

## **94-05 Instruction Revisions**

- A. You should also remove everything (brackets, hoses, etc.) that is fuel line related down to the fuel feed tube from the fuel pump (99-05) and also down to the fuel return line (90-97). You should cover those two tubes with a piece of tape so nothing falls in during install. Note, on 90-97 models, the fuel feed is the tube closest to the firewall and the return is the tube closest to the front of the car.
- B. The vacuum routing is significantly different from the current instruction manual:
1. Install the air filter in the Cold Air Box
  2. Connect the AFM to the filter
  3. Connect the reducing silicon adaptor to the AFM
  4. Connect the 3" long, 3" diameter aluminum tube to the silicone reducer
  5. Connect the 3" diameter flex hose to the 3" tube and the other end to the throttle body.
  6. Connect a 3/8" hose from the fitting on the 3" tube to the fitting on the exhaust side of the cam cover
  7. Cut the hose in step 6 at a convenient location and insert a 3/8" TEE.
  8. Connect the third leg of the TEE with 3/8" hose to the inlet side of the IAC.
  9. Using a piece of 3/8" hose, connect the PCV valve on the intake side of the cam cover to the barb on the block under the throttle body adaptor.
  10. Cut the hose in step 9 and insert a 3/8" TEE.
  11. Connect the third leg of the TEE to the outlet of the IAC (small 3/8" fitting on the bottom).
  12. Connect the barb on the passenger fender side of the throttle body adaptor to the barb on one end of the Vacuum Distribution Block (VDB)
  13. Connect the brake boost hose to the other end of the VDB.
  14. Connect the small black plastic tubing to the Legris port on the fender side of the intake manifold. This is a simple "push to connect" fitting. Cut the end of the tubing clean and square and simply push it into the fitting. Tug on it (not too hard). If it does not come out, it is in far enough. To remove the tubing, if needed, simply push the small black ring on the fitting inward towards the manifold and pull the tubing out. It does not require force to remove. For 99-05 kits, run the tubing into the passenger compartment along with the wires for the ECool injector and connect the other end to the pressure sensor near the ECU/Plug in harness for the cards. It has a similar push to connect fitting and assembles the same. If you have a vacuum/Boost gauge in the car, simply cut the tubing at a convenient location and insert the spare Y connector that is supplied with the tubing. Run a piece of the tubing from the third leg of the Y to the gauge. Most gauges use 1/8" hose and the tubing will slip right inside of the hose. Put a little saliva on the tubing end first as that makes it slide into the hose easier and, when dry, is like glue. If you have a 94-97 kit, take the other spare Y connector and, at a convenient place under the hood, cut the tubing and insert the Y connector. Then run a piece of the tubing to the FPR and connect to the 1/8" vacuum hose the same way as the gauge.
  15. Connect any other loose hoses to the front of the VDB.

C. Starting in March 2015, we have dropped the dual injectors and have returned to the single injector (750cc) pre blower mounted in the Throttle Body Adaptor.:

1. One wire from the injector wires to one wire from the FFS ECool Card. There is no polarity so either wire to either wire.
2. The other wire from the injector wires to the other wire from the FFS ECool card.
3. Test fit the injector to insure that the electrical connectors will be accessible for the connection. If not, use one or two of the supplied serrated washers to rotate the injector. One washer will rotate 120\* and two will rotate 240\*.
4. Put Ultra Black on the threads.
5. Screw in HAND TIGHT. Use NO TOOLS to tighten. Allow to sit over night before exposing to fuel. Caution, the use of pliers or other wrenches may harm the injector.

D. 99-05 IAC coolant hose B61P-13-691A is no longer supplied. Use the barb to barb fitting and simply cut the two hoses and couple them back together. 99-00 use the supplied 5/16" barb to barb and 01-05 use the supplied 3/8" barb to barb.

E. 99-05 Fuel Rail.

1. The procedure is similar to the 94-97 fuel rail without the FPR adaptor.
2. Using the two 1/4" NPT plugs (supplied), plug the rear hole.
3. Insert the 5/16" Barb x 1/4" NPT 90\* (or 45\*) fitting into the front hole and tighten.
4. Align it so that when the fuel rail is installed, the fitting points down between the engine and the blower.
5. Install a 45\* 5/16" fitting in the top hole and align it towards the ECool injector. Then run a short piece of 5/16" Fuel injection hose from the fuel rail to the ECool injector.
6. A new set of rubber for the injectors is supplied with the kit. Should you damage an O-Ring on an injector, they are available from AutoZone. Part number ES70600
7. Put a little grease (bearing grease works great) on the top O-ring of each injector. Just a very light film to let the injector slip into the fuel rail. Also, put a dab of grease on the bottom of the lower injector rubber seal to help air seal it to the head.
8. Re-assemble.
9. A quick and easy way to check the fuel rail for leaks is to jumper the GND and F/P connection on the diagnostics connector under the hood. It easy to hear the leak before it starts spurting, and it's quick to stop it. It takes two people to do this easily. One to work the jumper and the other to look for leaks.
10. The mounting holes closest to the fuel rail are for 1999-2005. The mounting holes furthest from the rail are for the 1994-1997.

## F. 94-05 EGR Assembly

Because of the recent addition of the Cold Air Intake (covered under separate instructions), there are now new EGR plates and they now mount at a new angle. This is all to give clearance to the 3" hose which now crosses over the engine rather than under the intake manifold. The instructions are the same as in the manual except:

1. The 90\* compression fitting needs to be installed. It can be adjusted to make minor alignment corrections for connecting the stainless tube that connects to the compression fitting on the manifold under the throttle body adaptor.
2. The two plates need to be assembled with a light film of Ultra-Black.
3. The two screws and nuts included are for the mounting of the plates to the crossover pipe/flange that comes across the rear of the engine from the exhaust manifold. The EGR valve mounts with the two original screws.
4. The angle of the plates now varies from the pictures in the instructions. They now angle away from the fuel rail instead of being vertical.
5. The EGR valve can be mounted either of two directions. Back towards the fuel rail or down and behind the intake manifold (if there are no interferences).
6. If the connector on the top of the EGR has an interference issue with anything, you can remove the four screws/nuts at the top of the EGR valve and rotate the top coil assembly any of four directions to make it convenient.

## G. Brass NPT pipe fittings

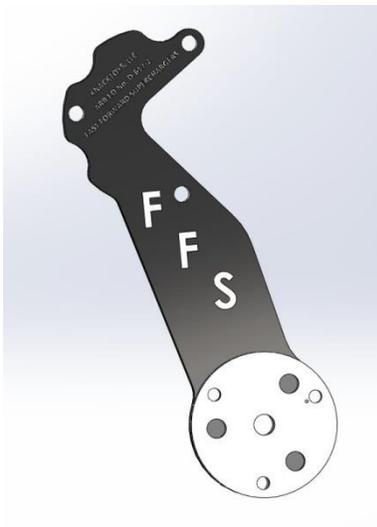
1. All of the brass fittings with barbs or compression connections have tapered pipe threads on the other end. These threads are NPT (National Pipe Threads) and you must use the SWAK included with the kit. You should avoid covering the start threads by at least 1 or 2 threads.

## H. Aluminum Restrictor

1. In the miscellaneous parts there is a small aluminum restrictor. About 3/4" long and 3/8" diameter. This part should be inserted in the end of the 3/8" hose that connects to the cam cover in step B.6. above. Simply insert it in the end of the hose and then push the hose on the barb on the cam cover.

## I. Tensioner Mount

1 Since the very beginning, we made the tensioner spacer so it would allow for adjusting the point at which the tensioner met the bottom of the belt. That was done so that larger pulleys and belts could be accommodated. However, we always shipped the spacer pre-assembled to the tensioner bracket. It never seemed to need to be rotated by the customer. These days, more and more brave and power hungry souls are running larger and larger pulleys. Because of this, we now ship the spacer un-assembled from the bracket. For those who have the stock 105mm pulley and up to 115mm pulley, this spacer should be mounted with the hole marked with a dimple at about 2:00 o'clock as shown here:



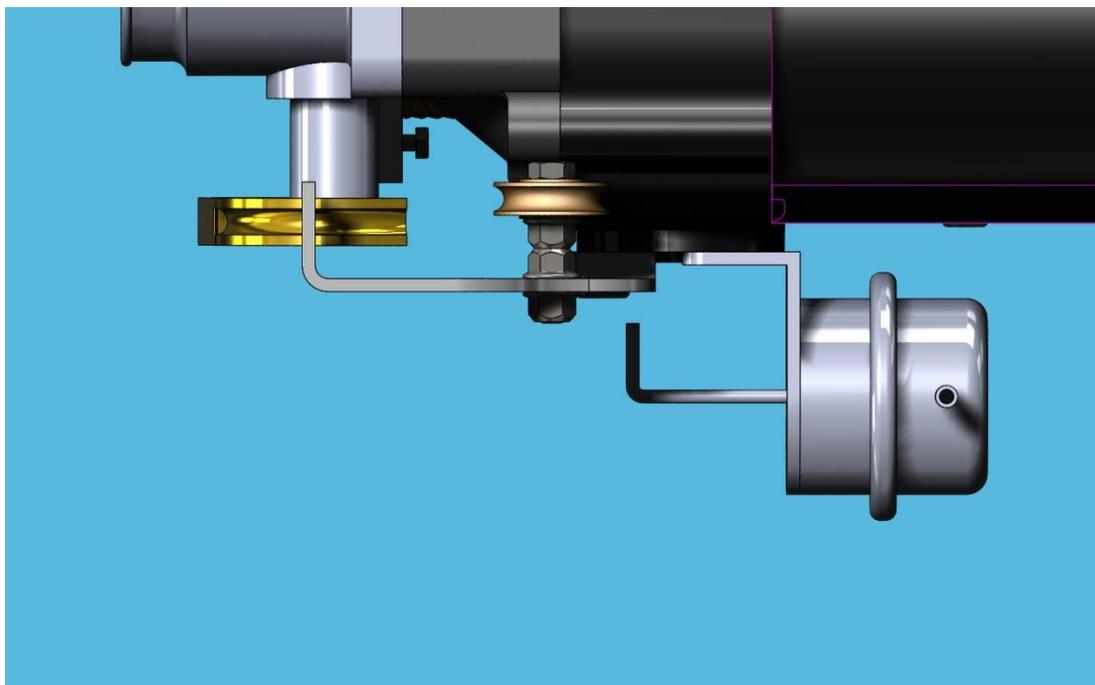
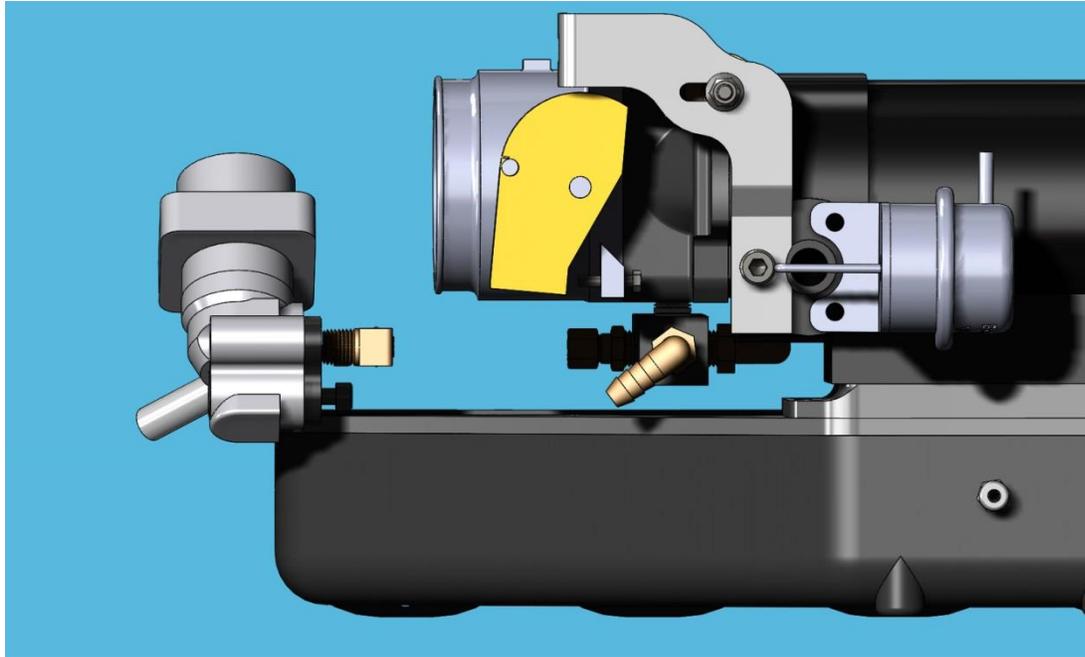
You will note that the bracket has six holes for the screws and the spacer, as shown has three screw holes and three holes for the tab on the tensioner. Also note that the screw holes and their respective nearby tensioner pin holes are differing distances apart. The screw hole with the dimple is close to the nearby hole and, going counter clockwise, those distances get farther apart. For very large pulleys like my 130mm, we rotated the dimpled hole from the 2: o'clock position to the 10: o'clock position. That drops the tensioner pulley down a little and makes room for the belt. If you were to run the 150mm pulley, it would need to drop a bit further. This would be accomplished by flipping the spacer over and finding the appropriate hole position.

- J. Please note that the Bypass Valve on the side of the blower has been changed several years ago to point towards the front of the engine. This is the correct direction. Do not change this.

NOTE: This change eliminates the use of the Water Bottle Relocation Plate. It is no longer included with the kit.



K. The change in direction of the bypass valve also changes the direction of the Throttle Cable Bracket. Note also the parts stack up for the cable pulley on the bracket. The cable then runs around the pulley and back to the crank arm on the TB. Similar to how its mounted stock.



- L. Here are pictures of the correct way to mount the upper and lower under brace brackets.



M. IAC Bracket

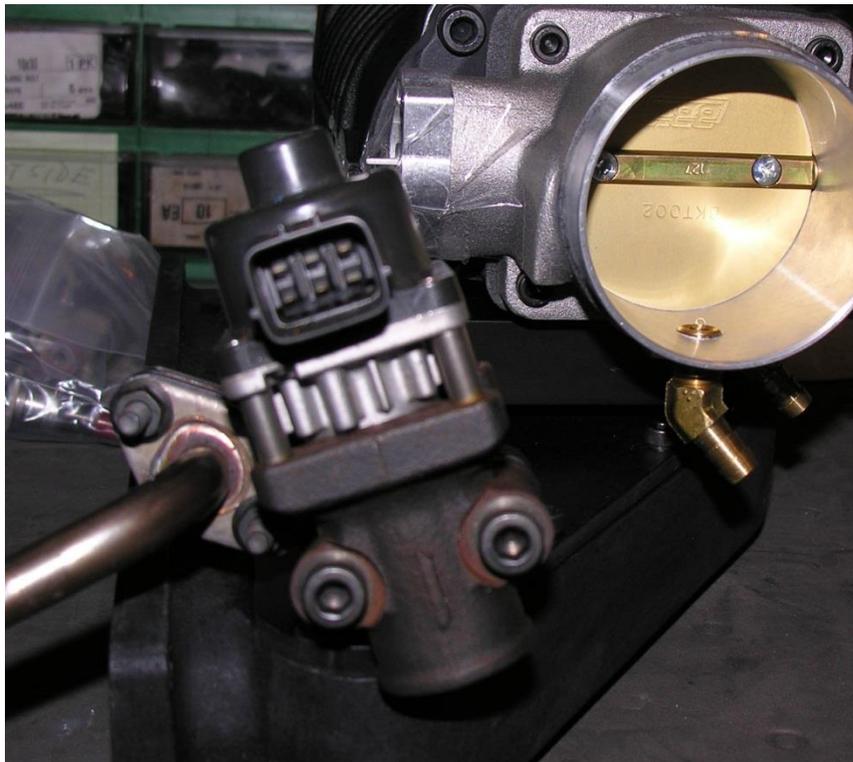
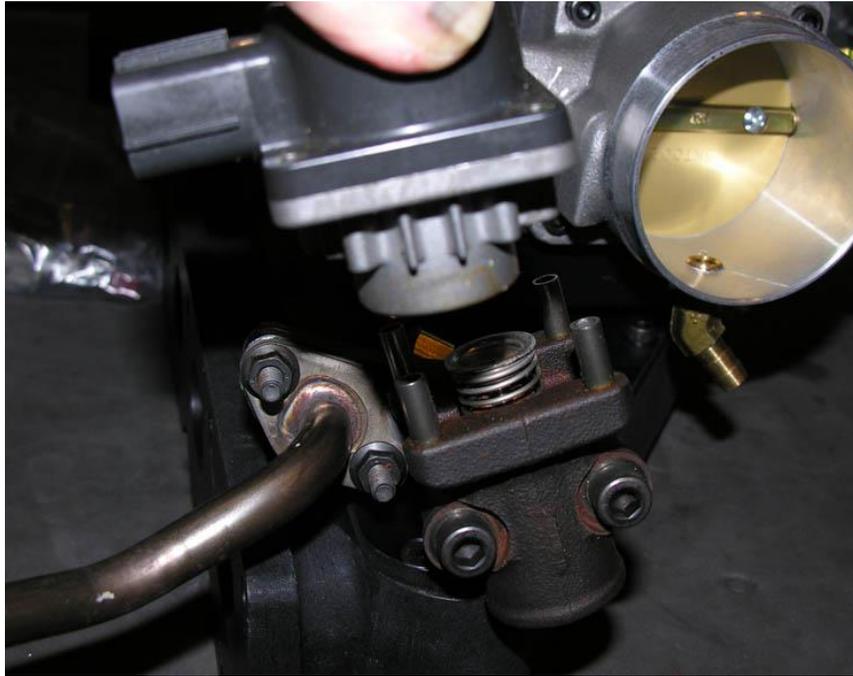
For 90-97 IAC brackets, you will need to use Ultra Black RTV to mount the IAC valve to the bracket. Use it sparingly and allow at least overnight for it to set up before exposing it to radiator fluid.

For 99-05, use the gasket that came off of the the old mounting.

## N. EGR Bracket

With the introduction of the Cold Air Intake and the intake hose now going across the engine instead of under the intake manifold, the EGR bracket was re-designed to allow the EGR valve to lay more horizontal. You may need to remove the screws and rotate the top solenoid section to allow for the connector to not hit the fuel rail depending on which model year you have. Shown here is the 99-05. You should also use some Ultra Copper or equivalent RTV between the plates when assembling the plates.

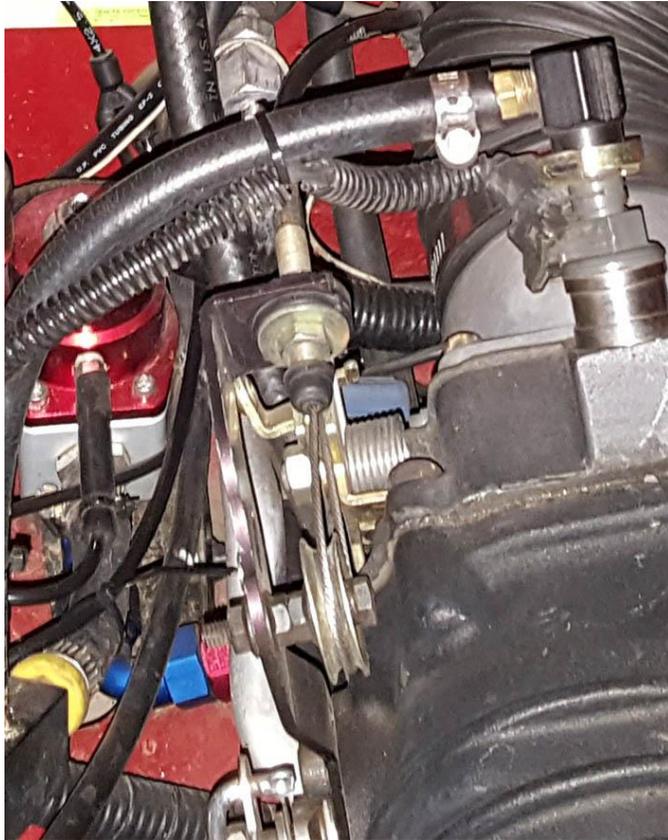




It can be rotated to any one of four positions as needed.

## O. Throttle Cable Adjustment

Make sure that, at rest, the throttle cable has slack in it. Then, with the help of a second person, have them slowly push the throttle pedal to the floor. If properly adjusted, the pedal will get to the floor **BEFORE** the throttle body is all the way open. If not properly adjusted, you could bend or break the throttle cable bracket and **possibly stick the throttle body wide open**. If you cannot adjust the cable to stop before the TB goes to Wide Open Throttle, it is a good possibility that the throttle pedal stop screw located on the throttle pedal bracket under the dash is incorrectly set. Adjust that screw to stop the pedal at the correct location.



When first installing the kit, a good check is to leave the belt off and cards/harness unplugged. Start the engine and go for a drive. It should drive just like stock. If all is well, plug in the cards and install the belt.

Turn on the key and drive. **Don't push it until you can confirm that the Air/Fuel ratio is correct. Cards are pre-set but the A/F needs to be checked to ensure nothing went wrong during the install.** If all is good, enjoy for the next 20 years. Basically, the only maintenance item is the belt and it should last at least 50,000 miles but you should check at oil changes like you do the other belts.

When starting the car, turn the key to run, wait a few seconds, then start the engine. If the engine doesn't start, turn the key off and repeat.