

Acroloc Tool Holder Guide for 3" and 4 5/8" Dia. Holders

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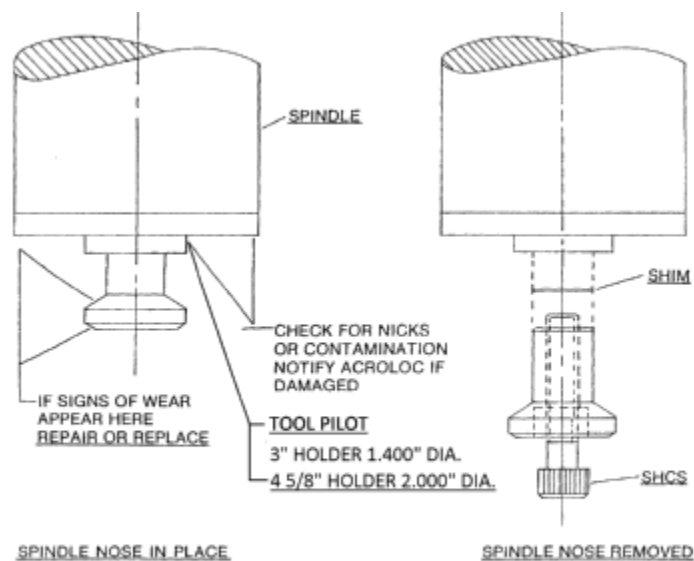
Acroloc Spindle Tool Nose Adjustment 3" or 4 5/8" Holders

Before adjusting, check for nicks, burrs or damage to spindle as shown in figure 1. Nicks & burrs can be stoned off , (CAUTION: Be very careful to stone only the damage area on the pilot diameter, this surface gives the tool holder concentricity, stoning too much off this diameter will cause the tool holder to runout)

Tip: During normal tool holder drop off the holder should seem to just fall off the spindle into the tool disc, if the tool holder seems to shoot of the spindle it's an indication that the pilot has a burr.

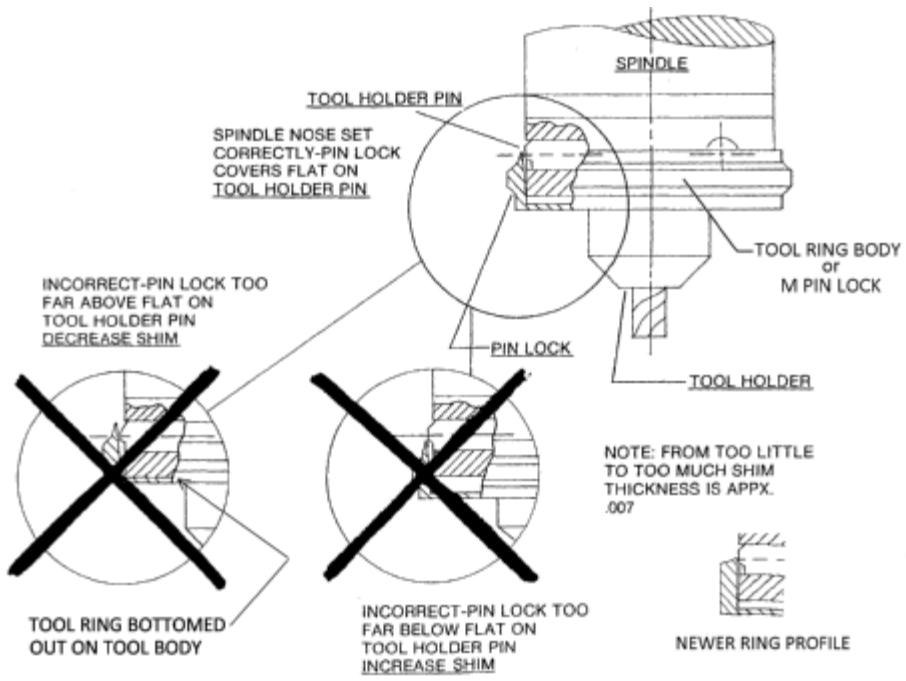
Checking for Tool Pilot Burr:

- Take a seldom used tool holder that has a good 2.0" I.D (for 3" holders 1.4").
- Take all the parts out leaving just the tool holder body.
- Put the tool holder body on the end of the spindle by hand using the tool holder as an O.D. gauge, it should go on without any excessive force and come off without any force also, if it takes force to put the tool holder on the spindle there is most likely a burr.
- Stone just the burr and not the entire pilot until the tool holder fits correctly. (See Caution above)

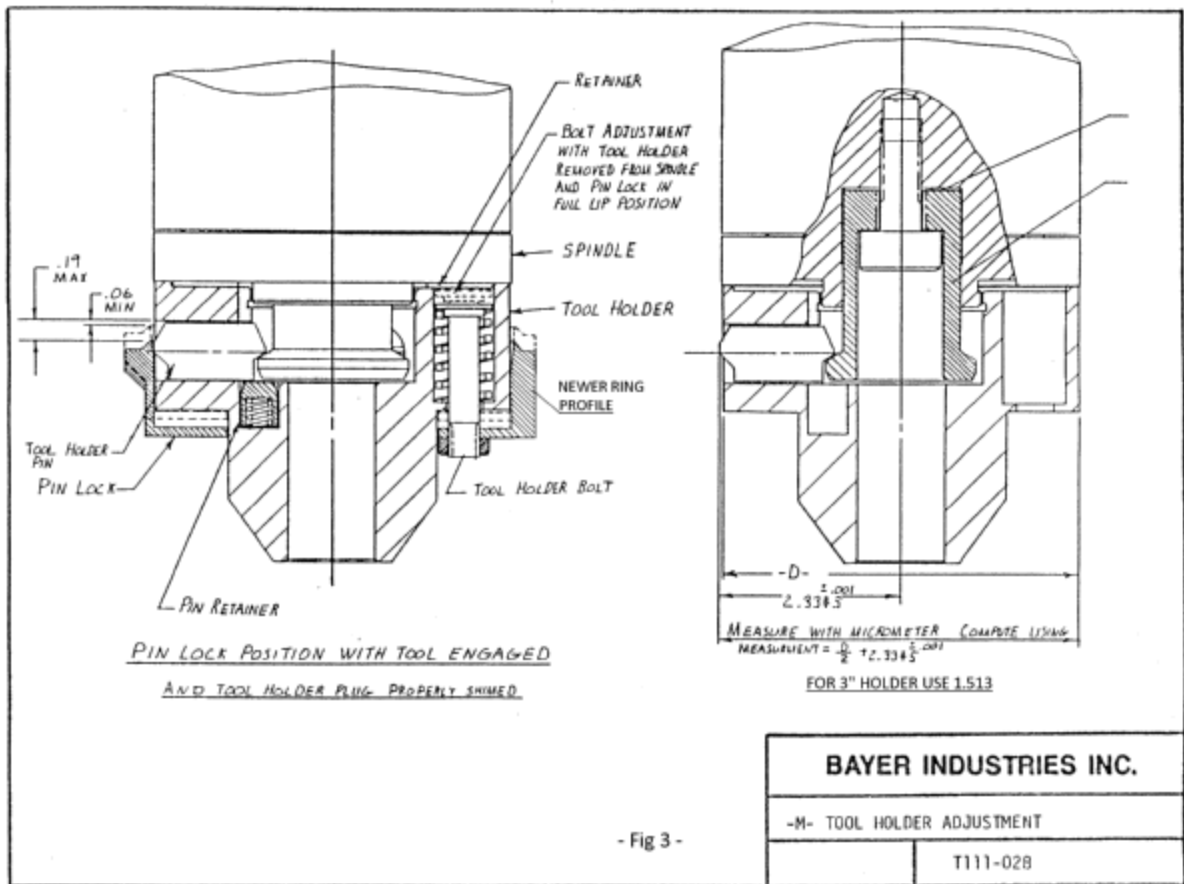


- Fig 1 -

When spindle has been inspected refer to figures 2 and 3 to adjust the spindle nose by adding or reducing shim as show in figure 1.

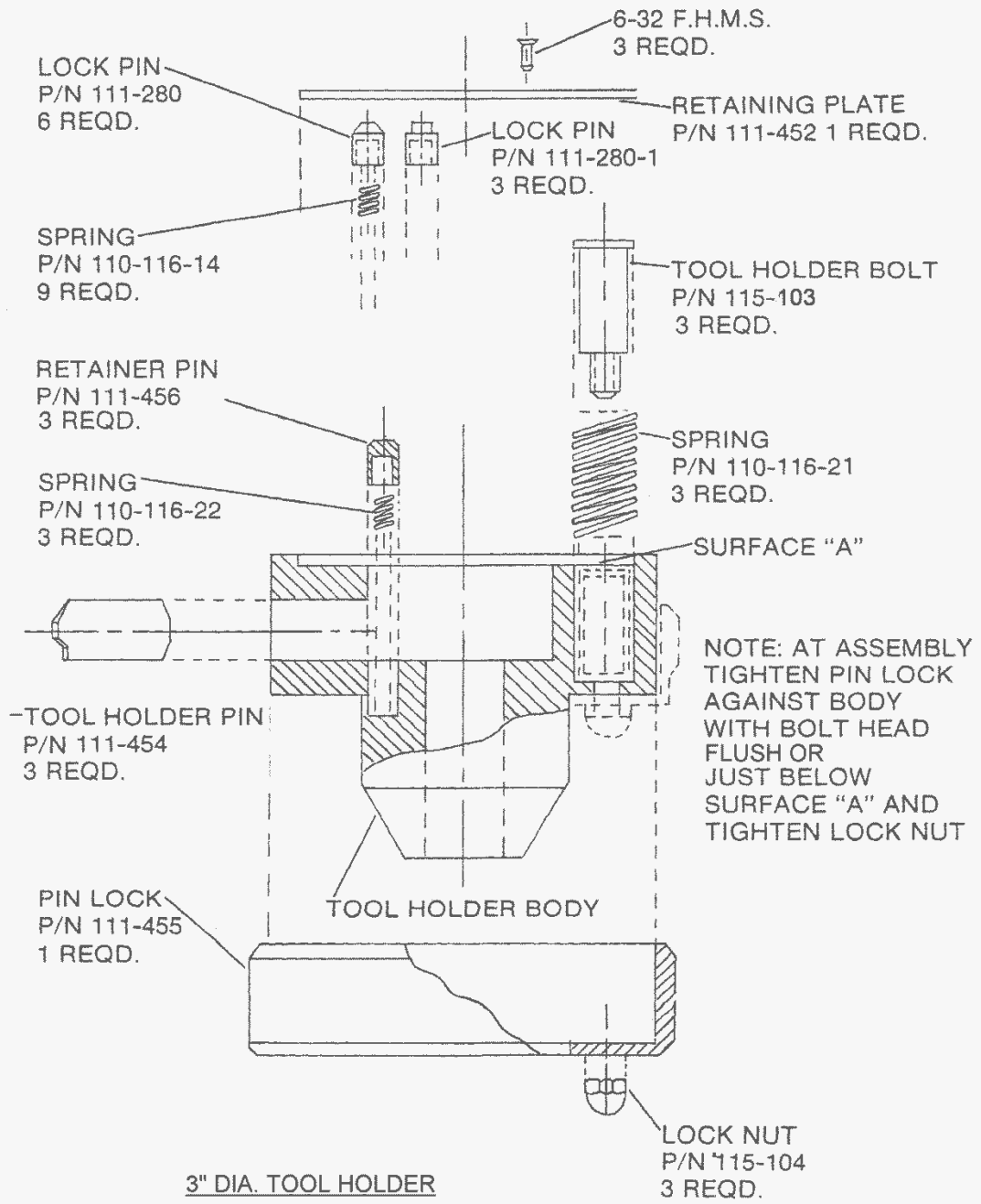


- Fig 2 -



- Fig 3 -

Parts Layout 3" Dia. Tool Holder

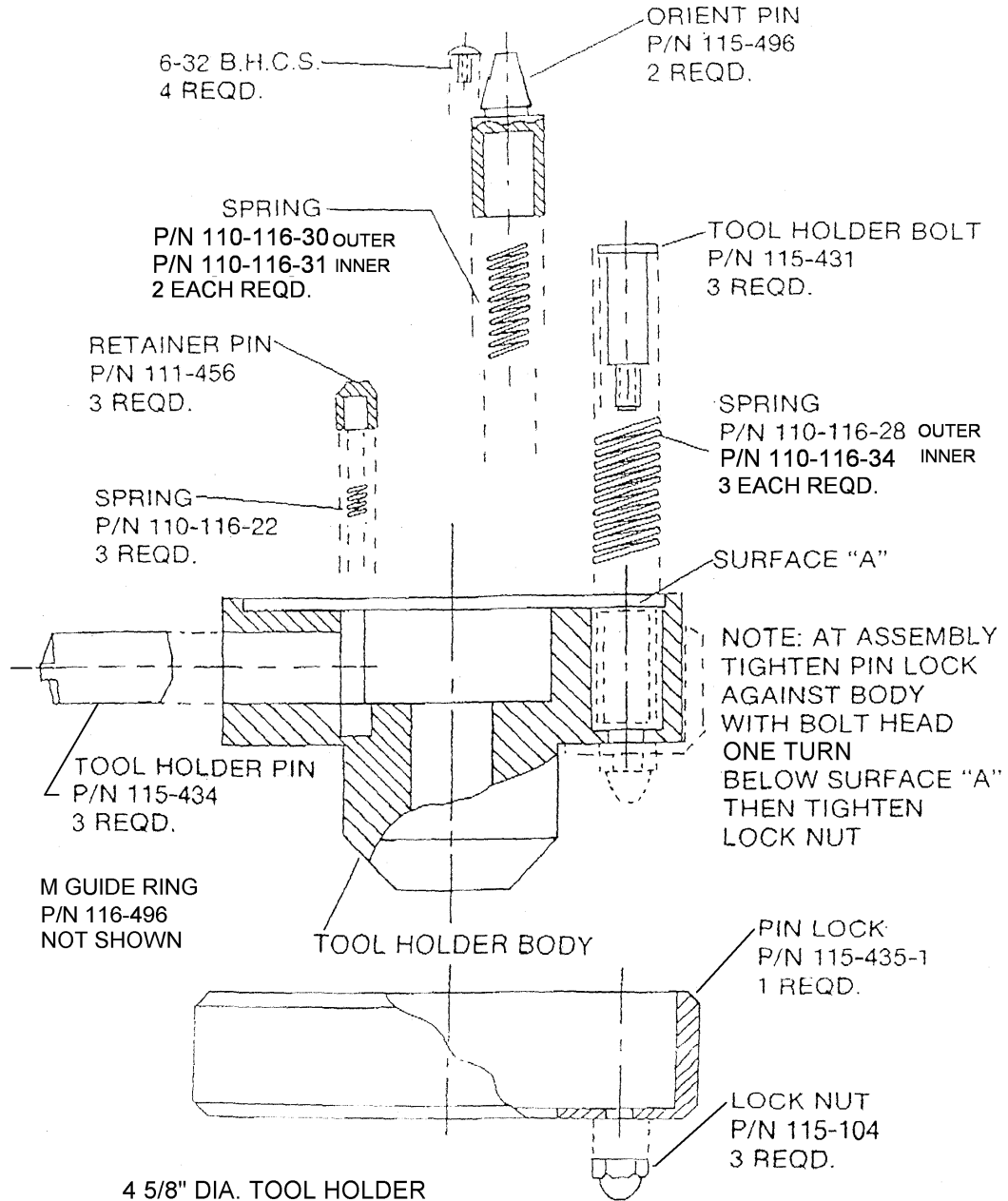


3" DIA. TOOL HOLDER

MACHINE MODELS S10, M12, 12-32, 12-20, 22-40, 22-32

- Fig 4 -

Parts Layout 4 5/8" Dia. Tool Holder



MACHINE MODELS S100, S1000, M15, M15L, 15-32, 15-40, 2030

- Fig 5 -

Nomenclature for Tool Holder Parts

See Figures 4 & 5

- M tool Guide 111-460 (3" holder) sometime referred to as Tool Ring or Tool Disc Ring
 - * This ring holds the tool holder in the tool disc
 - * Normally the ring stays in the tool disc when the tool holder is removed
- M tool Guide 116-496 (4-5/8" holder) sometimes referred to as Tool Ring
 - * This ring holds the tool holder in the tool disc
 - * The ring remains with the tool holder when the tool holder is removed
- Tool Holder Pin 111-454 & 115-434 sometime referred to as Cross Pin
 - * This pin is used to lock the tool holder on the tool nose
- Pin Lock 111-455 & 115-435-1 sometime referred to as Clamping Ring or Locking Ring
 - * This ring is used to apply the inward force to lock the Tool Holder pins (cross pins)
- Lock Pin 111-280 (3" holder) sometime referred to as the locator pin (bullet top)
 - * This pin is used to align the tool holder to the face of the spindle
- Lock Pin 111-280-1 (3" holder) sometime referred to as the drive pin (square top)
 - * This pin is used to drive the tool holder
- Retainer Pin 111-116-22
 - * This pin is used to hold back the Tool Holder Pin (cross pin) when the tool holder is not on the spindle

Tool Holder Maintenance

Proper cleaning and lubrication of your tool holders will result in millions of trouble free tool changes. Periodic maintenance is therefore recommended.

A tool holder working properly has a distinctly crisp mechanical sound during changing. Familiarity with the machine will acquaint you with this sound. With a little experience, you will be able to determine a tool holder that is not working properly.

Disassembly of the tool holder requires no special tools or training. Simply remove all screws, pins, and springs until the tool holder body is free of all these parts. Wash all parts in solvent and dry.

Check all pins for freedom of movement in their respective holes in the tool holder body. Any burrs or abrasions should be "stoned" off. Check the pin lock. (Refer to Figure 4 & 5) for wear at the point of contact with the tool holder pin. If worn, replace it.

Check tool holder body for proper fit on the spindle. Any restriction in the pilot diameter or nicks in the face that mates to the spindle face must be removed.

Any parts showing wear or damage should be replaced.

Refer to Figure 4, as a reference to assembly of 3" Tool Holders.

Refer to Figure 5, as a reference to assembly of 4 5/8" Tool Holders.

During assembly, lubricate all moving parts with a thin film of light weight oil, like Mobil DET 24 oil. Don't use penetrating oils like WD40 these oils tend to dry sticky

After assembly, it is necessary to "cock" the tool holder.

Cocking or Loading the Tool Holder

3" Tool Holder – Place the tool holder extractor on top of the pin lock and push down on the pin lock until the tool holder pins can be pushed out far enough for the retainer pin to pop up. The tool holder is now ready to be used.

4 5/8" Tool Holder – Place the "M" tool guide on top of the pin lock and push down on the "M Guide" until the tool holder pin can be pushed out far enough for the retainer pin to pop up. The tool holder is now ready for use.

- * Using an arbor press or drill press (as a press) makes this easier
- * When the retainer pins pop up they usually make a distinct snap sound

Tool Holder Adjustment:

The most frequently asked question is how to adjust the tool holder, basically there is only one tool holder adjustment required.

For 3" Tool Holder: With the tool holder collapsed, (that is the 3 retainer pins down, the tool holder cross pins in and the tool holder clamping ring or (Pin Lock) all the way up against the tool holder body) tighten the tool holder bolt flush or slightly below the tool holder body surface.

For 4 5/8" Tool Holder: With the tool holder collapsed, (that is the 3 retainer pins down, the tool holder cross pins in and the tool holder clamping ring or (Pin Lock) all the way up against the tool holder body) tighten the tool holder bolt flush or slightly below the tool holder body surface, then one turn down.

Images of Tool Holders Loaded and Collapsed



3" Tool Holder Loaded



3" Tool Holder Collapsed



4 5/8" Tool Holder Loaded



4 5/8" Tool Holder Collapsed