



CAM SHAFT INSTALLATION INFORMATION

INTAKE CAM GRIND# EX031

Upon installation of your WEB-CAM camshaft, check the following. These operations are very important to engine life, please follow instructions! If your cam is described as a "bolt-in" in the WEB-CAM catalog, you may skip 1-5 below.

1. Check piston to valve clearance. Provide the necessary clearance by removing material from the piston. Minimum clearance intake .050", exhaust .080".
2. Check valve to valve clearance. It may be necessary to remove material from the valves or sink valve seat height to head.
3. Check the valve spring retainer to valve guide clearance at maximum lift. Remove material from top of valve guide to provide a minimum of .030" clearance.
4. Check for valve spring coil bind at maximum valve lift. Clearance at valve should be at least .015".
5. Be certain that cam and/or rocker arms rotate freely in head or block. Remove material from head, block or rocker arms where necessary.
6. Engine and cam life depend on proper installation. New or reground followers should be used when installing WEB-CAM profiles. Apply the provided assembly lube to cam lobe and follower surfaces.

NOTE: Damage will occur if Cam Position Sensor Pin is not installed correctly. Pin should protrude .300 max for the Hayabusa.

Valve Timing Information

Engine: 99-07 Suzuki GSX 1300R Hayabusa

Grind# EX031

SPECIAL PROFILE FOR BROCK'S PERFORMANCE EXHAUST

| | |
|---------------|-----------------|
| Lobe Center | @ 100° |
| Valve Lash | .006 - .008 In. |
| Valve Lift | .348 |
| Duration | 260° |
| Duration@.050 | 235° |

Valve timing is checked with zero valve lash @ .050 inches of valve lift.

Reference Only - Your Actual Numbers May Vary.

| | | |
|---------|-----|--------|
| Exhaust | 33° | Before |
| Opens | | BDC |
| Exhaust | 13° | After |
| Closes | | TDC |

Special Note: Piston to valve clearance: Measure at 10° AFTER TDC on the INTAKE side using a dial indicator and Brock's Performance Valve Clearance Tool (part# VTOOL) or equivalent. You should have at least .060 - .080 clearance or more with our pistons. If you have less clearance move your lobe center numbers accordingly to obtain a minimum of .060 In. clearance at 10° ATDC. A couple of degrees variance on your lobe center numbers will not affect performance.

****If you do not have enough piston to valve clearance, catastrophic engine failure can occur!****

Note: We have spent WEEKS on the dyno coming up with these numbers for use in OUR combination. We have fine tuned the AVERAGE and PEAK power numbers to allow maximum acceleration... not just bragging numbers on the dyno.

For additional information check out our information forum at www.BrocksPerformance.com or e-mail advice@BrocksPerformance.com or call the Order Line at 937.912.0054