

# Pro Action<sup>TM</sup> Small Block Chevy Cylinder Head #12056

#### **DESCRIPTION**

RHS<sup>TM</sup> Pro Action<sup>TM</sup> Small Block Chevy 23° cylinder head, bare casting aluminum, 220cc intake runner, 64cc combustion chamber, straight plug 2.020" intake/1.600" exhaust valves

## **Specifications**

	Intake	Exhaust
Port Volume: Port Dimension:	220cc	74cc
Port Dimension:	1.225" X 2.200"	1.350" X 1.400"
Port Location:	Stock	stock
Port Location: Valve Angle:	23°(stock angle)	23°(stock angle)
Valve Head Diameter:	2.020"	1.600"
Valve Length:	5.011" (std length + $.100$ ")	5.011" (std length + .

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 Valve Seat Dimensions:
 2.120" X 1.812" X .375"
 1.656" X 1.350" X .375"

 Valve Seat Angles:
 35/45/60/75
 35/45/55/redive

**Valve Seat Angles:** 35/45/60/75 35/45/55/radius

Valve Guide Diameter: 11/32" 11/32"

**Valve Guide Dimensions:** .502" O.D. X 2.130"L X .530" boss dia. .502" O.D. X 2.130"L X .530" boss dia.

Valve Guide Spacing: 1.890"

Valve Guide Material: Premium bronze material for superior heat dissipation and longer life

Cylinder Head Material: Aluminum
Chamber Volume: 64cc
Spark Plug Configuration: Straight plug

**Spark Plug Type:** 14mm, .750" reach, 5/8" hex, flat gasket style

Spring Pocket Diameter: 1.55"

**Pushrod Diameter:** 5/16" (larger diameter will require clearancing)

Weight: 20 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

Flat Milling:	.006" per cc
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Angle Milling: .0075" per cc (excessive milling can cause intake manifold misalignment)

**Head Bolt Torque:** Refer to cylinder head bolt manufacturer's specifications

**Rocker Stud Torque:** 45 lb/ft **Intake Manifold Torque:** 35 lb/ft

Header/Spark Plug Clearance:

**Spring Pocket Machining:** Can be machined to 1.625" maximum diameter, cannot be machined deeper

**Pushrod Length:** Measuring with length checker (COMP Cams® #7705) required to verify pushrod geometry

**Piston to Valve Clearance:** Must be verified -minimum clearance is .080" intake and .100" exhaust

**Retainer to Guide Clearance:** Must always be measured when using high lift cams

Chamber to Dome Clearance: Must always be checked with domed pistons, clearancing may be necessary

Chamber Volume: Varies due to valve margins and dishes, should always be verified before installation

Valve Guide Clearance: 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

Spark plug/ wire boot clearance verification is required prior to header installation.

Minor modifications may be necessary in order to achieve proper clearance.

#### RHSTM

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Part #12056IS Revised 02/17/09



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## **Suggested Assembly Components**

Part Type	Brand/Part #	Description
Intake Valves	COMP Cams® #6001-8	2.020", + .100" long, 11/32" valve stem diameter
Exhaust Valves	COMP Cams® #6002-8	1.600", + .100" long, 11/32" valve stem diameter
Valve Springs*	COMP Cams® #972-16 (-01)	1.460 single valve spring set, 124# @ 1.800" max lift .560"
	COMP Cams® #987-16 (-02)	1.430 dual valve spring set, 95# @ 1.800" max lift .550"
Retainers*	COMP Cams® #743-16 (-01)	1.400" 7° steel retainer set
	COMP Cams® #740-16 (-02)	1.400" 10° Super Lock™ steel retainer set
Valve Locks*	COMP Cams® #601-16 (-01)	11/32" 7° valve lock set
	COMP Cams® #611-16 (-02)	11/32" 10° Super Lock <sup>TM</sup> valve lock set
Valve Stem Seals	COMP Cams® #529-16	.530" metal body viton valve stem seals
Spring Locators*	COMP Cams® #4696-16 (-01)	1.510" valve spring locators
	COMP Cams® #4770-16 (-02)	1.550" valve spring locators
<b>Guide Plates</b>	COMP Cams® #4808-8	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 <sup>TM</sup> rocker arm stud set

### **Additional Recommended Components**

Part Type	Brand/Part #	Description
Spark Plugs	ZEX <sup>TM</sup> #82003-8	Street/strip: 14mm, .750" reach, 5/8" hex, premium spark plug set
	ZEX <sup>TM</sup> #82216-8	Race: Champion C57YC, 14mm, .750" reach, 5/8" hex, spark plug set
Rocker Arms	COMP Cams® #1301-16	Pro Magnum <sup>TM</sup> 1.52 ratio rocker arm set, 3/8" stud diameter
Shaft Mount Rockers	COMP Cams® #1503	1.6 ratio shaft-mounted full roller aluminum rocker arms
Intake Gaskets	RHS <sup>TM</sup> #1707	Intake manifold gasket,2.09" X 1.28" port, .060" thick
Exhaust Gaskets	RHS <sup>TM</sup> #1708	Header gasket, 1.500" X 1.500" port size, graphite
Head Gaskets	RHS <sup>TM</sup> #1700	Cylinder head gasket, 4.060" bore X .041" compressed thickness
	RHS <sup>TM</sup> #1701	Cylinder head gasket, 4.165" bore X .041" compressed thickness
Valve Cover Gaskets	RHS <sup>TM</sup> #1709	Valve cover gasket, .120" thick, silicone reinforced
Head Bolts**	ARP #134-3701	HP head bolt set, 265-400 SBC
Head Studs**	ARP #234-4301	8740 head stud set, 265-400 SBC
Stud Girdle**	COMP Cams® #4004	Aluminum stud girdle set, 265-400 SBC

#### **Application Notes**

- \* -01 indicates flat tappet application
- \* -02 indicates hydraulic roller application
- \*\* Recommended components only, individual application <u>must</u> be verified prior to installation



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