



PERFORMER RPM 348/409 CYLINDER HEADS
1958-1965 Chevrolet W-SERIES Big Block Engines
Catalog #60809, #60815 #60819

INSTALLATION INSTRUCTIONS

PLEASE study these instructions carefully before beginning this installation. Most installations can be accomplished with common automotive 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. 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 your warranty and may result in poor performance and engine or vehicle damage.

DESCRIPTION: Edelbrock Performer RPM cylinder heads are designed for street/high performance use on 348/409 cid big block Chevrolet engines made from 1958 to 1965. **Please note that these heads are not compatible with the stock intake manifold of the 348 cid engine.** Edelbrock RPM 348/409 heads feature high velocity 220cc intake ports, 90cc exhaust ports and 16cc combustion chambers. Complete heads come assembled with valvetrain parts capable of operating up to 6500 rpm. Other outstanding features include phosphor-bronze valve guides, ductile iron valve seats and premium one-piece stainless steel high-flow 2.190" intake and 1.720" exhaust valves, heat-treated machined steel retainers, valve locks, rocker studs and hardened guide plates, along with the heavy duty valve springs which work with cams having valve lifts up to .600". The springs have a seated pressure of 128 lbs. for Flat Tappet cams and 150 lbs. for Hydraulic Roller Cams. 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 valve cover rails for compatibility with original equipment and aftermarket parts. **NOTE: Custom length pushrods are required; see below.** Bolt holes for exhaust flanges and rocker studs are fitted with helicoil inserts for increased strength. 348/409 heads are available either bare (#60809) or complete (#60815 - Hydraulic Roller Cam and #60819 - Flat Tappet Cam).

WARNING: These cylinder heads are equipped with spark plug cooling holes. In order to properly use these cylinder heads on a 1958 W-Series big block, the spark plug cooling holes on the deck have to be welded up.

Complete cylinder heads are assembled using the following components and are ready to install right out of the box:

- Stainless steel, one-piece, swirl-polished intake and exhaust valves with under-cut stems for increased flow
- Threaded rocker studs with optimized geometry
- Edelbrock Sure-Seat valve springs
 - Flat Tappet Cam - #5792
 - Hydraulic Roller Cam - #5821
- Retainers #9644
- Valve locks #9616
- Valve spring seats #5771
- Hardened guideplates #9609

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.

Hardware & Parts Required for Installation

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

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| <input type="checkbox"/> Head gaskets; Fel-Pro #8007PT or equivalent. | <input type="checkbox"/> Intake manifold gaskets; Edelbrock #7240 or Fel-Pro #9788 |
| <input type="checkbox"/> Exhaust gaskets; Edelbrock #7241 | <input type="checkbox"/> 14mm x 3/4" reach gasketed spark plugs, Champion RC-12YC or equivalent |
| <input type="checkbox"/> Custom Length Hardened Pushrods; Edelbrock #9635 | <input type="checkbox"/> Head bolts and hardened washers; Edelbrock #8581 |

These heads require custom length (8.650" in; 9.000" Ex) 3/8" diameter hardened pushrods. Use Edelbrock #9635 kit or equivalent. Bare heads will require the use of hardened guideplates; Edelbrock part #9609.

CHECKING PISTON-TO-VALVE, VALVE-TO-BORE AND PISTON-TO-HEAD CLEARANCES: Prior to installation, it is highly recommended that valve-to-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. **These heads will not fit 1958-1965 348 cid 'W' engines unless an Edelbrock #5409 or stock large port 409 intake manifold is used. Proper cylinder wall notching must be checked to ensure adequate exhaust valve-to-cylinder wall clearance.**

ACCESSORIES: Although Edelbrock Performer RPM Heads will accept OEM components (valve covers, intake manifold, 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. Stock length head bolts may be used with hardened washers. The recommended bolt and washer kit is Edelbrock #8581.

Rocker Arms and Valve Train: Stock (stamped type) rockers may require longer-than-stock pushrods to maintain proper geometry. Appropriate length pushrods will minimize the area of the valve stem contacted by the rocker tip when the engine is rotated. The pushrods must be hardened in order to be used with guideplates. The valve springs supplied will accommodate valve lifts up to .600", which is much higher than stock rocker arms will allow. If your camshaft has more than .480" lift you will need to use an aftermarket rocker assembly. The rockers should have a ratio of 1.7:1 and accommodate 7/16" studs, such as Crane #13750, or equivalent components from Comp Cams, Crower, Isky, or your preferred valvetrain manufacturer.

Valve Covers: Performer RPM 409 heads will accept stock valve covers. Edelbrock also casts classic finned covers for this engine as part #4140 in polished aluminum, and #41403 with a black textured powder coating.

Intake Manifold: Clean gasket surfaces. Apply Gasgacinch to both sides of the intake gaskets and install them on the cylinder head flange surfaces. 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. Install intake manifold according to factory specifications. Torque to recommended 25 ft-lbs. in the factory sequence. Refer to factory service manual.

NOTE: *The stock intake manifold found on 348 cid engines will not cover the intake ports of these cylinder heads. An aftermarket manifold, such as Edelbrock #5409, or a stock 409 manifold will need to be used to ensure proper port sealing.*

Exhaust Headers: Any header or manifold designed for original equipment 348/409 heads will fit Edelbrock Performer RPM 348/409 Cylinder Heads.

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 spark plugs!**

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).

NOTE: You may need to remove the guideplates in order to install and torque down the head bolts. Loosening and adjusting the guideplates may also be needed to achieve proper valvetrain alignment. Guideplates should be re-torqued to 45 ft/lbs when finished. Proper valvetrain alignment is achieved when the rocker tips are centered on the top of the valve stems.

SPECIFICATIONS

Head Bolt Torque:..... 65 ft./lbs. (in steps of 40, 55, 65)
 Rocker Stud Torque:..... 45 ft./lbs.
 Combustion Chamber Volume:..... 16cc
 Deck Thickness: 5/8"
 Valve Seats:..... Hardened ductile iron, compatible with any fuel
 Valve Size:(PN 60819) Intake 2.190", Exhaust 1.720"
 Valve Spring Diameter: 1.550"
 Valve Spring Installed Height: 1.900"
 Valve Spring Seat Pressure:
Flat Tappet Cam - 128 lbs. @ .600" lift: 308 lbs.
Hydraulic Roller Cam - 150 lbs. @ .600" lift: 405 lbs.
 Max. Valve Lift:..... .600"

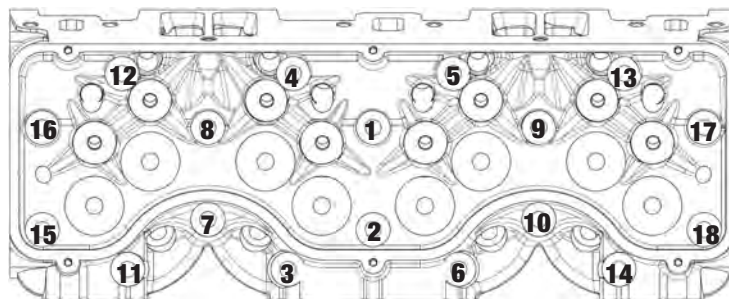


Fig. 1 - Cylinder Head Tightening Sequence

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