

# **Pro Action**<sup>TM</sup> Small Block Ford Cylinder Head #35010-01

## **DESCRIPTION**

RHS<sup>TM</sup> Pro Action<sup>TM</sup> Small Block Ford cylinder head, flat tappet assembly aluminum, 160cc intake runner, 58cc combustion chamber, 1.940" intake/1.600" exhaust valves

## **Specifications**

 Port Volume:
 160cc
 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: 1.940" 1.600"

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

 Valve Seat Dimensions:
 2.006" X 1.900" 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: 26 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

Header/Spark Plug Clearance:

**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

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

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

**Accessory Holes:** Some older applications utilize the AIR Reactor hole in the cylinder as an accessory mount.

These applications require a reducer bushing from Ford, part # F4ZZ6E086A,

to provide the proper diameter to mount the brackets.



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# **Suggested Assembly Components**

Part Type	Brand/Part #	Description
Intake Valves	COMP Cams® #6014-8	1.940", + .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® #4816-8	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	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® #1331-16	Pro Magnum <sup>TM</sup> 1.6 ratio rocker arm set, 3/8" stud diameter
Intake Gaskets	RHS <sup>TM</sup> #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 thickess
	RHS™ #1705	Cylinder head gasket, 4.155" bore X .040" compressed thickess
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
- \*\*\* Due to the difference in deck heights, different guide plates may need to be used, check prior to final assembly\*

