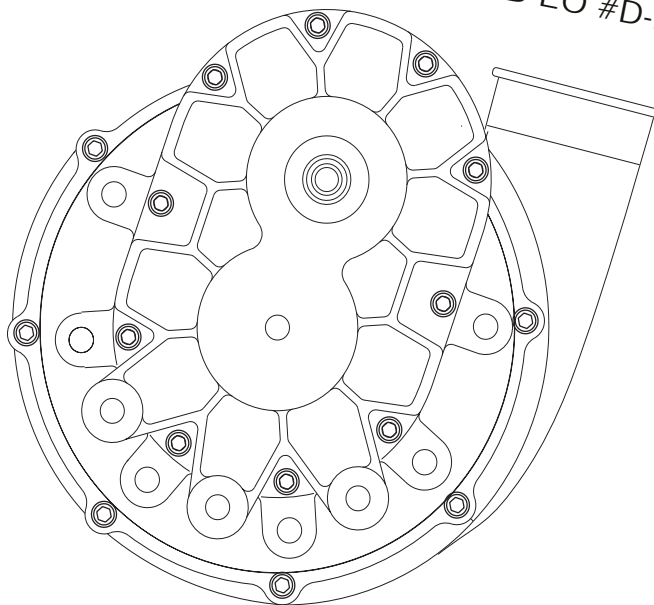


GM F-Body LT1 Supercharger System Installation Instructions

1993-1997 Model Years
50 State Smog Legal per CARB EO #D-213-17



ENGINEERING, LLC

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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 possible installers in your area.

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GM F-BODY LT1

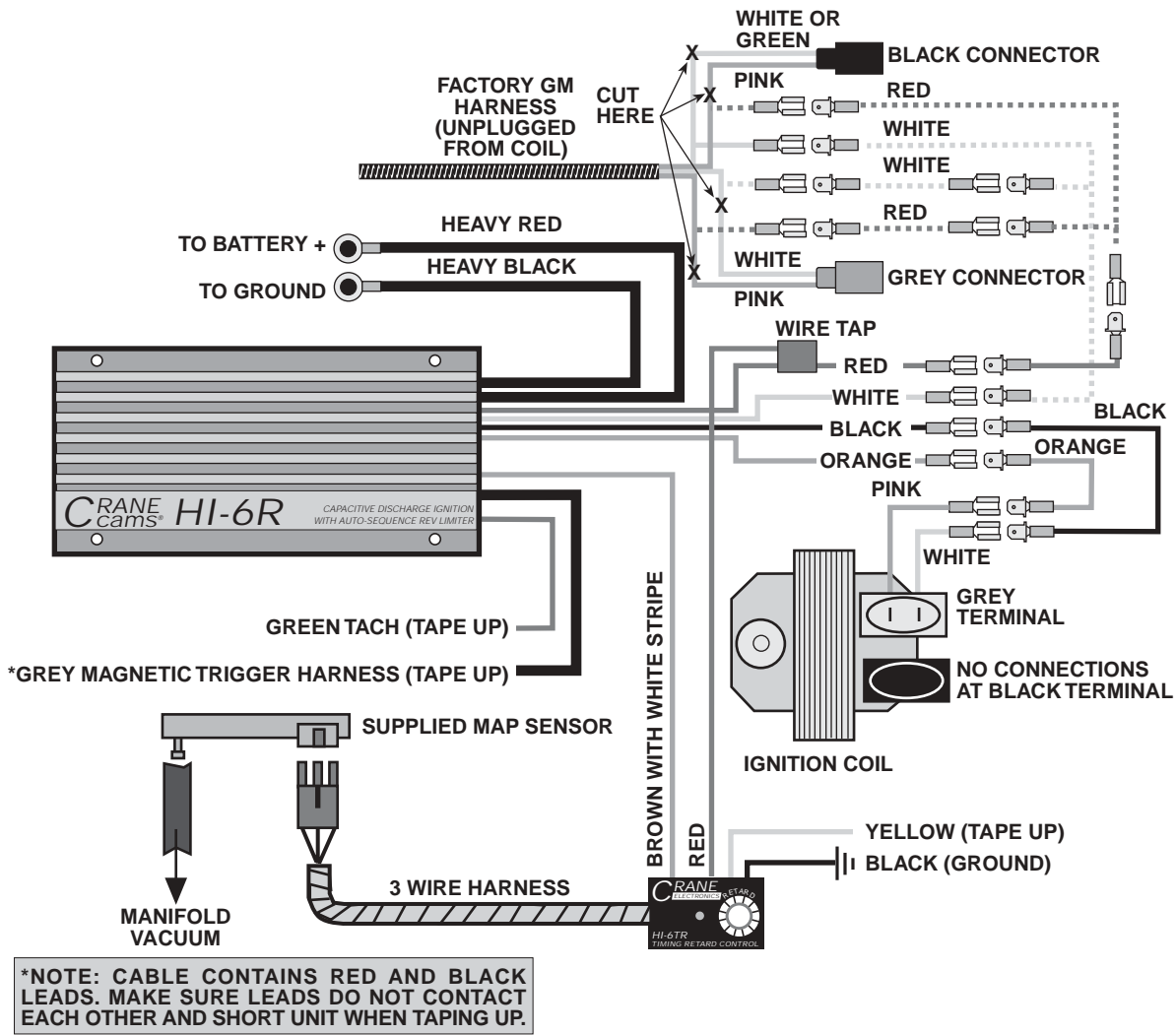
IMPORTANT NOTICES

This product is protected by state common law, copyright and/or patent. All legal rights therein are reserved. The design, layout, dimensions, geometry, and engineering features shown in this product are the exclusive property of Vortech Engineering, Inc. This product may not be copied or duplicated in whole or part, abstractly or fundamentally, intentionally or fortuitously, nor shall any design, dimension, or other information be incorporated into any product or apparatus without prior written consent of Vortech Engineering, LLC.

This kit is not designed to fit onto vehicles equipped with the factory traction control option. If you are installing this kit on one of these vehicles, additional non-Vortech parts are required. Call Vortech for further details.

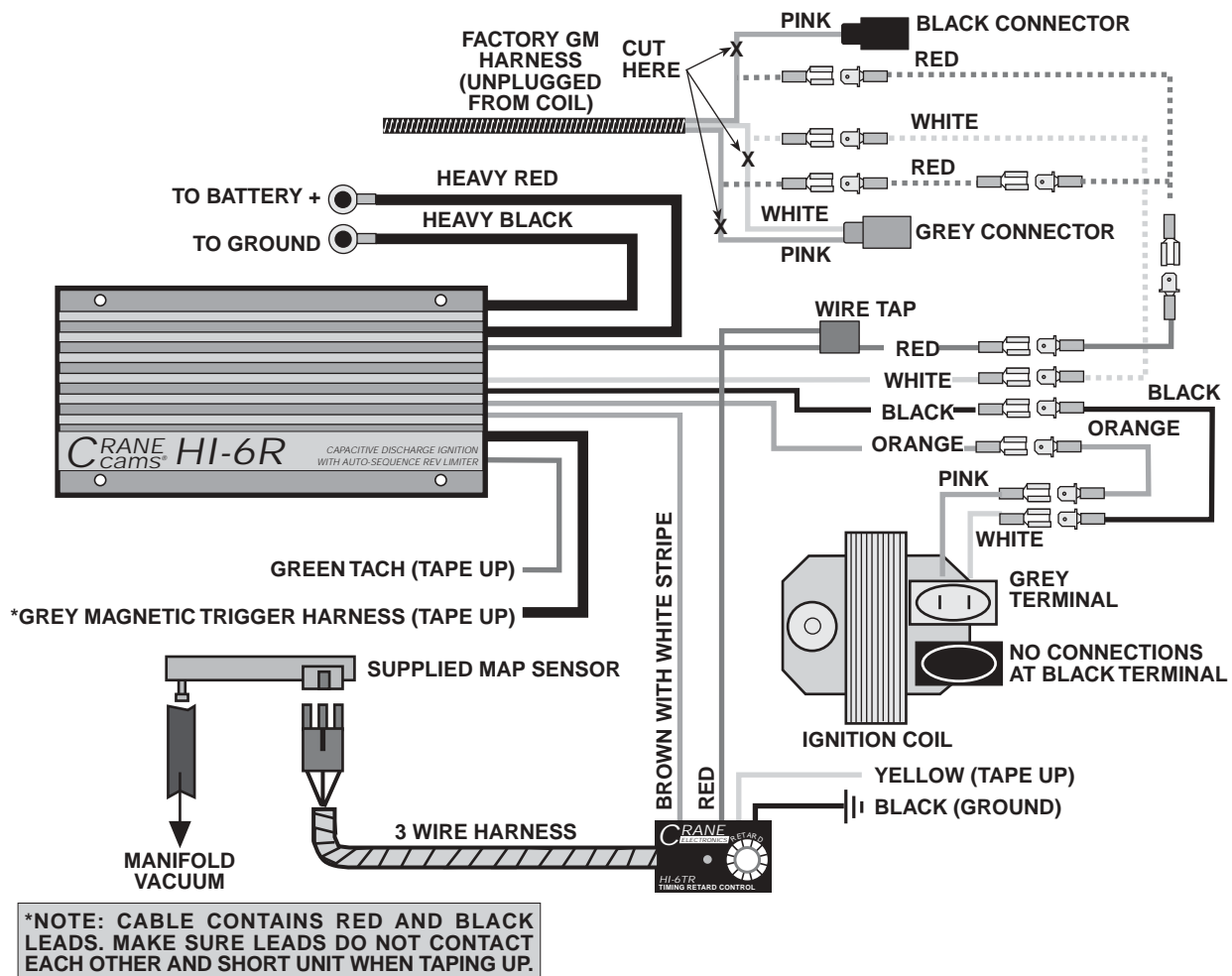
1993 GM LT1 F-BODY SUPPLEMENT HARDWIRING INSTRUCTIONS FOR KITS NOT EQUIPPED WITH A GM WIRING HARNESS

1. Unplug the grey and black connectors from the coil. Cut the connectors off from the main harness approximately 2" from the end.
2. Attach the supplied male and female connectors to lengthen the white and pink wires previously cut from the coil connectors. Connect the two pink wires together to one red wire and the two white wires to the supplied single white wire. Attach the pink and white wires to the red and white wires on the supplied ignition box.
3. Reattach the grey connector to the coil (leave the black connector disconnected). Using the supplied male and female connectors, attach the pink wire on the grey connector to the orange wire on the supplied ignition box and attach the white wire to the black wire on the ignition box.



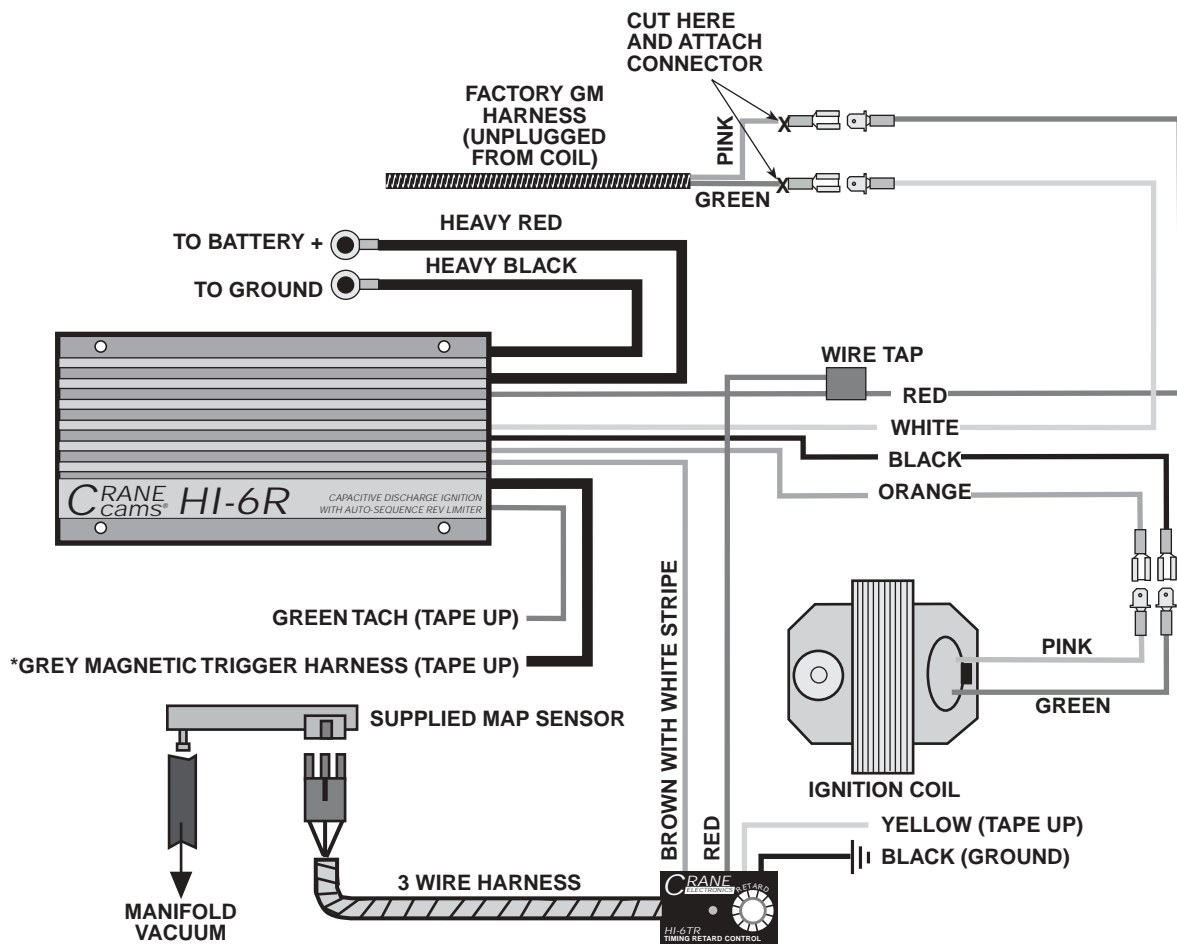
1994-95 GM LT1 F-BODY SUPPLEMENT HARDWIRING INSTRUCTIONS FOR KITS NOT EQUIPPED WITH A GM WIRING HARNESS

1. Unplug the grey and black connectors from the coil. Cut the connectors off from the main harness approximately 2" from the end.
2. Attach the supplied male and female connectors to lengthen the white and pink wires previously cut from the coil connectors. Connect the two pink wires together to one red wire. Attach the pink and white wires to the red and white wires on the supplied ignition box.
3. Reattach the grey connector to the coil (leave the black connector disconnected). Using the supplied male and female connectors, attach the pink wire on the grey connector to the orange wire on the supplied ignition box and attach the white wire to the black wire on the ignition box.



1996-97 GM LT1 F-BODY SUPPLEMENT HARDWIRING INSTRUCTIONS FOR KITS NOT EQUIPPED WITH A GM WIRING HARNESS

1. Unplug the two-wire harness from the coil. Cut the connectors off from the main harness approximately 2" from the end.
2. Attach the supplied male and female connectors to the green and pink wires previously cut from the coil connector. Connect the pink wire to the red wire and the green wire to the white wire coming from the supplied ignition box.
3. Reattach the grey connector to the coil. Using the supplied male and female connectors, attach the pink wire to the orange wire (from the ignition box) and attach the green wire to the black wire.



***NOTE: CABLE CONTAINS RED AND BLACK LEADS. MAKE SURE LEADS DO NOT CONTACT EACH OTHER AND SHORT UNIT WHEN TAPING UP.**

SPECIAL NOTICE CONCERNING THE Carroll Supercharging MAF Signal Massager

1996-97 LT1 F-Bodies may require the Carroll Supercharging MAF Signal Massager to prevent OBD-II trouble codes from being set. This part is available separately at an additional cost under P/N 4GM020-030 direct from Vortech Engineering, Inc. The MAF Signal Massager, manufactured by Carroll Supercharging Co., Inc., is serviced exclusively by the manufacturer. Carroll Supercharging Co., Inc. warrants this product to be free from defects in material and workmanship under normal use and if properly installed for 90 days. In case of malfunction, this unit will be repaired free of charge according to the terms of the warranty. If found to be defective as mentioned above, it will be repaired or replaced if returned prepaid along with proof of date of purchase. This shall constitute the sole remedy of the purchaser and the sole liability of Carroll Supercharging Co., Inc. and/or Vortech Engineering, Inc. To the extent permitted by law, the foregoing is exclusive and in lieu of all other warranties or representations whether expressed or implied, including any implied warranty of merchantability or fitness. In no event shall Carroll Supercharging Co., Inc. and/or Vortech Engineering, Inc., be liable for labor charges, special or consequential damages.

When returning this unit for service, proof of purchase must be supplied for warranty verification. Please send the unit prepaid with proof of purchase to the attention of:

Carroll Supercharging Co., Inc.
Customer Service Department
14 Doty Rd.
Haskell, NJ 07420
(973) 835-1705
(973) 835-1660 Fax
www.carrollsupercharging.com

The repaired unit will be returned as soon as possible after receipt, COD for any charges. Be sure you include a detailed account of any problems experienced, the type of vehicle and any modifications.

Should you have any technical or installation questions regarding this unit, contact Vortech Engineering, Inc., directly at (805) 247-0226, M-F 8AM-4:30PM (PST).

SPECIAL NOTICE CONCERNING THE *CRANE IGNITION SYSTEM*

The ignition system, manufactured by Crane Electronics, included in this kit is serviced exclusively by the manufacturer. Crane Electronics warrants this product to be free from defects in material and workmanship under normal use and if properly installed for a period of one (1) year from the date of purchase. In case of malfunction, this unit will be repaired free of charge according to the terms of the warranty. If found to be defective as mentioned above, it will be repaired or replaced if returned prepaid along with proof of date of purchase. This shall constitute the sole remedy of the purchaser and the sole liability of Crane Electronics and/or Vortech Engineering, Inc. To the extent permitted by law, the foregoing is exclusive and in lieu of all other warranties or representations whether expressed or implied, including any implied warranty of merchantability or fitness. In no event shall Crane Electronics and/or Vortech Engineering, Inc., be liable for labor charges, special or consequential damages.

When returning this unit for service, proof of purchase must be supplied for warranty verification. After the warranty period has expired, repair service is charged between a minimum and maximum charge. In either case, please send the unit prepaid with proof of purchase to the attention of:

Crane Electronics
Customer Service Department
530 Fentress Boulevard
Daytona Beach, Florida, 32114
(904) 258-6174
(904) 258-6167 Fax
www.cranecams.com

The repaired unit will be returned as soon as possible after receipt, COD for any charges. Be sure you include a detailed account of any problems experienced, the type of vehicle and any modifications.

Should you have any technical or installation questions regarding this unit, contact Vortech Engineering, Inc. directly at (805) 247-0226, M-F 8AM-4:30PM (PST).

1993 - 1997 GM LT1 F-Body Installation Instructions

50 State Smog Legal per CARB EO #D-213-16

Congratulations on selecting the best performing and best supported automotive supercharger available today... the VORTECH® V-2® Supercharger!

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

Vortech supercharger systems are performance improving devices. In most cases, increases in torque of 30% to 35% and horsepower of between 35% and 45% can be expected with the boost levels specified by Vortech Engineering, Inc. 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, Inc. 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 92 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 either a high grade SF rated engine oil or a high quality synthetic lubricant, and change the oil and filter at least every 3,000 miles. **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 10,000 miles with original heat range plugs as specified by the manufacturer and reset timing to factory specifications (follow the procedures outlined in 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 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" breaker bar and 4" extension
- Flat #2 screwdriver
- Phillips #2 screwdriver
- Adjustable wrench
- Open end wrenches:
3/8", 7/16", 9/16", 5/8", 3/4", 7/8", 15mm, 10mm
- 1/8" drill bit
- 1/4" drill bit
- 5/16" allen wrench
- 2 gallons 50/50 coolant and water mix
- Tubing cutter
- Hose cutter or knife
- Loctite threadlocker
- 5 quarts 20w/50 synthetic motor oil
- Spring-lock fitting disconnect tool
- Drill motor
- 1/2"-20 die
- Wire cutter/crimp tool

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

- Spark plug socket
- 8 - new OE heat range spark plugs

4GH218-050-15
4GH218-060-15



1993 GM LT1 F-Body

Part No. 4GH218-050SQ

PARTS LIST

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

Part Number	Description	Quantity	Part Number	Description	Quantity
2E228-120	SUPERCHARGER ASSEMBLY	1	4GH112-020	AIR DISCHARGE ASSEMBLY	1
2E128-120	V-2 SQ Supercharger	1	4GH012-020	Discharge tube A	1
4GH038-333	3.33" supercharger drive pulley	1	4GH012-010	Discharge tube B	1
8R101-002	Pulley retainer assembly	1	7S350-300	3-1/2" x 3" sleeve	1
			7S400-200	4" x 2" sleeve	1
4GH111-021	MOUNTING BRACKET ASSEMBLY	1	7R002-044	#44 hose clamps	2
4GH010-034	Mounting plate A	1	7R002-056	#56 hose clamps	2
4GH010-044	Mounting plate B	1	7R002-064	#64 hose clamps	2
4GH011-021	Upper mounting bracket	1	7S275-300	2-3/4" x 3" sleeve	1
4GH011-031	Lower mounting bracket	1	7U034-016	1" x 2-1/2" heater hose	1
7A375-250	3/8-16 x 2-1/2" bolts	2	7U034-016	1" x 14" heater hose	1
7J375-044	3/8" SAE washers	4	7R002-016	#16 hose clamps	4
7A375-124	3/8-16 x 1-1/4" bolts	3	7U030-046	5/32" x 26" vacuum hose	1
7K375-040	3/8" AN960 flat washers	10	7P156-082	5/32" tee	1
7A375-075	3/8-16 x 3/4" bolts	4	8D001-001	Bypass valve	1
7A375-100	3/8-16 x 1" bolts	4	7P750-100	3/4" NPT x 1" hose fitting	1
7A312-100	5/16-18 X 1" bolts	2			
7K312-001	5/16" AN washers	2	4GH116-010	CRANK PULLEY ASSEMBLY	1
7L312-000	5/16" split lock washers	2	4GH016-021	Crank pulley	1
7F312-018	5/16-18 nuts	2	4GH018-021	Factory crank pulley	1
7A375-125	3/8-16 x 1-1/4" socket head cap screws	3	7A437-175	7/16-14 x 1-3/4" bolts	3
4GV011-032	Belt tensioner	1	7J438-081	7/16" SAE washers	3
7GL10-150	10M x 1.5 nylock nut	1	7L437-075	7/16" lock washers	3
			2A048-408	Belt	1
4GH112-010	AIR INTAKE ASSEMBLY	1	4GH130-026	OIL FEED ASSEMBLY	1
4GH012-012	Air inlet tube assembly	1	7U030-026	1/4" x 49" oil feed hose	1
8H040-030	Air filter	1	7P525-067	.500 crimp ferrules	2
7U035-000	3-1/2" x 17" flex hose	1	7P250-066	#4 swivel x 1/4" hose barb fittings	2
4FA012-012	90° intake elbow	1	7P250-082	1/4 NPT x -4 90° fitting	1
7E010-075	#12 x 3/4" sheet metal bolts	4	7P250-122	1/4" pipe thread AN917 tee	1
7S350-200	3-1/2" x 2" sleeves	2	7P125-026	1/8 NPT x #4 90° fitting	1
7R002-052	#52 hose clamps	2	7P250-121	1/4" NPT x 3" steel nipple	1
7R002-056	#56 hose clamps	4	7U100-055	6" nylon tie wraps	3
5W018-050	30" 18GA yellow wire	1	7U100-066	11" nylon tie wraps	2
5W018-020	30" 18GA black wire	1	7P250-080	1/4 NPT 90° street elbow	1
5W018-010	30" 18GA red wire	1	7P250-036	#4 flare to 1/4" NPT	1
5W001-007	3/16" x 6" shrink tube	1	7S625-000	32" fire sleeve	1
7P375-045	3/8" NPT 45° street elbow	1			
7P375-017	3/8" NPT x 1/2" straight hose barb	1	4GH139-096	PCV ASSEMBLY	1
7P125-025	1/8" NPT x 5/32" hose	1	7U375-052	3/8" vacuum cap	1
4GH010-091	Air Inlet bracket	1	7U100-055	6" nylon tie wraps	5
7P125-016	1/8" NPT plug	1	7U030-036	1/2" x 58" oil drain hose	1
4GH013-010	Air filter cover	1	7R001-008	#8 stainless hose clamps	2
4GH130-036	OIL DRAIN ASSEMBLY	1	4GH238-058	FMU (with lines)	1
7U030-036	1/2" x 9" oil drain hose	1	6Z110-118	10:1 fuel management unit	1
7P375-017	3/8" NPT x 1/2" straight hose barb	1	4GH145-156	14" male fuel line assembly	1
7R001-008	#8 stainless hose clamps	2	4GH146-166	10" female fuel line assembly	1
			7P156-082	5/32" tee	1
4GH101-001	FUEL PUMP ASSEMBLY	1	7U030-046	5/32" x 36" vacuum line	1
5W001-001	Wire tap	1	7U100-055	6" nylon tie wraps	10
5W001-012	22GA red solderless connector	1			
5W001-014	Fuse holder	1	4GH136-060	SMOG PUMP RELOCATION	1
5W001-015	20A blade type fuse	1	7U100-066	11" nylon tie wraps	8
5W001-017	Large ring terminals	2	7P625-004	5/8" tee	1
5W001-011	Ring terminals	2	7R001-008	#8 stainless hose clamp	1
7F008-032	8-32 lock nuts	8	4GH010-061	Bent smog pump bracket	1
7J008-001	#8 flat washers	8	7A250-101	1/4-20 x 1" cap screws	3
7J010-001	#10 flat washers	2	7F250-021	1/4-20 nylock nuts	3
7R001-004	#4 hose clamps	2	7J250-001	1/4" SAE washers	6
7R004-002	17.0 stepless clamps	2	7E010-075	#12 x 3/4" sheet metal bolts	3
7U100-055	6" nylon tie wraps	10	7U033-000	5/8" x 35" PVC hose	1
8F101-300	Pump wiring assembly	1	7U033-000	5/8" x 20" PVC hose	1
7U032-016	3/8" x 36" fuel hose (pump inlet)	1	8H040-022	3/4" breather	1
7U031-018	5/16" x 12" fuel hose	1			
7U032-016	3/8" x 11" fuel hose (pump outlet)	1	5A101-008	HI-6 CRANE IGNITION ASSEMBLY	1
7U314-001	#8 Lord mounts	4	5A001-009	HI-6TR Crane ignition system	1
8F002-265	Inline 90° T-Rex fuel pump	1	5W001-001	Wire tap	1
7P312-002	5/16" x 1/4" NPT barbs	2	5W001-009	16-14GA male slides	11
7P250-045	1/4" NPT x 3/8" fittings	2	5W001-010	16-14GA female slides	15
7R004-003	14.5 stepless clamps	2	5W001-011	16-14GA eyelets	2
7E010-046	#8 x 3/4" sheet metal screw	1	5W001-019	12-10GA solderless connectors	4
7U100-044	4" nylon tie wraps	10	5W001-020	3/4" X 35" plastic wire loom	1
			5W012-000	72" 12GA red wire	1
4GH150-012	RELOCATION ASSEMBLY	1	5W012-010	24" 12GA black wire	1
4GH010-051	Bent coil mount bracket	1	5W018-010	18" 18GA red wire	1
7A375-075	3/8-16 x 3/4" bolts	2	5W018-020	18" 18GA black wire	1
7F375-016	3/8-16 nuts	2	5W018-060	18" 18GA orange wire	1
7J375-044	3/8" SAE washers	2	5W022-060	77" 22GA blue wire	1
7E010-150	#10 x 1-1/2" sheet metal bolts	2	7E010-046	#8 x 3/4" sheet metal screws	2
7R001-008	#8 stainless hose clamps	4	7P156-082	5/32" tee	1
7GL10-150	10M x 1.5" nylock nut	1	7U030-046	5/32" x 60" vacuum line	1
7R003-015	15/16" adel clamp	1	7U100-055	6" nylon tie wraps	6
7U033-000	5/8" x 20" PVC hose	1	7U375-001	9" Velcro hook	1
7U125-000	11-1/2" heat sleeve	1	7U375-002	9" Velcro latch	1
7U133-024	5/8" x 2" molded elbow hose	1	5A002-001	GM Wiring harness	1
7P375-020	3/8" NPT x 5/8" straight hose barb fittings	2	5W001-014	Fuse holder	1
7P500-021	1/2" 90° compression fittings	2	5W001-015	Blade type 20A fuse	1
7P625-005	5/8" 90° compression fittings	2	5W001-017	Large ring terminals	2
7P500-022	1/2" to 3/8" bushings	2	5A002-006	Map sensor	1



ENGINEERING, LLC

1994-1997 GM LT1 F-Body

Part No. 4GH218-060SQ

PARTS LIST

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

Part Number	Description	Quantity	Part Number	Description	Quantity
2E228-120	SUPERCHARGER ASSEMBLY	1	4GH112-020	AIR DISCHARGE ASSEMBLY	1
2E128-120	V-2 SQ supercharger	1	4GH012-020	Discharge Tube A	1
4GH038-333	3.33" supercharger drive pulley	1	4GH012-010	Discharge Tube B	1
8R101-002	Pulley retainer assembly	1	7S350-300	3-1/2" x 3" sleeve	1
			7S400-200	4" x 2" sleeve	1
4GH111-021	MOUNTING BRACKET ASSEMBLY	1	7R002-044	#44 hose clamps	2
4GH010-034	Mounting plate A	1	7R002-056	#56 hose clamps	2
4GH010-044	Mounting plate B	1	7R002-064	#64 hose clamps	2
4GH011-021	Upper mounting bracket	1	7S275-300	2-3/4" x 3" sleeve	1
4GH011-031	Lower mounting bracket	1	7U034-016	1" x 2-1/2" heater hose	1
7A375-250	3/8-16 x 2-1/2" bolts	2	7U034-016	1" x 14" heater hose	1
7J375-044	3/8" SAE washers	4	7R002-016	#16 hose clamps	4
7A375-124	3/8-16 x 1-1/4" bolts	3	7U030-046	5/32" x 26" vacuum hose	1
7K375-040	3/8" AN960 flat washers	10	7P156-082	5/32" tee	1
7A375-075	3/8-16 x 3/4" bolts	4	8D001-001	Bypass valve	1
7A375-100	3/8-16 x 1" bolts	4	7P750-100	3/4" NPT x 1" hose fitting	1
7A312-100	5/16-18 X 1" bolts	2			
7K312-001	5/16" AN washers	2	4GH116-010	CRANK PULLEY ASSEMBLY	1
7L312-000	5/16" split lock washers	2	4GH016-021	Crank pulley	1
7F312-018	5/16-18 nuts	2	4GH018-021	Factory crank pulley	1
7A375-125	3/8-16 x 1-1/4" socket head cap screws	3	7A437-175	7/16-14 x 1-3/4" bolts	3
4GV011-032	Belt tensioner	1	7J438-081	7/16" SAE washers	3
7GL10-150	10M x 1.5 nylock nut	1	7L437-075	7/16" lock washers	3
			2A048-408	Belt	1
4GH112-010	AIR INTAKE ASSEMBLY	1			
4GH012-012	Air inlet tube assembly	1	4GH130-026	OIL FEED ASSEMBLY	1
8H040-030	Air filter	1	7U030-026	1/4" x 49" oil feed hose	1
7U035-000	3-1/2" x 17" flex hose	1	7P525-067	.500 crimp ferrules	2
4FA012-012	90° intake elbow	1	7P250-066	#4 swivel x 1/4" hose barb fittings	2
7E010-075	#12 x 3/4" sheet metal bolts	4	7P250-082	1/4 NPT x -4 90° fitting	1
7S350-200	3-1/2" x 2" sleeves	2	7P250-122	1/4" pipe thread AN917 tee	1
7R002-052	#52 hose clamps	2	7P125-026	1/8 NPT x #4 90° fitting	1
7R002-056	#56 hose clamps	4	7P250-121	1/4" NPT x 3" steel nipple	1
5W018-050	30" 18GA yellow wire	1	7U100-055	6" nylon tie wraps	3
5W018-020	30" 18GA black wire	1	7U100-066	11" nylon tie wraps	2
5W018-010	30" 18GA red wire	1	7P250-080	1/4 NPT 90° street elbow	1
5W001-007	3/16" x 6" shrink tube	1	7P250-036	#4 flare to 1/4" NPT	1
7P375-045	3/8" NPT 45° street elbow	1	7S625-000	32" fire sleeve	1
7P375-017	3/8" NPT x 1/2" straight hose barb	1			
7P125-025	1/8" NPT x 5/32" hose	1	4GH139-096	PCV ASSEMBLY	1
4GH010-091	Air inlet bracket	1	7U375-052	3/8" vacuum cap	1
7P125-016	1/8" NPT plug	1	7U100-055	6" nylon tie wraps	5
4GH013-010	Air filter cover	1	7U030-036	1/2" x 58" oil drain hose	1
			7R001-008	#8 stainless hose clamps	2
4GH130-036	OIL DRAIN ASSEMBLY	1			
7U030-036	1/2" x 9" oil drain hose	1	4GH238-068	FMU (with lines)	1
7P375-017	3/8" NPT x 1/2" straight hose barb	1	6Z110-117	8:1 fuel management unit	1
7R001-008	#8 stainless hose clamps	2	4GH145-156	14" male fuel line assembly	1
			4GH146-166	10" female fuel line assembly	1
4GH101-001	FUEL PUMP ASSEMBLY	1	7P156-082	5/32" tee	1
5W001-001	Wire tap	1	7U129-036	5/32" x 36" vacuum line	1
5W001-012	22GA red solderless connector	1	7U100-055	6" nylon tie wraps	10
5W001-014	Fuse holder	1			
5W001-015	20A blade type fuse	1	4GH136-060	SMOG PUMP RELOCATION	1
5W001-017	Large ring terminals	2	7U100-066	11" nylon tie wraps	8
5W001-011	Ring terminals	2	7P625-004	5/8" tee	1
7F008-032	8-32 lock nuts	8	7R001-008	#8 stainless hose clamp	1
7J008-001	#8 flat washers	8	4GH010-061	Bent smog pump bracket	1
7J010-001	#10 flat washers	2	7A250-101	1/4-20 x 1" cap screws	3
7R001-004	#4 hose clamps	2	7F250-021	1/4-20 nylock nuts	3
7R004-002	17.0 stepless clamps	2	7J250-001	1/4" SAE washers	6
7U100-055	6" nylon tie wraps	10	7E010-075	#12 x 3/4" sheet metal bolts	3
8F101-300	Pump wiring assembly	1	7U033-000	5/8" x 35" PVC hose	1
7U032-016	3/8" x 36" fuel hose (pump inlet)	1	7U033-000	5/8" x 20" PVC hose	1
7U031-018	5/16" x 12" fuel hose	1	8H040-022	3/4" breather	1
7U032-016	3/8" x 11" fuel hose (pump outlet)	1			
7U314-001	#8 Lord mounts	4	5A101-008	HI-6 CRANE IGNITION ASSEMBLY	1
8F002-265	Inline 90° T-Rex fuel pump	1	5A001-009	HI-6TR Crane ignition system	1
7P312-002	5/16" x 1/4" NPT barbs	2	5W001-001	Wire tap	1
7P250-045	1/4" NPT x 3/8" fittings	2	5W001-009	16-14GA male slides	11
7R004-003	14.5 stepless clamps	2	5W001-010	16-14GA female slides	15
7E010-046	#8 x 3/4" sheet metal screw	1	5W001-011	16-14GA eyelets	2
7U100-044	4" nylon tie wraps	10	5W001-019	12-10GA solderless connectors	4
			5W001-020	3/4" X 35" plastic wire loom	1
4GH150-012	RELOCATION ASSEMBLY	1	5W012-000	72" 12GA red wire	1
4GH010-051	Bent coil mount bracket	1	5W012-010	24" 12GA black wire	1
7A375-075	3/8-16 x 3/4" bolts	2	5W018-010	18" 18GA red wire	1
7F375-016	3/8-16 nuts	2	5W018-020	18" 18GA black wire	1
7J375-044	3/8" SAE washers	2	5W018-060	18" 18GA orange wire	1
7E010-150	#10 x 1-1/2" sheet metal bolts	2	5W022-060	77" 22GA blue wire	1
7R001-008	#8 stainless hose clamps	4	7E010-046	#8 x 3/4" sheet metal screws	2
7GL10-150	10M x 1.5" nylock nut	1	7P156-082	5/32" tee	1
7R003-015	15/16" adel clamp	1	7U030-046	5/32" x 60" vacuum line	1
7U033-000	5/8" x 20" PVC hose	1	7U100-055	6" nylon tie wraps	6
7U125-000	11-1/2" heat sleeve	1	7U375-001	9" Velcro hook	1
7U133-024	5/8" x 2" molded elbow hose	1	7U375-002	9" Velcro latch	1
7P375-020	3/8" NPT x 5/8" straight hose barb fittings	2	5A002-001	GM Wiring harness	1
7P500-021	1/2" 90° compression fittings	2	5W001-014	Fuse holder	1
7P625-005	5/8" 90° compression fittings	2	5W001-015	Blade type 20A fuse	1
7P500-022	1/2" to 3/8" bushings	2	5W001-017	Large ring terminals	2
7P625-002	5/8" Hose Mender	1	5A002-006	Map sensor	1

1. PREPARATION/REMOVAL

- A. Disconnect the negative cable at the battery.
- B. Jack up the front of the vehicle and secure with jack stands or use a lift.
- C. Crank the engine over just until the arrow on the crankshaft pulley points in the 6 o'clock position (straight down).
- D. Disconnect and set aside the anti-roll bar.
- E. Drain the radiator completely by removing the radiator cap and opening the petcock on the lower passenger's side. Catch the coolant in a clean container to reuse or dispose of properly.
- F. Unplug the intake air temp sensor connector. Remove the sensor from the intake elbow. Unplug the MAF sensor located between the intake elbow and air filter. (1993 models are not equipped with MAF meters.) Remove the unit and set aside, taking care to protect the wire elements inside. Remove the intake elbow/resonator assembly. (On 1995-1997 models, the 5/32" hose must be removed from the inlet elbow.) Using an upholstery fastener removal tool, remove the entire air intake assembly including the air box and filter.

NOTE: *On models equipped with factory "ram air" induction, remove the air inlet system entirely and reinstall the fuel rail bolts originally securing the air filter box.*

- G. Remove the factory air pump from the vehicle.
- H. Unplug the ignition coil and ignition module connections along with the attached ground wires and set aside. Remove the coil and related hardware.
- I. If the vehicle is equipped with an engine oil cooler, remove the upper radiator hose assembly (driver's side) from the radiator, water pump and intake manifold. Set the complete assembly and clamps aside for future reassembly.
- J. Remove the 5/8" oil cooler hose from the water pump. Remove the rubber 5/8" hose (on the bottom driver's side of the radiator) that connects to the oil filter/cooler assembly (do not remove the entire cooling line from the vehicle).
- K. Remove the accessory drive belt.
- L. Remove the three (3) bolts that attach the harmonic balancer to the crankshaft hub (do not remove the hub or center bolt) and remove the balancer.
- M. Label and disconnect the four (4) driver's side spark plug wires from the distributor module.
- N. Removing the driver's side radiator fan eases supercharger mounting somewhat, but is not necessary to complete installation.

2. OIL COOLER LINE MODIFICATIONS

NOTE: On vehicles not equipped with external oil cooler lines, skip the steps below and move onto steps 2-H, 2-J and 2-K.

- A. Remove the engine oil filter.
- B. With both coolant lines disconnected from the radiator and water pump, remove the clamp securing the cooler line assembly to the oil pan. Spreading the clamp slightly may be necessary.
- C. Remove the bolt securing the oil cooler line assembly to the oil filter base. Carefully remove the entire oil cooler line assembly by pulling them through toward the front or the rear of the engine. Use caution not to lose or damage the sealing washers.
- D. Using a tubing cutter or hacksaw, carefully cut the coolant lines as shown in *Figures 2-a, 2-b*.
- E. Thread the supplied 5/8" barb and 3/8" NPT x 5/8" or 1/2" (depending on model year) x 90° compression fittings together. Temporarily install a compression fitting assembly onto the end of each of the cooler lines to aid in installation later. Remove the compression assembly. The nuts and ferrules should remain on the tubes.
- F. Reinstall the cooler line assembly onto the oil filter base using care not to damage the sealing washers.
- G. Remount the 90° compression fitting assemblies back onto the installed cooler line assembly. The 5/8" brass barb must point up in approximately the two o'clock position. (See *Figure 2-C*.)
- H. For clearance purposes, the 5/8" elbow that exits the water pump must be rotated carefully upward to the two o'clock position. Using a small piece of pipe or cylindrical object, insert the object into the elbow and rotate the elbow counterclockwise. Use caution not to distort or kink the tube. (See *Figure 2-d*.)

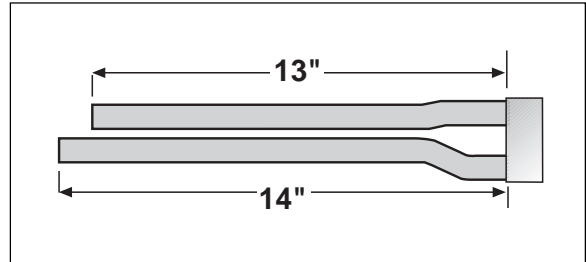


Figure: 2-a
1995-97 Models

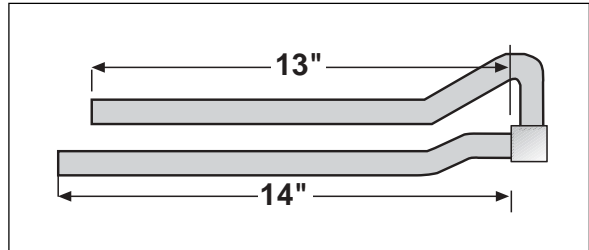


Figure: 2-b
1993-94 Models

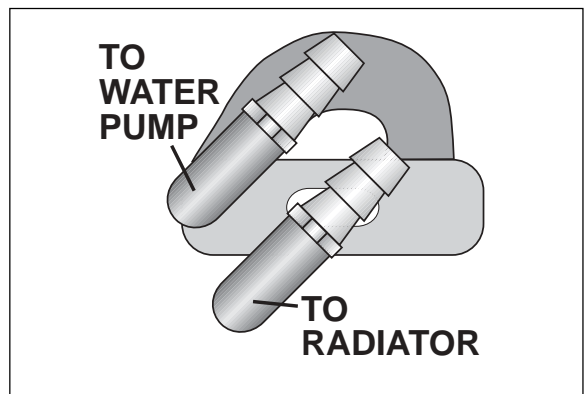


Figure: 2-c

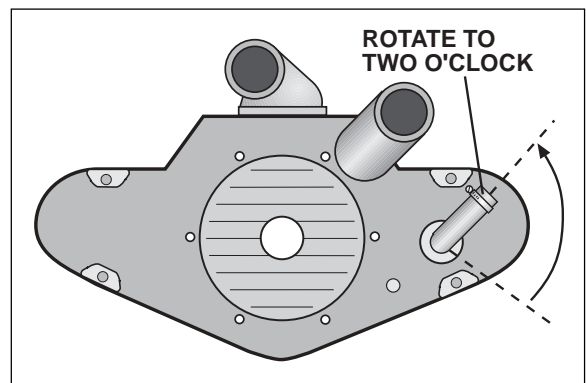


Figure: 2-d

2. OIL COOLER LINE MODIFICATIONS, cont'd.

- I. Install the 5/8" x 20" long heater hose onto the upper oil cooler line fitting. Slide the supplied 12" long heat sleeve over the heater hose to protect it from exhaust heat. Route the hose up and around to the 90° fitting on the water pump. (The hose will run near the exhaust manifold.) Secure both ends of the hose with clamps provided. (See *Figure 2-e*.)
- J. Install the 5/8" x 24" long heater hose with the 90° molded end to the lower left side fitting on the radiator. (The 90° end of the hose must be trimmed slightly to fit as close as possible to the radiator.) Route the hose along the frame (front to rear) and around to the lower oil cooler line barb fitting. (For non-oil cooler applications, reattach the factory coolant hose to the previously rotated elbow located on the water pump. Connect this hose to the 5/8" hose coming from the lower radiator using the supplied 5/8" hoseender and #8 clamps. Slide the orange heat sleeve over the hoses to protect them from exhaust heat. Trim hose length if necessary. Clamp and secure both ends of the hose using the supplied #8 clamps and tie wraps to avoid sharp corners and moving parts. An adel clamp and 10mm nut have been supplied to secure the hose to the anti-roll bar mount.
- K. Refill cooling system.

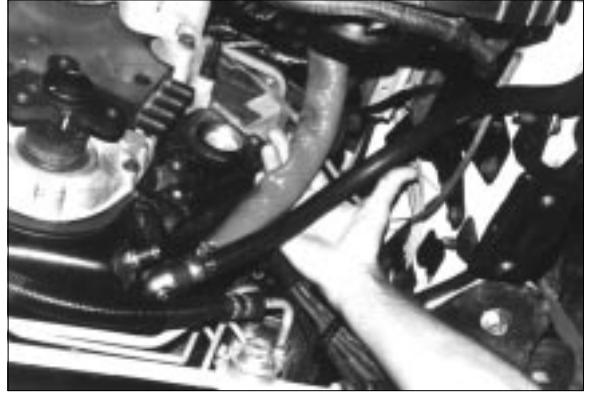


Figure: 2-e

3. CRUISE CONTROL RELOCATION

- A. Using the template on page 5, mark the splash guard located in the front lower left side of the vehicle.
- B. Remove the splash guard and cut out the marked area for air inlet tube clearance. (See *Figure 3-a*.)
- C. Locate the cruise control box below the driver's side front frame rail, and remove by disconnecting the electrical connection and fasteners.
- D. Disconnect the control box from its mounting bracket by removing the three bolts and splitting the plastic cable guard.
- E. Rotate the unit and mount it on the side of the frame rail using the front bolt hole of the original bolt pattern on the frame, bolt and front tab. Secure the two front mounting tabs by drilling two 1/8" holes and installing the supplied #10 x 1-1/2" sheet metal screws. (See *Figures 3-b, 3-c*.)
- F. Plug the electrical connector back into the unit (you may find it necessary to reroute the wiring through the air intake opening to reach the control box). Check all cables and connections for routing and possible binding. Use the supplied tie wraps to secure.

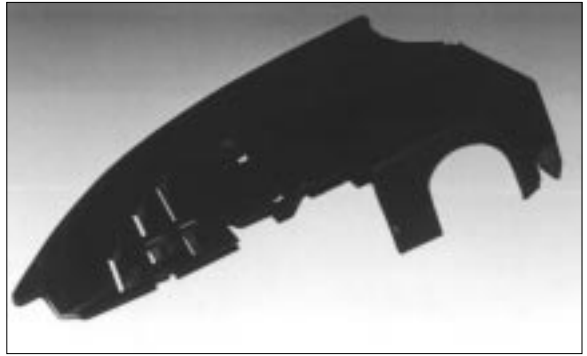


Fig. 3-a



Fig. 3-b

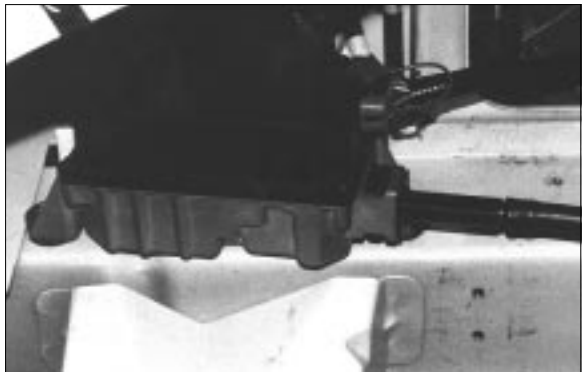
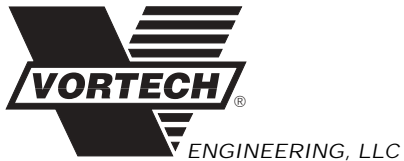
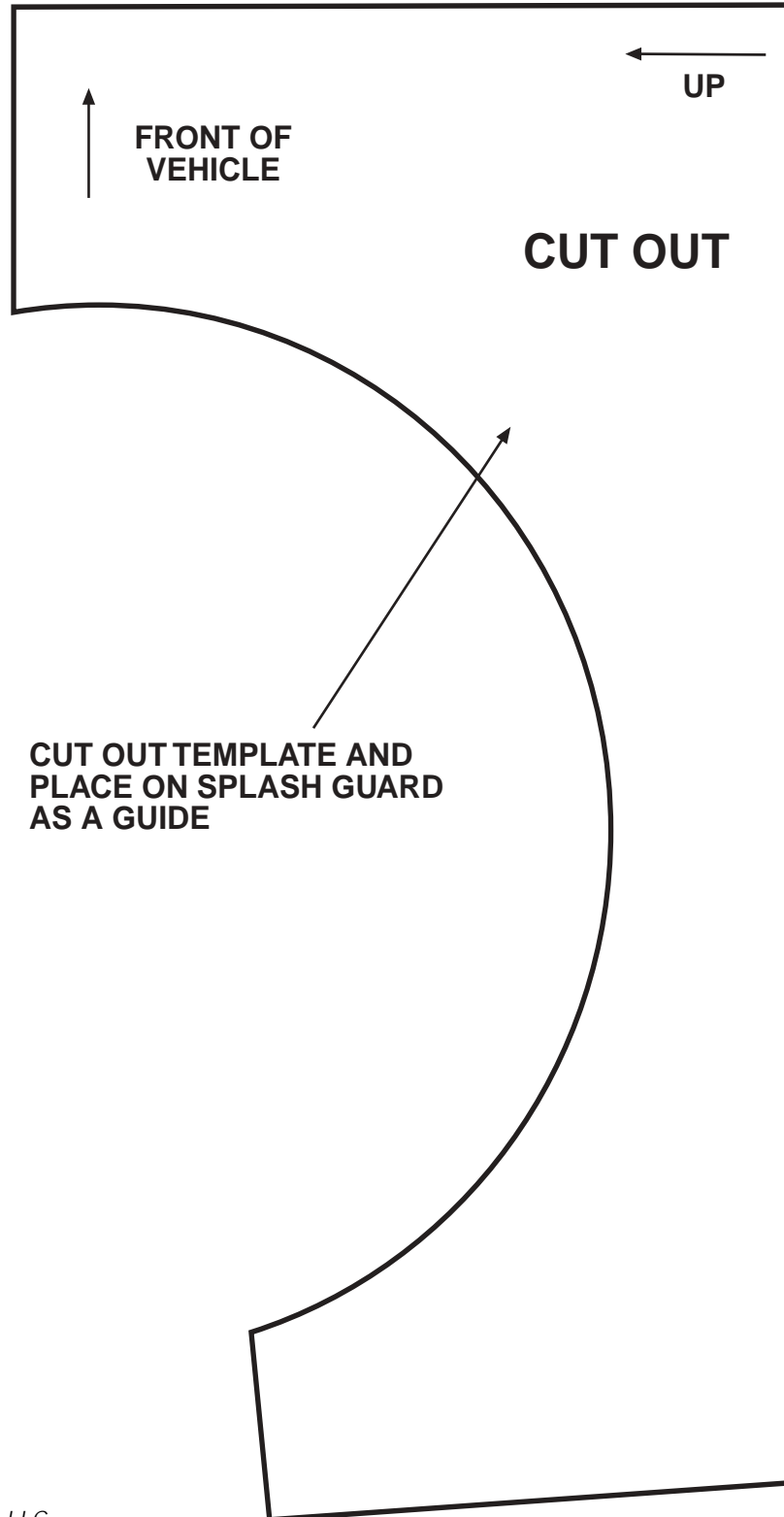


Fig. 3-c

TEMPLATE

SPLASH GUARD 1993-1997 LT1 F-BODY



4.1 AIR PUMP MODIFICATION AND RELOCATION (1993 MODELS)

- A. Unplug the wiring assembly, clamps and hoses from the air pump.
- B. Remove the unit from the mount by removing the mounting nuts. Remove the pump mount and spark plug wire hold-down from the vehicle.
- C. Remove the 90° rubber elbow from the check valve and TEE on the driver's side exhaust manifold. Rotate the TEE 180°. Remove the hose that was previously connected to the air pump and discard.
- D. Cut a 45° bend out of the original 3/4" air pump inlet hose and attach to the check-valve and TEE. (See *Figure 4-a.*) Secure with tie wraps.
- E. Take the supplied piece of 5/8" x 35" hose and remove 12". Attach the 23" piece to the remaining branch on the air pump discharge TEE.
- F. Place the air pump relocation bracket near the left side inner fender panel (former air filter assembly location). Position the pump bracket so that the pump discharge and inlet tubes face the engine. Mark and drill holes and mount the bracket using the #12 x 1" sheet metal screws provided. (See *Figure 4-b.*)
- G. Using the three 1/4-20 x 1" bolts, nylock nuts and washers, secure the air pump to the relocation bracket.
- H. Reroute the pump power cable up to its new location and attach to the pump.
- I. Attach the remaining end of the 5/8" x 23" hose to the air pump discharge and secure with a tie wrap.
- J. Remove a straight 1-1/2" long section from the original air pump inlet hose. Attach the hose and the supplied 3/4" breather to the air pump inlet.

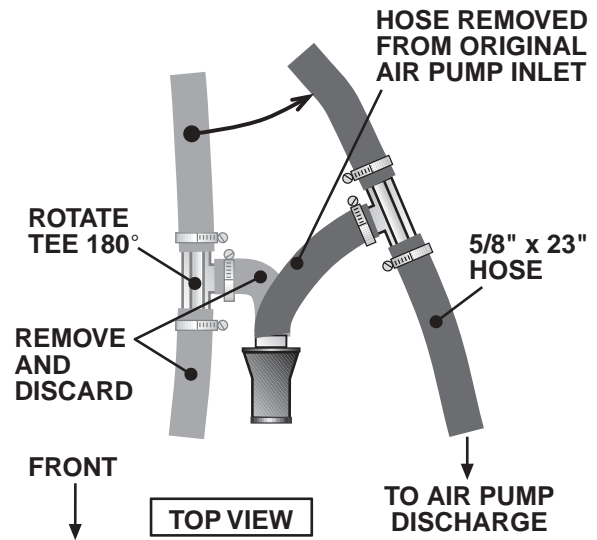


Figure: 4-a



Figure: 4-b

4.2 AIR PUMP MODIFICATION AND RELOCATION (1994-97 MODELS)

- A. Unplug the wiring assembly, clamps and hoses from the air pump.
- B. Remove the unit from the mount by removing the mounting nuts. Remove the pump mount and spark plug wire hold-down from the vehicle.
- C. Using a tubing cutter or hacksaw, cut the 5/8" steel air line that runs from the passenger's side exhaust manifold to the driver's side exhaust manifold. Make the cut in the area shown in *Figures 4-c, 4-d* (approximately 2" off of the crank).
- D. Attach the supplied 5/8" x 35" hose and #8 clamp onto the previously cut air pump tube.
- E. Route the hose along the power steering lines (on the rack and pinion assembly) and up through and between the engine-to-frame area on the driver's side using tie wraps where necessary.
- F. Rotate the left side check valve elbow on the exhaust manifold 180° from its original position (it should end up pointing to the rear).
- G. Cut the 5/8" factory air pump discharge hose as shown in *Figures 4-e, 4-f*. Attach the hose to the supplied 5/8" TEE and exhaust manifold check valve as shown in *Figures 4-h, 4-i* on page 8.

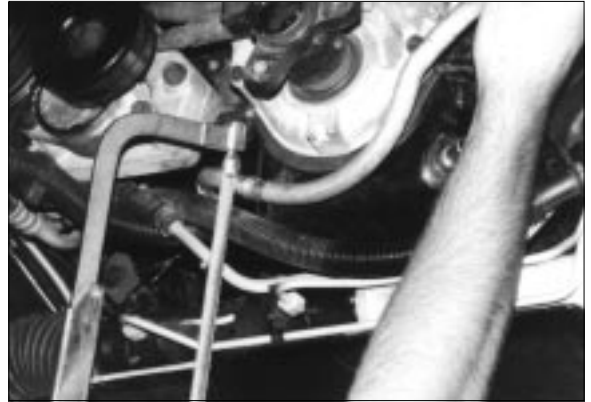


Figure: 4-c

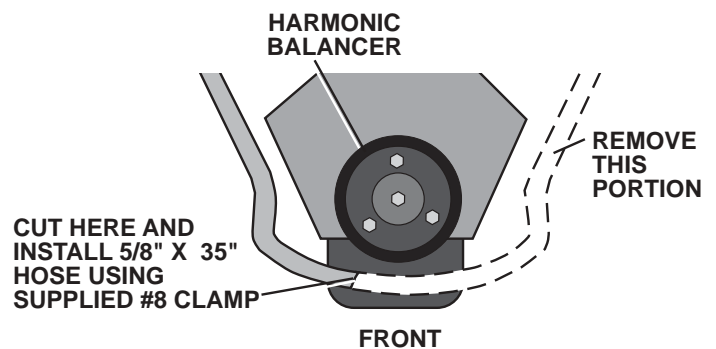


Figure: 4-d

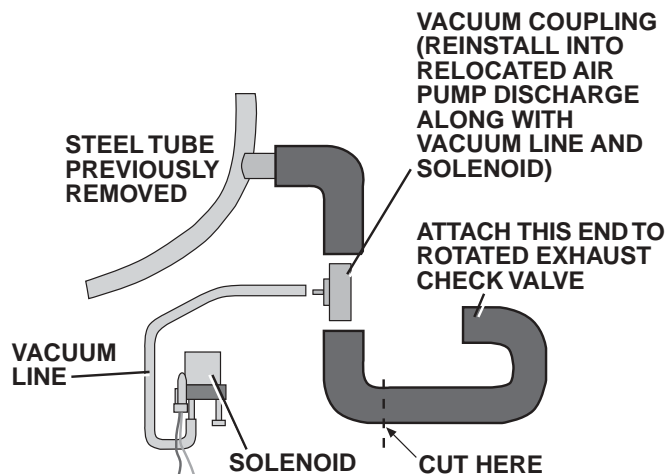


Figure: 4-e - 1996-97 Models

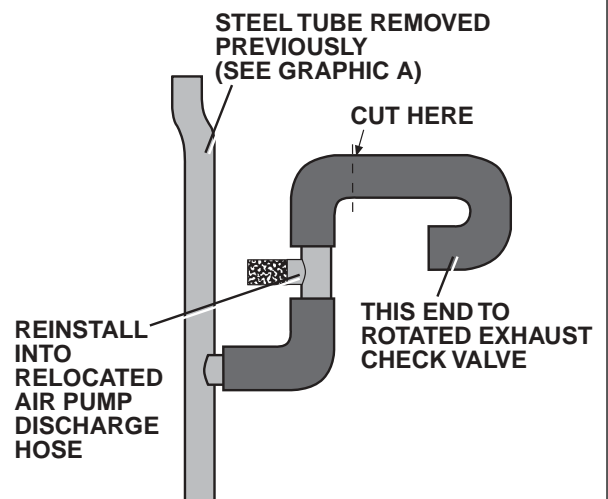


Figure: 4-f - 1993-95 Models

4.2 AIR PUMP MODIFICATION AND RELOCATION (1994-97 MODELS) cont'd.

- H. Place the air pump relocation bracket near the driver's side inner fender panel (former air filter assembly location). Position the pump bracket so that the pump discharge and inlet tubes face the engine. Mark and drill holes and mount the bracket using the #12 x 1" sheet metal screws provided. (See *Figure 4-g*.)
- I. Using the three 1/4-20 x 1" bolts, nylock nuts and washers, secure the air pump to the relocation bracket.
- J. Reroute the pump power cable up to its new location and attach to the pump. (See *Figure 4-h*.)
- K. Install the 5/8" x 20" long piece of hose onto the TEE fitting connected to the exhaust manifold check valve. Connect the remaining end to the air pump discharge. (On 1995 and newer vehicles, install the vacuum breather/check valve into the air pump discharge hose along with the vacuum line and solenoid, if so equipped.) Attach the remaining end of the 5/8" x 35" hose to the last branch on the 5/8" TEE. Secure with the supplied tie wraps. (See *Figure 4-i*.)
- L. Remove a straight 1-1/2" long section from the original air pump inlet hose. Attach the hose and the supplied 3/4" breather to the air pump inlet.



Figure: 4-g



Figure: 4-h

5. OIL FEED LINE

- A. The supercharger uses engine oil for lubrication and must have an oil feed line connected to a filtered oil access on the engine and an oil return or drain. The return is a gravity drain and should be routed so a gradual drop is provided and connected to the pan above oil level and away from suspension components or exhaust headers or pipes.

WARNING: The oil system contains a small orifice that is easily plugged. DO NOT USE any type sealant on any of the threads. Instead use clean engine oil. Disassemble and blow out the entire line if you have any doubts.

- B. Locate the oil pressure sender which is just above the oil filter assembly. (See Figure: 5-a.) (1995-97 models have the oil sending unit located in a different position.)

NOTE: For 1995-97 models, skip steps C and D.

- C. Unplug the sender wiring harness.
- D. Using a 1-1/16" oil pressure sender socket, remove the unit from the block.
- E. Preassemble the 3" x 1/4" NPT nipple, 1/4" NPT TEE as shown and install into the sender port of the block. (See Figure: 5-b.) For 1995-97 models, remove the 1/4" NPT pipe plug above the oil filter and install the 3" x 1/4" NPT nipple, 1/4" NPT female elbow and #4 x 1/4" NPT straight fitting into the block using engine oil on the threads for lubrication.
- F. Reassemble the mounting fitting and oil sender using engine oil on the pipe threads. Teflon tape, paste or other sealant is not recommended as it might loosen and cause blockage of the oil feed orifice, resulting in supercharger failure.



Figure: 5-a
Oil Pressure Sender

NOTE: Install the supplied piece of metallic heat sleeve onto the oil feed hose before attaching to the vehicle.

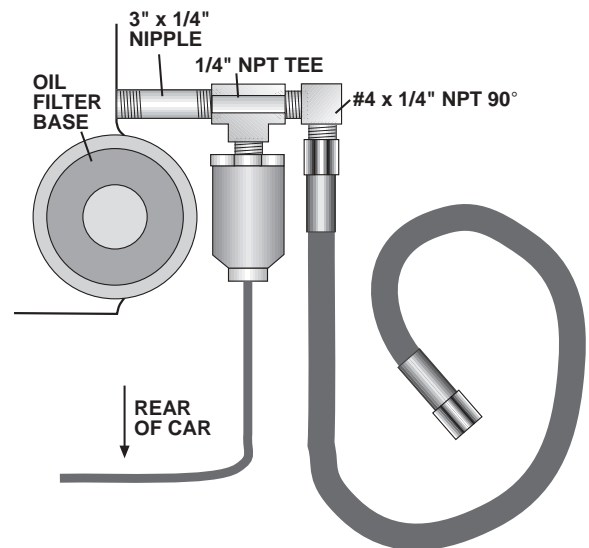


Figure: 5-b
View From Underneath Vehicle - 1995
and Later Vehicles Will Not Have an Oil
Pressure Sending Unit Installed in Feed Line.

5. OIL FEED LINE cont'd.

- G. Attach one end of the feed hose assembly to the 90° flare previously mounted in the block. Route the line around the oil filter mount, along the oil cooler tubing and out to the front of the engine block. Take care to tie wrap and protect the line from kinking, abrasion and high heat areas. (See *Figure 5-c*.)
- H. Temporarily cover the end of the hose and protect it from dirt until connecting to the supercharger.

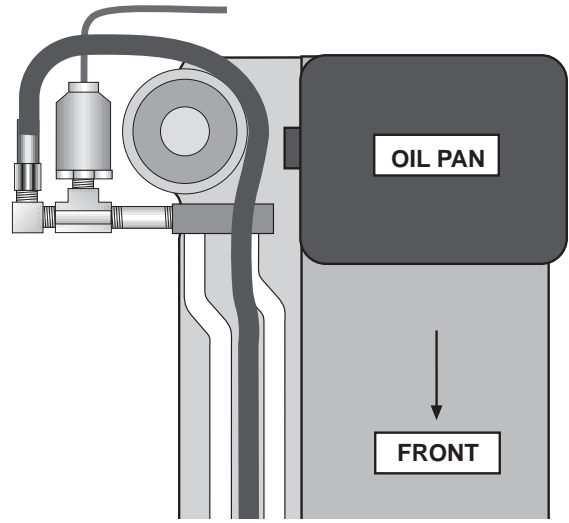


Figure: 5-c

6. OIL DRAIN LINE

- A. To provide an oil drain for the supercharger, it is necessary to make a hole in the oil pan. Locate and mark hole. (See *Figures 6-a, 6-b*.) It is best to punch the hole rather than drill.
- B. Remove paint around the hole area.
- C. Use a small center punch to perforate the pan and expand hole, switch to a larger diameter punch and expand the hole further to approximately 9/16" diameter. Most punches are made from hexagon material and may be placed in a socket with an extension to make this procedure easier. Use caution so that the hole is not enlarged too much and punch does not contact the crankshaft.
- D. Tap the hole with a 3/8" NPT tap approximately 1/4" deep. Pack the flutes of the tap with heavy grease to hold chips. Use a small magnet to check for any stray chips.

NOTE: *This method of rolling over the lip of the hole and tapping it works very well if carefully done and should cause no problems.*

- E. Thoroughly clean the threaded area. Apply a small amount of silicone sealer to the new threads. Apply more sealer to the 3/8" NPT hose fitting and secure in hole. Make sure a seal is formed all around the fitting.
- F. Drain the engine oil, install a new filter and refill with fresh oil.

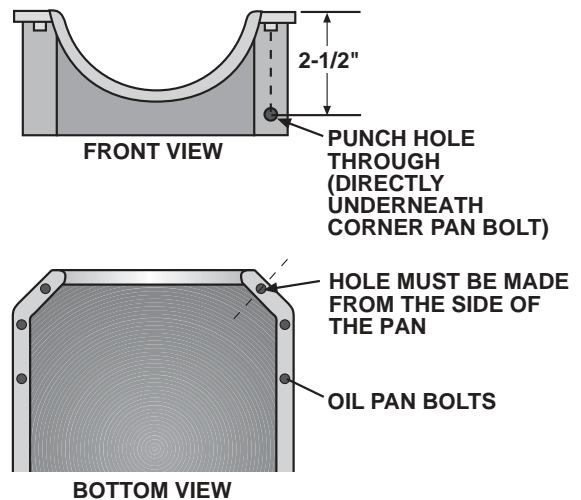


Figure: 6-a



Figure: 6-b

7. SUPERCHARGER MAIN BRACKETS

- A. Install the lower mounting bracket to the front driver's side of the engine block using two 3/8-16 x 1-1/4" socket head bolts supplied. (See *Figures 7-a, 7-b.*)
- B. Install the upper mounting bracket to the cylinder head and engine block using the two 3/8-16 x 2-1/2" and 3/8-16 x 1-1/4" socket head bolt. (See *Figure 7-c.*)



Figure: 7-a

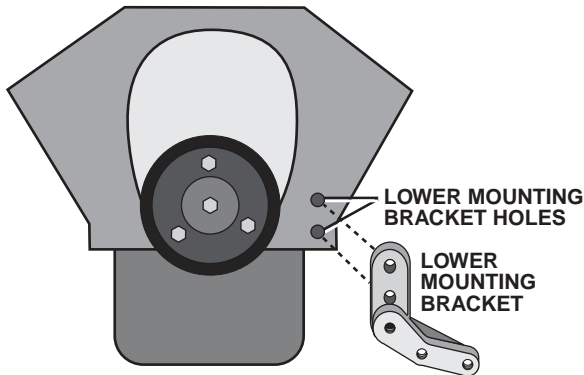


Figure: 7-b

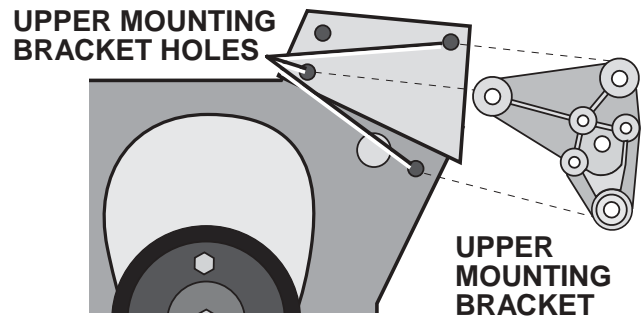


Figure: 7-c

8. SUPERCHARGER MOUNTING

- A. Reinstall the four driver's side spark leads to the distributor module.
- B. On 1995-97 models only, separate the distributor ventilation hoses from the black flex loom. Remove the vacuum hose from the blue one-way valve (next to the throttle body) and cut approximately 7-1/2" off of the end. Run the line back up in between the water pump and the upper main bracket to the blue valve and reconnect. Temporarily leave the remaining 5/32" fresh air hose down below. (See *Figure 8-a.*)
- C. Attach the supplied 1/2" x 9" drain hose to the supercharger oil drain using the supplied #8 clamp. Rotate the clamp so that the screw housing will not interfere with the mounting plate when installed.

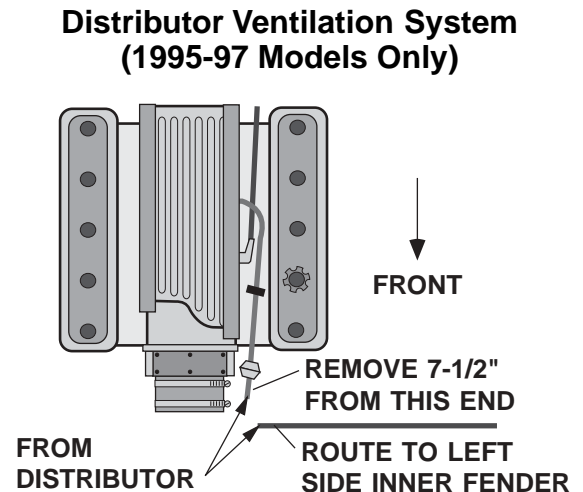


Figure: 8-a

8. SUPERCHARGER MOUNTING, cont'd

- D. Attach mounting plates A and B together (see *Figure 8-b*) using two 5/16-18 x 1" bolts and 5/16" nuts, washers and lock washers.
- E. Fasten the supercharger plate assembly to the supercharger unit using the four supplied 3/8-16 x 1" bolts and washers.
- F. From beneath the car, carefully guide the supercharger and mounting plate assembly up and onto the two mounting brackets.
- G. Using the six supplied 3/8-16 bolts and AN washers (see *Figure 8-c*), attach the supercharger mounting plate to the mounting brackets. Use caution when mounting the supercharger so that no hoses, wires, etc. are being pinched or cut.

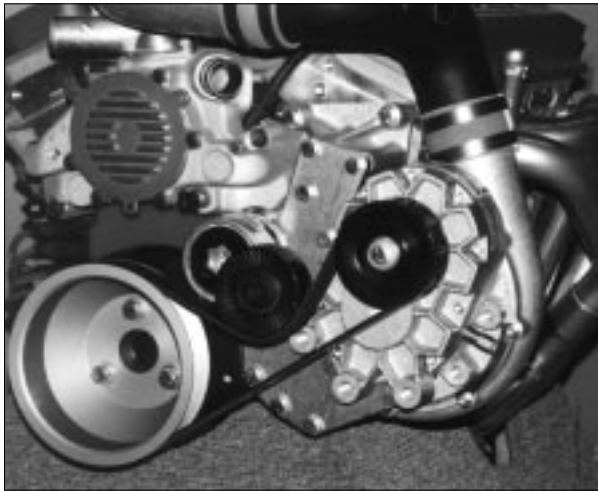


Figure: 8-d

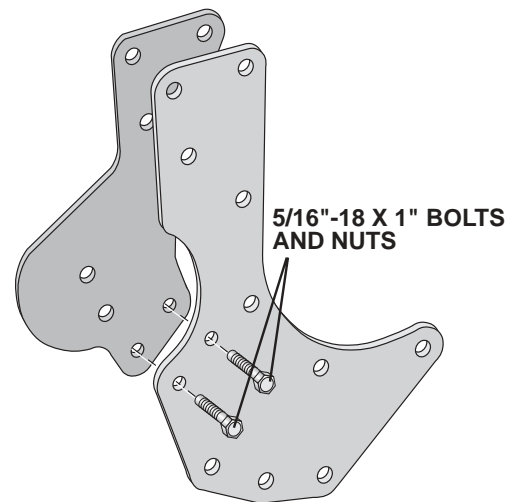


Figure: 8-b

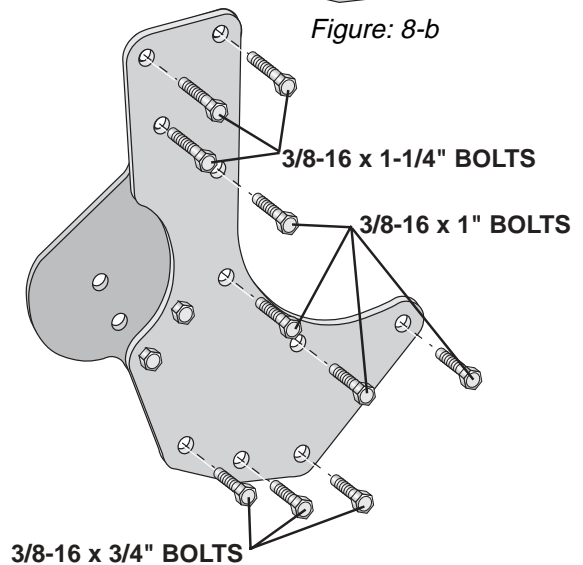


Figure: 8-c

9. HARMONIC BALANCER, PULLEYS AND DRIVE BELT

- A. Install the supplied spring belt tensioner to the supercharger mounting plate using the 10mm x 1.5 hardware provided.
- B. Be sure that both of the mating surfaces of the crank and balancer are clean and free from rust and dirt.
- C. Slide the supplied harmonic balancer onto the crankshaft hub. Rotate the balancer on the crankshaft hub to find proper bolt hole alignment. Place the Vortech supercharger crank pulley onto the new balancer also lining up the bolt holes. Use the supplied 7/16-14 x 1-3/4" bolts with Loctite and start all three bolts; then torque to 60 ft./lbs.
- D. Install the factory accessory and supercharger belts.
- E. Check for clearance at supercharger pulley and upper radiator hose. Rotate hose and/or use tie wraps to keep hose from rubbing the pulley and belt.

10. AIR INLET DUCT

- A. Attach the appropriate fitting into the 1/8" NPT bung on the plastic air inlet tube:
 - a. **1993-94 models** - 1/8" NPT plug
 - b. **1995-97 models** - 1/8" NPT x 5/32" 90° fitting
- B. Slip the 3-1/2" x 2" sleeve onto the supercharger inlet using the supplied #56 clamps. Slide the short end of the 3-1/2" plastic elbow into the sleeve. Rotate the elbow so that it points downward in approximately the five o'clock position (viewed from the front).
- C. Mark and drill four 1/8" holes to mount the plastic air inlet tube by placing the tube and bracket assembly on the bottom of the driver's side frame rail. Position the tube mounting flange in the center of the rail (left to right) and in between the anti-roll bar mount and the radiator core support. Secure the assembly by installing the supplied #8 sheet metal screws into the frame. (See *Figure 10-a*.)
- D. Reinstall anti-roll bar with the factory hardware.
- E. Slide the 3-1/2" x 17-1/2" flex hose onto the supercharger elbow and the air filter tube. Secure with the supplied #52 clamps.
- F. The MAF plug harness (1993 models are not equipped with MAF meters) must be lengthened to accommodate relocation of the MAF meter using the supplied 30" lengths of wire. Carefully cut the MAF wires, add heat shrink tubing and solder extensions into place.

NOTE: Double check the wire to wire (MAF and harness) relationship before soldering and sealing.

- G. Install the 3-1/2" x 2" sleeve, MAF meter (directional) and air filter to the open end of the air filter tube. (See *Figure 10-c*.) Secure all pieces with supplied clamps. Reconnect the extended MAF wiring connector to the MAF unit.
- H. Install the air filter onto the MAF meter and secure with the clamp provided. Attach the supplied air filter cover to the top-half of the air filter. (See *Figure 10-b*.) The cover must be installed so that rain water etc. cannot drip onto the air filter. 1995-1997 Models Only: Attach the 5/32" distributor breather line to the fitting located near the MAF meter on the air inlet duct.

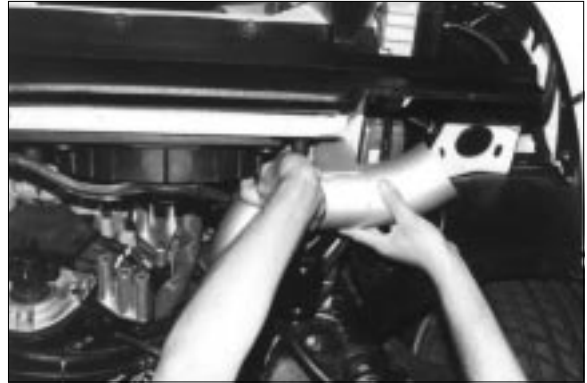


Figure: 10-a

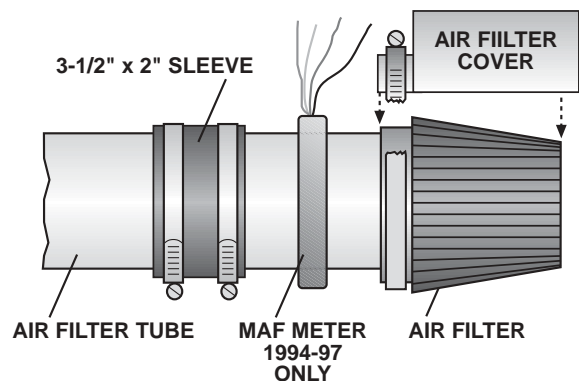


Figure: 10-b



Figure: 10-c - Air Filter Cover Not Shown

10. AIR INLET DUCT, cont'd.

- I. Reinstall the plastic splash guard (previously trimmed) into the lower left fenderwell.

11. OIL DRAIN HOSE

- A. Connect the 1/2" x 9" drain hose from the supercharger to the 1/2" barb in the oil pan. Make sure that there are no dips or kinks in the drain hose. Trim if necessary.
- B. Secure both ends with the supplied #8 clamps.

12. OIL FEED HOSE CONNECTION

- A. Route the oil feed line up to the supercharger and connect to the supercharger oil feed.
- B. Use care to ensure that there are no kinks, sharp bends or routing near moving objects.

13. COIL RELOCATION AND IGNITION BOX MOUNTING

- A. Use the supplied 3/8-16 x 3/4" bolt to reconnect the ground wires to the cylinder head. Use the upper left hand hole in the front of the driver's side cylinder head to mount the bolt (include the small bracket securing the 1/4" piece of plastic tubing with the ground wires).
- B. Using the two supplied 3/8-16 x 3/4" bolts, washers and nuts, fasten the coil and ignition module assembly to the Vortech coil bracket. (See *Figure 13-a*.)

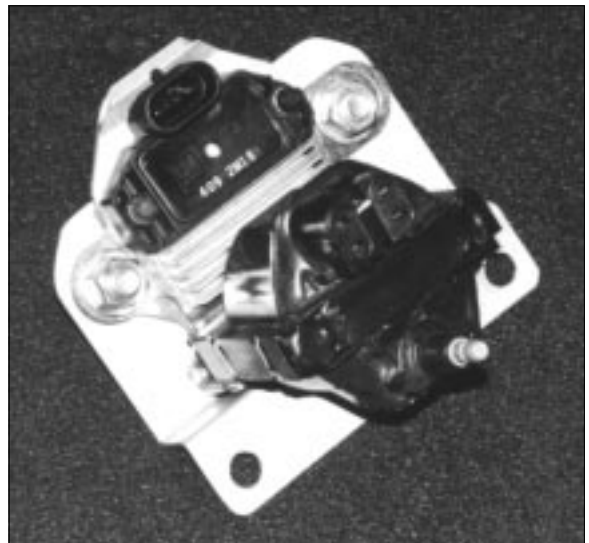


Figure: 13-a

13. COIL RELOCATION AND IGNITION BOX MOUNTING, cont'd.

- C. Mount the coil and bracket assembly to the upper supercharger mounting bracket. Use the two 3/8-16 x 1-1/4" bolts previously installed on the supercharger bracket to mount the coil assembly.
- D. Reinstall the upper radiator and coolant hoses.
- E. Mount the supplied ignition control box onto the vehicle in the flat area behind the headlight, next to the air pump. (See *Figure 13-b*.)
- F. Route the heavy black cable to a clean ground. Extend the heavy red cable with the supplied wire and connector. Route the red cable to the (+) battery terminal.
- G. Install the supplied wiring harness to the coil and ignition box following *Figure 13-e*. Use the supplied 1/4" male and female quick disconnects.
- H. Mount the timing control knob in an easily accessible position from the drivers seat. Attach the black wire to a clean ground and the red wire to a keyed on 12V power source or to the red wire from the Vortech ignition box. Tape up the end of the yellow wire to prevent contact with any metal surface. Route the three wire harness to the supplied map sensor and attach. Connect a manifold sourced vacuum line to the map sensor using a 5/32" TEE and hose.
- I. Use supplied cable ties to keep the harness secure and away from moving objects.

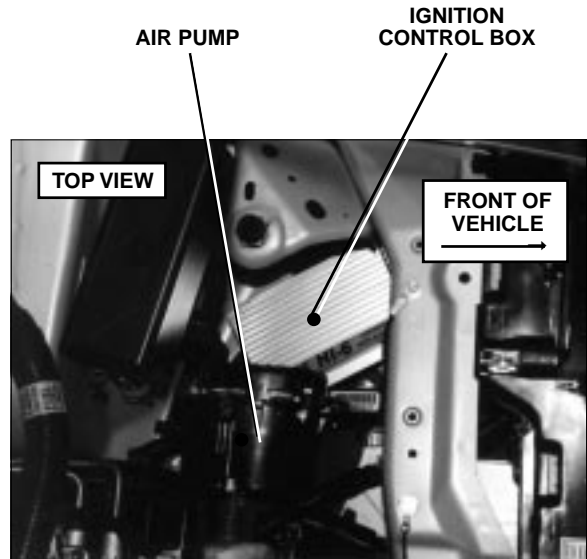


Figure: 13-b

NOTE: *If your kit is not equipped with MSD harness #8876, proceed to hardwire the ignition box following the supplemental instruction sheet included.*

13. COIL RELOCATION AND IGNITION BOX MOUNTING cont'd.

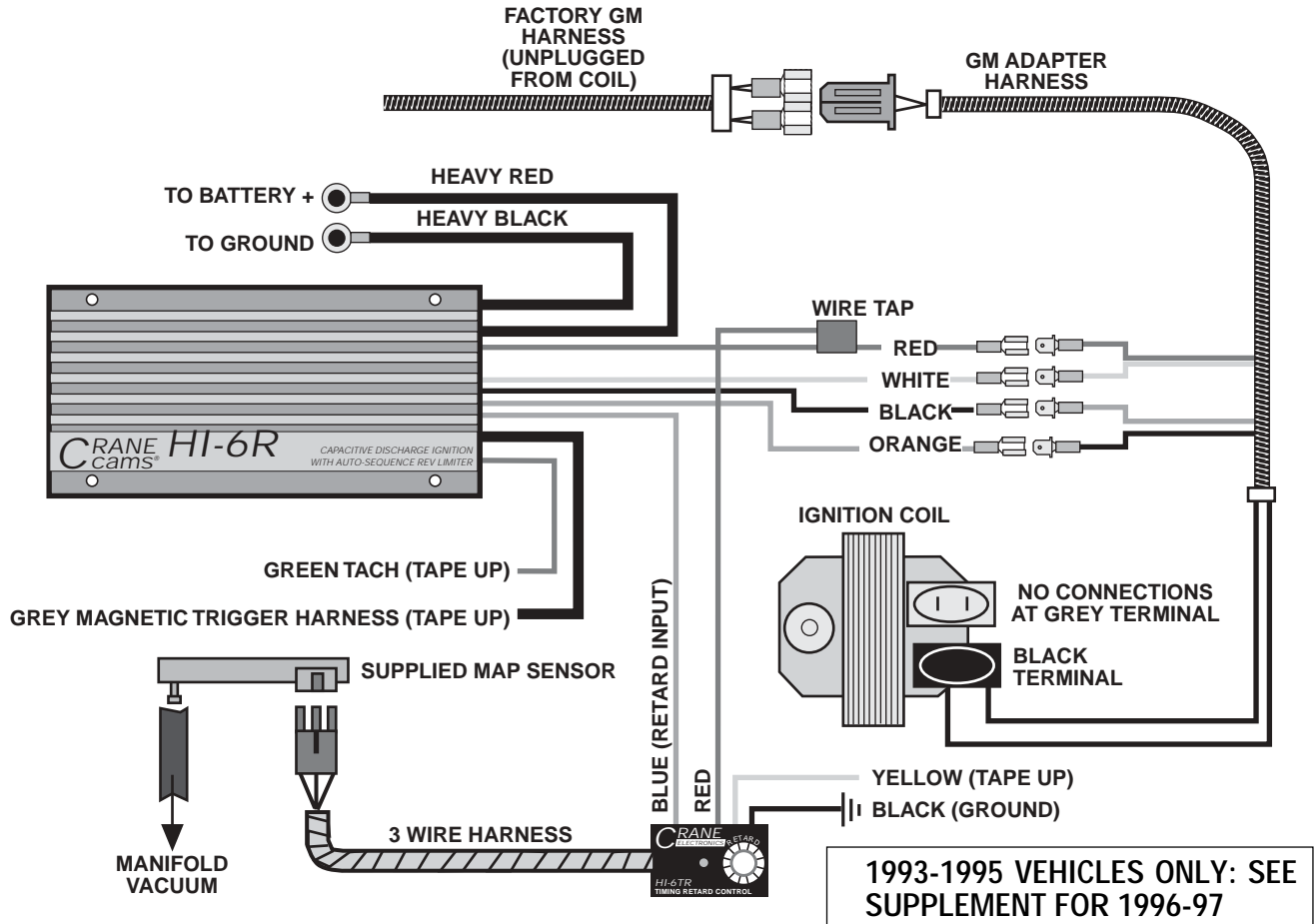


Figure: 13-e

14. IGNITION/BOOST CONTROL OPERATION

- A. The Ignition/Boost Control unit is designed to retard ignition in relation to boost.
- B. The unit is adjustable from 0° of ignition retard to 4° of ignition retard for each pound of boost, up to a maximum of 20°.
- C. Using the 1° per pound position as a starting point, adjust the ignition retard knob until just beyond the point of detonation. Use third gear for testing in a safe area or road. Adjust the retard according to changes in altitude and fuel quality.

Caution: It is extremely important that the boost retard never be turned to 0°. It is recommended that in stock street applications, the knob be at no less than 1° per lb.

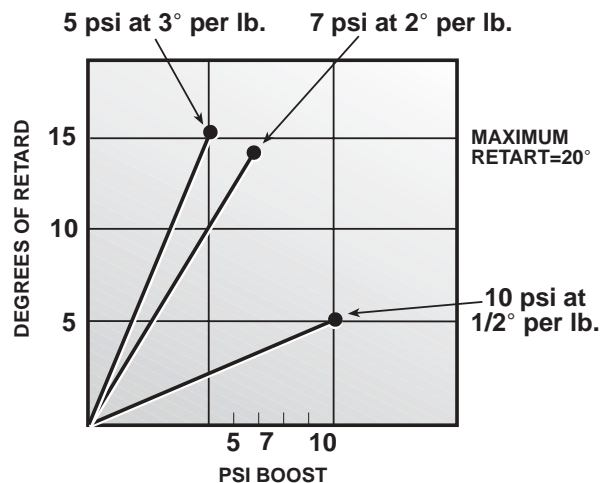


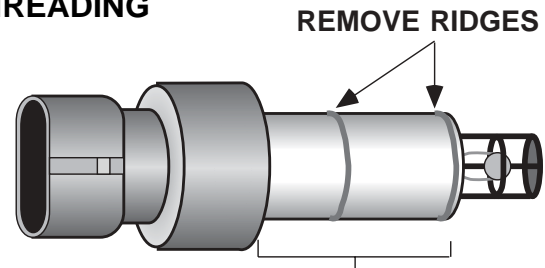
Figure: 14-a
Examples of Ignition Retard vs. Boost

15. SUPERCHARGER DISCHARGE ASSEMBLY

- A. Install the 2-3/4" x 2" sleeve and #44 clamps onto the supercharger discharge. Place the 4" x 2" sleeve and #64 clamps onto the throttle body.
- B. Connect the Vortech discharge tube and aluminum discharge elbow together using the 3-1/2" x 3" sleeve and #56 clamps. Orient the discharge tube so that the 1" barb points toward the front of the vehicle.
- C. Install the discharge tube assembly onto the throttle body and supercharger. Rotate the tubes to get proper alignment and tighten all clamps.

16. INTAKE AIR TEMPERATURE (IAT) SENSOR THREADING

- A. Disconnect the IAT sensor from the harness.
- B. With a file, remove the ridges from the sensor and thread the sensor to 1/2"-20 with a die. (See *Figure 16-a*.)
- C. Install the threaded sensor onto the supercharger discharge duct and secure.
- D. Attach wiring connection to sensor.



USE A 1/2"-20 DIE TO
THREAD THIS PORTION

Figure: 16-a

17. BYPASS VALVE CONNECTION

- A. Attach the 1" x 2-1/2" hose to the discharge tube using a #16 clamp.
- B. Slide the 1" x 14" hose onto the bypass valve outlet (see *Figure 17-a*) and secure with a #16 clamp.
- C. Attach the bypass valve inlet to the supercharger discharge duct while simultaneously routing the 1" outlet hose down to the barb on the air inlet duct. Secure the hose ends with the supplied #16 clamps.
- D. Route the 5/32" vacuum line from the bypass to the nipple on the driver's side of the intake manifold. Remove the factory vacuum connection from the manifold. Place the supplied 1-1/2" length of line and vacuum TEE on the manifold vacuum spout. Connect the TEE to the factory vacuum line and bypass vacuum line.

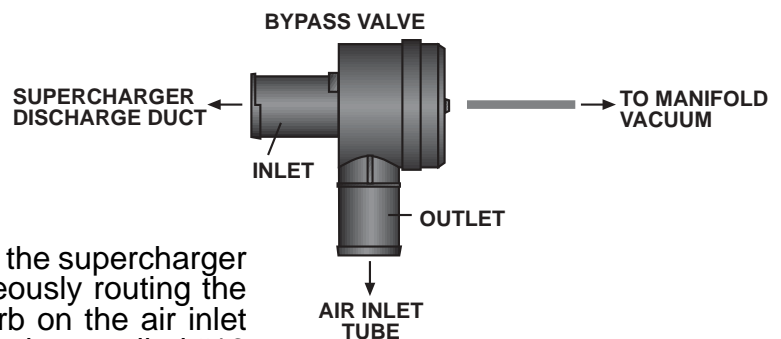


Figure: 17-a

18. FUEL MANAGEMENT UNIT (FMU) INSTALLATION

- A. Remove the two center bolts that secure the driver's side valve cover.
- B. Install the FMU with the fittings pointing upward (towards the center of the engine) using the valve cover bolts.
- C. Disconnect the fuel return line at the fuel rail (smaller line) using a spring lock disconnect tool.
- D. Connect the 1/4" x 14" fuel line to the center fitting on the FMU and then snap into the return line running to the tank. (See *Figure 18-c*.)
- E. Attach the 1/4" x 10" fuel line to the 90° fitting on the side of the FMU and snap it into the return fitting coming from the fuel rail.
- F. Using the supplied 5/32" vacuum line and TEE, splice into the bypass valve vacuum line. (See *Figure 18-b*.)



Figure: 18-a

IMPORTANT! Pressure check the entire fuel system to confirm that each fitting has a leak-free connection. Make sure fuel lines are routed away from hot exhaust pipes and moving or sharp objects.

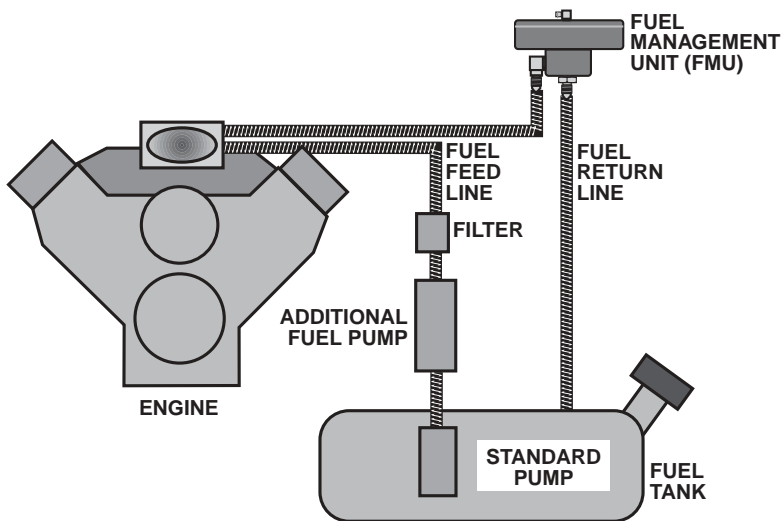


Figure: 18-c

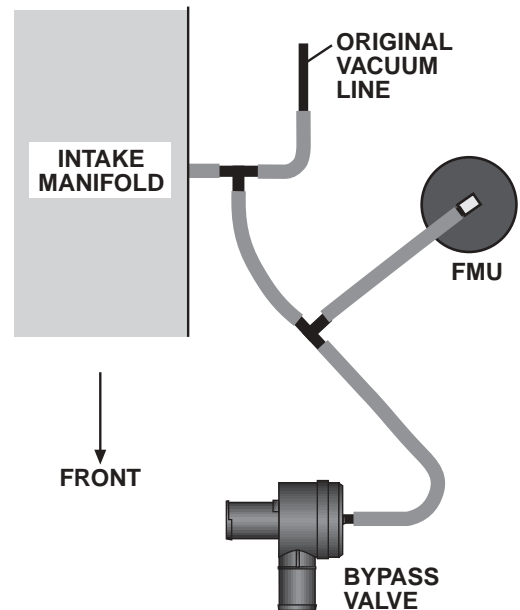


Figure: 18-b
Vacuum Diagram

19. BREATHER HOSE REROUTING

- Remove the valve cover breather assembly from the vehicle. Disconnect the plastic valve cover fitting and attach it to the supplied length of 1/2" x 58" long hose.
- Thread the supplied 1/2" barb into the 3/8" NPT bung on the inlet duct.
- Route the hose from the valve cover forward along the fender apron, down near the air conditioning compressor and then along the front frame K-member to the 1/2" barb on the inlet duct. Secure with a #8 clamp. (See *Figure 19-a*.)
- Attach the supplied vacuum cap to the nipple on the throttle body.

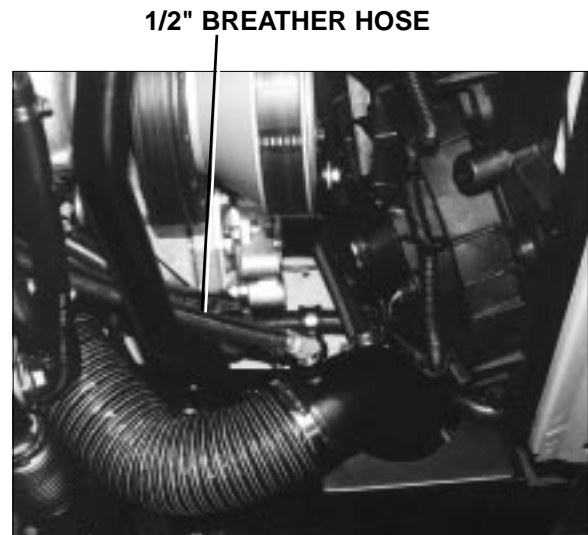


Figure: 19-a

20. T-REX FUEL PUMP INSTALLATION

- Loosen the tank filler cap to vent any residual pressure.
- Disconnect the original plastic fuel feed hose to the fuel filter.
- Remove the plastic fitting from the hose and set aside.
- Using a sharp knife or razor blade, cut approximately 1" off from the end of the hose.
- Place the supplied 5/16" barb fitting into a 400° F oven for approximately 15-20 minutes. Using heat protective gloves or a towel, quickly insert the heated 5/16" barb into the plastic fuel hose.
- After the fitting has cooled, thread the 3/8" NPT x 3/8" barb into it using pipe sealant on the threads.
- Inside the vehicle, remove the rear carpet and flip the rear seats forward.
- Locate the fuel relay box underneath the vehicle rear seat floor pan. Disconnect the two plugs entering the box. Trim the "cut-out" from the supplied template on page 21 (see *Figure 20-g*) and place over the fuel relay. Center punch and drill the four holes 3/16" in diameter. Reinstall the factory relay plugs.

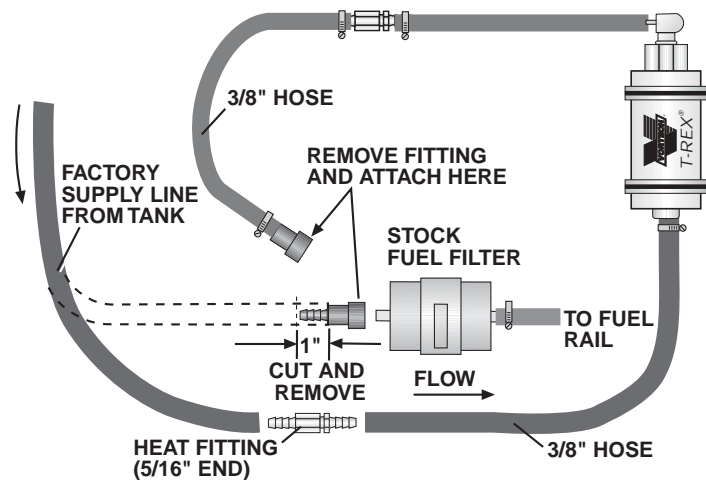


Figure: 20-a

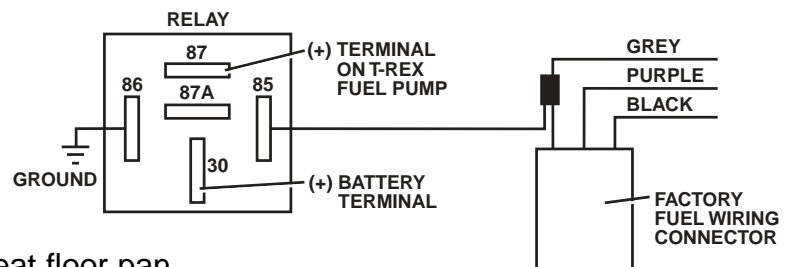


Figure: 20-b

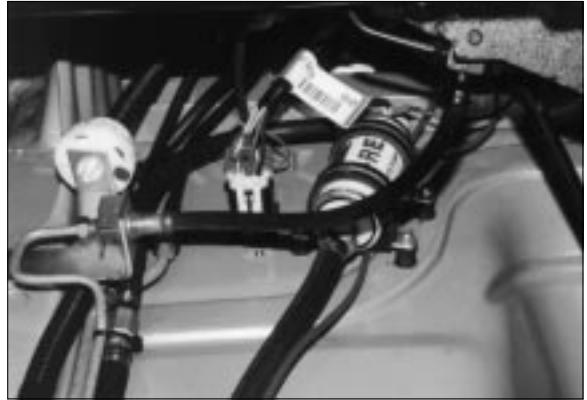
20. T-REX FUEL PUMP INSTALLATION, cont'd.

- I. Secure the fuel pump/line assembly to the vehicle with the supplied rubber isolators, nylock nuts, and hardware. (See *Figure 20-c*.)
- J. Reinstall rear carpet and seats.
- K. Route the T-Rex inlet hose around the front of the fuel filter to form a smooth, gradual bend to the pump. Attach into the 3/8" barb in the factory feed line. Secure the connection with a #8 hose clamp. (See *Figure 20-a*.)
- L. Attach the factory snap connector removed from the original line into the T-Rex discharge line. Secure with supplied #8 clamp. Attach the line to the fuel filter inlet. Use cable ties to keep all fuel lines tight up against the underbody.

NOTE: *It is important that all fuel lines have no contact with moving parts, exhaust components or sharp corners. Make sure lines are routed with gentle bends and secured with the supplied tie wraps.*

- M. Using a 1/8" drill, make a mounting hole in the frame crossmember above the T-Rex pump to mount the relay wiring harness and provide a grounding point. Remove all paint and dirt from around the hole. Mount the relay, fuel pump grounding wire and #86 relay terminal using the supplied sheet metal screw.
- N. Using the yellow wire from the #85 relay terminal and a wire tap, splice into the grey wire in the factory fuel pump harness. (See *Figure 20-b*.)
- O. Connect the #87 red wire on the relay to the positive terminal on the T-Rex pump.
- P. Run the remaining long red wire up to the battery, using tie wraps to keep the wire away from heat and moving parts. Connect the supplied fuse, fuse holder and large ring terminal to the wire and attach to the remote (+) positive battery terminal.
- Q. Replace the fuel tank filler cap.

IMPORTANT! *Pressurize the fuel system to check for any leakage before starting the vehicle.*



*Figure: 20-c
View Looking Up From Beneath Vehicle.*



Figure: 20-d

20. T-REX FUEL PUMP INSTALLATION, cont'd.

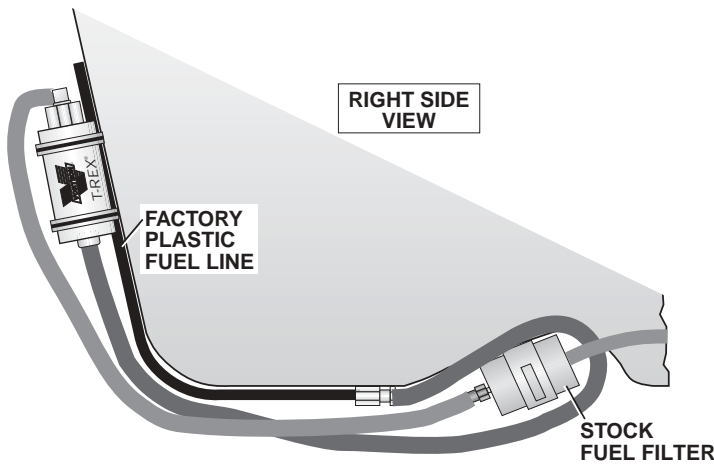


Figure: 20-e

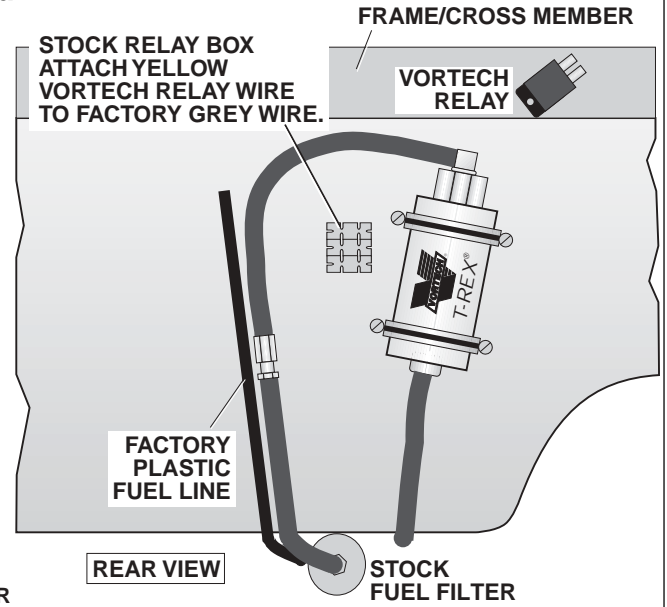


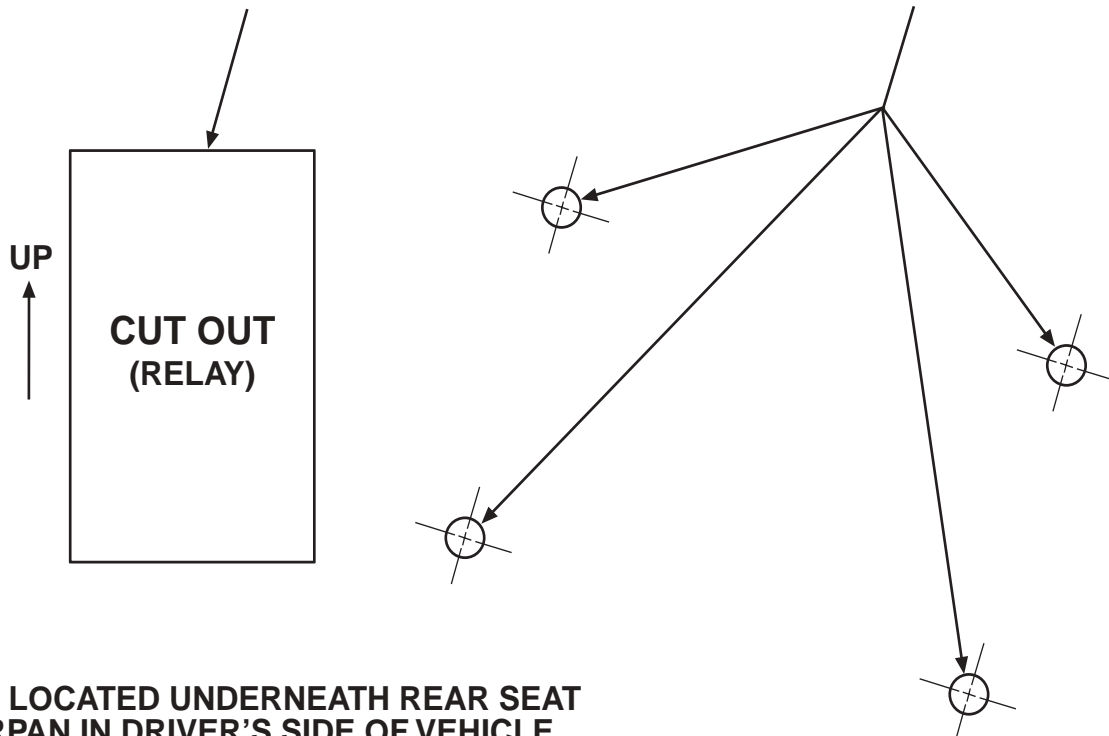
Figure: 20-f

TEMPLATE

T-REX FUEL PUMP KIT 1993-1997 LT1 F-BODY

CUT OUT RECTANGLE AND PLACE OVER FUEL SYSTEM RELAY AS A GUIDE

CENTER PUNCH AND DRILL FOUR 3/16" HOLES IN FOUR PLACES



RELAY LOCATED UNDERNEATH REAR SEAT FLOORPAN IN DRIVER'S SIDE OF VEHICLE

Figure: 20-g

21. FUEL INJECTOR REPLACEMENT (1993 MODELS ONLY)

- A. Disconnect the eight fuel injector wiring clips and retainers from the injectors.
- B. Remove the four 10mm bolts holding down the fuel rail on the intake manifold. Lift up on the rails evenly, removing all eight injectors.
- C. Using a small amount of clean motor oil, lightly lubricate the O-rings on both ends on the Vortech supplied fuel injectors.
- D. Install the new injectors into the fuel rails with the terminals facing outward. Attach the injector retainers into the top injector groove.
- E. Carefully lower the fuel rail/injector assembly down onto the intake manifold. Check to see that each injector has been seated properly into the manifold.
- F. Tighten down the fuel rail assembly with the original bolts and attach the wiring clips to the injector terminals.

NOTE: *Make sure injector retainers are secure and properly installed. Recheck after cycling fuel system.*

22. FINAL ASSEMBLY AND CHECK

- A. Reinstall cooling fan if removed in step 1.
- B. Make sure that the pan fitting is tight and the engine is filled with factory specified synthetic oil.
- C. Fill the coolant surge tank with a 50/50 coolant/water mix.
- D. Fill the overflow tank to the proper level.
- E. Reconnect the battery.
- F. If your vehicle has gone over 10,000 miles since its last spark plug change, you will need to change the spark plugs now before test-driving the vehicle.
- G. 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. (See *Figure 22-a*.)
- H. Check all fluid levels, making sure that your tank is filled with 92 octane or higher fuel before commencing test-drive.
- I. Start the engine and bleed the cooling system at the water neck until a steady stream of coolant comes out of the fitting. Retighten the bleed screw. Refill the coolant bottle.
- J. Recheck to be sure that no hoses, wires, etc. are near exhaust headers or moving parts and for signs of any fluid leakage. Check ignition timing to make sure it is set to stock specifications before commencing test-drive.
- K. Test-drive the vehicle.
- L. Recheck the coolant and oil level.
- M. Read the **STREET SUPERCHARGER SYSTEM OWNER'S MANUAL AND RETURN THE WARRANTY REGISTRATION FORM** within thirty (30) days of purchasing your supercharger system.



Figure: 22-a

WARNING: *Do not attempt to operate the vehicle until ALL components are installed and ALL operations are completed including final check. Failure to do so may cause PREMATURE FAILURE OF MAJOR COMPONENTS.*



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