



EDELBROCK/BIG VICTOR 3 CNC CYLINDER HEAD BIG BLOCK CHEVY INSTALLATION INSTRUCTIONS

CATALOG NUMBERS:					
613269	613369	613469	613569	613669	613769
613869	613969	614669	614769	614869	614969

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 engine. If you do not feel comfortable performing this installation, it is recommended to have the installation completed by a qualified engine builder. 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.

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.

INSTALLATION PROCEDURE

DESCRIPTION: Edelbrock Big Victor 3 cylinder heads are designed for high rpm, large displacement big block Chevrolet race engines and their 5.0 inch bore spacing derivatives. These heads are a unique departure from current spread port designs using instead the familiar Pro Stock style symmetrical port layout. Intake manifolds for both stock (4.84") and 5.00" bore space application are available. The 613669, 613769, 614669, and 614769 fit all 1965 and later big block Chevrolet blocks and their aftermarket equivalents. The others fit the various versions of 5.00" bore spacing blocks available in the aftermarket. The 613769, 613869, and 613969 are semi-finished in that all machining on the valve axes has been omitted thus allowing custom designs with unique valve angles and positions. All of these heads are supplied with no combustion chamber and small ports to permit various port and chamber finishing options. All are also treated to a Hot Isostatic Pressing (HIP) process prior to heat treat and final machining. This process greatly improves metal density and tensile strength thus significantly extending their useable life.

HEAD PORTING RECOMMENDATIONS: These BV3 heads contain a unique coolant flow design that provides the potential for much better cooling than conventional designs. As a result the coolant passages get close to the ports in some locations and impose limits on how much the ports can be opened up before breaking into those coolant passages. Most of these locations do not present a problem. One area is thin as-cast and that is the wall of the exhaust port on the cylinder wall side from the seat bottom up to 1" into the port. Do not remove any more than 0.050" from the as-cast exhaust port in this area! As always, be careful of grinding into the pushrod clearance adjacent to the intake port. Finally, remember that the exhaust port bulge around the headbolt connects to oil so don't break through or you will get smoke in the exhaust and possibly in the cylinder as well.

IMPORTANT NOTES: All these heads will require custom valves. Consult with your head porter or engine builder for recommendations. Several other parts are specific to this head, as outlined in the recommendations below.

ACCESSORIES & INSTALLATION ITEMS: We highly recommend that premium quality hardware be used with your new heads. See our catalog for details. To order a catalog, call **(800) FUN-TEAM**, or visit our website at: **www.Edelbrock.com**.

Head Studs: High quality head studs with hardened washers must be used to prevent galling of the aluminum bolt bosses. The boss heights are listed on the next page (**See Fig. 1**), along with the torque sequence.

Seats and Guides: Guide bores have been machined to 0.500" for a 0.502" x 3.00" long guide. Seat bores are significantly undersize to allow a variety of finished valve sizes. Detailed specification sheets are available upon request that give recommended valve sizes for your particular heads. Seat bores can be increased as desired for any sensible combination of intake and exhaust valve but the seat depth should not be increased beyond 0.080" without potential for failure while in use.

Rocker System: Matching valve train for all these heads are currently in development by both Jesel and T&D Machine. Check with them for availability.

Valve Covers: Welded aluminum sheet metal valve covers are available from Moroso and are required.

Spark Plugs: Use 14mm x 3/4" reach, gasketed spark plugs. Heat range for competition applications will vary. We recommend the use of **anti-seize** on the spark plug threads to prevent galling in the cylinder head, and torque to 10 ft/lbs. **DO NOT OVERTIGHTEN.**

Intake Manifolds and Valley Trays: Manifolds and valley trays are available for both 4.84" and 5.00" bore space applications. Please consult with your engine builder or contact Edelbrock via our Technical Hotline at 1-800-416-8628 for more information regarding manifold and valley tray selection. Manifold gaskets also available.

Exhaust Headers: Big Victor 3 heads use a standard bolt pattern flange on all the 4.84 versions. The 613669 and 613769 have an "extended flange" so conventional headers may require adjustment. All 5.00 versions have the extended flange and have the ports spaced at 5.00" like the bores.

INSTALLATION:

Note: Prior to assembly, the following should be checked:

1. Valve to Cylinder Wall Clearance
2. Piston to Valve Clearance
3. Piston Dome to Combustion Chamber Clearance
3. Rocker Arm to Valve Cover Clearance
4. Rocker Arm to Valve Cover Rail Clearance (intake only)

Installation is the same as for original equipment cylinder heads. Consult a service manual for specific procedures, if necessary. Be sure that the surface of the block and the surface of the head are cleaned thoroughly to remove any oily film before installation. Use alcohol or lacquer thinner on a lint-free rag to clean. Apply liquid Teflon PST or suitable thread sealer to head stud threads that extend into coolant passages. Torque the head studs to 70 ft/lbs in three steps, following the factory tightening sequence **(See Fig. 1)**. A re-torque is recommended after initial start-up and cool-down (Allow 2-3 hours for adequate cooling).

SPECIFICATIONS: Contact Edelbrock Technical Hotline or Edelbrock.com for a detail spec sheet for your heads.

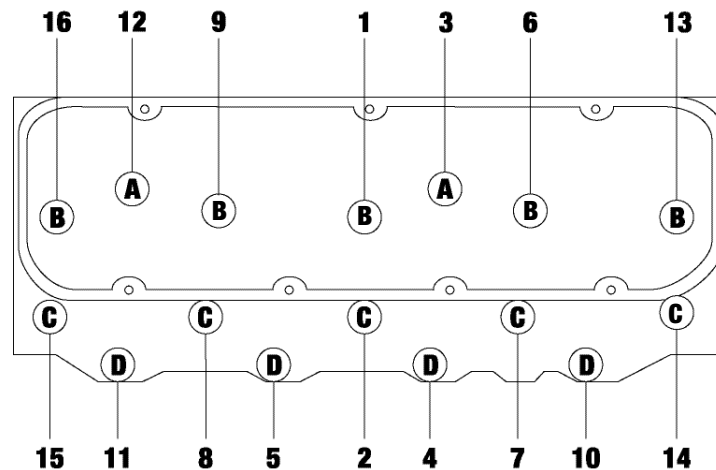


Figure 1 - Cylinder Head Stud/Nut Torque Sequence and Bolt Boss Height Chart
Torque nuts according to stud manufacturer's instructions.

Boss Height and Bolt Length

Letter	Boss height	Qty.
A	*1.250"	*2
B	4.750"	5
C	5.125"	5
D	1.550"	4

*NOTE: These are thru port bolts with a roof plug. Some versions have 4 bolts and some have 2 bolts.



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