

Thank you for purchasing the CT Engineering Supercharger Kit for the Acura TL. All components have been designed and manufactured utilizing the latest technology and materials. **Please take a moment to read this instruction manual and warranty information page thoroughly before starting any work.** CT recommends the use of a Genuine Acura Service Manual to supplement these instructions. All CT products are intended to be installed by a professional installer. We recommend marking any hose or wire before disconnecting to avoid confusion during reassembly. Remember to 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 to avoid any potential damage or injuries. **Before starting, CT recommends locating the radio code for your particular vehicle and write down the frequencies for the radio's preset buttons, so the radio can be reactivated and restored after completion of this installation. **CT Engineering highly recommends the use of Redline High Temp ATF fluids in your transmission for best performance & longevity.**

Additional items needed before starting installation:

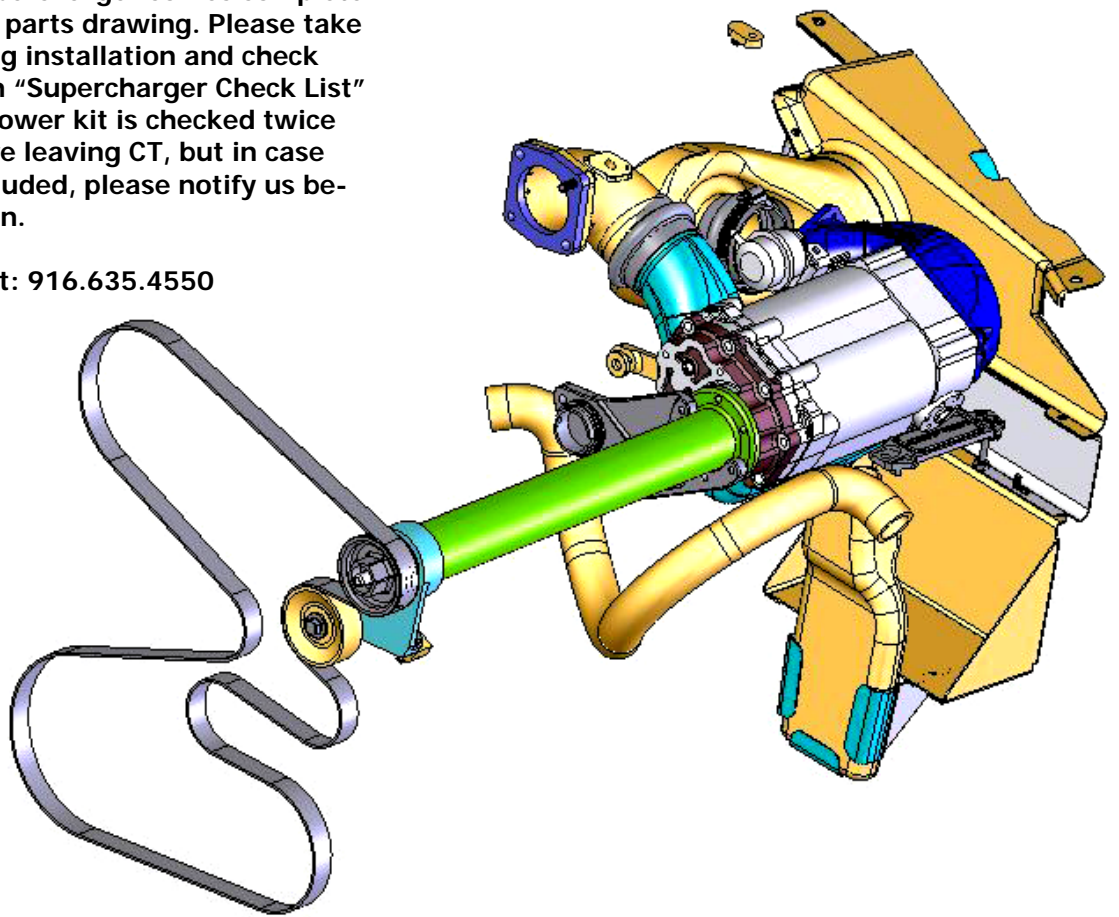
- Torque Wrench
- Sanding disc or cut-off wheel
- Size 51R battery

Installation facility; please make sure the owner of the vehicle is given a copy of the instructions and supercharger maintenance for their records.



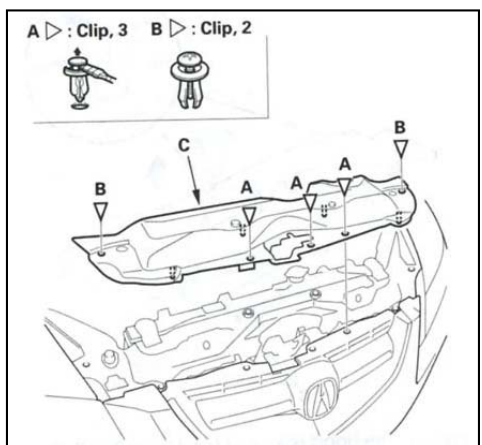
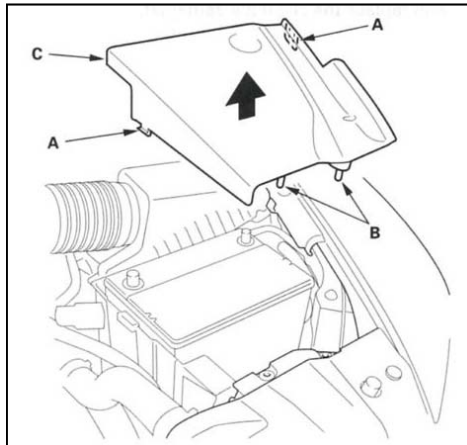
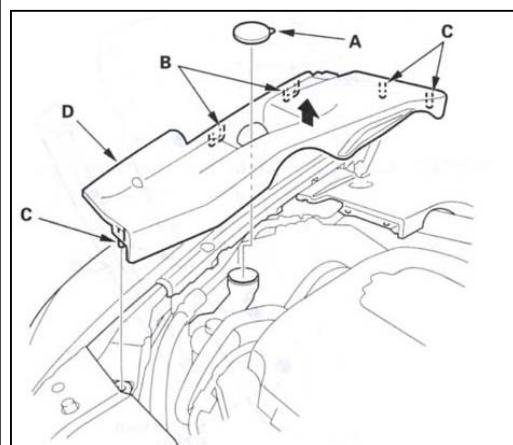
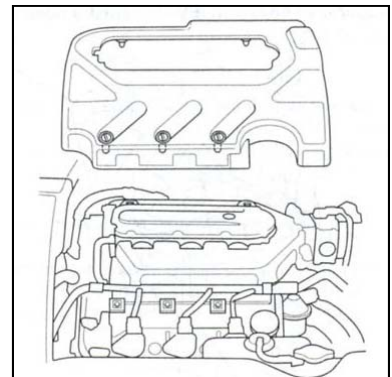
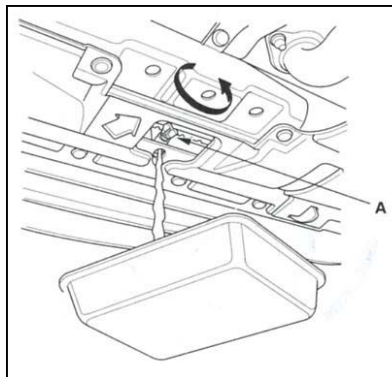
The CT Engineering Supercharger comes complete with all parts shown in parts drawing. Please take a minute before starting installation and check that parts in box match "Supercharger Check List" provided in kit. Each blower kit is checked twice for completeness before leaving CT, but in case something was not included, please notify us before starting installation.

Sales/technical support: 916.635.4550



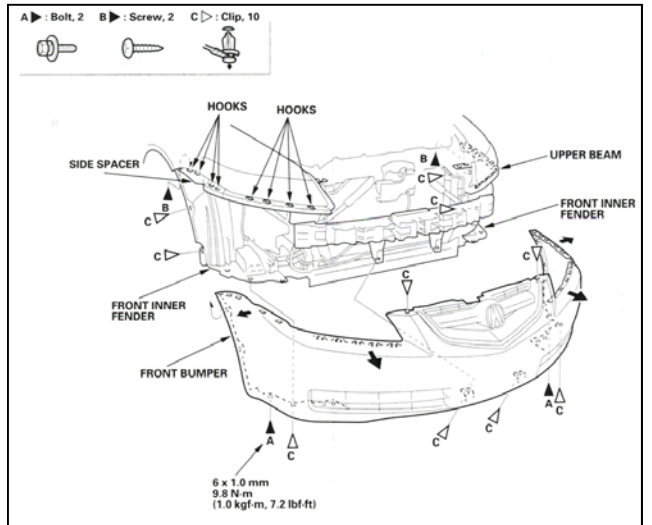
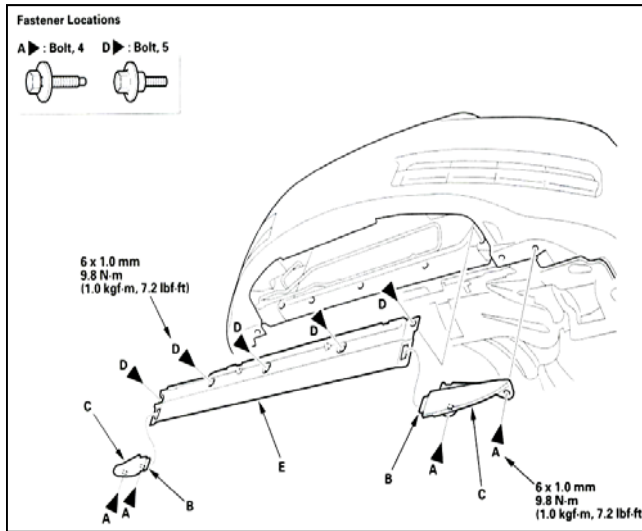
Step #1 Parts Removal:

- Jack up and support the front of the car with jack stands.
- Drain coolant from the radiator (make sure engine is cooled down).
- Remove the plastic engine covers.
- Remove the front bulkhead cover by removing the clips.
- Make sure to keep all of the parts, they will be reused.



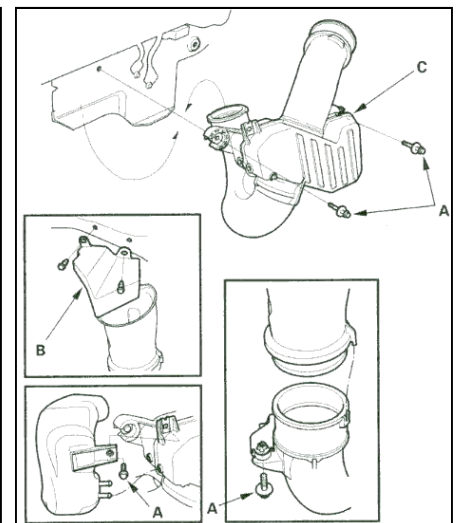
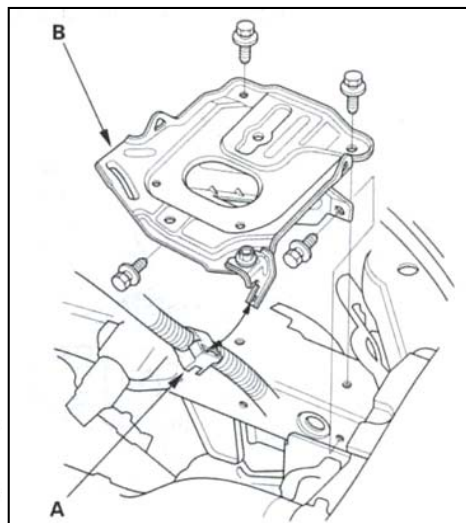
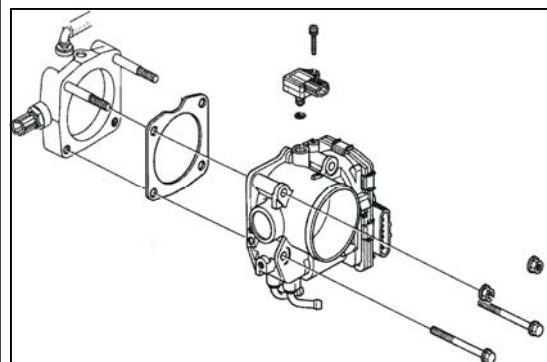
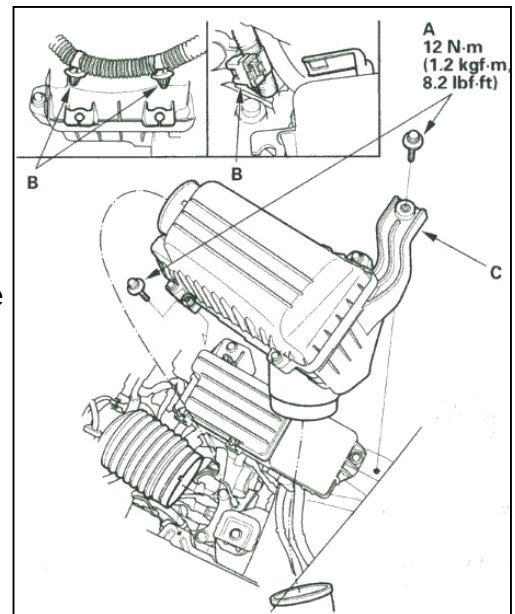
Step #2 Bumper Removal:

- Remove the front lower strakes by removing the bolts (A) and release the hooks (B) then remove the front strakes (C). Remove the bolts (D), then remove the front air guide plate (E).
- Remove the front bumper by removing the (2) bolts (A), then remove the (2) screws (B) at top corner in wheel wells. Remove the (10) clips (C) and pull the bumper off the front on the chassis.



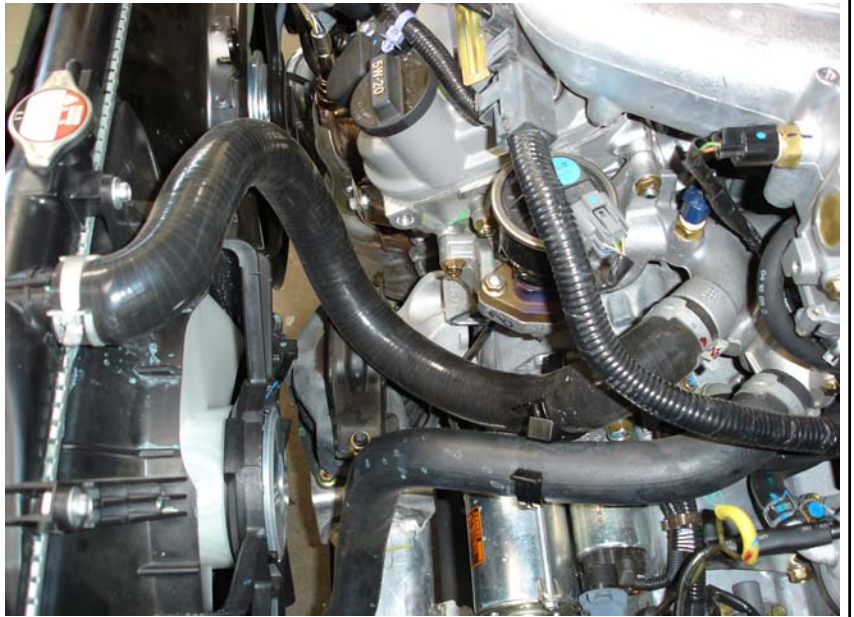
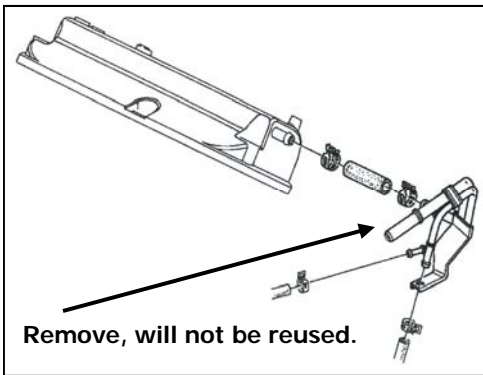
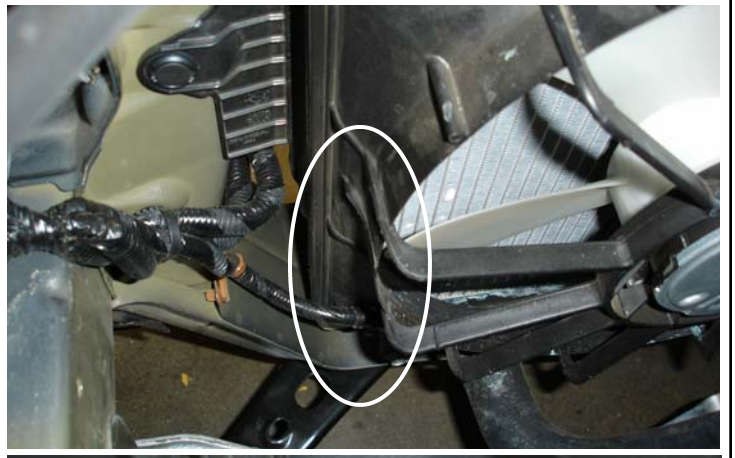
Step #3 Intake/Throttle Body/Battery Removal:

- Remove the upper air cleaner assembly (C) by removing the (2) bolts (A) and disconnecting the clips (B).
- Disconnect the battery cables, remove the battery hold down bracket and remove the battery.
- Remove the resonator by removing the cover (B), removing the bolts (A), then removing all of the stock resonator pieces.
- Remove the battery tray (B), by removing the bolts (bolts will be reused) and disconnecting the clip (A).
- Remove the Map sensor from the throttle body (the screw, o-ring and sensor will be reused).
- Disconnect the water hoses and electrical connectors from the throttle body. Make sure to mark the connections.
- Remove the throttle body from the manifold. Save the hardware, it will be reused.



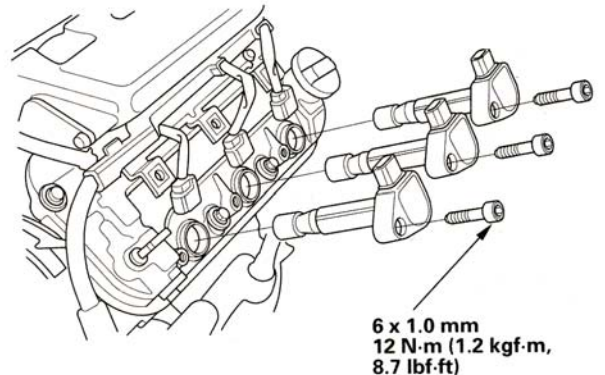
Step #4 Replace Radiator Hose & Trim Radiator Fan Shroud:

- Remove the two clamps holding the upper radiator hose and remove the hose.
- Using a small saw and file, cut away the fan shroud (like the picture) to allow clearance for the supercharger.
- Sand the side two ribs (remove about .125" of material) to make room for the new battery.
- Install the new longer radiator hose reusing the stock clamps.
- Remove the stock radiator overflow bottle.
- Remove the stock O2 sensor wire clip bracket from the edge of the cylinder head; it will not be reused.
- Remove Breather tube/water line assembly from rear valve cover area.



Step #5 Replace Spark Plugs:

- Remove the stock spark plugs and replace with the supplied Denso IK22.



Step #6 Replace Upper Alternator Mount:

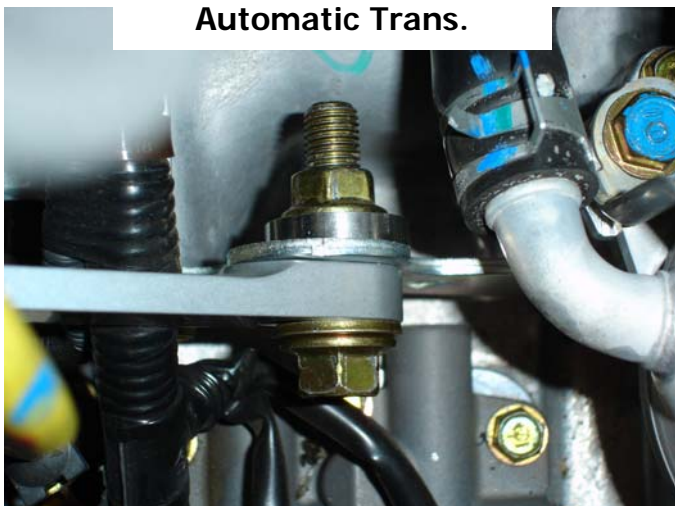
- Remove bolt holding plastic cover over wiring harness. Open the snap clips on plastic cover & remove from wire harness (it will not be reused).
- These wires will be rerouted along the groove between timing belt cover and the valve cover.
- Release the belt tension and remove the stock belt.
- Remove the upper alternator bracket. Replace with the supplied bracket reusing the stock hardware, torque the bolts to 16 lbs-ft. You may need to loosen the lower alternator bolt to get the upper bolts to line up, torque to 22 lbs-ft.



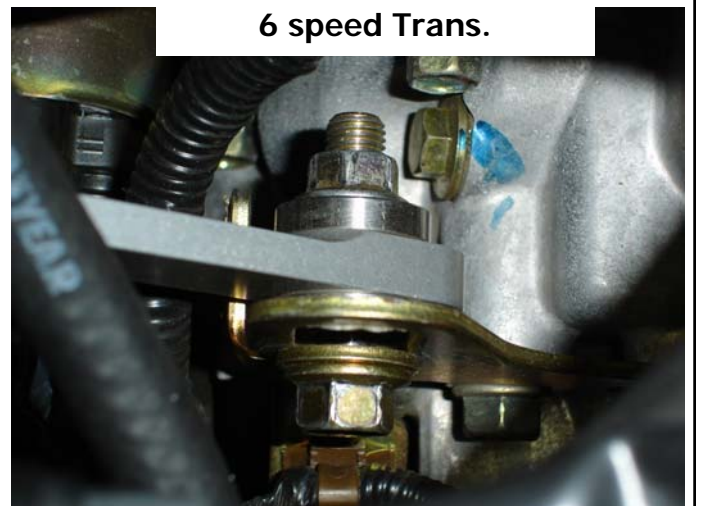
Step #7 Blower Support Brace Install:

- Locate upper transmission lift bracket.
- Install blower support brace using the supplied M10x40 washer bolt, thick washers and M10 nut. Do not torque yet. Torque this bolt after installing blower and aligning top of mount with threaded tab on blower (Step #11).
- On the automatic you will need to install the brace on the driver side of the trans bracket with one thick washer. On the 6 speed trans you will need to install the brace on the passenger side of the trans bracket with two thick washers.

Automatic Trans.

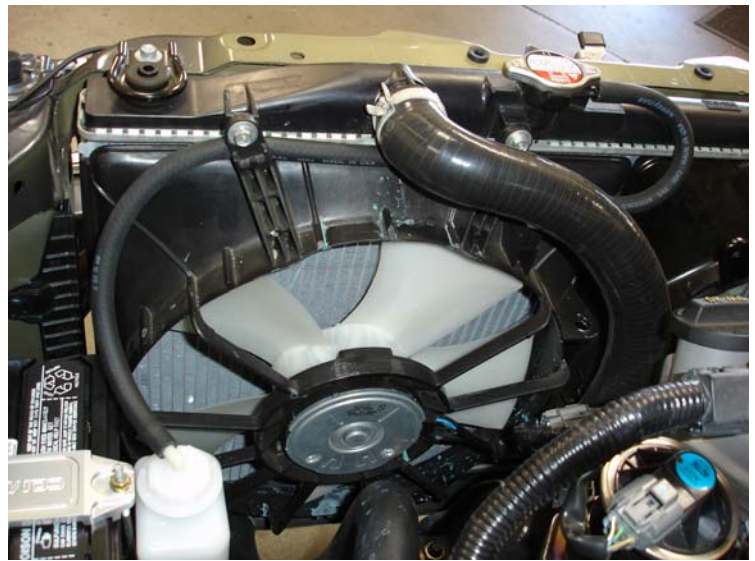


6 speed Trans.



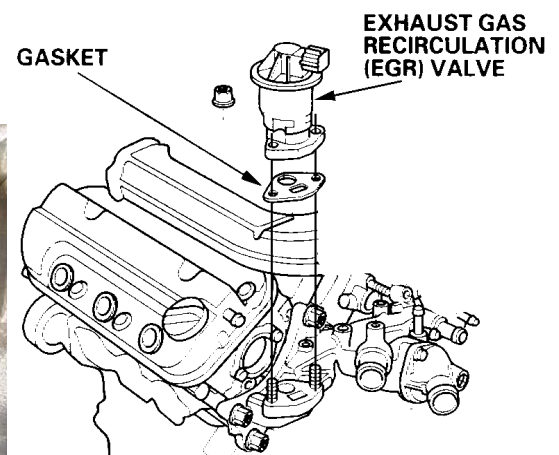
Step #8 Battery/Overflow Install:

- Mount the supplied battery tray to the frame rail using the original holes and bolts.
- Lower the new "51R" battery (not supplied in kit) into tray with posts offset to inner frame rail.
- Attach Comptech battery clamp using supplied M6x55 flange bolt on drivers side & the longer stock "J" bolt on passenger side (trim the lower part of the "J" bolt shorter).
- Install the supplied longer power (mounts same as stock) and ground (runs into inner fender and mounts to the existing ground point) battery cables.
- Connect Positive terminal only to battery.
- **DO NOT CONNECT Ground TERMINAL to the battery UNTIL INSTALLATION IS COMPLETE!**
- Install CT overflow bottle to the side of battery tray. Refill with appropriate coolant.
- Attach the supplied 10.5" siphon hose to bottom of the stock overflow bottle lid and place it on new bottle.
- Install the supplied 27" hose from the radiator to the newly installed overflow bottle lid (see picture).



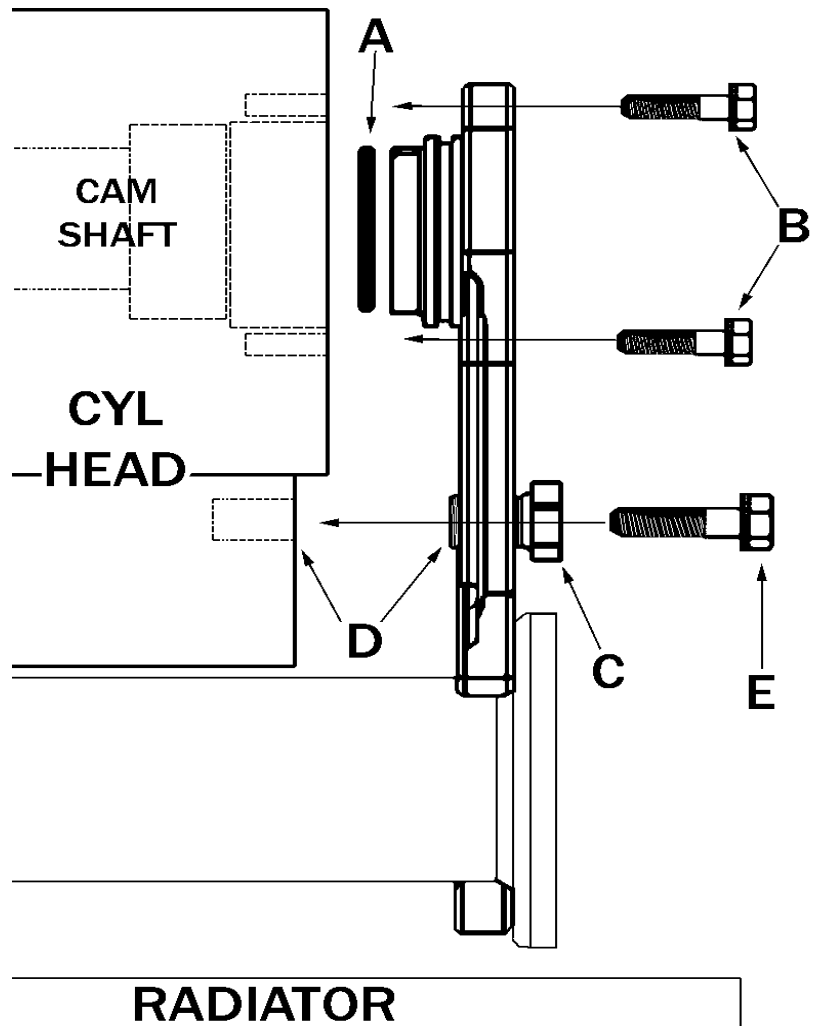
Step #9 EGR Valve/Cam Cap Removal:

- Clean the area around the EGR valve and cam cap seal.
- Remove the EGR valve. The valve and the M8 nuts will be reused. New gasket supplied in the kit.
- Remove cam cover plate beside the EGR valve. This will expose the end of the camshaft, some oil may leak out, wipe with clean rag.



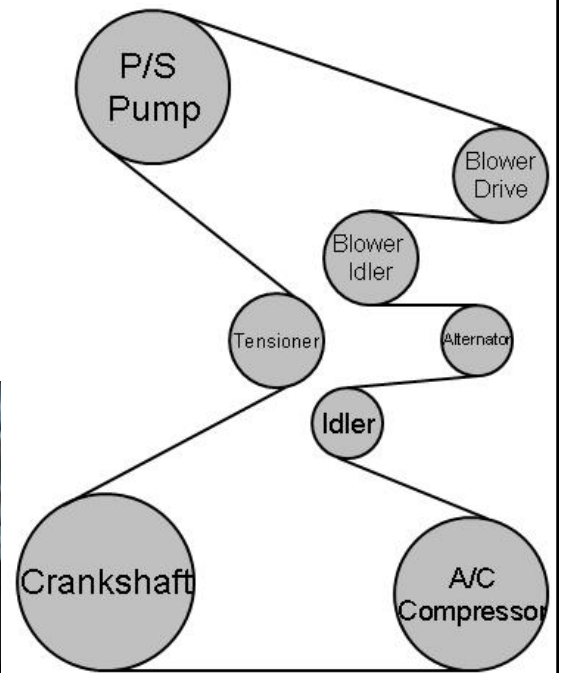
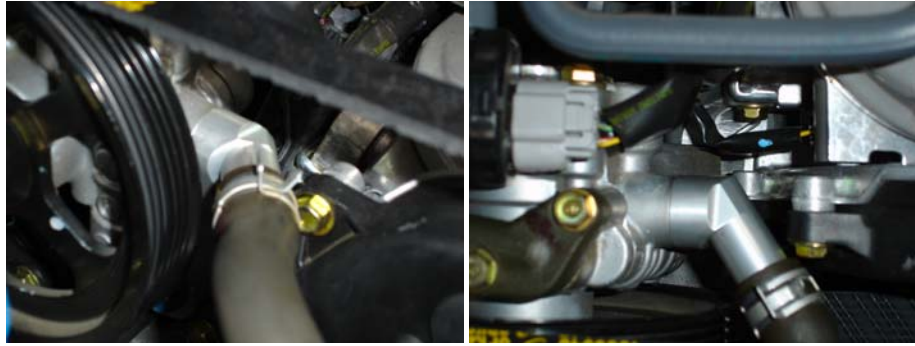
Step #10 Blower Installation:

- Install the supplied o-ring (A) on to the blower mounting bracket. Lube the o-ring using engine oil.
- Carefully lower the blower into place lining up the pulley side. Slide the mounting bracket into the end of the cylinder head making sure not to pinch or cut the cam o-ring.
- Once the blower is in place, use the supplied M8x30 flange bolts (B) to secure the bracket to the head. Snug up the bolts but do not completely tighten them.
- Install the supplied M10x40 flange bolt (E). Once the bolt is installed, adjust the threaded bobbin (C) so that it just contacts the end of the head (D). Once the bobbin is adjusted, snug up the M10x40 flange bolt but do not tighten.
- On the pulley side of blower shaft, align blower outer bracket with bracket on alternator. Install (2) M8x25 flange bolts holding blower mount to alternator bracket. Do not tighten.
- Once all the mounting bolts are installed, torque the two M8x30 bolts to the cylinder head to 16 lbs-ft. Then torque the M10x40 bolt to 22 lbs-ft. Then torque the M8x25 bolts on the alternator bracket to 16 lbs-ft.
- Install the supplied M8x40 flange bolt in the upper hole on the blower support brace under the blower (see step #8). Torque the upper M8 bolt to 16 lbs-ft. and the lower M10 hardware to 22 lbs-ft.
- Reinstall the EGR valve using the supplied new gasket and torque the nuts to 16 lbs-ft.
- Install the supplied A/C hose support under the right headlight rear mounting bolt.



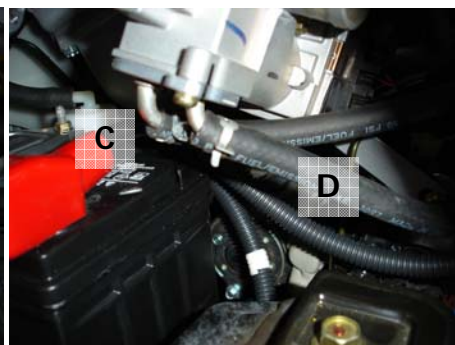
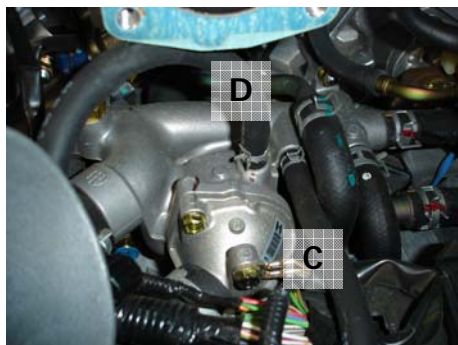
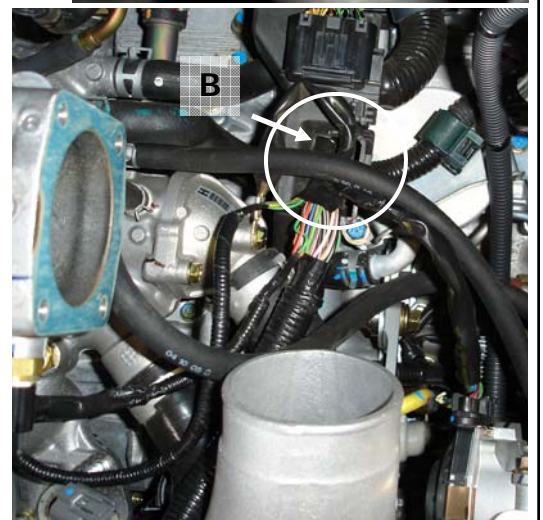
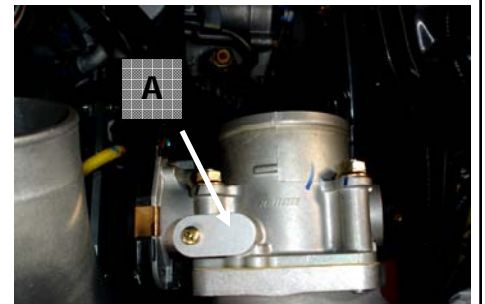
Step #11 Install New P/S fitting & Belt Installation::

- Using a rag under the P/S pump fitting remove the hose and remove the stock plastic fitting from the pump.
- Install the supplied new aluminum fitting using the supplied M6x14 allen bolt and new o-ring.
- Install the new longer belt following the diagram.
- Once the belt is installed, reinstall the hose to the new P/S pump fitting reusing the original clamp. Use a shop rag under the fitting to catch the fluid.



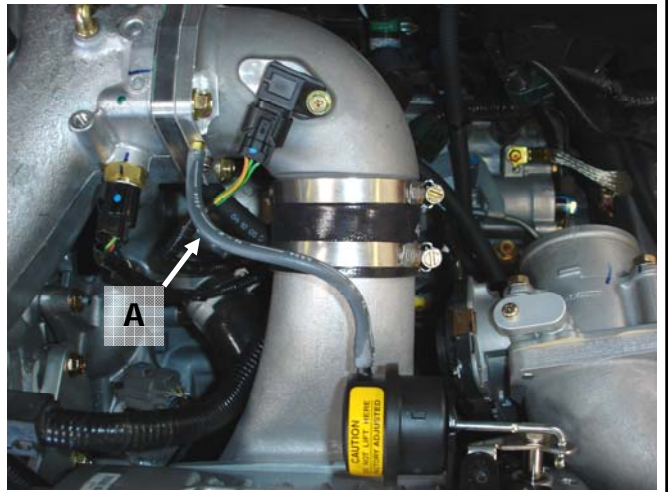
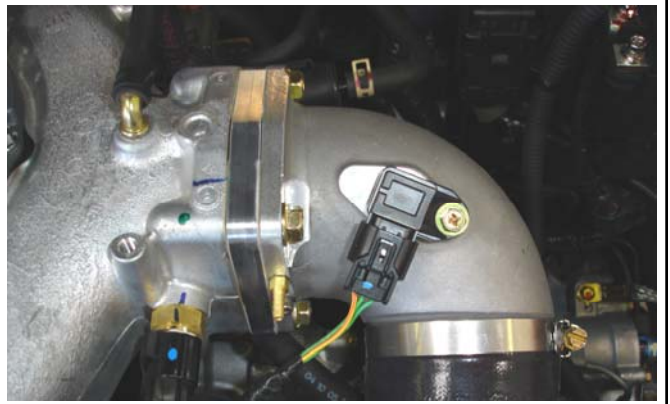
Step #12 Throttle Body Installation:

- Remove studs from stock intake manifold and install studs on blower intake manifold in upper (2) holes. Use the two nuts from the TB removal to remove the original TB studs.
- Using the supplied new gasket and stock hardware, install the throttle body in its new location on the blower intake manifold. Torque the hardware to 16 lbs-ft.
- Using the supplied plate (A), o-ring and screw, plug the original MAP sensor hole.
- Trim the top off the plastic wiring harness guide (B) to allow the harness to reach the new throttle body location. (See Picture)
- Reconnect the main throttle body electrical connector.
- Install the supplied 17" and 23" coolant lines to throttle body using the original clamps.
 - The 17" line (C) connects the horizontal line out of cylinder head crossover pipe to the front fitting on the newly installed throttle body.
 - The 23" line (D) connects the fitting in the top of the thermostat housing to the rear fitting on the bottom of the newly installed throttle body.



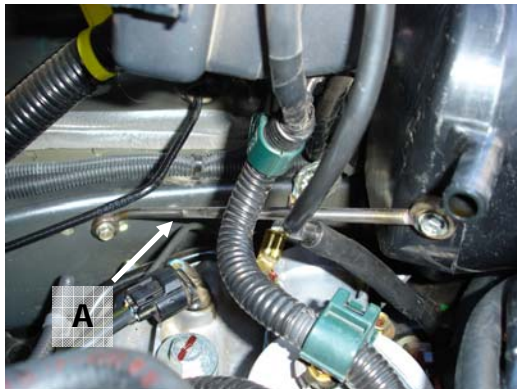
Step #13 Inlet Manifold Installation:

- Inspect all intake openings and tubes for any debris or objects. Install only clean, inspected parts.
- Slide supplied silicon hose (3" IDx2") and clamps (#48) on blower outlet manifold.
- Install the inlet elbow onto intake manifold using supplied spacer, gaskets, (1) M8x85 and (3) M8x30 flange bolts and torque to 16 lbs-ft.
- Slide hose equally over both housings and tighten clamps.
- Install the MAP sensor removed in step #3 reusing the o-ring and screw. Plug in the Map sensor electrical connector.
- Connect vacuum hose (A) from blower bypass valve to inlet fitting.



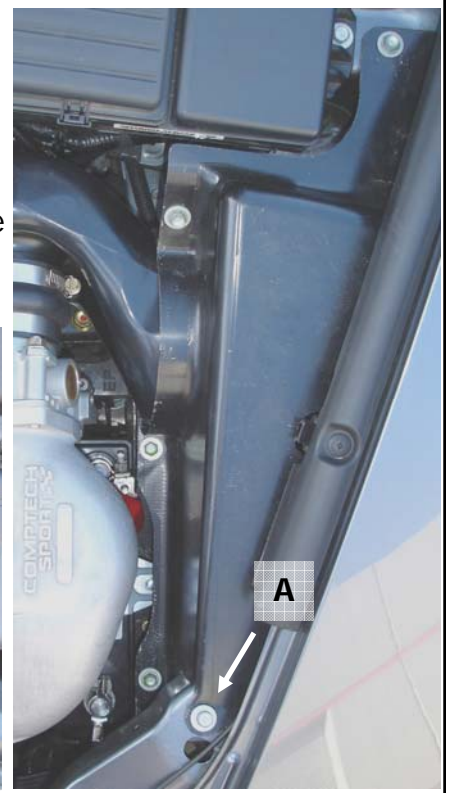
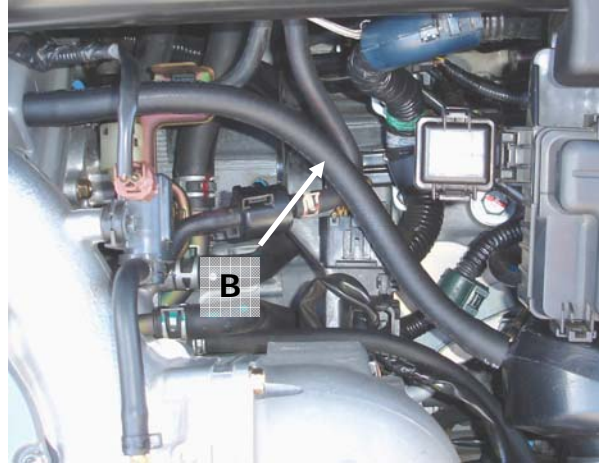
Step #14 Install Air Intake System:

- Install the lower half of the intake shield onto the studs on the battery tray. Use the supplied (2) M6 flange nuts.
- Install the hump hose and clamps (#44) onto the end of the throttle body.
- Pre-oil the air filter and install it onto the end of the supplied intake tube.
- Install the intake tube into the car. Once in place, secure it with hose and clamp on the throttle body.
- Install the intake tube support brace (A). Using the supplied M5x16 washer bolt, install the brace to the intake tube. Once in place secure the brace to the corresponding hole in the chassis under the fuse box. On the 6 speed there is a clutch line bracket using this hole. Remove the stock bolt and replace with the supplied M6x30 flange bolt. On the automatic car there is nothing in this hole; use the supplied M6x21 flange bolt.



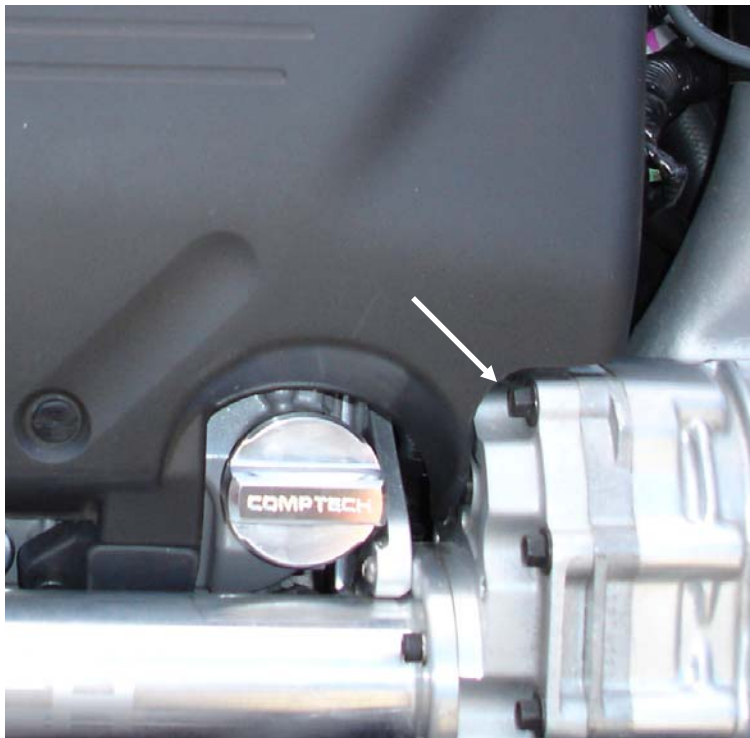
Step #14 Install Air Intake System (Continued):

- Remove the M6x16 washer bolt holding the back of the headlight housing to the radiator support (A).
- Install the air intake top using the supplied (4) M6x14 washer bolts and (3) M6 nuts to bolt the upper to the lower part of the intake. Install one of the M6x14 washer bolts by the fuse box securing both the upper and lower intake parts to the shock tower. Reinstall the M6x16 washer bolt holding the headlight housing and the intake top.
- Install the valve cover vent hose (B), run the supplied 1/2"x14" hose from the rear valve cover to the side of the newly installed intake tube.



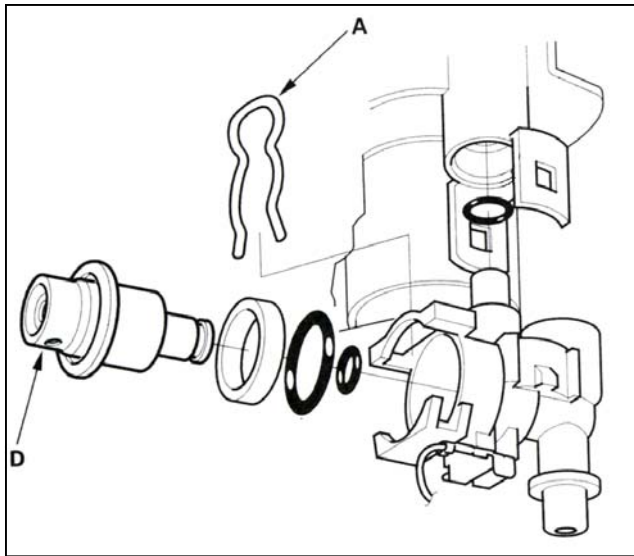
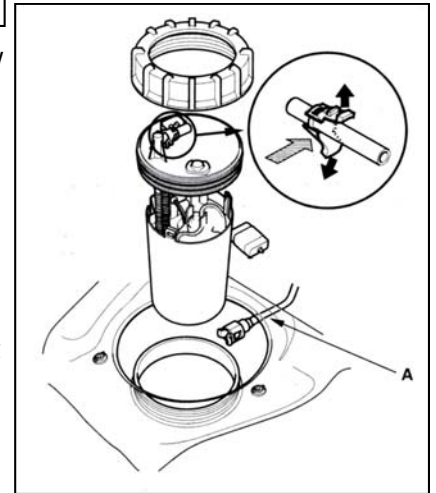
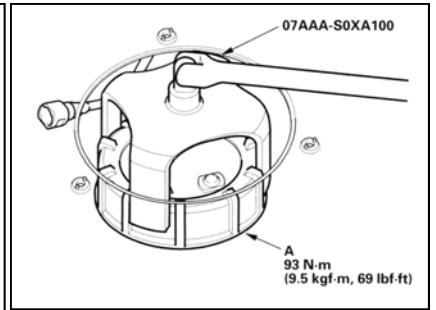
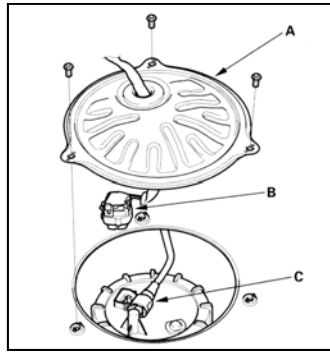
Step #15 Trim Engine Covers:

- Below is an example of where to trim, but you will have to test fit as you trim your covers to ensure proper fit. Supplied are two trim templates. To help show you where to cut the side plastic.
- We recommend the use of a cut off wheel or razor knife to trim the main portion of plastics, then finish with a sanding disc and emery cloth.
- Reinstall all plastic engine covers. Check for clearance.

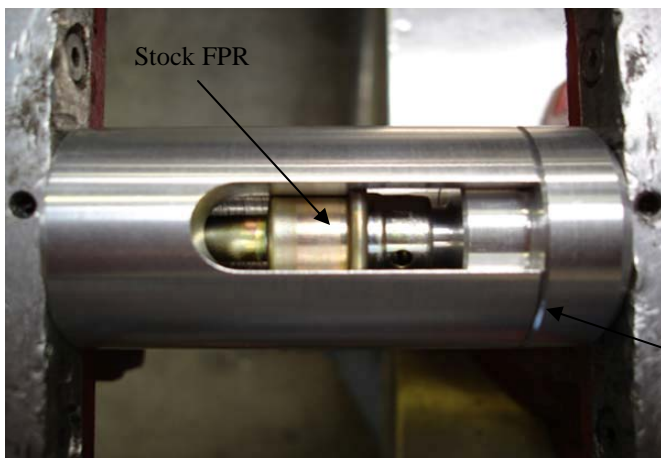
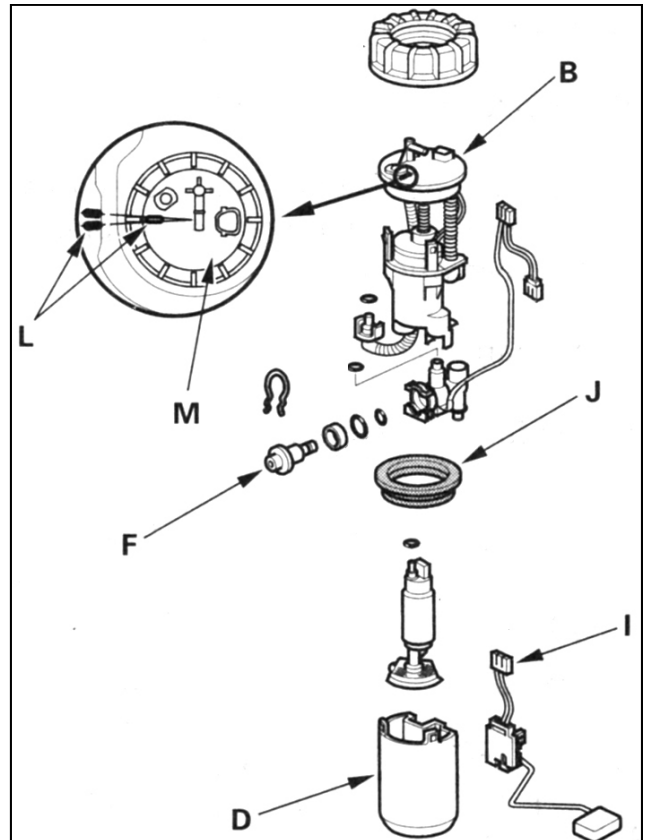


Step #16 Modify Fuel Pressure Regulator:

- Remove the trunk mat to access the fuel tank access panel (A).
- Remove the three screws holding the panel and disconnect the 5 pin harness connector (B). Wrap a rag around the fuel line. Pinch the release tabs and disconnect the fuel line.
- Use the factory Honda tool to remove the top of the pump/sender assembly (we have found you can also use a larger flat bladed screw driver as a punch to remove it also).
- Using rags to catch the fuel, slowly pull the pump assembly out of the tank be very careful not to damage the sending unit float.
- Once the assemble is out disconnect the sending unit harness from the top (I) releases the clips and pull the pump out of the reservoir tank (D).
- Once out of the reservoir tank the fuel pressure regulator (F) can be accessed. Release the side clips on the plastic regulator housing and pull it off the bottom of the filter. Remove the R clip (A) remove the regulator make sure to keep all of the seals and spacers in order, they will be reused.
- Using the supplied (2 piece) tool very carefully compress the regulator about .030" of an inch. This can be done in a bench vice. This will raise the fuel pressure about 10 psi. **See note below.**
- Reinstall the regulator with the hole (D) pointing down.
- Reassemble everything in the reverse order as removal. *We have found that when you are just about to install top of the pump assemble (B) into the tank, slip the seal (J) in to the top of the tank first. Make sure to line up the*



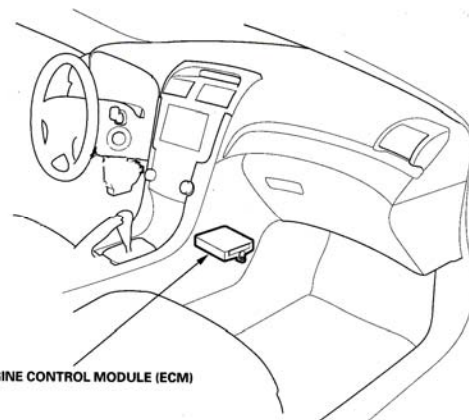
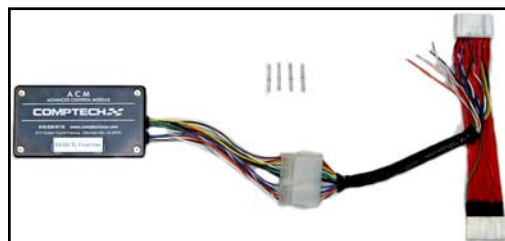
top of the pump assemble (B & M) with the tank (L).



Note: Insert FPR into large piece of tool with o-ring end first. Then place cap of tool in center of FPR. Compress two pieces of FPR tool until this gap is taken up.

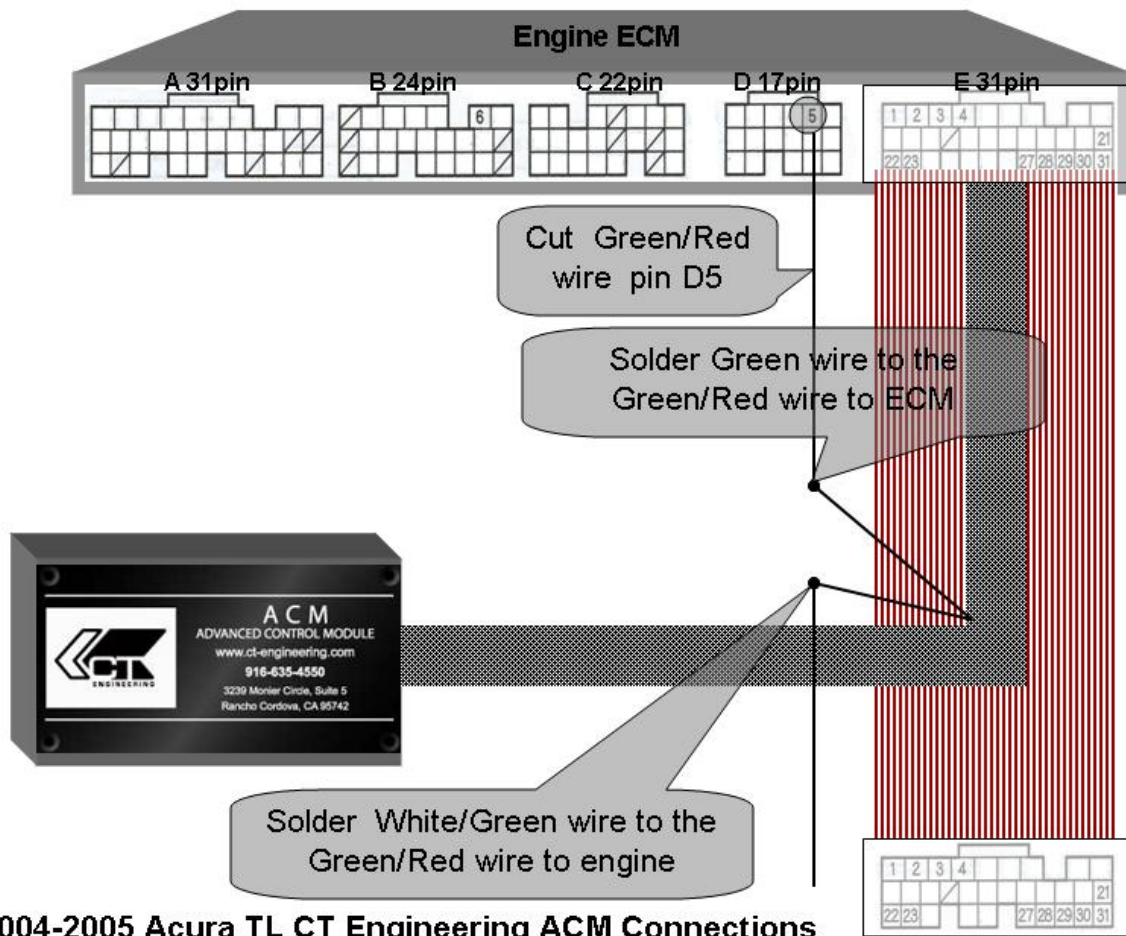
**Step #17A Installing ACM (Advanced Control Module):
2004-2005 only. See next page for 2006 install**

- Locate the ECM under the center console.
- Disconnect connector "E" and plug the ACM jumper harness in between the ECM and wiring harness.
- Locate the Green/Red wire at pin #D5 and cut the wire about 2" from the connector. Using the solder splice connectors, connect the Green wire from the ACM to the Green/Red going to the ECM and connect the White/Green wire from the ACM to the Green/Red wire going to the engine.
- Place the ACM in the area on the floor above the ECU Harness and reinstall the carpet.



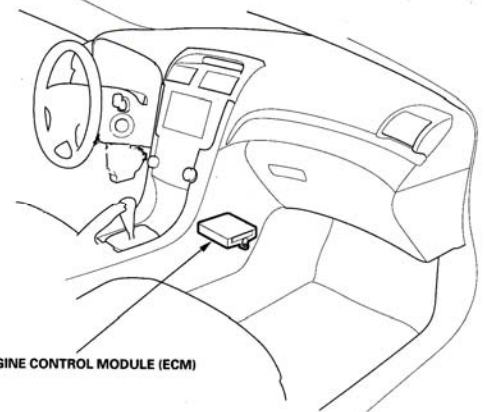
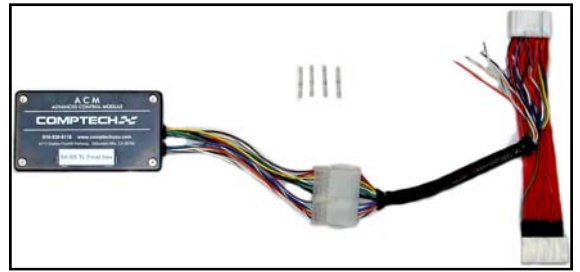
How to use Solder Splice Connectors:

Strip about 1/4" of insulation off each wire and insert the wire into the end of the solder splice connector, overlapping the bare wire in the middle by the solder ring. Slowly heat the outer edges of the heat shrink until the color ring melts. Once they are melted, heat the center until the solder melts connecting the wires.



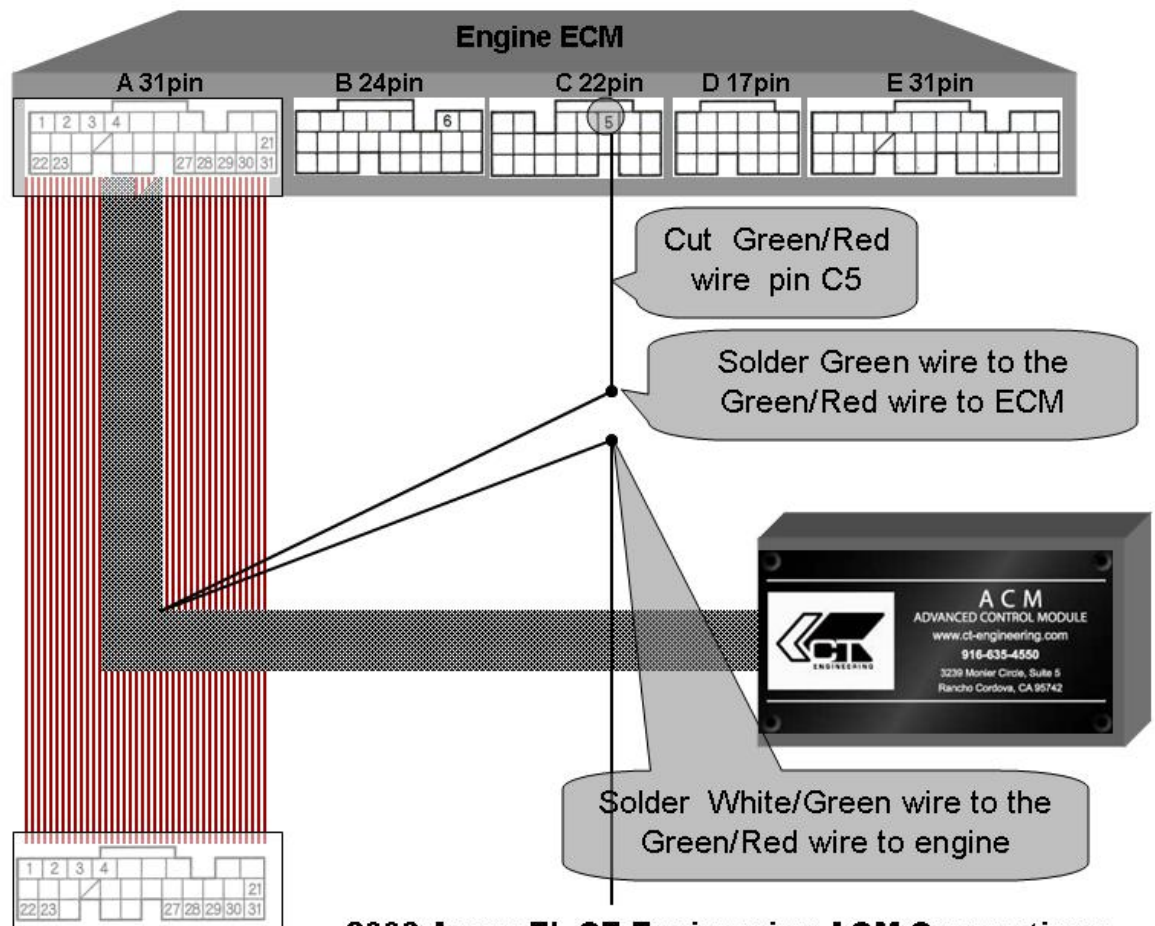
**Step #17B Installing ACM (Advanced Control Module):
2006 only. See previous page for 2004-2005 install**

- Locate the ECM under the center console.
- Disconnect connector "A" and plug the ACM jumper harness in between the ECM and wiring harness.
- Locate the Green/Red wire at pin #C5 and cut the wire about 2" from the connector. Using the solder splice connectors, connect the Green wire from the ACM to the Green/Red going to the ECM and connect the White/Green wire from the ACM to the Green/Red wire going to the engine.
- Place the ACM in the area on the floor above the ECU Harness and reinstall the carpet.



How to use Solder Splice Connectors:

Strip about 1/4" of insulation off each wire and insert the wire into the end of the solder splice connector, overlapping the bare wire in the middle by the solder ring. Slowly heat the outer edges of the heat shrink until the color ring melts. Once they are melted, heat the center until the solder melts connecting the wires.



2006 Acura TL CT Engineering ACM Connections

Step #18 Final:

- Place CARB EO Decal in a visible place within the engine bay for inspection purposes.
- Refill radiator. COOLING SYSTEM MUST BE PROPERLY BLED AS DIRECTED IN SERVICE MANUAL, FAILURE TO DO SO COULD RESULT IN ENGINE DAMAGE.
- Recheck all connections, fittings, fluids, plugs and wires. Wipe down all parts.
- Replace negative battery terminal.
- Turn ignition key to the "ON" position but **DO NOT START ENGINE.** This will allow the fuel pump to pressurize the system. Check all fuel lines for leaks.
- **Start vehicle, check for any leaks and check for proper clearance on all moving parts.**
- **After car has cooled recheck coolant level, belt tension / alignment and leaks.**
- Reinstall the front bumper in the reverse order of removal (See Step #2).
- Lower the car off the jack stands.

Installation facility; please make sure the owner of the vehicle is given this a copy of the instructions for their records.

Filter maintenance:

- Inspect air filter during normal oil servicing intervals (every 3000 miles or 3 months).
- Filter will normally need cleaning/re-oiling about every other regular oil change, but may vary due climate/regional differences.
- When in doubt about servicing, remember a clean filter flows more air, and will allow your vehicle to run better.
- Properly maintained, the included filter should last the lifetime of your vehicle.
- For future filter service, please order CT/Uni Filter Service kit: Part# 620-004

Belt Maintenance:

- Inspect and replace worn belt when inspecting as per the Honda/Acura service schedule.
- Blower Drive Belt Replacement: Part#355-159 (4060945)

Blower Maintenance:

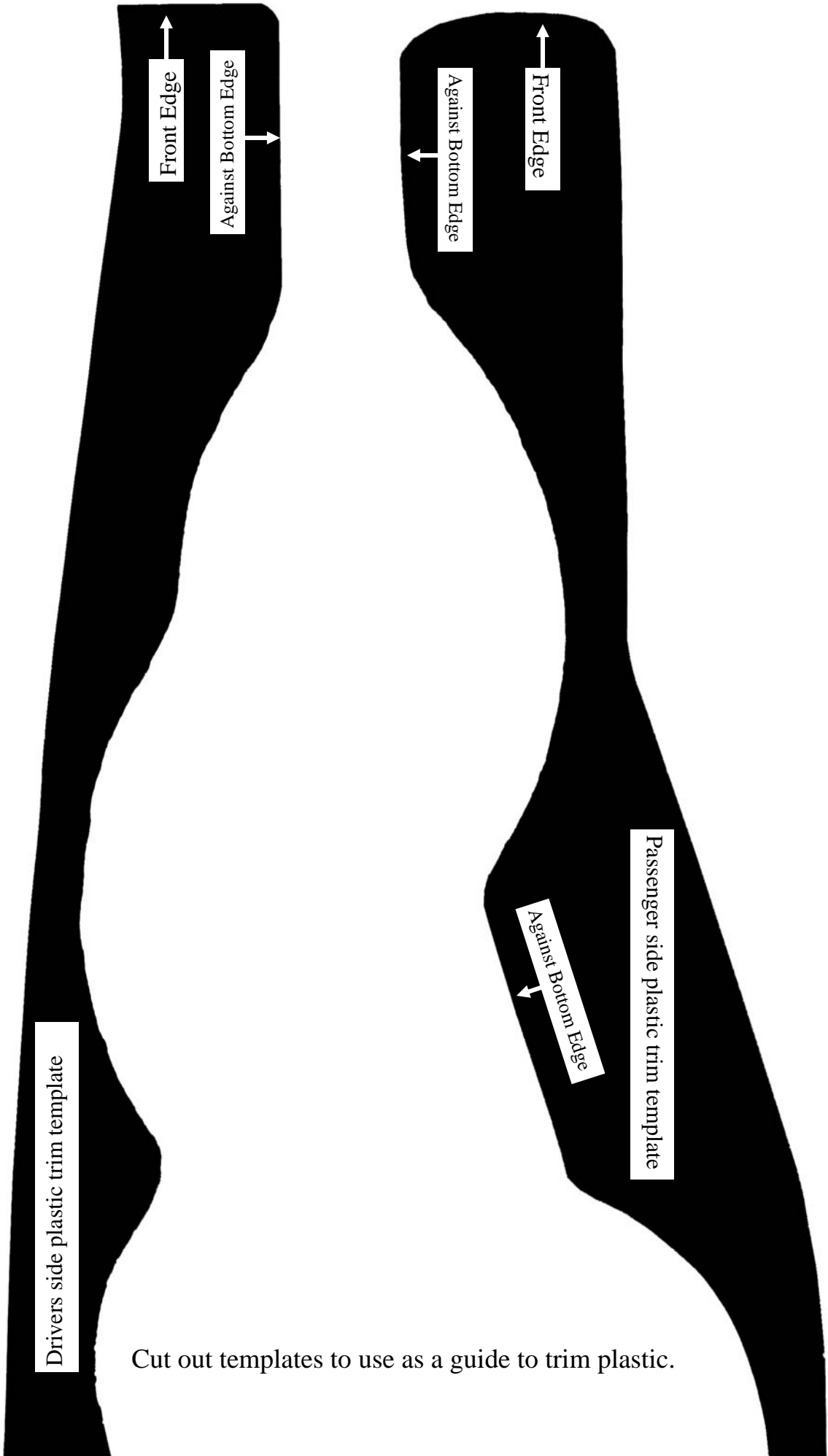
- Sound from the blower unit is normal at idle and normal operating conditions.
- Blower unit should not require any servicing for 70,000+ miles.
- If blower unit shows signs of any wear or defects, i.e. oil leaking or excessive sound, please contact our technical support at 916.635.4550.

Misc Maintenance:

- Remember to check all hoses, vacuum lines, electrical connections, battery, etc, whenever servicing vehicle to ensure proper vehicle operation.

CT Engineering

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Cut out templates to use as a guide to trim plastic.

