## Installation Instructions for 51475 and 51479 Cylinder Heads for Big-Block Chevrolet

## \*\*IMPORTANT - READ THIS FIRST\*\* These Heads are Intended for Racing Use Only!!

- Heads are cast using virgin 356-A alloy material and heat treated to a T6 temper
- Combustion chamber volume: 119cc with CNC-profiled machined combustion chambers
- Intake runner volume: 350cc as cast
- Intake valve: 2.300" 11/32" stem diameter, 5.375" length
- Exhaust valve: 1.880" 11/32" stem diameter, 5.425" length
- Exhaust ports are raised .625" from stock location and are machined to standard bolt pattern
- Spring pockets: 1.770" diameter
- Premium bronze valve guides machined for .531" diameter seal
- Valve spring installed height: With a .060" spring cup you can achieve a 2.000"+ for intake and 1.950" exhaust valve spring installed height.
- Valve seats: Cast alloy designed for unleaded gasoline.
- Spark plugs: Gasket-style seat, 3/4" reach with 5/8" hex. Always use anti-seize on plugs in aluminum heads.
- Guideplates: This head is designed to use stock dimension guideplates. We have found that some aftermarket guide plates will vary from those specifications and may need to be cut and welded to locate the rocker arm roller tip to be centered on the tip of the valve stem.
- Pushrods: Using proper length pushrods cannot be over emphasized!! Good valve train geometry starts when the right length pushrod is used for your specific engine combination (deck height, cam base circle, lifter length and choice of rocker arms). The fact is, if you are using stock length pushrods, your valve train is probably wrong. Before ordering pushrods use an adjustable pushrod checking tool (# 270-99730-2) to determine the proper length for your particular combination.
- Rocker arms: Our stud location was established using standard aluminum extruded rocker arms and +.100" length valves. Always trial fit rockers before final assembly! Always use a premium grade extruded aluminum roller rocker arm.
- Piston to valve clearance: Most performance applications will require machining of the valve reliefs for proper piston-to-valve clearance or consider a set of custom pistons. **This is a must-check operation.**
- Head bolts or studs: Requires 5 longer bolts or studs per head for the row beside the exhaust ports. Bolt kit 070-135-3612 includes 5 bolts per kit.
- Intake manifolds: There are many manifolds that do not match the flow requirements of this cylinder head. It pays to have your manifold checked on a flowbench.
- Stud girdles: Use Jeg's #555-20518.
- Head Gasket: 119cc CNC combustion chamber head on a Mark IV block requires Fel-Pro # 375-1017-1 or equivalent; Gen V and Gen VI blocks require Fel-Pro # 375-17048. Check to make sure the head gasket fire ring does not protrude into the chamber.
- Intake gasket: Because the intake ports are 2.45" x 1.75", they require Fel-Pro # 375-1275, Mr.Gasket # 720-5817 or equivalent.
- Exhaust Gasket: Fel-Pro # 375-1412, Mr. Gasket # 720-5912 or equivalent.
- Valve jobs: When you purchase our heads bare, the valve seats extend out of the chambers and require a top cut to blend the seat to the roof of the chamber so as not to create an edge on the seat, which would promote premature detonation.

Any modification to the casting voids any warranty!

