



# LS7 BILLET INTAKE MANIFOLD INSTALLATION INSTRUCTIONS

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## Parts supplied

- 1 x billet manifold
- 1 x valley plate
- 2 x fuel rails
- 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 **M8 x 20mm dowel pins** for location. A thin layer of silicone is required on the top face of the plenum body between the top o-ring and the front o-ring.
4. Add plenum lid. The o-ring should be protruding out the front of the body approximately evenly on both sides.
5. Tighten lid to plenum using **M6 x 20 (M6 x 25 if using tall race lid)** bolts using **Loctite-style** compound on the threads. Once the lid is tight, trim the leftover ends of the o-ring flush to the plenum body, and place a small dab of silicone to seal the o-ring.
6. Attach valley plate to engine using the factory O-ring seal plate and **M8 x 20 button head bolts**. The breather hole is tapped M14 x 1.5. A blockoff plug is supplied. If required for use, you must run a banjo style fitting in that hole.
7. Use 8 x O-rings on head flanges and attach manifold to engine. M6 x 30 bolts are supplied to attach the manifold to the cylinder heads if you wish to use them.
8. **If running standard length (half length) injectors**, attach the fuel rail legs and stands to the manifold using the **M8 x 65** bolts.
9. **If running aftermarket (full length) injectors**, screw the studded rail stands into the runners, and add the rail mounts using **M8 x 20 bolts**.
10. 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.
11. Attach fuel rails to the mounting legs using **M8 x 20** bolts and flat washers. The threads in the end of the fuel rails are tapped to -8AN.
12. Place large o-ring in front face groove, then add throttle body adaptor plate to the plenum body using the **M8 x 16mm dowel pins**. 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.
13. Due to factory tolerances, we cannot guarantee an exact alignment between the intake manifold and the standard intake ports on the cylinder head. We have measured various sets of factory cylinder heads, and machined our ports to an average size. We recommend port matching both items together to achieve maximum efficiency if required.