



Pro Action™ Small Block Ford Cylinder Head #35004

DESCRIPTION

**RHS™ Pro Action™ Small Block Ford cylinder head, bare casting
aluminum, 180cc intake runner, 58cc combustion chamber, 2.020" intake/1.600" exhaust valves**

Specifications

| | Intake | Exhaust |
|--------------------------------|---|--|
| Port Volume: | 180cc | 66cc |
| Port Dimension: | 1.150" X 2.020" | 1.300" X 1.325" |
| Port Location: | Stock | stock |
| Valve Angle: | 20°(stock angle) | 20°(stock angle) |
| Valve Head Diameter: | 2.020" | 1.600" |
| Valve Length: | 5.011" (SBC std length + .100") | 5.011" (SBC 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 2.100"L X .530" boss dia. | .502" O.D. X 2.100"L X .530" boss dia. |
| Valve Guide Spacing: | 1.89" | |
| Valve Guide Material: | Premium bronze material for superior heat dissipation and longer life | |
| Cylinder Head Material: | Aluminum | |
| Chamber Volume: | 58cc | |
| Spark Plug Location: | Optimized for best performance | |
| 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
- Dual exhaust flange pattern to fit most common header models

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: | Additional valve spring pocket machining is not recommended |
| 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. |

RHS™

3416 Democrat Rd. Memphis, TN 38118

Phone: (877) 776-4323 Fax: (901) 368 1951

www.racingheadservice.com

Part #35004IS

Revised 01/28/07



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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™ 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® #4771-16 (-02) | 1.550" 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 |
| | COMP Cams® #4503-16 | 7/16" Magnum™ rocker arm stud set |

Additional Recommended Components

| Part Type | Brand/Part # | Description |
|----------------------------|---------------------|---|
| Spark Plugs | ZEX™ #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 |
| Rocker Arms | COMP Cams® #1331-16 | Pro Magnum™ 1.6 ratio rocker arm set, 3/8" stud diameter |
| Intake Gaskets | RHS™ #1713 | Intake manifold gasket, 1.28" X 2.10" port, .060" thick |
| Exhaust Gaskets | RHS™ #1714 | Header gasket, 1.420" X 1.620" port size, graphite |
| Head Gaskets | RHS™ #1704 | Cylinder head gasket, 4.030" bore X .040" compressed thickness |
| | RHS™ #1705 | Cylinder head gasket, 4.155" bore X .040" compressed thickness |
| Valve Cover Gaskets | RHS™ #1715 | Valve cover gasket, .120" thick, silicone reinforced |
| Head Bolts** | ARP #154-3605 | HP head bolt set, 289-302, 5.0 liter |
| | ARP #154-3603 | HP head bolt set, 351W |
| Head Studs** | ARP #154-4005 | 8740 cylinder head stud set, 289-302, 5.0 liter |
| | ARP #154-4003 | 8740 cylinder head stud set, 351W |
| Stud Girdle** | COMP Cams® #4015 | Aluminum stud girdle set, 289-302, 5.0 liter, 351W |

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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