



INSTALLATION INSTRUCTIONS

MOPAR MAGNUM ALUMINUM CYLINDER HEAD

Fits 1992-2001 5.2L Magnum and 1993-2003 5.9L Magnum ENGINES

PART NUMBER P5153847

Cylinder Head Kit Components

- (1) Cylinder Head Assembly w/ Valves, Retainers & Valve Springs.

Read all instructions before beginning installation.

Warnings and Cautions

Mopar Performance Parts recommends professional installation by an ASE Certified technician. A torque wrench and specialized removal and installation tools are required.

Description

This cylinder head is designed for 1992-2001 5.2L (318) and 1993-2003 5.9L (360) Chrysler Magnum V-8 engines. This head will also fit Mopar Performance 360 Magnum crate engines. These heads are an easy bolt on upgrade for these modern engines. Stock Magnum intake and exhaust flange and port locations ensure fit with all Magnum based parts. These heads feature 176 cc intake ports, 75 cc exhaust ports and 58 cc combustion chambers for a slight increase in compression over the factory heads. 2.020" intake and 1.600" exhaust valves with 11/32" stems offer more flow than stock and they accept adjustable aftermarket rocker arms (hardened pushrods are required).

IMPORTANT NOTES: READ BEFORE BEGINNING INSTALLATION!

For a successful installation, Mopar Performance cylinder heads require some components other than the original equipment parts. To complete installation, you will need the following items:

- P4876048 - Cylinder Head Gasket Set
- P4876049 - Intake Manifold Gasket Set
- Exhaust Manifold or Header Gasket Set
- P5153848 - Hardened Pushrod Set
- 14 mm x 3/4" reach, gasketed spark plugs; Champion R3-12YC or equivalent (May vary depending on engine specifications).
- P4120459 - Head Bolt Washer Set
- P5007617, P5007618, or P5007619 – Die Cast Valve Cover Set.
- P5153852 - Adjustable Roller Rocker Arm Set (1.6:1 ratio)

Note: These heads are assembled with 3/8" rocker studs and will not accept factory pedestal mount rocker arms. A high

performance, stud mounted roller rocker arm set (P5153852) is required with these heads.

Checking Piston-To-Valve, Piston-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. These cylinder heads have larger than stock valve sizes and may not work with the valve pockets in stock pistons, especially if a high lift cam is used. The use of after-market 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 heads are used on a small bore engine, valve-to-bore clearance should also be checked, and the top of the bore notched for clearance if necessary.

Special Note: These heads have a closed combustion chamber and cannot be used with pistons that stick out above the fire deck on the block. In all cases, you must make sure that there is at least .035" clearance between the piston and any part of the cylinder heads.

Accessories

Although Mopar Cylinder heads will accept most 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.

Rocker Arms and Valve Train

Adjustable rocker arms must be used. These heads are assembled with 3/8" rocker studs and will not accept factory pedestal mount rocker arms. A high performance, stud mounted rocker arm set is recommended for use with these heads – P5153852. These rocker arms require valve covers that are taller than stock for rocker arm clearance.

Guide Plate Adjustment

In some cases, it may be necessary to loosen the rocker studs and align the guide plates for the best alignment of the pushrods. Re-torque the rocker studs to 45 ft/lbs after any adjustments. Be sure to use hardened pushrods – required with guide-plates.

Valve Covers

These heads have the stock Magnum 10 bolt valve cover rail. The rocker arms won't have enough clearance with stock valve covers, so taller die cast valve covers are recommended:



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- P5007617 Black Wrinkle w/ "Magnum" logo
- P5007618 Polished Aluminum w/ "Magnum" logo
- P5007619 Black Wrinkle w/ "Jeep" logo

Intake Manifold

Stock Magnum intake manifolds will fit, but Mopar recommends one of the following HP intake manifolds:

- P5007380 - M1 single plane intake manifold – carburetor
- P5007381 - Dual plane intake manifold – carburetor
- P5007398AB w/ EGR, or P5007852 w/o EGR – Single Plane MPI - Use installation kit P5007638 with these intakes

Note: Fill the small center hole at each end of the bottom of the valley tray on intake manifolds P5007380, P5007381, P5007398AB, and P5007852 (to prevent oil leaks). Follow the procedure in the service manual for your vehicle to install the intake manifold.

Exhaust Headers

Any header or manifold designed for original equipment heads will fit these heads. Exhaust ports are CNC profiled.

Spark Plugs

Use 14mm x 3/4" reach gasketed spark plugs. Heat range may vary by application, but we recommend RC-12YC (or equivalent) for most applications. Use anti-seize on the spark plug thread 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 is thoroughly cleaned to remove any oily film before installation. Use alcohol or lacquer thinner on a lint-free rag to clean. Apply oil or suitable thread lubricant to the head bolt threads and underside of bolt heads and washers. Torque to 95 ft/lbs. in three steps (45-65-95) 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).

For technical assistance, please contact the Direct Connection Tech Hotline - Monday-Friday, 7:00am - 3:00pm EST at 1(888) 528-HEMI or 1(888) 528-4364.

Specifications

Head Bolt Torque	95 ft/lbs (in steps of 45-65-95)
Rocker Stud Torque	45 ft/lbs.
Comb. Chamber Volume	58cc (+/- 2cc)
Deck Thickness	5/8"
Valve Seats	Hardened, interlocking, compatible with any fuel
Valve Sizes	Intake 2.020", Exhaust 1.600"
Valve Spring Diam.	1.450"
V/Spring Installed Height	1.800"
Valve Spring Seat Press.	120 lbs.
Max Valve Lift	.580"

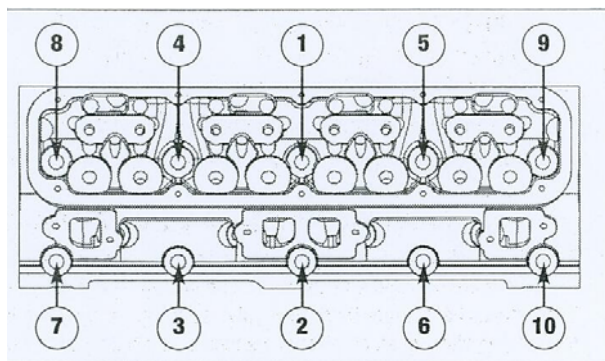


Figure 1 - Bolt Tightening Sequence

NO PARTS WARRANTY – "AS IS"

Mopar Performance parts beginning with a "P" prefix are sold "as is" unless otherwise noted. This means that parts sold by Mopar Performance carry no warranty whatsoever. **Implied warranties, such as warranties of merchantability, are excluded.** (An implied warranty of merchantability means that the part is reasonably fit for the general purpose for which it was sold). The entire risk as to quality and performance of such parts is with the buyer. Should such parts prove defective following their purchase, the buyer and not the manufacturer, distributor or retailer, assumes the entire cost of all necessary servicing or repair. Chrysler, Dodge and Jeep® vehicle and parts warranties are voided if the vehicle or parts are used for competition. The addition of performance parts does not by itself void a vehicle's warranty. However, added performance parts (parts not originally supplied on the vehicle from the factory) are not covered by the vehicle's warranty, and any failure that they may cause is also not covered by the vehicle's warranty.