CARBURETED PERFORMER RPM LS1 INTAKE MANIFOLD
For GM 5.7L LS1 V8 Engines
Catalog # 7118

INSTALLATION INSTRUCTIONS

PLEASE study these instructions carefully before beginning this installation. Most installations can be accomplished with common tools and procedures. However, you should be familiar with and comfortable working on your vehicle. If you do not feel comfortable performing this installation, it is recommended to have the installation completed by a qualified mechanic. If you have any questions, please call our **Technical Hotline at: 1-800-416-8628**, 7:00 am - 5:00 pm, Pacific Standard Time, Monday through Friday.

NOTE: *Proper installation is the responsibility of the installer. Improper installation may result in poor performance and engine or vehicle damage.*

- **DESCRIPTION:** The Performer RPM LS1 Intake Manifold allows the user to retro-fit any GEN III-based longblock into an early vehicle, using a carburetor. The manifold includes an electronic Timing Control Module, which picks up MAP, Crank Position, Cam Position, and drives the stock Coil-On-Plug ignition system with the proper ignition timing. Included are several timing curve "pills" that are each tailored for different camshafts, final drive gearing, and vehicle weight *(See Timing Curve Application Chart in the Timing Control Module Installation section for details)*.
- **KIT CONTENTS:**

QTY.	Description
❑ 1	Intake Manifold
❑ 1	Timing Control Module & Hardware
❑ 1	LS1 type MAP Sensor (1 Bar)
❑ 1	MAP Sensor Bracket
❑ 1	1/8"NPT to ¼" Hose Fitting (For MAP)
❑ .75 ft	¼" I.D. Vacuum Hose (For MAP)
❑ 2	Cable Bracket (Large Opening)

QTY.	Description
❑ 2	Cable Bracket (Small Opening)
❑ 1	GEN III Throttle Bracket Base
❑ 4	6mm x 1.0 x 12mm Serrated Flange Hex Bolt
❑ 4	6mm x 1.0 Serrated Flange Hex Nut
❑ 10	6mm x 50mm Hex Head Capscrew
❑ 10	¼" AN Washer

- **EGR SYSTEM:** This manifold 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. This manifold is not legal for use in California on pollution-controlled motor vehicles.
- **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.
- **POWER PACKAGE:** Edelbrock Performer RPM manifolds are part of a Total Power Package System that can be completed with the use of dyno-matched Performer RPM Hydraulic Roller camshaft Part #2215 or #2216, and related parts specifically designed to give you maximum results.
- **CARBURETOR RECOMMENDATIONS:**

CARBURETOR	REFERENCE	PARTS REQUIRED FOR INSTALLATION
Performer #1405 (600 cfm) **Performer #1406 (600 cfm)**	A, I	#1483 or 1844 throttle lever adapter (Highly recommended for street applications)
Thunder Series #1805 (650 cfm) **Thunder Series #1806 (650 cfm)**	A, I	#1483 or 1844 throttle lever adapter (Highly recommended for street applications)
Performer #1412 (800 cfm) **Performer #1413 (800 cfm)**	A, I	#1483 or 1844 throttle lever adapter (Highly recommended for street applications)
Thunder Series #1812 (800 cfm) **Thunder Series #1813 (800 cfm)**	A, I	#1483 or 1844 throttle lever adapter (Highly recommended for street applications)

A - Carburetor will work with non-EGR or pre-emission control systems.
I - Carburetor has no provisions for evaporative canister.

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:**
  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. Install eight of the supplied 6mm x 50mm hex head bolts and 1/4" AN washers, into all of the manifold bolt holes except for the two rear driver's side bolt holes (hand tighten only). Using the remaining two 6mm x 50mm bolts and AN washers, attach the GEN III Throttle Bracket Base to the two rear driver's side manifold bolt holes (hand tighten only). 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.)*

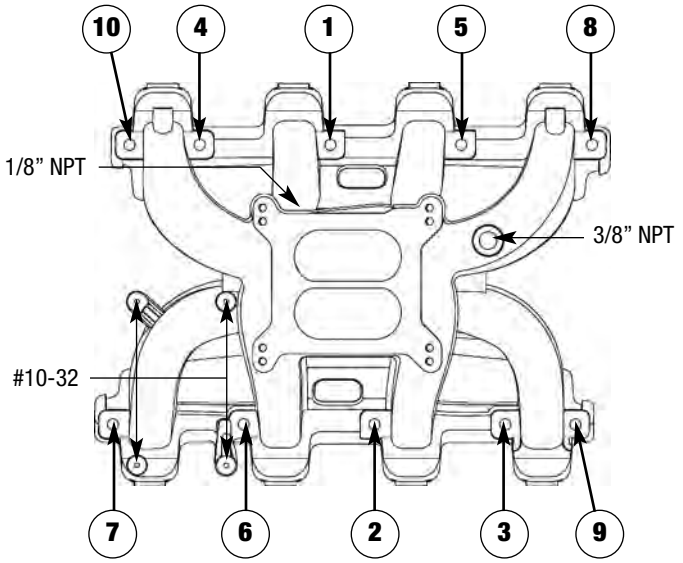

Figure 1 - Intake Manifold Tightening Sequence

  3. 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)***. Install your carburetor *(Use only recommended carburetors for best performance)* and using the rear passenger side carburetor stud/nut, attach the MAP sensor and bracket to the carburetor ***(See Figure 3)***. Connect the sensor to the fitting with the supplied 1/4" hose.

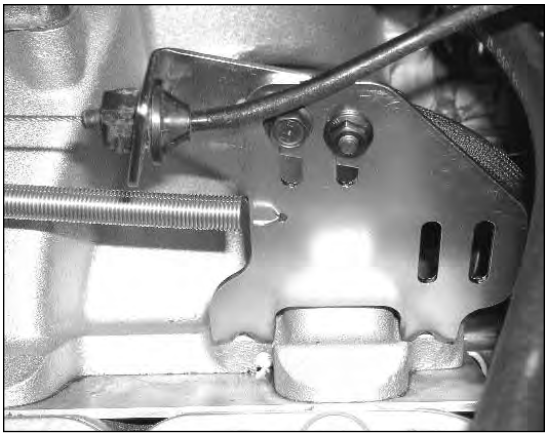

Figure 2 - Throttle Cable Bracket

Figure 3 - Map Sensor and Bracket

  4. In some applications, the intake manifold may rest on the valley coolant tubes. You will need to use coolant tubes from a different year/model of engine. LS6 engines do not need coolant tube replacement. It is suggested to use the LS6 parts with this intake manifold if the intake manifold contacts the valley coolant tubes in your application. Use the GM LS6 front water crossover, GM #12578838 and plug the rear coolant ports with GM "LS6 Head Water Covers", GM #12563325 (Quantity 2).

- **TIMING CONTROL MODULE INSTALLATION:**
  1. Using the supplied hardware included with the Timing Control Module, attach the module to the four #10-32 mounting holes on the Performer RPM intake manifold ***(See Figure 1)***. Mount the module so that the main harness will face towards the passenger side ***(See Figure 4)***.

     NOTE: *If you choose to mount the Timing Control Module in another location, you will need to plug the #10-32 mounting hole nearest to the carburetor pad on the #1 runner (See Figure 1). The drilled hole breaks thru into the runner therfore a vacuum leak will occur if it's not used.*

  2. Route the harness around to the passenger side of the engine and towards the rear of the engine. Locate the Crankshaft Position Sensor connector. It is the three wire connector (pink, brown, and orange with yellow stripe) at the end of the long section of harness which is encased in a smooth, rubberized, dark grey heatshield. 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 5)***.

  3. Locate the MAP Sensor connector. It is the three wire connector with orange, green, and brown wires. Connect this to the MAP Sensor which is now attached to the passenger side rear carburetor mounting stud.

  4. Locate the Camshaft Position Sensor connector. It is a three wire connector with a pink wire, brown, and a brown wire with a white stripe. 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 6)***.

  5. Connect the 7 wire connectors to each coil pack. The connector that is part of the main wiring harness (leading to the passenger side) with the following wire colors: brown, white with blue stripe, purple with blue stripe, pink, black, red with green stripe, and brown with green stripe, is connected to cylinder numbers 2, 4, 6, & 8 (Passenger side cylinder bank). The connector that is wired separately from the main harness, with the following wire colors: black, red, green, brown, light blue, purple, and pink, should be routed along the driver side valve cover and connected to cylinder numbers 1, 3, 5, & 7 (Driver side bank).

  6. Locate the portion of the harness with the four non-terminated wires (Pink, Blue, Black, & Yellow). These will be connected to the following sources:

Figure 4 - Timing Control Module Mounting

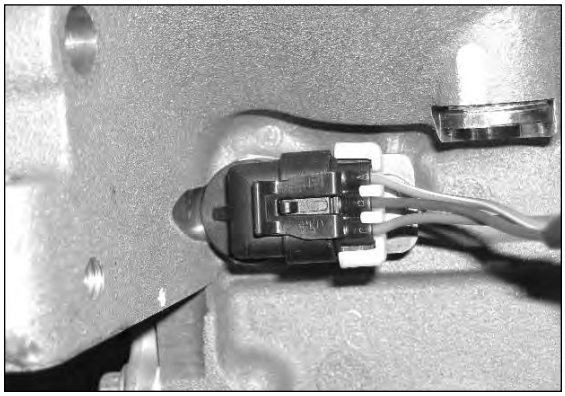

Figure 5 - Crankshaft Position Sensor

Figure 6 - Camshaft Position Sensor

Pink	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	A/C compressor. If A/C is being used in your application, use Edelbrock Idle Compensator #8059 and connect blue wire to A/C compressor. Connect the other blue wire at the 1, 3, 5, 7 cylinder coil pack connector to the lead on #8059. This provides timing advance when idle is increased while A/C compressor is running. ***(Tip:*** *In applications with a radical cam, that have trouble idling, use Edelbrock Idle Compensator #8059 to bump up throttle and timing by connecting #8059 and blue wire to a switched ignition source. This allows increased timing and throttle to support a high duration cam, yet allows throttle to be fully closed when key is in the "OFF" position.)* If wires are not being used, secure out of the way and cover end with electrical tape to prevent accidental connection.
Yellow	Tachometer output signal. If not in use, secure out of the way and cover end with electrical tape to prevent accidental connection.

- **FINAL TUNING FOR OPTIMUM PERFORMANCE:**
  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. Installation of aftermarket headers, camshafts, or both, with an Edelbrock Performer RPM intake manifold may lean out the carburetor calibration. Should this condition occur, recalibrate the carburetor.
  3. Included with the Timing Control Module are six timing curve "pills". Using the *"Timing Module Tuning Chart"* below, select the curve that best suits your application.

TIMING MODULE TUNING CHART:

CURVE #	NOTE	CAMSHAFT	VEHICLE
1		Stock or Mild	Heavy or Low Ratio Gear
2		Stock or Mild	Medium or Standard Ratio
3	Default	Stock or Mild	Light or High Ratio Gear
4		Z06 or Edelbrock #2215 (some overlap)	Medium or High Ratio Gear
5		Z06 or Edelbrock #2215 (some overlap)	Light w/ Standard or High Ratio Gear
6		HIGH OVERLAP; Edelbrock # 2216	Light w/ High Ratio Gear

NOTE: *Low Ratio = Approximately 3.20-3.50:1, Standard = Approx. 3.40-3.73:1, & High = Approx. 3.90-4.11:1 (or higher)*

- **CAMSHAFT:** This Performer RPM intake manifold is compatible with aftermarket camshafts and/or headers. Edelbrock has developed dyno-matched, street-proven, Performer RPM camshafts Part #2215 or #2216, which are suitable for use with the Performer RPM intake manifold. These camshafts will require the use of adjustable high performance rocker arms, valve spring retainers, and valve springs.

HEADERS: When using headers, the header primary tube diameter should be 1-3/4".

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