

## Pro Action<sup>TM</sup> Small Block Chevy Cylinder Head #12044-01

#### **DESCRIPTION**

RHS<sup>TM</sup> Pro Action<sup>TM</sup> Small Block Chevy 23° cylinder head, flat tappet assembly aluminum, 200cc intake runner, 72cc combustion chamber, angle plug 2.020" intake/1.600" exhaust valves

### **Specifications**

	Intake	Exhaust
Port Volume:	200cc	74cc
Port Dimension:	1.200" X 2.180"	1.350" X 1.400"
Port Location:	Stock	stock
Volvo Anglos	23°(stock angle)	23°(stock angle)

Valve Angle: 23°(stock angle) 23°(stock angle)

 Valve Head Diameter:
 2.020"
 1.600"

 Valve Length:
 5.011" (std length + .100")
 5.011"

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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/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: 72cc
Spark Plug Configuration: Angle 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: 24 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

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

**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

**Header/Spark Plug Clearance:** 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 #12044-01IS Revised 02/17/09



Part Type

**Spark Plugs** 

**Rocker Arms** 

Intake Gaskets

Head Gaskets

Head Bolts\*\*

Head Studs\*\*

Stud Girdle\*\*

**Exhaust Gaskets** 

**Shaft Mount Rockers** 

Valve Cover Gaskets

# **Pro Action<sup>TM</sup> Small Block Chevy Cylinder Head #12044-01**

## Suggested Assembly Components

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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"
Retainers*	COMP Cams® #743-16 (-01)	1.400" 7° steel retainer set
Valve Locks*	COMP Cams® #601-16 (-01)	11/32" 7° 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
<b>Guide Plates</b>	COMP Cams® #4808-8	5/16" guide plate set
Rocker Arm Studs	COMP Cams® #4502-16	3/8" Magnum <sup>TM</sup> rocker arm stud set

Additional Recommended Components

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

8740 head stud set, 265-400 SBC

Aluminum stud girdle set, 265-400 SBC

#### **Application Notes**

- \* -01 indicates flat tappet application
- \* -02 indicates hydraulic roller application

ARP #234-4301

COMP Cams® #4004

\*\* Recommended components only, individual application <u>must</u> be verified prior to installation



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