



# INSTALLATION INSTRUCTIONS

## Victor Intake Manifold for 390-428 Fe Ford Racing Engines Catalog #2936/#2937

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, Monday through Friday, Pacific Standard Time, or e-mail us at [edelbrock@edelbrock.com](mailto:edelbrock@edelbrock.com).

Kit Contents
1 - 5/8" X 3/8 pipe water bypass tube
1 - Coverplate, rear PVC/breather boss
1 - Gasket, coverplate
2 - Bolt, 1/4-20 x 3/4" long
2 - Washer, 1/4" AN .060" thick

**DESCRIPTION:** The Edelbrock Victor 2936 and 2937 intake manifolds are designed for 390-428 Fe Ford racing engines. These large runner single plane intake manifolds are designed for high-output 427-500 cubic inch displacement Fe Ford engines. The 2936 accepts square bore (4150) style carburetors. The 2937 accepts Dominator (4500) style carburetors. The 2936 and 2937 will fit all cylinder heads designed for 390-428 Fe Ford engines except 427 High-Riser or 427 Tunnel-Port cylinder heads. The Victor 427 intake manifold should fit in Ford passenger cars (except Thunderbird) and in original 427 Shelby Cobras. The carburetor flange height has been limited to the same height as a Ford High-Riser 1-4V dual plane intake manifold C4AE-9424-G, which fits these applications. **These manifolds are neither intended nor legal for street use on pollution-controlled vehicles.**

### MANIFOLD FEATURES:

- Racing single plane design with full Air-Gap
- Available for Standard Square Bore 4150 Carburetors, P/N 2936 and for Dominator 4500 Carburetors, P/N 2936
- Fits Edelbrock Aluminum Cylinder Heads P/N 6005-6008; Ford Cast-Iron Standard, 427 Medium-Riser, 427 Low-Riser and 428CJ Cylinder Heads; and Shelby Medium-Riser Aluminum Cylinder Heads
- Machined Rear PVC/Breather Boss; Coverplate, gasket, and fasteners are included in the kit
- Front Oil Fill Tube Boss (must be machined by the customer to accept an oil fill tube)
- Nitrous bosses (not drilled)

### MANIFOLD SPECIFICATIONS:

- The carburetor pad is 1" taller than our Performer RPM Intake Manifold P/N 7105.
- Runner average cross sectional area is 3.45 sq. in.
- Operating range is 4000 to 8000 rpm (this could vary depending on engine size, bore and stroke combination).
- Carburetor Flange A-B height = 6.49" (end seal to carburetor flange), Carburetor Flange Angle - 0°, Flat
- As-cast Port Opening Size - 1.98" tall X 1.20" wide, Bolt Hole Centerline to As-cast Port Opening Roof Height - .88"
- As-designed Matched Port Opening - 2.10" wide X 1.40" wide, Bolt Hole Centerline to As-designed Matched Port Opening Roof Height - .94"
- Intake Manifold Bolt Boss Heights - Two front: 2.25", All others eight places: 1.00"
- Water Bosses - Temperature sender boss: 3/8"-18 pipe, Heater fitting boss: 1/2"-14 pipe

### CARBURETOR RECOMMENDATIONS:

**2936** - Square Bore 4150 mechanical secondary style racing carburetors.

**NOTE:** **The secondary throttle linkage on vacuum secondary style carburetors may interfere with the intake manifold carburetor flange. If a vacuum secondary carburetor is used, the secondary throttle linkage must be checked to make sure the linkage operates freely or a dangerous stuck-open throttle situation could occur.**

**2937** - Dominator 1050-1150cfm 4500 style racing carburetors with 2.00" diameter throttle bores.

**NOTE:** **If a Dominator carburetor with 2.125" diameter throttles bores is used, the alignment of the carburetor throttle bores to the manifold carburetor flange opening should be checked for throttle blade interference or a flow**

**restriction caused by the flange opening being inside the throttle bores. If the throttle linkage does not operate freely a dangerous stuck-open throttle situation could occur.**

**INTAKE MANIFOLD BOLT KIT:** The intake manifold bolt kit #8536

**GASKET RECOMMENDATIONS:** Medium-Riser Intake Port Openings - Fel-Pro p/n 1247 (2.10" tall X 1.40" wide)  
Low-Riser Intake Port Opening - Fel-Pro p/n 1246 (2.34" tall X 1.40" wide)

**CARBURETOR SPACERS:**

- |   |  |
|---|--|
| ➤ <b>2936</b> -P/N 8710, 1" Open Spacer, Black Phenolic Plastic | P/N 8711, 1" 4-hole Spacer, Black Phenolic Plastic |
| P/N 8712, 2" Open Spacer, Black Phenolic Plastic                | P/N 8713, 2" 4-Hole Spacer, Black Phenolic Plastic |
| P/N 8719, 3/4" Open Spacer, Wood Fiber Laminate                 | P/N 8720, 1" Open Spacer, Wood Fiber Laminate      |
| P/N 8724, 1/2" Open Spacer, Wood Fiber Laminate                 |  |
- **2937** -P/N 8718, 1" Cloverleaf Spacer, Aluminum

**POWER OPTIONS:** Although this manifold will work with ported factory cast iron heads, we highly recommend the use of Edelbrock aluminum Performer RPM Fe Ford cylinder heads P/N 6005-6008. See our catalog for details. **To order a catalog, call (800) FUN-TEAM.**

**BEFORE INSTALLING YOUR INTAKE MANIFOLD**

**Port Matching:** For optimum performance results, the 2936/2937 Victor intake manifold will require port matching. The as-cast runner exits look smaller than would be normal for a Victor level intake manifold. The runner passages are necked down as they pass by the pushrod holes to provide a conservative amount of material for the drilling of the pushrod holes. For maximum performance, the cross-sectional area of the runner as it passes by the pushrod holes should be maximized. Port matching should produce a minimum wall thickness between the machined pushrod holes and the runners of not less than .070" (See figure 1). Port matching in the runner to gain all of the possible area near the pushrod hole must be done accurately. It is recommended to remove the material adjacent to the pushrod holes by accurately machining (using a mill) these areas, indicating off each pushrod hole to be able to maintain accurate wall thickness. If a pushrod hole is broken into or if it is desired to port the runners until they break into the pushrod holes, thin wall brass tubing (5/8" o.d. x .015" wall) to sleeve the pushrod holes is available from model building supply companies. The pushrod holes should still clear the pushrod with the .015" wall tube installed. If it is desired to have a 5/8" diameter pushrod hole after sleeving, then the hole will need to be reamed to 21/32" and a 21/32" o.d. X .015" wall tube will need to be used. The tube will need to be sealed with a two-part epoxy adhesive to prevent oil from being sucked into the intake manifold. A good epoxy is available from CV Products, P/N CV101 Epoxy {Phone Number (800) 448-1223}.

**Intake Manifold Fit Check:** Before installing the intake manifold for the final time, the intake manifold should be pre-installed to check for fit to your engine. The fit of the intake manifold will be affected if your engine block and or cylinder heads have been milled. The fit check should be done with the intake manifold gaskets installed.

- The checklist for a final fit check should include:
- Alignment of the intake manifold boltholes with the threaded holes in the cylinder heads
- Alignment of the intake manifold valve cover flanges with the cylinder head valve cover flanges
- Installation of the distributor and its o-ring through the distributor hole in the intake manifold
- Sufficient engagement of your intake manifold bolts in the cylinder heads, 1/8" thick washers should be used
- With the intake manifold water bypass tube installed, its alignment and clearance with the water pump bypass tube
- Alignment of the intake manifold runner exits with the cylinder head port openings
- Free movement of the carburetor throttle linkage with the carburetor installed on the intake manifold
- The distance between the intake manifold end seal and the engine block for sufficient clearance, also note how tall the silicone bead will need to be to seal the end of the manifold.

**NOTE :** This manifold has no provision for power brake vacuum. If your application requires manifold vacuum; drill and tap a 3/8" or 1/4" pipe hole in either the back or passenger side of the plenum as close to the carb flange as possible. This should be done prior to installing the manifold.

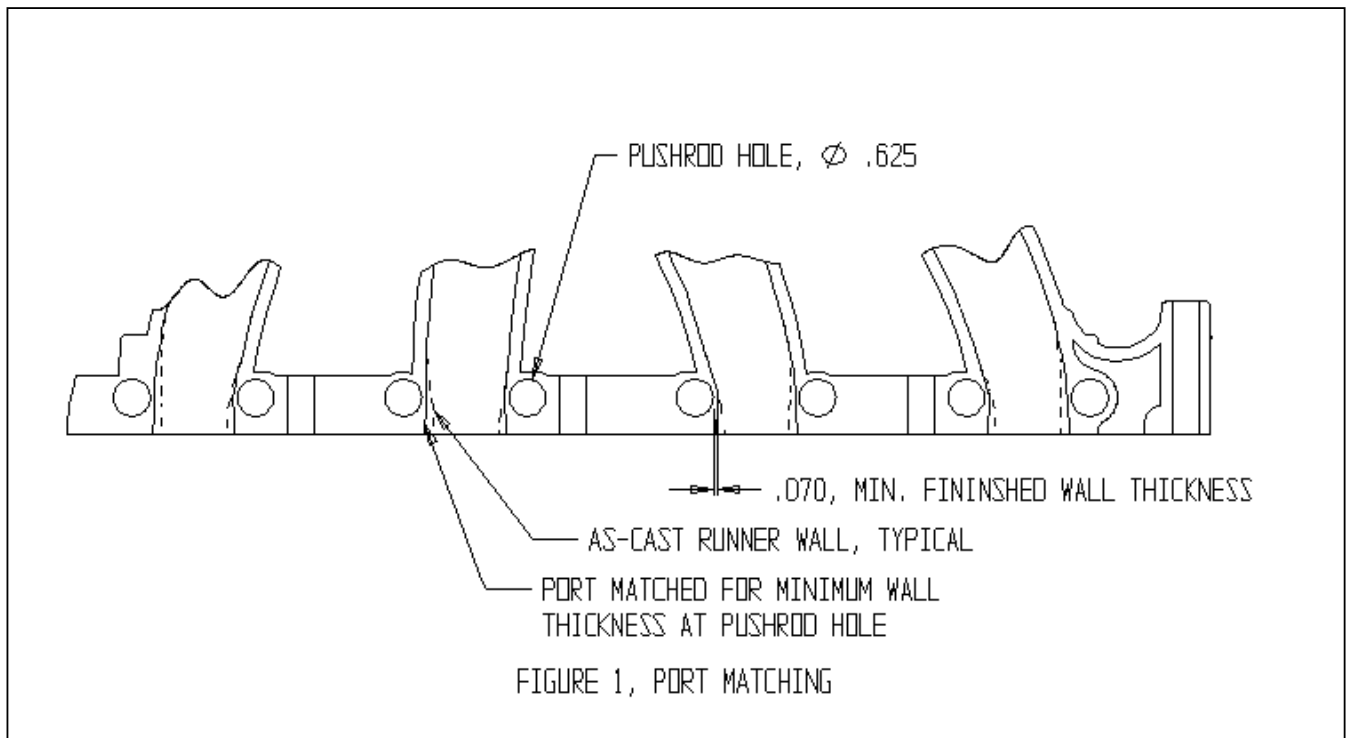
**Front Oil Fill Tube:** A boss for a front oil fill tube that is standard on 427 Ford engines is provided in the 2936/2937 intake manifold castings. If a front oil fill tube is desired, the customer must have the hole machined by a competent machinist. Figure 3 shows the proper angles to set up for machining the hole. The drill dimple cast into the intake manifold at the appropriate location defines the location of the hole for the oil fill tube. The maximum diameter hole than should be machined into the intake manifold is 1.375".

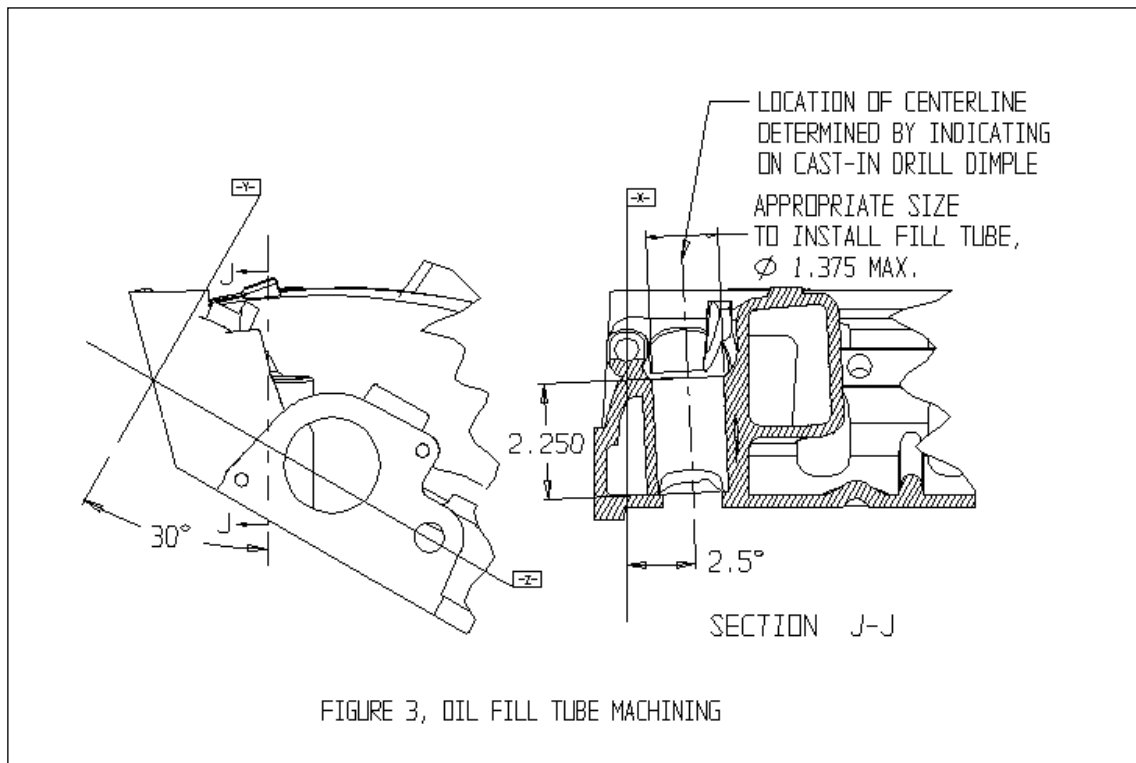
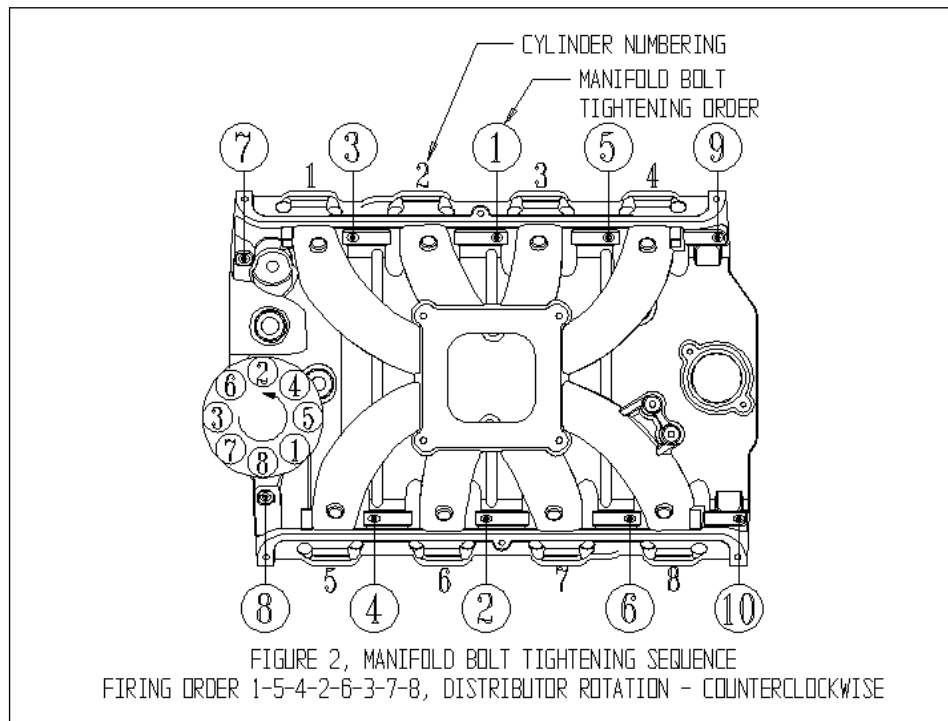
### **INSTALLATION INSTRUCTIONS**

1. Install the water bypass tube supplied with the intake manifold into the front of the manifold. Use a thread sealant on the threads. Make sure the water bypass hose and hose clamps are installed on the water pump bypass tube before installing the intake manifold.
2. Install the rear PVC/breather coverplate if the boss is not being used for a factory style PVC valve or breather. Apply Edelbrock Gasgacinch (P/N 9300) to one side of the coverplate gasket and to the coverplate. Let dry and install the gasket to the coverplate. Install the coverplate with the supplied 1/4-20 x 3/4" long bolts and washers. Tighten bolts to 6-8 ft-lbs.
3. Check that the cylinder head intake manifold flanges and the block end seals are clean. Remove any traces of old gasket material and sealant from all sealing surfaces. Apply Edelbrock Gasgacinch (P/N 9300) to both the cylinder head intake flanges and the cylinder head side of the intake manifold gaskets. Let dry and install the gaskets to the cylinder heads.
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. Position the intake manifold inserting the water bypass tube into the water bypass hose before putting the manifold down, then place the intake manifold down on the engine. Make sure there is enough silicone at the end seal gaps to seal, silicone should squeeze out slightly to prove that silicone is filling the gap.
6. Install the distributor before installing the intake manifold bolts. Check that the intake manifold is properly aligned.
7. Install the intake manifold bolts; apply engine oil to the bolt threads before installing. Tighten the intake manifold bolts evenly in 3-4 steps to 25 ft-lbs per the tightening sequence shown in figure 2 in the following attached pages. After tightening the intake bolts, the distributor should be free to come in and out and to be turned to set the ignition timing.
8. Install the remaining engine components. Consult service manuals or the component manufacturer's installation instructions for specific procedures, if necessary.

### **PREP AND TUNING FOR POWER:**

The single plane intake manifold design may require changes in the carburetor jetting depending on individual application, driving habits, engine condition, and vehicle use. Refer to your carburetor owner's manual for tuning instructions.





**PLEASE** complete and mail your warranty card. Be sure to write the model number of this product in the "Part # \_\_\_\_\_" space.

**THANK YOU.**

**Edelbrock Corporation • 2700 California Street • Torrance • California 90503**