



Victor Jr. LS1 EFI Intake Manifold
for GM 5.7L LS1 Style V8 Engines
Catalog #29085 & #29086
INSTALLATION INSTRUCTIONS

PLEASE study these instructions carefully before installing your new Intake Manifold. If you have any questions or problems, do not hesitate to contact our Technical Hotline at: 1-800-416-8628, from 7am-5pm PST, Mon-Fri, or via e-mail at: Edelbrock@Edelbrock.com. Please fill out and mail your warranty card. Remember to include the model number of this product in the "Part # ____" space. Thank you.

CAUTION: Make sure the vehicle's battery has been disconnected and that the vehicle is supported on a level surface to prevent any possibility of the vehicle moving during the installation procedure.

- **MANIFOLD:** The single plane Victor Jr. LS1 Intake Manifold is intended for racing and engine swap applications. Part # 29086 includes fuel rails. A separate fuel rail kit may also be purchased under part # 3638.
- **EGR SYSTEM:** This manifold has no provision for EGR (exhaust gas recirculation) equipment. EGR systems are used on most 1972 and later model vehicles, up to certain GWs. Check local laws for requirements. This manifold is not considered to be a direct replacement part.
- **ACCESSORIES & INSTALLATION ITEMS:** Major recommendations are listed below. However, because this manifold system is intended for engine swaps into a variety of vehicles, some customization may be required.

ITEM	NOTES	PART NUMBER AND DESCRIPTION
Throttle Body	Standard Square-Bore Style Base	P/N 3878 - With standard GM/Delphi IAC P/N 38783 - With Mototron/Hitachi Linear Style IAC
Fuel Rail Kit	Stock Injector Angles	P/N 3638 - Includes Hold Down Brackets
Headers	1-3/4" - 1-7/8" Step, Victor Series	Various. See Catalog For Details
Camshaft	Developed for Carbureted Applications	P/N 2215 - 220° Int./224° Exh. @ .050", .510" Valve Lift P/N 2216 - 230° Int./237° Exh. @ .050", .540" Valve Lift

KIT CONTENTS: 29085 and 29086

- | <u>QTY.</u> | <u>Description</u> |
|---------------------------------|---|
| <input type="checkbox"/> 1 | Intake Manifold |
| <input type="checkbox"/> 1 | MAP Sensor Bracket (For LS1 Style Sensor) |
| <input type="checkbox"/> 1 | 1/8" NPT to 1/4" Hose Fitting (For MAP) |
| <input type="checkbox"/> .75 ft | 1/4" I.D. Vacuum Hose (For MAP) |
| <input type="checkbox"/> 2 | Cable Bracket (Large Opening) |
| <input type="checkbox"/> 2 | Cable Bracket (Small Opening) |
| <input type="checkbox"/> 1 | GEN III EFI Throttle Bracket Base |
| <input type="checkbox"/> 4 | 6mm x 1.0 x 12mm Serrated Flange Hex Bolt |
| <input type="checkbox"/> 4 | 6mm x 1.0 Serrated Flange Hex Nut |
| <input type="checkbox"/> 10 | 6mm x 50mm Hex Head Capscrew |
| <input type="checkbox"/> 10 | 1/4" AN Washer |

29086 Additionally Includes:

- | <u>QTY.</u> | <u>Description</u> |
|----------------------------|---------------------------------|
| <input type="checkbox"/> 2 | Machined Fuel Rail |
| <input type="checkbox"/> 4 | Fuel Rail Stand |
| <input type="checkbox"/> 4 | 1/4"-20 x 1-1/4" Hex Head Bolt |
| <input type="checkbox"/> 4 | 1/4"-20 Hex Nut |
| <input type="checkbox"/> 8 | 1/4" AN Washer |
| <input type="checkbox"/> 4 | 1/4" Lock Washer |
| <input type="checkbox"/> 4 | 1/4"-20 x 1/2" Socket Head Bolt |

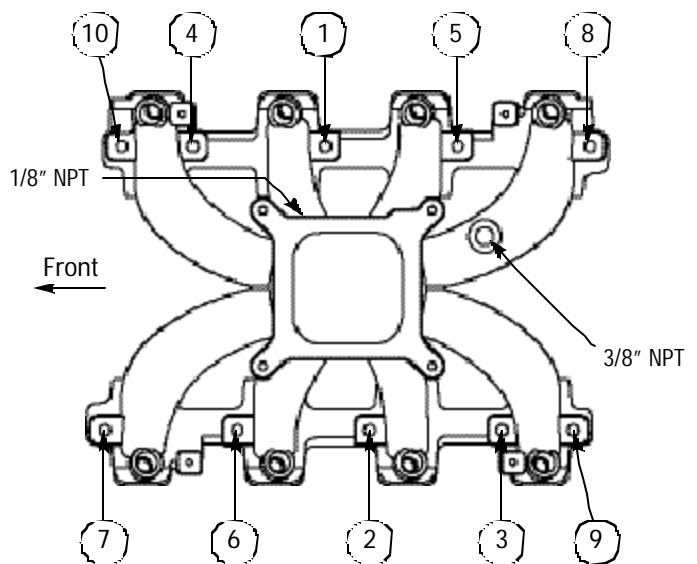


Figure 1 - Intake Manifold Tightening Sequence

- **INSTALLATION PROCEDURE:**

1. *(Note: Use only original equipment (GM P/N 12533587) O-Ring type gaskets when installing this intake manifold). No gasket sealer is required when using the OEM type gaskets. Using the supplied 6mm x 50mm hex head bolts and 1/4" AN washers, mount the manifold to the engine. The Gen III throttle bracket mounts under the two left side rear intake manifold bolts. Following the torque sequence in Figure 1, torque all manifold bolts to 11 ft/lbs.*
2. Select the appropriate cable brackets for your application (large or small opening brackets) and attach them to the GEN III throttle bracket base with the appropriate number of 6mm x 1.0 x 12mm serrated flange hex bolts. *(Note: In our retrofit of the LS1 into a 1974 Camaro, using a TH400R automatic transmission, we only needed one of the small opening cable brackets for the throttle cable, since a kickdown cable is not used. See Figure 2 for example.)*

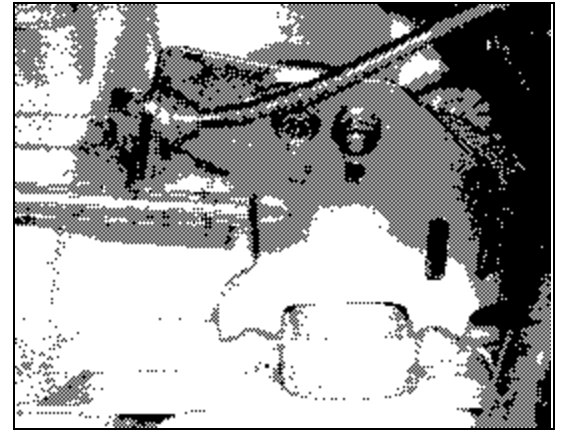


Figure 2 - Throttle Cable Bracket

- **FUEL RAIL KIT (29086 only):** Install fuel rail kit using the included stands and 1/4"-20 nuts and bolts. For 29085, a fuel rail kit may be purchased separately under part #3638. Fuel rail kit 3638 may also be used in custom applications where manifold 29085 is not being used.
- **INJECTOR SELECTION AND INSTALLATION:** It is important to select the appropriate electronic injectors for optimum performance. The injectors must not only match the fuel demands of an engine, but they must also match the electronic capability of the engine control unit (ECU). When installing the injectors onto the manifold, make sure that the O-rings of the injectors create a complete seal to prevent any air or fuel leaks. The same precaution should be applied when assembling the injectors to the fuel rails. Use assembly lube on O-rings when installing injectors. Brake assembly lube works well.
- **FINAL CHECKS:** After assembling the injectors, fuel rails, support brackets, throttle body, spacer (if needed), gaskets, and air cleaner, check the following:
 - Have an assistant depress and release the gas pedal. Check for full open throttle at the throttle body. Check for any possible interference of the throttle with other components. Make sure the throttle can return without binding.
 - Check the fit of each injector. They should be able to rotate freely. The O-rings should be fully inside their respective bores.
 - Activate the fuel pump and fully check the system for any leaks prior to starting the engine.

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