



INSTALLATION INSTRUCTIONS

Small Block Chevy RPM Air Gap Manifold

For 262-400 c.i.d. V8 with Vortec style cylinder heads

Catalog #7516

- **Please** study these instructions carefully before installing your new intake manifold. If you have any questions or problems, please call our **Technical Hotline at: 1-800-416-8628**, 7:00 am – 5:00 pm, Pacific Standard Time, Monday through Friday or e-mail us at edelbrock@edelbrock.com.

Kit Contents
3 – 3/8"-18 Pipe Plugs
1 – 3/8" Pipe to 5/8" dia. Nipple Fitting
1 – 7" Length of 5/8" Black Heater Hose
1 – 3/8"-5/8" Hose Clamp

- **DESCRIPTION:** The Edelbrock RPM Air-Gap #7516 intake manifold has been designed for 262-400 c.i.d. small-block Chevy engines **equipped with Vortec style cylinder heads**. The manifold accepts late model water neck, air conditioning, alternator and H.E.I. ignition systems. Use the recommended electric or manual type choke square bore carburetors only. This intake manifold is recommended for street high performance and race vehicles only. The RPM Air Gap manifold provides good low rpm response for street performance vehicles while providing increases in horsepower and torque up to 6500 RPM. When used with any mix of aftermarket equipment designed for this operating range, the performance increases will be even greater.
- **EGR SYSTEMS:** This manifold will not accept stock EGR (Exhaust Gas Recirculation) equipment or exhaust-heated chokes. EGR systems are used on some 1972 and later model vehicles and only in some states. Check local laws for requirements. This manifold is not legal for use on any emissions controlled vehicle where such equipment is required.
- **ACCESSORIES & INSTALLATION ITEMS:** Major recommendations are listed below. However, due to the variety of years, makes and models to be covered, please review each part listed in the Installation Items section of the Edelbrock catalog to decide whether more items are required for your specific vehicle than are mentioned in these instructions. See our catalog for details. **To order a catalog, call (800) FUN-TEAM.**

▪ **CARBURETOR RECOMMENDATIONS:**

CARBURETOR	REFERENCE	PARTS REQUIRED FOR INSTALLATION
Performer #1407 (750 cfm)	A, I, K, O	
Performer #1411 (750 cfm)	A, I, K	
Performer #1412 (800 cfm)	A, I, K, O	

- A** – Carburetor will work with non-EGR or pre-emission control system.
- I** – Carburetor has no provisions for evaporative canister.
- K** – Carburetor requires #8008 or #8024 stud, washer and nut kit. Determine proper length for your carb to manifold gasket thickness and your accessory mounting requirements.
- O** – Carburetor comes with manual choke. It can be converted to electric choke using kit #1478.

- **THROTTLE BRACKETS:** Due to the design of Vortec style intake manifolds, throttle brackets designed to fit at the intake manifold bolt bosses on a standard small block Chevy will not work. A throttle bracket that attaches to the carburetor or carb flange will need to be used. This type of bracket is available from some aftermarket suppliers.
- **GASKETS:** Use only an original equipment intake gasket set **GM #12529094** when installing an Edelbrock 7516 intake manifold.

INSTALLATION INSTRUCTIONS

- 1) Use only a GM #12529094 intake gasket set when installing this intake manifold.
- 2) Fully clean the cylinder head intake flanges and the engine block end seal surfaces.
- 3) Install the intake gaskets to the cylinder head intake flanges. Two dowels on the intake manifold gasket will locate into dowel holes in the cylinder head. Do not use any type of gasket sealer on the intake gaskets. The O-rings are designed to seal without chemical sealers.
- 4) Do not use cork or rubber end seals. Use RTV silicone sealer instead. Apply a 1/4" high bead across each block end seal surface, overlapping the intake gasket at the four corners. This method will eliminate end seal slippage and deterioration.

5) Install the intake manifold bolts. Apply Loctite 242 to the intake bolt threads. Carefully tighten the intake manifold bolts evenly until the intake manifold has compressed the o-ring section of the gasket. Torque all of the manifold bolts in the sequence shown in Figure 1 to 11 ft/lbs.

- **SPECIAL NOTE:** This intake manifold is primarily intended for use with Vortec heads on pre-Vortec blocks. 1995 and earlier blocks have the thermostat bypass water passage from the block directly to the water pump through the passenger side water pump mounting flange. **If the manifold is used on a 1996 and later Vortec engine that does not have the in-block bypass passage, you must route a thermostat bypass hose from the water bypass port on the front of the manifold to the 5/8" hose nipple on the passenger side of the water pump.** The 3/8" pipe to 5/8" hose nipple fitting, hose, and hose clamps are included in the kit. If your engine block has the thermostat bypass passage, use a 3/8" NPT plug supplied in the kit to plug the bypass port in the front of the intake manifold.
- **PREP AND TUNING FOR POWER:**
 - 1) The long equal length runners in the RPM Air-Gap manifolds create a very even air/fuel mixture distribution. In general, the stock jetting in the recommended carburetor will not need changing. Refer to your carburetor owner's manual for details.
 - 2) Aftermarket ignitions and aggressive advance curves are recommended with Performer RPM packages. Total advance will vary with cylinder head design. Use modified (three-angle valve job, bowl blend, and port-matched) stock heads or Edelbrock aluminum heads for best results. Port match the manifold exits .020" per side smaller than the intake port openings in your cylinder head.
- **CAMSHAFT AND HEADERS:**
The RPM Air-Gap manifolds are compatible with aftermarket camshafts and headers designed to work in the 1500-6500 rpm range. Edelbrock has developed a dyno-matched, street proven camshaft, the #7102 for use with the #7516 manifold. This camshaft requires the use of high performance adjustable rocker arms, studs, retainers, and Edelbrock Sure-Seat valve springs #5703 on factory iron heads. Valve Spring kit #5794 provides high performance retainers, valve locks, and the correct Edelbrock Sure-Seat valve springs in one package. (Note: With Vortec cylinder heads the retainer to seal clearance needs to be checked when using the 7102 camshaft and the 5794 valve spring kit. Modification of the valve seal boss may be required.) Recommended compression ratio is 9.5 to 1. Header primary tube diameter should be 1-3/4". Use of aftermarket headers, camshafts, or both, with an Edelbrock RPM Air Gap manifold may lean carburetor calibration. Should this occur, recalibrate with a richer jet.
- PLEASE complete and mail your warranty card. Be sure to write the model number of this product in the "Part # _____" space. THANK YOU.

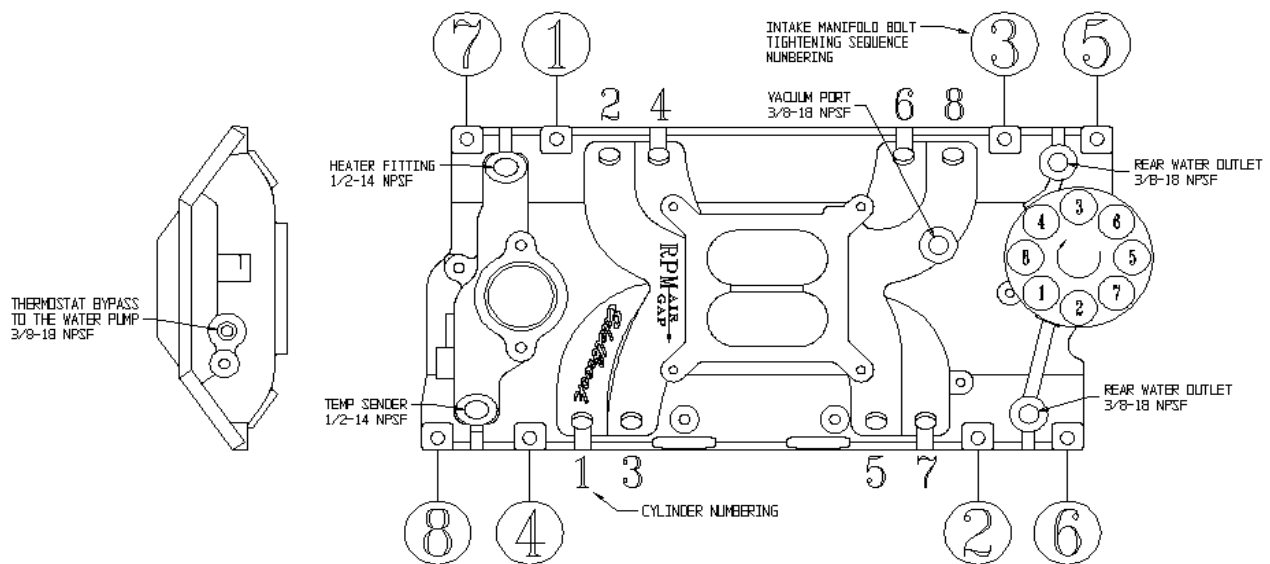


FIG 1 - Intake Manifold Bolt Tightening Sequence,
Small Block Chevy Firing Order 1-8-4-3-6-5-7-2,
Turn Distributor Counter Clockwise to Advance Ignition Timing