



PERFORMER D-PORT CYLINDER HEADS
for 1965-79 Pontiac V8s
PART #61539, 61569, 61579, 61589 and 61599
INSTALLATION INSTRUCTIONS

Please study these instructions carefully before installing your new cylinder head. 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.

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: These cylinder heads have been designed for 1965-1979 389-455 c.i.d. Pontiac engines. They are available in 87cc and 72cc combustion chamber versions for applications that want to maintain the same compression ratio as the factory heads as well as a 65cc version for customers looking for high compression and/or a smaller chamber suitable for porting. Performer D-Port Pontiac heads produce outstanding horsepower with excellent low speed torque and throttle response. The high flow exhaust ports will accept traditional D-port headers or exhaust manifolds. On both versions, the deck surface is 5/8" thick for superior durability and head gasket retention. All factory accessory bosses are included for bolt-on convenience. The exhaust heat cross-over has been machined to make these heads street legal on 1965-1979 vehicles with 389-455 c.i.d. V8s without secondary air injection. NOTE: The valve angle used in factory 1965-1966 Pontiac cylinder heads was 20°. Edelbrock Pontiac cylinder heads use the later 14° valve angle. When installing Edelbrock Pontiac cylinder heads on 1965-1966 and some 1967 engines that came stock with the early 20° valve angle, compatibility of valves with pistons will need to be checked.

#61539 is an as-cast cylinder head with 65cc chambers. Designed to be finished by a professional cylinder head machine shop, this version comes with valve guides and seats installed, but with no port machine work. Complete heads are assembled with stainless steel, one-piece swirl-polished 2.11" intake and 1.66" exhaust valves with under-cut stems to promote excellent flow for more power. They also include 2-ring positive oil control seals, 7/16" rocker studs, 5/16" guideplates, Edelbrock Sure-Seat Valve springs #5767, retainers #9736, valve spring seats #5769, valve stem seals #9725 and valve keepers #9611. Complete cylinder heads are assembled and prepared for installation right out of the box. **Bare cylinder heads include guideplates and will have valve guides and seats installed, but will require final guide bore sizing and a valve job to match the valves you will be using.**

SPECIFICATIONS

Combustion chamber volume:	87cc (#61569 & #61579)	72cc (#61589 & #61599)	65cc (#61539)	
Head bolt torque:	85 ft.-lbs	Rocker stud torque:	45 ft.-lbs.	
Valve Seats:	Hardened, interlocking, compatible with any fuel		Valve Stem Diameter:	11/32"
Valve Size:	Intake- 2.11", Exhaust- 1.66"		Valve Spring Diameter:	1.45"
Valve Spring Installed Height:	1.800"	Valve Spring Seat Pressure:	120 lbs.	
Max. Valve Lift (Complete Heads):	.575"	Pushrod dia. (guide plate slot):	5/16"	
Deck thickness:	5/8"			

ACCESSORIES: Although Edelbrock Aluminum Cylinder Heads will accept OEM components (rocker arms, valve covers, intake manifold, etc.), we highly recommend that premium quality hardware be used with your new heads.

INTAKE MANIFOLD: Although stock intake manifolds will fit, the Edelbrock Pontiac Cylinder Heads are matched in size and operating range with Edelbrock Performer RPM intake manifold #7156. If the Performer RPM is too tall to fit under your hood, you may use the Edelbrock Performer manifold #2156. Additionally, any manifold that matches Edelbrock #7280 or Fel-Pro #1233 gaskets may be used. Manifolds may be used as-is, or port matched to the same size as the cylinder heads for optimum performance. For racing applications, use our Victor #2957 or #2956.

ROCKER ARMS: The valve springs supplied will accommodate valve lifts up to .575", which is much higher than stock rocker arms will allow. 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. Use of stock ratio (1.5:1) rocker arms is strongly recommended, use of higher ratio rockers may require machining pushrod provisions to clear.

VALVE COVERS: Due to the valve cover bolt holes piercing the top of the intake port, valve cover studs have been supplied. Use thread sealer when installing these studs to prevent oil leakdown. Use Edelbrock Signature Series chrome valve covers #4456 or Elite Series polished aluminum valve covers #4256.

HEAD BOLTS or STUDS: Edelbrock Head Bolt Kit #8561 must be used with these cylinder heads. These cylinder heads will not accept stock length head bolts. To prevent stripping of head bolts or improper torque, you must use the correct length bolt in each location. See Figure 1 for head bolt location.

EXHAUST HEADERS: Any header or manifold designed for D-port heads will fit the Edelbrock Pontiac Cylinder Heads. Fel-Pro #1424 D-port exhaust gaskets are recommended for this application.

SPARK PLUGS: Use 14mm x 3/4" reach gasketed spark plugs. Heat range will vary by application and may range from Champion RC-9YC to RC-14YC (or equivalent). For typical street use, Champion RC-12YC equivalent should work well. Use anti-seize on the plug threads to prevent galling in the cylinder head, and torque to 10 ft.-lbs. **Do not overtighten sparkplugs!**

INSTALLATION

Installation is the same as for original equipment cylinder heads. Consult service manual for specific procedures, if necessary. For 389-455 engines, use Edelbrock #7381, Fel-Pro #1016 or equivalent head gaskets. **NOTE:** Edelbrock Cylinder Head Gasket Set #7382 may also be used. This gasket set includes all necessary gaskets for cylinder head installation, including cylinder head, intake, exhaust, waterneck and valve cover gaskets. 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. Coat threads, washers, and underside of bolt heads with the ARP moly lube supplied with the head bolt kit for accurate torque readings. Torque head bolts according to the torque sequence in four even increments (see Fig. 1). Start in center and work out towards ends. A re-torque is recommended after initial start-up and cool-down (allow 2-3 hours for adequate cooling). It may be necessary to loosen the push rod guide plates in order to achieve the best rocker alignment. Torque the rocker studs to 45 ft-lbs once the guide plates are properly aligned. **NOTE:** It may be necessary to trim the cork valley plate gasket to prevent interference with the installation of the intake manifold.

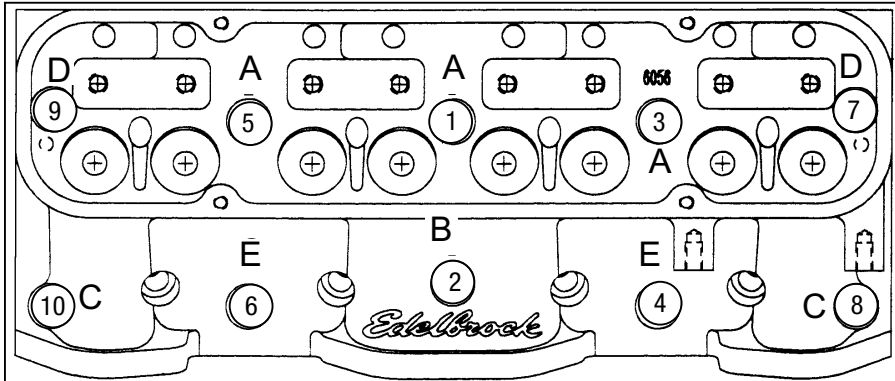


Figure 1- Head Bolt Boss locations and Tightening Sequence

Note: Coat threads, washers and underside of bolt heads with the moly lube supplied with the bolt kit for accurate torque readings, then loosely install all ten head bolts in each head. Torque the bolts in four step increments of 35, 60, 75 ft-lbs. then the final value shown in the table at right. Start torquing the bolts in the center of the head and work your way out toward the ends following the numbered sequence. Re-torque all head bolts after initial warm-up and cool-down.

Head Bolt Locations (#8561):

(see Figure 1)

Qty.	Bolt length	Boss location	Torque Value
6	4.25"	A	85 ft-lbs.
2	4.00"	B	85 ft-lbs.
4	3.75"	C	85 ft-lbs.
4	3.00"	D	85 ft-lbs.
4	2.250"	E	85 ft-lbs.
20	1/2" x 1/8" Hardened washers		

Replacement valves are available separately as:

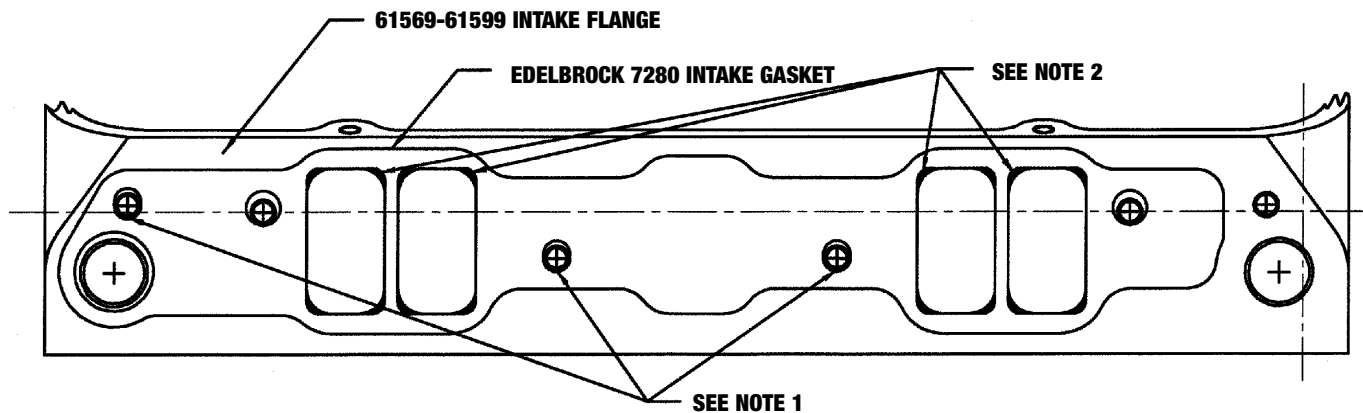
INTAKE VALVES	1 ONLY	SET OF 8
2.11" dia., 11/32" stem	#9781	#9780
EXHAUST VALVES	1 ONLY	SET OF 8
1.66" dia., 11/32" stem	#9783	#9782

PONTIAC CYLINDER HEAD INTAKE MANIFOLD

GASKET FITTING:

NOTE 1: The position of the intake port entry on all Edelbrock Pontiac cylinder heads has the same roof height as a Pontiac 455 Super Duty cylinder head. This was done to provide the best performing intake port while maintaining a stock Pontiac port location. The Fel-Pro #1233 intake manifold gasket has a port roof to intake manifold bolt hole centerline dimension that is .06" lower than 455 Super Duty head dimension. When installing the Edelbrock 7280 or Fel-Pro 1233 intake gasket on Edelbrock Pontiac cylinder heads, align the gasket with the intake port entries. Three of the bolt holes in the gasket will have to be elongated as shown in the illustration.

NOTE 2: The radii of the intake port entry corners on Edelbrock Pontiac cylinder heads are 5/16" to maximize the cross-sectional area through smallest part of the port. The corners of the intake port openings of an Edelbrock 7280 intake manifold gasket (and Fel-Pro #1233) are 3/8". If you are using the intake manifold without port-matching the runner exits or if you port match to the 3/8" radius, you do not have to modify the corners of the port openings in the gasket. If you are port-matching to the 5/16" radii in the cylinder head, then the corners of the gasket port opening should be trimmed.



Edelbrock LLC • 2700 California St. • Torrance, CA 90503
Tech Line: 1-800-416-8628 • Office: 310-781-2222