



# Carbureted Victor Jr. & Super Victor LS Intake Manifold for GM 5.7L LS1 or Gen IV L76/L92/LS3 V8 Engines Part #2908, #29087, #28097, 28456 & #28457 INSTALLATION INSTRUCTIONS

**PLEASE** study these instructions carefully before installing your new Intake Manifold. If you have any questions, do not hesitate to contact our **Technical Hotline at: 1-800-416-8628**, from 7am-5pm, Pacific Standard Time, Monday through Friday.

- **MANIFOLD:** The Victor Jr. and Super Victor LS Intake Manifolds allow the user to retrofit any GEN III/IV-based longblock into an early, non-emissions controlled or custom vehicle using a carburetor. PN 2908, 29087 & 28097 are for LS1/LS2 cathedral port engines. Manifold kit #2908 includes an electronic Timing Control Module, which picks up MAP, Crank Position, Cam Position sensor outputs, ECT and drives the stock Coil-On-Plug ignition system. Included are several timing curves that are each tailored for different applications (*See timing module instructions for details*). Part #29087 is the same intake manifold as #2908, but does not include the Timing Control Module. Super Victor manifold #28097 is intended for high performance race engines using large profile camshafts and forced induction or significantly increased compression ratios. Victor Jr. manifold #28457 is intended for use on Gen III or IV blocks equipped with L76/L92/LS3 rectangle port cylinder heads. Victor Jr. manifold #28456 is the same as #28457 but includes the required timing control module (MSD 6014). MSD ignition controller #6014 fits both Gen III & Gen IV engines equipped with either a 24x reluctor wheel or 58x reluctor wheel.

## KIT CONTENTS:

Qty.	Description	Included in Manifolds:
1	Intake Manifold	All
10	6mm x 50mm Hex Head Capscrew	All but 28456: (28457 includes only qty. 6 of the 50mm long capscrews)
4	6mm x 90mm Hex Head Capscrew	28457
10	6mm x 45mm Hex Flange Bolt	28456
2	6mm x 70mm Hex Flange Bolt	28456
10	¼" AN Washer	All but 28456
1	GEN III Throttle Bracket Base	2908 & 29087
2	Cable Bracket (Small Opening)	2908 & 29087
2	Cable Bracket (Large Opening)	2908 & 29087
4	6mm x 1.0 Serrated Flange Hex Nut	2908 & 29087
4	6mm x 1.0 x 12mm Serrated Flange Hex Bolt	2908 & 29087
.75'	¼" I.D. Vacuum Hose (For MAP)	2908, 28456
1	Timing Control Module & Hardware	2908, 28456
4	Nylock Nuts	2908
2	Aluminum Spacer (.75")	28456
1	LS3 Intake Port O-rings (set of 8)	28456
1	Timing Control Module Bracket	2908, 28456
1	1/8"NPT to ¼" Hose Fitting (For MAP)	2908, 28456 & 28457
1	3/8" NPT Pipe Plug	28457

- **EGR SYSTEM:** These manifolds will not accept EGR (exhaust gas recirculation) equipment. EGR systems are used on most 1972 and later model vehicles, up to certain GVWs. Check local laws for requirements. These manifolds are not legal for use in California on pollution-controlled motor vehicles.
- **ACCESSORIES & INSTALLATION ITEMS:** Major recommendations are listed below. However, because these manifold systems are intended for engine swaps into a variety of vehicles, some customization may be required.

- **POWER PACKAGE:** We offer two hydraulic roller camshafts, part #2215 & #2216. See our catalog or website for details.
- **CARBURETOR RECOMMENDATIONS:** If parts required for installation are unavailable locally, contact Edelbrock directly. Please note that the Edelbrock carburetors recommended below are designed for use with non-EGR applications and do not have any provision for an evaporative canister. Thunder series carburetors include an additional secondary air door and are recommended to achieve the best possible performance.

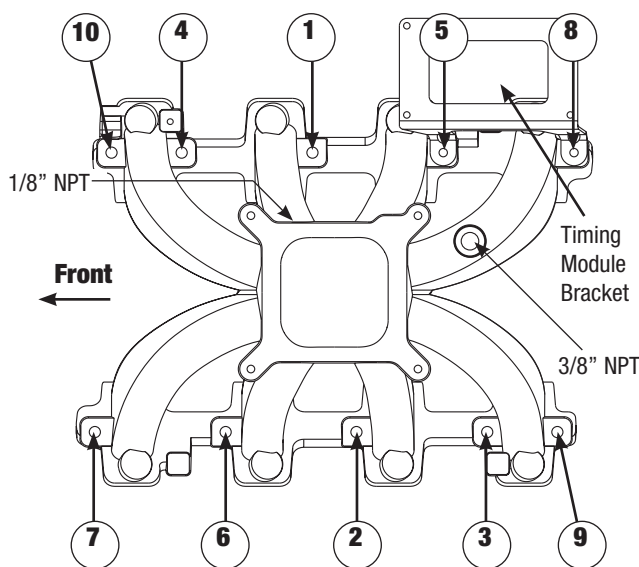
CARBURETOR	NOTES
Thunder Series P/N 1805 (650 cfm, manual choke) Thunder Series P/N 1806 (650 cfm, electric choke)	Ideal for street driven and/or smaller displacement applications (4.8L & 5.3L)
Performer Series P/N 1407 (750 cfm, manual choke) Performer Series P/N 1411 (750 cfm, electric choke)	Works well with a larger displacement (6.0L) street driven application.
Performer Series P/N 1412 (800 cfm, manual choke) Performer Series P/N 1413 (800 cfm, electric choke)	Recommended for displacements greater than 6.0L and/or vehicles that will see frequent track or strip time.
Thunder Series P/N 1813 (800 cfm, electric choke) Thunder Series P/N 1813 (800 cfm, electric choke)	Recommended for displacements greater than 6.0L and/or vehicles that will see frequent track or strip time.

- **CAMSHAFT AND HEADERS:** The Victor Jr. and Super Victor intake manifolds are compatible with a variety of aftermarket camshafts and/or headers. Edelbrock has developed two Performer RPM camshafts, part #2215 and #2216, which are suitable for use with the LS1 Victor Jr. intake manifold. When using headers, header primary tube diameter should be 1-3/4". Super Victor manifold owners should consult their engine builder for recommendations.

**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.

#### INSTALLATION PROCEDURE:

1. (**Note:** Use only original equipment (Edelbrock P/N 7386 for LS1; GM P/N 12590125 for L92/LS3) O-Ring type gaskets when installing Victor Jr. intake manifolds, use Fel-Pro standard gaskets #1312-3 with Super Victor manifold #28095). No gasket sealer is required when using the OEM type gaskets. Use the supplied 6mm hex head bolts and 1/4" AN washers to mount the manifold to the cylinder heads (hand tight only).
2. (2908 & 29087 Only) The Gen III throttle bracket mounts under the two (2) driver side rear intake manifold bolts.
3. Following the torque sequence in **Figure 1**, torque all manifold bolts to 11 ft/lbs. **NOTE:** 28456 requires the use of the included aluminum spacers placed between the Timing Module Bracket and the Intake Manifold. The longer 70mm bolts are used in these bolt hole locations (#5 & #8).
4. (2908 & 29087 Only) 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.)
5. (#2908 & 28456 Only) Apply a bit of liquid Teflon thread sealant to the threads of the supplied 1/8" NPT to 1/4" hose fitting and install the fitting into the 1/8" NPT hole in the passenger side of the plenum (**See Figure 1**).



**Figure 1 - Intake Manifold Tightening Sequence**

## TIMING CONTROL MODULE INSTALLATION (#2908/28456 ONLY):

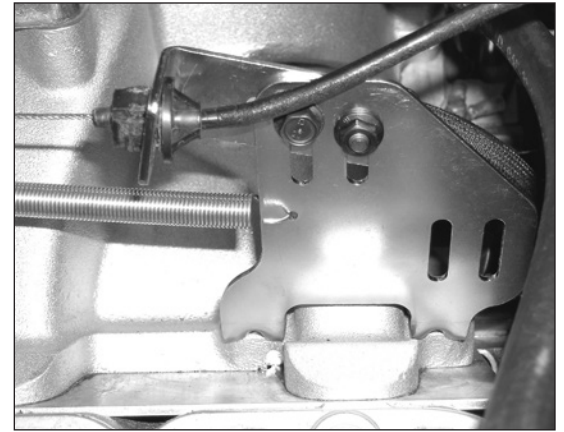
**NOTE:** In addition to the instructions below, please refer to MSD 6014 instruction manual included with the timing control module.

1. Using the supplied rubber isolators included with the Timing Control Module, plus the four locknuts, attach the module to the bracket. Mount the module so that the main harness will face forward.
2. Locate the Crankshaft Position Sensor connector. Route this line down the passenger side rear of the engine, and connect it to the Crankshaft Position Sensor. The Crankshaft Position Sensor is located on the rear of the passenger side of the engine, just above the oil pan rail (**See Figure 3**).
3. Locate the MAP port on the timing module. Connect the included 1/4" hose to the MAP port on the Timing Control Module. Route the other end to the previously installed vacuum fitting on the manifold.
4. Locate the Camshaft Position Sensor connector. On LS1/LS2 engines, connect this to the Camshaft Position Sensor located at the rear/top of the block. This is where the distributor would be mounted on an early small block Chevrolet engine (**See Figure 4**). L92/LS3 Engines route this line to the driver side front of the engine and connect to the Camshaft Position Sensor.
5. Connect the two coil connectors to the factory coil harnesses. Refer to MSD 6014 instruction (included) for proper coil connections.
6. Locate the portion of the harness with the five non-terminated wires (Red, Black, Blue, Gray & Pink). These will be connected to the following sources:

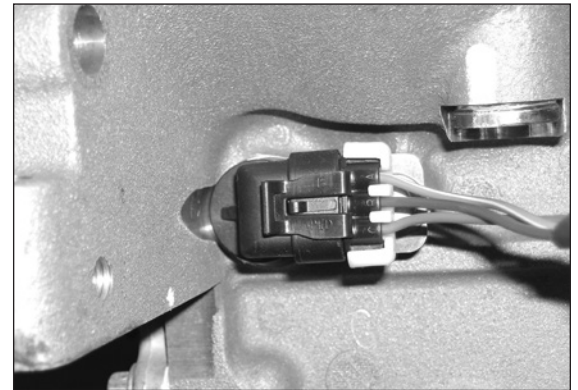
Red	Main power. Connect to a SWITCHED ignition power source. 12v should be measured only with ignition key in the "START" and "ON" positions.
Black	Chassis ground.
Blue	Two-Step Launch Control. When 12-volts are applied, the Launch Rev Limiter is active.
Gray	Standard V8 tachometer output signal. If not in use, secure out of the way and cover end with electrical tape to prevent accidental connection.
Pink	Step Retard. When 12-volts are supplied, the Step Retard is activated.

## FINAL TUNING FOR OPTIMUM PERFORMANCE (#2908 & 28456 ONLY):

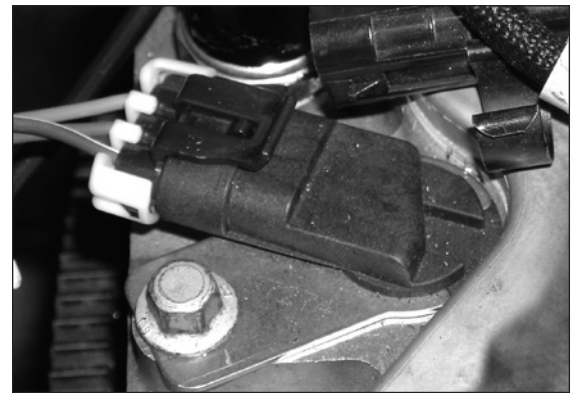
1. Generally speaking, the stock jetting for the carburetors listed previously in the "Carburetor Recommendations" section will not need changing. Some applications may show a performance increase by recalibrating the fuel metering circuits using jets, rods, and other parts available from Edelbrock.
2. The included timing control module has six (6) built in timing curves and four (4) custom slots. Refer to MSD 6014 instructions for ideal timing curve for your application.



**Figure 2 - Throttle Cable Bracket**



**Figure 3 - Crankshaft Position Sensor**



**Figure 4 - LS1 Camshaft Position Sensor**

**Edelbrock LLC. • 2700 California St. • Torrance, CA 90503**  
**Tech Line: (800) 416-8628**