Acknowledgements: We thank Emery Freeman for taking pictures, documenting the installation and writing this procedure. His contribution will be appreciated by everyone installing this EFI system.

930 EFI Installation Instructions
item #9007-14 & 9007-15

First and most importantly, **DISCONNECT THE BATTERY!!!**

Starting at the beginning:

1. Remove the driver's seat.
2. Remove the driver's door inner trim strip (Philips screws)
3. Remove driver's side rear quarter interior panel, so you can now see the CIS wire harness running from the Jetronics relay and other relays under the seat back into the driver's side firewall. I do not recommend removing any of the existing wiring harness at this point. After installation, you will be able to go back in and remove the CIS relays from under the driver's seat, and you will no longer need to use any of the CIS wiring in the engine bay. You will need to tap into the ignition and the tach leads. You'll also want to use switched 12v power in the engine bay.
4. Unwrap the wiring harness up to the firewall.
5. Open the engine hood.
6. Loosen the A/C compressor and remove belt so you can move it around and gain access to the other parts you need to remove.
7. Remove the intercooler.

8. Remove all the CIS and intake components, working from the top down.
9. Remove the plug wires.
10. Remove the fuel lines and accumulator.

11. After you have removed all the intake and CIS components, etc. plug all intakes and turbo pipes with towels to prevent dirt or parts from falling into them.

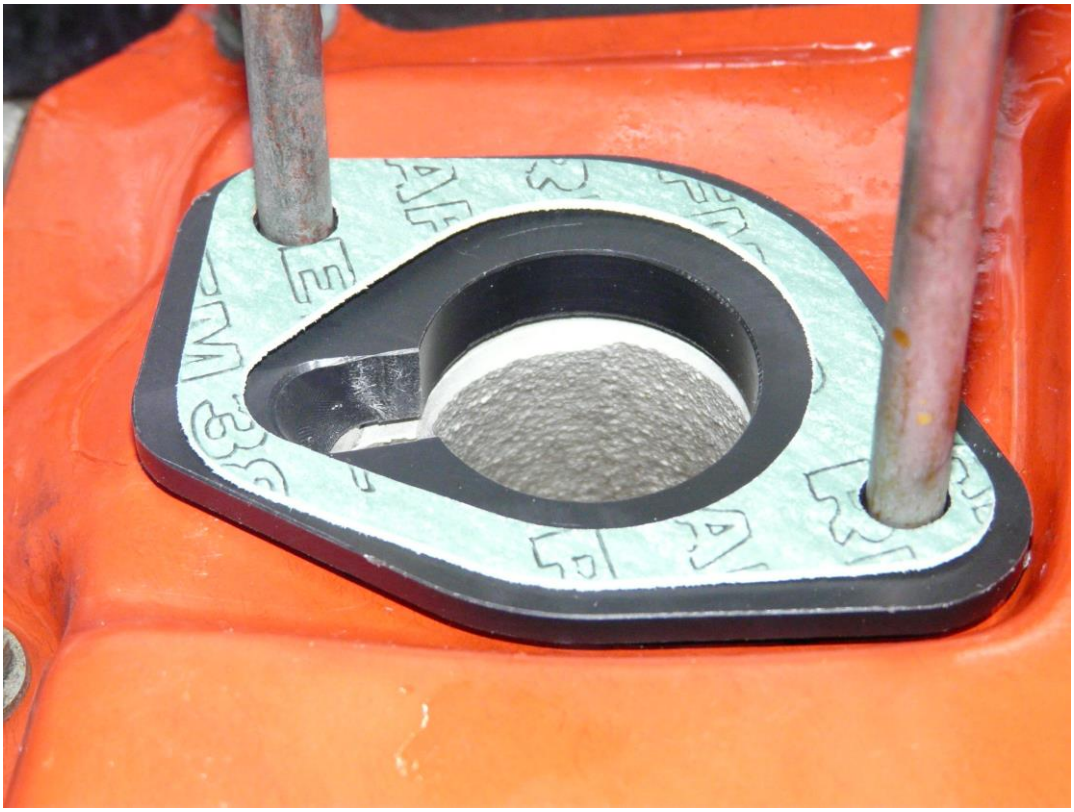
12. Install six 930 intake gaskets.

13. Picture with gaskets installed on each intake port.

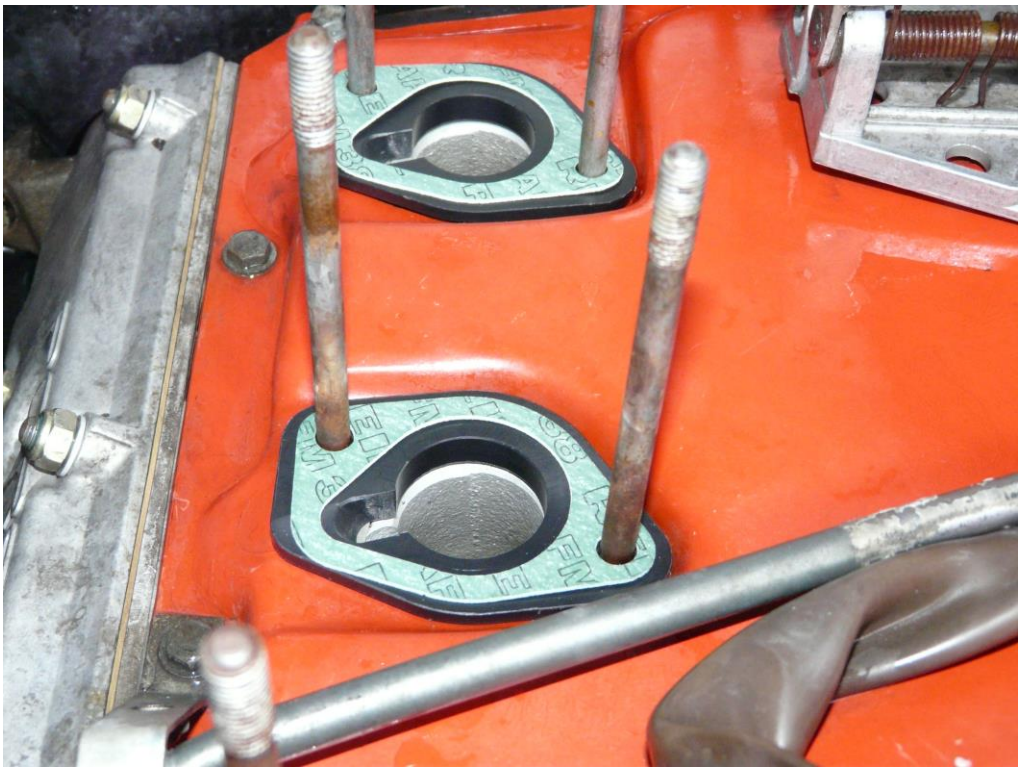
15. Install heat insulators.

16. Install six 3.2 Carrera intake gaskets.

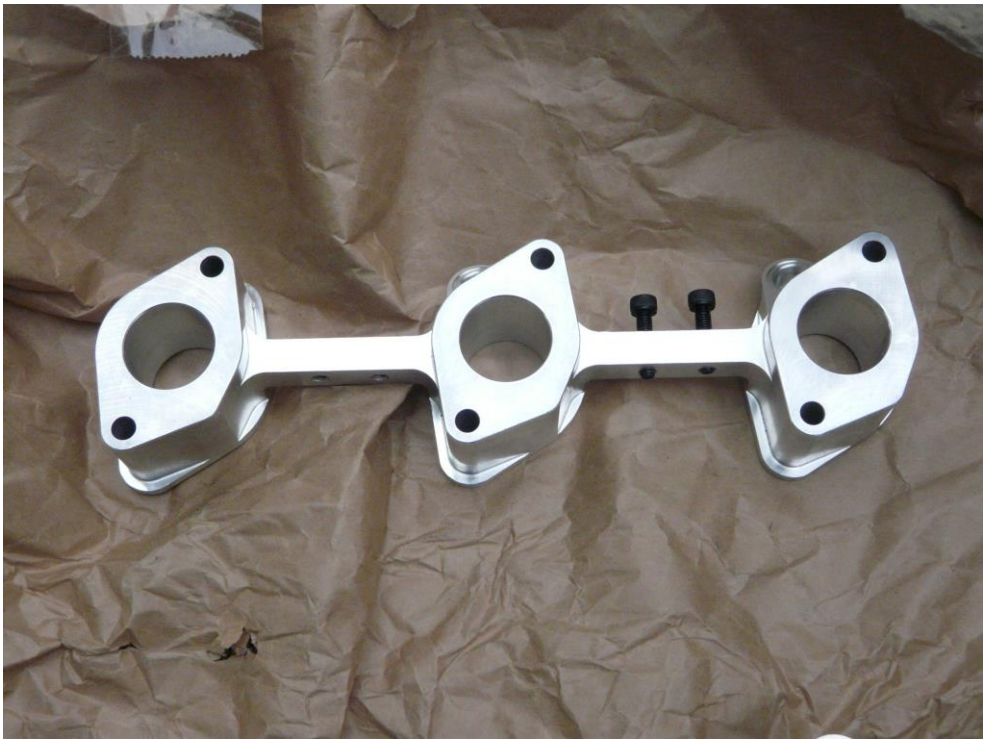
17. Picture of (from bottom up) 930 gasket, heat insulator, 3.2 gasket.

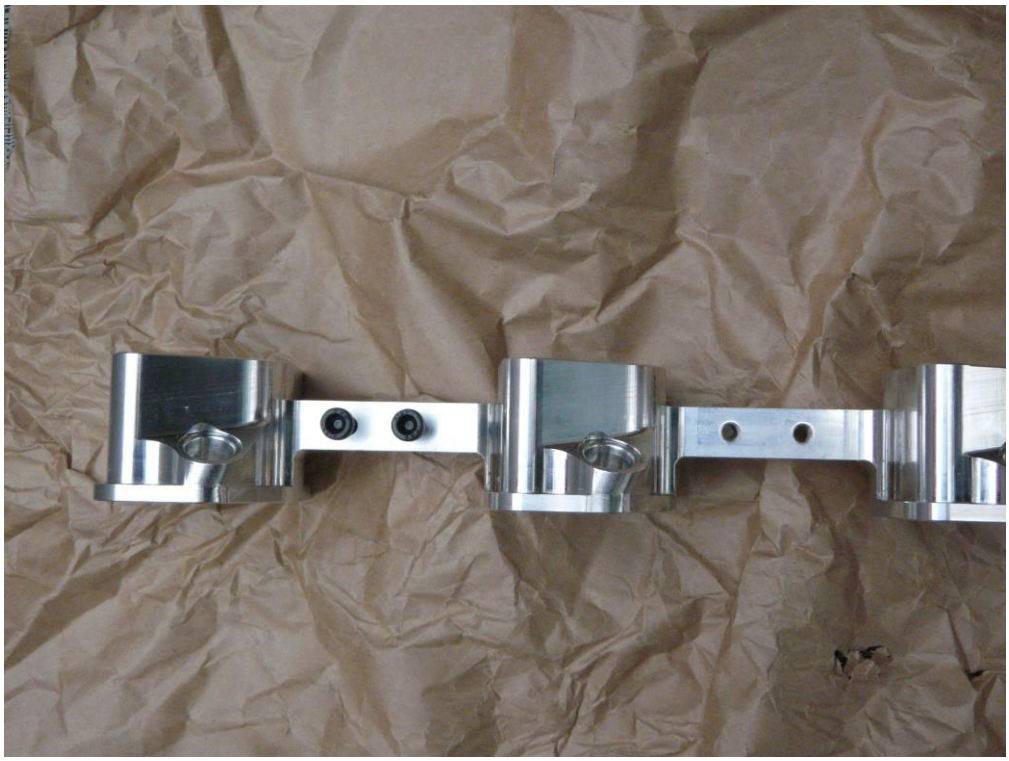


18. Pictures of gaskets and spacers installed.



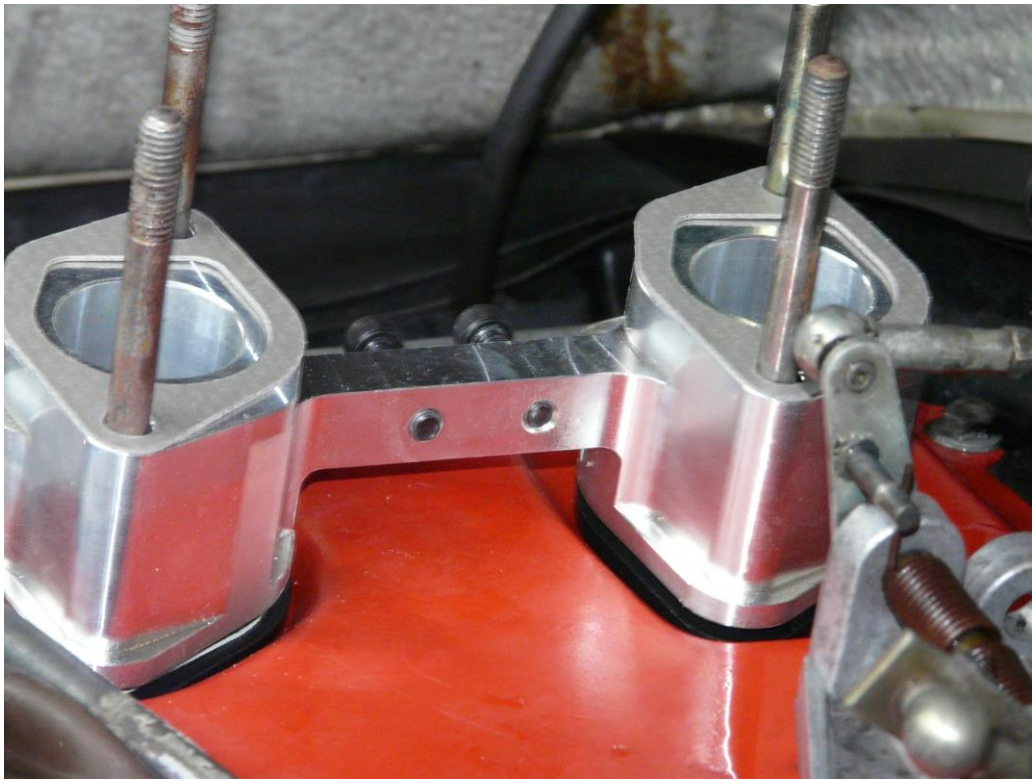
19. Pictures of new manifolds with injector bores.



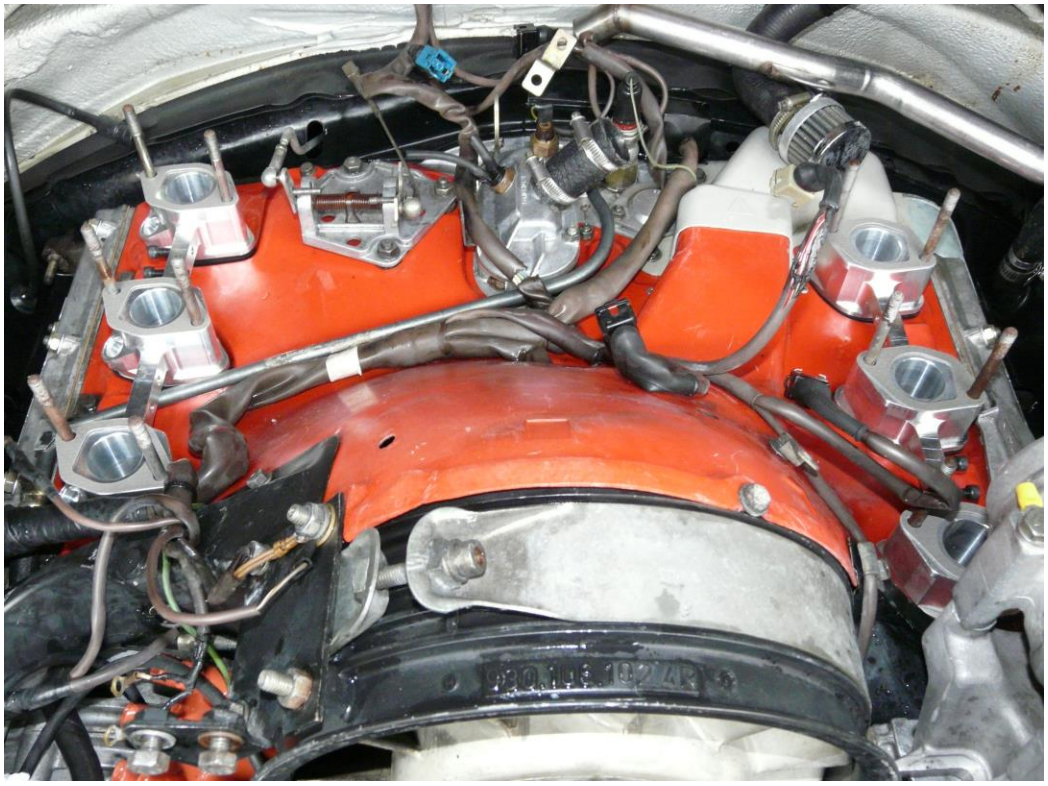


20. Install injector blocks over gasket/spacer stack on intakes.

21. Install six 930 gaskets over top of intake blocks.



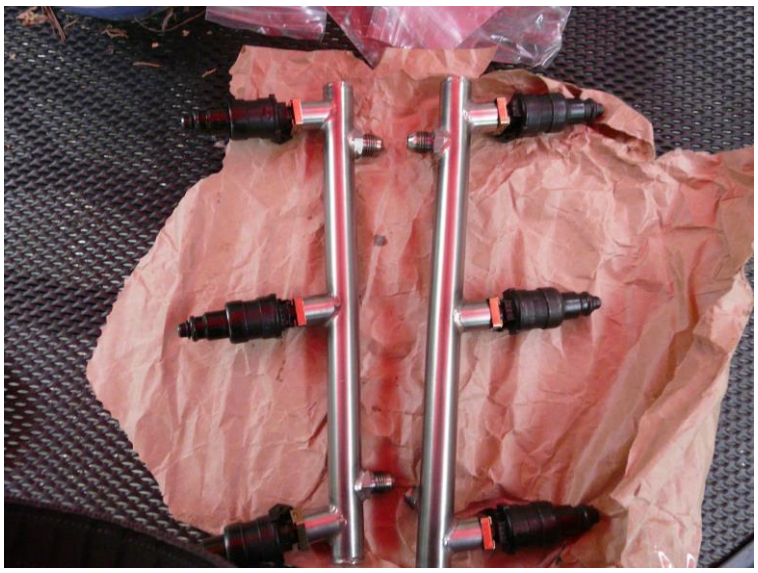
22. Pictures of intake blocks with 930 gaskets.



23. Install manifold on top of gaskets and blocks.

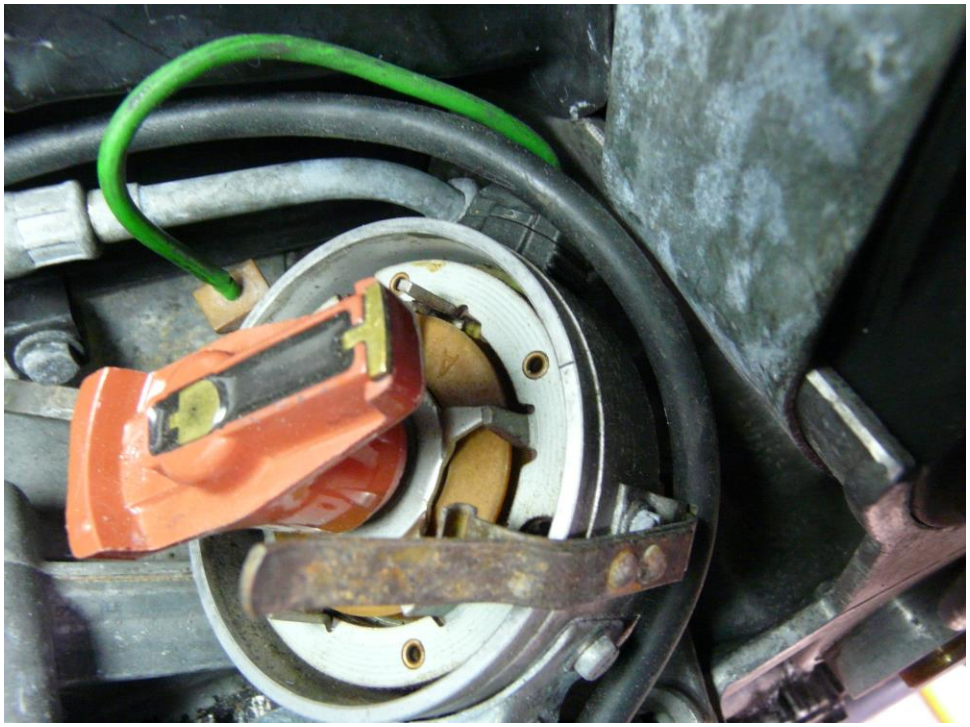
24. Follow the installation instructions included with the TPS sensor included with the kit.

25. Pictures of assembled fuel rails below. To assemble rails, lightly oil injector O rings and insert into fuel rails. Snap on square clips to hold injectors in rail.



26. Pictures of the installed fuel rails.

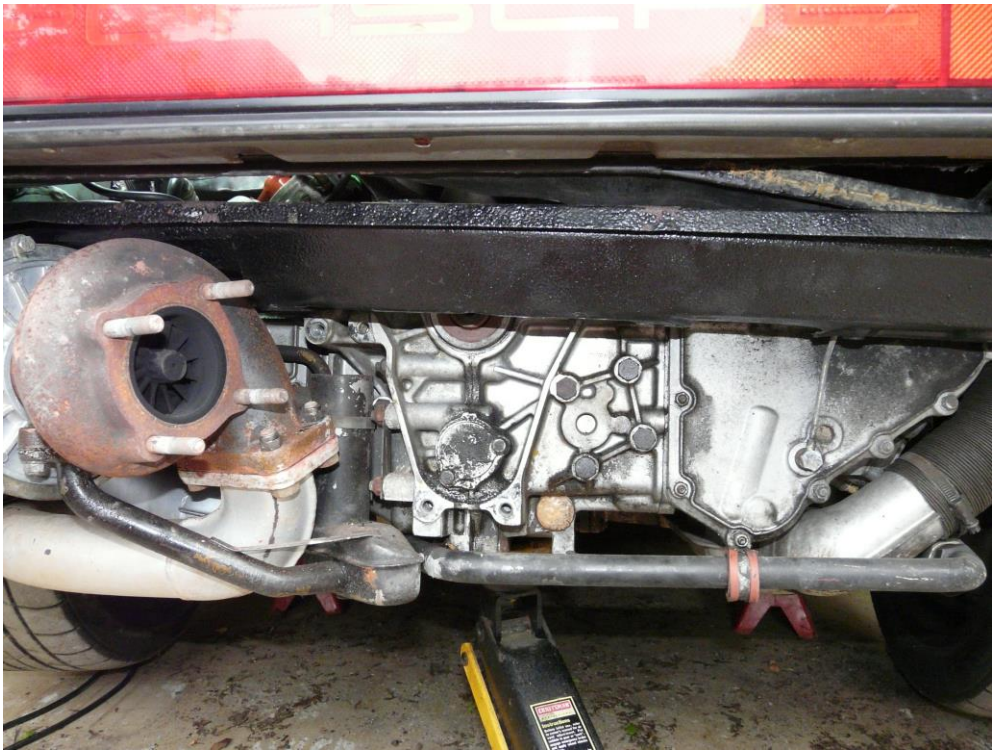
27. Set engine to TDC on Cylinder 1. Having the engine at TDC and on #1 cylinder puts you in a good spot just in case.



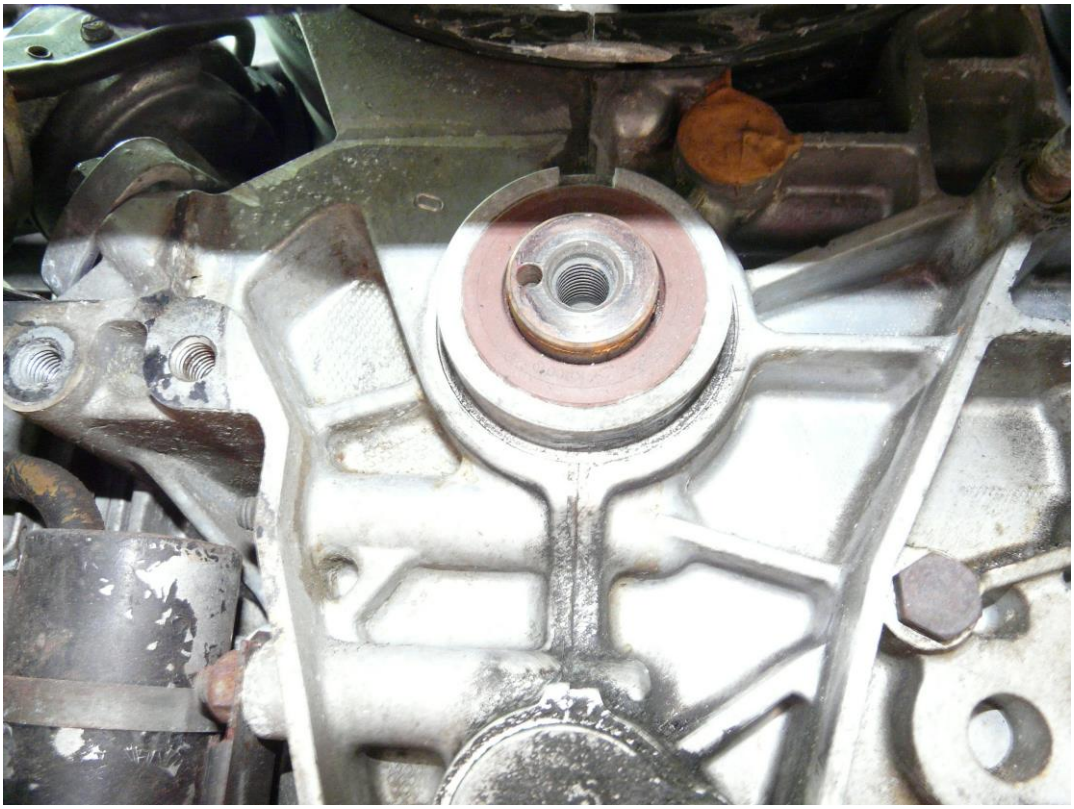
28. Remove the distributor and sell it.

29. Insert your Clewett distributor hole plug and tighten it with a 8mm allen wrench.

30. Lower engine a bit and remove all the parts between you and the pulley. Then, remove the pulley. This will include: valence, bumper, exhaust, exhaust/turbo hanger, engine mount crossbar, engine mount,…



31. See this hole? The new pulley is pegged and fits right in.



32. Install the pulley.

33. The new trigger mount is held in by the bolt formerly used to hold the distributor down. Install the motor mount and verify that the sensor holder seats properly on the engine block. It may be necessary to grind away some material to clear the sensor mount.

34. Once the motor mount is trimmed and installed, mount the trigger holder.

35. Install the crank sensor in the bracket. Do not over tighten. Set gap to about .035.

    You do not want it to hit the pulley.

36. Re assemble this section (motor mount, brackets, exhaust, etc.).

37. Install the wide band 02 sensor into the bung on your exhaust (downstream of turbo).

38. Moving on to the drilling of the passenger side cam tower casing to install the cylinder head temp sensor. Drill a hole for a M12 X 1.0 thread per the instructions with the sensor. Locate hole into the cam tower casing in the spot shown in the photo. Then tap the hole to cut the threads. Use cutting lubricant to help you cut nice threads. Once complete, admire your amazing fabrication skills and then install the sensor and route the wire under the heater hose and up onto the shroud area for later connection. Another task complete!

38. Mount your coils. Depending upon where you want them and how fancy you want to get, do your own thing. I did not want to drill into anything structurally critical, so I drilled holes into the bulkhead and just mounted the coils in the center of the bulkhead. Used washers on both sides to help keep things solid and tight. You'll have to remove the rear seat back to do this, if you go with this option. Simple.

39. Run your plug wires and make sure they are in the right order. Coil A cylinders 1 & 4, Coil B = 3 & 6, Coil C = 2 & 5

40. Remove the fuel filter and accumulator from the engine bay.

41. Drill holes and mount the new fuse blocks to the left side of the engine bay.

42. Figure out where you will mount your new fuel pressure regulator and set it up. I re used a rubber isolation mount formerly used to hold in the fuel head. Once situated, measure and cut your fuel lines. You will route the incoming line into the filter, then from the filter to the front left fuel rail nipple; then rear left to front right rail nipple; then right rear to pressure regulator; then back to return line. You will have to cut the factory lines and install AN fittings. Sounds scary, but it is easy.

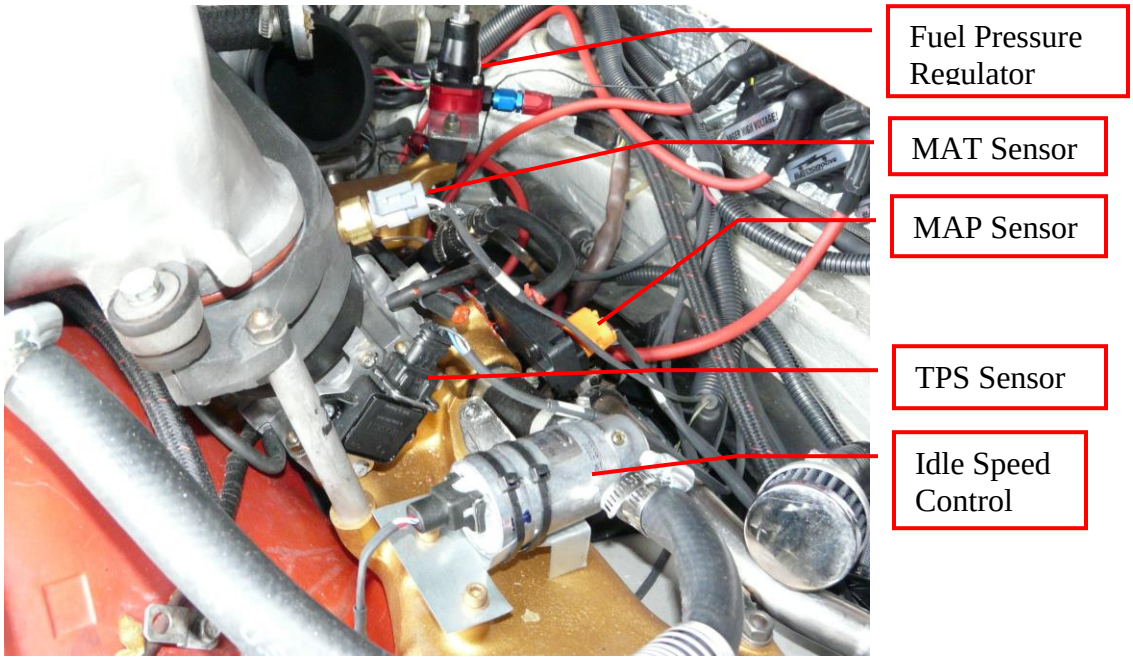
43. So, let's take a survey. We are almost done. We have the injectors in place, throttle positions sensor (TPS) in place, the pulley in place, the coils in place, the fuel lines in place, the CHT sensor in place, the ignition trigger in place, the fuse blocks in place. What's left?: idle air motor (optional), MAP sensor to install; wiring to route and connect; fuel pressure to set with a gauge; re assembly of the intercooler and pipes/tubes; mount the ECU under the seat and run the new harness to it; connect the four wires to complete the ECU setup (12 v switched, tach, ground, and run the low amp 12v lead to the blue wires in back of the fuse box in the trunk – the blue wires on the fuel pump relays…I think at that point you will be ready to load your base map and start the car.

44. Fabricate a mount and install the idle air control motor. I cut and bent aluminum to make a mount, and installed the motor right next to the throttle body. I ran a hose from the motor output port into the manifold, and from the intercooler into the motor inlet port.

45. Using your tap and die expertise, drill a hole in the magnesium recirculation housing so the MAT sensor will sit just above the TB intake. For a GM MAT sensor you will need a 3/8 pipe thread tap and a 9/16 drill bit. Once the hole is tapped, install the MAT sensor.

46. Run a hose from the MAP sensor around to the rear of the manifold. You will see a fitting there you can use to connect the hose to. I had to run a reducer in line as the fitting on the manifold is around ½ inch or more and the line going in to the MAP sensor is 1/4.

47. At this point, all your sensors are in place.



48. Now, route your wiring in a manner which satisfies your need for tidiness. I used tape and spiral plastic cable barrier to help keep my installation neat. Basically, your engine bay wiring harness needs to route to each sensor, and to the fuse blocks. I also connected to the 12v switched power on the left rear fuse factory fuse block, and ran the ground wires to solid ground points on the block.

49. If you have not yet done so, route your wiring harness from the engine bay through the left lower side of the bulkhead (where the factory harness is routed). You will likely have to cut this hole to make it large enough to route your new harness. Run the harness down under the driver's seat.

50. Fabricate a bracket to mount your ECU and mount your ECU under the seat. I used aluminum flat bar to create a simple mount, drilled some holes and bolted the ECU to the mount. It is very secure and inexpensive.

51. Connect your wiring harness to your ECU.

52. Route the tach wire up behind your dash. There is a pass through hole you can use on the left side of the dash that pops the wire out behind the gas piston holding the hood up. Splice the wire brown into the black/purple tach wire.

53. Connect the fuel pump control 12v low amp lead to the blue wires on the back of the fuel relays.

54. Reconnect the battery.

55. Turn on the ignition without turning over the engine. Check and set fuel pressure to 43 lbs. Verify that there are no fuel leaks!!

56. Turn on the ECU, connect to your laptop via serial port (laptop loaded with Wintec software), download your initial base map – supplied by your vendor. In my case Richard Clewett supplied me with a starter map.

57. I think at this point, we are ready:

    a. Fuel system installed

    b. Ignition system installed

    c. Sensors installed

    d. Wiring connected

    e. ECU installed

58. All systems re assembled (exhaust, intercooler, manifold, A/C bracket and pump, engine tin) With your laptop on, start the engine. The car should start. Turn off the engine and call your vendor to review your base settings. Once set up, go for a short drive and record the run via Wintec. Make changes to assure proper AFR's, idle, starting, and to verify MAP signals boost, etc. If all looks good, drive, record, tune, converse with your tuner and keep adjusting until you get your final mapping.

Good job! Have fun.

The components used in this installation:

- Clewett Engineering 930 EFI system item #9007-14
- Spark plug wires item #9192-22

Upgrade options:

- Terminated Wire Harness item #1001-81-U
- Idle Air Control, item #9191-97
- A universal -6 AN fuel line kit was used to hookup the fuel system.