



Pro Action™ Small Block Chevy Cylinder Head #12319-01

DESCRIPTION

**RHS™ Pro Action™ Small Block Chevy 23° cylinder head, flat tappet assembly
cast iron, 200cc intake runner, 64cc combustion chamber, straight 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 |
| 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 + .100") |
| 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: | Cast iron | |
| Chamber Volume: | 64cc | |
| Spark Plug Configuration: | Straight plug | |
| Spark Plug Type: | 14mm, .708" reach, 5/8" hex, taper seat style (new RHS™ castings only) 14mm, .450" reach, 5/8" hex, taper seat style (old Pro Topline castings only) | |
| Spring Pocket Diameter: | 1.55" | |
| Pushrod Diameter: | 5/16" (larger diameter will require clearancing) | |
| Weight: | 55 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" |
| 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. |

RHS™

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www.racingheadservice.com

Part #12319-01IS

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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" |
| 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 |
| Guide Plates | COMP Cams® #4808-8 | 5/16" guide plate set |
| Rocker Arm Studs | COMP Cams® #4502-16 | 3/8" Magnum™ rocker arm stud set |

Additional Recommended Components

| Part Type | Brand/Part # | Description |
|--------------------------|---------------------|--|
| Spark Plugs, RHS™ | ZEX™ #82070-8 | Street/strip 14mm, .708" reach, 5/8" hex, premium spark plug set |
| | ZEX™ #82209-8 | Race: Champion S57YC, 14mm, .708" reach, 5/8" hex, spark plug set |
| Spark Plugs, Pro Topline | 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 |
| Shaft Mount Rockers | COMP Cams® #1503 | 1.6 ratio shaft-mounted full roller aluminum rocker arms |
| 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 |
| Valve Cover Gaskets | RHS™ #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 must be verified prior to installation



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