



LS3 BILLET INTAKE MANIFOLD INSTALLATION INSTRUCTIONS

Parts supplied

- 1 x billet manifold
- 2 x fuel rails
- 1 x valley plate
- 1 x throttle body adaptor
- 1 x bag of assorted O-rings and bolts

Procedure

1. Place 8 x O-rings in grooves and attach runners to plenum
2. Tighten runners to plenum using **M6 x 12** bolts using a **Loctite-style** compound on the threads. All M6 bolts in this assembly should be tightened to 12ft/lb torque.
3. Place long O-ring in top of plenum, plus 4 x **8mm dowel pins** for location, then add plenum lid
4. Tighten lid to plenum using **M6 x 20** bolts using **Loctite-style** compound on the threads.
5. Attach valley plate to engine using factory O-ring seal plate and **M8 x 20 button head bolts**. The breather hole is tapped M14 x 1.5. A block-off plug is supplied. If required for use, you must run a banjo style fitting in that hole. (**M14 x 1.5mm Banjo bolt and a dash 6 or dash 8 banjo outlet depending on size required**).
6. Vacuum Fittings – the holes on the rear and side of the intake are 1/8 and ¼ NPT thread.
7. Use 8 x O-rings on head flanges and attach manifold to engine. M6 x 35 cap head bolts are supplied for fitment between the manifold and the engine if you wish to use them.
8. Attach the fuel rail legs and stands to the manifold using the M8 x 50 bolts. The fuel rail legs are designed to suit standard length LS3 injectors (half length). Spacers need to be added to the mounting legs if you are running a longer than standard injector. If running “billet atomiser” brand injectors, the injector through hole must be drilled out to 11mm, and the bottom oring removed from the bottom of the injector. Please see attached drawing.
9. Attach fuel rails to mounting legs using **M8 x 16** bolts and flat washers. The engraving on the fuel rails should be facing outwards, which makes the fuel rails even on both sides. This makes for easier and neater fuel line plumbing. The threads in the end of the fuel rails are -8AN.
10. Add orings to the throttle body adaptor. If running the **Plazmaman 102mm throttle body**, use the supplied M6 x 45 bolts and spring washers. If using the **LS DBW (90mm or 102mm)**, use the supplied M6 x 65 bolts and flat washers.
11. Due to a vast range of different casting tolerances, we cannot guarantee an exact alignment between the intake manifold and the standard cast intake ports on the cylinder head. We have measured various sets of factory cylinder heads and machined our ports to an average round size. We recommend port matching both items together to achieve maximum efficiency if required.