



Instruction Sheet

Manufacturer of the Highest Quality Engine Blocks, Heads & Manifolds.

CASTING ID# **WOR-071C**

16° BIG BLOCK CHEVY ALUMINUM HEADS

Technical Instructions for assembled & bare head part numbers:

020750 WOR-071C Bare head, 16° valve angle, 325cc Intake runner, 80cc chamber

020750 - 3 Assembled head, for Solid roller camshaft

020750 - 4 Assembled head, for Solid roller camshaft

020750 WOR-071C Bare head, 16° valve angle, 345cc Intake runner, 80cc chamber

020750 - 3 Assembled head, for Solid roller camshaft

020750 - 4 Assembled head, for Solid roller camshaft



Specifications:

Port Dimensions: 020750 325cc intake 2.310" x 1.700", exhaust 1.600" x 1.890"

020750C 345cc intake 2.465" x 1.800", exhaust 1.775" x 1.930"

Port Locations: Intake: stock exhaust: Raised .600"

Combustion Chamber Volume: 80cc.

Valve Guides: Manganese Bronze

Valve Guide Spacing: Ctr-Ctr 2.000" intake moved .030"

Valve Seats: Intake & Exhaust = Durabond Powdered metal seat .006" press fit

Valve Seat Dimension: Intake 2.450"x 2.000"x .375" Exhaust 2.000"x 1.600"x .375"

Valve Seat Angles: Intake = 35°-(50°(.040"))-60°-75° Exhaust = 38°(50°(.060))-500radius-75°

Intake Valves: 2.350" 11/32" x .350 Replacement part # 702865SD5 (For -3,-4 Head assemblies)

Exh. Valves: 1.880" 11/32" x .+100" Replacement part # 702735SD5 (For -3,-4 Head assemblies)

Valve Locks: 10 degree machined steel locks. Replacement part # 702156-16 (for -3,4 head assemblies)

Valve Seals: Metal clad Viton valve seal. Replacement part # 702179-16 (for -3,4 head assemblies)

Valve Springs: 1.550" O.D. dual valve spring. Seat pressure 200 lbs. @ 1.900 Replacement part # 702210-16 (for -3 head assemblies)

1.640" O.D. dual valve spring. Seat pressure 275 lbs. @ 2.000 Replacement part # 702212-16 (for -4 head assemblies)

Spring Retainers: 1.550" O.D. single valve spring Replacement part # 702112-8 (-3 head assemblies)

1.640" O.D. single valve spring Replacement part # 702126-8 (-4 head assemblies)

Pushrod Guide Plates: N/A

Pushrods: To obtain proper rocker geometry, pushrod length will need to be determined by using an adjustable checking pushrod.

Rocker Arms: Machined for a Jesel or T&D Shaft System (Jesel # KPS325131)

NOTE: When using rocker arms greater than a 1.7 ratio, it may be necessary to elongate the pushrod guide holes in the cylinder head.

Rocker Arm Studs: N/A

Rocker Stud Girdle: N/A

Head Bolts: On a Mark IV block, standard BBC head bolt hardware (ARP bolts 135-3603). ON a Mark V & VI block ARP# 135-3607

Head Studs: On a Mark IV block, standard BBC head Stud hardware (ARP studs 235-4016). On a Mark V & VI block ARP# 235-4113

Head Gaskets: When using BMP BBC 16 Degree heads on Mark IV blocks use the corresponding gasket that is compatible with the bore size of the engine. 4.370" = Felpro 1027, 4.540" = Felpro 1017 & 4.630" = Felpro 1057. When using a BMP BBC 16 Degree head on a Mark V or VI block, you must use Mark V or VI head gasket depending on which one was used

Intake Gaskets: Mr. Gasket 121 or equivalent

Header Gaskets: Fel Pro 1410 or equivalent

Pistons: 16° aftermarket pistons

Spark Plugs: 14mm .750" reach, recommended starting point Accel #416 or equivalent.

Head Bolt Torque Specs:

Torque all head bolts to 75 ft. lbs w/ oil. Before torquing, coat the head bolts and rocker studs with a thread sealing paste. **Note:** Refer to the factory service manual for proper head bolt tightening sequence

Rocker Arm Studs: N/A

Maximum Valve Diameter: 2.350 Intake & 1.900 Exhaust.

Maximum Spring Seat Depth: Spring seat is cut to accept a 1.550 spring. IT IS NOT RECOMMENDED TO CUT THE SPRING SEAT DEEPER OR TO ENLARGE THE SEAT FOR A SPRING DIAMETER OVER 1.650.

Maximum Spring Diameter: 1.650

Maximum Flat Mill:

Maximum Angle Mill:

Approximate Milling Guidelines: .065 per 1cc

Brackets and Accessories:

1. The BMP BBC 16 Degree heads have accessory bolt holes drilled in the factory locations.

Before Final Assembly:

Please inspect castings for defects or damage prior to modification, assembly or installation. Cylinder heads that have been modified, installed or used ARE NOT RETURNABLE. At this time install the cylinder head to the block with no head gasket and snug the bolts.

This assembly should be checked to assure that all components are compatible with your combination before assembling your engine. There is no warranty on valve springs of any type.

1. Due to different ratio rockers and different deck height blocks, now is the time to check for pushrod to cylinder head interference. If the pushrod has interference with the cylinder head, remove the head, grind the casting the needed amount. Clean the head after grinding then reinstall the head using the mock up procedure and recheck the clearance. Repeat the procedure as necessary until the desired clearance is achieved.
2. Once everything has been checked and all the desired clearances and specifications achieved, final assembly may begin.
3. If a new flat tappet camshaft is being installed with a-2 cylinder head, it is HIGHLY RECOMMENDED to remove the inner valve spring during the camshaft break in procedure. After the cam is broken in, reinstall the inner valve spring.
4. If you bought bare castings then remember, you must wash the heads before assembly.

WARRANTY TERMS:

No warranties of any nature (expressed, implied, fitness of usage or merchantability) are given on these products. Seller undertakes no responsibility for any product sold. Additional disclaimers are within and are binding upon this contract. Due to the intended usage of products offered, all products are sold on an "as-is" basis, and no warranties of any kind, whether written or oral are made by Bill Mitchell Products, its agents or employees. All implied warranties, including the implied warranties of merchantability and fitness are expressly excluded, and the buyer bears the entire risk as to quality performance and use of these products. Bill Mitchell Products will assume no responsibility of personal injury, labor or other injury arising out of the usage of high performance racing parts or products. Any defective part will be handled between the original manufacturer and the buyer. Bill Mitchell Products reserves the right to change specifications, prices and discontinue parts without notice. Installation of Bill Mitchell Products heads may adversely affect the vehicle manufacturer's warranties, and may violate State and Federal laws when vehicles so equipped are operated other than strictly off-highway. Bill Mitchell Products reserves the right to discontinue any product at its sole discretion and without any liability with respect to similar products already in the field. Some parts are not legal for sale or use on pollution controlled motor vehicles.

While our products are used in many applications using super-chargers, Turbos or Nitrous successfully, please be aware that there is a greater potential for engine damage due to the possibility of tuning errors.

PLEASE DO NOT CALL THE DEALER FROM WHICH YOU PURCHASED YOUR PARTS. If you have any questions, please contact BMP customer service at 631-737-0372 (Fax 631-737-0467).

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

BILL MITCHELL PRODUCTS

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