



# BIG BLOCK CHEV BILLET INTAKE MANIFOLD INSTALLATION INSTRUCTIONS

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## Parts supplied

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

## Procedure

1. Completely disassemble the manifold after it is unpacked from the shipping box. Thoroughly inspect all parts for damage during shipping. Please also make sure all items are clean before re-assembly. We recommend to assemble this manifold on a clean workbench with a layer of foam or rubber on top to avoid any scratching of the anodised surface.
2. Place **4 x 4.25" x .103" O-rings** in the top of each bank of runners, and place runners into plenum pockets. Make sure the injector bosses are facing outwards.
3. Tighten the runners onto the plenum using **M6 x 12** bolts, using a **Loctite-style** thread locking compound on the threads. All M6 bolts in this assembly should be tightened to 16ft/lb torque.
4. Turn the plenum and runner assembly upside down, and place **8 x 65mm x 2mm O-rings** in the bottom of the runners. Place the valley plate on top of this assembly, making sure the rear of the valley plate (where the distributor mounting land is) is in the correct orientation with the back of the plenum (where the vacuum holes are located). Line up all runners and lightly screw a **M6 x 16** bolt in each side. Tighten both sides evenly so that that valley plate does not pull to one side causing misalignment with the runners.
5. Once aligned, tighten the runners to the valley plate using **M6 x 16** bolts, using a **Loctite-style** thread locking compound on the threads.
6. Turn assembly back over, so that the plenum is now the correct way up. Place the long length of O-ring in the top of the plenum. There should be approximately an even amount (around 15mm) of o-ring cord sticking out both sides of the o-ring groove where it comes out of the front face of the plenum.
7. Add 4 x **M8 x 20mm dowel pins** to the top of the plenum, and place the plenum lid onto these dowels.
8. Attach lid to plenum. **M6 x 35** bolts are used in rear four holes. **M6 x 45** bolts are used in the rest of the holes. All bolts should be tightened using a **Loctite-style** compound. Once tightened, trim the protruding o-ring cord flush with the front face and apply a small dab of silicone to seal the o-ring.
9. Use **8 x 68mm x 2mm O-rings** around the intake ports, and **4 x 50mm x 2mm O-rings** around the water ports on the head flanges of the valley plate. It is recommended to run a sealing compound around the water ports as well as the supplied o-rings.

10. Silicone is required in the groove of the valley plate, plus along the front and rear edges to seal the valley plate to the engine block and heads. (same procedure a standard cast manifold).
11. Attach manifold to engine. Bolts are not supplied for fitment between manifold and engine.
12. Attach the fuel rail stands to the manifold. The grub screw end gets screwed into the valley plate. The fuel rail stands are designed to suit full length 14mm injectors. The legs can be shortened, or spacers can be used on your injectors if they are not full length.
13. One of the fuel rails has a throttle cable mounting land on top if it. This rail should be mounted on the same side as the cable wheel on the throttle body. The holes are tapped M5 to suit a quick release morse-cable bracket. The cable wheel of the throttle body also has a 3/16 UNC hole tapped in it to allow the morse-cable rod end to be easily attached. Alternatively, you can fabricate your own bracket. There is also a throttle cable mounting land on the valley plate if you wish to run your cable underneath the plenum.
14. Attach fuel rails to the stands using **M8 x 20** bolts and flat washers. The threads in the end of the fuel rails are -10AN.
15. Add 2 x **M8 x 16 dowels** into the front face of the plenum. Install 2 x O-rings on throttle body faces, and attach the throttle body to the plenum using 6 x **M6 x 50** bolts.
16. **IF RUNNING A TWIN 3.5" INLET STYLE**, add 2 x **M8 x 16 dowels**, and attach inlet nose to the throttle body using 2 x **M6 x 20** bolts in the two centre holes. Then add 2 x **M8 x 45** and **M8 x 30** in the remaining holes.
17. **IF RUNNING A SINGLE 4" OR 5" INLET STYLE**, add 2 x **M8 x 16 dowels** , and attach inlet nose to the throttle body using 6 x **M6 x 20** bolts.
18. A distributor cannot be run in the standard position on this manifold. A block off plug is required. We recommend MSD block off part numbers MSD8513 or MA29003 be used as on this manifold, depending on your exact requirements.
19. The front two water inlets are machined to suit -12AN. The rear two water holes are machined to suit -6AN for air bleeding of the water system.
20. Due to a vast range of different port sizes from factory, we do not guarantee an exact alignment between the intake manifold and the standard cast intake ports on the cylinder head. We recommend port matching both items together to achieve maximum efficiency if required.