10 SHEET METAL SCREW	2
7F008-032	8-32 NYLOCK NUT	2
7P156-082	5/32" TEE, BRASS	1
7P157-219	REDUCER UNION, 5/32" TO 7/32"	1
7U030-046	5/32" VACCUM LINE	4'
7U100-055	TIE WRAP, 6" NYLON	8
7U375-001	VELCRO-HOOK 1" BLACK	.166 YD
7U375-002	VELCRO-LATCH 1"BLACK	.166 YD
8F001-342	Fuel pump assy.	1
8D204-011	Race blowoff valve	1
4HS020-010	Instruction manual	1
008110	Decals	2
008444	S/C owners packet	1
008130	Lic. plate frame, Vortech	1



ENGINEERING, LLC

2004 HONDA S2000

Part No. 4HS218-020/028SQ

PARTS LIST

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

PART #	DESCRIPTION	QTY	PART #	DESCRIPTION	QTY
2E229-210	V2SQ S/C SC-TRM CCW HONDA S2000	1	7U100-030	O-RING, FMU	1
2A036-450	S/C PULLEY 4.50" 6-GRV	1	7U030-016	1/4" EFI HP FUEL LINE	2
4HS111-021	MOUNTING BRACKET ASSY S2000	1	7U030-016	1/4" EFI HP FUEL LINE	2
2A017-016	PILOT, 6203/5 BRG, 3/8 SCREW	1	7R001-004	#4 HOSE CLAMP	2
4FH016-150	IDLR PULLEY, 6-RIB 3" FLANGED	1	7U030-046	5/32" VACUUM LINE	2
4GF016-160	PULLEY, 3" IDLER-RIBBED	1	7P156-082	5/32" TEE	1
4HS010-011	MTG BLOCK, SUPPORT PLT S2000	1	7R004-003	STEPLESS CLAMP, 14.5-70	2
4HS010-021	SUPPORT, LWR MTG PLT S2000	1	4HS130-026	OIL FEED ASSY S2000	1
4HS010-034	S/C SUPPORT PLT, REAR S2000	1	7U250-000-360	OIL FEED HOSE, 36" -4 STRT	1
4HS010-044	S/C MOUNTING PLT, S2000	1	7P125-004	1/8 NPT 90° x -4 JIC FTG STL	1
4HS010-051	SUPPORT, NTG PLT, LATERAL S2000	1	7P125-101	1/8 NPT 45° x -4 JIC FTG STL	1
4HS017-011	RIBBED IDLER SPACER, S2000	1	7P125-125	FTG, 1/8 NPT FEM x 1/8 SPT MALE	1
4HS017-021	SPACER, S/C BOSS S2000	1	7P125-034	1/8 NPT x 1/8 NPT STRT T	1
4HS017-031	SPACER, UPPER S/C PLT S2000	4	7U100-055	TIE-WRAP, 7.5" NYLON	6
4HS017-041	SPACER, LOWER S/C PLT S2000	1	4HS130-036	OIL DRAIN ASSY S2000	1
4HS017-051	SPACER, TENSNR PULLEY S2000	1	7P375-004	3/8 NPT x 1/2 SAE MALE FLARE	1
4HS040-050	GASKET, VTEC SOLENOID S2000	1	7P375-041	3/8 NPT HEX NIPPLE x 1.5"	1
4PFA010-031	BRACKT, IDLER ADJUST SCREW	1	7P500-050	FTG, -8 JIC TUBE x 90° w/BARB	1
7A250-075	1/4-20 x 3/4 SHCS PLTD	2	7R001-008	#8 STNLS HOSE CLAMP	2
7A312-100	5/16-18 x 1 HXCS GR5P	2	7T560-001	CUTTER, 9/16" ROTABROACH	1
7A375-124	3/8-16 x 1-1/4 HXHD G5 PLATED	7	7T560-002	ARBOR, ROTABROACH	1
7A375-350	3/8-16 x 3-1/2 HXHD	1	7U030-036	1/2" OIL DRAIN HOSE	1
7B375-350	3/8-24 x 3-1/2" HXHD GR8	4	8F001-342	FUEL PUMP w/SCREEN, GSS 342	1
7B500-325	ARBOR, S/C TENS PLY, S2000	1	5A101-021	ENGINE MNGMNT ASSY 04' S2000	1
7C010-049	M10 x 1.25 x 50 HCHD CL10.9	1	4HS010-070	BRKT, FMC MNTG S2000	2
7C010-115	M10 x 1.25 x 115 HXHD CL10.9 P	1	5A001-121	TIMING BOX, 04' HONDA S2000, PROG	1
7C012-050	M12 x 1.75 x 50mm HXHD BOLT	1	5W001-009	16-14GA MALE SLIDE INSULATED	11
7C060-080	M6 x 1.00 x 80 SHCS CL 8.8	3	5W001-010	16-14GA FEMALE SLIDE INSULATED	8
7C060-622	M6 x 1.0 x 6.22" S2000 STUD	2	5W001-022	T-TAP CONN. 14-16 AWG	3
7C080-046	M8 x 1.25 x 45 SHCS CL8.8	2	7C008-050	#8-32 x 1/2" SHCS, ZINC	2
7F006-093	6mm NYLOCK NUT	2	7E010-049	#10 x 3/4 HXHD SLF DRL SHT MTL	2
7F375-028	PRESS NUT, 3/8-24 x .50	4	7F008-032	8-32 HEX LOCK NUT	2
7F500-030	1/2-20 HEX JAM LOCK NUT ZINC	1	7P156-082	5/32 TEE	1
7J006-093	6mm WASHER, PLATED	5	7P157-219	REDUCER UNION, 5/32" TO 7/32"	1
7J010-002	10mm WASHER, ZINC PLATED	2	7U030-046	5/32" VACUUM LINE	4'
7J012-092	12mm WASHER, FLAT	2	7U100-055	TIE-WRAP, 7.5" NYLON	8
7K312-001	5/16 AN WASHER, PLATED	2	7U375-001	VELCRO-HOOK 1" BLACK	.16YD
7K372-040	3/8 AN960 FLAT WASHER, PLATED	12	7U375-002	VELCRO-LATCH 1" BLACK	.16YD
7PA375-500	SCREW, IDLER ADJUST, 5.00"	1	4HS112-010	AIR INLET ASSY S2000	1
4HS116-021	S/C DRIVE ASSY 04' S2000	1	4HS010-110	MNTG BRKT, UPR, S2000 AIRBOX	1
2A046-500	BELT, K060500-GATES	1	4HS010-120	MNTG BRKT, LWR, S2000 AIRBOX	1
4HS016-011	S/C CRANK PULLEY, 6" S2000	1	4HS012-011	INLET ELBOW, 3.5" MOD. S2000	1
4HS016-021	MODIFIED DAMPER PLY S2000	1	4HS013-010	AIRBOX, S2000	1
7C010-050	10-24 x .50 SHCS GR8 PLT	6	4HS110-060	FLANGE ASSY, AIRBOX S2000	1
4HS238-048	FMU ASSY, w/LINES 4:1, S2000	1	7A250-050	1/4-20 x .50 SHCS ZINC PLTD	8
6Z110-150	FMU, 4:1 1/4 BARB w/SPRING	1	7C060-020	M6 x 1.0 x 20mm HHCS	1
6Z050-151	FMU WASHER, 4:1/38LB. PLATED	1	7E010-049	#10 x HXHD SLF DRL SHT MTL	2
6Z070-020	FMU 4:1 RING SPACER	1	7P375-017	3/8 NPT x 1/2 BEADED HSE BRB	1
6Z090-010	SPRING, FMU GM 4.3	1	7R002-052	#52 SAE TYPE F SS HOSE CLAMP	2
7C010-050	10-24 x .50 SHCS GR8 PLT	6	7R002-056	#56 SAE TYPE F SS HOSE CLAMP	2
7C010-075	10-24 x 3/4 SHCS GR5 ZINC	4	7S350-200	3-1/2 x 2 SLEEVE, BLUE	1
7C024-025	10-24 x 1/4 PHILL HD	3	7U030-016	1/4" EFI HP FUEL LINE	1
7E010-046	#8 x 3/4 SHEET METAL	2	7U030-036	1/2" OIL DRAIN HOSE	3
7P125-025	1/8 NPT x 5/32 HOSE 90	1	7U035-001	3-1/2" FLEX HOSE	.41'
7P125-036	1/8 NPT-STRT 1/4 BARB	1	8H040-022	3/4" BREATHER	1
7P125-037	1/8 NPT-90° TO 1/4 BARB	1	8H040-040	AIR FILTER, 3.5" FLG x 5.52"	1



ENGINEERING, LLC

2004 HONDA S2000

Part No. 4HS218-020SQ

PARTS LIST, cont'd

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

PART #	DESCRIPTION	QTY	PART #	DESCRIPTION	QTY
8N401-040	PWR COOLR ASSY, 04' HONDA S2000	1	8D004-141	SLEEVE, COMPACT BYPASS MACHINED	1
008341	VORTECH CHARGE COOLER DECAL	1	8D104-042R	MINI BYPASS GUIDE ASSY	1
7A250-050	1/4-20 x .50 SHCS ZINC PLTD	2	4HS020-010	INSTRUCT MANUAL, HONDA S2000	1
7P156-082	5/32 TEE	1			
7P250-033	1/4 x 5/32 RED.UNION	1			
7P500-026	1/2 NPT x 3/4 BARB 90° BRASS	2			
7R002-044	#44 SAE TYPE F SS HOSE CLAMP	4			
7S275-200	SLEEVE, BLUE, 2.75" D x 2.00" L	1			
7S275-300	2-3/4" x 3", BLUE	1			
7U030-030	1/4" VACUUM HOSE	3			
7U030-046	5/32" VACUUM LINE	2			
8H040-175	FILTER, 1-3/4" I.D., RACE BYP	1			
8N055-050	PLASTIC CAP, SURGE TANK	1			
8N301-240	PWR COOLR CORE ASSY, 04' S2000	1			
8N106-110	WATER PUMP/COOLR ASY S2000	1			
4HS010-080	MNTG BRKT, H2O TANK, S2000	1			
4HS010-090	H2O COOLR MNTG BRKT, UPR S2000	1			
4HS010-100	H2O COOLR MNTG BRKT, LWR S2000	1			
5W001-002	FUSE TAP	1			
5W001-009	16-14GA MALE SLIDE INSULATED	1			
5W001-011	16-14GA RING TERM. .26" HOLE	2			
5W001-014	FUSE HOLDER 10GA WIRE	1			
5W001-015	FUSE, BLADE TYPE 20 AMP	1			
5W001-017	12-10GA x 3/8" RING TERMINAL	1			
5W001-019	10-12GA BUTT CONN INSULATED	1			
7A250-050	1/4-20 x .50 SHCS ZINC PLTD	2			
7A250-075	1/4-20 x 3/4 SHCS PLTD	3			
7E010-049	#10 x 3/4 HXHD SLF DRL SHT MTL	10			
7F250-021	1/4-20 NYLOCK NUT ZINC PLATED	3			
7J250-001	1/4 WASHER, SAE, PLTD	10			
7P375-075	3/4" HOSE BARB UNION, BRASS	1			
7P500-026	1/2 NPT x 1/4 BARB 90° BRASS	3			
7P500-078	1/2 NPT x 3/4 HOSE FIT STRT	1			
7R003-027	ADEL CLAMP, 1-11/16"	1			
7R007-001	NYLON RATCHET CLAMP 1-1/8"	10			
7U038-000	3/4" HEATER HOSE	12			
7U038-012	HOSE, Ø3/4" 90° 4 x 12 LEGS	2			
8F001-402	PUMP, WATER, PIERBURG	1			
8F101-310	FUEL PUMP RELAY ASSY, HONDA	1			
8N006-010	WATER COOLR, SETRAB SINGLE PAS	1			
8N055-030	TANK, WATER, TRIANGLE SHAPE	1			
8D204-011	RACE BLOWOFF VALVE-SATIN	1			
7A250-074	1/4-20 x .75 HHCS PLTD	2			
7A312-126	5/16-18 x 1.25 SET SCRW OVAL P	1			
7F312-022	5/16-18 JAM NUT, STAINLESS	1			
7J006-093	6mm WASHER, PLATED	2			
7P125-109	FTG, 1/8 NPT - 1/4 BARB, AL	1			
7U100-086	SNAP RING, COMPACT BYPASS	1			
8D003-080	RATAINER, SPRING	1			
8D004-023	COVER, RACE BYPASS-BLUE	1			
8D004-053	GASKET, MTG FLNG, M.F. RACE BYPASS	1			
8D004-083	SPRING, MFRB, 12" HG	1			
8D104-042	MFRB BODY ASSY SATIN	1			
7C011-200	10-32 SHCS x 2" ZINC PLATE	1			
7F010-030	10-32 THIN NYLOCK NUT SST	1			
7P125-020	BREATHER, SFMU	1			
7U100-049	O-RING, COMP.BYPASS	1			
8D004-031	VALVE, COMPACT BYPASS ANODIZED	1			
8D004-061	PISTON, COMPACT BYPASS MACHINED	1			
8D004-091	DIAPHRAM, COMPACT BYPASS	1			

1. PREPARATION/REMOVAL

- A. Disconnect the negative battery cable.
- B. Remove the factory engine air filter enclosure cover.
- C. Disconnect the crankcase ventilation tube and the air pump inlet hose attached to the rubber inlet duct leading to the throttle body.
- D. Remove the vacuum/coolant tubing junction from the vehicle. Tag and label the vacuum hoses for ease of reassembly in later steps. (See *Figs 1-a, 1-b, 1-c.*)

NOTE: Make sure that the rubber hoses that are shown in Fig. 1-c are also removed from the vehicle along with the tubing junction.

- E. Detach the pressure solenoid from the plastic air filter enclosure (single phillips head screw). (See *Fig. 1-b.*)
- F. Separate the rubber vacuum hoses and wiring from the air filter enclosure.
- G. Remove the rubber inlet duct from the throttle body and the air filter.
- H. Remove the air filter and enclosure from the vehicle.
- I. Remove the screw securing the plastic vacuum canister to the backside of the front crossmember (located in front of the engine). Set aside for reinstallation at a later time.
- J. Remove the accessory belt and crank damper pulley from the engine. Removal of the crank damper pulley bolt may require Honda sourced tools (07JAB-001020A handle and 07JAA-001020A damper socket). Set aside the damper screw for reinstallation at a later time.
- K. Remove the factory idler (smooth) pulley and hardware and set aside temporarily. (See *Fig. 1-d.*)
- L. Remove the two factory M8 x 1.25 screws that attach the front corner of the cylinder head to the engine front cover (see *Fig. 1-e.*)
- M. Disconnect the wiring from the VTEC solenoid assembly. Remove the three screws attaching the solenoid assembly to the side of the cylinder head. (See *Figs. 1-f, 1-g.*) Set the VTEC solenoid assembly aside for mounting in a later step. Make sure that the o-ring sealing gasket does not get lost or damaged, because it will be re-used in a later step.

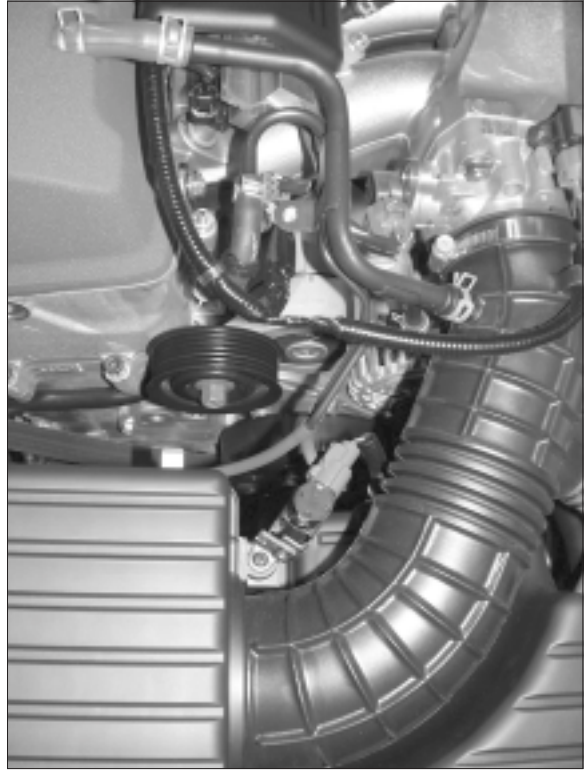


Fig. 1-a

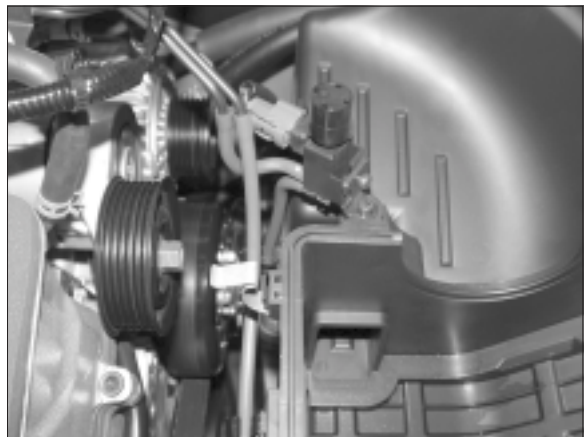


Fig. 1-b



Fig. 1-c

1. PREPARATION/REMOVAL, cont'd.

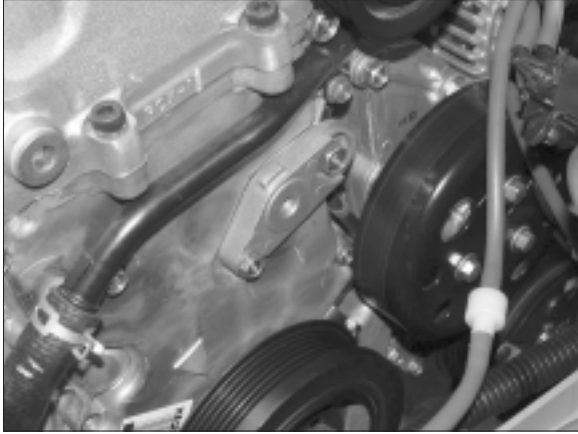


Fig. 1-d

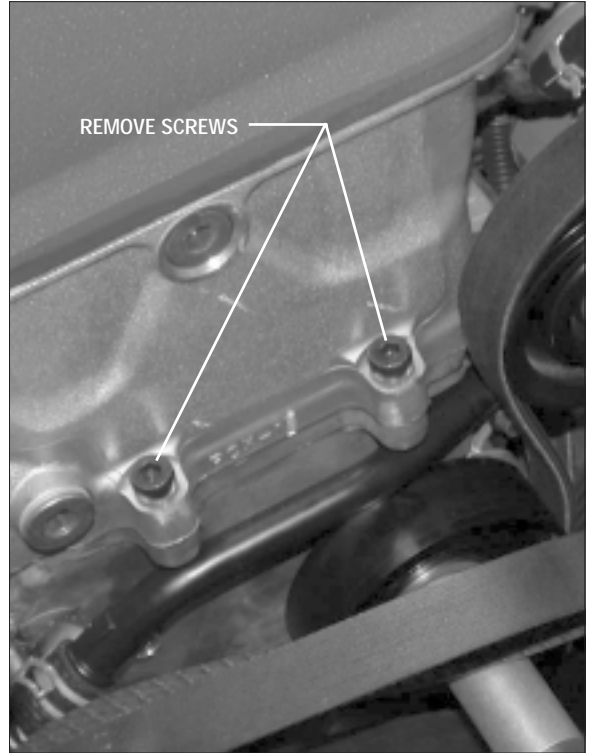


Fig. 1-e

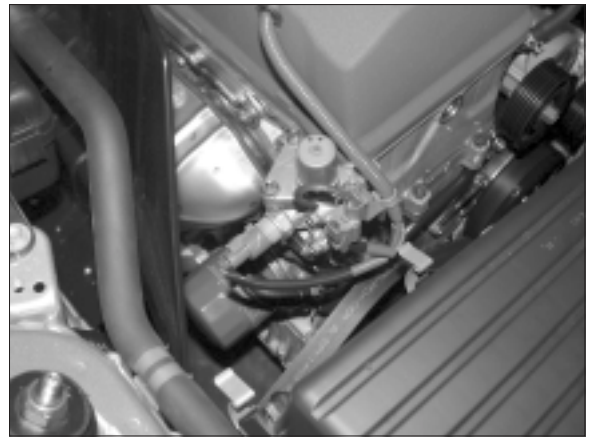


Fig. 1-f

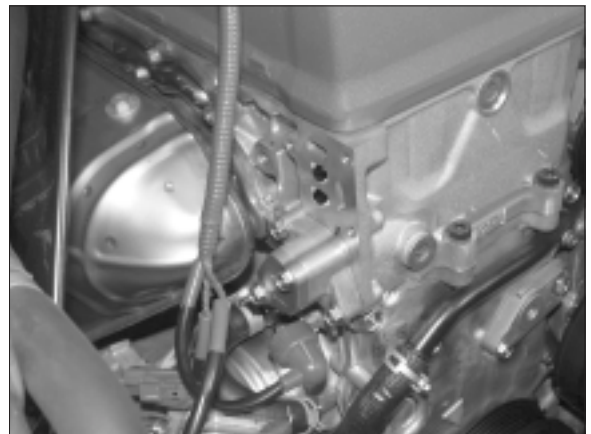
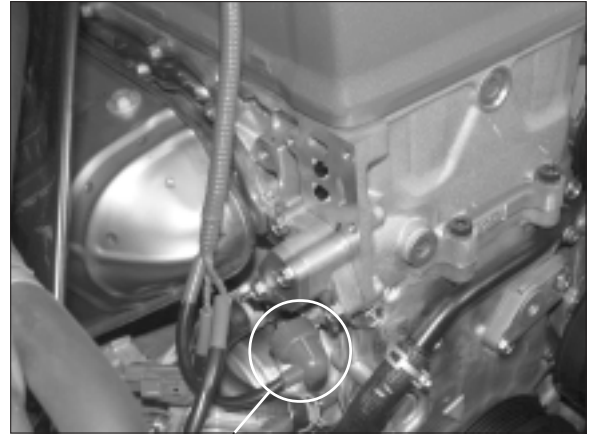


Fig. 1-g

2. OIL FEED

- A. The supercharger uses engine oil for lubrication and must have an oil feed line connected to a filtered oil access on the engine.
- B. Locate the oil pressure sending unit on the passenger side of the engine, toward the front (see *Fig. 2-a*). Using a 7mm socket, remove the signal wire from the sending unit. Using a 15/16 socket, remove the sending unit from the engine.
- C. Install the supplied 1/8" BSP adapter into the block. Install the supplied 1/8" NPT street TEE into the BSP adapter. Thread the stock sending unit into the tee as shown in *Fig. 2-b*. Reattach the stock signal wire and nut to the sending unit.

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.



OIL PRESSURE SENDING UNIT

Fig. 2-a

- D. Install the supplied 90° x 1/8" NPT x #4 flare fitting into the previously installed TEE. (See *Fig. 2-c*.) Make sure that the fitting is tightened and clocked as shown.
- E. Temporarily cover the open fitting hole to keep out debris until the connection is made to the supercharger hose in step 12.



Fig. 2-b



Fig. 2-c

3. OIL DRAIN

- A. Drain the engine oil and change the filter.
- B. To provide an oil drain for the supercharger, it is necessary to make a hole in the pan.
- C. Remove (6 screws) the tubular chassis crossmember located beneath the rear of the engine.
- D. Remove the oil pan bumper that is attached to the vehicle frame in front of the oil pan.
- E. Remove the two screws that attach the oil pan to the transmission bellhousing.
- F. Remove the two lower A/C compressor pump mounting bolts that attach to the oil pan mounting bracket. Leave the small aluminum mounting bracket attached to the pan.
- G. Remove the remaining oil pan screws around the perimeter of the pan and carefully remove the pan.
- H. Locate and mark the drain hole location on the oil pan as per *Figs. 3-a, 3-b*. The hole location is between the two fins as shown, and down from the sealing surface of the pan 1.25". Grind down the fins on the oil pan as shown.
- I. Using the supplied 9/16" rota-broach cutter and arbor, carefully machine a through hole into the pan in the location specified.
- J. From the outside of the pan, tap the hole with a 3/8" NPT tap approximately 1/4" deep. Pack the flutes of the tap with heavy grease to hold the chips. Thoroughly clean the threads and hole with acetone or lacquer thinner.
- K. Using a small amount of silicone sealer, install the 3/8" NPT x 1.5" hex nipple into the oil pan. Thread the supplied 3/8" NPT female x -8 flare fitting onto the hex nipple. Temporarily cap the fitting until the drain hose is connected in step 12.
- L. Thoroughly clean the mating surface of the oil pan flange and the bottom of the engine block. The surfaces must be free from oil so that a proper seal can be achieved when the pan is reinstalled.
- M. Apply a small amount of Hondabond sealer (available at the local Honda dealership) to the oil pan mating flange.
- N. Reattach the pan to the engine. Reinstall all of the factory hardware.
- O. Reinstall the two A/C compressor screws, factory oil pan bumper and chassis crossmember.
- P. Re-fill engine with factory specified weight oil. Vortech recommends the use of synthetic oil.

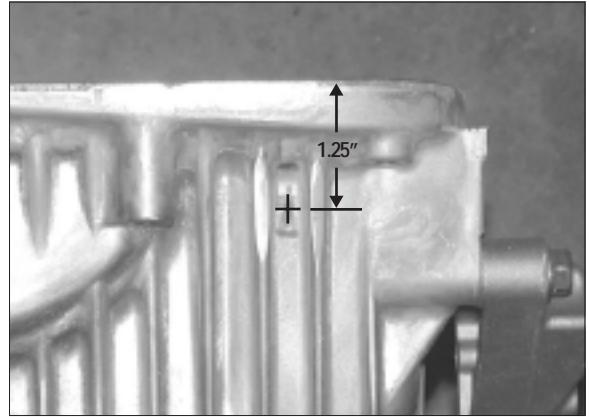


Fig. 3-a

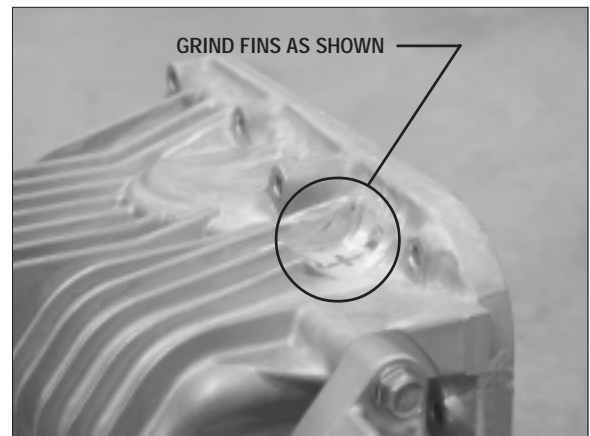


Fig. 3-b

4. CRANK DAMPER PULLEY INSTALLATION

- A. Locate the supplied damper pulley and billet aluminum supercharger crank pulley.
- B. The aluminum supercharger crank pulley is to be installed over the new damper pulley as shown in *Fig. 4-a*. Be sure to rotate the aluminum pulley so that the holes properly line up with the corresponding threaded holes in the damper. Ensure that the damper is smooth and clean where the aluminum pulley is to be seated.
- C. Carefully lower the aluminum pulley down onto the damper. Make sure that the aluminum pulley is completely seated onto the damper. Do not hammer or pry the pulley into place. If necessary, the aluminum pulley may be lightly heated to allow for an easier fit onto the damper pulley.
- D. Secure the pulley and damper together using the six supplied 10-24 x .50 socket head screws. Use a drop of blue Loctite on the threads on each of the screws. Torque the screws to 50 in/lbs (4-5 ft/lbs.)
- E. Clean the damper pulley screw and washer that were removed in step 1. Using a small amount of engine oil, lubricate the screw threads and the bottom side of the screw head (area that mates to the washer). Install the new crank pulley assembly onto the engine. Torque the screw to 181 lb/ft. Do not use an impact wrench. In order to achieve the correct torque on the screw, Honda sourced tools may be required (07JAB-001020A handle and 07JAA-001020A damper socket) to keep the assembly from rotating.

4. CRANK DAMPER PULLEY INSTALLATION, cont'd.

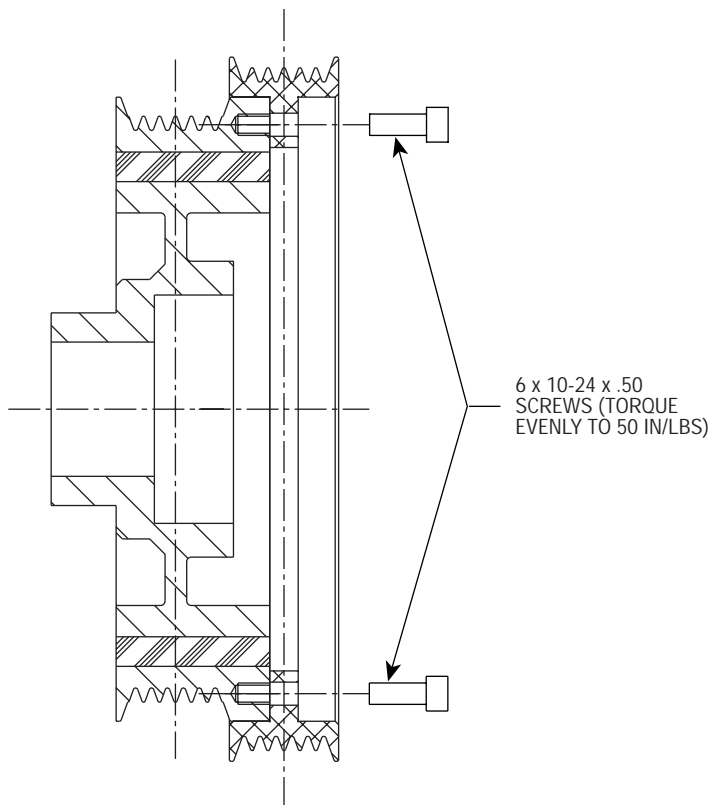
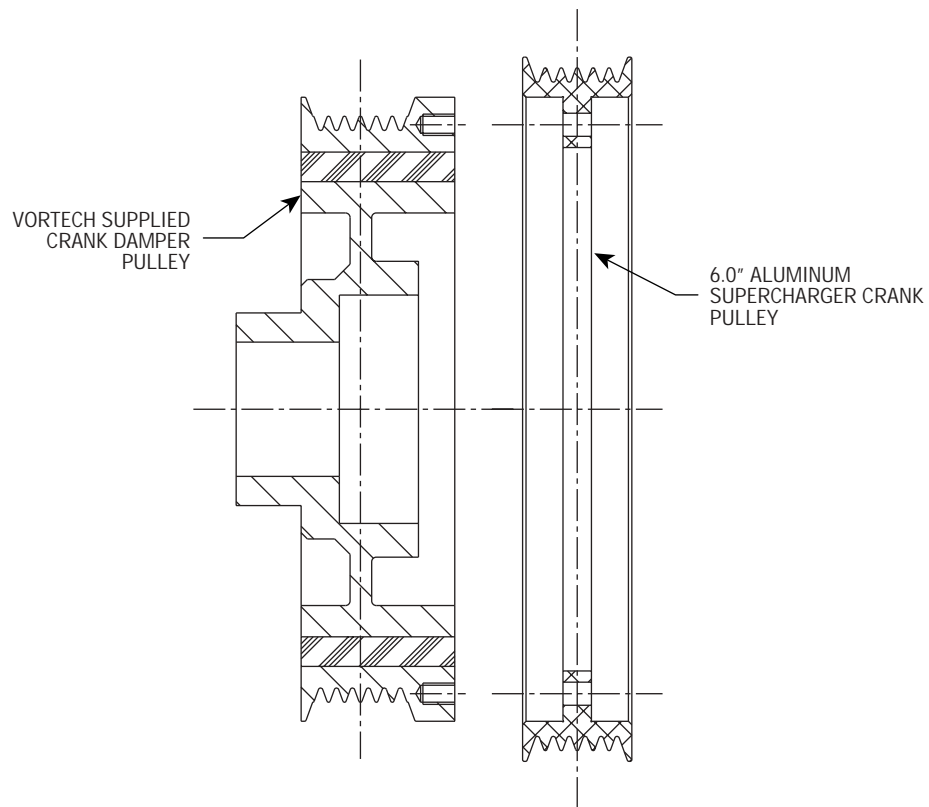


Fig. 4-a

5. FUEL MANAGEMENT UNIT

- A. Disconnect and discard the factory rubber fuel return line running from the fuel pressure regulator outlet to the steel return line located under the vehicle.
- B. Remove the relay from the factory bracket/tab near underhood fuse box. (See *Figs 5-a, 5-b.*) Remove the bracket/tab from the vehicle and discard. Move the relay toward the underhood fuse box to make space for mounting of the Vortech FMU.
- C. Position the FMU onto the driver side inner fender as shown in *Figs. 5-c, 5-d.* Mark and drill holes and secure the FMU with the supplied sheet metal screws.
- D. Route the supplied 34" hose as shown in *Fig. 5-f.* Connect the FMU inlet hose (the hose that goes to the 90° fitting on the side of the FMU) to the return side of the factory fuel regulator. Trim hose length if needed. Secure the fuel line away from abrasion and exhaust with the tie wraps provided. Make sure the hose end is securely clamped onto the regulator outlet using one of the supplied #4 clamps.
- E. Route the supplied 28" hose as shown in the diagram. Connect the FMU outlet hose (attaches to the center fitting on the bottom of the unit) to the steel return line running to the tank (see *Fig. 5-e*). Trim hose length if needed. Secure the fuel lines away from abrasion and exhaust with the tie wraps provided. Make sure the hose end is securely clamped onto the return line using one of the supplied #4 clamps.
- F. Attach the supplied 28" length of 5/32" vacuum hose to the fitting on top of the FMU. Splice the opposite end of the hose into the factory fuel regulator vacuum connection using the 5/32" TEE provided. Trim hose length as necessary.

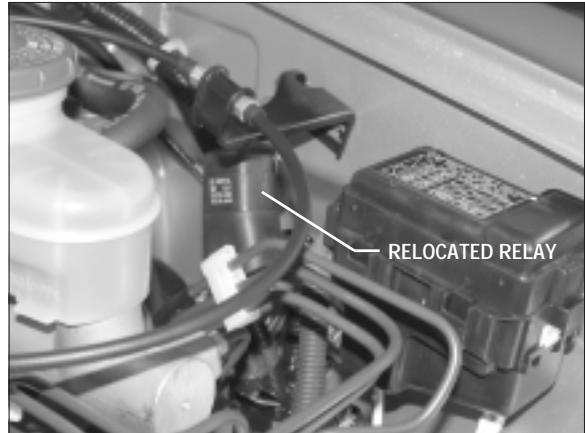


Fig. 5-a



Fig. 5-b

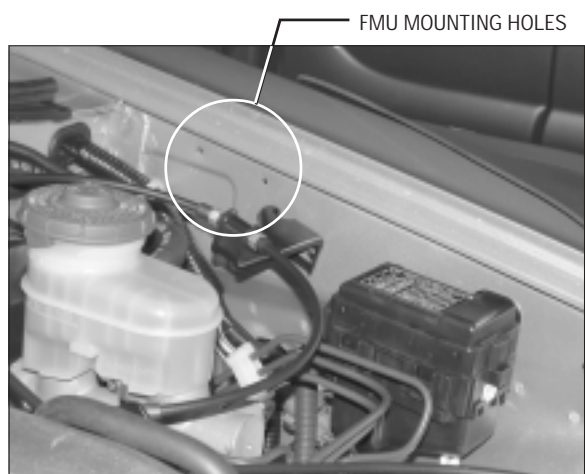


Fig. 5-c

5. FUEL MANAGEMENT UNIT, cont'd.



Fig. 5-d

FACTORY RETURN
LINE INTO TANK



Fig. 5-e

5. FUEL MANAGEMENT UNIT, cont'd.

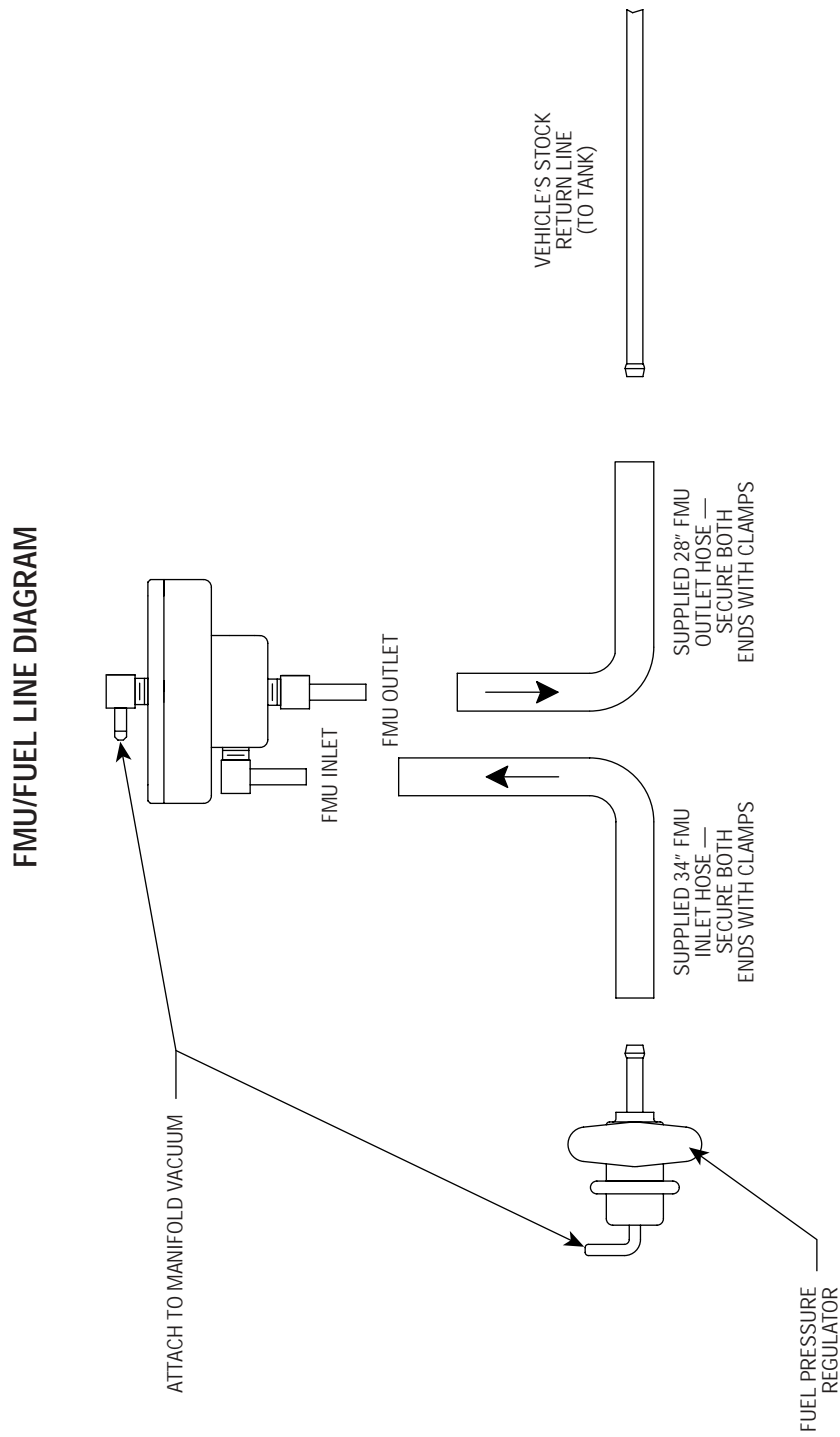


Fig. 5-f

6. FUEL PUMP REPLACEMENT

- A. Remove the spare tire from inside the vehicle's trunk.
- B. Remove the holding tray for the convertible top, located behind the seats. Remove all of the pushpins securing the holding tray. (Refer to page 20-71 of the factory service manual for the location of all the pushpins) Slide the tray out by way of the trunk. (See Fig. 6a.)

NOTE: Pressing in on the center of the black plastic removable rivets with a small screwdriver will cause them to release.

- C. Remove the three- (3) screws securing the cover of the fuel tank.
- D. Disconnect the fuel feed and return lines from the top of the tank along with the electrical connectors.
- E. Remove the eight- (8) screws securing the top of the fuel pump module to the gas tank. Carefully remove the fuel pump module using care not to damage the fuel level sender. (See Fig. 6-b.)
- F. Disconnect the electrical connector connecting to the fuel pump.
- G. Unsnap the white plastic retaining clip next to the fuel filter. (See Fig. 6-c.)
- H. Using a pair of pliers, slide the spring clamp on the short fuel hose down and remove the fuel pump from the module. (See Fig. 6-d.)
- I. Carefully remove the small retaining clip securing the fuel filter to the bottom of the fuel pump. Remove the fuel filter and attach it to the provided replacement fuel pump and secure it with the small retaining clip previously removed.
- J. Remove the short fuel line from the discharge of the fuel pump and install onto the new fuel pump.
- K. Reinstall the removed components in reverse order.

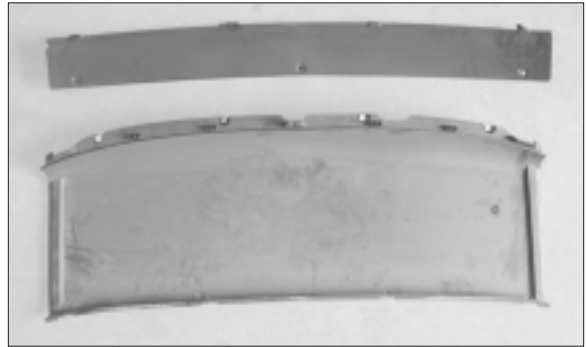


Fig. 6-a

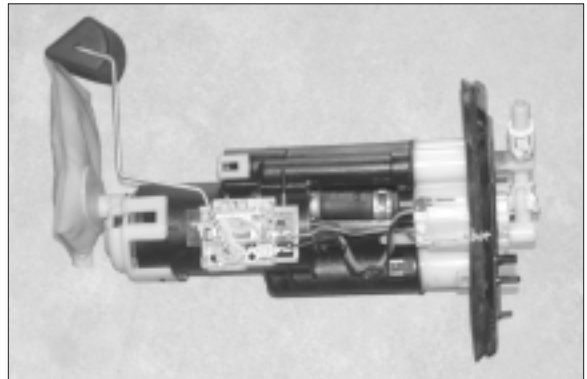


Fig. 6-b

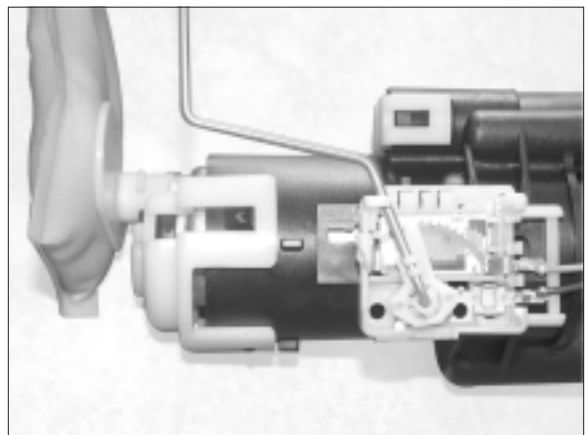


Fig. 6-c

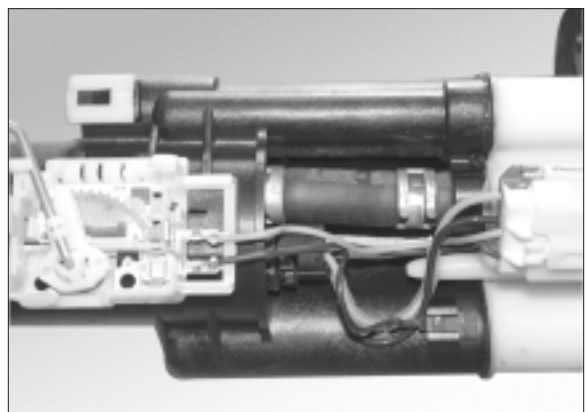


Fig. 6-d

7. FUEL RAIL/REGULATOR MODIFICATIONS (2004 Models Only)

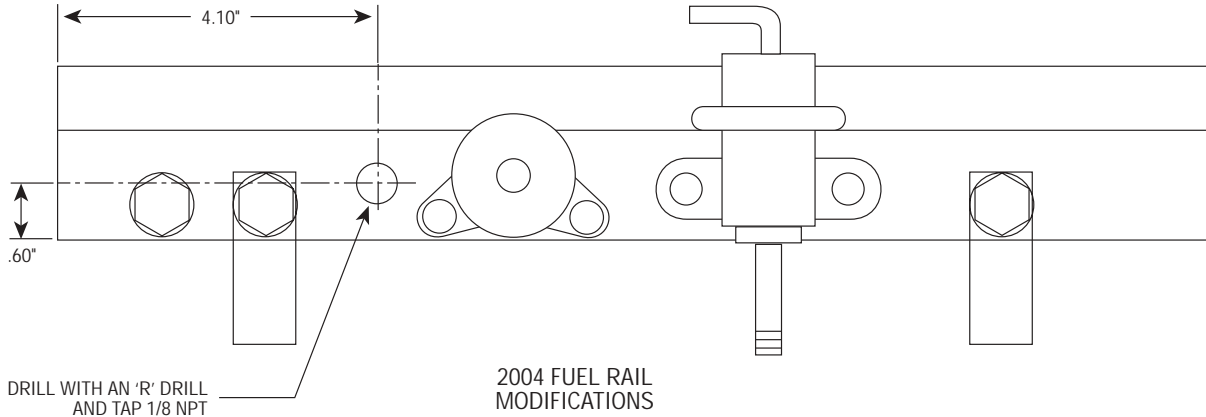


Fig. 7-a

- A. Disconnect the fuel feed line running to the middle of the factory fuel rail.
- B. Remove the hose connected to the return side of the fuel regulator.
- C. Loosen the factory screws securing the fuel rail and remove the fuel rail from the vehicle.
- D. Using Figs. 7-a, 7-b, mark the location to be drilled. Keeping the drill perpendicular to the fuel rail, drill a .339" (R drill bit) hole into the top of the fuel rail.
- E. With a 1/8 NPT tap, thread the newly drilled hole until the tap is 1/3 of the way inside the hole or the supplied 1/8 NPT x -4 fitting can be started. Thoroughly clean all debris from the fuel rail.
- F. Using a thread sealant, install the 1/8 NPT end of the supplied fitting into the fuel rail until the fitting is snug.
- G. Reinstall the fuel rail back into the vehicle. Reconnect the fuel feed line and secure all the factory hardware.

NOTE: At this time, leave the fuel return line disconnected from the fuel regulator.

- H. Remove the two screws securing the fuel pressure regulator to the fuel rail.
- I. Following Fig. 7-c, drill a .078" hole in the rear of the regulator. (This allows the regulator to bypass more fuel due to increased static fuel pressure.)

NOTE: This step is also recommended for 2001-2003 model years.

- J. Clean all debris and reinstall the fuel pressure regulator back onto the fuel rail, verifying alignment of the O-ring.
- K. Reconnect the fuel return line to the bottom barb on the fuel pressure regulator.

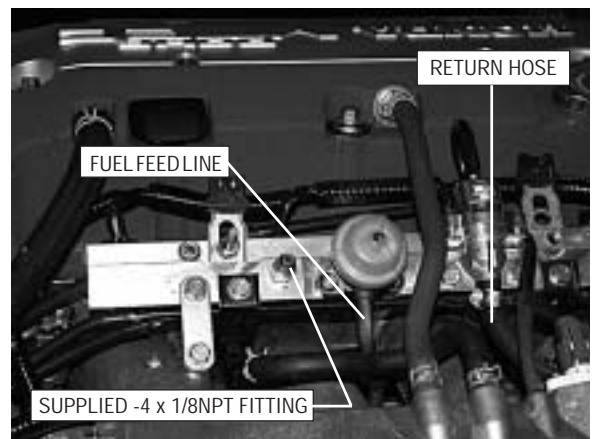


Fig. 7-b

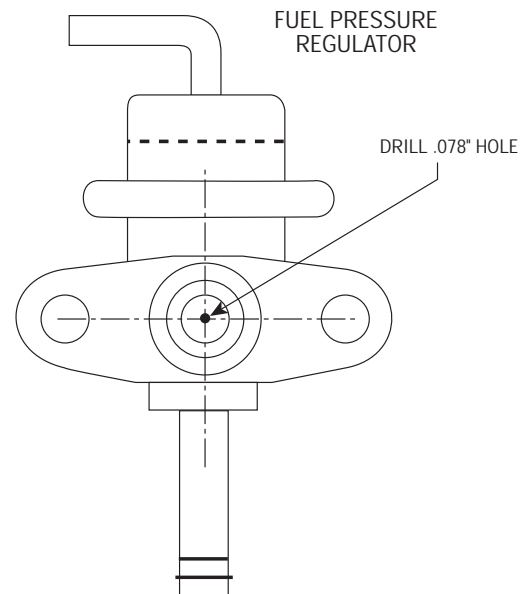


Fig. 7-c

8. SUPERCHARGER MOUNTING BRACKET/PLATE INSTALLATION

- A. Detach the factory wiring harness from the rear of the front crossmember for mounting bracket clearance. Push the harness down toward the steering rack.
- B. Remove the two factory M6 x 1.0 screws from the passenger side front of the engine near the crank pulley at the location shown in *Fig. 8-a*.
- C. Locate the lower supercharger plate spacer. This is a .75" thick aluminum spacer that is 2.9" wide x 4.05" tall with two 1/2" round protrusions machined into one end. Slide the two supplied 10 mm studs through the holes in the lower plate spacer. With the studs located loosely through the lower plate spacer, thread the two studs into the front cover as shown in *Figs. 8-b, 8-n, 8-o*. This step must be done as described because of the limited space available in the engine compartment. Use a drop of blue Loctite on the threads of the studs before threading them into the engine. Tighten the studs into the front of the engine by using a stud wrench, or by temporarily threading two nuts on the end of each stud and torquing. Remove the nuts from the ends of the studs.
- D. Attach the supplied 6 groove idler pulley to the main supercharger mounting plate as shown in *Figs. 8-c, 8-d, 8-e, 8-f*. Slide one of the supplied 3/8-24 x 3.5" screws through the machined bearing pilot, 6 groove idler pulley and steel idler spacer (1.772" effective length x Ø.406" through hole). Attach the complete assembly to the aluminum mounting plate by threading the 3/8-24 x 3.5" screw through the plate and into the threaded steel insert that is pressed into the plate.
- E. Attach the belt tensioner adjustment screw, tensioner arbor and adjustment screw locator block as shown in *Figs. 8-e, 8-f, 8-g, 8-h, 8-i*. Secure the assembly to the plate by threading the two 1/4-20 x .75" socket head screws through the plate and into the adjustment screw locator block as shown. Make sure the locator block is positioned as shown in *Fig. 8-h* or you will experience oil feed line clearance issues.
- F. Slide the supplied smooth idler pulley and steel idler spacer (1.772" effective length x Ø.515" through hole) over the tensioner arbor that was previously installed onto the mounting plate. Install the 12 mm washer and 1/2-20 jam lock nut over the idler and arbor. Do not tighten the nut at this time. (See *Fig. 8-f*.)
- G. Remove the blue plastic dust cap located on the 1/2" oil drain fitting on the bottom of the supercharger. Attach the supplied 1/2" x 18" fabric braided oil drain hose to the supercharger drain



Fig. 8-a

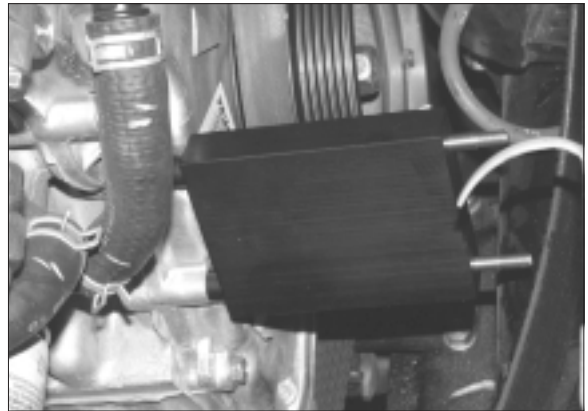


Fig. 8-b

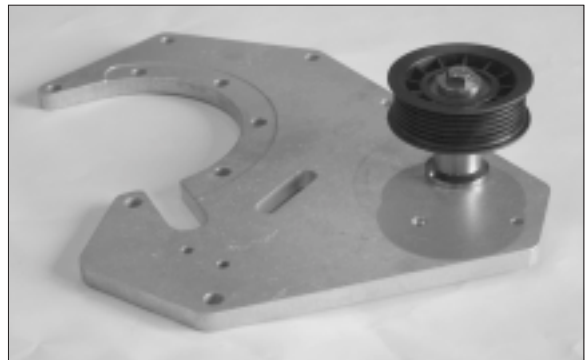


Fig. 8-c



Fig. 8-d

8. SUPERCHARGER MOUNTING BRACKET/PLATE INSTALLATION, cont'd.

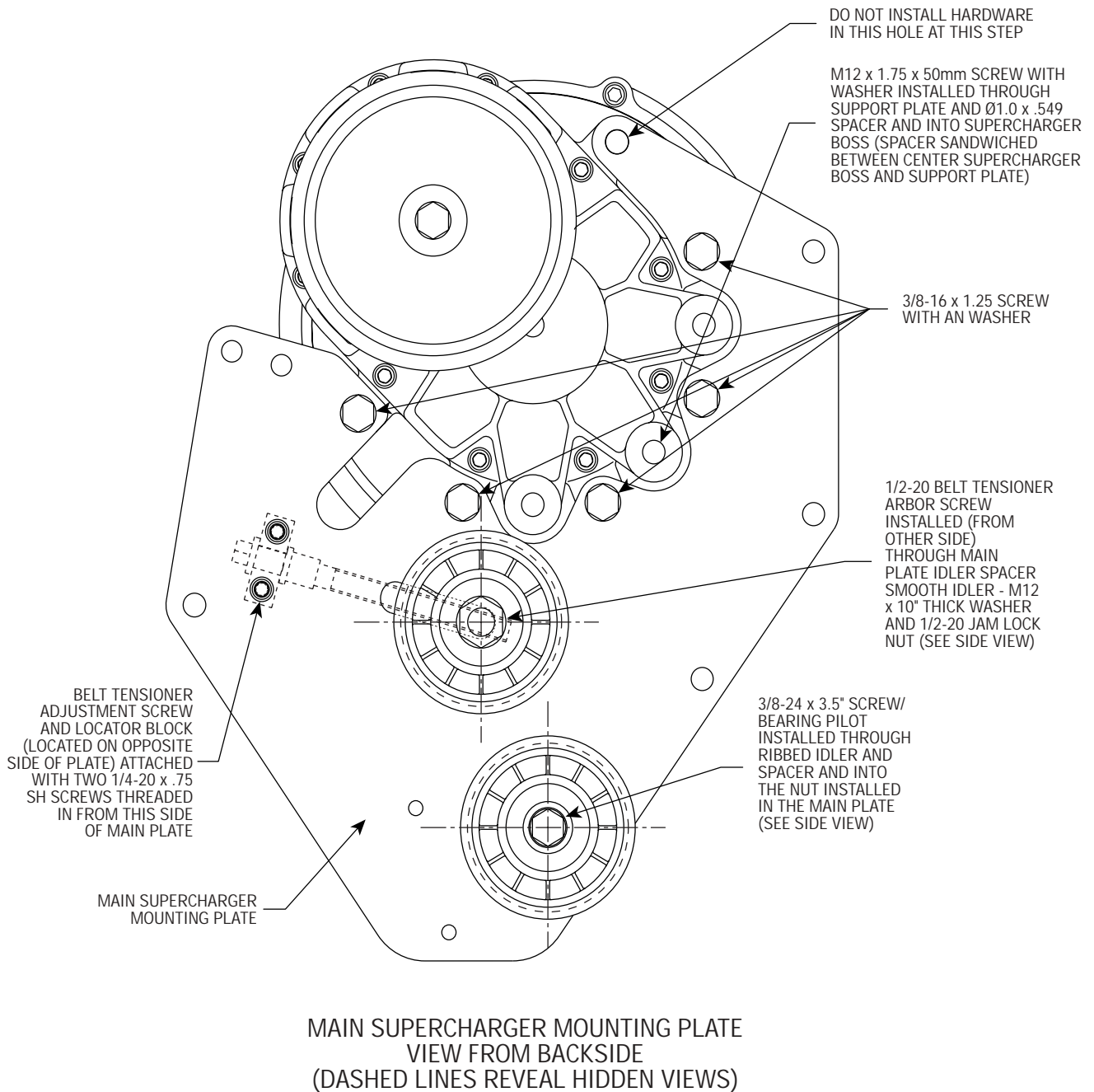


Fig. 8-e

8. SUPERCHARGER MOUNTING BRACKET/PLATE INSTALLATION, cont'd.

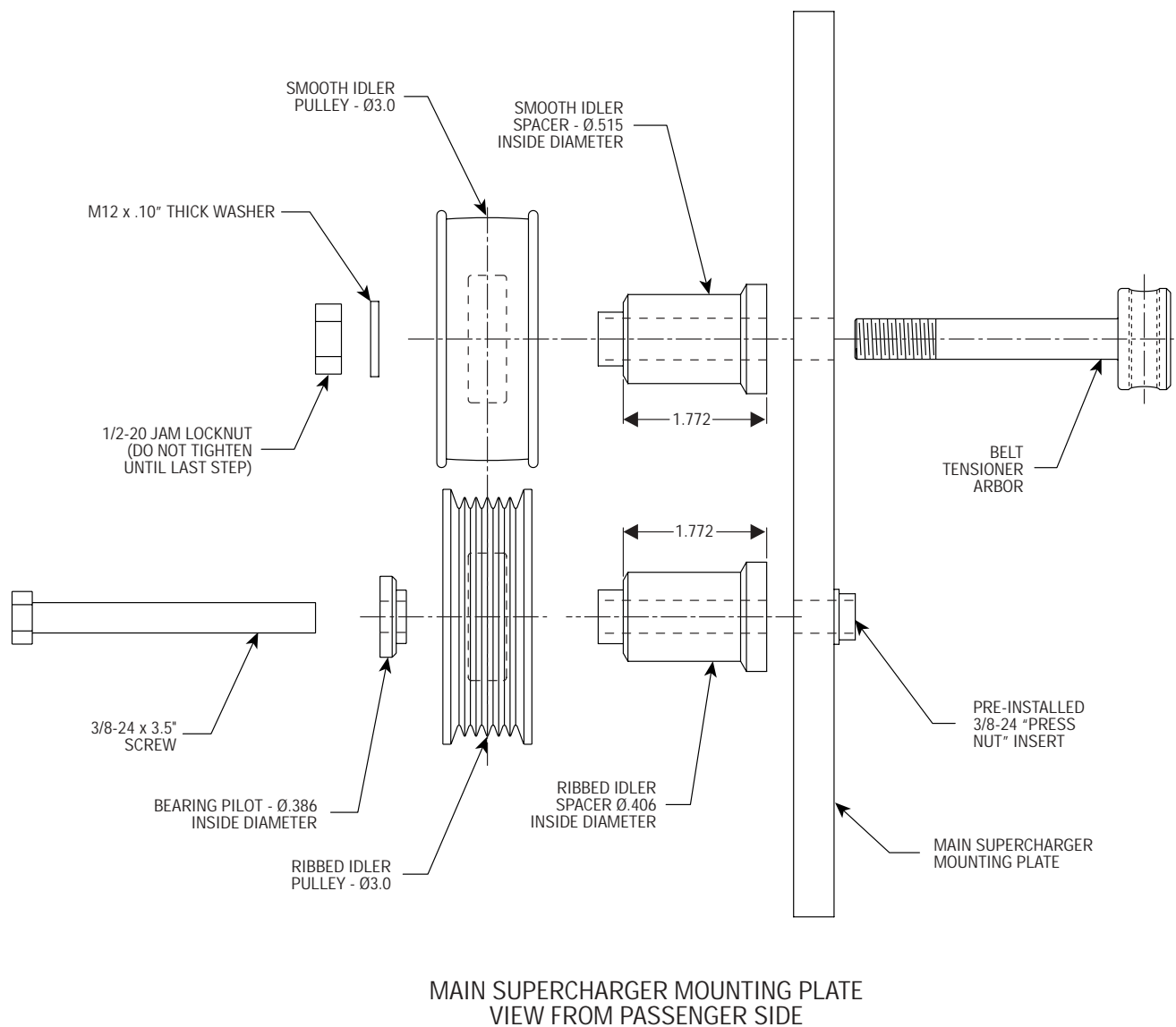


Fig. 8-f

8. SUPERCHARGER MOUNTING BRACKET/PLATE INSTALLATION, cont'd.

BELT TENSIONER
ARBOR SCREW

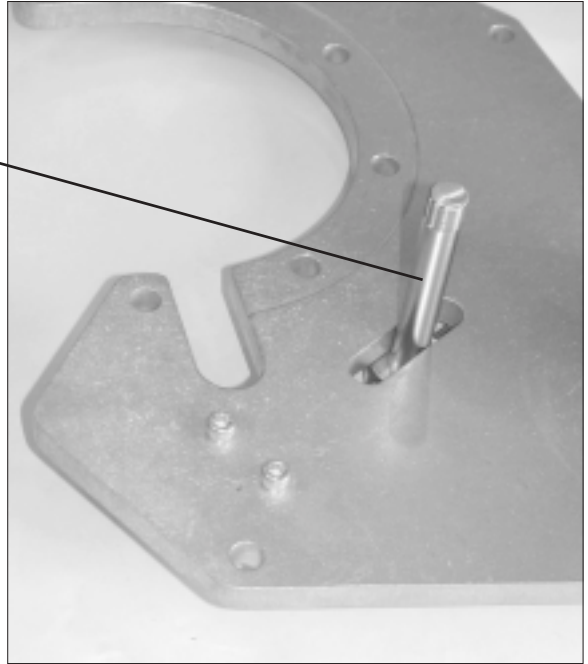


Fig. 8-g

BELT TENSIONER
ADJUSTMENT SCREW

ADJUSTMENT SCREW
LOCATOR BLOCK

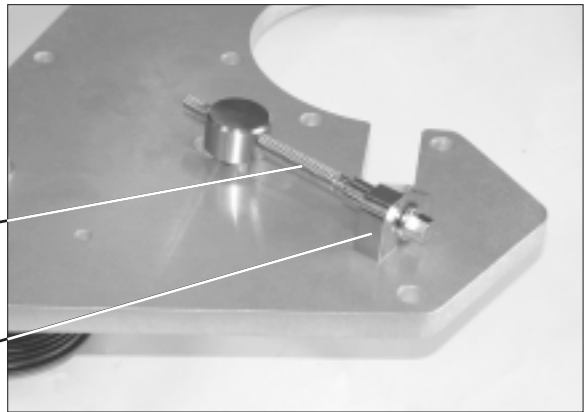


Fig. 8-h

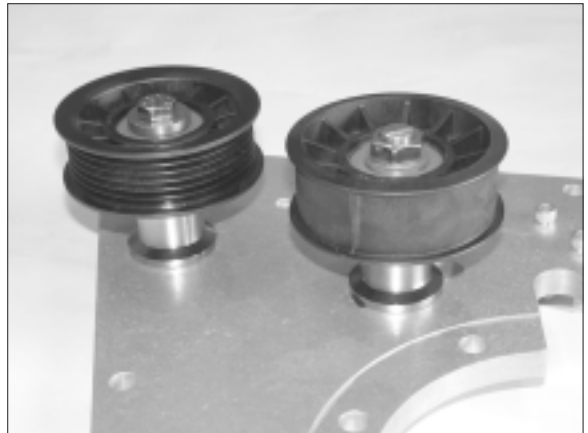


Fig. 8-i

8. SUPERCHARGER MOUNTING BRACKET/PLATE INSTALLATION, cont'd.

fitting. Secure with a #8 hose clamp. Make sure that the hose clamp housing is clocked down toward the supercharger so that it will not cause interference with the supercharger mounting plate that is to be installed. (See Fig. 8-j.)

- H. Remove the blue plastic dust cap located on the brass oil feed nozzle on the side of the supercharger. Thread the supplied steel 1/8" NPT x 45° x -4JIC fitting into the supercharger oil feed nozzle. Carefully tighten and clock the 45° fitting as shown in Figs. 8-j, 8-k. Use caution when tightening the oil feed fitting, as the brass nozzle may be broken if care is not exercised. Connect the supplied oil feed line to the flare fitting. Temporarily cover the open end from debris until the connection is made to the engine in step 12.

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.

- I. Attach the supercharger unit to the mounting plate as shown using the five supplied 3/8-16 x 1.25" screws with AN washers. The sixth supercharger mounting hole should remain empty at this time. (Refer back to Fig. 8-e, and Fig. 8-k.)
- J. Using two of the supplied 3/8-16 x 1.25" screws with AN washers, attach the upper supercharger support plate to the supercharger mounting block as shown in Figs. 8-l, 8-m. Thread the screws down until the heads almost touch the plate/washers. Do not tighten the screws at this time.

NOTE: When directed, it is important to follow the suggestion: "Do not tighten the screws". Failure to follow this direction will result in bracket misalignment and the possibility of the VTEC solenoid not maintaining a proper seal. Thread the applicable screws and nuts in until the head almost touches down (.01-.02" clearance). This will allow the bracket to properly align itself to the engine and other components in the assembly during installation.

- K. From the back side, slide the supplied 3/8-16 x 3.5" screw and AN washer through the top hole (refer to Figs. 8-n, 8-o) of the upper support plate and into one of the supplied Ø.875 O.D. x 1.858" long spacers. Loosely mount the support plate assembly with spacer onto the supercharger and previously assembled main supercharger plate.



Fig. 8-J



Fig. 8-K

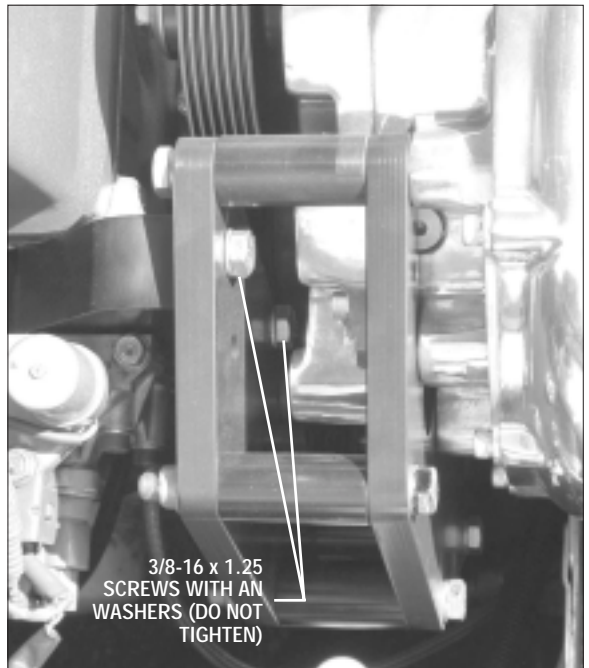


Fig. 8-L

8. SUPERCHARGER MOUNTING BRACKET/PLATE INSTALLATION, cont'd.

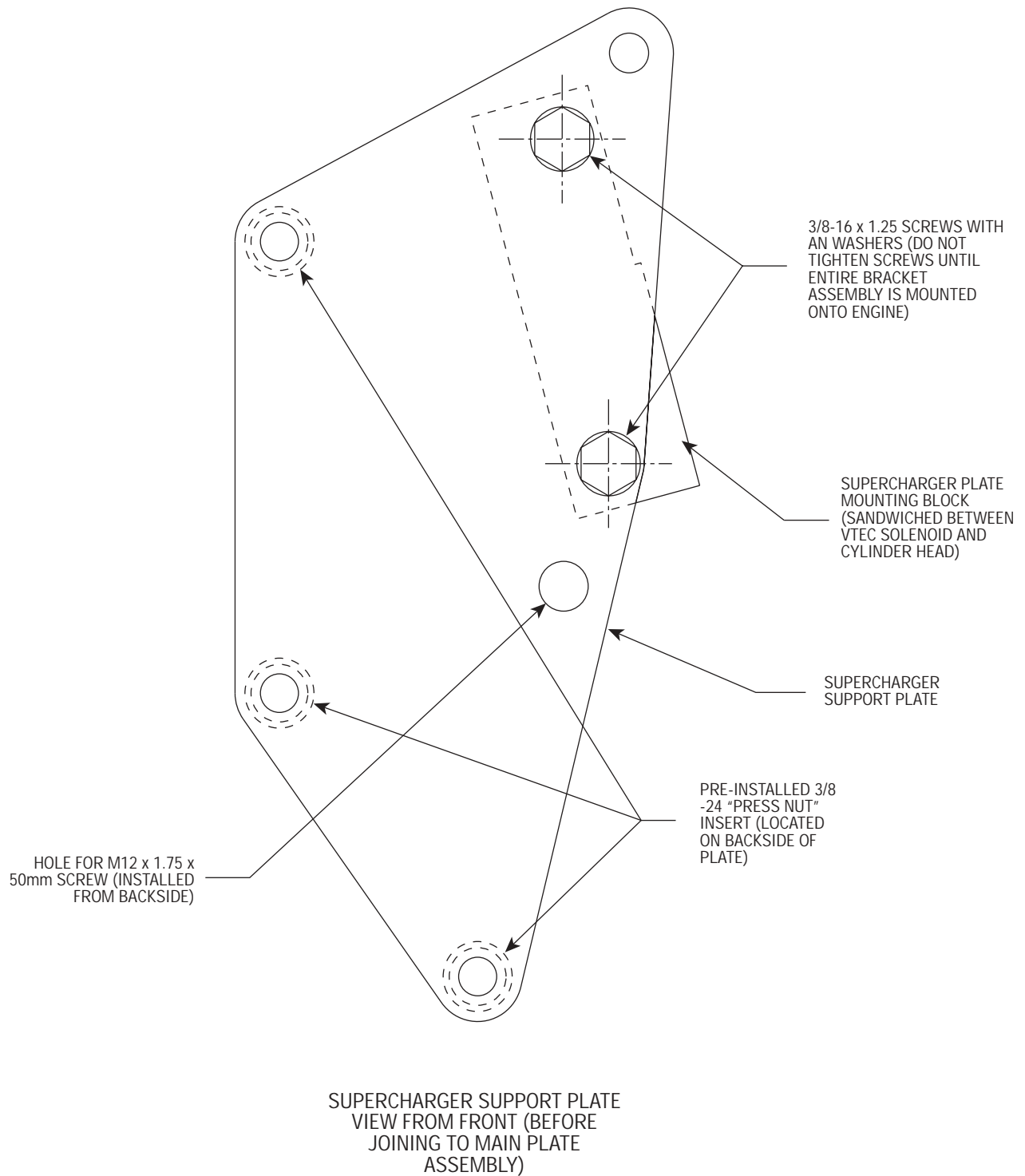


Fig. 8-m

8. SUPERCHARGER MOUNTING BRACKET/PLATE INSTALLATION, cont'd.

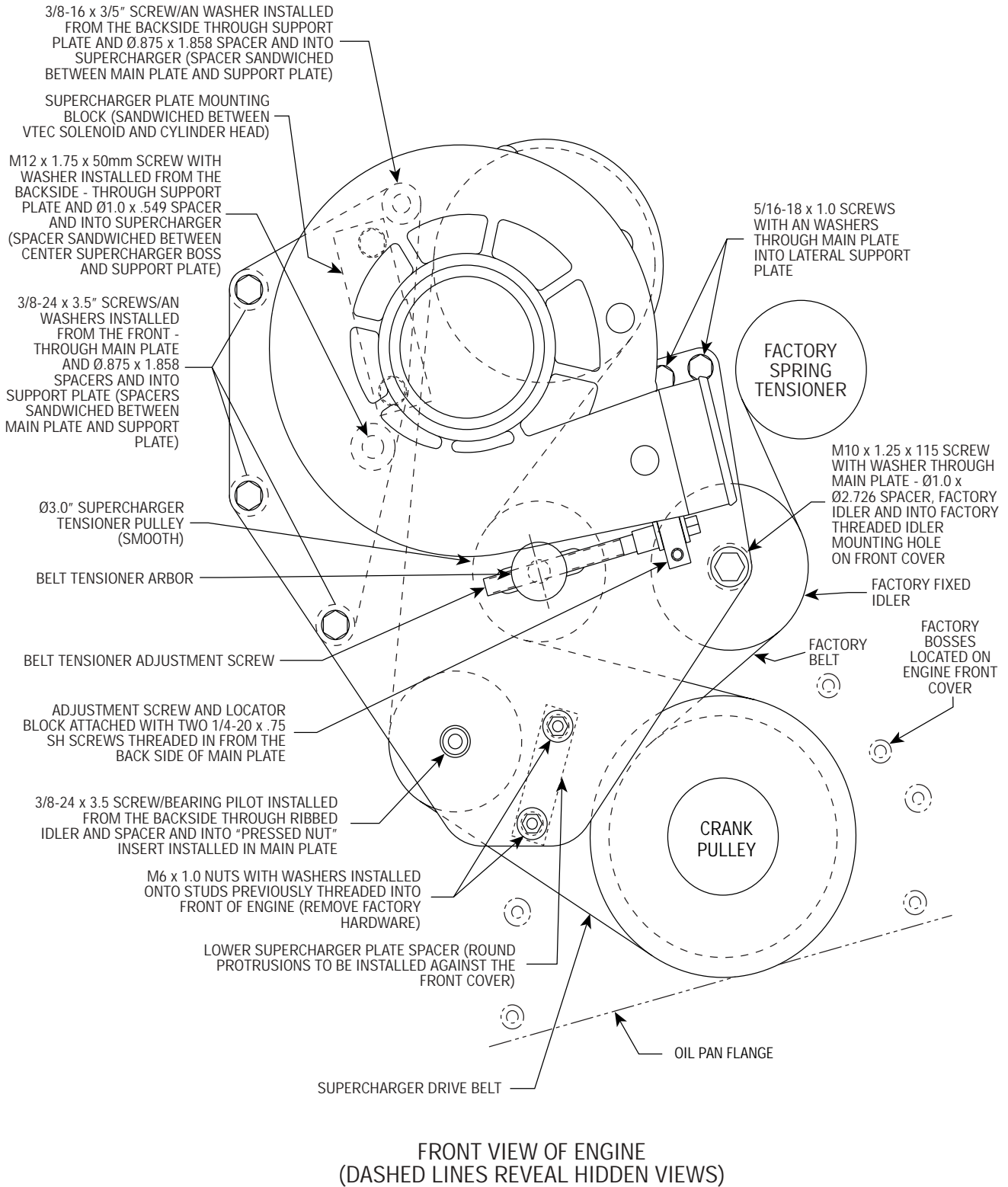
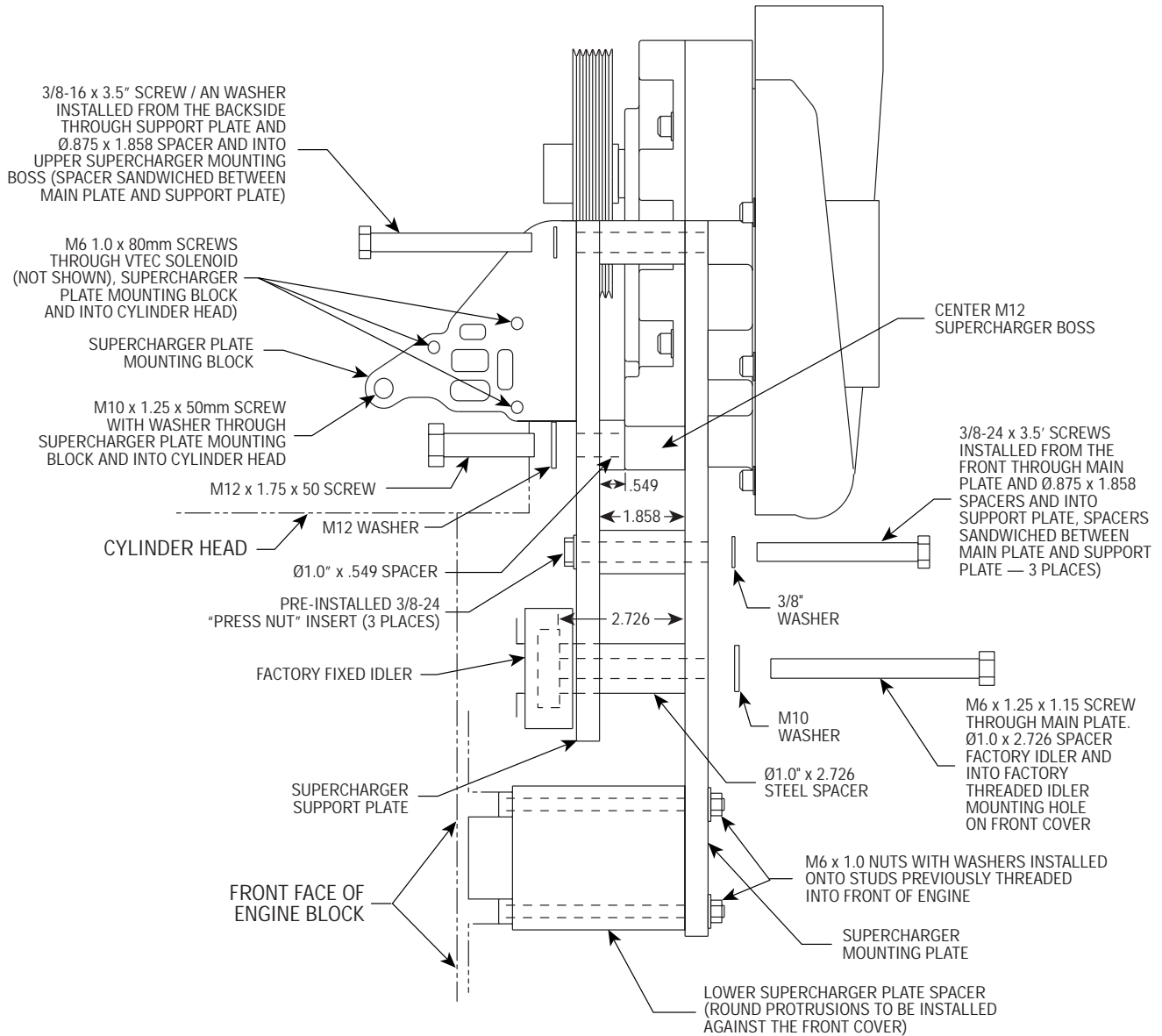


Fig. 8-n

8. SUPERCHARGER MOUNTING BRACKET/PLATE INSTALLATION, cont'd.



SUPERCHARGER BRACKET ASSEMBLY VIEW FROM PASSENGER SIDE —
VORTECH IDLERS AND SOME FASTENERS NOT SHOWN FOR CLARITY
(DASHED LINES REVEAL HIDDEN VIEWS)

Fig. 8-o

8. SUPERCHARGER MOUNTING BRACKET/PLATE INSTALLATION, cont'd.

The 3/8-16 x 3.5" screw is to be threaded through the main supercharger plate and into the remaining 3/8" threaded mounting hole on the supercharger unit. (See *Fig. 8-p.*) Thread the screw down until the head almost touches the plate/washer. Do not tighten the screw at this time.

- L. Mount the remaining three $\text{\O}0.875$ O.D. x 1.858" long spacers between the main supercharger mounting plate and the upper support plate as shown in *Figs. 8-P, 8-q.* From the front side, slide the three supplied 3/8-24 x 3.5" screws and AN washers through the main mounting plate, through the three $\text{\O}0.875$ O.D. x 1.858" long spacers and into the threaded steel inserts that are pressed into the back side of the support plate. (See *Figs. 8-n, 8-o.*) Thread the screws down until the heads almost touch the plate/washers. Do not tighten the screws at this time.
- M. From the back side, slide the supplied M12 x 1.75 x 50 screw and M12 washer through the remaining hole in the upper support plate (refer to *Figs. 8-o, 8-q.*) and into the supplied $\text{\O}1.0$ O.D. x .549" long spacer. The spacer is to be sandwiched between the front side of the upper support plate and the center 12 mm boss located on the supercharger cover. Thread the screw down until the head almost touches the plate/washer. Do not tighten the screw at this time.
- N. From the front side, slide the supplied M10 x 1.25 x 115 screw and M10 washer through the remaining hole in the mounting plate and into the supplied $\text{\O}1.0$ O.D. x 2.726" long steel spacer. (See *Figs. 8-r, 8-s.*)
- O. Insert the new supplied VTEC o-ring gasket seal into grooves in the Vortech supercharger plate mounting block. as shown in *Fig. 8-t.* Make sure that the gasket remains in the block grooves during gasket installation on the engine. Apply a light amount of oil to the gasket.
- P. Place the factory idler (removed in step one) back onto the original boss on the front of the engine (without hardware, washer or dust shield).
- Q. Loosely route the factory accessory belt onto the engine. The belt should be routed around the crank pulley and fixed idler pulley per the factory method. Do not attempt route the belt around the spring tensioner at this time.
- R. Loosely route the supplied supercharger drive belt onto the engine. Following *Fig. 8-n*, loosely attach the supercharger with bracket assembly onto the engine. Line up the two $\text{\O}1/4$ " holes in the main bracket with the lower spacer and two M6 studs (previously installed). Move the bracket assembly over the studs. Thread the supplied M6 nuts with washers over the ends of the studs until the nuts almost touch the washers. Do not tighten the nuts at this time.

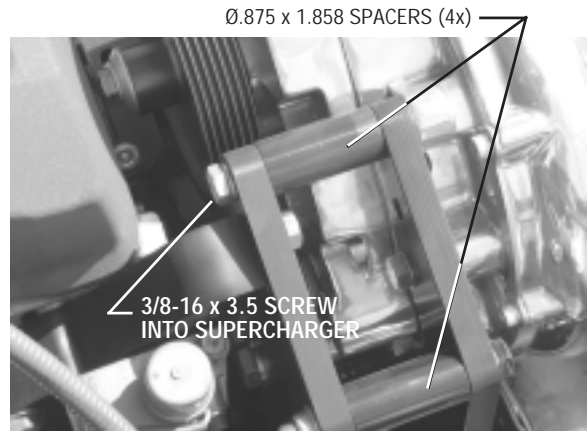


Fig. 8-p

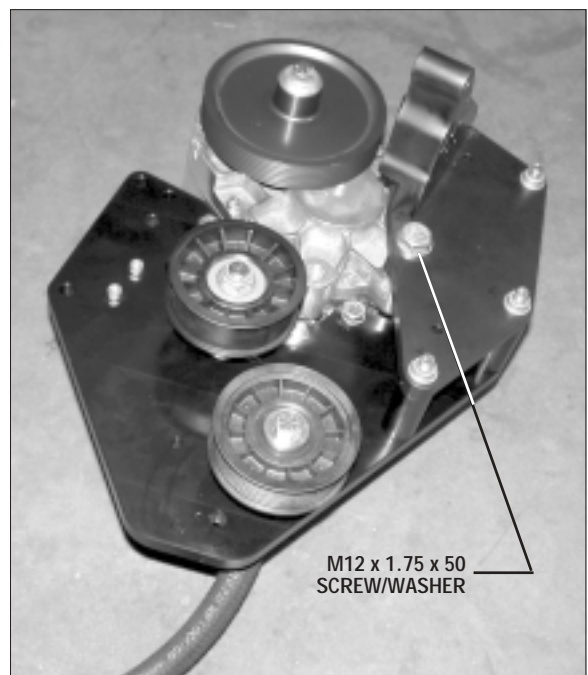


Fig. 8-q

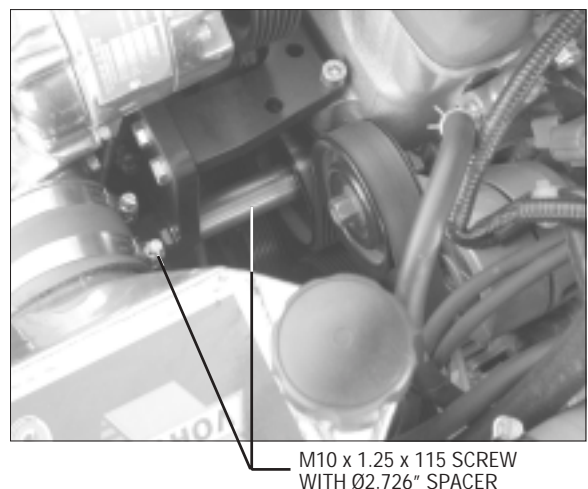


Fig. 8-r

8. SUPERCHARGER MOUNTING BRACKET/PLATE INSTALLATION, cont'd.

SLIDE THE Ø1.0" x 2.726"
SPACER ONTO THE M10
x 1.25 x 115 SCREW
BEFORE ATTACHING
THE MOUNTING PLATE
TO THE ENGINE

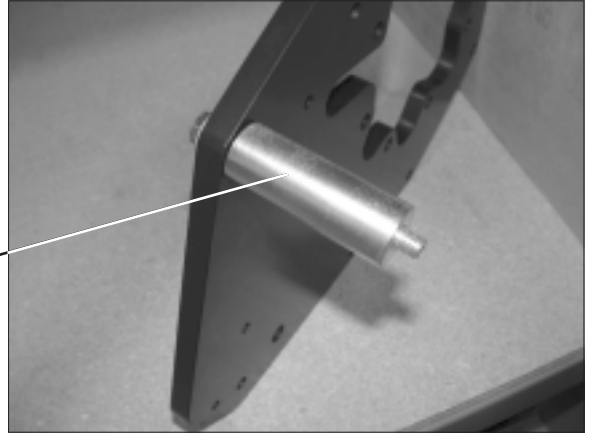


Fig. 8-s

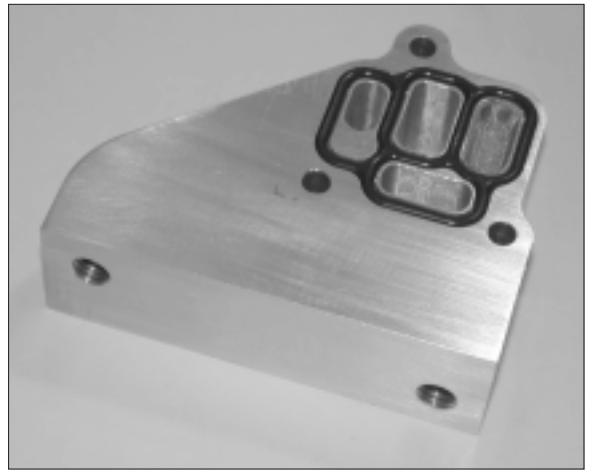


Fig. 8-t

8. SUPERCHARGER MOUNTING BRACKET/PLATE INSTALLATION, cont'd.

NOTE: When installing the supercharger with bracket assembly onto the engine, the belt must be manipulated so that it is properly routed around the idler, tensioner, supercharger pulley and lower supercharger plate spacer. (Refer back to Fig. 7-n.)

- S.** Align the M10 x 1.25 x 115 screw (previously inserted through the front of the main supercharger plate) into the factory idler pulley mount on the front cover. (See Fig. 8-u.) Make sure that the supplied $\text{\O}1.0$ O.D. x 2.726" long spacer is sandwiched between the back of the supercharger mounting plate and the inner bearing race of the factory idler. Do not tighten any screws at this time.
- T.** Insert the three supplied M6 x 1.0 x 80 screws with washers through the previously removed VTEC solenoid, the Vortech supercharger plate mounting block and into the side of the cylinder head. (See Figs. 8-v, 8-w.) Make sure that both of the VTEC gaskets remain in their proper locations during bracket installation on the engine. Thread the supplied M10 x 1.25 x 50 screw with washer into the remaining hole in the supercharger plate mounting block and into the cylinder head. Thread the four screws down until the heads almost touch the washers. Do not tighten the screws at this time.
- U.** Attach the supplied lateral supercharger mounting plate ('L' shaped bracket) support to the front corner of the cylinder head as shown using the supplied M8 x 1.25 x 45 socket head screws (no washers are used here). See Figs. 8-u, 8-x. Thread the screws down until the heads almost touch the plate. Do not tighten the screws.
- V.** Align the two threaded holes in the end of the lateral support with the two holes in the supercharger mounting plate. Slide the two supplied 5/16-18 x 1.0" screws with AN washers through the remaining two holes in the supercharger mounting plate and into the lateral support. Thread the screws down until the heads almost touch the washers. Do not tighten the screws at this time.
- W.** Secure the completed mounting bracket assembly to the engine by lightly "snugging" the hardware in the following sequence:
1. Four VTEC solenoid mounting screws.
 2. 3/8-16 x 3.5" screw running through the top hole of the upper support plate, $\text{\O}.875$ O.D. x 1.858" long spacer and into the supercharger.
 3. M12 x 1.75 x 50 screw running through the upper support plate, $\text{\O}1.0$ O.D. x .549" spacer and into the center 12 mm boss



Fig. 8-u

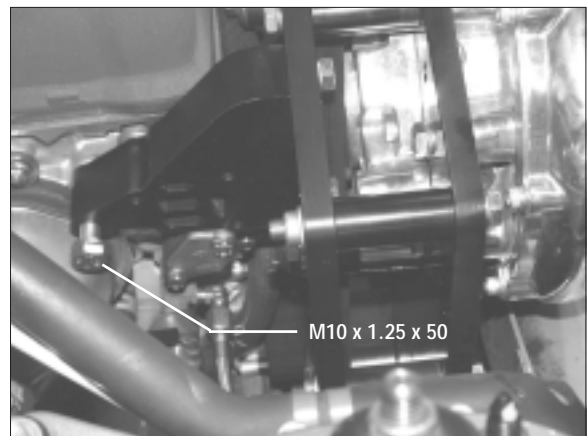


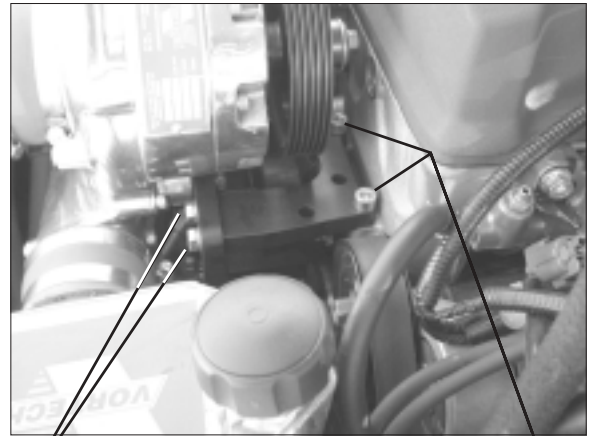
Fig. 8-v



Fig. 8-w

8. SUPERCHARGER MOUNTING BRACKET/PLATE INSTALLATION, cont'd.

- located on the supercharger cover.
4. Two 3/8-16 x 1.25" screws with AN washers that attach the supercharger support plate to the supercharger mounting block.
 5. M10 x 1.25 x 115 screw through the front of the supercharger mounting plate and into the factory idler pulley mount on the front cover.
 6. Two 5/16-18 x 1.0" screws through the supercharger mounting plate and into the lateral support.
 7. Two M8 x 1.25 x 45 socket head screws through the lateral support mounting plate, front corner of the cylinder head and into the front cover.
 8. Three 3/8-24 x 3.5" screws running through the main mounting plate, Ø.875 O.D. x 1.858" long spacers and into the threaded steel inserts that are pressed into the back side of the support plate.
 9. Two M6 nuts that are threaded onto the two studs inserted into the front of the engine.
- X. Repeat the sequence above with final torquing of all hardware.
- Y. Reconnect the previously removed VTEC wiring connections.
- Z. Reattach the plastic vacuum canister to the backside of the front crossmember (located in front of the engine) using the factory screw that was removed in step 1. Make sure that there is enough clearance between the vacuum hose and the crank pulley.



TWO 5/16-18 x 1"
SCREWS WITH
AN WASHERS

TWO M8 x 1.25 x 45
SOCKET HEAD SCREWS
(NO WASHERS)

Fig. 8-x

9. SUPPLEMENTARY FUEL INJECTOR INSTALLATION (2004 Models Only)

- A. Locate the supplied charge cooler. Insert the supplied 55lb/hr fuel injector into the injector base welded to the cooler discharge tube so that the injector plug is facing away from the injector base. (See Fig. 9-a.)

NOTE: Lightly oil the O-rings on the injector for easier installation.

- B. Insert the upper block over the injector. Secure the upper injector block with the supplied shoulder bolts.
- C. Install the 1/8 NPT end of the supplied 90° fitting into the upper injector block. Orient the fitting so that it is pointing toward the back of the car.
- D. Connect the 90° end of the supplied steel braided line to the -4 end on the installed straight fitting in the fuel rail. Run the fuel line toward the front of the car. Leave the open end of the fuel line disconnected until the charge cooler has been installed. (See Fig. 9-b.)

NOTE: Thread sealant is recommended on all fitting ends that have pipe threads.

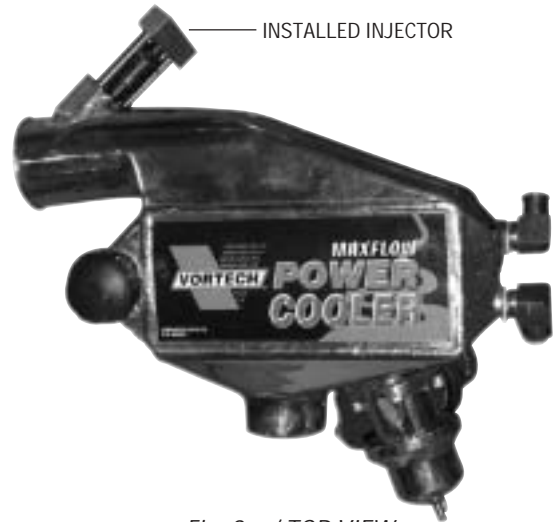


Fig. 9-a / TOP VIEW



Fig. 9-b / TOP VIEW

10. SUPERCHARGER BELT TENSIONER ADJUSTMENT

- A. Make sure that the 1/2-20 jam lock nut previously threaded onto the tensioner arbor is threaded down almost all of the way, but not tight. The belt is tightened/loosened by rotating the belt tensioner adjustment screw. Tighten the belt until light resistance is felt in the belt tensioner adjustment screw. Proper belt tension is achieved when the belt can be twisted approximately 1/4 of a turn by hand. Adjust belt tension as needed. Do not over tension the belt.
- B. From beneath the vehicle, tighten the 1/2-20 jam lock nut on the belt tensioner arbor.
- C. Reinstall the factory accessory belt using the factory routing.

11. AIR PUMP INLET HOSE MODIFICATION

- A. Separate the air pump inlet hose from the factory hose union that was originally connected to the engine inlet duct.
- B. Insert the supplied 3/4" air pump inlet hose filter into the pump inlet hose. (See *Figs. 11-a, 11-b.*)

SUPPLIED AIR PUMP
INLET FILTER

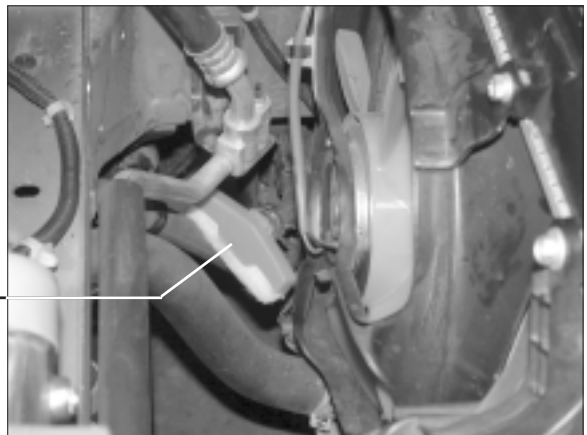


Fig. 11-a / TOP VIEW

SUPPLIED AIR PUMP
INLET FILTER

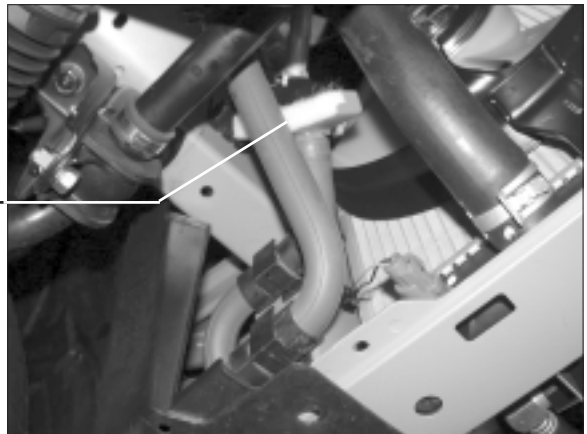


Fig. 11-b / BOTTOM VIEW

12. CHARGE AIR COOLER INSTALLATION

- A. Attach the supplied breather/filter to the outlet of the Vortech race bypass valve. Attach the Vortech race bypass valve to the charge cooler core using the supplied 1/4-20 x .50" socket head bolts and gasket. (See Fig. 12-a.)
- B. Install the charge cooler between the supercharger and the throttle body using the supplied 2.75" sleeves and #44 hose clamps. The 3" long sleeve is to be placed on the throttle body.
- C. Remove all of the plastic valance or splash panels located under the vehicle toward the front.
- D. Install the fittings into the water cooler as shown in Fig. Diag 12-b, and Fig. 12-d. Note that the 90° fitting is to be pointing toward the front of the vehicle when the water cooler is mounted.
- E. Attach the water cooler mounting bracket #1 to the upper portion of the cooler using the 1/4" hardware as shown.
- F. Trim one of the supplied $\text{Ø } 3/4"$ x 90° hoses so that one leg measures 3" and the other measures 5". Attach the short leg of the cut hose to the straight fitting on the water cooler and secure with one of the provided nylon ratchet clamps. Install the $\text{Ø } 3/4"$ hose union into the other end and secure with a clamp.
- G. Position the water cooler onto the front of the vehicle in front of the air conditioning condenser using the lower mounting brackets as shown in Fig. 12-c. Secure the water cooler using the provided #10 self-tapping screws. Route the attached cooler hose above the condenser hard line. The upper mounting bracket attaches to the hood latch screw. (See Fig. 12-e.)
- H. Attach the short leg of the $\text{Ø } 3/4"$ x 90° hose to the hose union previously installed and secure with one of the provided clamps.
- I. Cut the electrical connector off of the end of water pump wiring harness and install one 14-16 Ga. ring terminal onto the brown (negative) wire and the 18 Ga. insulated male slide connector onto the blue/green wire (positive).
- J. Mount the water pump to the front of the passenger side core support using the supplied 1-11/16" Adel clamp and one #10 self-tapping screw. Attach the ground wire (brown wire with ring terminal installed) from the water pump to the clamp. Angle the discharge of the water pump up as shown. (See Fig. 12-f.)

The discharge of the water pump must be angled up. This is REQUIRED for the pump to purge itself of air.

- K. Attach an 18 Ga. insulated female slide connector to the yellow wire attached to the supplied relay. Route the yellow wire from the relay to the power distribution box located in front of the

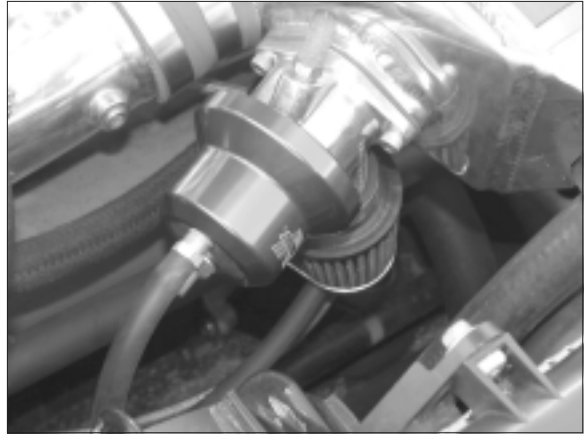


Fig. 12-a

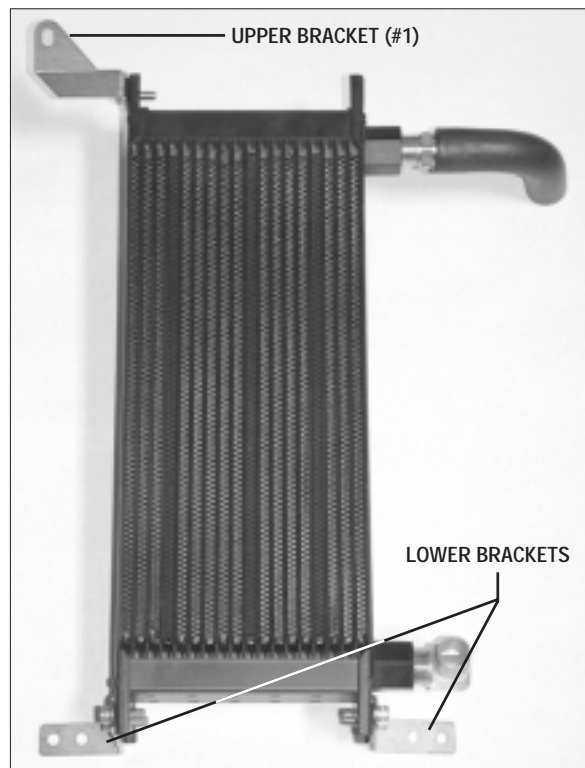


Fig. 12-b

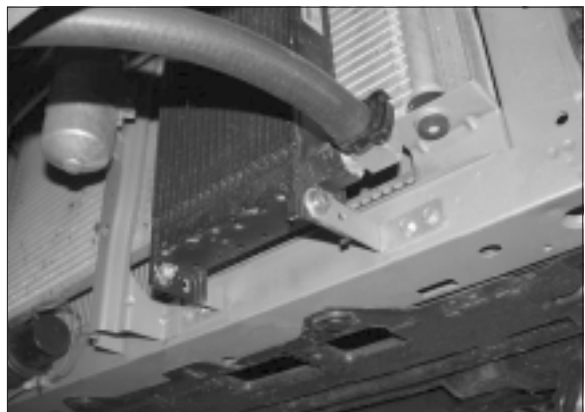


Fig. 12c

12. CHARGE AIR COOLER INSTALLATION, cont'd.

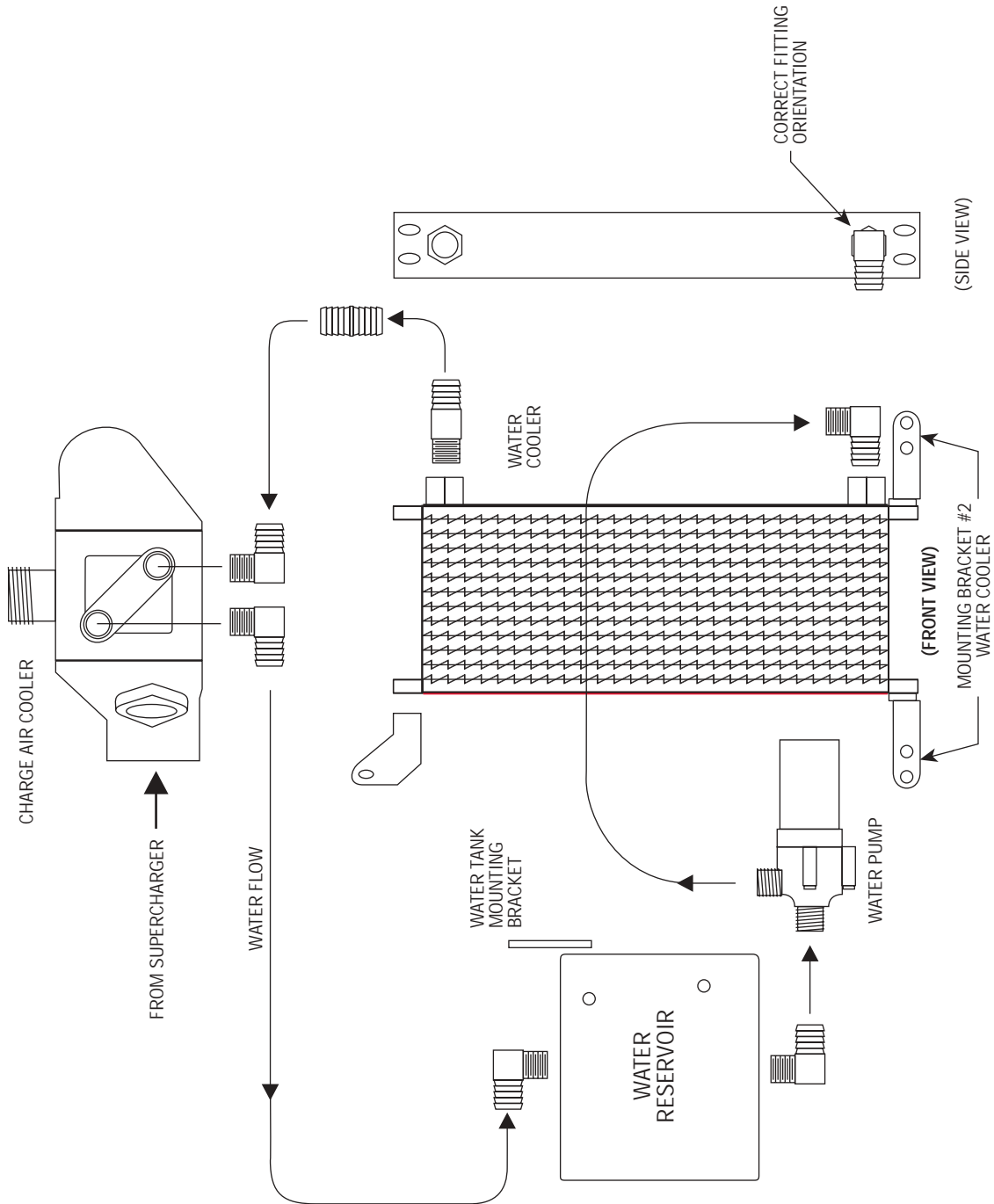


Fig. 12-d

12. CHARGE AIR COOLER INSTALLATION, cont'd.

battery. Following *Fig. 12-g*, route the wire up along the factory wires.

- L. Remove the factory heater motor relay located in the underhood fusebox and modify to accept the electrical power tap as shown in *Fig. 12-h*. Re-install the relay with the power tap. Connect the yellow wire to the power tap.
- M. Attach the black wire from the supplied relay to a suitable ground.
- N. Route the red wire from terminal #87 on the supplied relay down to the water pump. Install a female insulated slide connector onto the wire and connect to the blue/green (positive) wire on the water pump.
- O. Cut the supplied fuse holder wire and install the 12 GA ring terminal on one end and the 12 GA. solderless connector onto the other. Connect the #30 wire on the supplied relay to the solderless connector attached to the fuse holder. Connect the ring terminal to the positive side of the battery and install the provided fuse.
- P. Cut approximately 40" off of the supplied length of $\text{\O}3/4$ " hose. Install one end onto the water pump discharge and the other onto the 90° fitting on the water cooler, routing it forward toward the front facia. (See *Fig. 12-i*.) Be sure there are no kinks or sharp bends in the hose. Secure both ends with the provided clamps.

Use a tape measure to correctly check the proper length and hose routing between each hose connection prior to actually cutting the hose.

- Q. Temporarily install the water tank mounting bracket onto the water reservoir using the 1/4" hardware (see *Fig. 12-j*). Mock the water reservoir up as shown and mark the location on the vehicles frame (passenger side, outer frame rail) where the #10 self-tapping screws are to be located. Remove the 1/4" hardware attaching the bracket to the reservoir. Secure the bracket to the vehicle using the self-tapping screws. (See *Fig. 12-k*.)
- R. Install the two remaining 90° brass fittings into the water reservoir using a small amount of thread sealant. Attach one end of the remaining $\text{\O} 3/4$ " hose to the top of the water reservoir and secure with a clamp.
- S. Permanently attach the water reservoir to the mounting bracket using the 1/4" hardware.
- T. Route the upper reservoir hose into the engine compartment (*Figs. 12-j, 12-l*) under the radiator fan and then up between the radiator fan and the condenser fan finally connecting it to the passenger side fitting on the charge air cooler. Secure the hose with one of the provided clamps.
- U. Measure between the bottom of the reservoir water outlet and the pump inlet and cut an appropriate section of hose and set aside.

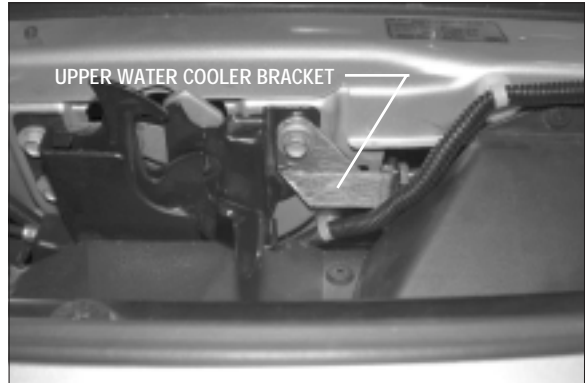


Fig. 12-e

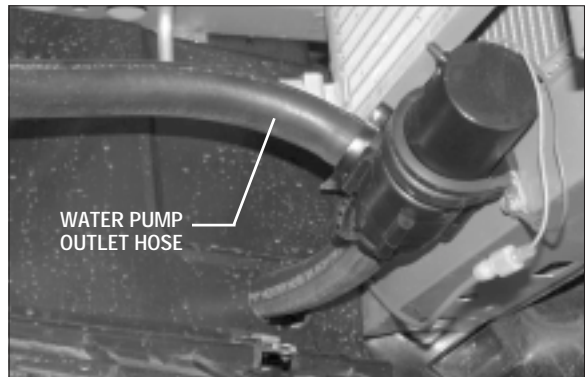


Fig. 12-f

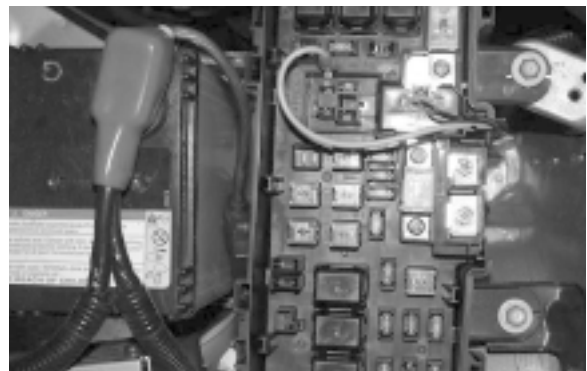


Fig. 12-g

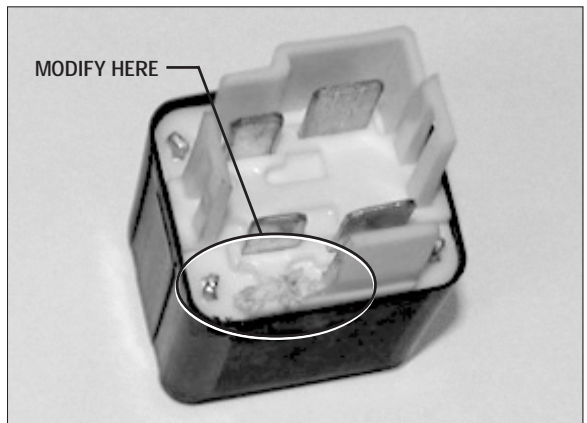


Fig. 12-h

12. CHARGE AIR COOLER INSTALLATION, cont'd.

- V. A hole approximately $\varnothing 1$ " will have to be made into the lower front plastic valance for the water line to pass through. Locate the point where the hose is to pass through and create a hole using a hole saw or grinder.
- W. Reinstall the lower front valance and attach the passenger side only, leaving the drivers side loose. Attach the hose previously cut between the water reservoir and the water pump inlet and secure with the provided clamps. (See Fig. 12-m.)
- X. Temporarily plug the 90° fitting attached to the driver side of the charge air cooler that connects to the water cooler outlet hose. Leave the hose that comes from the top fitting of the water cooler open to atmosphere.
- Y. Fill the system at the charge air cooler with 1/4 - 1/3 of a gallon of anti-freeze. **Slowly** fill the remainder with water until it comes out of the open hose coming from the top of the water cooler, this will help to purge the system of air. Connect the hose coming from the top fitting on the water cooler to the open fitting on the charge air cooler and secure with the provided clamp. Continue to fill the system with water until it is full and install the cap onto the charge air cooler.
- Z. With the battery reconnected, key the vehicle to the ON position. Slowly remove the cap on the charge air cooler and check the level of the coolant and make sure the coolant is flowing through the system. Run the system for a few minutes to allow any air trapped in the lower part of the system to escape. Top the system off with coolant if necessary and reinstall the cap.

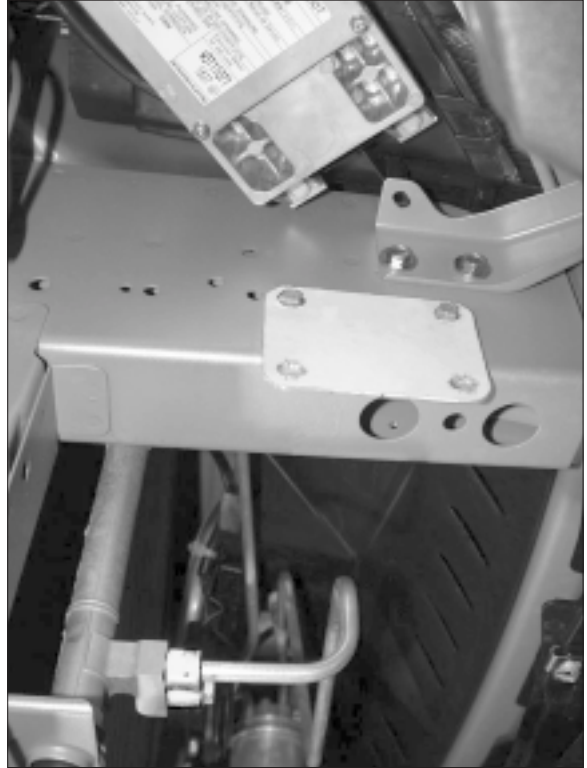


Fig. 12-k



Fig. 12-l

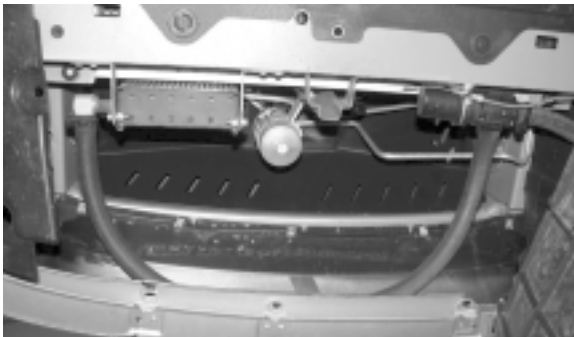


Fig. 12-i



Fig. 12-j

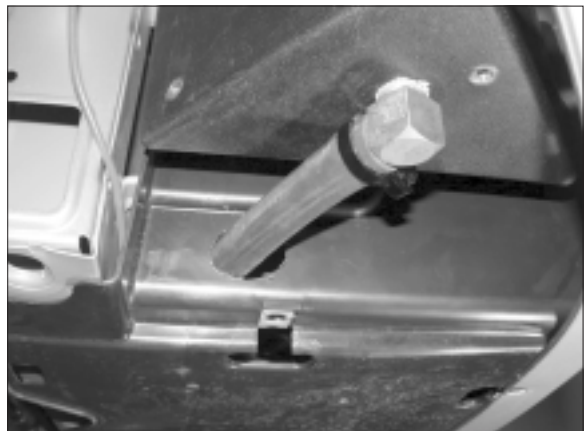


Fig. 12-m

13. AIR INLET DUCT INSTALLATION

- A. When installing this supercharger system on 2002-2004 model year vehicles, the horn mounted inside the engine compartment on the passenger side fender apron must be disconnected and removed. The horn may be relocated or removed completely from the vehicle. The vehicle will still be equipped with the horn located inside of the fender.
- B. Thread the 3/8" NPT x 1/2" beaded brass hose fitting into the threaded hole on the supplied Ø3.5" x 90° plastic inlet elbow.
- C. Install the Ø3.5" flange into the air box and secure with four 1/4-20 x 1/2" SHCS. Install the air filter onto the flange on the inside of the air box.

NOTE: Rotate the hose clamp on the air filter such that a screw/nut driver may be inserted through the hole on the bottom of the air box to tighten the hose clamp.

- D. Secure the hose clamp on the air filter.
- E. Install the upper and lower mounting brackets onto the air box and secure with 1/4-20 x 1/2" SHCS. (See Fig. 13-a.)
- F. Remove the upper passenger side screw securing the vehicle's cooling fan. Install the air box into the vehicle on the passenger side. (See Fig. 13-b.) Secure the upper mounting bracket to the cooling fan mount using the supplied M6 x 10 x 20mm screw.
- G. Secure the lower mounting bracket to the vehicle using the #10 self-tapping screws.
- H. Install the supplied Ø3.5" sleeve and two #56 hose clamps onto the beaded end of the Ø3.5" x 90° plastic elbow.
- I. Install the supplied Ø3.5" flex hose and two #52 hose clamps onto the flange on the air box. Check to make sure that there are no obstructions, foreign objects or debris in the air filter, flex hose or supercharger inlet. Attach the Ø3.5" elbow to the supercharger and flex hose. Secure both ends with the provided hose clamps. (See Fig. 13-c.) Note that the 1/2" brass fitting should be pointing down when the elbow is installed.

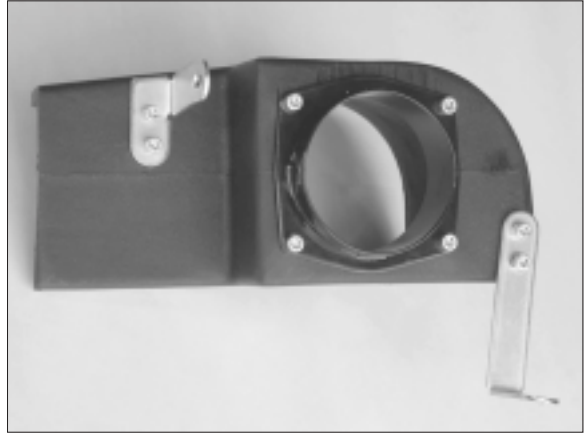


Fig. 13-a

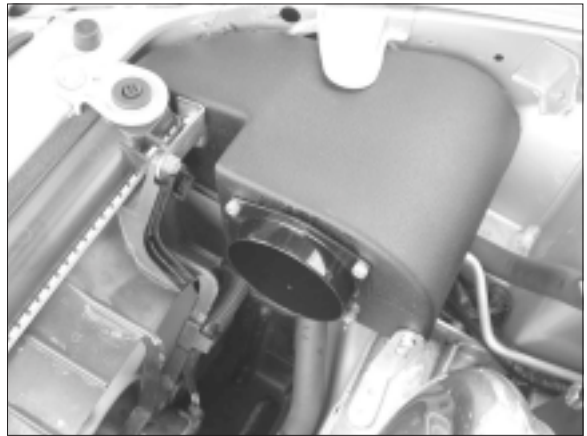


Fig. 13-b

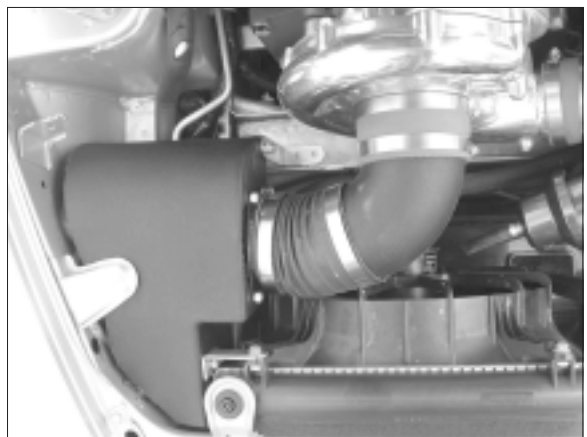


Fig. 13-c

14. HOSE ATTACHMENTS/EXTENSIONS

- A. Connect the lower end of the supercharger oil drain hose to the previously installed fitting in the drain pan using the supplied 90° x 1/2" swivel hose end. Hose routing must be downhill with smooth bends and must not have kinks, sharp bends or uphill sections. Trim hose length if necessary. Secure the drain hose to the oil pan fitting with a #8 clamp.
- B. Connect the supercharger feed line to the previously installed flare fitting near the oil pressure sending unit. Make a gentle forward loop around and beneath the front crossmember. Secure the hose with the tie wraps provided, routing it away from chaffing and/or sharp objects.

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.

- C. Attach the supplied piece of 1/4" x 16" long hose to the cylinder head coolant port that was previously connected to the factory vacuum/coolant tubing junction removed in step 1. Attach the remaining end of the hose to the corresponding port on the throttle body. Secure both ends with the previously removed factory clamps. (See Fig. 14-a, 14-b.)
- D. Install the length of 1/2" x 36" hose to the valve cover vent barb. Connect the opposite end to the 1/2" brass barb located on the supercharger inlet elbow. Trim the length if necessary.
- E. Attach the length of supplied 1/4" vacuum hose to the fitting on the cover of the Vortech compressor bypass valve. Route the hose over near the fuel rail. Install the supplied 5/32" -1/4" hose reducer into the end of the 1/4" hose. Splice one of the supplied 5/32" brass TEEs into the fuel pressure regulator/FMU signal hose. Attach the compressor bypass vacuum hose to the remaining leg of the 5/32" TEE using a short piece of 5/32" vacuum hose. (See Fig. 14-b.)
- F. Reconnect the two factory vacuum hoses that were removed in Step 1. Use the supplied lengths of 5/32" tubing for extensions if required.
- G. Re-attach the pressure solenoid (that was removed in Step 1) to the harness and vacuum hoses. Use a tie wrap to secure the unit down toward the crossmember and away from the crank pulley. (See Fig. 14-c.)

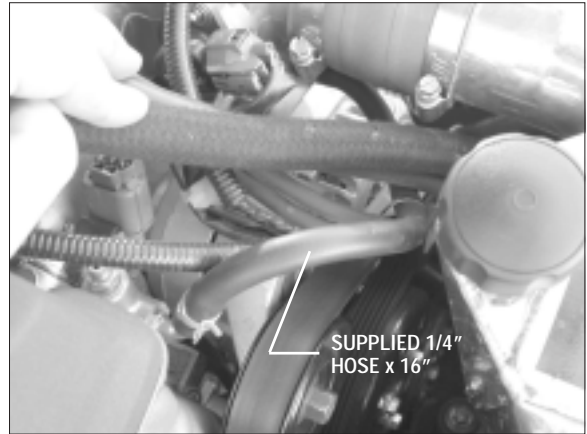


Fig. 14-a

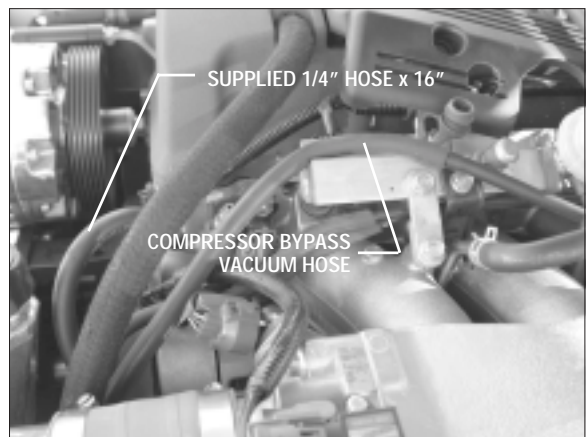


Fig. 14-b



Fig. 14-c

15. ELECTRONIC CONTROL BOX INSTALLATION

NOTE: 2004 models do not require the installation of a map controller.

- A. Unclip the yellow wiring harness near the steering shaft above the accelerator / brake pedals located underneath the dash on the interior of the vehicle. (See Fig. 15-a.)
- B. Referring to Fig. 15-a, mark the mounting hole locations, spacing should be 3 7/8". Temporarily attach the brackets to the timing controller and check for proper spacing.
- C. Drill the holes using the self tapping screws and secure the brackets to the vehicle.
- D. Following the diagram (See Fig. 15-e) attach the MAP controller to the bottom of the timing controller using the supplied hook and loop fastener.

NOTE: The MAP controller is offset to one side. Make sure the wires route toward the driver's side door.

- E. Mount the timing controller to the vehicle using the supplied 8-32 hardware. Point the vacuum line toward the drivers side and the wires toward the passenger side. (See Fig. 15-b.)
- F. Route the wires of the timing controller toward the driver's side.
- G. Remove the drivers side kick panel and locate the vehicles computer. Disconnect the three electrical connectors to it. (See Figs. 15-c, 15-d.)
- H. Tap the red wires from the timing controller and the MAP controller into the yellow/black wire (1 IGP1) on the 25P connector. (See Fig. 15-f.)
- I. Tap the black wires from the timing controller and MAP controller into the black wire (2 PG1) on the 25P connector.

NOTE: Each of the vehicles wires that are cut should have a male and female slide connector installed on each end so that the timing box or the MAP controller may be unplugged at any time and the vehicle can run in a stock configuration.

- J. Cut the green/red wire (17 MAP) on the 31P connector and install one male and one female slide connector onto each end.
- K. Connect the blue wire from the MAP controller to the green/red wire leading to the engine compartment.
- L. Connect the white wire from the MAP controller to the green/red wire leading to the vehicle's computer.
- M. Cut the blue wire (8 CKPP) on the 31P connector and install one male and one female slide connector onto each end.
- N. Connect the blue wire from the timing controller to the blue wire leading to the engine compartment.

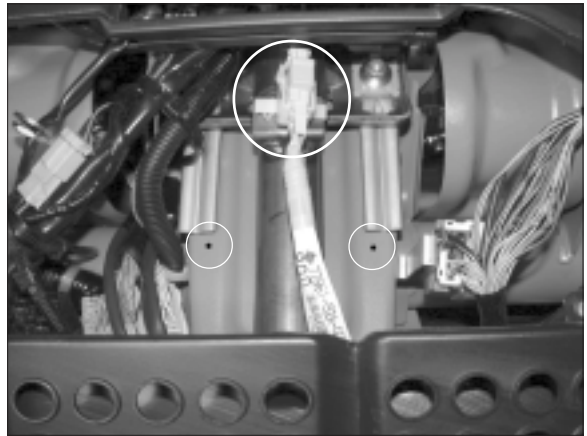


Fig. 15-a

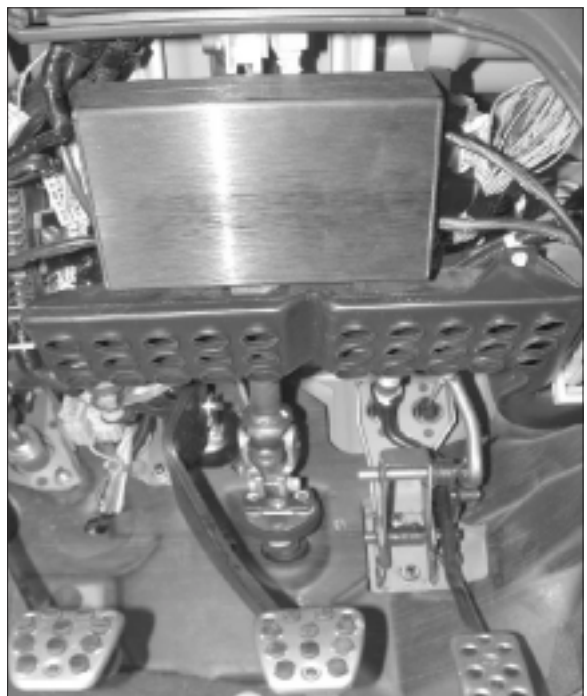


Fig. 15-b



Fig. 15-c

15. ELECTRONIC CONTROL BOX INSTALLATION, cont'd.

- O. Connect the blue/red wire from the timing controller to the blue wire leading to the vehicle's computer.
- P. Cut the green wire (20 TDC1P) on the 31P connector and install one male and one female slide connector onto each end.
- Q. Connect the green wire from the timing controller to the green wire leading to the engine compartment.
- R. Connect the green/red wire from the timing controller to the green wire leading to the vehicle's computer.
- S. Cut the yellow wire (20 TDC2P) on the 31P connector and install one male and one female slide connector onto each end.
- T. Connect the yellow wire from the timing controller to the green wire leading to the engine compartment.
- U. Connect the yellow/green wire from the timing controller to the yellow wire leading to the vehicle's computer.
- V. Route the supplied vacuum line to the rubber grommet that the vehicle's computer wires go out of. Punch a small hole in the rubber grommet and push the vacuum line out through the hole.
- W. Route the vacuum line up to the FMU and connect into it using the provided brass TEE.

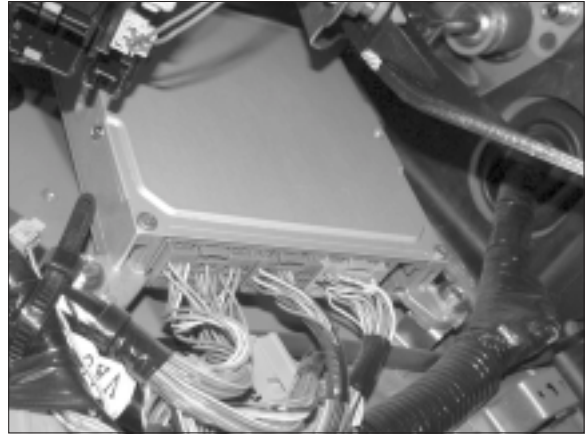


Fig. 15-d

- X. Connect the other end of the vacuum line to the FTC with the provided plastic vacuum line tap.
- Y. **(2004 Models)** There are four injector plugs running from the control box. Run one plug through the firewall to the supplementary injector installed in the charge cooler. Connect the plug to the injector. (See Fig. 15-g.)
- Z. **(2004 Models)** Secure the remaining injector wires.

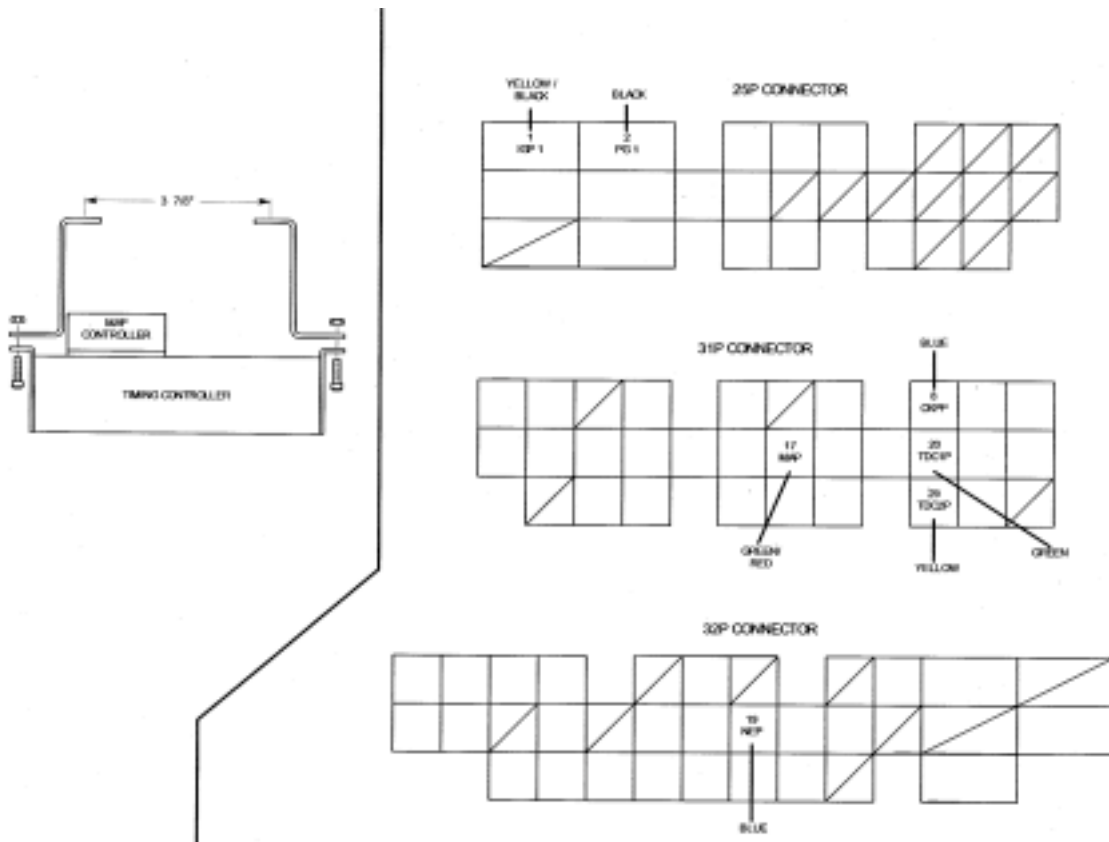


Fig. 15-e

15. ELECTRONIC CONTROL BOX INSTALLATION, cont'd.

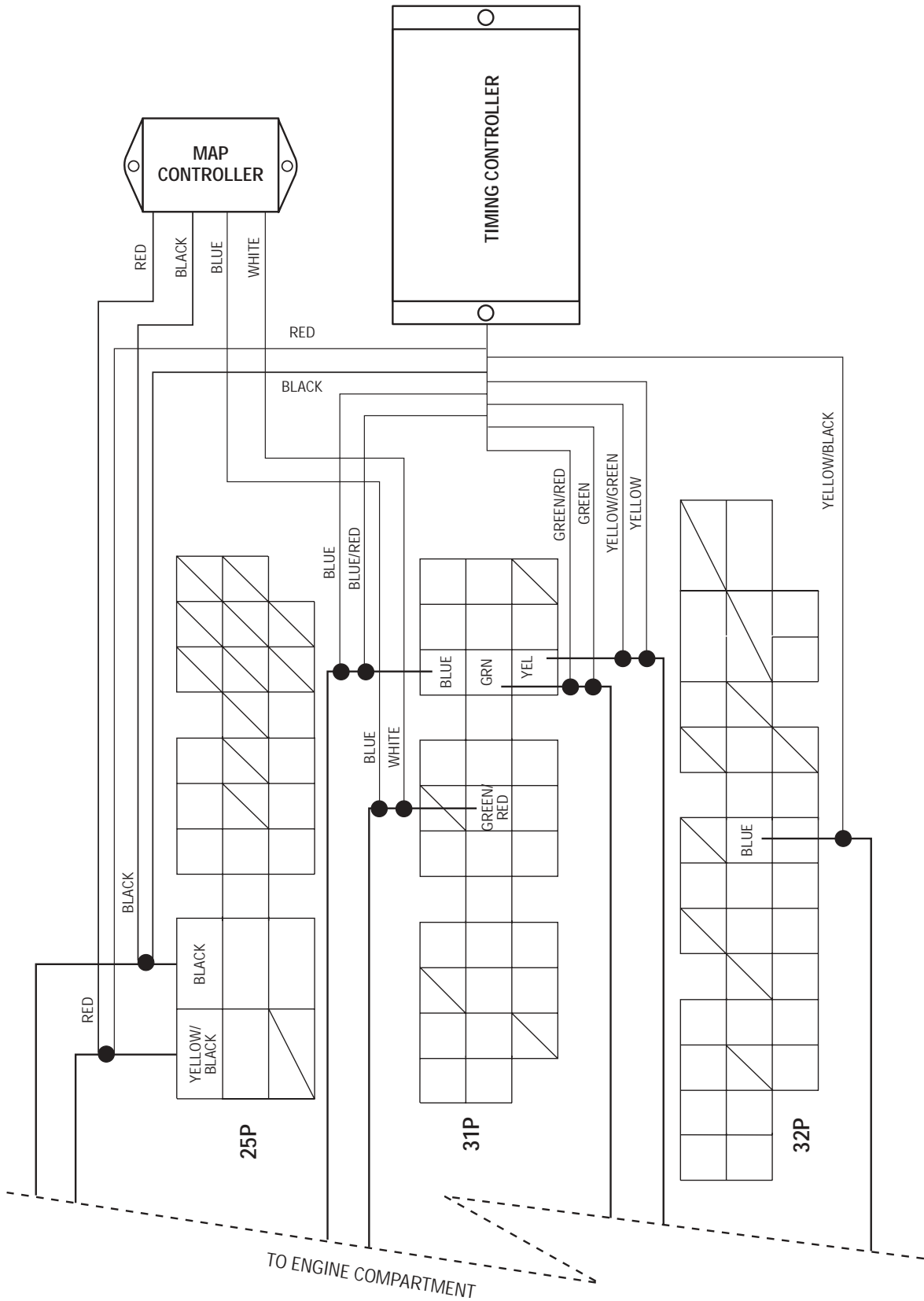


Fig. 15-f / 2001-2003 MODELS

15. ELECTRONIC CONTROL BOX INSTALLATION, cont'd.
(2004 Models)

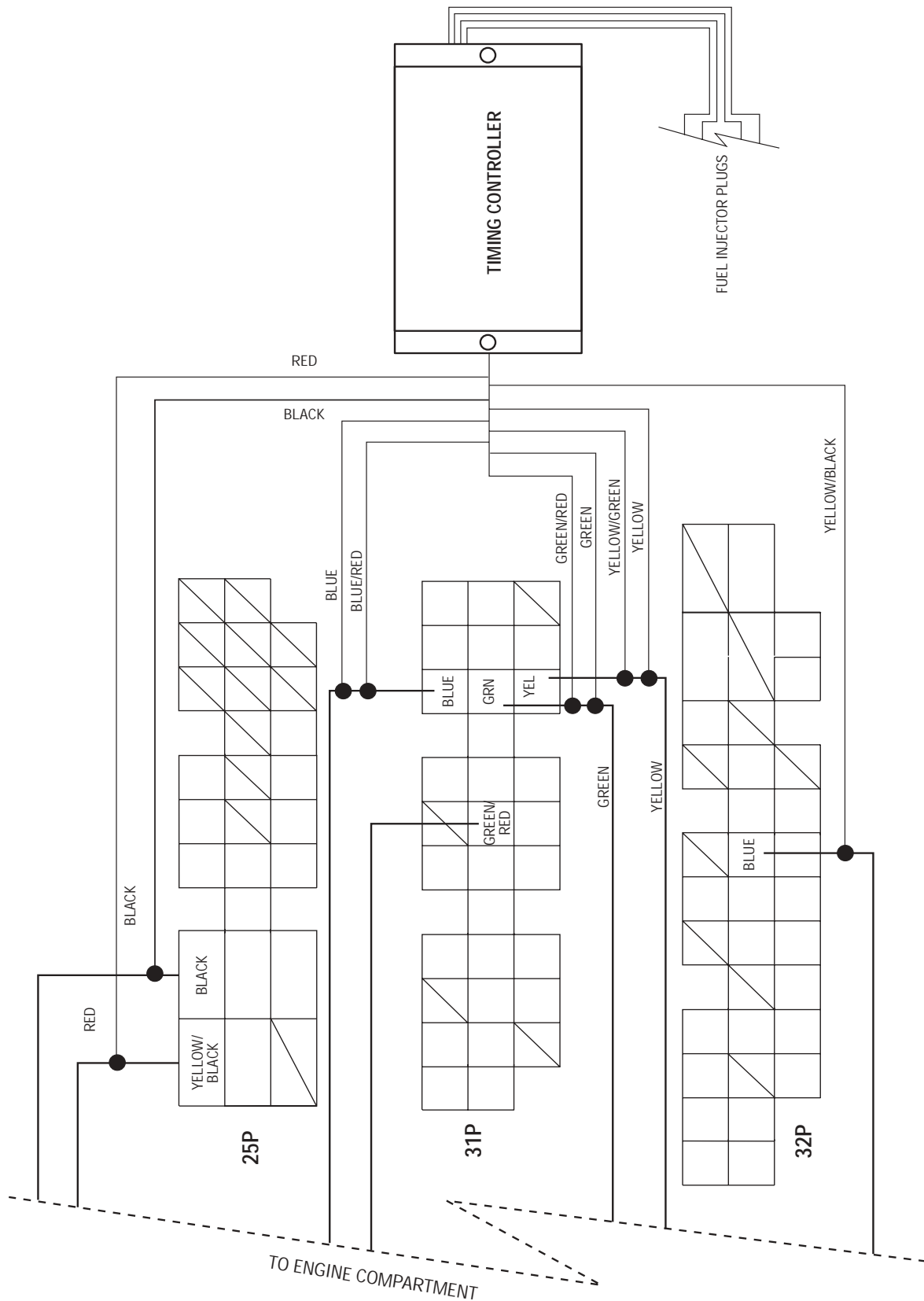


Fig. 15-g / 2004 MODELS

16. FINAL CHECK

- A. Reconnect the battery.
- B. If your vehicle has gone over 20,000 miles since its last spark plug change, you will need to change the spark plugs now before test driving the vehicle.
- C. Check all fittings, 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.
- D. Check all fluid levels, making sure that your tank(s) is/are filled with 91 octane or higher fuel before commencing test drive. Turn the ignition on to cycle the fuel pump a few times. Check all fuel fittings for leakage.
- E. Start engine and allow to idle a few minutes, then shut off.
- F. Recheck to be sure that no hoses, wires, etc. are near exhaust headers or moving parts and for signs of any fluid leakage.
- G. **PLEASE TAKE SPECIAL NOTE:** Operating the vehicle without ALL the subassemblies completely and properly installed may cause **FAILURE OF MAJOR COMPONENTS.**
- H. Test drive the vehicle.
- I. The supercharger belt stretches initially and will require adjustment in 250 to 400 miles.
- J. Periodically, verify that the supercharger pulley bolt is tight. Also verify that the belt is not slipping under boost. (Belt slippage is usually accompanied by a squealing noise at high RPM and a leveling off or fluctuating boost pressure. If belt slippage occurs, tighten tensioner.)
- 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.

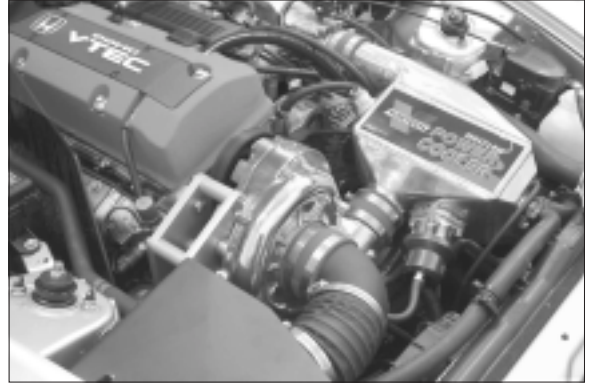


Fig. 16-a



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