



# RPM XTREME ALUMINUM CYLINDER HEADS for Big-block Chevrolet V8s PART #51459 INSTALLATION INSTRUCTIONS

Please study these instructions carefully before installing your new cylinder heads. If you have any questions or problems, do not hesitate to contact our **Technical Hotline at: (800) 416-8628** from 7:00 am to 5:00 pm, Monday through Friday, Pacific Standard Time.

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

**DESCRIPTION:** The Edelbrock RPM Xtreme Cylinder Head is designed for street high performance use, and is interchangeable with any factory iron early-style (1965-75) large oval port big-block Chevrolet cylinder head. This new cylinder head offers "out of the box" bolt-on performance with no additional porting required. The performance range is 1500-6500 rpm for great throttle response throughout the power band as well as top-end horsepower. The RPM Xtreme Cylinder Heads are CNC machined in several critical areas to significantly improve performance. The combustion chamber, intake and exhaust ports and bowl areas have all been machined to maximize flow and horsepower production. The 110 cc combustion chamber is a semi-open chamber design to maximize combustion efficiency with streetable compression ratios. NOTE: This head has no exhaust crossover passage and will not work on any vehicle requiring EGR. This cylinder head is compatible with both early style Mark IV and late model Mark V blocks.

Complete cylinder heads are assembled with the following components: Stainless steel, one-piece, swirl-polished intake and exhaust valves with under-cut stems for increased flow; 2-ring positive oil control seals; 7/16" rocker studs and 3/8" guideplates; Edelbrock Sure-Seat Valve Springs #5745, retainers #9715, valve keepers #9615 and valve spring seats #5770. Complete cylinder heads are assembled and prepared for installation right out of the box.

**ACCESSORIES:** Although Edelbrock RPM Xtreme Cylinder Heads will accept OEM components (rocker arms, valve covers, intake manifold, head bolts, etc.), we highly recommend that premium quality hardware be used with your new heads.

**HEAD BOLTS or STUDS:** High quality head studs or head bolts with hardened washers must be used to prevent galling of the aluminum bolt bosses. Edelbrock Head Bolt Kit #8551 includes eight longer-than-stock bolts which must be used with these cylinder heads. If you use any other head bolts, you must use the eight head bolts and washers supplied with these heads in positions #15, #8, #2, and #7 in Figure 1. These positions will not accept stock length head bolts.

**NOTE:** Head bolts may bottom out in blocks with blind bolt holes (Bowtie, 502 Mark V, etc.). Check for clearance, and if necessary shorten bolts or replace with a set specifically designed for use with blind holes.

**ROCKER ARMS:** The valve springs supplied will accommodate valve lifts up to .700". Check the spring pressures required by your cam manufacturer for your camshaft. This lift is much higher than stock rocker arms will allow. Roller rocker arms will be required if your camshaft has more than .500" lift. Stock rockers may require longer-than-stock pushrods to clear the valve springs. **NOTE:** A visual inspection of rocker arm to valve alignment is recommended. In some cases, it may be necessary to loosen the guide plate and adjust the plate to get proper alignment. Make sure to re-torque the studs to recommended torque listed below.

**VALVE COVERS:** Because most roller rockers are physically larger than stock rockers, taller valve covers are usually required to clear them. Use Edelbrock Signature Series chrome valve covers #4680 or Elite Series polished aluminum valve covers #4280.

**INTAKE MANIFOLD:** Although stock intake manifolds will fit, the Edelbrock RPM Xtreme Cylinder Heads are matched in size and operating range with Edelbrock Performer RPM intake manifolds #7161 or #7164. If the Performer RPM is too tall to fit under your hood (Corvettes, etc.), you may use the Edelbrock Torker II 2-0 manifold #5061. Additionally, any manifold that matches Edelbrock gasket #7203 may be used (Edelbrock Performer, Torker, Victor Jr., Victor Ram, etc.). Oval port intake manifolds may be used as-is, or port matched to the same configuration as the cylinder heads for optimum performance.

**EXHAUST HEADERS:** Any header or manifold with a 2" or larger primary tube designed for original equipment heads will fit the Edelbrock RPM Xtreme Cylinder Heads. Exhaust ports are CNC profiled to match Edelbrock #7205 exhaust gaskets which are recommended for this application.

**SPARK PLUGS:** Use 14mm x 3/4" reach gasketed spark plugs. Heat range will vary by application and may range from Champion N-9Y to N-14Y (or equivalent). If required for header clearance, use Champion RC-12YC or equivalent which are 1/4" shorter than "N" series plugs. **Use anti-seize on the plug threads to prevent galling in the cylinder head, and torque to 10 ft./lbs. Do not overtighten sparkplugs!**

**INSTALLATION:** Installation is the same as for original equipment cylinder heads. Consult service manual for specific procedures, if necessary. For 454 and smaller Mark IV engines, use Edelbrock head gasket #7302 or equivalent. For Mark V & VI engines, use Edelbrock head gasket #7375 or equivalent.

**NOTE:** For 454 and smaller Mark IV engines, Edelbrock Cylinder Head Gasket Set #7363 may be used. The set contains all gaskets necessary to install these cylinder heads onto a Mark IV engine, including intake, exhaust, cylinder head, distributor, water neck, and valve cover gaskets.

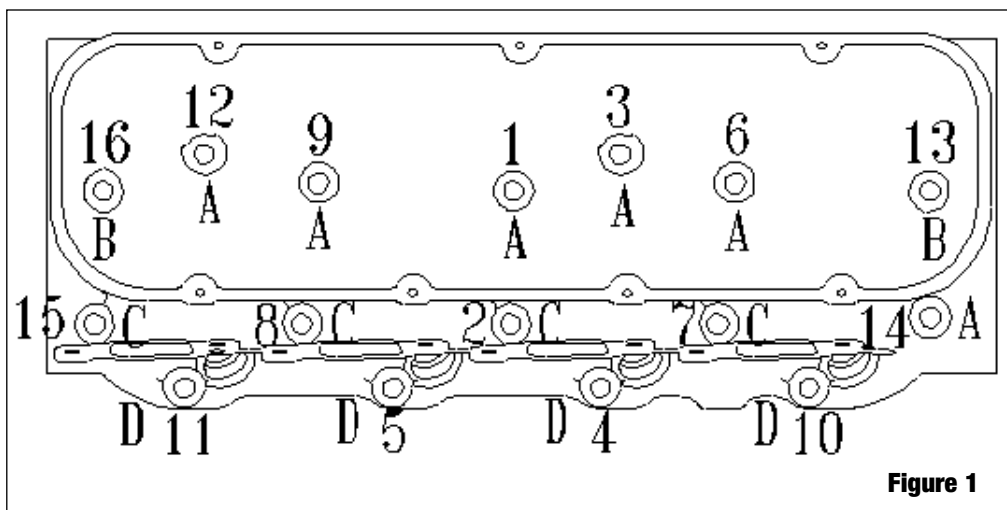
Be sure that the surface of the block and the surface of the head is thoroughly cleaned to remove any oily film before installation. Use alcohol or lacquer thinner on a lint-free rag to clean. Apply liquid teflon or suitable thread sealer to head bolt threads. Torque bolts to 70 ft./lbs. in three steps following the factory tightening sequence (see Figure 1). A re-torque is recommended after initial start-up and cool-down (allow 2-3 hours for adequate cooling).

**SPECIFICATIONS**

<b>Head bolt torque:</b> .....	70 ft./lbs.
<b>Rocker stud torque:</b> .....	45 ft./lbs.
<b>Combustion chamber volume:</b> .....	110 cc
<b>Deck thickness:</b> .....	9/16"
<b>Valve Seats:</b> .....	Hardened, interlocking, compatible with unleaded fuels
<b>Valve Size:</b> .....	Intake- 2.25", Exhaust- 1.88"
<b>Valve Stem Diameter:</b> .....	11/32"
<b>Valve Spring Diameter:</b> .....	1.54"
<b>Valve Spring Installed Height:</b> .....	1.975"
<b>Valve Spring Seat Pressure:</b> .....	120 lbs.
<b>Valve Spring Open Pressure @ .600" Lift</b> .....	345 lbs.
<b>Max. Valve Lift:</b> .....	.700" - Check spring pressures per cam manufacturer.

**Bolt Boss Height**

- A = 3.38"**
- B = 2.88"**
- C = 4.44"**
- D = 1.38"**



**Figure 1**

**Edelbrock Corporation • 2700 California St. • Torrance, CA 90503**  
**Tech Line: (800) 416-8628 • Tech Fax: (310) 972-2730**