

HEADSTOCK SPINDLE SLEEVE BEARINGS

10" to 16" Lathes

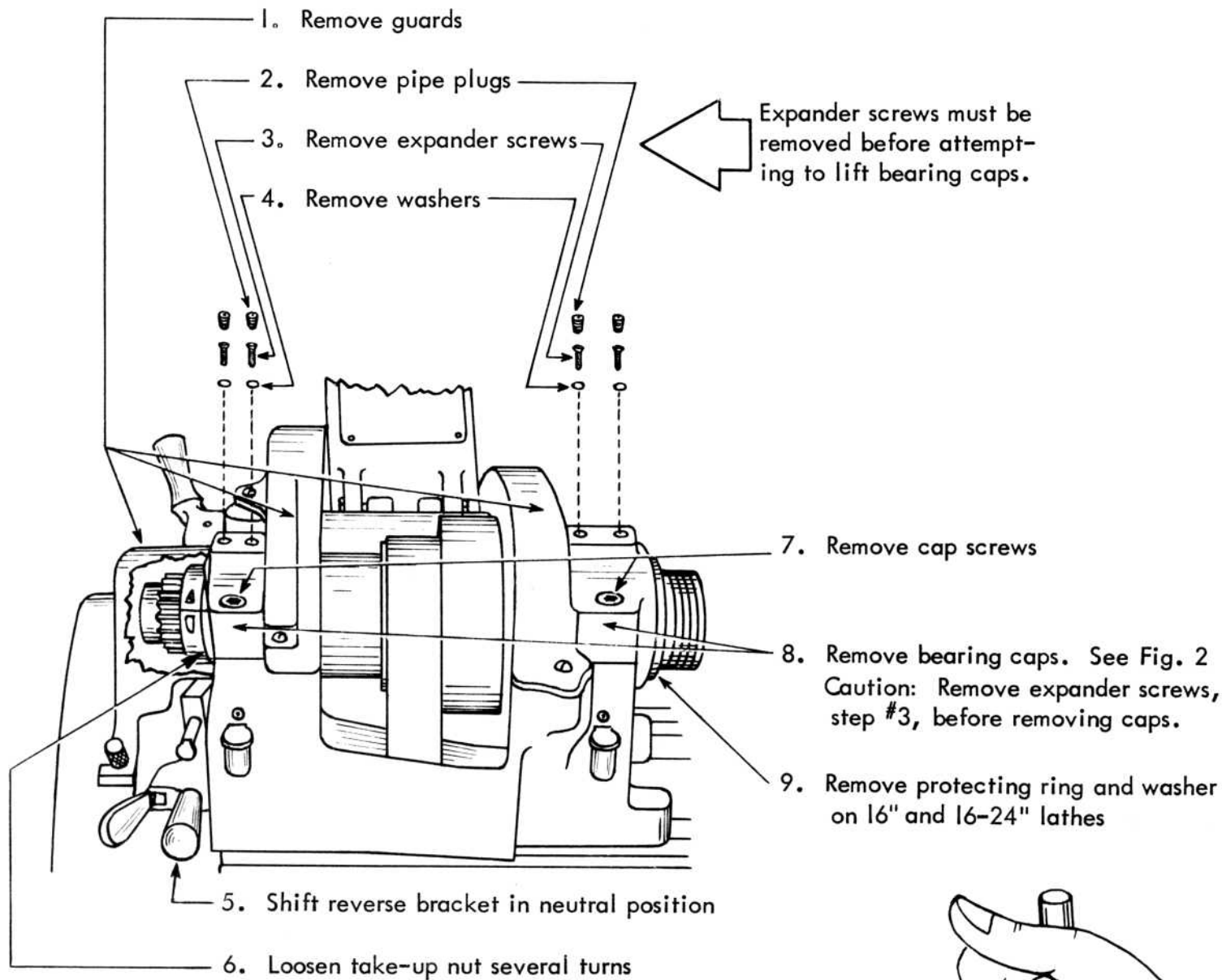
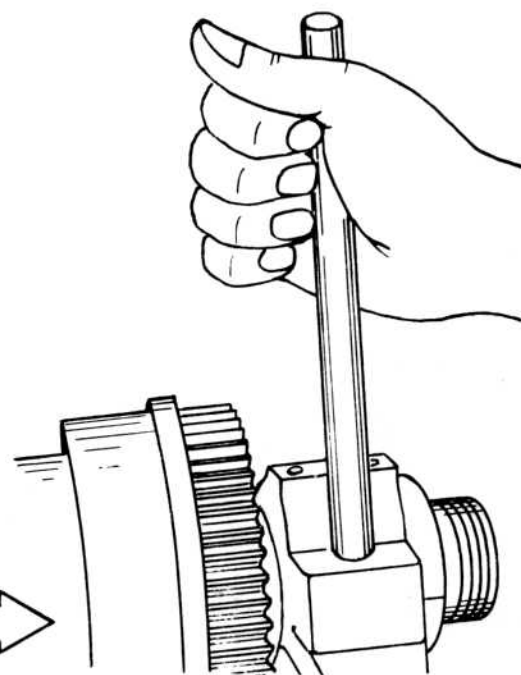


Fig. 1. Disassembling of Headstock
Perform Operations in numerical sequence.

Fig. 2. Loosening bearing cap by jarring piece of round stock placed in screw hole.



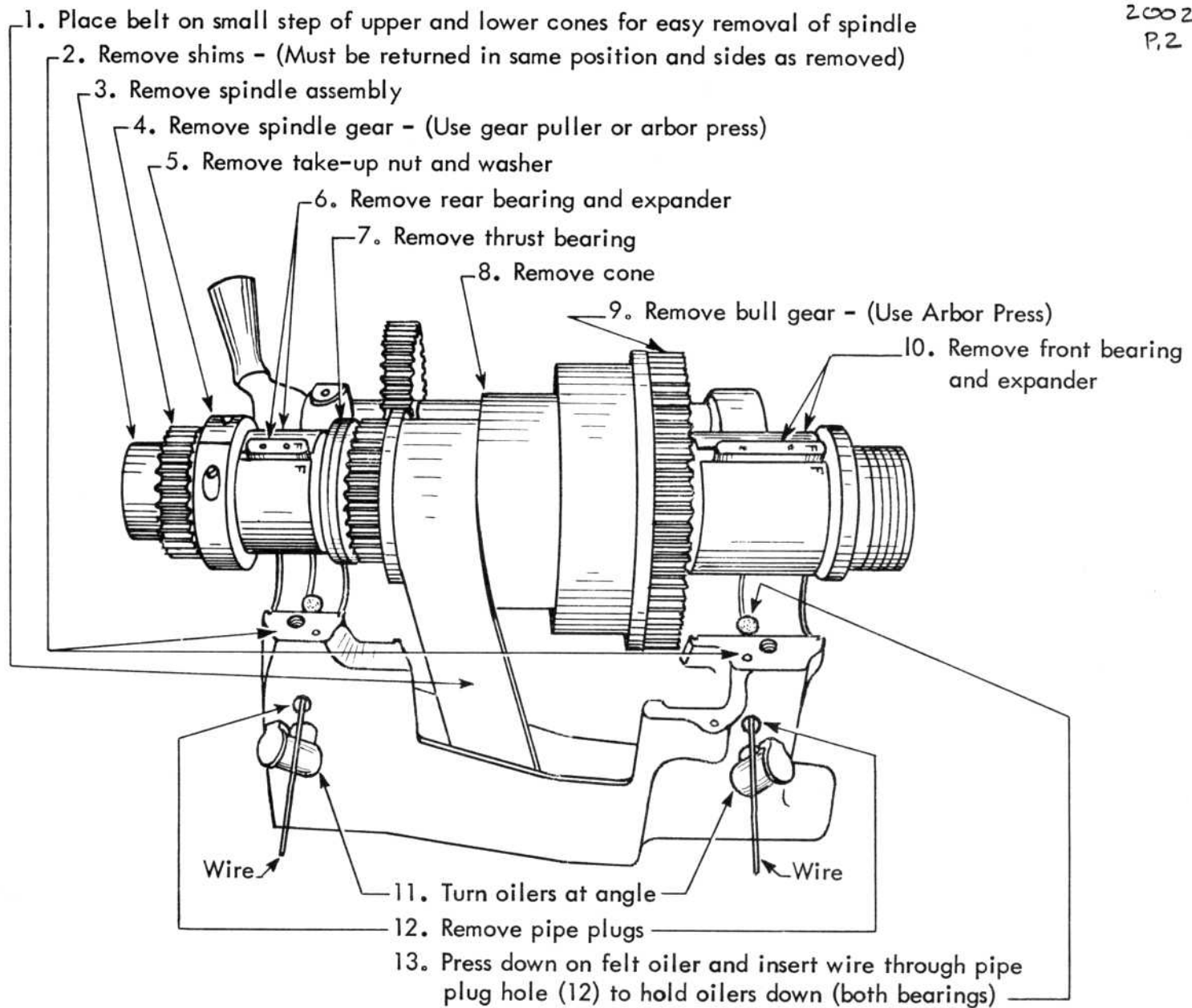


Fig. 3. Removing and disassembling spindle. See Fig. 4 if end assembly of spindle differs from above

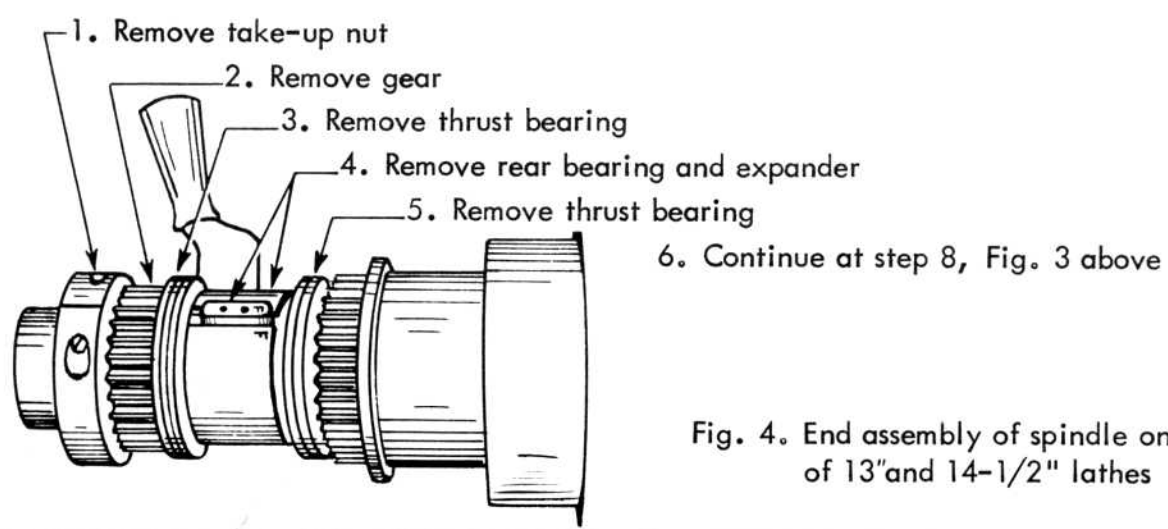


Fig. 4. End assembly of spindle on some models of 13" and 14-1/2" lathes

Mark the sleeve with letter "F" to indicate front
It is important that bearing is always placed back in the same position

Hole in sleeve bearing must fit over brass oiler tube

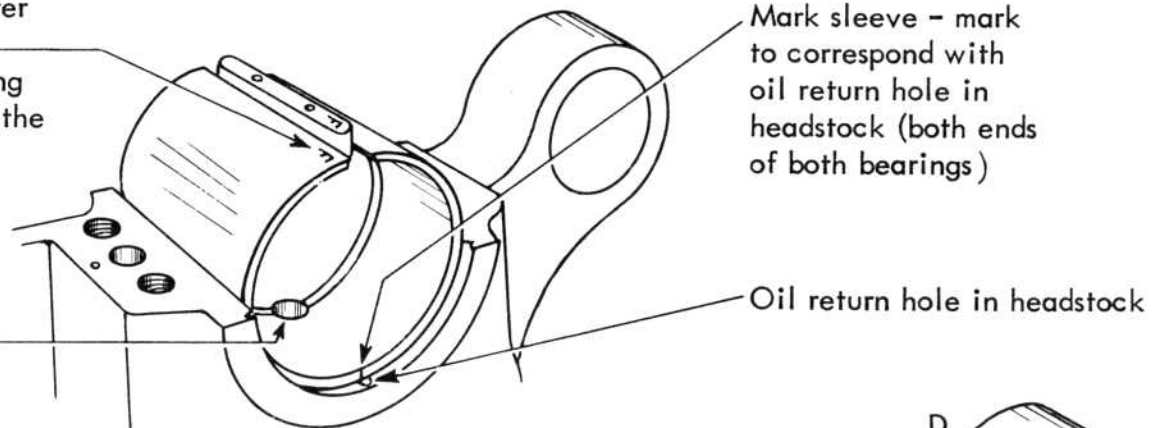


Fig. 5. Marking sleeve bearing for grooves

File grooves at both ends approx. same size as on originals. Use round file

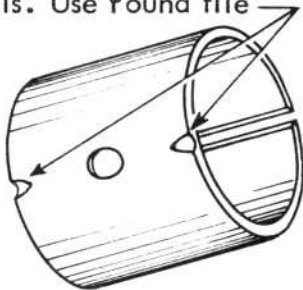


Fig. 6. Filed grooves in sleeve bearing

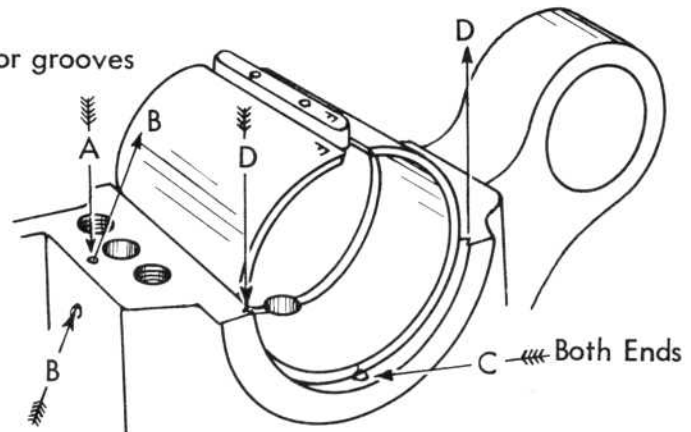


Fig. 7. Run pipe cleaner through oil breather holes at A and B also oil return hole at C and groove D to clean out any obstruction

T O A S S E M B L E H E A D S T O C K

1. Wipe all parts free of dirt and chips. Be sure all oil return and breather holes are clear. See Fig. 7.

2. Reverse the procedure indicated in Fig. 3 and Fig. 4 to assemble the spindle, but do not tighten the take-up nut. Also, if assembly of spindle is like that shown in Fig. 3 do not as yet press on the spindle gear

Place felt in bottom of expander before sliding expander on sleeve bearing.

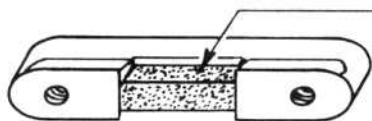


Fig. 8 Bearing Expander

3. Place spindle assembly in headstock, moving the bearings back and forth until the hole in bottom of sleeve bearing fits over the brass oiler tube in headstock.

4. Place bearing shims in proper position.

5. Fasten both bearing caps.

6. Install washers and expander screws and adjust moderately tight. Fasten pipe plugs into bearing caps.

7. Remove the wires used to hold down the felt oilers, put wires back in to check that oilers popped up in to position. Install the pipe plugs and return oil cups to upright position.

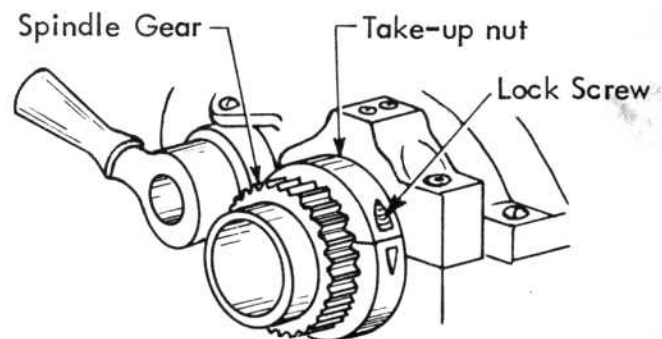


Fig. 9. Take-up nut adjustment

8. Adjust take-up nut. If end assembly of spindle is of the type shown above, (Take-up nut against face of headstock) Hand tighten the take-up nut, then back off approx. $\frac{3}{8}$ " (circular measurement) and lock in place with screw. Check to see that cone pulley runs free.

9. Press on Spindle Gear

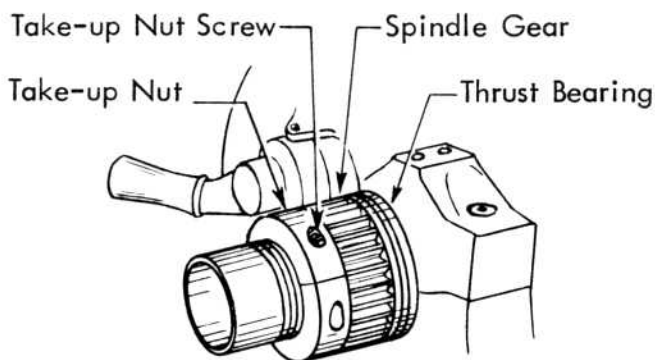


Fig. 10. Take-up nut adjustment on same 13" and 14-1/2" lathes.

10. If end assembly of spindle is of the type shown above, hand tighten the take-up nut and lock in place with take-up nut screw.

CHECKING THE HEADSTOCK

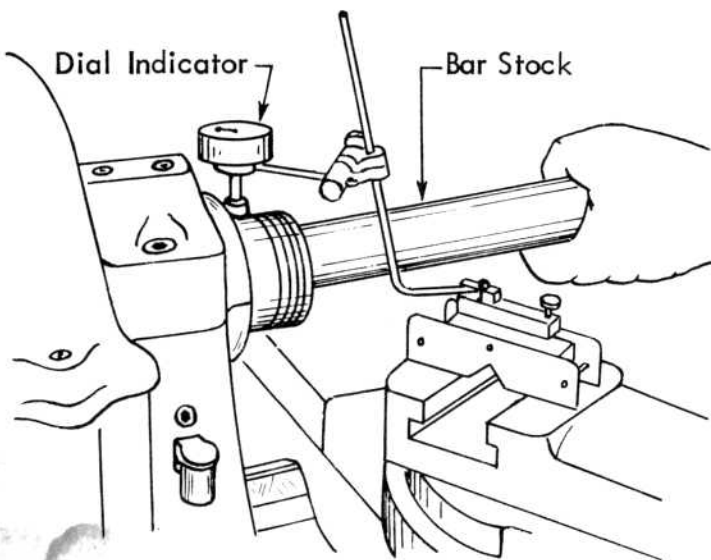


Fig. 11. Lift test at large bearing end

With the indicator set on the spindle as near to the shoulder as possible, force spindle down then exert about a 75 lb. lift. If the reading indicates a movement of over .001" the bearing cap at the front end will have to be removed and a .0015" lamination peeled off the laminated shim on one side. If necessary repeat on opposite side.

If the reading indicates a movement of less than .0007", a .0015" thick lamination will have to be added to the existing shims.

Follow same procedure for test at small bearing end. See Fig. 12.

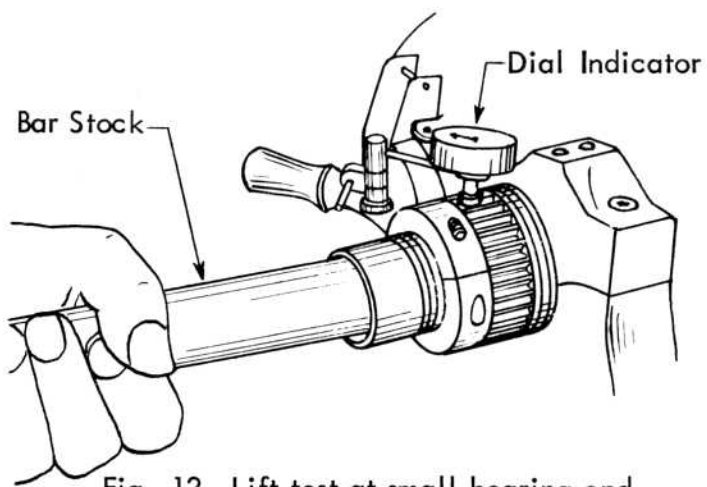


Fig. 12. Lift test at small bearing end

LUBRICATION

Before running the headstock under power fill the the spindle bearing oilers with proper machine oil (S.B.L.W. Catalog No. CE1600 or equal) and fill the spindle cone with oil (S.B.L.W. Catalog No. CE1603 or equal.)

TROUBLE SHOOTER

Overheated Bearing:

1. Remove pipe plugs in bearing cap and tighten bearing expander screws.
2. Remove bearing cap and place additional shim lamination (approx. .0015" thick.)
3. Flush bearing reservoir with kerosene and fill with proper machine oil (S.B.L.W. Catalog No. CE1600 or equal.)
4. If small bearing overheats, loosen the take-up nut slightly.

Bearing Throwing Oil:

1. Usually a clogged oil return or breather hole. Remove bearing caps and proceed as in Fig. 7.
2. Remove the bearing expander and file the "V" of expander as shown in Fig. 13. Also trim the expander wick about 1/8".

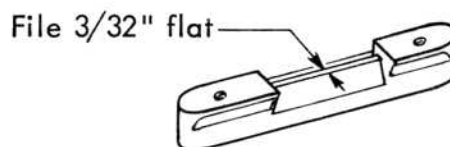


Fig. 13. Bearing expander with the "V" filed flat.