

## INSTRUCTIONS FOR OPERATING CYLINDER HONE

If dry honing, clean each cylinder thoroughly with any approved solvent and wipe dry. Be sure there is no oil or grease left in cylinder to get on stones. If stones should clog with gummed oil or other material, clean with wire brush. **ALWAYS KEEP STONES CLEAN.**

Honing with a honing oil will produce a smoother finish and generally remove material faster than dry honing. If honing oil is not available, a mixture of 8 parts kerosene to 1 part oil will suffice. Keep cylinder walls wet so fluid will wash away material you are removing from cylinder walls.

Use with heavy duty 1/2" drill and run drill clockwise.

Check to make sure stones are parallel their full length, (see Figure A). Use a caliper and measure across the stones at top, center and bottom. Correct any taper in stones by dressing with the abrasive paddle supplied.

Before expanding hone be sure to back up micrometer feed by turning to left until limit of feed or starting point is reached. This will give full range on micrometer feed when starting on cylinder.

**EXPANDING HONE** – Pull up on Micrometer Head to raise it clear of the 6 pins in body; then turn it to the left until the stones contact cylinder wall. Push head down on pins and turn micrometer feed to right for desired honing pressure.

Begin honing at lower or smaller end of cylinder, using medium (not heavy) pressure on stones. Hone there until stones cut through glazed surface and begin enlarging that portion. Then make occasional passes up and down to true entire length of hole. When the uneven pull on drill ceases, the cylinder is nearly true. The recommended honing RPM will vary with the cylinder diameter. The equation to determine honing RPM is: 1200 divided by the cylinder diameter. A 3" cylinder diameter would require 400 RPM.

**CAUTION:** Do not take the hone out of the cylinder or allow to pass too far through the cylinder while it is running as it might damage the tool or cause personal injury. The operator should not wear loose clothing while honing and rotating parts should be avoided. **WARNING:** **WEAR SAFETY GOGGLES.**

A good method of sizing the cylinders is to use coarse stones until the new pistons just slip in tight; then change stones and hone for proper clearance and finish. When through honing, scrub and wipe cylinders thoroughly to remove all loose or embedded grit.

**NOTE:** When changing stones be sure to insert each pair of rack pins in body where holes are marked "O", as in Figure A. Hone should appear as left drawing in Figure B. When using oversize stone sets insert rack pins until ends are flush on opposite side of body, then insert feed pinion. This will make it easy to space stones and guide block exactly alike.

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Figure A

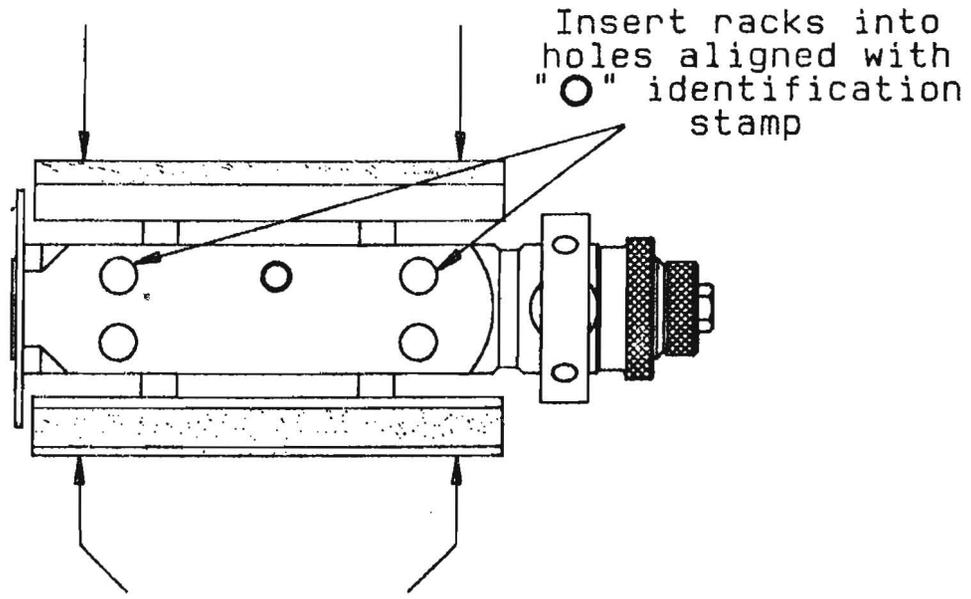


Figure B

Clockwise rotation

Clockwise rotation

