



# Pro Torker™ Small Block Chevy Cylinder Head #12401

## DESCRIPTION

**RHS™ Pro Torker™ Small Block Chevy cylinder head, bare casting  
cast iron, 170cc intake runner, 76cc combustion chamber, straight plug  
2.020" intake/1.600" exhaust valves**

## Specifications

	Intake	Exhaust
<b>Port Volume:</b>	170cc	67cc
<b>Port Dimension:</b>	1.200" X 2.025"	1.350" X 1.400"
<b>Port Location:</b>	Stock	stock
<b>Valve Angle:</b>	23°(stock angle )	23°(stock angle )
<b>Valve Head Diameter:</b>	2.020"	1.600"
<b>Valve Length:</b>	Stock length	Stock length
<b>Valve Seat Dimensions:</b>	Integral cast iron	1.656" X 1.350" X .375"
<b>Valve Seat Angles:</b>	35/45/60/75	35/45/55/radius
<b>Valve Guide Diameter:</b>	11/32"	11/32"
<b>Valve Guide Spacing:</b>	1.865"	
<b>Valve Guide Material:</b>	Integral cast iron	
<b>Cylinder Head Material:</b>	Cast iron	
<b>Chamber Volume:</b>	76cc	
<b>Spark Plug Configuration:</b>	Straight plug	
<b>Spark Plug Type:</b>	14mm, .450" reach, 5/8" hex, taper seat style	
<b>Spring Pocket Diameter:</b>	1.55"	
<b>Pushrod Diameter:</b>	5/16" (larger diameter will require clearancing)	
<b>Weight:</b>	50 lbs	

## Features

- Optimal port design for greater flow, better atomization & enhanced dynamics
- Unique multi-angled intake & radiused exhaust valve seats for increased flow and horsepower output
- Hardened valve seats for exceptional durability even when used in extreme applications with harsh fuels
- More efficient water jacket design for improved cooling and thermal conductivity, and reduced risk of detonation
- Thick deck faces with added material to allow angle milling for increased compression
- Revised combustion chamber design for excellent combustion thermodynamics and enhanced fuel efficiency
- All accessory bolt holes drilled and tapped to exact tolerances

## Tech Notes

<b>Flat Milling:</b>	.006" per cc
<b>Angle Milling:</b>	.0075" per cc (excessive milling can cause intake manifold misalignment)
<b>Head Bolt Torque:</b>	Refer to cylinder head bolt manufacturer's specifications
<b>Rocker Stud Torque:</b>	45 lb/ft
<b>Intake Manifold Torque:</b>	35 lb/ft
<b>Spring Pocket Machining:</b>	Can be machined to 1.550" maximum diameter, cannot be machined deeper
<b>Pushrod Length:</b>	Measuring with length checker (COMP Cams® #7705) required to verify pushrod geometry
<b>Piston to Valve Clearance:</b>	Must be verified -minimum clearance is .080" intake and .100" exhaust
<b>Retainer to Guide Clearance:</b>	Must always be measured when using high lift cams
<b>Chamber to Dome Clearance:</b>	Must always be checked with domed pistons, clearancing may be necessary
<b>Chamber Volume:</b>	Varies due to valve margins and dishes, should always be verified before installation
<b>Valve Guide Clearance:</b>	Must be checked due to the variance in valve stem diameters between manufacturers Recommended clearance: intake .0015"-.0016", exhaust .002"-.0025" Water jackets require flushing prior to cylinder head installation
<b>Header/Spark Plug Clearance:</b>	Spark plug/ wire boot clearance verification is required prior to header installation. Minor modifications may be necessary in order to achieve proper clearance.

RHS™

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Part #12401IS  
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## Suggested Assembly Components

Part Type	Brand/Part #	Description
Intake Valves	COMP Cams® #6004-8	2.020", stock length, 11/32" valve stem diameter
Exhaust Valves	COMP Cams® #6011-8	1.600", stock length, 11/32" valve stem diameter
Guide Plates	COMP Cams® #4800-8	5/16" guide plate set
Rocker Arm Studs	COMP Cams® #4502-16	3/8" Magnum™ rocker arm stud set
	COMP Cams® #4503-16	7/16" Magnum™ rocker arm stud set

## Additional Recommended Components

Part Type	Brand/Part #	Description
Spark Plugs	ZEX™ #82211-8	Street/strip: Champion V59C, 14mm, .450" reach, 5/8" hex, spark plug set
	ZEX™ #82212-8	Race: Champion V57C, 14mm, .450" reach, 5/8" hex, spark plug set
Rocker Arms	COMP Cams® #1301-16*	Pro Magnum™ 1.52 ratio rocker arm set, 3/8" stud diameter
Intake Gaskets	RHS™ #1707	Intake manifold gasket, 2.09" X 1.28" port, .060" thick
Exhaust Gaskets	RHS™ #1708	Header gasket, 1.500" X 1.500" port size, graphite
Head Gaskets	RHS™ #1700	Cylinder head gasket, 4.060" bore X .041" compressed thickness
	RHS™ #1701	Cylinder head gasket, 4.165" bore X .041" compressed thickness
Head Bolts**	ARP #134-3701	HP head bolt set, 265-400 SBC
Head Studs**	ARP #234-4301	8740 head stud set, 265-400 SBC

## Installation And Application Notes

**\*ALWAYS check for proper rocker arm geometry and pushrod clearance before final installation of cylinder heads.**

All heads with slotted pushrod holes are designed to be used without guide plates and with OE 1.5 ratio stamped rockers, but tolerances in the factory lifter bore locations may mandate additional pushrod clearance in order to insure proper rocker arm geometry. Be extremely careful not to remove too much material when machining for additional clearance. RHS™ will not be held responsible for product failure due to excessive machining. When using aftermarket rocker arms, camshafts and/or engine blocks, RHS™ recommends machining the pushrod holes round and modifying the rocker pedestals to accommodate the use of guide plates and hardened pushrods. All applications utilizing self-aligning rocker arms require a round pushrod hole for clearance.

\*\* Recommended components only, individual application must be verified prior to installation



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