MID AMERICA MOTORWORKS™

INSTRUCTION SHEET

Part Number
642-070

Application: 1992-1996 Corvette

Part Includes
1 - edelbrock LT1 Performer Complete Cylinder Head

Edelbrock Performer Cylinder Head

SKILL LEVEL 4

Tools Needed

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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 vehicle. If you do not feel comfortable performing this installation, it is recommended to have the installation completed by a qualified mechanic. **IMPORTANT NOTE: PROPER INSTALLATION IS THE RESPONSIBILITY OF THE INSTALLER. IMPROPER INSTALLATION WILL VOID YOUR WARRANTY AND MAY RESULT IN POOR PERFORMANCE AND ENGINE OR VEHICLE DAMAGE.**

DESCRIPTION
Edelbrock Performer LT-1 cylinder heads are designed for street/high performance use on LT-1, 5.7L, Small block Chevrolet engines They also replace original equipment on 1992 through 1997 LT-1 5.7L equipped vehicles (C.A.R.B. E.O. Call Edelbrock for detailed information). Edelbrock LT-1 heads feature high velocity 170cc intake ports, 70cc exhaust ports and 54cc combustion chambers. Complete heads come assembled with valvetrain parts capable of operating up to 6500 rpm. Higher rpm applications will require the use of suitable valvetrain parts like larger valve springs and retainers. Other outstanding features include phosphor-bronze valve guides, ductile iron valve seats and premium one-piece stainless steel high-flow 1.940" intake and 1.550" exhaust valves, heat-treated machined steel retainers, valve locks, rocker studs and hardened washers, along with heavy duty valve springs which work with cams having valve lifts up to .600". Spring load at .600" lift is 340 lbs. Check camshaft manufacturer's spring load specifications when using other than Edelbrock camshafts. These powerful heads use the stock location for intake and exhaust flanges and bolt holes, and centerbolt valve cover rails for compatibility with original equipment and aftermarket parts. Bolt holes for exhaust and intake flanges and rocker studs are fitted with helicoil inserts for increased strength. LT-1 heads are available either bare or complete.

COMPLETE CYLINDER HEADS ARE ASSEMBLED USING THE FOLLOWING COMPONENTS
-Stainless steel, one-piece, swirl-polished intake and exhaust valves with under-cut stems for increased flow
-Rocker studs and hardened washers for use with self-aligning rocker arms
-High quality vitton lip seals with metal jacket
-Edelbrock Sure-Seat valve springs
-Retainers
-Valve keepers
-Valve spring seats

Complete cylinder heads are assembled and prepared for trouble-free installation right out of the box. **BARE CYLINDER HEADS WILL HAVE VALVE GUIDES AND SEATS INSTALLED, BUT WILL REQUIRE FINAL SIZING OF THE VALVE GUIDES AND A VALVE JOB TO MATCH THE VALVES YOU WILL BE USING.**

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Description (cont.)

For a successful installation, the Edelbrock Performer Cylinder Heads require some components other than original equipment parts. To complete your installation, you will need the following items:

-Head gaskets; GM or Fel-Pro or equivalent.

-Intake manifold gaskets; GM or Fel-Pro (Will require port matching).

-Exhaust gaskets; Fel-Pro or equivalent

-Edelbrock head bolt kit

-14mm x 3/4" reach gasketed spark plugs, Champion RC-12YC or equivalent.

-Pushrods, .100" longer than stock, hardened preferred (if using stock type rocker arms)

-Self-aligning rocker arms - GM (stamped steel 1.5:1 ration); GM (aluminum roller, 1.5:1 ratio); & GM)aluminum roller 1.6:1 ratio) or equivalent.

CHECKING PISTON-TO-VALVE, PISTON-TO-BORE AND PISTON-TO-HEAD CLEARANCES: Prior to installation, it is highly recommended that valveto-piston clearances are checked and corrected to minimum specs, if necessary. A minimum of 0.100" clearance is recommended for both intake and exhaust. If other than stock valve sizes are used, they may not work with the valve pockets in stock pistons, especially if a high lift cam is used. The use of aftermarket pistons and/or custom machining to your pistons may be required. Actual valve-to-piston clearance should be specified by your camshaft manufacturer. If these cylinder heads are used on small bore engines, valve-to-bore clearance should also be checked, and the top of the bore notched for clearance, if necessary.

ACCESSORIES

Although Edelbrock Performer LT-1 Heads will accept OEM components (valve covers, intake manifold, etc.), we highly recommend that premium quality hardware to 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 includes all bolts which must be used with these cylinder heads. Stock head bolts may be used if they meet these specs for length: 1-3/4" (short bolts); 3" (medium bolts); 3 - 13/16" (long bolts). Bolts not meeting these specs do not have enough thread engagement for use with hardened washers. The recommended hardened washers are GM #10051155, ARP #200-8511, or equivalent.

ROCKER ARMS AND VALVE TRAIN: Stock (stamped type) rockers may require +.100" longer-than-stock pushrods (hardened preferred) to maintain proper geometry. The valve springs supplied will accommodate valve lifts up to .600", which is much higher than stock rocker arms will allow. Long slot stamped or roller rocker arms will be required if your camshaft has more than .480" lift. **CAUTION: GM LT-1 HEADS ARE FACTORY-EQUIPPED WITH "SELF-ALIGNING" ROCKER ARMS. THESE ROCKER ARMS HAVE A STAMPED RECESS ON THE VALVE TIP END TO GUIDE THE ROCKER ARM ON THE VALVE STEM WHICH ALLOWS THE ROCKER ARM TO GUIDE THE PUSHROD. EDELBROCK PERFORMER LT-1 PN 61909 CYLINDER HEADS ARE EQUIPPED WITH ROCKER STUDS AND HARDENED WASHERS FOR USE WITH "SELF-ALIGNING" ROCKER ARMS. ALWAYS CHECK ROCKER-TO-VALVE TIP ALIGNMENT AND ADJUST AS NEEDED. IF USING NON-SELF ALIGNING ROCKER ARMS, EDELBROCK RECOMMENDS THE USE OF PN 9660 GUIDE PLATES FOR USE WITH 5/16" PUSHRODS. IF USING GUIDEPLATES THE WASHER UNDER THE ROCKER STUD MUST BE REMOVED AND HARDENED PUSHRODS MUST BE USED.**

VALVE COVERS: Performer LT-1 heads will accept centerbolt valve covers. Edelbrock centerbolt pattern #4246 and 4247 will work with Performer LT-1 heads.

INTAKE MANIFOLD: Clean gasket surfaces. Do not use cork or rubber end seals. Use RTV silicone sealer instead. Apply a ¼" high bead across each block end seal surface, overlapping the intake gasket at the four corners. This method will eliminate end seal slippage. Install gaskets and intake manifold to factory specifications. Torque to recommended 35 ft-lbs. in the factory sequence. Refer to factory service manual.

EXHAUST HEADERS: Any header or manifold designed for original equipment heads will fit Edelbrock Performer LT-1 Cylinder Heads. Exhaust ports are CNC-profiled to match Fel-Pro #1404 exhaust gaskets, which are recommended for these applications.

SPARK PLUGS: Use 14mm x 3/4" reach gasketed spark plugs. Heat range may vary by application, but we recommend Champion RC-12YC (or equivalent) for most street-driven applications. Use anti-seize on the plug threads to prevent galling in the cylinder head, and torque to 10 ft./lbs. Do not overtighten sparkplugs!

Description (cont.)

INSTALLATION

Installation is the same as for original equipment cylinder heads. Consult service manual for specific procedures, if necessary. Be sure that the surface of the block and the surface of the head are thoroughly cleaned to remove any oily film before installation. Use alcohol or lacquer thinner on a lint-free rag to clean. Apply Teflon pipe sealant or suitable sealer to head bolt threads. Apply 30W oil or suitable lubricant under side of bolt heads and washers. Torque to 65 ft./lbs. in three steps (40, 55, 65) 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

Head Bolt Torque	65 ft./lbs. (in steps of 40, 55, 70)
Rocker Stud Torque	45 ft./lbs.
Combustion Chamber Volume	54cc
Deck Thickness	5/8"
Valve Seats	Hardened ductile iron, compatible with any fuel
Valve Size	(PN 61909) Intake 1.940"
	Exhaust 1.550"
Valve Spring Diameter	1.450"
Valve Spring Installed Height	1.800"
Valve Spring Seat Pressure	120 lbs. pressure seated @ .600" lift:340 lbs.
Max. Valve Lift	600"

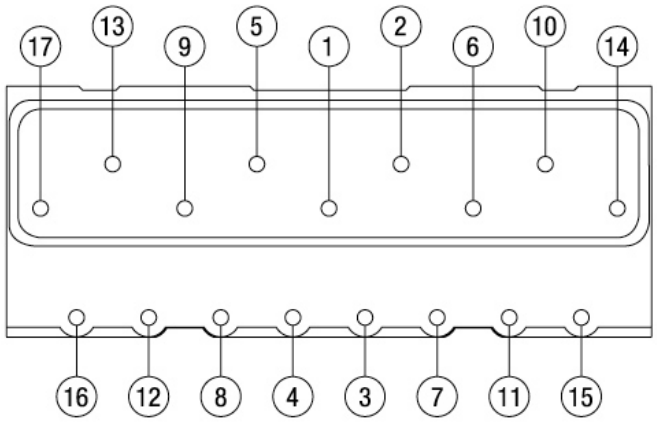

Fig. 1 - Cylinder Head Tightening Sequence