

# Service and Repair Information

## Mounting and Removing Keyed Chucks

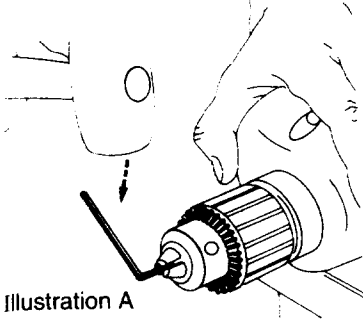


Illustration A

## On Threaded Spindle Portable Tools

### To mount chucks:

Thread chuck on the spindle by hand so that the back of the chuck seats firmly against the mounting surface on the portable tool spindle.

### To remove chucks:

Chucks with threaded mounts can be identified by the letters 'B' or 'BA' in the model number (1B, 31BA). 'BA' model chucks have a left hand thread retaining screw through the chuck body into the tool spindle.

Remove retaining screw through the chuck jaw hole opening, turn screw clockwise and proceed as described for 'B' model chucks. 'B' model chucks may be removed from a threaded spindle by tightening the chuck jaws around a hex key and striking the key with a sharp blow in a counter-clockwise direction, using a wooden or rubber hammer (Illus. A).

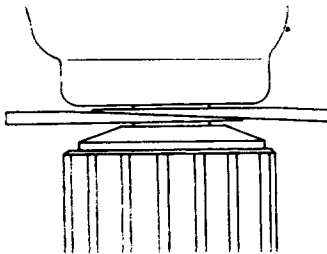


Illustration B

## On Tapered Spindles

### To mount chucks:

Clean both tapers of all grease and grit. With the chuck jaws completely retracted into the chuck and using a thin piece of wood to protect the chuck nose, tap the chuck into place on the spindle.

### To remove chucks:

If a power tool has a tapered spindle, the chuck may be removed from the spindle by inserting chuck removal wedges between the chuck back and the spindle housing (Illus. B).

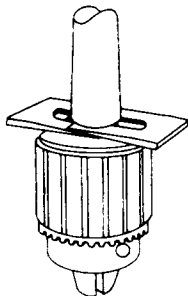


Illustration C

## On Tapered Shank Arbors

### To mount chucks:

Clean both tapers as above. With the jaws retracted into the chuck and with the chuck nose resting on a wooden bench, strike the tang of the arbor lightly to seat it into the chuck. Do NOT assemble on an arbor press as excessive pressure will expand the chuck body and distort the chuck jaw holes.

### To remove chucks:

Insert wedges between the back of the chuck and the shoulder of the arbor (Illus. C). In case the mounting taper of the arbor does not provide a shoulder, a cross hole should be drilled through the neck of the arbor (Illus. D) and a cross pin inserted. Then the wedges can be used between the chuck back and the cross pin. If desired, a hole may be drilled through the soft centre portion of the chuck body (Illus. D), and a pin may then be used with an arbor press to force the arbor out of the chuck.

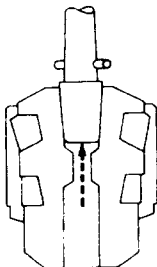


Illustration D

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# Service and Repair Information

## Mounting and Removing Keyless Chucks

**IMPORTANT!** Follow all instructions carefully. Unplug drill or disconnect battery pack before attempting installation.

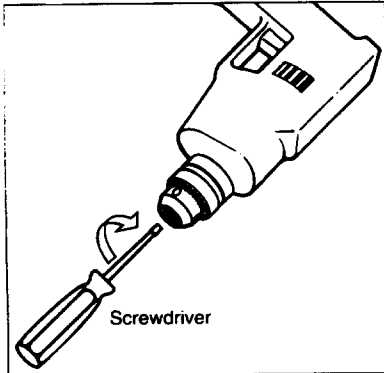


Illustration E

Step 1: Open jaws of existing chuck completely. Remove left-hand thread retaining screw from inside chuck and save for re-use (Illus. E).

Step 2: Unscrew chuck from spindle: insert  $\frac{5}{16}$ in or larger Allen®-type wrench into chuck body and tighten jaws on wrench. Strike wrench counter-clockwise with mallet to free, and unscrew chuck.

Step 3: Screw Hand-Tite® chuck onto spindle (clockwise). Place  $\frac{5}{16}$ in or larger, Allen®-type wrench in jaws and tighten jaws on wrench. Strike wrench clockwise with mallet several times (Illus. F), then remove wrench.

Step 4: Reinstall left-hand retaining screw inside chuck.

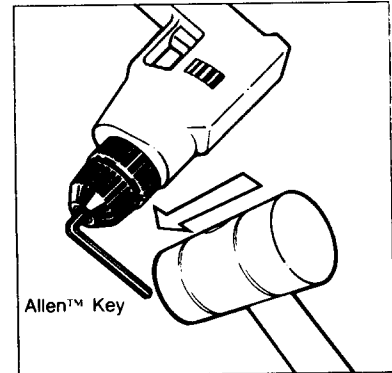


Illustration F

## Repair Instructions

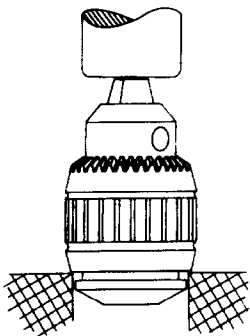


Illustration G

## Plain Bearing Chucks

### Disassembly

Extend the jaws to half capacity, press the sleeve off over front (jaw end) of body, remove the nut halves (Illus. G).

### Assembly

**CAUTION:** Each of the three jaws differ slightly from the other by the location of the threaded portion (Illus. J). In order to ensure proper operation, they must be re-installed in the proper sequence.

Refer to Illus. J and insert the jaws in the correct sequence when viewing the chuck from the body nose diameter. Insert No. 1 jaw (with small step) first, then No. 2 jaw (with the largest step) in the clockwise position, then No. 3 jaw (without a step) should be inserted.

Turn chuck jaws to closed position and check to ensure that all three jaws are properly aligned. The height of all three jaws should be uniform.

A good grade of grease should be applied to the jaw and nut threads, then the nut halves should be closed around the jaws. Extend jaws to half capacity. Press on the sleeve with an arbor press (Illus. H).

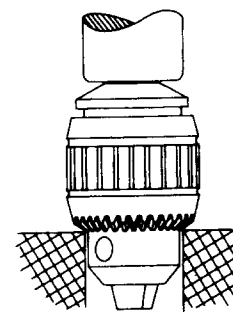


Illustration H

JAW NUMBER INDICATED BY PROFILES SHOWN BELOW.



No. 1



No. 2



No. 3

Illustration J – Jaw Identification

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