

PLAZMAMAN

EVO X 4B11T INTAKE MANIFOLD INSTALLATION GUIDE

Parts included (In Brackets beside will be what they are utilized for)

- 1 x Plenum + Sticker + Manual Card
- 1 x Fuel Rail
- 2 x Rail Stands
- 2 x M8 x 40mm Cap Head (fuel rail)
- 2 x M8 Small Flat Washers (fuel rail)
- 3 x M8 x 35mm Hex Bolts (manifold to head)
- 3 x M8 Large Washers (manifold to head)
- 3 x M8 Spring Washers (manifold to head)
- 2 x M8 Nut Flange (manifold to head)
- 1 x M6 x 12mm Hex Bolt (dip stick mount)
- 1 x 3/8 to 10mm NPT (PCV)
- 1 x 1/4 to 10mm NPT (booster vacuum)
- 1 x 1/8 to 4mm NPT (fuel pressure reference)
- 1 x 1/8 to 6mm NPT (BOV reference)
- 1 x 1/8 to 8mm NPT (purge solenoid)
- 1 x EFI to 8mm Barb (fuel return quick connect)



If OEM Throttle Body

- 4 x M8 x60mm M8 Cap Head
- 4 x M8 Spring Washers

Parts you may need to source.

-4mm,6mm and 8mm vacuum hose

-fuel hose/fittings to suit your fuel system

-zip ties and electrical tape.

GAINING ACCESS TO THE OEM INTAKE MANIFOLD

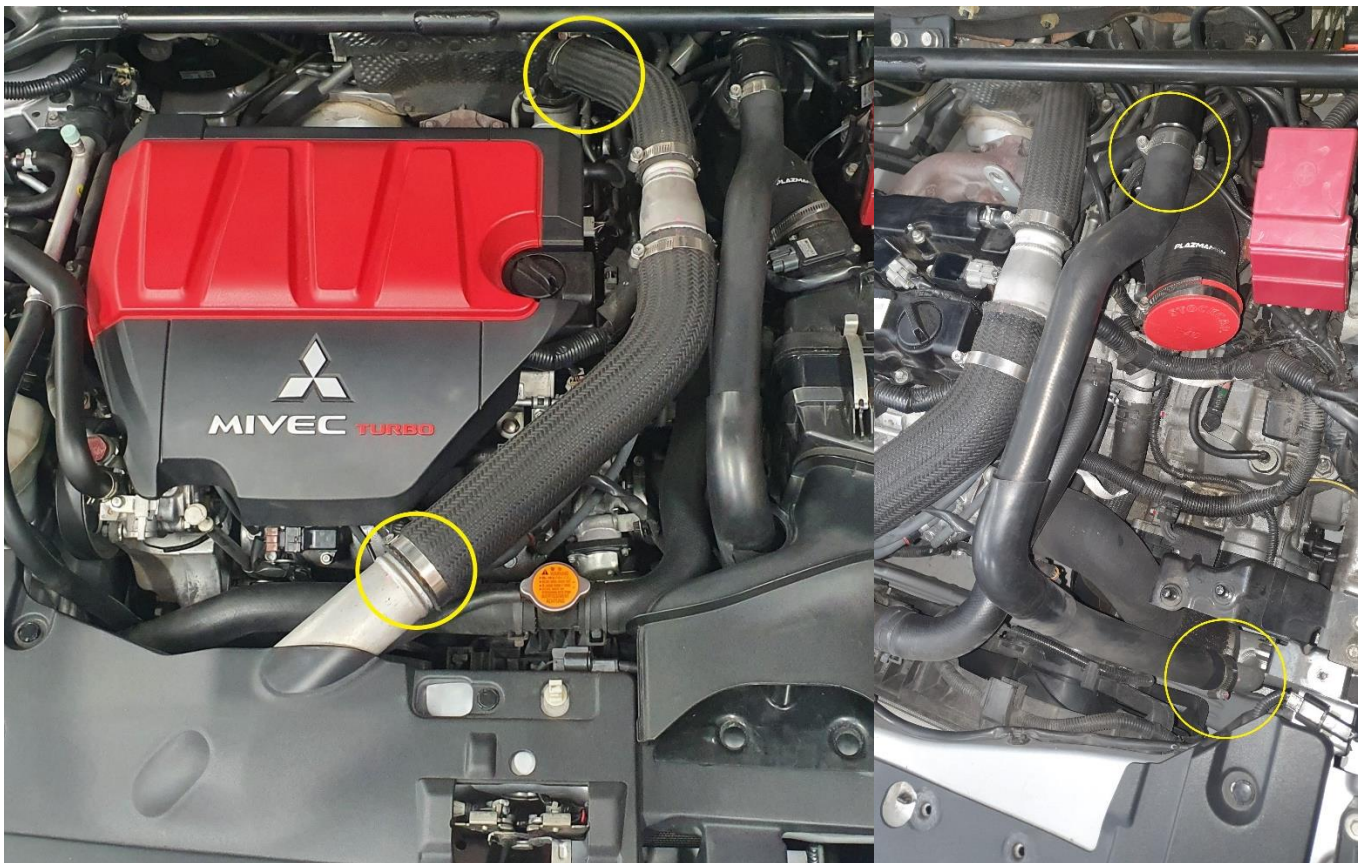
1. First disconnect your battery, failure to do so may result in damage to the electronics in your vehicle.
2. Remove the engine cover by simply pulling it away from the engine, you will find it has 4 push connectors holding it in place.



3. Now remove the airbox and MAF, you will find 2 plastic push rivets holding the air dam in place, 2 retainer clips on the top of the airbox, 1 single hose clamp attaching the MAF to the intake hose, 1 Electrical connector to the MAF with 2 harness retaining push clips and 1 single 10mm bolt to the right side of the airbox. See the pictures below.



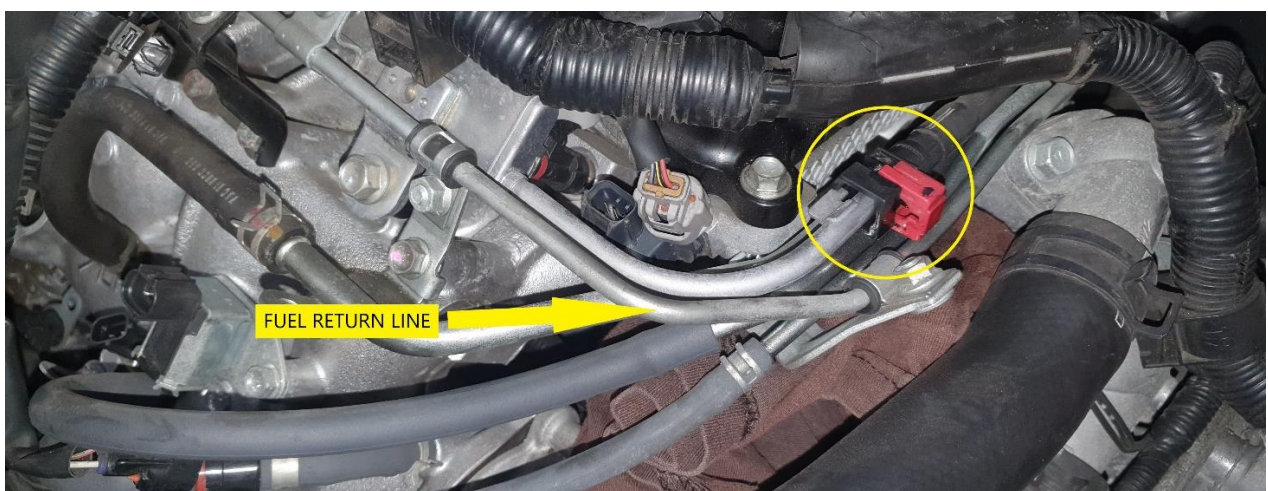
4. Remove the BOV (blow of valve) recirculating hose, hot side intercooler hose that runs from your turbo and intercooler hose which runs into your throttle body – each will require removal of a hose clamp at either end.



5. At this stage it is recommended you block all openings into your engine, Intake pipe, turbo outlet, intercooler pipe above your radiator, both ends of the BOV recirc system, and lower cold side intercooler pipe. Failure to follow this step may result in engine damage due to debris, tools or anything entering the engine.

REMOVAL OF THE OEM INTAKE MANIFOLD

6. It is time to remove all electrical plugs attached to the OEM intake manifold, take your time with this step, and label all connectors because it will make reinstallation much easier knowing which connectors are which.
7. Disconnect the fuel lines, the feed line connection is to the right of the engine with a red retainer that you must push into unlock position, follow the return line to the rear of the engine to locate the return fuel hose for removal. A small amount of fuel will leak from the lines.



8. Detach the brake booster hose, EVAP purge solenoid hose and BOV reference hose, you can find them by following the hardlines to the rear of the engine.
9. Unbolt the hardlines at the cylinder head by removing the 2 bolts. The hardlines will stay attached to the OEM intake manifold when you remove it later.

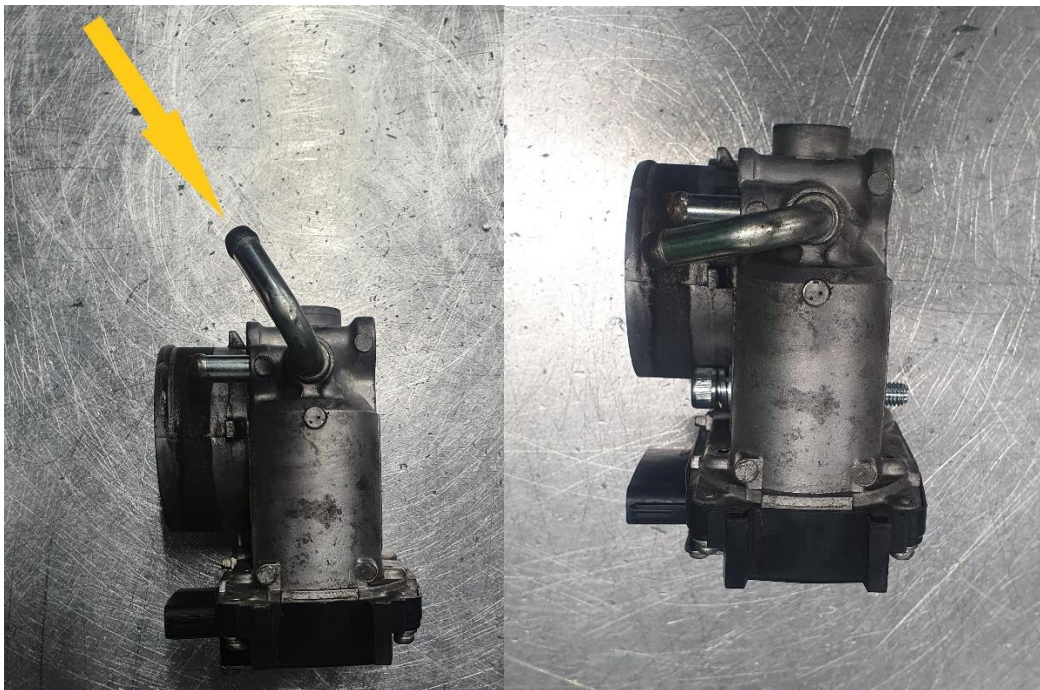
10. Remove the PCV hose that goes from your rocker cover to the intake manifold.
11. Detach the feed and return coolant lines running to your throttle body.
12. You will need to remove 2 brackets underneath the intake manifold bracing it to the bottom of the engine block.
13. Remove the 5 bolts attaching the intake manifold to the cylinder head, all these can be easily accessed from the top.
14. Now carefully remove the intake manifold including the hardlines from the engine, this may take some manoeuvring and if needed remove any further obstructions.

INSTALLATION OF YOUR NEW PLAZMAMAN INTAKE MANIFOLD

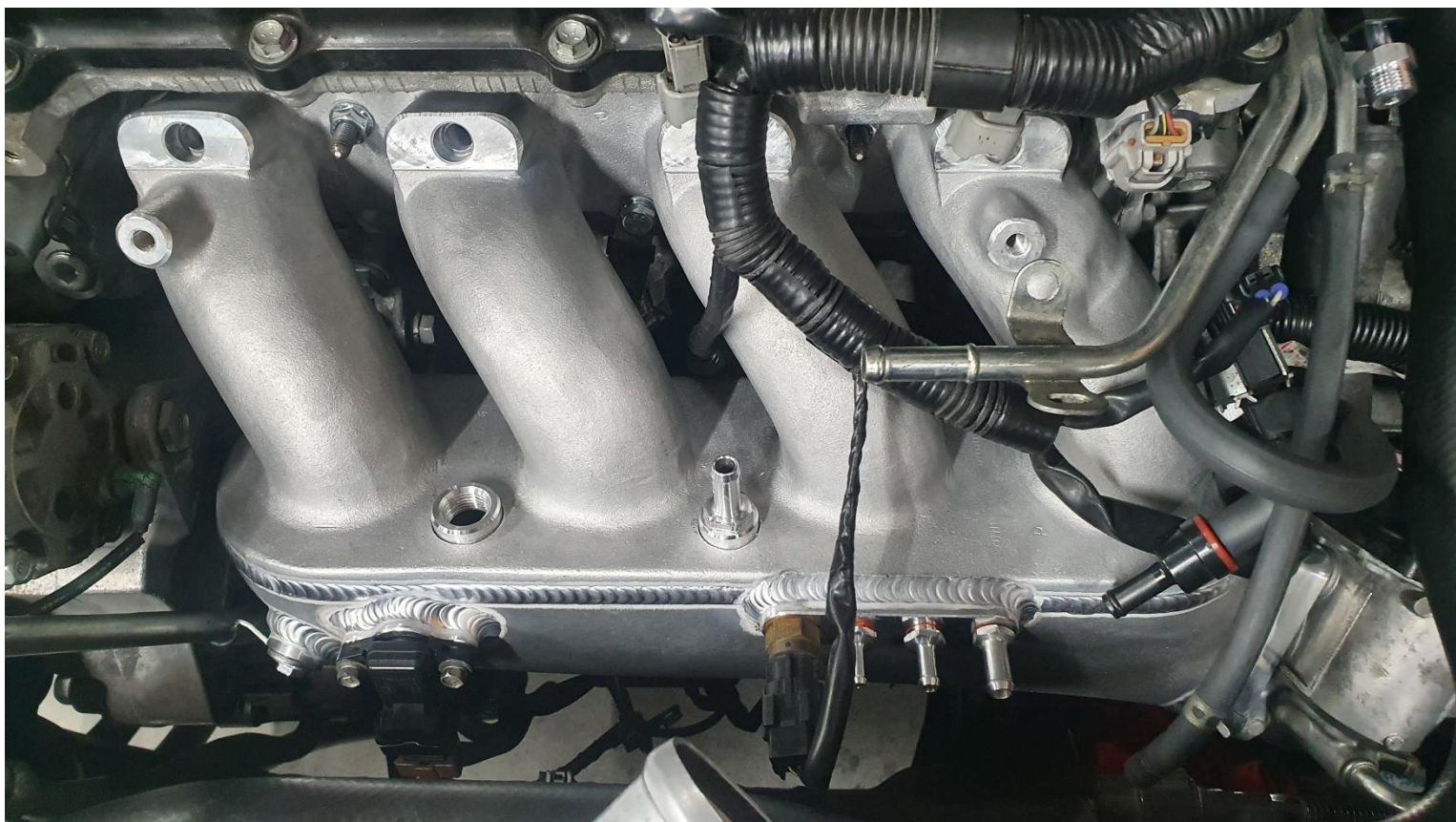
15. Before installation you will need to separate some connectors for a cleaner install. You will cut the plastic corrugated split tube and electrical tape circled below being careful not to damage the wire beneath to separate the air temp sensor, EVAP purge solenoid and throttle body wiring.



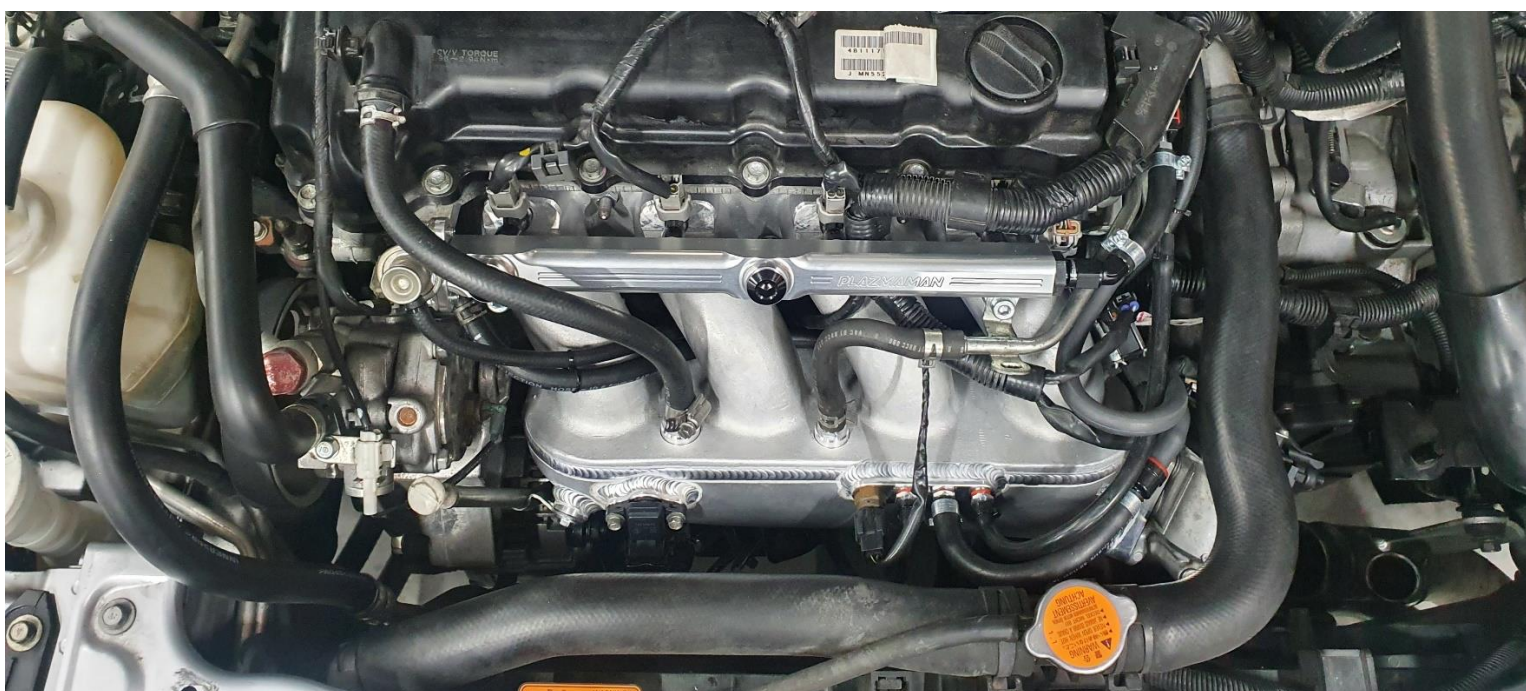
16. Rotate the longer water hard-line on your throttle body to point in the direction shown below in the second picture or remove completely. We choose to delete this waterline during the process of installation, by looping the water line at the motor.



17. You may need to test fit the inlet in position to find out exactly how to reinstall the plastic split tube and tape the wiring. Shown below is an example. Feed all the wires except the air temp, throttle body and EVAP solenoid through between runner 2 and 3. Once you have test fitted the wiring, tape them up neatly.



18. Install your inlet manifold using the nuts and bolts provided, make sure not to forget the OEM gasket between the head and manifold.
19. Install your OEM map sensor and air temp sensor, illustrated above.
20. Reinstall all the wiring underneath the inlet manifold, neatly and zip tie where needed.
21. Reinstall the hard lines for the brake booster, purge solenoid and BOV.
22. The purge solenoid is installed on the bracket to the right of the manifold, on runner 4. Rotated with the electrical plug closer to the firewall.



23. Your Plazmaman Fuel rail is designed to suit full length injectors out of the box, if you choose to run the OEM injectors you will need to either cut the fuel stands down 12mm or use $\frac{3}{4}$ – full length injector extensions. We designed it this way so to give more options in terms of injector choice.

24. The Booster hard line is easily bent into position to be inline with the bolt for fuel rail. Install the fuel rail with your chosen injectors. The OEM booster hose can be reused if you shorten it.
25. When it comes to the PCV, fuel regulator and fuel lines, you will need to source these parts specific to your build. An EFI – 8mm Barb is supplied which you can utilize for the quick connect fuel feed.
26. Remove the lower radiator hose and shorten the side which attaches to the motor, this is to give clearance to your throttle body, start with 30mm and check clearance with the throttle body installed. Cut more if needed. After this is complete, reinstall the hose for good.
27. Install the throttle body using the bolts and washers supplied.
28. After this is complete double check, everything is neat, tight, and check for fuel leaks.
29. If you have purchased our bolt-in intercooler pipe to suit your new Plazmaman intake manifold, you may install this now.
30. Follow the same steps in reverse for re-installation of the airbox, intercooler piping and engine cover, fill and bleed your coolant system.
31. You will need a custom Dyno tune after the install to reap the full potential of this intake manifold and ensure your engine is running correctly, failure to do so may result in engine damage.

