

Figure 14 – Checking Thread Length

**NOTE!** If a ring gauge is not available, a fitting can be used. This fitting should be representative of those being used on the job. The pipe thread should be cut to obtain 2 to 3 turns hand tight engagement with fitting. If pipe thread is not proper diameter the index line should be moved in the direction of the OVER or UNDER size mark on size bar. (Refer to "Installing Dies in Die Heads").

### Operating Instructions Using Geared Threaders



**Do not wear gloves or loose clothing when operating Power Drive. Keep sleeves and jackets buttoned. Do not reach across the machine, geared threader or drive shaft.**

**Do not use this Power Drive if the foot switch is broken or missing. Always wear eye protection to protect eyes from dirt and other foreign objects.**

**To prevent tipping, proper set-up of the Threading Machine and Geared Threader is required. Follow instructions carefully.**

**Geared Threaders weigh 95 to 160 pounds. Two (2) persons should be used to lift these threaders.**

### Adjusting Nos. 141 and 161 Geared Threaders

#### Cam Plate (Pipe Size) Adjustment Procedure

1. Place threader on floor or workbench with drive shaft up.
2. Pull knobs (Figure 15) of cam plate and rotate cam plate to desired pipe size marking on top of die head. Release knobs when locating pins drop into hole in selector plate.

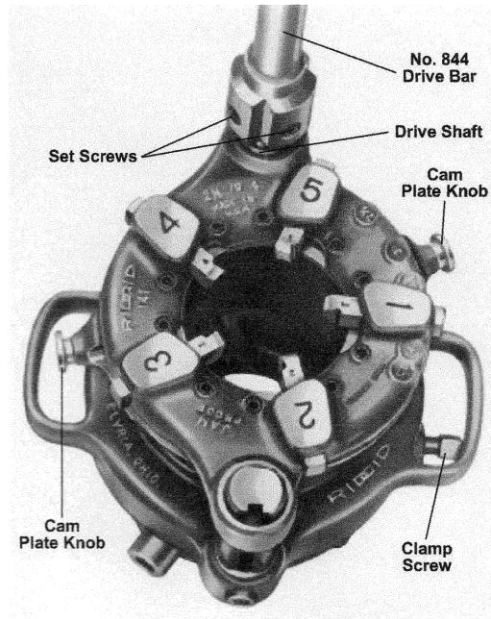


Figure 15 – No. 141 Geared Threader with No. 844 Drive Bar Installed (No. 161 Threader Similar)

#### Thread Size Adjustment Procedure

Grasp workholder and turn square end of drive shaft or turn gear case by hand to respective reference lines on guide post (Figure 16).

Standard Size Thread - Either one of the following two (2) reference lines may be used.

Reference Line 1: Set bottom surface of die head at red STANDARD line on pinion sleeve.

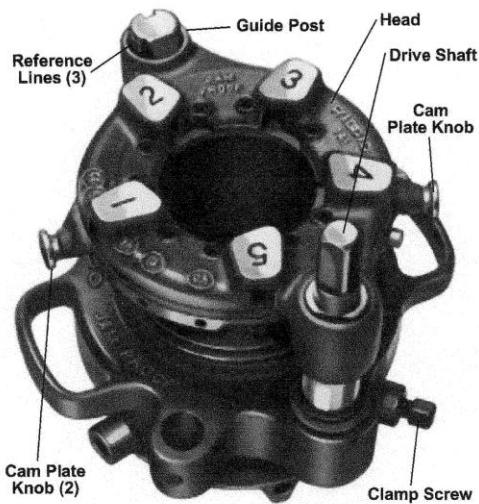
Reference Line 2: Set upper surface of die head which houses guide post even with STANDARD line at top end of guide post.

**Oversize Thread:** For oversize (shallow thread) set head at bottom line on guide post. This line is marked (2T OVER).

**Undersize Thread:** For undersize (deep thread) set head at top line on guide post. This line is marked (2T UNDER).

**Changing Posts For Straight Or Tapered Threads**

1. Adjust threader to cut standard size threads using "STANDARD" reference line.
2. Remove screw from gear case at base of guide post.



**Figure 16 – No. 141 Geared Threader Showing Pinion Sleeve and Guide Post Reference Lines**

3. Pull guide post up until guide block attached to selector plate is disengaged from angle slot in guide post.
4. Turn guide post until straight slot faces inward for straight thread. For tapered threads set tapered slot inward. *Figure 16* shows guide post set to cut tapered thread.
5. Engage guide block in slot and push guide post down into position.
6. Replace guide post screw.

Unit is now set to cut straight threads (NPSM or BSPP) or taper threads (NPT or BSPT).

**Changing Die Set**

1. Remove stop screw (*Figure 17*) from selector plate.

2. Pull Knobs (*Figure 15*) and rotate cam plate to CD mark on top of die head.

3. Remove worn die set (*Figure 15*) and insert new die set.

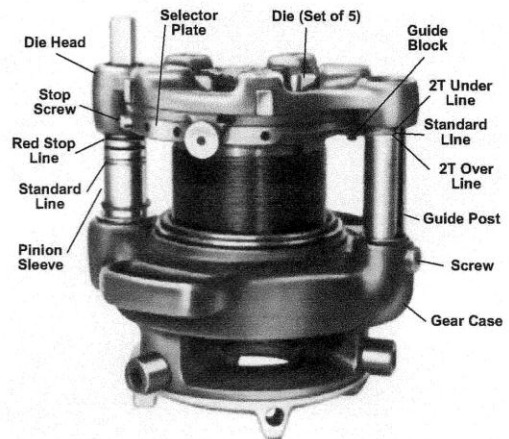
**IMPORTANT!** Be sure to replace complete die set. Die numbers must correspond with slot numbers.

4. Rotate cam plate to original position and replace stop screw.

**NOTE!** If it becomes necessary to remove or replace the guide block, the stamped number E-1997 on guide block must be AGAINST selector plate. If stamped number is visible you will cut an UNDERSIZE thread.

**Installing Nos. 141 and 161 Geared Threaders (Close-Coupled Method)**

1. Place threader on floor or workbench with drive shaft up. Install No. 844 Drive Bar on threader drive shaft and tighten two (2) set screws (*Figure 15*).



**Figure 17 – No. 141 Geared Threader with 844 Drive Bar Installed (No. 161 Threader Similar)**

2. Using two persons, pick up threader and insert drive bar into chuck of Power Drive. Tighten Power Drive chuck jaws into three "V" shaped grooves in head of drive bar.

**IMPORTANT!** Allow approximately 3/4" of V-shaped grooves exposed in front of chuck jaws (*Figure 17*) to allow space for oiling.

3. Close centering chuck on shaft of drive bar.

4. 141 Geared Threaders (Figure 19) – Pull out support bar on switch side and secure retaining ring against Power Drive body with set screws.
- 161 Geared Threaders (Figure 20) – Insert No. 346 Support Arms into support bars and secure retaining rings against Power Drive body with set screws.
5. 141 Geared Threaders (Figure 19) – Slip No. 758 Loop over support bar and secure to gear case loop with set screw.

NOTE! Use No. E-3675 Adapter Bracket (Figure 19) in place of No. 758 Loop on all 4P Threaders without loop hole on gear case.

- 161 Geared Threader (Figure 20) – Remove set screw (plug) from threader guide post and secure support arms with bolt and washer.
6. Support pipe with a pipe support (Figure 21). Position support approximately 2-1/2 feet from threader.
7. Insert pipe in threader and center end of pipe in throat of dies. Tighten workholder with socket wrench (Figure 18).
8. Tighten clamp screw securely with socket wrench.

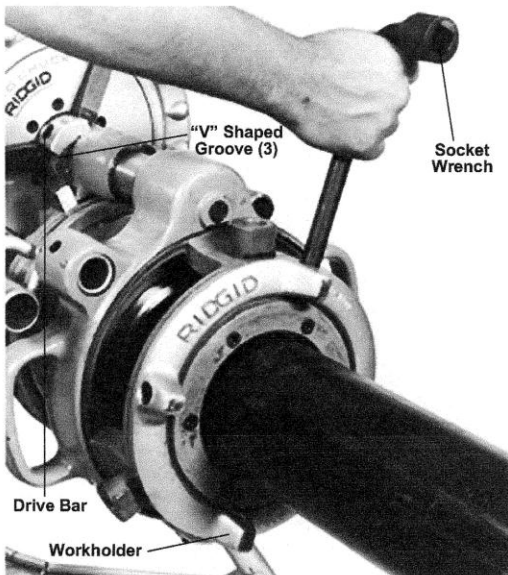


Figure 18 – Tightening Workholder on No. 141 Geared Threader (No. 161 Threader Similar)

9. Position No. 418 Oiler directly under threader (Figure 21).

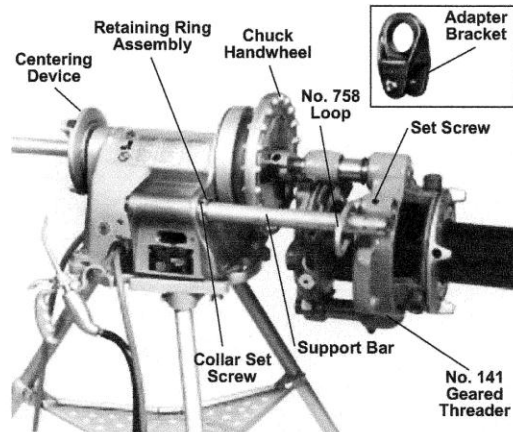


Figure 19 – No. 141 Geared Threader Close-Coupled to Power Drive

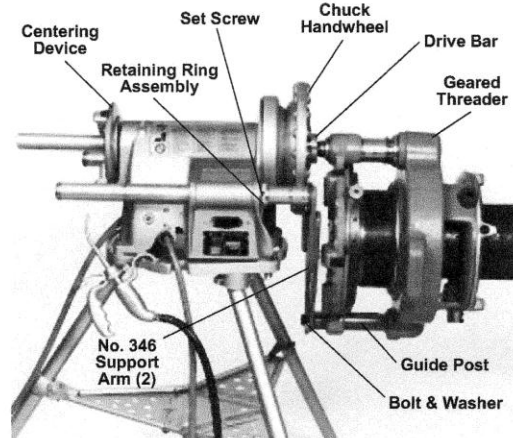


Figure 20 – No. 161 Geared Threader Close-Coupled to Power Drive

### Threading using Nos. 141 and 161 Geared Threaders (Close-Coupled Method)

1. Install geared threader and pipe.
2. Turn Power Drive REV/OFF/FOR switch to FOR (Forward) position.
3. Step on foot switch.
4. Flood dies with RIDGID Thread Cutting Oil during threading operation to assure long die life.

5. 141 and 161 – Release foot switch when red STOP line appears on pinion sleeve (Figure 17).
- NOTE! RIDGID Geared Threaders have a jam-proof design so pinion shaft will automatically disengage if threader is accidentally run on pipe past a full thread length.
6. Turn REV/OFF/FOR switch to REV (Reverse) position. Step on foot switch and back threader off of pipe.

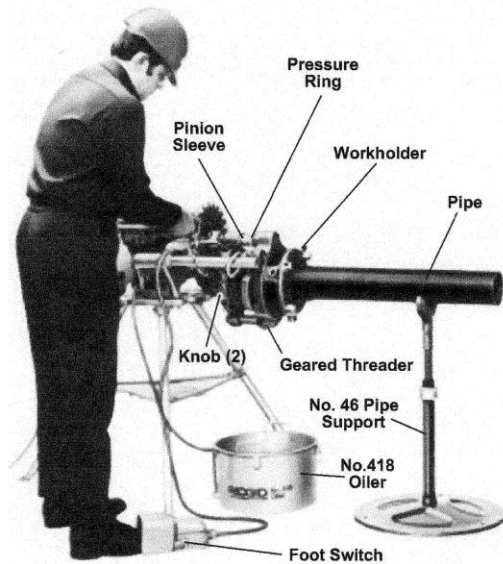


Figure 21 – Threading Pipe with No. 141 Geared Threader (Close-Coupled Method) (No. 161 Threader Similar)

**IMPORTANT!** Allow approximately  $\frac{3}{4}$ " of V-shaped grooves exposed in front of chuck jaws (Figure 17) to allow space for oiling.

7. 141 and 161 – Using the socket wrench, loosen clamp screw (Figure 16), turn workholder to OPEN position and remove pipe.

NOTE! Before threading next piece of pipe, run threader head beyond STANDARD line on pinion sleeve and then back to STANDARD line. This movement takes up slack in gearing for immediate response when cutting next thread.

8. Turn REV/OFF/FOR switch to OFF position.

**IMPORTANT!** If, by accident, a RIDGID Geared Threader is backed off too far and threaded barrel becomes disengaged from workholder, the threader must be removed from the Power Drive and put on a bench. Re-engage the threads carefully by hand. Do not attempt this by power.

### Installing Nos. 141 and 161 Geared Threaders Using No. 840A Universal Drive Shaft

#### **▲ WARNING**

When threading pipe larger than 2 inches, the Power drive stand must be bolted to the floor. Chain vise must be securely anchored with jacks screw assembly and post to ceiling or bolted to floor. Failure to follow these instructions could result in the Vise or Power Drive tipping and causing serious injury.

When threading pipe up to 5 inches nominal, the 450 Tristand Vise can be used. However, when threading 6 inch nominal pipe, a BC-610, BC-810 Top Screw Bench Chain Vise or a 460 Tristand Vise must be used.

1. Adjust threader being used.
2. Slide long hexagon end of the universal drive shaft into front chuck of Power Drive. Tighten chuck hand-wheel and centering chuck.
3. Locate chain vise in line, on same level, and approximately the length of universal drive shaft away from Power Drive front chuck (Figure 22).
4. Tightly secure pipe in No. 450 or 460 Chain Vise.
5. Support long pieces of pipe with pipe support.
6. Using two persons, position workholder so that a jaw is on top center and slide threader onto pipe. Carefully center end of pipe in throat of dies.