



INSTALLATION MANUAL

CNC Billet LS Intake Manifold LS3/L92 Heads

PFEMB69001



Included Items	QTY
PFEMB69001 Billet Intake Manifold 102mm Bore	1
Fuel Rail Kit + AN Fittings	1
200 Series Stainless Steel PTFE Crossover Tube	1
Assorted Mounting Accessories + Gaskets	1

WARNING: PLEASE READ ALL INSTRUCTIONS BEFORE PROCEEDING. PROFLOW WILL NOT BE RESPONSIBLE FOR ANY DAMAGE AS A RESULT OF THE INCORRECT INSTALLATION OF THIS PRODUCT. IT IS RECOMMENDED THAT A QUALIFIED AUTOMOTIVE TECHNICIAN PERFORMS THIS INSTALLATION.

Installation of the Intake Manifold

1. Before installing the intake manifold, perform a test fit of the intake manifold without the O-rings installed. Make sure that the socket head cap screws supplied can thread freely into the cylinder heads. The mounted flange should seat properly and be completely flat.
2. Check the port opening alignment. Test fit the fuel and vacuum plumbing, throttle linkage (if applicable) and wiring. Ensure there are no clearance issues before beginning installation.
3. Ensure all M6 socket head cap screws that mount the runners to the manifold and the mounting flange to the runners are torqued to approximately 8-10 Nm.
Ensure all M5 socket head cap screws (that fasten the lid) are torqued to 5 Nm.
4. Once you have checked clearances and are ready to do the final installation, install the 8 O-rings provided into the mounting flange O-ring grooves. Ensure you apply a light coat of lubrication to these O-rings.
5. Put the intake manifold into place on the cylinder head. Be sure that all the O-rings are still in their grooves and not being accidentally crushed or pinched.
6. Install the supplied socket head cap screws into the cylinder heads with flat washers. Apply light lubrication to the threads and hand tighten all screws working side to side and out from the centre (refer to figure 1) until the manifold is fully seated on the mounting flanges and the O-rings have been compressed.

Manifold Tightening Sequence

7. In two steps, tighten the mounting bolts first to 5 Nm and then to 10 Nm following the recommended factory bolt tightening sequence shown below.

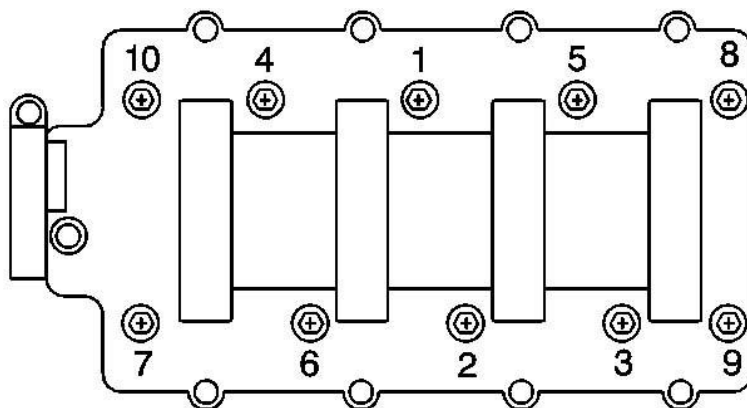


Figure 1: Recommended factory tightening sequence

8. On the rear of the intake, there are 4 holes tapped; 1x 1/4" NPT and 3x 1/8" NPT ports. These ports will provide ample vacuum port sources. Any of these ports can be used depending on what your vehicle requires. Any unused ports will need to be blocked off with the appropriate NPT fitting plug (sold separately).

Fuel Rail Installation

9. Insert the 8 fuel injectors into the O-ring bosses on the intake manifold by gently applying downwards pressure. Apply a coat of lubrication to the O-rings of the injector prior, to ensure you do not damage or pinch them.
10. Install the fuel rails by positioning them above the injectors on the intake and pressing down firmly until the injector is fully seated into the fuel rail. The Proflow logo should be facing outwards.
11. Fasten the brackets to the fuel rail by putting the socket head cap screws through the holes in the fuel rails and into the bracket. Repeat this process for the other 3 brackets.
12. Install the supplied -08AN ORB fittings with O-rings to the ends of the rails and connect them with the stainless-steel braided crossover tube.
13. Finally, rotate the injectors so the plugs are facing outwards and reconnect them to the wiring harness.

Installation on Modified Engines

Proflow Supermax intake manifolds are designed to provide maximum performance for LS racing engines. These intake manifolds will have the best fitment when the engine block and cylinder heads are machined to OEM dimensions. If the engine block or cylinder head deck surfaces have been machined significantly, the alignment of the mounting bolt holes and the port flange openings may be shifted and may not match up satisfactorily.

These steps may have to be undertaken if your block or deck surfaces have been machined:

- The bolt holes may have to be slotted in the intake manifold to allow the fastener to pass through the manifold mounting holes.
- Any material removal required to align the intake port flange openings should be removed from the cylinder head and not the intake manifold. Removing material from the intake manifold will jeopardise the sealing power of the O-rings.
- The intake mounting surfaces on the cylinder heads should be in good condition and free of scratches or burs. If not, these defects may impede the sealing ability of the intakes O-rings.