



**PERFORMER RPM MARINE CYLINDER HEADS  
FOR BIG-BLOCK CHEVROLET  
#61459 - OVAL PORT  
#61559, #61555 - RECTANGULAR PORT  
INSTALLATION INSTRUCTIONS**

***These Performer RPM Heads are intended for Marine Use Only.***

**Please** study these instructions carefully before installing your new cylinder heads. If you have any questions, 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.

**DESCRIPTION**

The Edelbrock Performer RPM Cylinder Heads are designed for high performance marine use. #61459 is interchangeable with any early-style (1965-75) oval port cylinder heads while #61559 and #61555 are interchangeable with high performance rectangular port heads. These heads offer “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 intake and exhaust ports are CNC machine “matched” and have been designed for maximum flow velocity when matched with our Performer RPM intake manifold: #7161-Oval Port, #7163-Rectangular Port, and #2561-Marine Specific Oval Port Q-Jet. We also recommend the use of our Performer Marine Series Carburetors and our Performer RPM cam kit, #7162, for optimum performance. This Performer RPM Power Package produced 540 horsepower in dyno tests on a 454 c.i.d. Chevy with 9.5:1 compression on pump gasoline. NOTE: These head have no exhaust crossover passages and will not work on engines requiring EGR systems.

#61555 is a complete cylinder head that is assembled with springs intended for use on hydraulic roller cams. The head is ready to be installed right out of the box.

#61459 and #61559 are bare cylinder heads which have valve guides and seats installed. They will require final sizing and a valve job to match the included valves. Heads are intended for marine applications where exhaust valves are subjected to cooling by water injection into the exhaust system. To extend valve life, we have included heavy-duty inconel exhaust valves.

**ACCESSORIES:** Although Edelbrock Street 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:** Each cylinder head features four taller head bolt bosses: locations: 15, 8, 2, and 7 (**See Figure 1**). The included head bolts and washers must be used in these locations as the stock length bolts are not compatible. The use of high quality head studs or head bolts with harden washers must be used to prevent galling of the aluminum bolt bosses. We recommended the use of Edelbrock’s Head Bolt Kit #8551; it is a complete head bolt kit which also contains the lengthened head bolts needed to accommodate the taller head bolt bosses that are unique to these cylinder heads.

**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.*

**VALVE COVERS:** Most roller rocker adjusters are physically larger than stock rockers, so taller valve covers are usually required to clear them. Use Edelbrock Signature Series #4680-Chrome or #4683-Black, Elite II Polished Aluminum #4275 or Victor Series #41803.

**ROCKER ARMS:** Check the spring pressures required by your cam manufacturer for your camshaft. 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 maybe 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.*

**INTAKE MANIFOLD:** The Edelbrock Street Cylinder Heads are matched in size and operating range with Edelbrock Performer RPM intake manifolds: Oval Port #7161 or #2561 and Rectangular Port #7163. Additionally, any manifold that matches Edelbrock gaskets #7202 or #7203 may be used (Edelbrock Performer, Torker, Victor Jr., Victor Ram, etc.). 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 designed for original equipment heads will fit the Edelbrock Street 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. 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 spark plugs!**

**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 454 Mark V engines, use Edelbrock head gasket #7375, or equivalent. For 502 c.i.d. Mark V engines, use Edelbrock head gasket #7356 or equivalent.

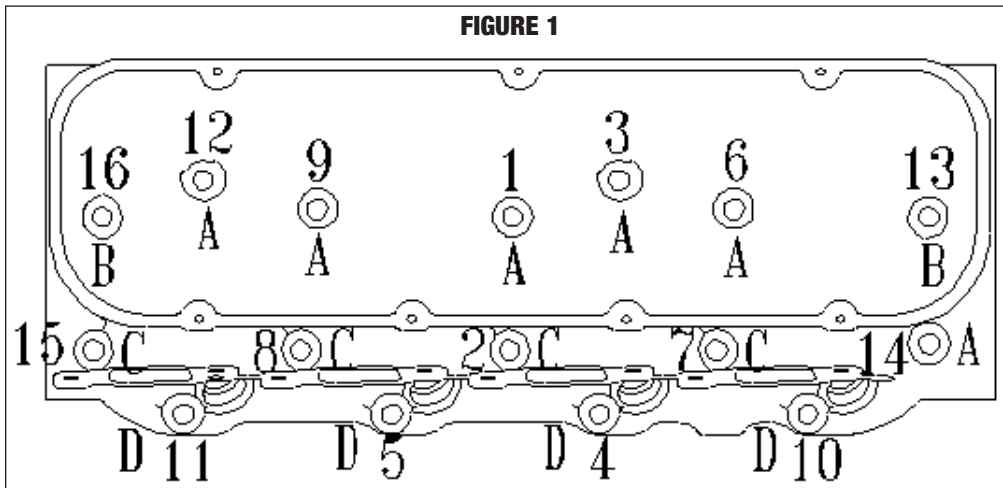
Be sure that the surface of the block and the surface of the head is thoroughly cleaned to remove any oily film before installation. Use alcohol or lacquer thinner on a lint-free rag to clean. Apply liquid teflon or suitable thread sealer to head bolt threads. Torque bolts in three steps following the factory tightening sequence (see Figure 1): 35 ft./lbs, 50 ft.-lbs and final torque of 65 ft./lbs for short bolts and 75 ft./lbs for long bolts. A re-torque is recommended after initial start-up and cool-down (allow 2-3 hours for adequate cooling).

**NOTE:** Complete Head Gasket Sets are also available. These sets contain all gaskets necessary to install the cylinder heads onto a Big-Block Chevy short block. Content includes intake, exhaust, cylinder head, distributor, water neck, and valve cover gaskets. Please visit [www.edelbrock.com](http://www.edelbrock.com) for more information.

### SPECIFICATIONS

<b>Head Bolt Torque:</b> .....	65 ft./lbs. Short bolts: #11, #5, #4, and #10
.....	75 ft./lbs. Long bolts: All others
<b>Rocker Stud Torque:</b> .....	45 ft./lbs.
<b>Combustion Chamber Volume:</b> .....	110 cc (#61459)
.....	118cc (#61559)
<b>Deck Thickness:</b> .....	9/16"
<b>Valve Seats:</b> .....	Hardened, interlocking, compatible with unleaded fuels
<b>Valve Size:</b> .....	Intake - 2.25", Exhaust - 1.89"
<b>Valve Stem Diameter:</b> .....	11/32"
<b>Valve Spring Diameter:</b> .....	N/A
<b>Valve Spring Installed Height:</b> .....	1.850" (61555 Only)
<b>Valve Spring Seat Pressure:</b> .....	150lbs @ 1.850" and 415lbs @ 1.250" (61555 Only)
<b>Max. Valve Lift:</b> .....	.650" (61555 Only).

FIGURE 1



Bolt Boss Height	
<b>A</b>	= 3.38"
<b>B</b>	= 2.88"
<b>C</b>	= 4.44"
<b>D</b>	= 1.38"

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