

## CP9361 Air Scribe®

## Instructions

## Operating Instructions

To start tool, turn sleeve valve indicator approximately to the mid-point of the operating range. If necessary, jar stylus lightly against bench to start piston. After starting, adjust sleeve valve to the operating speed, causing the stylus to make a mark to the depth desired.

The CP9361 Air Scribe is capable of marking material as hard as Rc-64. When marking material of this hardness, the operator is cautioned to regulate the impact of the stylus with the throttle valve so that the stylus makes a legible mark and no more than this. If the stylus is driven harder, excessive wear and breakage of the stylus point may result on very hard materials.

When scribing, do not bear down on the work and cause stylus to dig in. Guide the tool and let the stylus do the work. Tool should be held approximately 15° off perpendicular to the work surface in order to scribe smoothly and to minimize excessive force on the side of the stylus point.

When using a chisel, it is necessary to bear against the work as with a chipping hammer. The tool may be used at full throttle on softer materials and, by varying the throttle setting, speed may be adjusted to suit the particular job and to give the operator full control of the tool. The amount of force the operator exerts on the Air Scribe directly affects the chisel blow. Applying lighter force when starting or stopping a cut results in good control of the tool.

## To Change from Stylus to Chisel

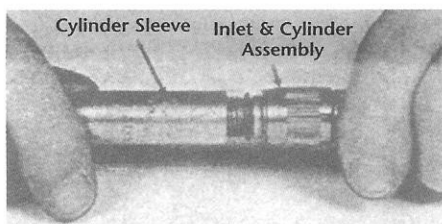


Fig 1

Unscrew the cylinder sleeve from inlet and cylinder assembly. (Right Hand Thread)

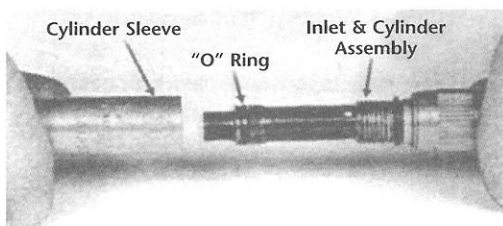


Fig 2

Withdraw inlet and cylinder assembly from sleeve. Avoid damage to "O" ring.

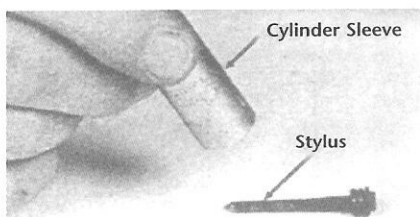


Fig 3

Jar the stylus out of cylinder sleeve.

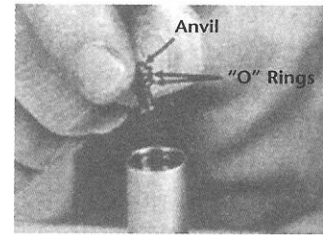


Fig 4

Be sure two "O" rings are assembled under shoulder of anvil. Drop anvil into cylinder sleeve, small end down. Shake sleeve until small end of anvil enters hole in bottom of sleeve.

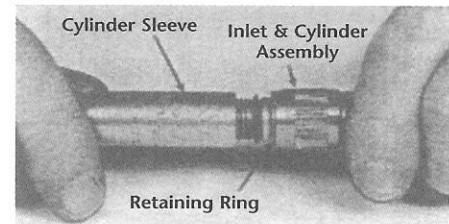


Fig 5

Carefully screw inlet and cylinder assembly into cylinder sleeve until it bears against retaining ring.

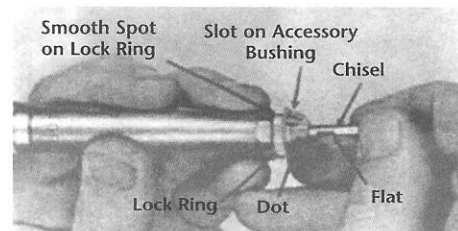


Fig 6

Rotate lock ring until smooth spot on lock ring is aligned with slot on accessory bushing. Line up flat on chisel with dot on accessory bushing.

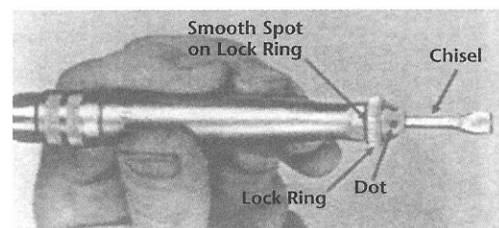


Fig 7

Push the chisel into the tool, it should enter easily. Lock the chisel in place by turning the lock ring until smooth spot on lock ring is aligned with dot on accessory bushing. The chisel should move freely in the bushing with a small amount of end play.

## Chicago Pneumatic

### To Replace Stylus

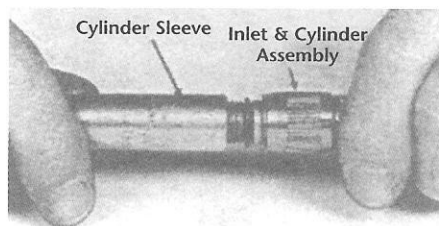


Fig 8

Unscrew the cylinder sleeve from inlet and cylinder assembly. (Right Hand Thread)

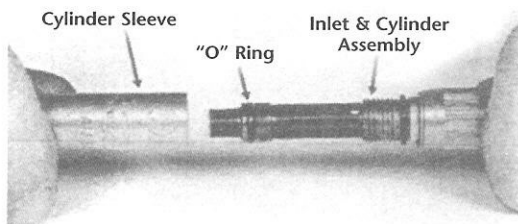


Fig 9

Withdraw inlet and cylinder assembly from cylinder sleeve. Avoid damage to "O" ring.

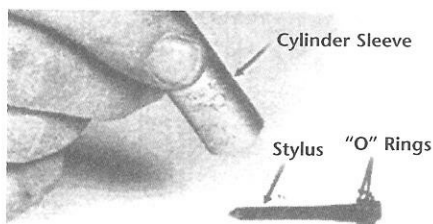


Fig 10

Jar the stylus out of the cylinder sleeve. Be sure two "O" rings are assembled next to shoulder of replacement stylus. Drop stylus point first into sleeve.

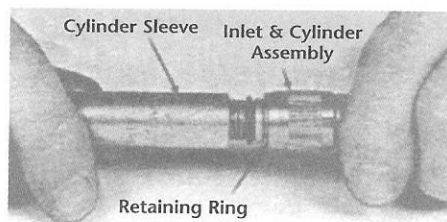


Fig 11

Carefully screw inlet and cylinder assembly into sleeve until it bears against retaining ring.

### Sharpening the Stylus

Best results are obtained with a diamond wheel mounted on a tool post grinder in a lathe. This is followed by polishing first with a Norton stone No. 37C4006V or equivalent then with carborundum paper No. A935K500 or equivalent to a 10-15 micro finish. If such facilities are not available, the stylus can be sharpened with No. 19A 6OL8V Norton wheel on a bench grinder.

Sharpen to an included angle of 90° with a point diameter of .005" to .015" flat, see Fig. 12.

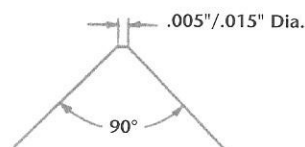


Fig 12

The stylus may be sharpened until the turned down portion at the end of the stylus holder is ground off.

This gives a usable length of stylus of approximately 1/4 inch as shown on drawing below (Fig. 13).

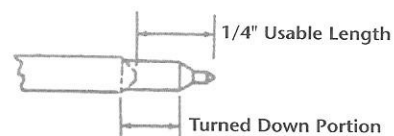


Fig 13

### Hardening Chisel Blanks

A blank chisel is provided for special jobs. It can be heated and formed to any desired shape.

To harden chisel after forming, heat to cherry red and quench in oil. Polish a surface with emery cloth and reheat to a light straw color.

If heat treating facilities are available, harden by heating to 1550°F for five minutes, quenching in oil and drawing at 425° for one hour. Hardness should be 55-60 Rc.



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### Disassembly/Assembly Cautions

When disassembling tool, use a 3/32" pin punch to remove roll pin (34). Support tool firmly on a suitable surface and drive pin out carefully to avoid damage to cylinder (65) or inlet (32). Take precautions to avoid losing roll pin. When removing sleeve valve (14) align mark on sleeve with "OFF" on inlet (32) to avoid cutting "O" ring (7). To remove accessory bushing (69) support lock ring (71) on bore of P059993 Holder and press bushing out of cylinder sleeve (60) from interior of sleeve with P059992 Drift. See illustration (Fig. 14).

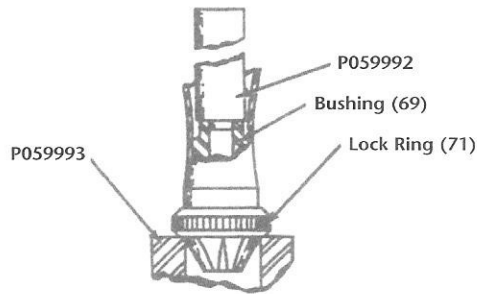


Fig 14

When assembling inlet (32) with sleeve valve (14), first lubricate "O" ring (7) LIGHTLY with a good rubber lubricant and place in counterbored air port in inlet. Lubricate two "O" rings (8) and assemble in grooves on either side of air port. To avoid cutting "O" ring in air port align indicator mark on valve with "OFF" on inlet and slide valve carefully on inlet. Place retaining ring (15) in groove in inlet, lubricate third "O" ring (8) and assemble in groove next to shoulder between retaining ring groove and threads on inlet. Be sure this "O" ring is assembled between the slight ridge and the shoulder (shown in enlarged view on tool drawing, pg. 2) to prevent "O" ring from being forced into inlet threads.

When installing a new piston (61) in cylinder (65), it may be necessary to lap the piston to secure a close yet free fit in cylinder. No. 12-24 UNC internal threads in piston allow handling during this operation. Use a good grade FINE lapping compound, thoroughly clean parts and lubricate with recommended air tool oil before assembly.

After assembling piston and cylinder, lubricate and install "O" ring (41) on inlet and carefully slip cylinder on inlet. Do not injure "O" ring. Align transverse holes in cylinder and inlet and carefully install roll pin (34) through parts. Support parts firmly and avoid injury or distortion of parts while driving roll pin.

Assemble "O" ring (70) and 1/8" steel ball (73) in accessory bushing (69) with lubricant to hold in place. Lubricate and assemble 5/32" steel ball (74) in larger opening. Referring to Fig. 15 align nubbin at smooth spot on lock ring (71) with dot on accessory bushing (69). Nubbin should be on side of lock ring toward bushing. Slip ring on bushing. Orient dot on bushing with any corner of hex on cylinder sleeve (60) and press bushing into sleeve up to bushing shoulder.

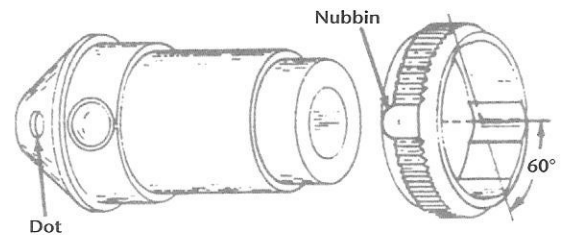


Fig 15

### Malfunctions and Repairs

Because of the close clearance between piston (61) and cylinder (65), foreign matter in the air supply may cause piston to stick. To correct, remove cylinder sleeve (60), drive roll pin (34) out of cylinder and inlet (32) and remove piston from cylinder. Thoroughly clean parts, blow dry and lubricate with recommended air tool oil. Check clearance and free movement of piston and reassemble tool.

If sleeve valve must be removed, remove "O" ring (8) between retaining ring (15) and threads on inlet, remove retaining ring, set sleeve valve at "OFF" and pull valve off inlet. Inspect "O" rings, replace if worn, relubricate and reassemble. Do not overlubricate "O" ring (7) in counterbored air port and risk impeding air flow.



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