



12051 Rivera Rd., Santa Fe Springs, CA 90670 USA (562) 945-7578 / 1-888-ITS NIKS FAX (562) 698-7029

**H-948B**

**HONDA CR-80 to 105cc  
BIG BORE SLEEVE KIT 1986-2001**

**GENERAL MACHINING and INSTALLATION**

Thank you for your interest in **L.A. SLEEVE** and **ProCross** Genuine Racing Parts products, and congratulations on purchasing your Big Bore bolt-on kit!

**Before beginning any installation procedures, please be sure to check that all parts ordered are in the shipping carton.**

**Parts required for this application:**

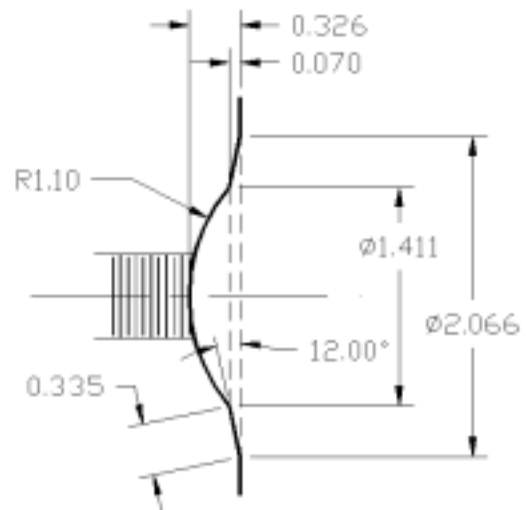
Sleeve Part No. H-948B

Piston Kit Part No. W948PS (includes rings, clips, wrist pin)

Gasket Kit Part No. GS948C (head and base)

These tips are intended to be a guide for installing sleeves into cylinders. There are always exceptions to the rule and care must be taken on special applications.

1. Always check to make sure cylinder has not been previously decked.
2. Cylinder must be bored to accept the new sleeve.
3. Recommended interference fit is .004.
4. A countersink at the top of the cylinder is needed to accept the flanged sleeve.
5. Heat the cylinder to 400° for 45 minutes to an hour. The sleeve should drop right in if the barrel is heated properly. You will have 5 to 10 seconds to line up the ports.
6. Under a hydraulic press, keep pressure on the sleeve as the cylinder cools.
7. Milling the top deck of the cylinder always adds a quality touch. A caution here, some cylinders may not be able to have the top surface decked.
8. For 2-stroke cylinders, blending or matching the ports is vital to the performance of the engine.
9. Blend cylinder to match the sleeve ports, not visa-versa. It is very important to grind an upward 60° angle at the top of the intake boost port. This boost port angle should reach the same height as the transfer port. The angle is also important because it will prevent the ring ends from catching this edge of the intake boost port.
10. Bore cylinder to fit the piston. Allow .0025 piston clearance measured 90 degrees from wrist pin hole at the skirt bottom or largest diameter. Ring end gap should be .010 to .012. Arrow on top of the piston should point towards exhaust side of the cylinder after installation.
11. Re-chamber the head to accept the 52mm piston.  
Head volume: 7cc.  
Use specifications shown on the drawing.
12. Make sure all parts are clean before installing to the cycle.
13. Preferred compression is 150 lbs. to 160 lbs.





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**TECHNICAL NOTES and INSTALLATION INSTRUCTIONS**

The CR-105 Big Bore kit is a relatively easy bolt-on kit at about the cost of a new cylinder. The kit will increase horsepower throughout the power band, with brutal power from mid-range to top end. The kit is designed to use with a stock carb and pipe, but to truly utilize all the available horsepower we highly recommend using the FMF Gold Series pipe. Stage II porting will make the CR-105 a top end screamer.

1. Inspect all parts to be sure they are clean. Replace any worn or broken parts such as wrist pin bearing, reed petals, etc.
2. Install piston to rod using circlips provided with the piston kit. Note: Clips **do not** interchange with O.E.M. Honda clips. Install new base gasket, oil cylinder wall and install cylinder. Use special big bore head gasket provided. When using a copper gasket, a gasket sealer must be used to help seal in the water. Gascacinch or Permatex 101B is recommended. Coat both sides of the head gasket and the cylinder surface with the sealer. Follow manufacturer's directions.
3. When installing the piston, arrow on top should always point towards the exhaust port.
4. Be sure air filter is clean. It is recommended you replace the old filter with a new one.
5. Re-install carb and exhaust system.
6. See recommended break-in procedure on next page.
7. Use O.E.M. 2-stroke oil requirements. ELF oil is also an excellent alternative.
8. A gas/oil ratio of 32:1 is recommended (large carb only).
9. After break-in the compression should be 155 lbs.

**CARBURETION NOTES**

Always check jetting using spark plug as a guide. A light brown tip color indicates the proper jetting.

1. Stock Carb with Stock Pipe  
Main Jet: 2 sizes larger. All else stock.
2. Stock Carb with FMF Pipe  
Main Jet: 3 sizes larger.

About the Keihin Carb: The Keihin carbs are now being used by the big four Japanese race teams and are the hot set-up. We have pre-jetted the 28mm PWK carb to match the 105 kit. The carb is supplied with 2 extra main jets and a throttle cable.

Needle adjustment: This affects primarily the mid-range of your powerband. If your bike bogs or hesitates when accelerating, try richening your needle by lowering the needle clip one position at a time. If the bike sputters when accelerating, try leaning the needle by raising the clip.

Main jet: This jet primarily affects \_ throttle to full throttle of the top end of your powerband. First, try running the bike at full throttle for a couple of minutes. Remove your spark plug and look at the insulator tip. If the insulator is white and/or blistered, then you are too lean. A black and wet insulator means you are too rich. A light brown color indicates the proper main jet. Remember, it is better to start off with too rich of a main jet and work your way down. Too lean of a jet could cause engine damage. A rich main jet will cause the bike to sputter and not clean out on the top end.

About the FMF Pipe: This pipe was designed to increase horsepower throughout the powerband with exceptional mid-range and top end quickness. The power will tend to come on the pipe quickly. An oval aluminum silencer is also available.