

# B1 Series Cylinder Heads



## Installation Instructions

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**Check piston to head clearance.**

**Check valve stems for burrs created by number stamps or mishandling.**

Check valve to piston clearance. It will be necessary to machine valve reliefs on pistons with stock valve locations.

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**Bronze guides should be wet-honed for clearance. A good cross-hatch pattern is desirable for initial oil retention.**

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Valve stems should be lubricated with cam lube or a lubricant which will stay in the guide until the engine is warm and sufficient engine lubricant is oiling the valve and guides.

*Recommended valve clearances: .0015 Intake and .00175 Exhaust. Use an oil and STP mixture for lubrication of valve guides.*

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**Most bronze valve guide wear problems are created in the initial preparation and engine warm-up. Bronze guides ABSOLUTELY cannot be run dry, even for a second. If a valve stem is used, the neoprene-teflon insert type is desirable.**

*A tight seal is not recommended.*

Torque head to 75 ft-lb using increments of no more than 20 ft-lb. Care should be taken to check the length of the top row of head studs. It may be necessary to shorten these studs to avoid interference with rocker arms.

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A re-torque of heads after initial warm-up is desirable, preferably after engine is allowed to cool completely.

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Heads have a 68 cc combustion chamber out of the box. They may be flat milled as much as .130 in. at a rate of .0057 in. per cc. The intake correction rate is .010 in. per .010 in. removed from the deck.

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Check pushrod clearance with the head installed on the engine block that will be used.

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Use Anti-Seize compound on all bolts and spark plug threads.

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Champion 'C' Series spark plugs are recommended. Gasoline cars can start with a C 59YC. This is only a recommended starting range. You may discover that a colder or hotter plug will work better with your combination.

**Put large flat side of spark plug gasket next to head.**

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Dyno tests have shown that engines of 499 cu. in. or larger perform best with 35-36 degrees of timing, and 38-39 degrees for 420-470 cu. in. engines. These tests were conducted using MSD 7A components. Attempts to use more timing than this could result in damage to engine components.

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Because of the high-flow design of the exhaust port, porting should be limited to radiusing the seat and matching the port immediately below the seat to the i.d. of the exhaust seat insert. Smoothing the remainder of the port is acceptable, but substantial removal of material could be counter-productive.

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Rocker stands should be mounted using the B1 stand hardware kit. This kit includes 10 3/8 studs and 6 5/16 studs that should be installed on rocker pads (above the intake ports).

Nylatron rocker spacers may need to be deburred with emery cloth or sand paper to allow a proper fit on the rocker shaft.

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Please check these heads thoroughly in every possible way. If you suspect a defect is present, contact Brodix or B1 before any work has been done.

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**NOTE** - The use of external oil drain downs from the heads to the oil pan is highly recommended for better oil control and greater performance.

**It would be advisable to groove the number 4 cam journal to provide adequate oiling to the rocker arms.**

**Warning** - Please be advised that heat soaking aluminum heads above 250 degrees Fahrenheit can drastically affect the hardness of the head. There are cleaning techniques being introduced into the market that utilize high heat to remove oil, etc. from castings.

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**WE DO NOT RECOMMEND THE USE OF HEAT TO CLEAN THESE HEADS.**

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Please feel free to call or write should a problem or question arise.

We have a complete repair service available in the event of damage to the heads.

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**Warranty:** The products listed in this brochure are sold without any express warranty of merchantability or fitness for the intended purpose. Where that purpose is competitive racing, they are sold with no warranty whatsoever.

We have a complete repair service available, in the event of damage by engine failure, etc. We also stock oversized guides and seats. Please feel free to call or write should a problem or question of any nature arise.

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**BRODIX**<sup>®</sup>  
**CYLINDER HEADS**

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