

Thank you for purchasing the CT Engineering Supercharger kit for the Honda S2000.

All components have been designed and manufactured utilizing the latest in technology and materials.

All CT products are designed to blend with the original vehicle design to improve performance, without modifying the original vehicle's integrity or emission certification.

We are sure you will be pleased with the look, fit, dependability and performance this kit will provide.

Should you have any questions, please call us at 916-635-4550.

To further realize the full potential of this Supercharger kit, we recommend the addition of a CT Engineering Cat-Back Exhaust system and Header for the S2000.

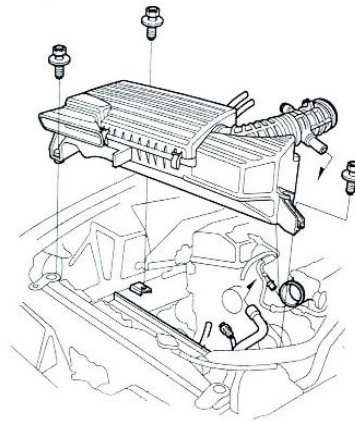


### **Before starting:**

- **Thoroughly Read these instructions.**
- We reference and recommend the factory service manual to supplement these installation instructions.
- **We recommend that only a competent and qualified mechanic perform this installation.**
- Some special tools are required to remove crank pulley. (see step#3)
- Thoroughly check the enclosed parts list to insure that all components are included in this kit **before** proceeding with the installation.
- Many factory parts are reused for installation, use caution not to damage or discard any parts, small or large.
- Always use jack stands to support the vehicle when a car lift is not available.
- Always work in a clean environment and use the appropriate safety equipment and tools.

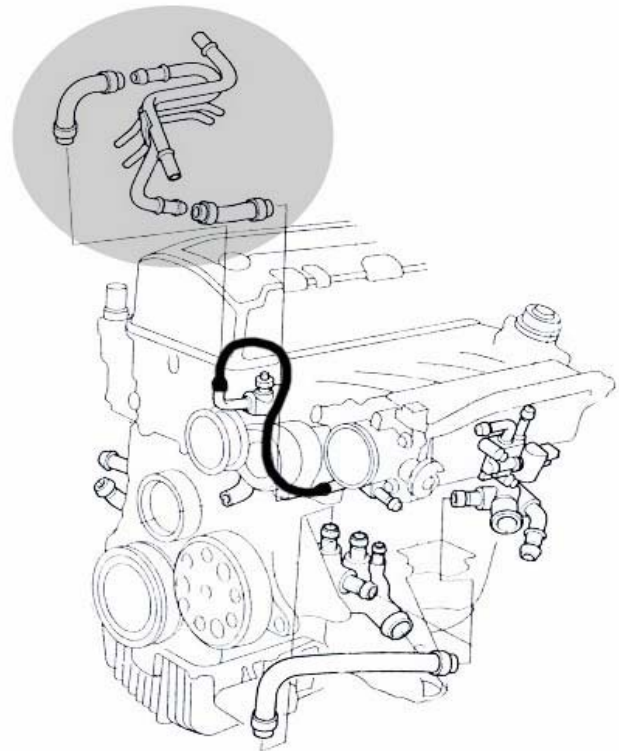
### Step #1: Remove air box:

- Label and disconnect the vacuum lines, air control solenoid valve wiring harness, air injection hose and crankcase vent tube from air box assembly.
- Disconnect the MAP sensor lead located on top of the throttle body.
- Remove the air control solenoid valve from the air box (see step #4 for new mounting position).
- Remove the three 6mm mounting bolts and hose clamp from the assembly. This will allow you to remove the complete assembly as one unit.



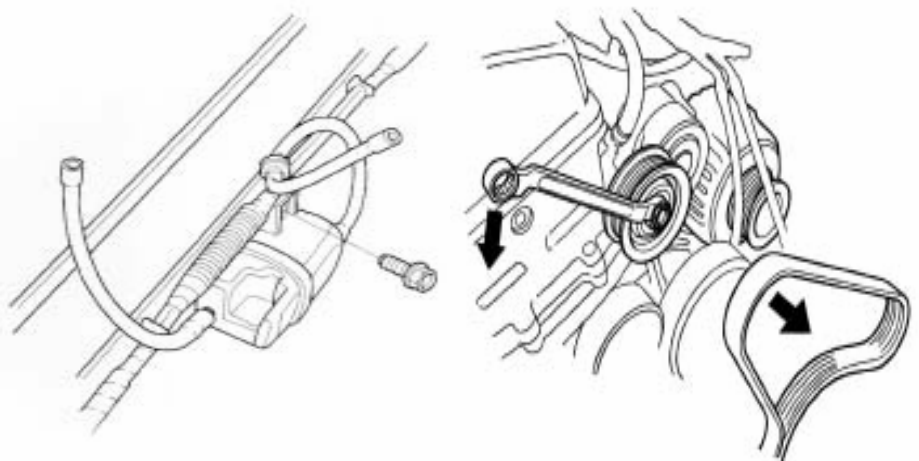
### Step #2: Crankcase vent tube:

- Label and remove the vacuum hoses, wiring harness and coolant lines from the vent tube assembly.
- Replace stock coolant hose with 5/16" hose and stock clamps. (See diagram A)



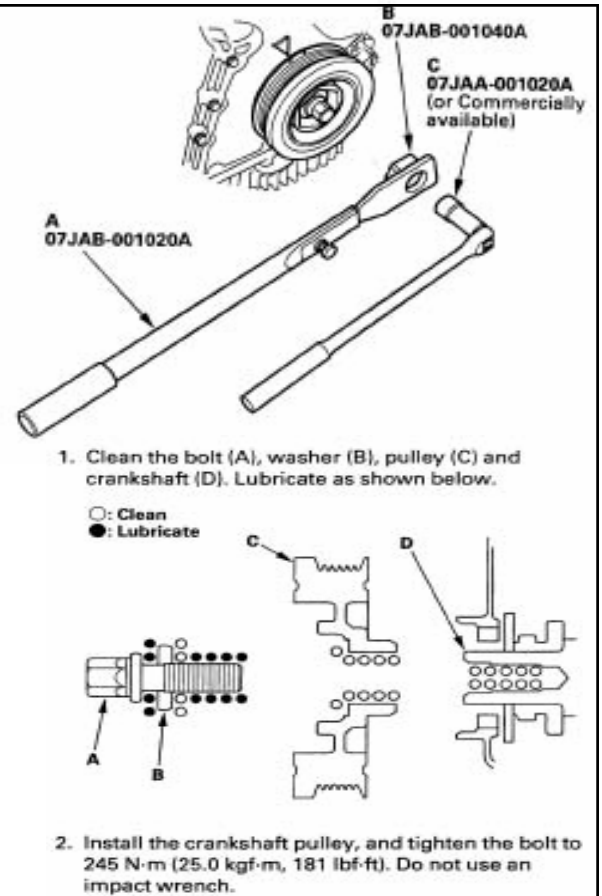
### Step #3: Blower drive pulley:

- To gain more clearance during this procedure, the vacuum tank attached to the sub-frame should be removed.
- Due to limited space the crank pulley must first be installed without the blower pulley.
- **Honda tools #07JAB-001040A & #07JAB-001020A, available at your Honda dealer are required to complete this procedure)**



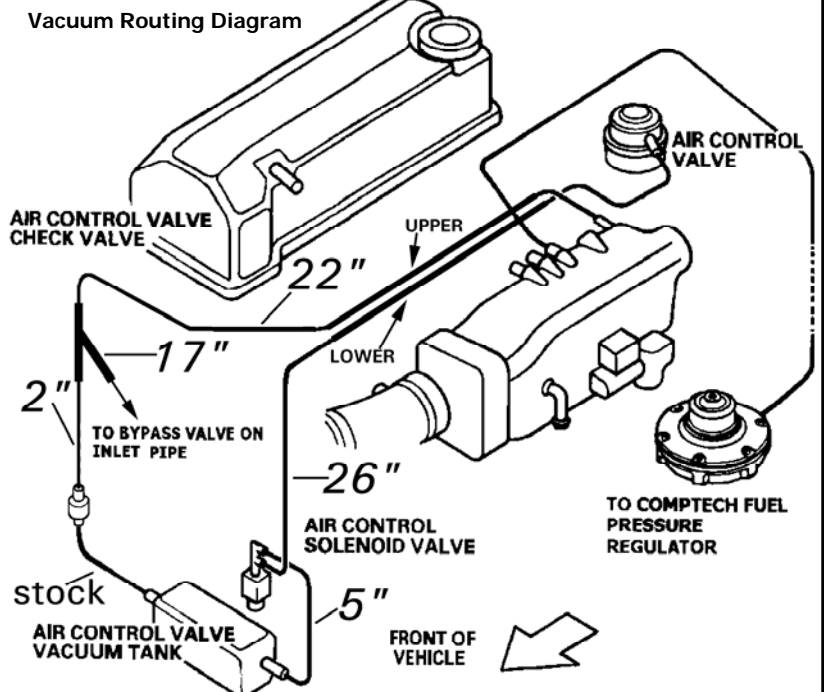
### Step #3 Continued:

- Remove stock belt.
- Using tools listed above remove pulley bolt, pulley and key (if loose) in key-way. (see diag A)
- Install the modified crank pulley with stock key and bolt in reverse order of removal.
- Lubricate the crank bolt threads & the top of the washer with clean oil. Torque to 181 lbs.ft
- Install the 6-groove blower pulley using supplied 10/32 x 1 1/4" Allen bolts and washers. (you will need to turn the crank pulley to access all 6 bolts)
- Apply blue Loctite and torque bolts to 80 In/lbs .
- Replace and tighten the stock belt and fasteners to factory specs.



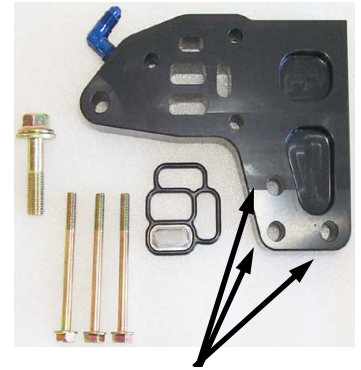
### Step #4: Air Control Valve (ACV):

- Longer vacuum hoses are provided to accommodate new ACV location. Label, remove and replace hoses individually to avoid confusion. Please refer to Vacuum diagram for any vacuum routing problems.
- Mount the ACV (removed from the air box in step 1) to the vacuum tank using the 5mm bolt and spacer provided.
- Connect the 26" vacuum hose from the lower vacuum port on the air control solenoid valve to the lower hard line, located under the fuel rail.
- Connect the 5" vacuum hose from the vacuum tank to the top of the ACV.
- Remove stock vacuum line after inline check valve and replace with 2" hose to stock check valve.
- 17" hose will be routed to supercharger bypass valve in inlet pipe in **Step #13**.
- Connect the 22" hose from ACV to upper hard line attaching to upper intake port.
- Route the steering-box wiring harness under the vacuum tank-mounting tab on the sub-frame for clearance to super charger.
- Mount vacuum tank in stock location using original 6mm bolt.



### Step #5: VTEC Mounting Block:

- Remove the three 6mm bolts that hold the V-TEC solenoid to the cylinder head. ( Some oil will leak out) Make sure the gasket stays in the V-TEC solenoid.
- Install rubber O-ring gasket in V-TEC mount block and place between V-TEC solenoid and cylinder head using 6x70mm and 10x45mm bolts provided.
- Torque 6mm bolts to 8 ft/lbs and 10mm bolt to 30 ft/lbs



These lower (3) holes will be used to mount the blower stand off block in step #9.

### Step #6: Alternator Extension:

- Remove the top 10x45mm alternator bolt and bracket.
- Install new bracket using 10x55mm bolt.
- Align bracket at approx. 1 o'clock but do not tighten until Supercharger mounting bolt is installed in step # 8.



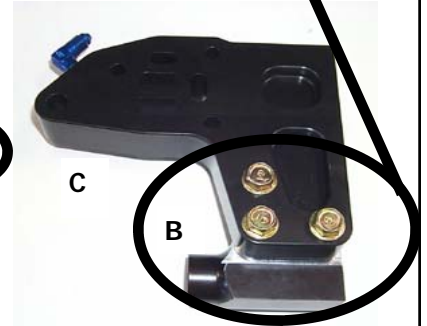
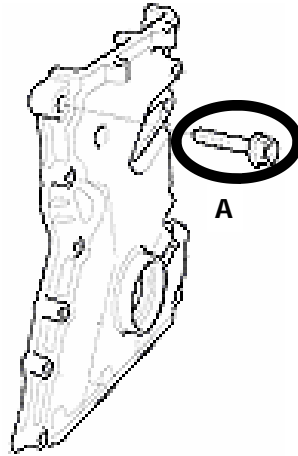
### Step #7: Modify Cross-Member:

- The cross-member at the front of the motor has to be modified slightly to clear the supercharger oil return line.
- Measure 8" from passenger side frame rail and bend a 1" section of the rear flange as shown in diagram A.



### Step #8: Blower Install:

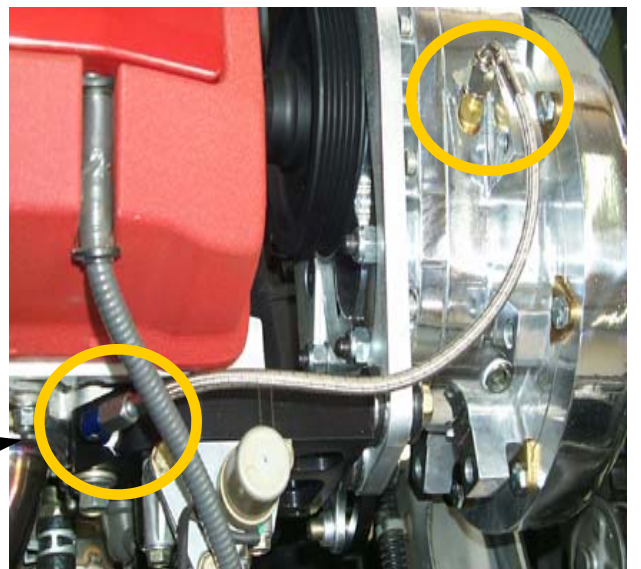
- Remove the 10x45mm bolt from the upper passenger side of the engine timing cover (A) beside VTEC block.
- Connect 45 degree end of -8 AN line to fitting on bottom of Supercharger.
- Align blower assembly with mounting brackets and -8 oil line routed towards oil pan. Start all four mounting bolts.
- Orient lower VTEC stand off block to align holes and start three 8x35mm bolts
- With all hardware fully engaged tighten in steps and Torque 10mm bolts to 33 ft/lbs ( except pulley tension pivot bolt, see next step) Torque 8mm VTEC stand off bolts (B) to 20 ft/lbs.
- Route Supercharger drive belt per diagram B. With the belt in place, use a 14mm wrench on the tensioner pulley-mounting bolt and rotate it clockwise to apply tension against the belt and tighten 10mm adjuster and pivot bolt.
- Check the belt tension by applying 20lbs. of force to the drive side of the belt (side opposite the tensioner), deflection should be .500" to .625". If correct torque the tensioner pivot bolt to 33 ft/lbs and tighten the adjustment bolt.



**Note:** The stand off block (B) bolts to the V-TEC block (C— installed earlier in step #5)

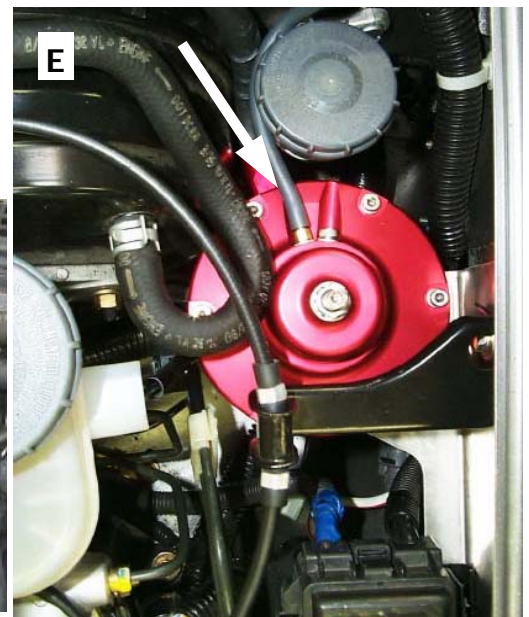
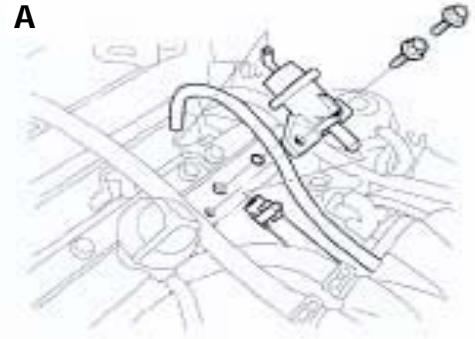
### Step #9: Blower Oil lines:

- **It is recommended that you drain the oil before this step.** Using provided 14mm to -8 male fitting and crush washer, remove oil pan drain plug and install the 14mm side of the new fitting with the crush washer in the drain plug hole.
- Route -8 AN hose to avoid any contact with other components from supercharger to oil pan fitting.
- Connect to oil pan and tighten both ends of hose.
- Refill engine with new oil as specified in owners manual.
- Connect straight end of the -3 steel braided line, to the fitting located in the end of the VTEC mounting block. Connect the 90 degree end to the fitting to the Supercharger and tighten both ends.



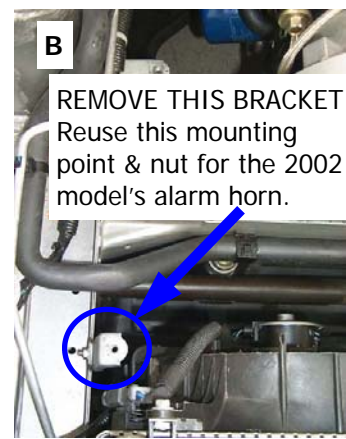
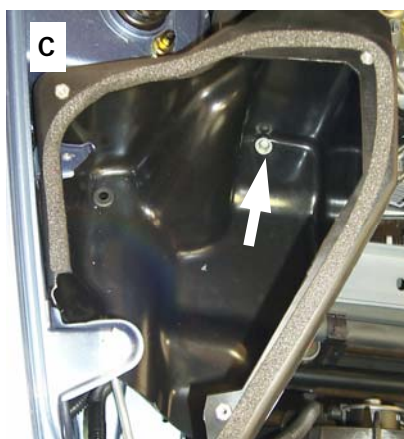
## Step #10: Fuel Pressure Regulator (FPR):

- Remove the plastic intake manifold cover and PCV valve from the valve cover (A).
- Disconnect the vacuum hose from the intake manifold to the stock FPR (A).
- Remove the hose clamp from the fuel return hose and loosen the two 6mm bolts and carefully remove the regulator with the O-ring which will be reused (A). (Use caution in removing the regulator as it may be under pressure and some fuel will leak out).
- Install the O-ring in the fuel rail to banjo fitting adaptor provided. Using stock hardware mount in same location and torque to 7 ft/lbs. Replace plastic intake manifold cover (B).
- The new FPR comes pre-assembled on the mounting bracket and will mount behind the throttle bracket and the fuse box bracket next to the brake master cylinder (C).
- Before mounting the new FPR/bracket, connect the -6 fuel hose to the FPR. install the -4 push on fitting to the stock return hose using the stock clamp (D).
- Route the fuel return line underneath the brake booster. Route the -6 line between the clutch reservoir and the brake booster and on top of the heater by-pass tube. And attach both hoses to the FPR before mounting it to the fender (D).
- With both hoses attached mount the FPR to the fender well behind the stock throttle brackets using the stock 6mm bolts (E).
- Connect the -6 fuel line to the FPR adapter in the fuel rail using the provided banjo bolt and crush washers (F).
- Install the supplied 35" vacuum line from the vacuum port located on the FPR to the port on the intake manifold that the original fuel pressure regulator connected to. Route the vacuum line along the top of the fuel line.



### Step #11: Comptech Air Box:

- The filter does not come pre-oiled and will have to be removed from the air box and oiled. (see pg 10)
- Remove the stock air box mounting tab (B) (2002 cars, see note).
- Place the CT air box as shown in diagram A.
- Start rear bottom bolt (C).
- Air box side mount uses aluminum tab (attached to side of air box) placed inside fenderwell (A). Start 6mm screw in side mount and while pressing down on airbox tighten both screws. (This is to crush the foam around the A/C lines under the box, if this is not done, the Carbon Fiber lid may rub against the hood).



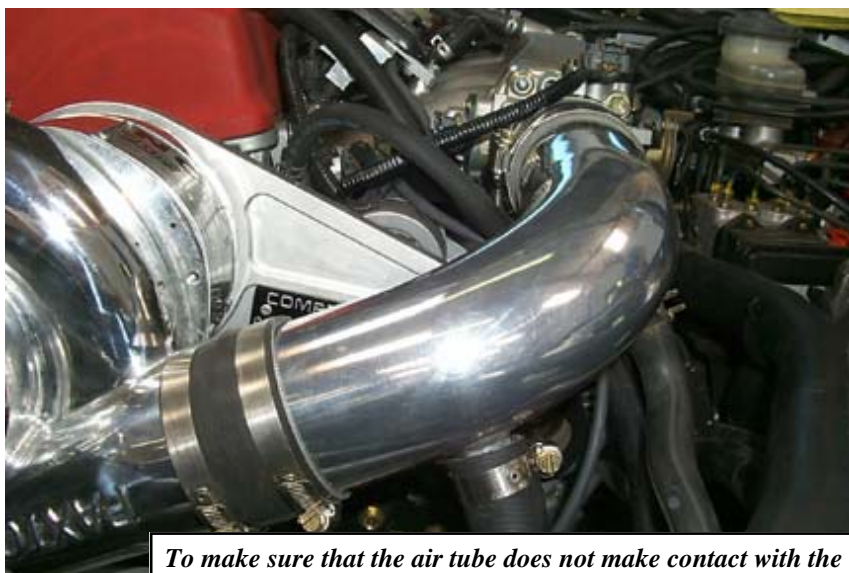
#### NOTE: 2002 and newer models

Relocate the alarm horn to the mounting point on the inner frame as seen in diagram A. Use the new horn mounting bracket supplied in kit. Reuse the bolt from the factory bracket (B) to reattach the horn & reroute plug to new location.



### Step #12: Aluminum Intake tube or start Aftercooler Installation:

- If you are installing the optional CT aftercooler kit (#350-047) please go to the installation Institutions for that kit now before continuing with these.
- The air tube should be installed with the 3/4" hose barb (for the air pump hose) positioned just before the throttle body and the 1" hose barb (for the air by pass hose) positioned just in front of the blower unit.
- Attach the tube using the four 3.5" hose clamps supplied in the kit.



*To make sure that the air tube does not make contact with the strut bar the air tube must angle down as it comes out of the throttle body.*

### Step #13: Blower Inlet tube:

- Position the black silicone tube with the ½" plastic barb facing down and towards the driver's side. (confirm clearance between hose and fan shroud)
- Using the provided hose clamps, secure the tube to the air filter assembly and the blower inlet.
- Install the by-pass valve with the vacuum hose barb facing down and the opposite barb toward the aluminum air tube using 1 ¼" hose clamps
- Next install the provided by-pass hose from the by-pass valve to the barb located in the bottom of the aluminum air tube. Secure with the remaining two 1 ¼" hose clamps.
- Connect supplied "Y" vacuum hoses as follows. (refer to engine vacuum hose diagram for further detail).
- Connect 2" side of vacuum hose "Y" to the check valve connected to the Air Control Valve vacuum tank.
- Connect 17" side to the by-pass valve located under the black silicone inlet tube.
- Connect 22" side to the upper metal vacuum tube located under the fuel rail that connects to the intake manifold.



*Make sure that the hose does not hit the fan shroud. If it does push the hose onto the filter more. If it is still too close, trim off a small amount of the fan shroud.*

### Step #14: Crank case vent hose:

- Using the provided ½" hose, connect the crank case vent on the valve cover to the plastic barb in the side of the silicone inlet tube.
- Route the hose down underneath the throttle body and along the underside of the aluminum air tube.
- Secure the hose with the provided hose clamps.

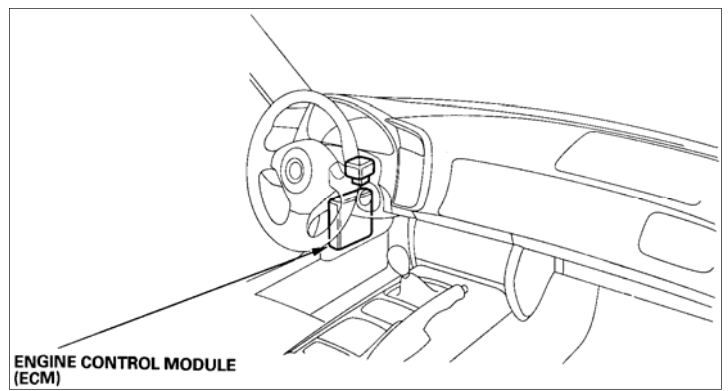
Crank Case Vent Hose.



### Step #15: Electronic Signal Modifier (ESM):

See the ESM instructions included with the unit.

The ECU is located as seen in the diagram shown, by the driver's left leg.



### Step #16: Emissions Sticker:

- Clean and degrease an area adjacent to the factory emission decal on the underside of the hood.
- Apply the two provided decals. These are required by law to pass emissions testing.



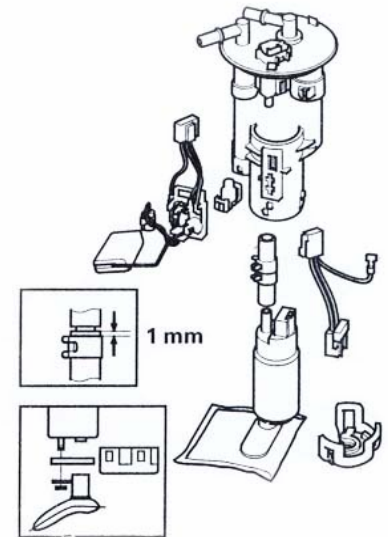
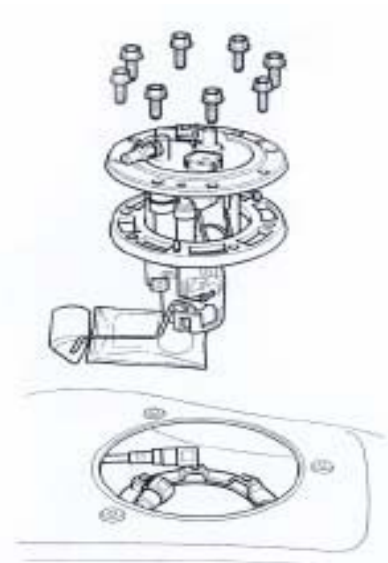
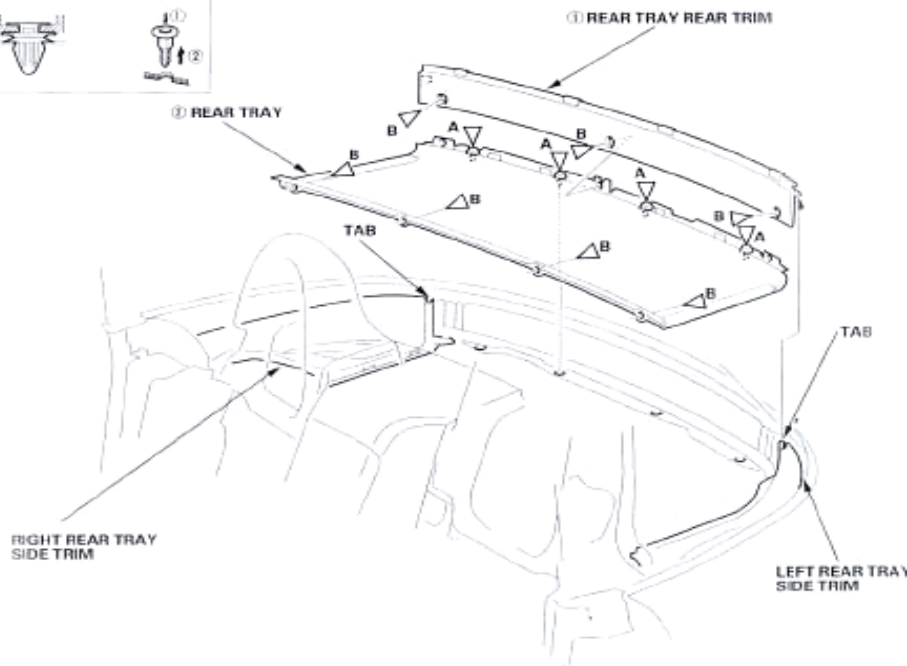
### Step #17: Fuel pump:

- We recommend following the fuel pump replacement procedure in the Factory Service Manual to install the new fuel pump. Note that the fuel pressure in the system should have already been relieved in step 10.
- All parts except fuel pump are reused. Do not lose or damage anything during disassembly.

#### Fastener Locations

A ▷ : Clip, 4

B ▷ : Clip, 7



### Step #18: Pre-start check:

- **Review these instructions and check for anything that was possibly over looked.**
- Check all hoses, fittings and hardware for proper torque and adjustment
- Check the engine oil and coolant levels.
- Without starting the car turn ignition key to on position twice to pressurize fuel system and check for leaks.

### Step #19: Initial Startup:

- Start the vehicle and let it idle and check for leaks. (There will be a slight rattle from supercharger unit at idle from impeller gear lash).
- If everything is operating properly, shut the vehicle off before it gets warm.
- Recheck drive and accessory belt tension.
- Check the engine oil level.
- With engine cool, radiator cap removed and heater control on hot restart car and run engine until fully warm (radiator fan comes on twice) to bleed any air out of the cooling system.
- Refill radiator and replace radiator cap.
- Enjoy the Drive.

**Return your original crank pulley in good working condition to get your core charge back!**  
**Fill out the Warranty Card and mail to CT Engineering!**

**Air Filter Maintenance**

The CT Engineering high-flow air filter needs to be maintained to insure the flow of clean unobstructed air to the engine. The air filter should be inspected at every oil change and cleaned and re-oiled at every-other oil change. The filter should be cleaned and oiled with specific filter cleaner and oil (CT part #620-004) to insure good performance and long filter life.

- **Cleaning** – Spray generous amounts of filter cleaner over all exposed surfaces of the filter and let it soak for approximately 3 minutes. Rinse out the filter element in warm water until clean. A second application of cleaner may be applied if filter is still dirty. When the filter foam is dry completely, re-oil filter as noted below. **Note:** DO NOT use any type of petroleum based cleaners or solvents to clean the CT filter. This will destroy the filter.
- **Oiling** – It is necessary to treat the filter with oil for it to perform properly. Thoroughly spray all exposed surfaces of the filter with oil and let stand for 2 to 3 minutes and repeat spraying. Much of the oil will soak in quickly, leaving an even penetration of sticky air filter oil on each foam strand. This coating traps dirt without restricting airflow.

