

### INSTALLING THE ATTACHMENT TO THE LATHE

Remove the slotted draw bar "A" from the attachment and fasten attachment to rear of carriage with the two 3/8" x 1" hex cap screws furnished. See Figure 1.

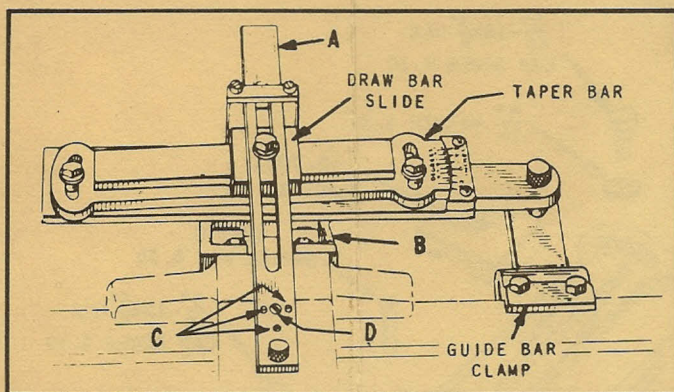


FIG. 1. No. 700 Tool Room Taper Attachment.

**NOTE:** On early model ATLAS 9" and 10" lathes a portion of the back of the carriage must be machined by end milling or filing. The finished pad must be slightly larger than the face of the bracket "B". Drill and tap the two holes as shown in Figure 2.

Fasten the guide bar clamp on the back edge of the rear lathe bedway. Fasten attachment to bracket by inserting the guide coupling pin. By inverting, this clamp is used for both 9" and 10" lathes. When taper bar is set at zero reading it must be absolutely parallel with the lathe bedway. Check this with a dial indicator fastened to the carriage and resting against the taper bar. Move carriage the entire length of taper bar, both top and side surfaces should check parallel with the bedway. If necessary place shims between carriage and guide bracket.

Replace the draw bar "A". Remove the cross slide screw guard located on the rear of the carriage cross slide. Advance cross slide until brass nut becomes free of screw, then remove nut.

Connect draw bar to cross slide by inserting knurled plug into hole formerly occupied by the brass nut. Adjust set screws "C", see Figure 1, until they just touch the cross slide, then tighten round head machine screw "D" securely.

**NOTE:** On lathes equipped with the old style die cast cross slide, machine screw "D" is used in hole directly in front of knurled plug and screws "C" are not used.

### OPERATING

After mounting work in the lathe, set the compound rest at right angles to the bedways, with the point of the tool bit on the exact lathe center line. Set the taper bar to give the angle of taper

desired and clamp securely. The graduations on the taper bar are marked in degrees right and left of the zero mark; the index plate is marked in inches per foot.

Advance the cross slide until the cutting tool just touches the work, then lock the draw bar at this setting. Have the draw bar slide, see Figure 1, in a position so that draw bar slide has a sufficient amount of travel to complete the tapering operation. **CAUTION:** Never allow the draw bar slide to strike the hex cap screws at the ends of the taper bar. It is advisable to have the smaller diameter of the taper toward the tailstock end and start cutting from this end.

**IMPORTANT:** When cutting tapers, always have the point of the tool bit on the exact lathe center line.

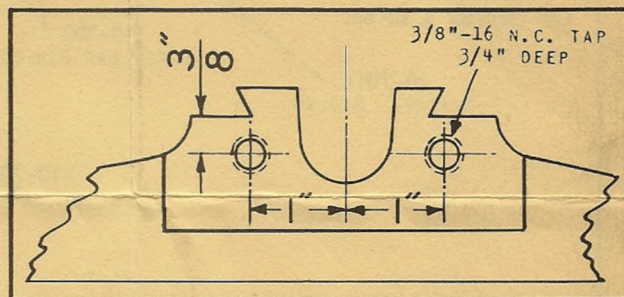


FIG. 2. Locating tapped holes in carriage for early model ATLAS 9" & 10" lathes.

### FINDING TAPER PER FOOT

The difference between the diameters of two ends of a tapered piece of work, expressed in inches per foot of length, is known as "Taper per Foot", and is determined as follows.

Differences in diameters of the two ends of taper expressed in inches divided by the length of taper in inches multiplied by 12 equals the taper per foot (expressed in inches per foot.)

#### EXAMPLE:

A piece of stock with a diameter of 3 1/4" at one end and 2 1/2" at the other end and 8" long.

$$\text{Taper per foot (in inches)} = \frac{12 (3 \frac{1}{4} - 2 \frac{1}{2})}{8}$$

$$\text{Taper per foot (in inches)} = \frac{12 \times .750}{8} = 1.125$$

$$\text{Taper per foot (in inches)} = 1.125$$

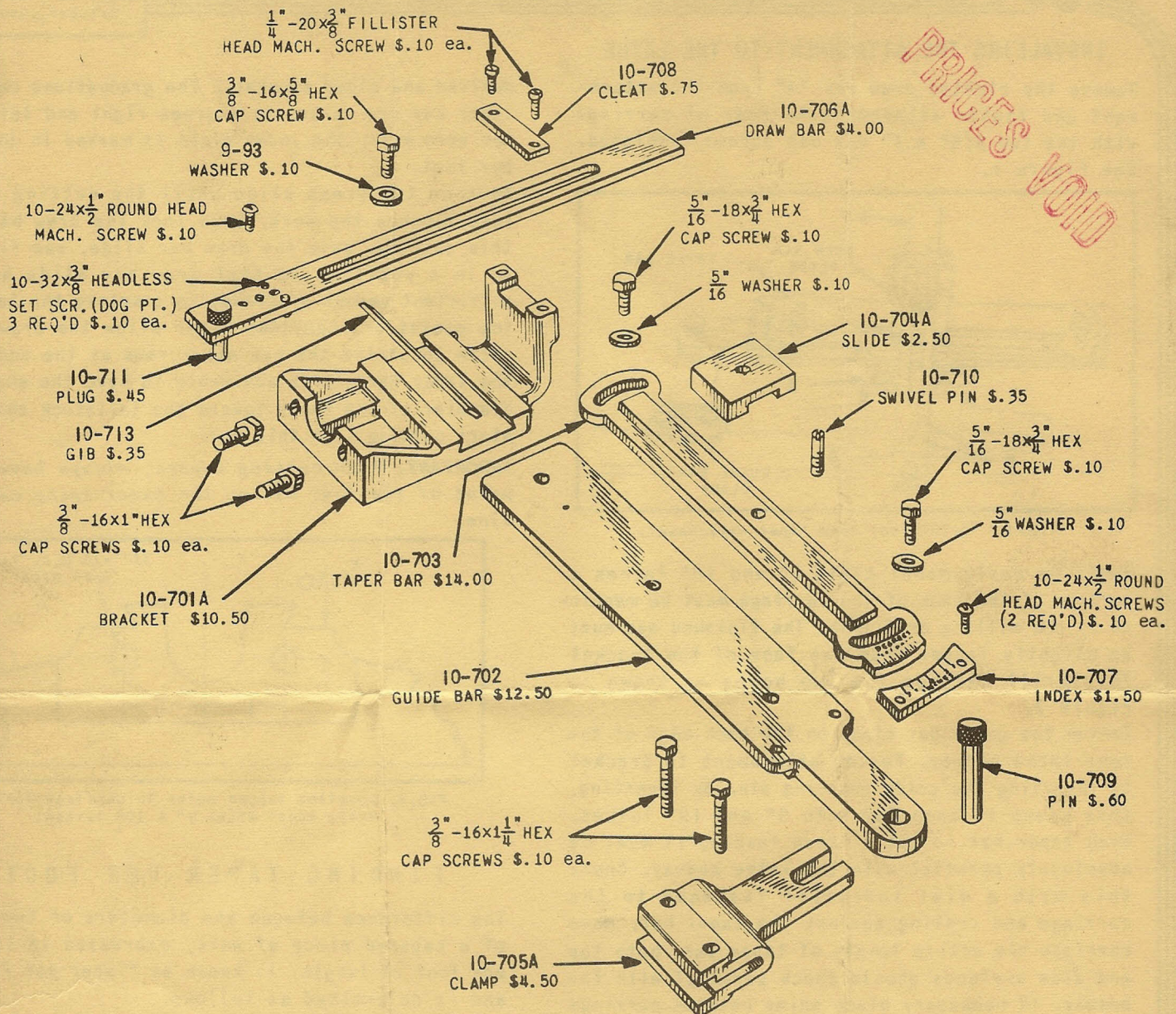
Set the taper slide on the 1 1/8 graduation mark to right or left of zero, depending upon which way the taper is cut.

For further information on tapers refer to the Atlas "Manual of Lathe Operations", pages 183 through 195.

SEE REVERSE SIDE FOR PARTS PRICE LIST



## NO. 700 TAPER ATTACHMENT PARTS PRICE LIST



### ORDERING INFORMATION

**IMPORTANT:** Order all repair parts by PART NUMBER and NAME. All prices are subject to change without notice. A minimum charge of \$0.25 will be made on any order. **NOTE:** Standard parts, such as bolts, nuts, washers, etc., shown above without part numbers should be purchased locally.



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