



Pro Action™ Small Block Ford Cylinder Head #35303

DESCRIPTION

RHS™ Pro Action™ Small Block Ford cylinder head, bare casting
cast iron, 215cc intake runner, 64cc combustion chamber, 2.080" intake/1.600" exhaust valves

Specifications

	Intake	Exhaust
Port Volume:	215cc	66cc
Port Dimension:	1.266" X 2.020"	1.300" X 1.325"
Port Location:	Stock	stock
Valve Angle:	20°(stock angle)	20°(stock angle)
Valve Head Diameter:	2.080"	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:	Cast iron	
Chamber Volume:	64cc	
Spark Plug Location:	Optimized for best performance	
Spark Plug Type:	14mm, .450" reach, 5/8" hex, tapered seat style	
Spring Pocket Diameter:	1.55"	
Pushrod Diameter:	5/16" (larger diameter will require clearancing)	
Weight:	49 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 #35303IS

Revised 01/28/07



Pro Action™ Small Block Ford Cylinder Head #35303

Suggested Assembly Components

Part Type	Brand/Part #	Description
Intake Valves	COMP Cams® #6003-8	2.080", + .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™ #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® #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



RHS™

3416 Democrat Rd. Memphis, TN 38118
 Phone: (877) 776-4323 Fax: (901) 368 1951
www.racingheadservice.com

Part #35303IS
 Revised 01/28/07