



GM LS Cast Intake Installation Instructions

Parts List:

- Intake Manifold
- O-ring seals, mounting bolts & washers

PLEASE READ THROUGH THESE INSTRUCTIONS BEFORE STARTING INSTALLATION

Our cast aluminum intake manifolds (650021/3-Dual Plane Carbureted, 650321/3-Single Plane Carbureted and 650321/3EFI-Single Plane EFI) are designed to fit cathedral port (LS1/2/6) or rectangle port (LS3) Chevrolet engines. They will work with OE or aftermarket cylinder heads. Check for hood & accessory clearance (alternator location etc.) on all vehicles **BEFORE** your start your installation.

Modified engines/blocks:

If your block has been milled or has had any deck modifications, you will need to take steps to align the ports and mounting points as required.

- 1) Check for intake mounting bolt hole alignment. The fasteners must thread easily into the cylinder head or improper sealing may result.
- 2) Use caution when port matching on the intake to not damage the o-ring grooves. The intake will not seal properly if the grooves are damaged.
- 3) The 650321EFI is designed for EV1 style fuel injectors and the 650323EFI is designed for EV6 fuel injectors. Both include fuel rails.

Installation:

- 1) Before installation, test fit the manifold without o-rings to ensure the mounting bolts thread in easily and the surfaces mate appropriately.
- 2) Test fit all vacuum lines, fuel line plumbing, throttle body linkage and cable and other wiring to ensure there will be no issues after the manifold has been mounted in position. Decide which vacuum ports on the intake will be required and thread in fittings or plugs accordingly using PTFE thread sealer. Ports are NPT thread.
- 3) Install the eight o-rings using a small amount of grease to hold them in position during installation.
- 4) Apply lubricant to the mounting bolts and thread them all the way in by hand.
- 5) Tighten the bolts in the correct factory sequence as shown in two stages. First to 50 in/lbs., then to 100 in/lbs.

