

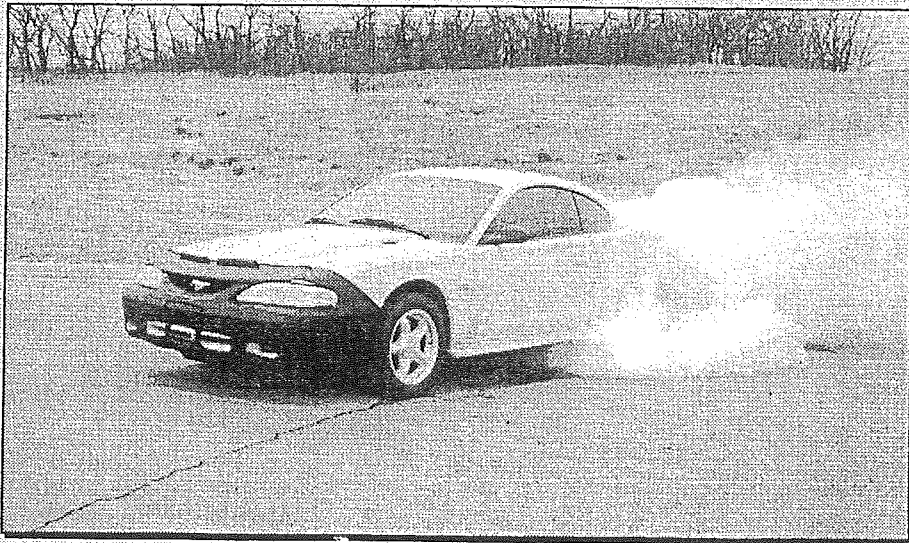
# OWNER'S MANUAL

1994 - 1995 Ford Mustang (CARB EO #D-365)

# PROCHARGER™

*Blown + Intercooled™*

**CENTRIFUGAL SUPERCHARGER SYSTEMS**

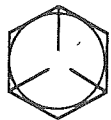
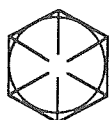


*The Intercooled Supercharging Experts!™*



ACCESSIBLE TECHNOLOGIES, INC.

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THREAD SIZE	 GRADE 5 TORQUE (Lb. Ft.)			 GRADE 8 TORQUE (Lb. Ft.)		
	UNPLATED	PLATED	LUBRICATED	UNPLATED	PLATED	LUBRICATED
1/4-20	11	8	7	16	12	10
1/4-28	13	10	8	18	14	11
5/16-18	23	17	14	33	25	20
5/16-24	26	19	15	36	27	22
3/8-16	41	31	25	58	44	35
3/8-24	47	35	28	66	49	39
7/16-14	66	49	40	93	70	56
7/16-20	74	55	44	104	78	62
1/2-13	101	75	60	142	106	85
1/2-20	113	85	68	160	120	96

Torque Value Chart

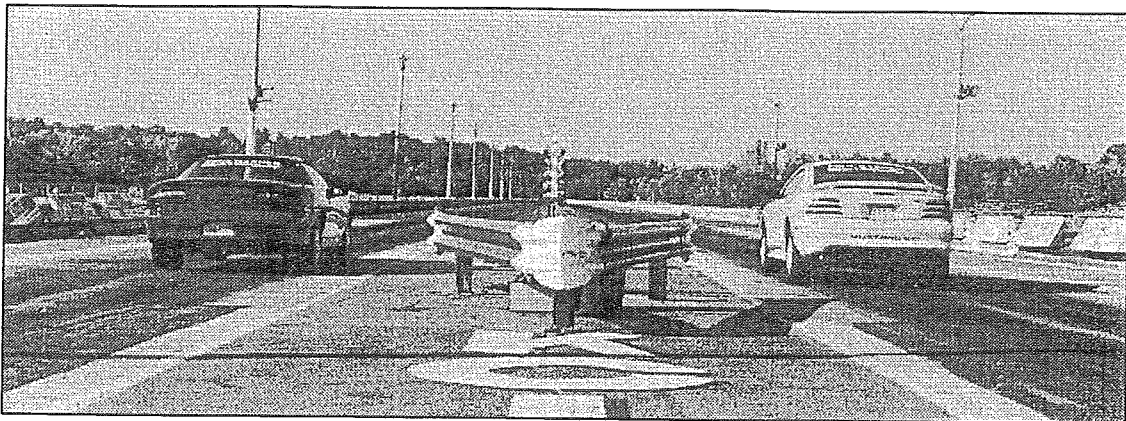
Congratulations on the purchase of your ProCharger™ Blown+Intercooled™ centrifugal supercharger system, and welcome to the world of intercooled supercharging. You are now the owner of the most powerful supercharger system available, and the latest technology in supercharging!

This Owner's Manual contains the following sections:

- Introduction
- Installation Instructions
- Operation and Maintenance
- Service
- Warranty

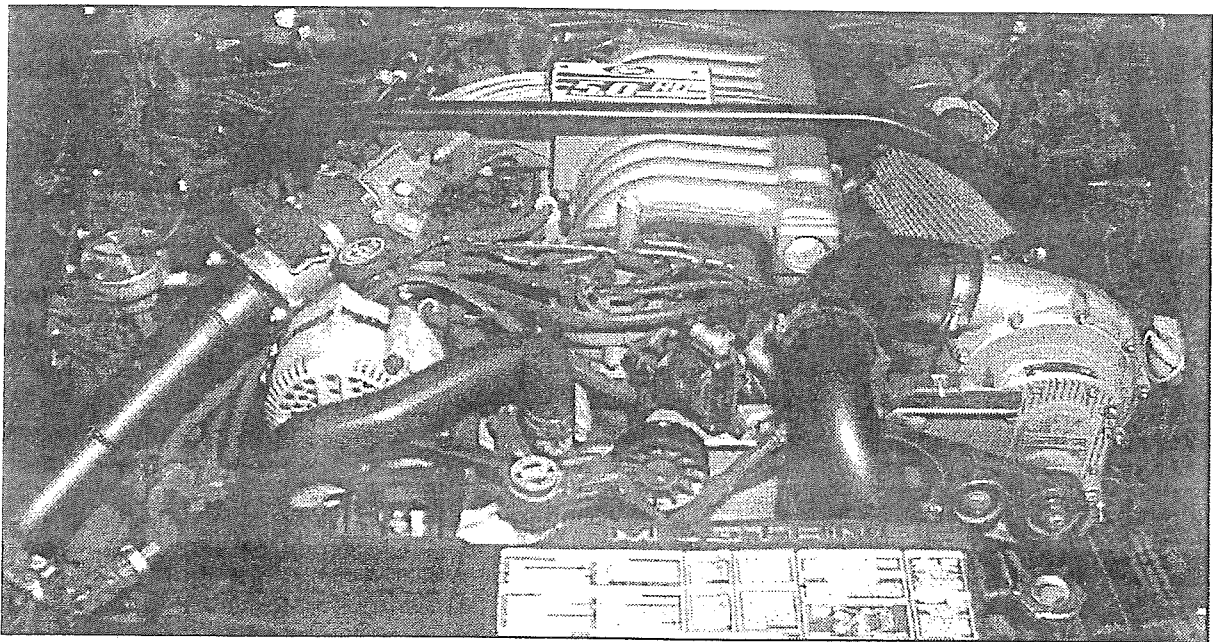
If you are performing the installation of this system and this is your first ProCharger installation, you will likely benefit from reading the entire installation instructions prior to proceeding, and then reviewing each section as you go. If you are familiar with supercharging, remember that intercooled supercharging is different from non-intercooled supercharging, and the same rules do not necessarily apply, primarily due to the unparalleled boost generated by the ProCharger, and the vastly cooler intake temperatures that result from intercooling this boost. Additionally, based on feedback from our customers and our own experiences, you should start preparing yourself for accusations of having engine modifications far beyond your actual setup, having nitrous, and/or running racing fuel rather than pump gas.

Once your system is installed and dialed in, you will experience a performance gain that is approximately double that delivered by non-intercooled supercharger systems. Because of this, when racing blown cars that are not intercooled, not only will you be able to embarrass vehicles with modifications far exceeding your own, the owners of these vehicles and other witnesses will likely find it hard to understand what has happened, based on the magnitude of your superior performance and their own experiences with non-intercooled supercharging. As more and more people begin to understand that intercooling basically separates the men from the boys, not only because of the benefits of intercooling, but because you must also have a real gear-driven supercharger to blow through an intercooler, such misunderstandings will become less and less frequent. For now, though, you will just have to grin and bear it.



# INSTALLATION OVERVIEW

- A. PREPARATION
- B. OIL DRAIN SETUP
- C. OIL FEED SETUP
- D. MASS AIR FLOW SENSOR RELOCATION  
(OPTIONAL)
- E. INTERCOOLER INSTALLATION
- F. PROCHARGER INSTALLATION
- G. BATTERY RELOCATION
- H. FUEL MANAGEMENT UNIT INSTALLATION
- I. FUEL PUMP INSTALLATION
- J. INSTALLATION REVIEW AND SAFETY CHECK
- K. TUNING



## INSTALLATION OVERVIEW

For best results we recommend that you review the installation instructions beforehand, and follow the installation instructions closely and in sequence. A detailed packing list is provided (stapled to your invoice) to help you identify the components of your ProCharger system. The following tools will be required to install your ProCharger system:

- 3/8" socket set (standard & metric)
- 1/2" socket set (standard & metric)
- 1/2" breaker bar and 4" extension
- adjustable wrench
- open end wrench set (standard & metric)
- center punch
- 9/16" tapered punch
- 3/8" NPT tap
- oil filter wrench
- oil filter
- 5 quarts engine oil (synthetic preferred)
- flat screwdrivers
- Phillips screwdrivers
- Torx bit set
- Ford factory repair manual
- heavy grease
- silicone sealer
- 8 spark plugs (not platinum plugs)\*
- spark plug socket\*

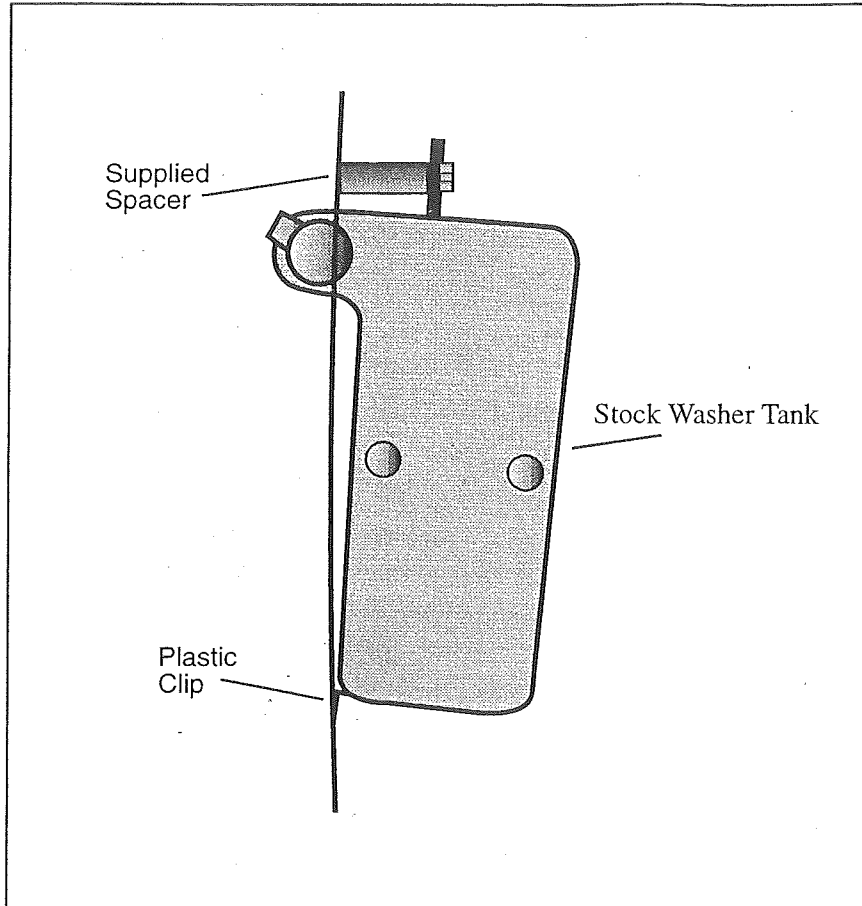
Ideally, you should also have the following gauges available to properly check the finished installation and monitor your vehicle's performance (especially for racing applications):

- manifold pressure boost gauge
- fuel pressure gauge (0-120 psig)

Both gauges should be of a type that can be read from the cockpit while performing a W.O.T. road test. Cockpit or hood-mounted gauges are preferable, although use of a shop fuel pressure gauge (which has a long enough hose to be taped to the windshield during testing) should be sufficient.

The vehicle on which the ProCharger should be installed should have stock compression. If your engine has been modified in any way, please check with us before proceeding. This supercharger system is intended for use on strong, well maintained engines. Installation on a worn or troublesome engine should be reconsidered. Accessible Technologies is not responsible for damage to an engine.

\* Current plugs should be replaced if platinum or have more than 10,000 miles of use.

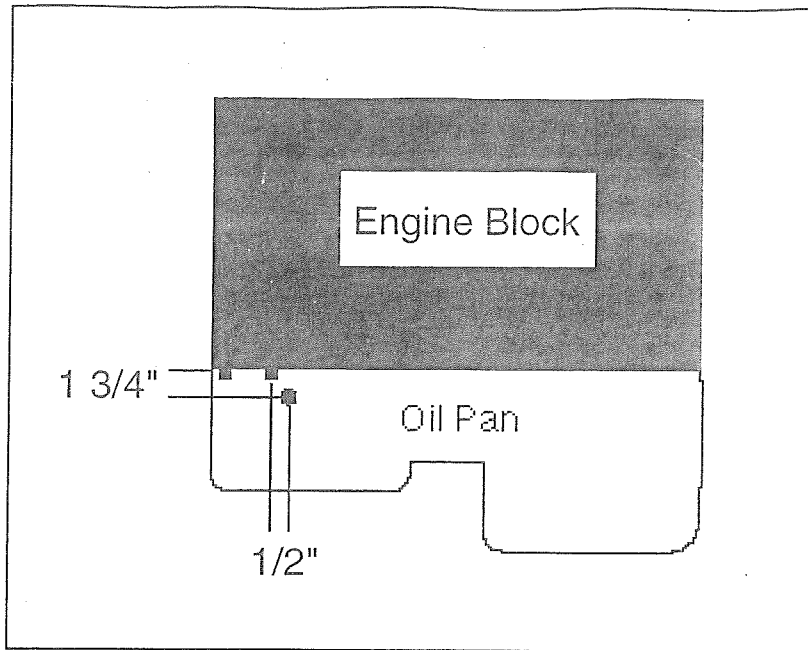


**Illus. A1**  
*View from above driver's fender*

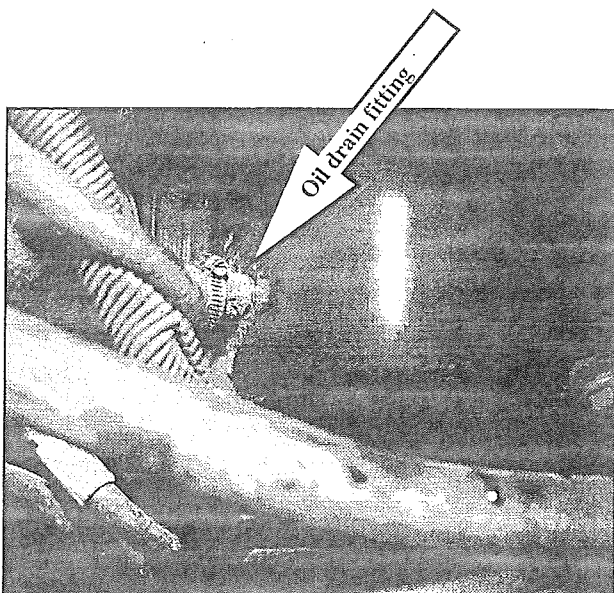
## A. PREPARATION

*Completion of this section will make space for the ProCharger and air intake system.*

1. Disconnect the positive and negative battery cables from the battery. Remove battery, battery tray and both battery cables from wiring loom running around front of engine oil pan. You may want to remove the starter at this point as well, as this will assist removal of the cables, and will be necessary for relocation of the battery in section G
2. Unbolt power distribution box from driver's fender well; relocate to front corner of fender well. Extend two grey wires from alternator with supplied wires to allow relocation.
3. Remove air filter, MAF sensor and all related components connected to throttle body from air filter housing. Remove air temperature sensor wiring clip from sensor. Unscrew sensor and retain (this will be reinstalled on new tubing).
4. Remove the crankcase vent tube from the oil fill spout. Remove the hose routed between the pcv valve (located on the back of the intake manifold) and the fitting on the under side of the intake manifold. Cap the intake manifold fitting with the supplied 3/8" vacuum cap.
5. Connect the supplied 3/8" X 32" long crankcase vent hose to the fitting on the oil filler spout and route to near the pcv valve at the back of the intake manifold. Attach one end of the 3/8" X 3" long hose to the center nipple of the supplied plastic tee and the other end of the 3" hose to the pcv valve. Attach the hose coming from the oil filler spout to one of the other nipples of the tee. Attach the supplied 3/8" X 24" long hose to the other nipple and route over to near the air filter. *Note: This hose vents to atmosphere and provides for proper crankcase ventilation. If in California, attach the supplied filter to the end of the hose.*
6. Remove stock 6-rib serpentine belt  
*Note: Cobras are equipped with a factory under-drive crank pulley. In order to achieve proper boost levels, the crank pulley needs to be replaced with a stock GT style pulley.*
7. Using puller tool, remove power steering pulley. Unbolt power steering pump, air conditioning compressor and ignition coil from factory bracket. Remove 5/8" bolts (2) and 9/16" (1) bolt which secure factory bracket, remove bracket from car
8. Raise vehicle, secure with jackstands, and turn wheels hard left; remove driver's front wheel
9. Remove front section of plastic inner fender splash panel to allow access inside the driver's front fender. With splash panel removed, unbolt stock windshield washer reservoir in order to move reservoir 2.5" closer to outer fender, allowing room for the ProCharger within the engine compartment. Insert supplied 2.5" spacer between reservoir bracket and stock mounting bracket on the inner fender; secure with supplied long screw (see illustration A1) This relocation should not affect the reservoir's other point of attachment (plastic clip extending through inner fender). Replace inner fender splash panel.
10. If installed, replace any aftermarket chip with the original stock chip. **Warning: Aftermarket chips, unless specifically designed for use with a supercharger, advance timing at elevated rpm's; this most likely will cause detonation and engine damage under boost conditons.**

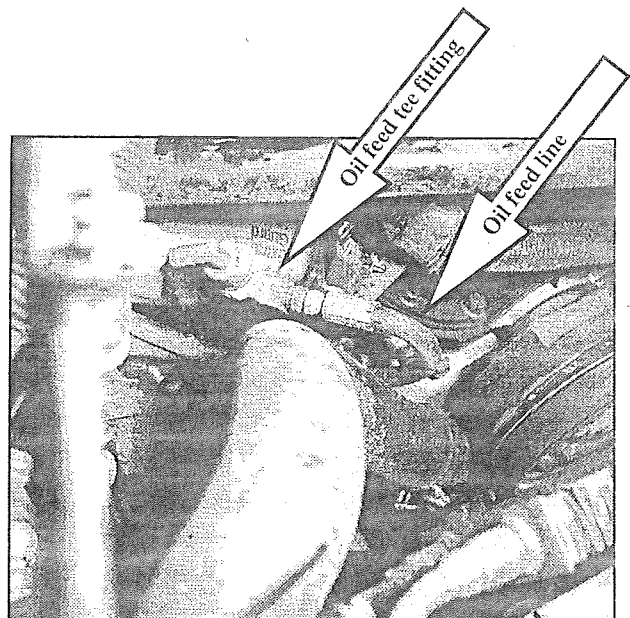


Illus. B1



Illus. B2

*Oil drain return installation*



Illus. C1

*Oil feed tee installation*



## B. OIL DRAIN SETUP

Completion of this section will establish a fitting for the oil return line, which drains oil from the ProCharger into the engine oil pan.

### Description and Operation

The main components consist of the oil feed "T" fitting, oil feed line and oil return line. The oil feed "T" fitting is installed between the oil pressure sending unit and the block, and provides an oil supply port for the feed line. The oil supply at this location is just downstream of the oil filter. The oil supply is used to supply filtered, high pressure oil to the ProCharger bearings and gears. The oil return line is routed from the ProCharger to the oil pan. This is a gravity feed system, therefore, this oil return line must be kink-free and downhill the entire length, and should drain into the pan above the oil level line.

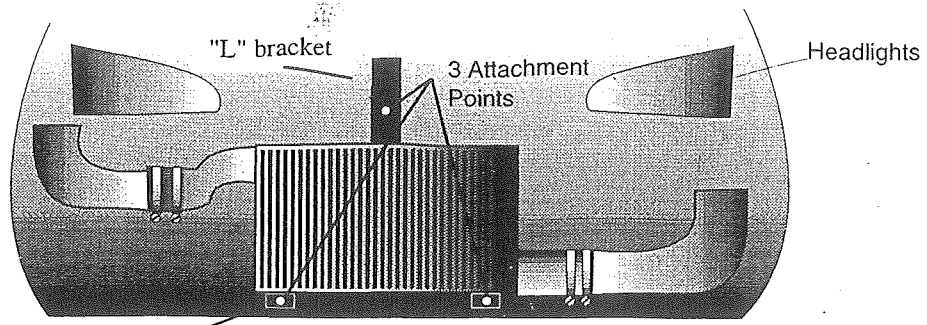
1. Punch (don't drill) a small pilot hole in the driver's side of the oil pan, centering 1/2" behind the first bolt on the side of the engine, and 1-3/4" below the lip of the oil pan (see illustration B1 & B2). Start with a small center punch and work up to a hole large enough to start the 3/8" NPT tap, (approximately 9/16"). (FYI: 3/8" NPT refers to a pipe's inner diameter.) Refer to figure B1.
2. Pack the 3/8" NPT tap with heavy grease and tap to a depth approximately 1/2 the length of the tap. *Note: This tap is tapered and should not be fully threaded in the pan.*
3. Clean threads and remove all chips (a magnet works well)
4. Liberally apply silicon sealer and attach 3/8" NPT fitting to oil pan - do not connect the oil drain line at this point, as it should be connected to the ProCharger first
5. Perform an oil and filter change prior to completing installation and starting engine

## C. OIL FEED SETUP

Completion of this section (after the factory bracket has been removed in section A) will allow establishment of an oil feed line from the oil pressure sending unit to the ProCharger.

1. Remove oil pressure sending unit
2. Thoroughly clean and blow dry sending unit; connect sending unit to end of supplied oil feed T fitting
3. Install supplied 45° fitting to side of block
4. Install supplied oil feed T fitting (with sending unit attached) to 45° fitting. See figure C1. for proper orientation of the oil T fitting.
5. Connect oil feed line (disconnect from ProCharger if necessary) to installed oil feed T fitting. Do not use Teflon™ tape or sealant on the fitting, as this could block the ProCharger oil nozzle!

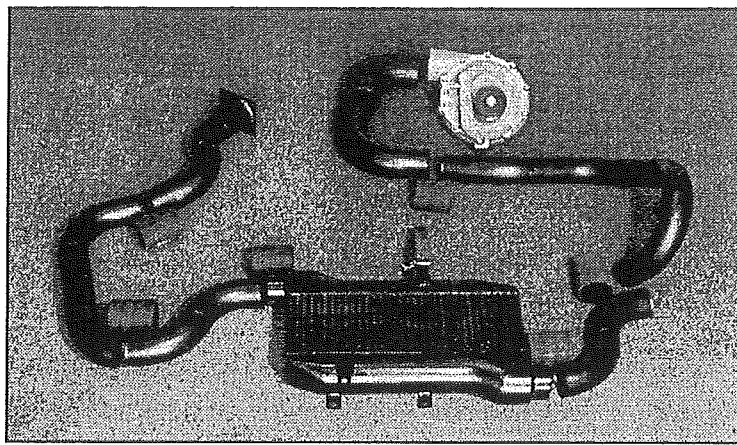
(Section D intentionally omitted)



P/S cooler hose attachment

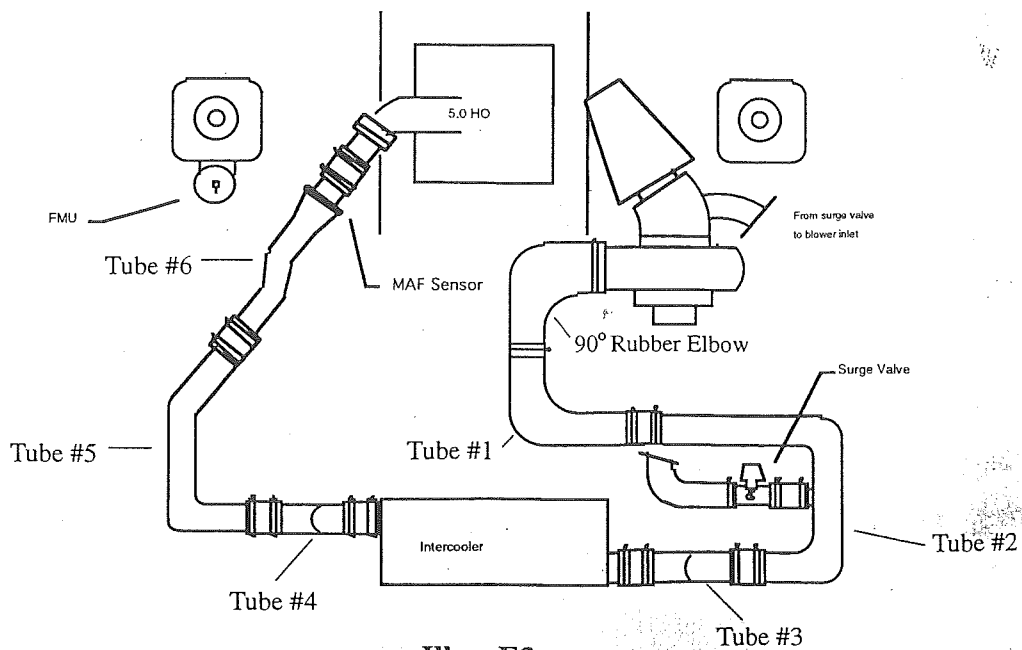
**Illus. E1**

*2 core intercooler installation  
View from front of car looking through grille*



**Illus. E2**

*2 core intercooler system layout*



**Illus. E3**

*2 Core intercooler installation  
View from above engine  
(intercooler mounted vertically in front of radiator)*

## E. INTERCOOLER INSTALLATION

*In this section you will install the intercooler system, which cools and routes air from the ProCharger discharge to the throttle body (see illustrations E1 thru E5).*

### Description and Operation

The intercooler system main components consist of the intercooler, surge valve and tubing. The intercooler is a two or three core, plate style, air-to-air heat exchanger. The charge air (compressed and therefore heated) coming from the ProCharger enters the lower intercooler plenum, passes thru a series of passages and exits the upper plenum. Ram-air flows between the charge-air passages and draws heat from the charge air. Cooling fins between adjacent passages increase cooling efficiency. The surge valve is a air-over-spring, diaphragm operated butterfly (ProFlow) or poppet (standard) valve. The valve opens under manifold vacuum conditions to allow venting of unneeded charge air to avoid compressor surge. The valve closes under boost conditions so that all the charge air is routed into the engine. The tubing system is made up of mandrel bent carbon steel tubing,, powder coated to prevent corrosion. The tubing routes the charge air from the ProCharger to the intercooler and then to the throttle body.

1. Unfasten clips at bottom of front fascia and black plastic air dam.

#### Finned style power steering cooler (steps 2-6)

2. Disconnect lines from power steering cooler at rear of core support
3. Unbolt power steering cooler from front side of core support
4. Lubricate metal lines on cooler and slide support bracket with rubber grommet inward until about 3" from cooling fins (allow for alignment with unused bolt hole on radiator core support during final step)
5. Mount the power steering cooler on back side of radiator using the radiator support on the driver side of cooler, and the bottom coolant bottle support on the passenger side of cooler by means of a sheet metal screw. This may require some rotating of bracket on driver side and lines, but will vary from car to car.
6. Reconnect lines removed in step 4, then proceed to step 11.

#### Plain line style power steering cooler (steps 7-9)

7. Unbolt power steering cooler line bracket.
8. Remove rubber lines running to cooler. Cut supplied rubber power steering line into two sections. Install hose sections such that cooling lines are spaced far enough forward to not interfere with intercooler. Tighten cooler lines.
9. Once the intercooler is installed, bolt stock power steering cooler line to bracket located on bottom of intercooler

*Note: Cobras are equipped with an engine oil cooler not found on GT models. The oil cooler lines may require rerouting during installation of the intercooler and tubing. Some customers have elected to remove the oil cooler system from their cars altogether with no adverse effect. Others have purchased aftermarket high pressure lines to avoid interference problems. You may reroute or remove these lines, whichever option suits your needs.*

#### 2 core intercooler installation (steps 10-17; 3 core customers proceed to step 18)

10. Remove hood latch support rod from behind grill.
11. Bolt the "L" shaped bracket extension to the long bracket protruding from top of intercooler, using the short straight piece between them. The short end of the "L" should be on top facing forward. Remove clip from hood latch support rod (removed in step 2) and attach to "L" bracket.