



Owners Installation Manual for the

PAXTON NOVI Supercharger

for the

1996-2003 4.6L SOHC MUSTANG GT

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FOREWORD

his manual provides information on the installation, maintenance and service of the Paxton supercharger kit expressly designed for this vehicle. All information, illustrations and specifications contained herein are based on the latest product information available at the time of this publication. Changes to the manual may be made at any time without notice. Contact Paxton Automotive for any additional information regarding this kit and any of these modifications at (805) 888-PAXTON 8:00am-4:30pm PST.



Take note of the following before proceeding:

- 1. Proper installation of this supercharger kit requires general automotive mechanic knowledge and experience. Please browse through each step of this instruction manual prior to beginning the installation to determine if you should refer the job to a professional installer/technician. Please contact your dealer or Paxton Automotive for possible installers in your area.
- 2. This product was designed for use on stock (*un-modified, OEM*) vehicles. The PCM (*computer*), engine, transmission, drive axle ratios and tire O.D. must be stock. If the vehicle or engine has been modified in any way, check with Paxton prior to installation and use of this product.
- 3. Use only premium grade fuel with a minimum of 91 octane (R+M/2).
- 4. Always listen for any sign of detonation (*knocking/pinging*) and discontinue hard use (*no boost*) until the problem is resolved.
- 5. Paxton is not responsible for any clutch, transmission, drive-line or engine damage.
 - Exclusions from Paxton warranty coverage considerations include, but not limited to:
- 1. Neglect, abuse, lack of maintenance, abnormal operation or improper installation.
- 2. Continued operation with an impaired vehicle or sub-system.
- The combined use of Paxton components with other modifications such as, but not limited to, exhaust headers, aftermarket camshafts, nitrous oxide, third party PCM programming or other such changes.

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	Н.	1013333	ASY, AIR DISCHARGE	
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	J.	1019328	ASY, OIL RETURN	
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ongratulations! You have purchased the finest street supercharger available for the Mustang GT. The centerpiece of this kit is the High-Efficiency PAXTON Supercharger, a mechanically driven centrifugal blower.

This kit comes with all the parts you will need to install the supercharger. The instruction manual has been written in order of sequence, and photographs and drawings have been included to illustrate the text. This will allow you quick parts identification and orientation.

The installation will require metric and SAE sockets and wrenches, a hand drill and bits, an Air Hammer (*and compressor*), a 3/8" x 18 NPT tap, screwdrivers, and a supply of buckets for the storing of coolant and oils.

We suggest that you obtain a copy of a Mustang shop manual for your model of car. This may be obtained from your dealer, or may be ordered by mail from Helm Publications at (800) 782-4356. Become familiar with the details of your car's system. If it is not operating within normal parameters, we do not recommend the installation or use of the supercharger.

For the quickest installation time, we suggest that you read this manual thoroughly before beginning. Make sure that you understand the process, have identified the areas of the car that you will be working on, and have the tools that you will need on hand. The average installation time is 8 to 10 hours, but your time will depend on your working conditions, experience installing superchargers, personal skill level, and preparedness for the job. This estimate does not include time for the initial vehicle inspection, cleaning, fine tuning, or troubleshooting. Once again, we recommend reading the manual before beginning the process. We are available for tech support at (805) 487-3796, Monday through Friday, 8AM - 4:30 PM PST.

After reading the manual, verify that all major assembly groups are present in the main kit box. As you remove a box or bag, note the identification label and compare it to the parts list.

PAXTON AUTOMOTIVE makes every effort to insure that all parts are included in the box. If you discover that you are missing any part, or that a part was damaged in shipping, call PAXTON immediately. DO NOT begin installation if a part is missing. Failure to contact PAXTON prior to beginning installation will result in a charge for the missing part.

We suggest that the engine compartment be cleaned before the installation. You can clean the engine with the pressure washer found at self-serve car washes. Use a safe-for-aluminum cleaner/degreaser, and cover the distributor and any electronics with a plastic bag to prevent water from entering.

You are undoubtedly eager to get started, but please take a little more time to insure that your safety is not in jeopardy. A moment's lack of attention may cause serious injury to you, or to someone else who happens to be standing nearby. By following some simple safety precautions, you can avoid many potential dangers. The following list is not meant to be a comprehensive list, but rather it is meant to make you aware of some of the risks, and encourage you to take a safety minded approach to your work area.

SAFETY FIRST

Never rely solely on a floor jack when working underneath a vehicle. Always use jack stands that are rated for the weight of your vehicle, place them at the recommended lift points, and place your vehicle in "PARK" or "FIRST" gear with the parking brake set.

Always use eye protection when using power tools, such as drills, saws, and grinders, or when working underneath a vehicle.

Never smoke, use an open flame, or have spark producing items around gasoline or flammable objects. Always have a fire extinguisher that is rated for chemical and electrical fires handy when working on motor vehicles. Also, make sure that the extinguisher is fully charged.

Operate engines only in a well ventilated area. Carbon Monoxide, gasoline, and solvent vapors are colorless and sometimes odorless, and may asphyxiate and explode without warning.

Always disconnect the battery from your engine before doing work on the electrical or fuel systems, or doing underdash work.

The chemicals used in the vehicle systems, such as oils and coolants, are poisonous. Clean up any spills immediately, and dispose of waste materials properly.

PAXTON Automotive thanks you for your purchase. We welcome your comments and suggestions to help us improve our product.

1996-2003 FORD 4.6L SOHC MUSTANG Installation Instructions

50 State Smog Legal, as per CARB EO #D-195-20 Congratulations on selecting the best performing and best backed automotive supercharger available today!

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.

Paxton 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 Paxton Automotive. 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. **Paxton Automotive is not responsible for engine damage.**

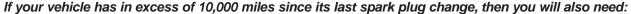
Installation on new vehicles will not harm or adversely affect the break-in period so long as factory break-in procedures are followed.

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

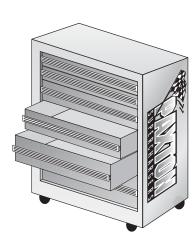
- 1. Use only premium grade fuel 91 octane or higher (R+M/2).
- 2. The engine must have stock compression ratio.
- 3. If the engine has been modified in any way, check with Paxton prior to using this product.
- Always listen for any sign of detonation (pinging) and discontinue hard use (no boost) until the 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 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 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 at least 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" Socket and Drive Set: SAE & Metric
- 3/8"NPT Tap and Handle
- Adjustable Wrench
- Open End Wrenches: 3/8", 7/16", 1/2", 9/16"
- Center Punch and a 5/8" Tapered Punch
- Ford Springlock 3/8" Fuel Fitting Disconnect Tool
- 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", 27/64" Drill Bits
- 1/2" Tube Bender
- 3/16" Allen Wrench
- Wire Strippers and Crimpers
- Utility Knife



- Spark Plug Socket
- NEW Spark Plugs



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Section 1

Disassembly

1.0 ECM REMOVAL

*** NOTE ***

Before removing the ECM, disconnect the positive cable from the battery.

- A. Remove the passenger's side front kick-panel from the interior of the vehicle. Remove the sound deadening material (*if any*) that is covering the ECM. Remove the plastic ECM hold-down bracket.
- B. Using a 10mm socket or wrench, remove the harness and plug from the ECM (as you loosen the bolt, the connector will slowly release). Remove the ECM from the vehicle.

C. Contact the Paxton Service Department for a Return Authorization Number. Send both the ECM and supplied credit tag to Paxton using the enclosed shipping box.

1.1 AIR INLET REMOVAL

A. Before the air intake assembly can be removed, you must first disconnect the plastic crankcase breather hose (A) and air idle bypass hose (B). Unplug the air temperature sensor 1996-2001 Models Only: (C) and mass air flow sensor (D). (See Fig. 1.1-a.) Begin the initial preparation and disassembly process by first disconnecting the negative side of the battery if not already done.

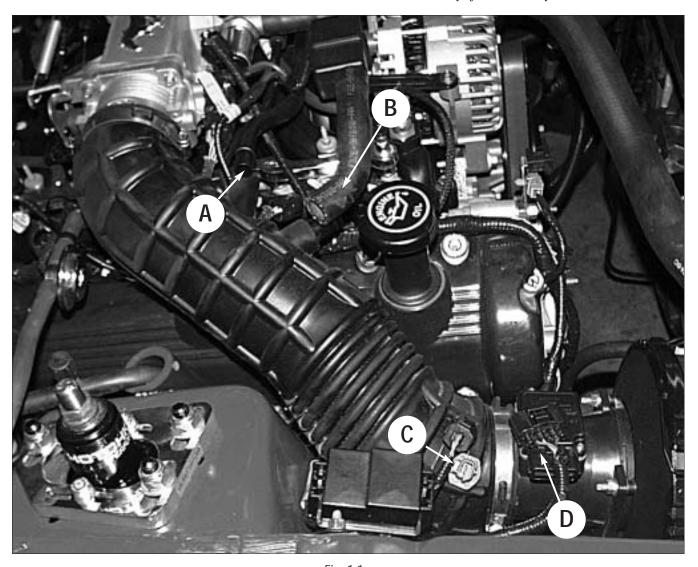


Fig. 1.1-a

*** NOTE ***

This manual covers model years 1996-2003. Some of the photographs and illustrations may be different but the removal and installation of components are similar.

*** NOTE ***

2002-2003 models do not have a separate IAT sensor. (The IAT sensor is integrated with the factory MAF.)

B. Using a flat-head screwdriver or 5/16" nut driver, loosen the hose clamps at the mass air flow sensor and the throttle body, and remove the air inlet hose. (See *Fig. 1.1-b.*)



Fig. 1.1-b

- C. Remove the air temperature sensor from the air inlet duct and set it aside. The sensor will be re-installed in a later step.
- D. Use an 8mm socket to remove the single air filter housing retaining bolt. The air filter and mass air sensor can then be removed as an assembly. (See *Fig. 1.1-c.*)

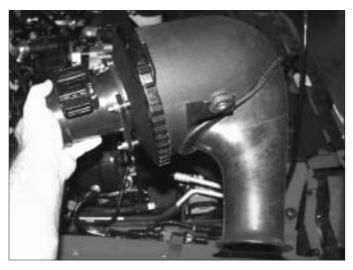


Fig. 1.1-c

E. Once the assembly is out of the car, use a 10mm socket to remove the mass air flow sensor from the air filter housing. (See *Fig. 1.1-d.*) Place the mass air flow sensor aside to be re-installed in a later step.



Fig. 1.1-d

1996-1998 Models Only

F. Unplug the coil pack on the passenger's side of the engine. (See *Fig. 1.1-e.*)



Fig. 1.1-e (1996-1998 Models)

- G. Use a 7mm socket to remove the four coil pack bolts and move the coil pack toward the passenger's side and out of your way.
- H. Remove the 13mm bolt, nut and stud bolt securing the coil bracket to the cylinder head. (See *Fig. 1.1-f.*)



Fig. 1.1-f

1.2 COOLANT RESERVOIR REMOVAL

- A. Drain approximately one gallon of coolant from the radiator into an appropriate container.
- B. Remove the large hose from the coolant reservoir and drain the contents of the reservoir into a container.
- C. The coolant reservoir is secured by three nuts. (See *Fig. 1.2-a.*) Use a 10mm socket, remove the reservoir by removing these nuts and place the reservoir aside.
- D. Remove the upper radiator hose and set aside to be modified in a later step.

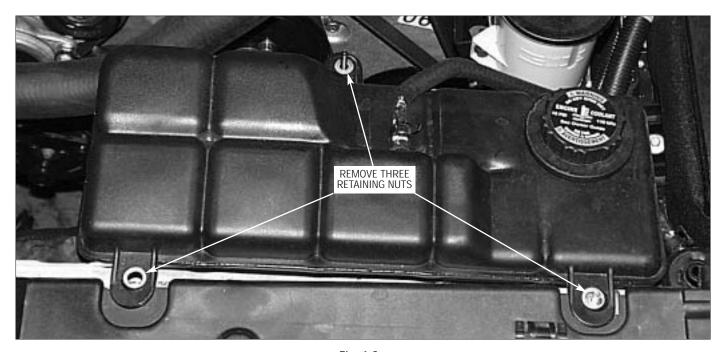


Fig. 1.2-a

1.3 FACTORY TENSIONER AND RELATED PARTS REMOVAL

A. Using a 13mm socket, remove the two nuts securing the tensioner limiting bracket. Set the bracket and hardware aside as they will not be reused. (See Fig. 1.3-a.)

*** NOTE ***
Some models and some model years may not have this bracket. (See Fig. 1.3-a.)

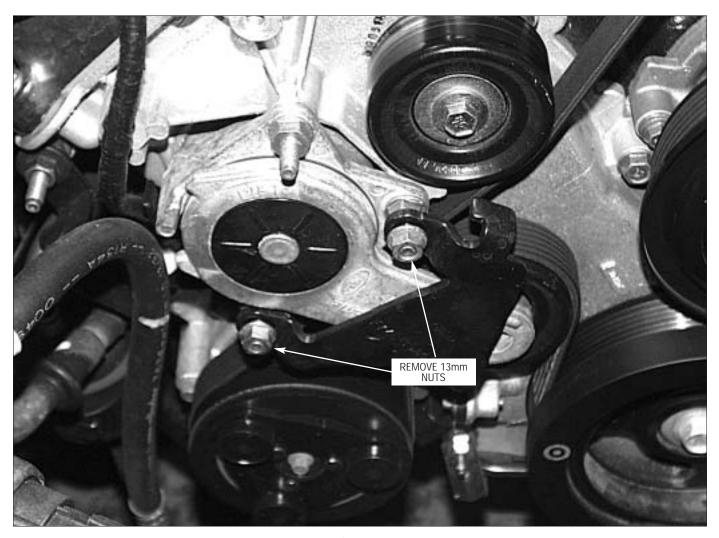


Fig. 1.3-a

B. Loosen (*but do not remove*) the four 10mm bolts on the water pump pulley. (See *Fig. 1.3-b.*)



Fig. 1.3-b

- C. Remove the accessory drive belt. Insert a 1/2" drive ratchet or breaker bar into the square at the end of the tensioner, and rotate the tensioner. This will relieve the tension on the belt so it can be removed. It will not be re-used.
- D. Using a 13mm wrench, remove the stud bolt and set it aside. It will not be reused. (See *Figs. 1.3-c, 1.3-d.*)
- E. Finish removing the four 10mm bolts securing the water pump pulley and place the pulley along with its fasteners aside to be reinstalled in a later step of the installation.

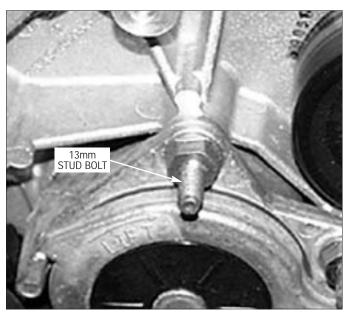


Fig. 1.3-c

F. Use a 13mm socket to remove the idler pulley located above the belt tensioner. (See *Fig. 1.3-d.*)

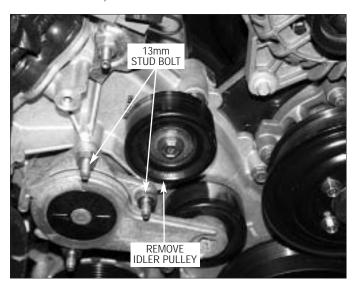


Fig. 1.3-d

- G. Place the pulley aside to be reused in a later step.
- H. Remove three bolts at the front of the engine (passenger's side), (see Fig. 1.3-e), a 10mm alternator mounting bolt (arrow "A"), and two 13mm timing cover bolts (arrows "B" and "C").

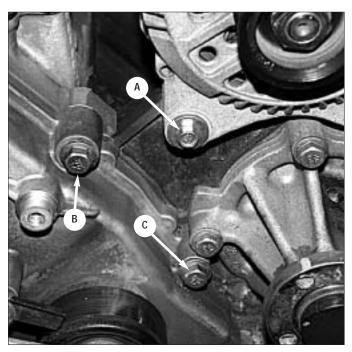


Fig. 1.3-e

I. Using a 13mm socket, remove the two nuts and stud bolts located at the top of the passenger's side cylinder head. (See *Fig. 1.3-i.*)

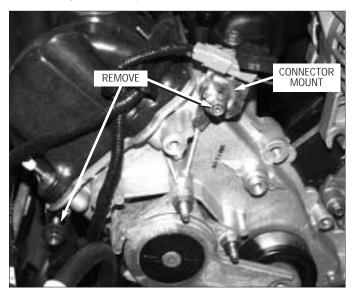


Fig. 1.3-f

- J. Remove the electrical connector mount. Set the mount aside to be relocated in a later step. (See *Fig. 1.3-f.*)
- K. Remove the 13mm nut located to the left of the belt tensioner (*passenger's side*). (See *Fig. 1.3-g.*) Push the bracket to the left to gain access to the stud bolt located at the top of the passenger's side cylinder head. Remove the stud bolt and set aside it will not be reused.



Fig. 1.3-g

1.4 FAN RESISTOR RELOCATION 2001-2003 Models Only

A. Disconnect the wiring harness from the fan resistor. (See *Fig. 1.4-a.*) Remove the clips holding the fan resistor to the fan shroud. Attach the fan resistor to the supplied bracket using the supplied hardware.

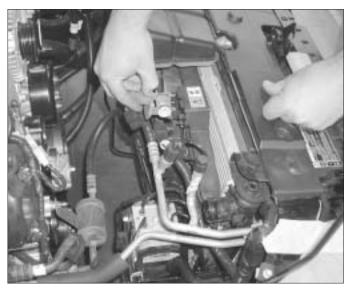


Fig. 1.4-a

B. Trim the fan resistor mounting tabs on the fan shroud to provide clearance for the air intake assembly. (See *Fig. 1.4-b.*) The fan shroud should look like this after trimming. (See *Fig. 1.4-c.*)



Fig. 1.4-b



Fig. 1.4-c

C. Re-attach the fan resistor to the wiring harness to ensure adequate wire length. (See *Fig. 14-d.*) Position the supplied fan bracket and hardware on the passenger's side of the lower fan shroud. Mark two mounting points along the fan shroud and drill the holes. Attach the mounting bracket with the supplied hardware.

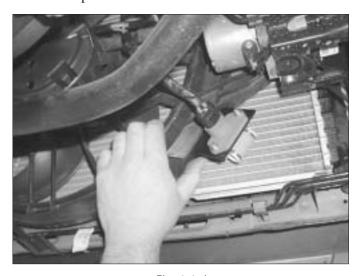


Fig. 1.4-d

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Section 2 SUPERCHARGER MOUNTING BRACKET ASSEMBLY

2.0 SUPERCHARGER MOUNTING BRACKET ASSEMBLY

*** NOTE ***

See Appendix for the model year's supercharger bracket assembly procedure.

A. Install the supercharger idler pulley bracket using the supplied hardware. Install the provided spacer between bracket and alternator. (See *Fig. 2.0-a.*) This operation will be performed on all model years.

*** NOTE ***

This photo is for illustration purposes. It will be easier for you to install this bolt/spacer first, then install the other two mounting bolts. (See Fig. 2.0-a.)



Fig. 2.0-a

B. Re-install the factory idler pulley using the factory hardware (see *Fig. 2.0-b*), followed by the supplied supercharger idler pulley (See *Fig. 2.0-c.*)



Fig. 2.0-b



Fig. 2.0-c

C. Replace the bolt stud at the upper right corner of the timing chain cover (*removed during step 1.3-i*) (see *Fig. 2.0-d*) with the supplied fastener. (See *Fig. 2.0-e*, 1996-1999 Models only.)

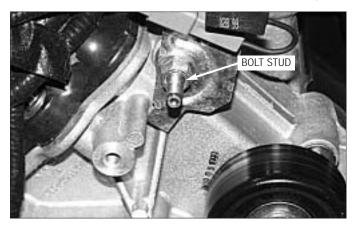


Fig 2.0-d

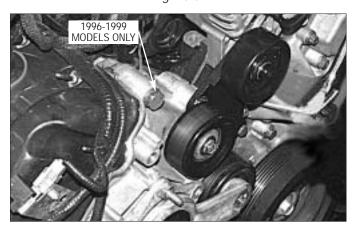


Fig. 2.0-e

D. Before installing the main supercharger bracket, the A/C refrigerant refilling port must be bent from its upright position downward so that the cap is facing the driver's side fender. (See Fig. 2.0-f.) Note that this operation will be performed on all model years except model year 2000. This hose assembly will be replaced with the provided A/C hose assembly.

*** NOTE ***

If possible, use a proper tubing bender for this step. If one is not available, the line can be bent by hand, but extreme care must be taken as the refrigerant within the line is under very high pressure. In any case, use a pair of heavy gloves and eye protection to prevent injury in the event of a ruptured line.

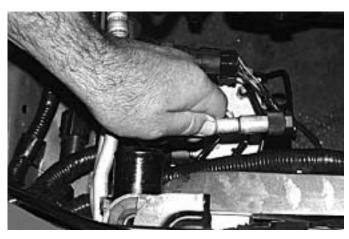


Fig 2.0-f

*** NOTF ***

2001-2003 models must have the accessory drive belt installed BEFORE the support bracket is installed.

E. Install the supercharger rear support bracket with the supplied 8mm bolt, leaving it fingertight. It will be necessary to move this bolt when the main supercharger bracket is mounted. (See *Figs. 2.0-g 2000-2003, 2.0-h.* 1996-1999)



Fig 2.0-g / 2000-2003 Models

*** NOTE ***

1996-1998 Models Only - The A/C line bracket should be placed between the spacer and the cylinder head. (See Fig. 2.0-I.)



Fig. 2.0-h (1996-1999 Models)

*** NOTE ***

Before installing the outer supercharger mounting plate, the supplied accessory's supercharger drive belt must be installed.

F. Mount the main supercharger bracket using the two 3/8-16 x 2.75" bolts and spacers in the upper portion of the bracket. Install the 8mm bolt and spacer in the lower middle portion of the bracket. (See *Appendix "C" for 1999 Models*, *Appendix "D" for 2000 Models*, *Appendix "F" for 2001-2003 Models*, *Appendix "E" for 1996-1998 Models*.) Install the lower bolt and two spacers. One between the support and main brackets, the other between the support bracket and the cylinder head. (See *Fig. 2.0-i*.)

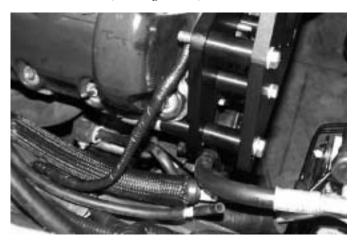


Fig. 2.0-i / 1996-1999 Models

G. Reinstall the water pump pulley removed in an earlier step. (See *Fig. 2.0-j.*)

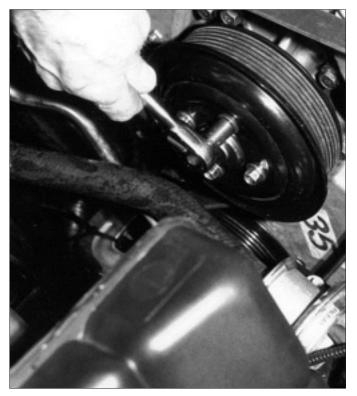


Fig. 2.0-j

Route the supercharger and accessory drive belt.

*** **NOTE** ***
On 2000-2003 models the drive belt needs to be routed before the rear S/C mounting plate is installed.



Fig. 2.0-k

*** NOTE ***
The belt must be routed BEFORE this bolt and spacer are installed.



Fig. 2.0-l Completed Supercharger Mounting Bracket

Fig. 2.0-m

2.1 SUPERCHARGER INSTALLATION

A. Install the supercharger oil return line (*see assembly 1019328*) to the supercharger drain fitting and secure with the hose clamp provided.. (See *Fig. 2.1-a.*)

*** NOTE ***

The hose clamp screw head should be parallel to the supercharger mounting base.

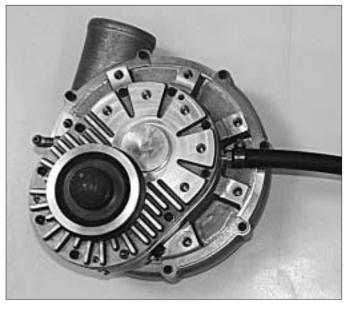


Fig 2.1-a

B. Locate the 1/8" x -4 x 90° oil feed fitting. (See assembly 1019327.) Install the fitting into the supercharger oil feed.

*** NOTE ***

Use only clean oil to seal this fitting. Teflon paste or Teflon tape may become dislodged and plug the supercharger oil feed.

- C. Remove the drive belt from the alternator pulley.
- D. Install the supercharger into the main bracket, while looping the drive belt around the supercharger pulley. (See *Fig. 2.1-b.*)
- E. Install the six 3/8-16 x 1.25" bolts and washers. Tighten the supercharger mounting bolts. Once the supercharger is installed, release the belt tensioner and loop the belt back around the alternator pulley.

*** NOTE ***

1996-1998 model year cars will require a coil bracket and a different spacer. One of the 3/8-16 x 1.25" bolts must be replaced by a 3/8-16 x 1.0" bolt to clear the coil bracket.

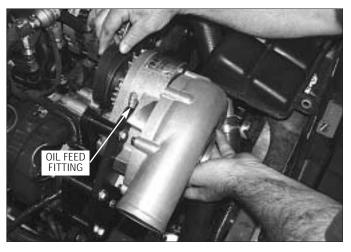


Fig. 2.1-b

H. Install the spacer and coil mounting bracket after installing the supercharger.

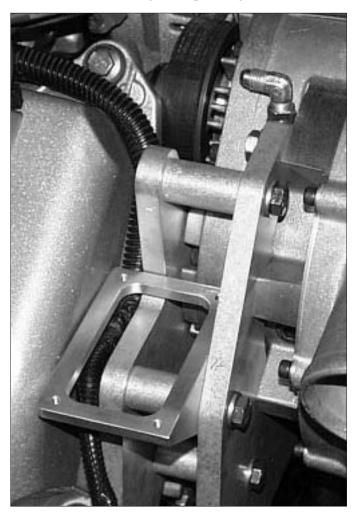


Fig. 2.1-c

Section 3 OIL FEED AND DRAIN INSTALLATION

3.0 SUPERCHARGER OIL FEED AND DRAIN (1996-2003 Models)

A. Your Paxton Automotive NOVI supercharger uses pressurized engine oil for lubrication. Use an oil sending unit socket (*Snap-On tools; part number 6152 or equivalent*) to remove the oil sending unit on the underside of the oil filter housing. (See *Fig. 3.0-a.*)



Fig. 3.0-a

- B. Install the supplied 1/4"NPT x 1/4"NPT STRT-T fitting. DO NOT USE TEFLON TAPE or paste. The sealant may become dislodged and clog the supercharger oil feed orifice and cause damage to the supercharger.
- C. Once installed, the junction fitting should be oriented so that the opening faces toward the front of the car. (See *Fig. 3.0-b.*)
- D. Install the oil sending unit onto the end of the brass junction. Install the 1/4" x -4 x 90° fitting into the side of the brass junction, and orient this fitting to face towards the driver's side frame rail. Attach the supplied length of braided stainless steel feed line, and route upwards to the 90° fitting on the supercharger.

*** NOTE ***

Be sure to stay clear of any moving parts or coolant hoses (engine vibration can cause the stainless line to chafe the rubber coolant hose, creating a leak over time). E. Install the line, and tighten moderately - no sealant is required. (See *Fig. 3.0-b.*)



Fig. 3.0-b

3.1 SUPERCHARGER OIL DRAIN INSTALLATION (1996-2003 Models)

A. Mark the front of the oil pan 1-1/8" below the pan rail and between the the two pan rail bolts, directly in the center of the small "hump". (See *Appendix* "G".) Drill a pilot hole with a 3/16" drill bit. (See *Fig. 3.1-a.*)



Fig 3.1-a

- B. Smear the drill bit with heavy grease first to prevent small metal particles from falling into the pan.
- C. Once the hole has been drilled, insert a straight length of welding rod or heavy wire (*such as a coat hanger*) into the hole approximately three inches to make sure no interference is encountered. If the path is blocked, turn the engine over until the pathway is clear.

D. Next, apply a small amount of anti-seize lubricant to the tip of the punch, and insert it into the pilot hole. Using the appropriate tool, (an air hammer works the best), use small bursts until the punch is inserted up to its shoulder. The finished hole size should be 9/16". (See Fig. 3.1-b.)

*** NOTE ***

Do not use hand tools. Using an ordinary hammer will dent the pan. Use extreme caution not to make the hole to big, or the drain fitting will not fit fter tapping the pan.

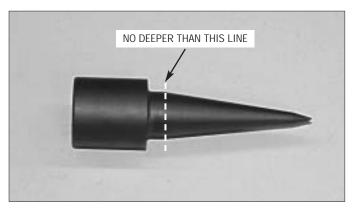


Fig. 3.1-b

- E. Apply a liberal amount of heavy grease to a 3/8-18 NPT tap (*not included*), and gradually thread into the hole. Clean the threads using a clean rag and an approved solvent, such as carburetor cleaner.
- F. Apply an ample amount of silicone RTV to the threads of the supplied 3/8"NPT x -8 fitting and insert into the hole. Be careful not to over-tighten. (See *Fig. 3.1-c.*)

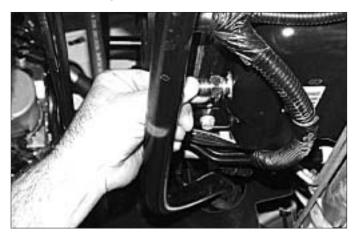


Fig. 3.1-c

G. Install the supplied drain-back hose fitting so that the elbow is oriented toward the passenger's side, away from the harmonic balancer/crank pulley. Attach the supercharger drain hose and fitting installed on the supercharger during an earlier step. (See *Fig. 3.1-d.*)

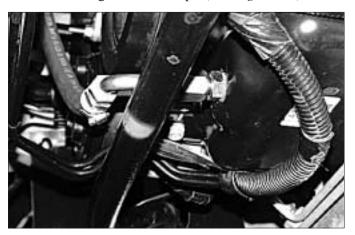


Fig. 3.1-d

Section 4 AIR INLET/DISCHARGE INSTALLATION

4.0 FUEL INJECTOR REPLACEMENT 1999-2003 Models Only

- A. Disconnect the eight fuel injector wiring clips and retainers from the fuel injectors. Release any residual fuel pressure from the rail by opening the schrader valve on the rail.
- B. Remove the four 8mm headed bolts holding the factory fuel rail onto 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 of the supplied fuel injectors.
- D. Install the new injectors into the fuel rails with the terminals facing outward.
- 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 injector plugs to the injector terminals.

*** NOTE **

Make sure injector retainers are secure and properly installed. Recheck after cycling the fuel system.

4.1 AIR DISCHARGE DUCT INSTALLA-TION (1996-2003 Models)

A. Install the discharge tube assembly as shown, using the supplied rubber sleeves and stainless steel clamps. (See *Fig. 4.1-a.*)



Fig. 4.1-a

B. Install the supplied length of rubber hose to the end of the hard crank case ventilation line that runs from the driver's side valve cover across the engine, (See *Fig. 4.1-b.*)



Fig. 4.1-b

Route the hose over the passenger's side valve cover and towards the front of the engine. This hose will be attached to the 3/8"NPT x 3/8" x 90° barbed fitting installed in the air inlet duct. (See *Appendix "G"* for fitting and hose location.) *Please note that this hose will be attached in a later step of the installation.*

C. Install the idle air control valve to the throttle body housing with the original hose, and to the discharge tube with the supplied length of rubber hose and hose clamps. (See *Fig. 4.1-c.*)



Fig. 4.1-c

4.2 AIR INLET INSTALLATION

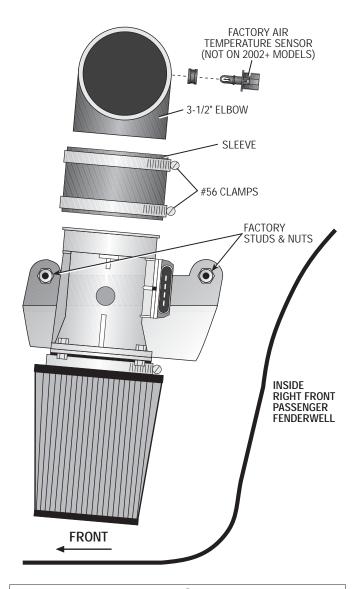
*** NOTE ***

The MAF mounting bracket you receive may be different than what is shown but the assembly is the same.

- A. Assemble the MAF, mounting bracket, MAF/air filter adapter and air filter. (See *Fig. 4.2-a & Appendix "G"*.)
- B. Using the supplied 1/4-20 hardware, mount the MAF meter to the MAF bracket and secure. (See *Fig. 4.2-a.*)

** NOTE ***

Remove the factory MAF screen before attaching the meter to the new bracket.



VIEW FROM INSIDE ENGINE COMPARTMENT

(Steel inner fender not shown for ease of description)

Fig. 4.2-a

C. Attach the supplied K & N air filter, 3-1/2" sleeve, 90° x 3-1/2" elbow and #56 hose clamps to the MAF and secure.

*** NOTE ***

1996-2001 models use the 90° x 3-1/2" plastic inlet elbow with the hole and grommet in the side. 2002+ models use the 90° x 3-1/2" plastic elbow without a hole in the side. Both elbows have been supplied.

D. (1996-2001 Models only.) Insert the factory air temperature sensor into the rubber grommet located on the side of the 90° elbow. Lubricate for easier fit. (See Fig. 4.2-a.)

*** NOTE ***

2002-2003 models do not have a separate IAT sensor.

- E. From beneath the vehicle, remove the two factory nuts and washers from the passenger's side lower fender valence. Mount the MAF/bracket assembly onto the existing studs using the same washers and nuts originally removed.
- F. Using a #52 hose clamp, connect the piece of 3-1/2" flex hose to the elbow attached to the MAF meter and route it through the opening in the right side inner fender toward the supercharger. Make sure the 3-1/2" flex hose does not contact or rub on the edge of the inner fender opening. (Eventual hose failure will result if the hose is not properly routed.)



Fig. 4.2-b

- G. Route the factory temperature sensor and MAF sensor connectors out through the inner fender opening. Reattach the connectors to the relocated sensors.
- H. Install the bypass valve assembly on the underside of the secondary intake tube. (See *Fig. 4.2-c.*) (*See Appendix "J" for bypass assembly procedure*.)



Fig. 4.2-c

I. Place the secondary intake tube/bypass valve assembly on the supercharger inlet and attach it to the flex hose. Attach the other end of the bypass valve to the discharge tube. Connect the hose that was previously installed on the hard plastic crank case ventilation line to the brass fitting on the intake tube. Tighten the clamps. The finished installation appears as shown. (See *Fig 4.2-d.*)

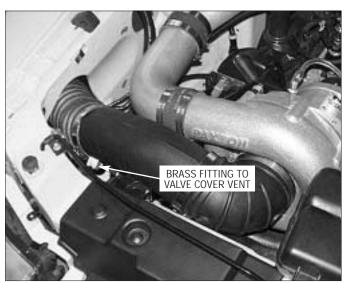


Fig. 4.2-d



Fig. 4.2-e

- Remove the 2" bolts securing the lower reservoir bracket. Reinstall the support bracket J. using one of the existing holes and factory fasteners and the self-tapping screw provided.
- K. Re-install the stock coolant reservoir. (See Fig. 4.2-f.)

*** NOTE ***
The Novi 2000 application will have spacers provided to move the coolant reservoir to gain clearance for the supercharger.

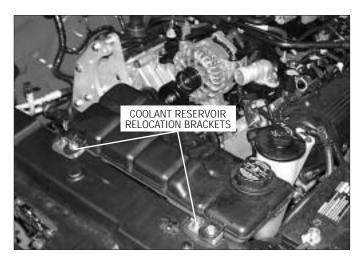


Fig. 4.2-f

Section 5 IN-TANK FUEL PUMP INSTALLATION

5.0 FORD 4.6L IN-TANK FUEL PUMP INSTALLATION (1999-2003 Models)

- A. Raise the rear of the car and support it with jack stands.
- B. Open the fuel door and remove the fuel cap and the three filler neck screws using a 10mm socket.
- C. Remove the fuel filter inlet line with a 3/8" spring-lock tool.
- D. With the weight of the fuel tank supported with a jack, remove the bolts securing the two fuel tank straps.
- E. Slowly lower the fuel tank, allowing it to lean over with the filler side up until the electrical connections leading to the center mounted fuel pump are revealed. Disconnect these two electrical connections.
- F. Remove the six bolts securing the fuel pump access cover (*on top of the fuel tank*) with an 8mm wrench. Depress the two clips securing the plastic fuel pump enclosure and slide it out of the tank. The fuel sender float is attached to the fuel pump enclosure and must be handled with care. Ensure that the tank has been lowered enough to remove the fuel pump enclosure.
- G. Remove the two screws securing the plastic fuel pump outlet manifold to the enclosure cap. Pull the manifold up and away from the fuel pump.
- H. Remove the three screws securing the fuel pump enclosure cover using a 3/16" nut driver and remove the cover.
- I. Remove the stock fuel pump from its enclosure. Separate the rubber pump support from beneath the filter and install it on the supplied pump. Secure the support with the new filter provided.
- J. Using the supplied fuel pump, reassemble the fuel pump assembly and canister with cap.
- K. Reinstall the canister assembly into the fuel tank. Reattach the electrical connections.
- L. Reinstall the fuel tank, reconnect the fuel filter inlet line, reattach the fuel filler neck, and reinstall the fuel pump.
- M. Turn the ignition key on and check the fuel pump for leaks.

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5.1 FUEL MANAGEMENT/UNIT (1996-1998 Models Only)

A. Position the fuel management unit (*FMU*) against the inner fender ahead of the right side shock tower about an inch from the top. Mark and drill two holes in the inner fender to mount the FMU. Secure with the sheet metal screws provided. (See *Figs. 5.1-a, 5.1-b, 5.1-c.*)

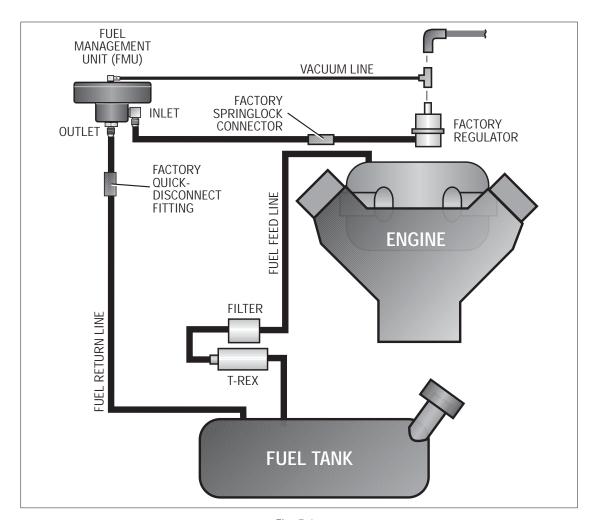


Fig. 5.1-a

- B. Disconnect and discard the factory rubber fuel return line running from the fuel rail (the return line DOES NOT have a pressure test fitting on it) to the steel return line (the smaller of the two) located behind the right side shock tower using a spring lock disconnect tool.
- C. 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 on the fuel rail.
- D. 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. Make sure the hose end is securely "snapped" onto factory fuel return line.
- E. Secure the fuel lines away from abrasion and exhaust heat with the tie-wraps provided.
- F. Attach the supplied length of 5/32" vacuum hose to the fitting on top of the FMU. Connect the opposite end of the hose to the factory fuel regulator vacuum connection using the 5/32" TEE provided.

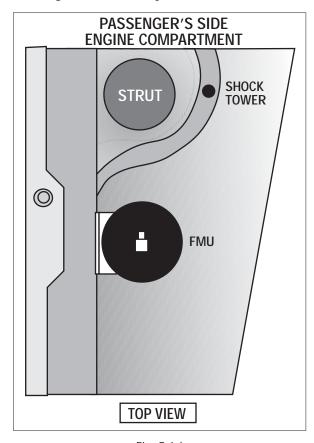


Fig. 5.1-b



Fig. 5.1-c

5.2 FORD 4.6L FUEL PUMP INSTALLA-TION (1996-1998 Models Only)

B. Connect the power wire from the relay (*Terminal #30*) to the battery positive (+) terminal. (See *Fig. 5.2-d.*)

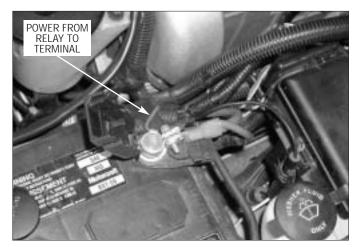


Fig. 5.2-d

C. Locate the wiring harness connection from the battery. Connect the gray trigger wire from the relay (*Terminal #86*) with the supplied quick connector to the solid red wire coming from the wiring harness connection. (See *Fig. 5.2-e.*)

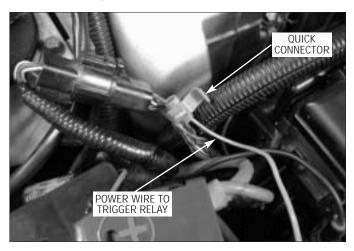


Fig. 5.2-e

D. Route the red wire from the relay (*Terminal* #87) through the provided split loom along the back of the firewall, across to the passenger's side, and along the other components to the fuel tank where it will be connected to the additional fuel pump.

- E. Disconnect the factory fuel line at the fuel filter using the supplied tool. Connect the male fitting from the fuel pump to the line that you removed from the fuel filter. Connect the female end from the fuel pump to the fuel filter.
- F. The in-line auxiliary fuel pump is installed next. Remove the spare tire from the well in the trunk. Mount the pump/bracket assembly by drilling two 1/4" holes in the spare tire well using the bracket as a template.
 - 1. Placement should be as close as possible to the fuel tank while still providing access to the mounting bolts with a socket.
- G. From inside the trunk (*not underneath*), use a grinder or a piece of course sandpaper to remove the paint from around one of the holes you just drilled. This will ensure a good ground point that is not exposed to the elements.
- H. From underneath the car, connect the pump ground wire to this hole as you secure the pump to the spare tire well using the supplied fastening bolts. (See *Fig. 5.2-f.*)
- I. Connect the wire from the relay to the pump power terminal.



Fig. 5.2-f

Section 6 CHECK-OUT PROCEDURES

6.0 CHECK-OUT PROCEDURES

We know that you are anxious to get out and drive your new vehicle, but please take a little bit more time to perform these simple check-out steps.

- A. Inspect all wiring harnesses and electrical connections. Make sure that all items are properly routed, connected and secured.
- B. Check all hoses, lines, and fittings for properly secured connections.
- C. Make certain all fasteners, brackets, and clamps are installed and properly tightened.
- D. Check the serpentine accessory belt and supercharger drive belts for proper tension and alignment.
- E. Cycle ignition key from "off" to the "on" position.
- F. Check the entire fuel system for possible leaks.
- G. Start the engine and verify that the oil pressure is within normal range.
- H. Allow the engine to come up to normal operating temperature.
- I. Check the coolant level in the coolant recovery bottle and top off as needed.
- J. Check for the following:
 - Fluid Leaks
 - Fluid Levels
 - Belt Slippage
 - Throttle Response

Now that the work is done, it's time to enjoy the results of your efforts. *PAXTON Automotive* wants to thank you for choosing our product, and wants to remind you that the performance and response of your vehicle will now be different from that to which you have been accustomed. Please drive cautiously until you feel comfortable with the handling of your vehicle.

Please see the service manual included in your kit for information on the service and maintenance of your *PAXTON Supercharger*. Belt tightening, troubleshooting, special tuning requirements, and warranty information is also included in the Service Manual.



Fig. 6.1-a

APPENDIX

Please realize that PAXTON Automotive is constantly improving the performance and look of the NOVI 1000/2000 superchargers. Parts in your kit may appear differently than what is pictured in this manual. This is due to photographs taken in preproduction, a change in material costs, or an improvement in performance.

Rest assured that you have purchased the best quality kit that PAXTON Automotive manufactures at this time. The installation of the components will remain the same.

List of Appendices

App. No.	DWG No	DWG Title	Pg. No.
A.	1001818	KIT, PARTS LIST	A-2
B.	1011817	ASY, S/C NOVI, REVERSE ROTATION	A-3
C.	1016606	ASY, S/C MTG BRKT (1996-1998 Models)	A-4
D.	1016609	ASY, S/C MTG BRKT (2000 Models)	A-5
E.	1016616	ASY, S/C MOUNTING BRKT (1999 Models)	A-6
F.	1016630	ASY, S/C MOUNTING BRKT (2001-2003 Models)	A-7
G.	1015933	ASY, AIR INTAKE	A-8
H.	1017017	ASY, AIR DISCHARGE	A-9
I.	1019336	ASY, OIL SUPPLY	A-10
J.	1019328	ASY, OIL RETURN	A-11
K.	1015506	ASY, COMPRESSOR BYPASS	A-12
L.	1015309	ASY, RADIATOR HOSE MODIFICATION	A-13
M.	1017700	ASY, FUEL CONTROL (1996-1998 Models Only) .	A-14
N.	1016029	ASY, FUEL PUMP	A-15
O.	1017734	ASY, FUEL PUMP / IN-TANK	A-16
P.		BELT ROUTING DIAGRAM, (2000-2003 Models)	A-17
Q.		BELT ROUTING DIAGRAM, (1996-1999 Models)	A-18

ITEM NO. QTY.	OTY.	PART NO.	DESCRIPTION
1	_	1011817	ASY, S/C NOVI 1000 REVERSE ROTATION
2	1	See App	ASY, S/C MTG BRKT
3	_	1015933	ASY, AIR INTAKE
4	1	1017017	ASY, AIR DISCHARGE
2	_	1019336	ASY, S/C OIL SUPPLY HOSE
9	_	1019328	ASY, S/C OIL RETURN HOSE
7	_	1015309	ASY, RADIATOR HOSE MODIFICATION
8	_	1015506	ASY, COMPRESSOR BYPASS
6	1	1017734	ASY, FUEL PUMP, INTANK
10	8	8F060-030	FUEL INJECTOR, '99-'03 Models only
11	1	4809605-1	VOUCHER, COMPUTER CHIP
12	1	4809633	BOOKLET, 4.6L SOHC MUSTANG GT
13	20	7U100-055	WRAP, NYLON-TIE 5.50"

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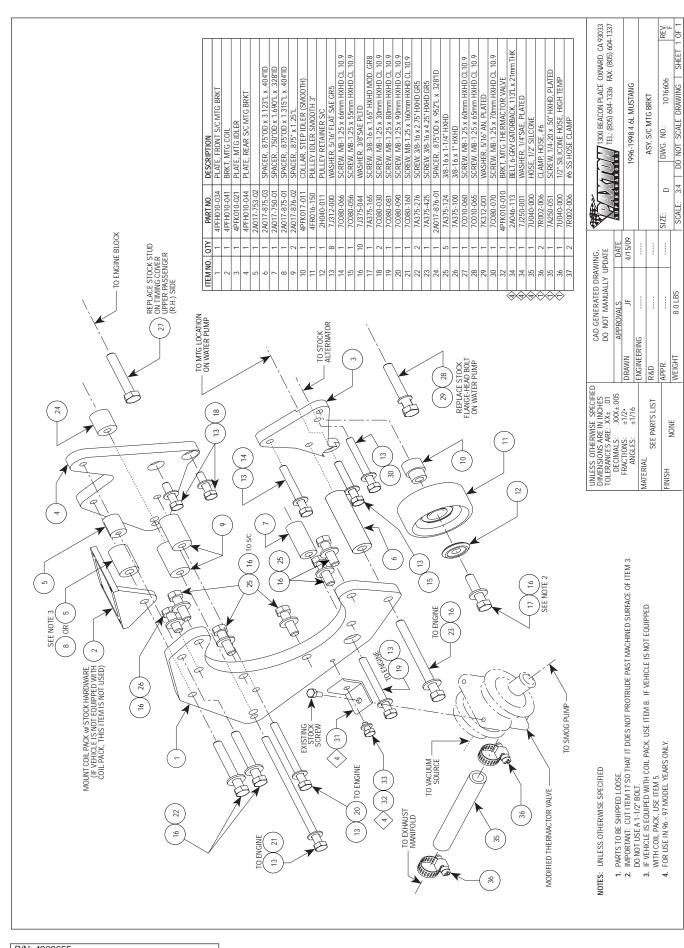
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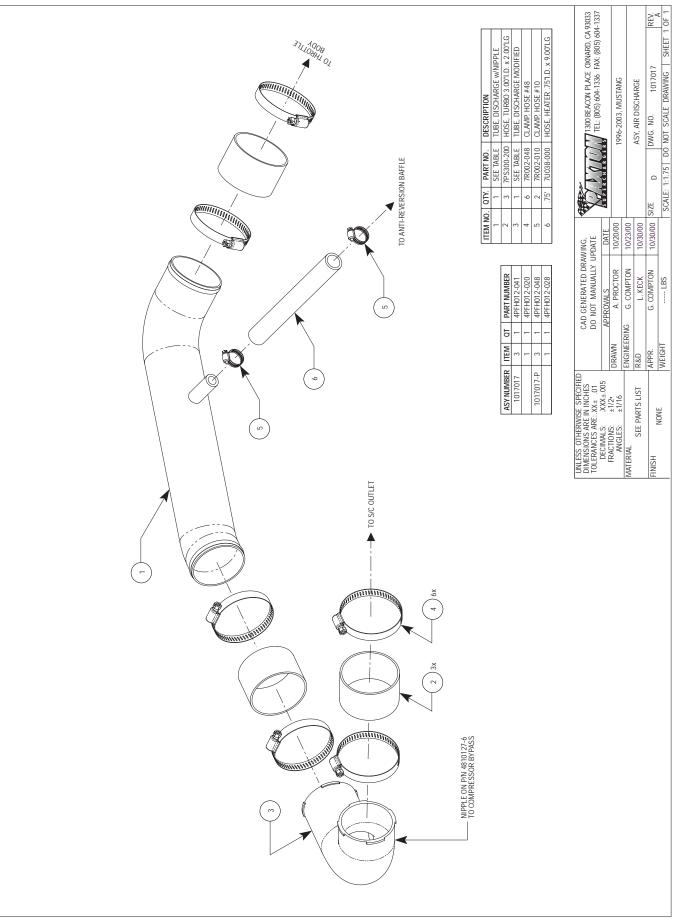
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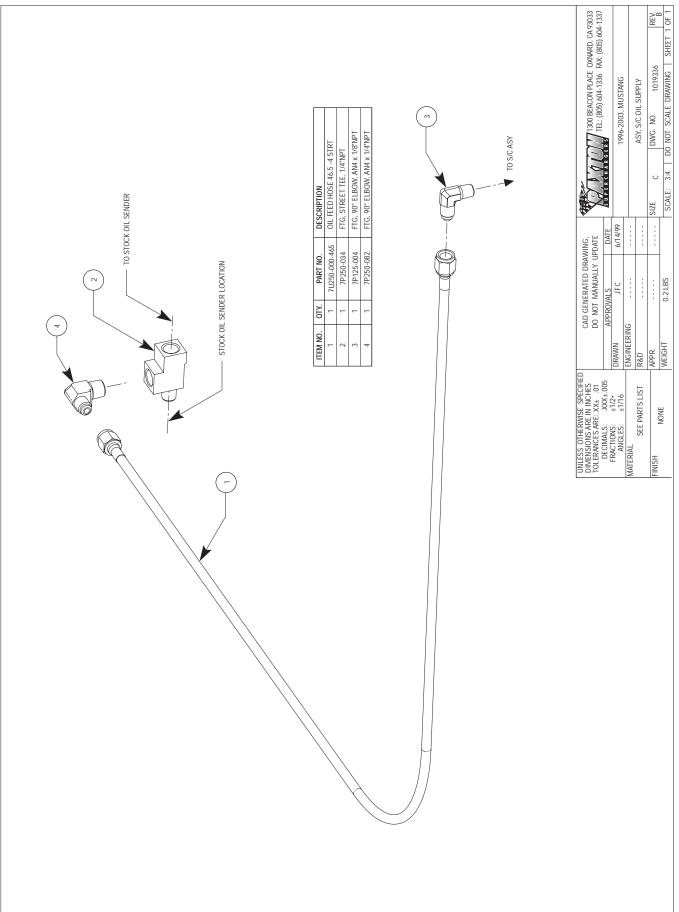
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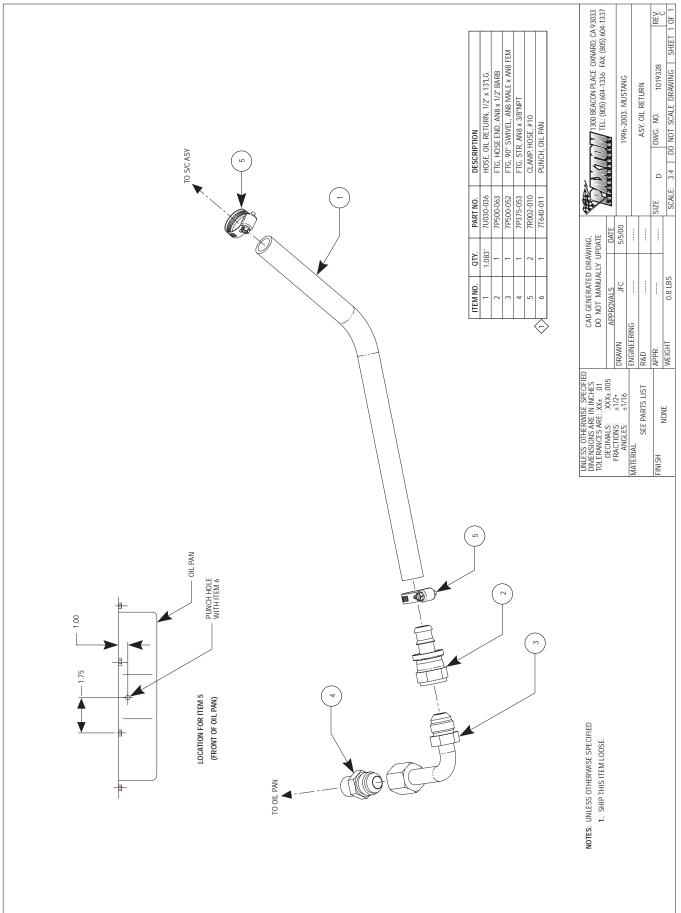


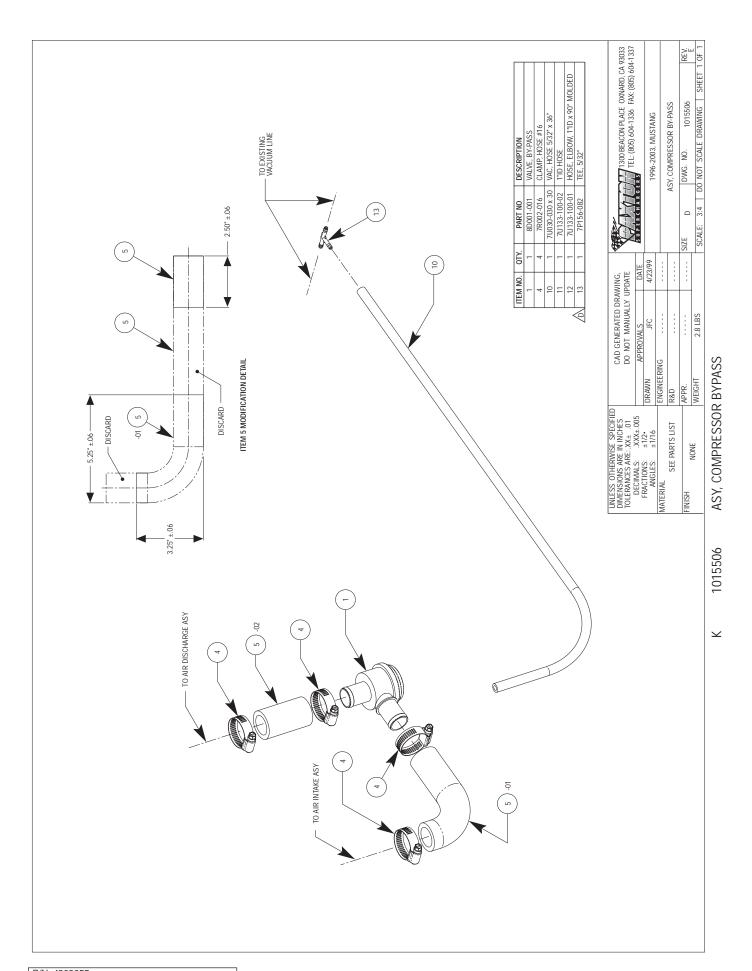


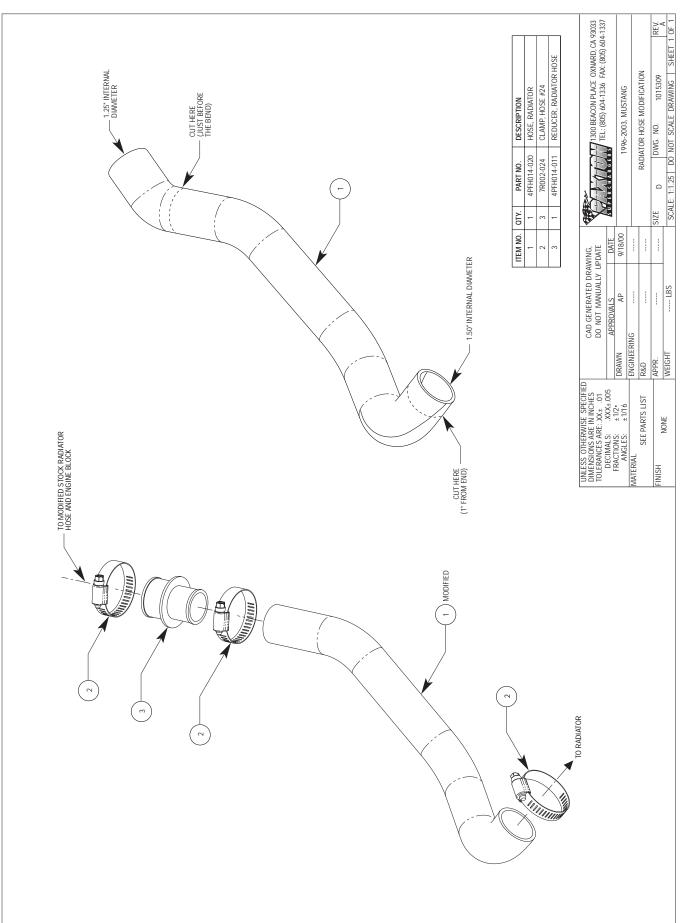
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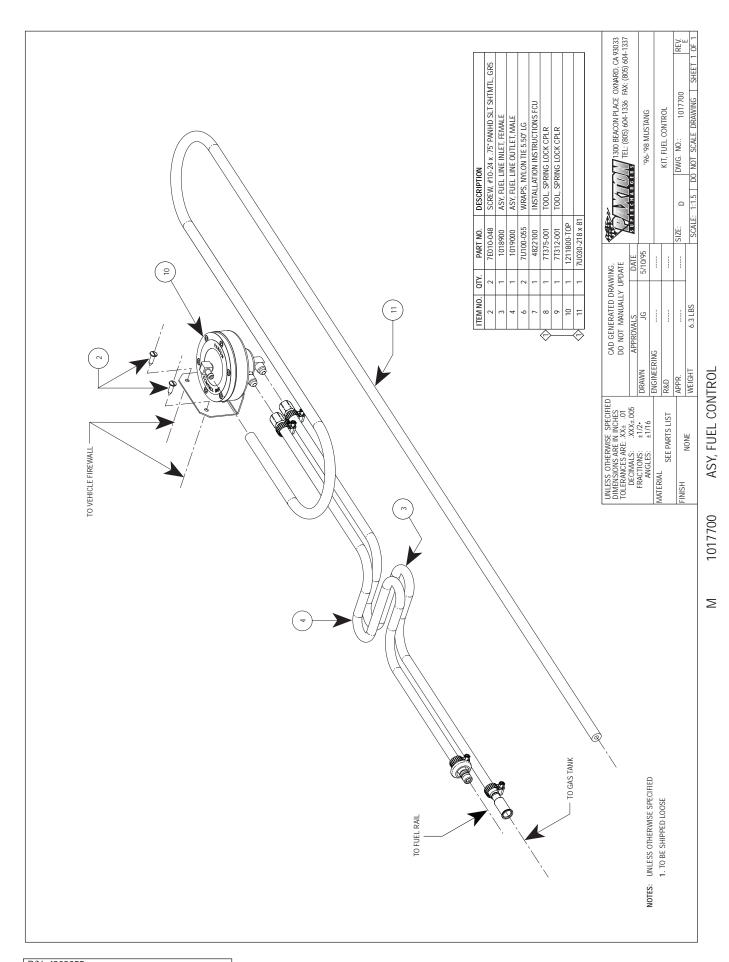
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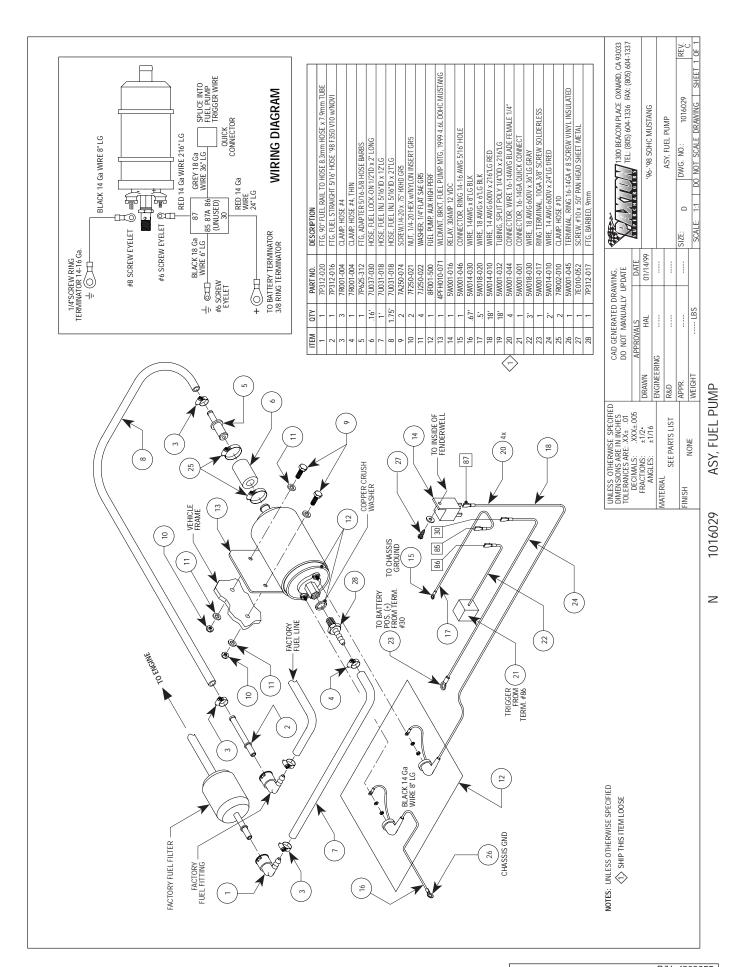












ASY, FUEL PUMP / IN-TANK

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FUEL PUMP, 255 LPH

8F001-260 PART NO

QTY.

ITEM NO.

DESCRIPTION

BELT ROUTING DIAGRAM

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