

### Technical Specifications:

Bore: 52.0mm

Compression Ratio: 11.5:1

Valve Clearance: .002" / .004"

Cylinder Head Torque: 10 ft. lbs.

Keihin PC18 Carburetor

### IMPORTANT - PLEASE READ CAREFULLY

*We recommend that this performance part be installed by a qualified motorcycle technician. If you have any doubts as to your ability to install this performance part, please consult with your local motorcycle dealer. Read all instructions first before starting installation. Make sure the motorcycle and exhaust system are completely cool before starting the installation. Also, make sure the bike is secure on a centerstand or ideally a service lift during installation. Be sure to save all stock components for possible use later.*

### Warranty Information

PitBoss Racing products are intended for closed course competition purposes only, and therefore are sold "as is" without warranty. PitBoss Racing specifically disclaims any warranties of merchantability or fitness for a particular purpose and disclaims all responsibility for consequential and incidental damages or any other losses arising from the use of these products or parts.



## INSTALLATION INSTRUCTIONS

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1. Make sure the bike is completely cool and secure on a centerstand before starting the installation.
2. Drain the engine oil.
3. Remove plastic / seat assembly.
4. Remove exhaust pipe.
5. Remove fuel tank.
6. Remove carburetor and air box / manifold.
7. Remove cam sprocket cover by loosening bolt from the right side of the engine to remove the left side cam cover.
8. Remove tappet covers.
9. Remove left side crankcase cover. Rotate the flywheel to T.D.C. by aligning the "T" mark on the flywheel with the groove on the top of the engine case.  
  
When these marks line up, make sure the "O" on the cam gear is aligned with the groove at the front of the engine cylinder head.
10. Remove cam sprocket bolts.
11. Remove cam chain tensioner from underneath motorcycle. This bolt is a 14mm head on the front left side of the bottom of the engine.
12. Remove cam gear.
13. Remove cylinder head nuts & washers, making a note of where the copper washer is used for assembly later.
14. Remove cylinder head.
15. Remove cam chain wheel from inside cylinder.
16. Remove cylinder.
17. Remove piston & pin by removing cir-clips.
18. Clean gasket surfaces (base gasket and head gasket).
19. Install rings onto piston. "R" is the top ring. "RN" is the second ring. Install the oil ring and oil ring retainers.
20. Install piston to connecting rod and install new retaining clips to secure wrist pin.
21. Install base gasket and large O-ring.
22. Coat the inside of the cylinder with clean motor oil.
23. Install new cylinder over piston making sure ring gaps are away from each other. Make sure to reuse dowel pins between cylinder & crankcase and cylinder & cylinder head.
24. Reinstall cam-chain when to new cylinder with cam chain going around wheel.
25. Remove right side cylinder head cover to access rocker arm shafts. Remove the rocker arm shafts by pulling out with bolt from the right side of the cylinder head.
26. Remove camshaft by pulling out from left side.
27. Install new camshaft, making sure the cam is facing the correct direction. The cam lobes should be facing toward the rear wheel. If this is installed upside-down, the bike will run but will not run well at the top end.



**INSTALLATION INSTRUCTIONS**

- 28. Reinstall rocker arms and rocker arm shafts.
- 29. Install new cylinder head gasket onto cylinder. Install the 2nd black seal into the recessed hole on the cylinder. Install the green rubber seal over the right side lower cylinder stud.
- 30. Install the cylinder head and torque to 10 ft. lbs.
- 31. Reinstall cam chain and align the "T" and "O" marks to ensure Top Dead Center (T.D.C.)
- 32. Tighten cam sprocket bolts.
- 33. Reinstall cam chain tensioner, spring, and bushing.
- 34. Rotate engine over by turning flywheel.
- 35. Adjust valve clearance to .002" / .004"
- 36. Install new manifold, carburetor, filter and gasket. We recommend an 85 main jet (95 shipped in carb). If the main jet is too large, the bike will not rev out on top end.
- 37. Make sure to use the supplied insulator between cylinder head and manifold to keep fuel from becoming too hot.
- 38. Reinstall covers and chassis parts removed in previous steps.
- 39. Add 800cc 10W-30W engine oil.
- 40. Double check your work. Look for leaks after first run. Make sure you go through one tank of fuel for break-in at low throttle positions.

**Horsepower Comparison  
88cc Kit vs. Stock Kit**

