

CAUTION DO NOT use a sling through the spindle tube only.



Figure 6 – Sling Transportation

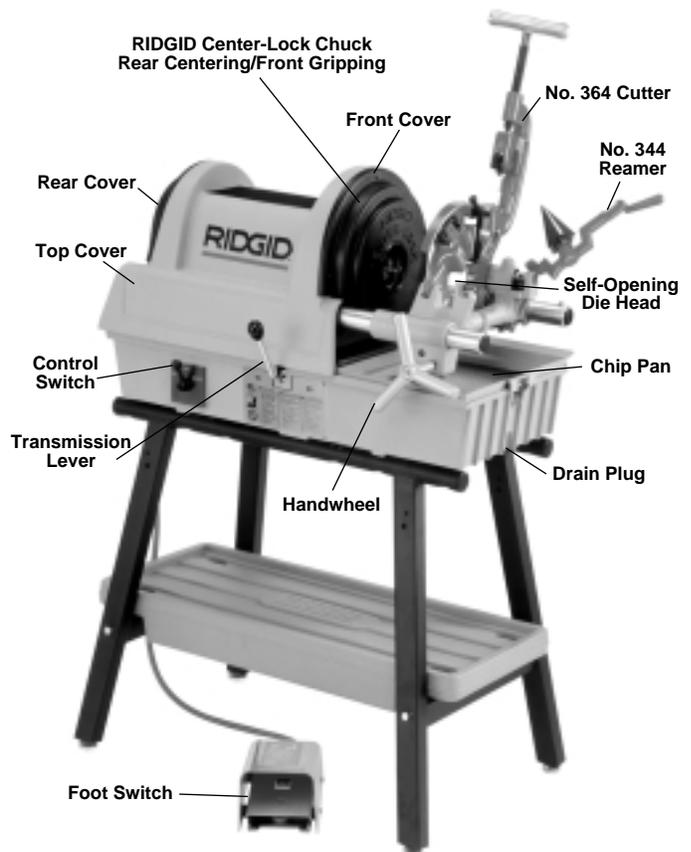
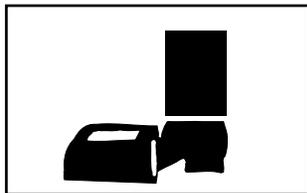


Figure 7 – 1822-I Threading Machine

Machine Inspection

▲ WARNING



To prevent serious injury, inspect your Threading Machine. The following inspection procedures should be performed on a daily basis:

1. Make sure threading machine is unplugged and the control switch is set to the OFF position (Figure 7).
2. Clean the chuck jaws with a wire brush.
3. Inspect the jaws for excessive wear or damaged teeth. Refer to the Maintenance Instructions if they need to be replaced.
4. Make sure the foot switch is present and attached to the Threading Machine (Figure 7).

▲ WARNING Do not operate the Threading Machine without a foot switch.

5. Inspect the power cord and plug for damage. If the plug has been modified, is missing the grounding pin, or if the cord is damaged, do not use the Threading Machine until the cord has been replaced.

6. Inspect the Threading Machine for any broken, missing, misaligned or binding parts as well as any other conditions which may affect the safe and normal operation of the machine. If any of these conditions are present, do not use the Threading Machine until any problem has been repaired.
7. Lubricate the Threading Machine if necessary according to the Maintenance Instructions.
8. Use tools and accessories that are designed for your Threading Machine and meet the needs of your application. The correct tools and accessories allow you to do the job successfully and safely. Accessories designed for use with other equipment may be hazardous when used with this Threading Machine.
9. Clean any oil, grease or dirt from all handles and controls. This reduces the risk of injury due to a tool or control slipping from your grip.
10. Inspect the cutting edges of your tools and dies. If necessary, have them replaced prior to using the Threading Machine. Dull or damaged cutting tools and dies can lead to binding, tool breakage and poor quality threads.

NOTE! High speed dies are recommended for use with this machine when threading 1" - 2" pipe at 45 RPM. Because of its high speed, alloy dies will wear quickly and produce poor quality threads.

11. Clean metal shavings and other debris from the chip tray of the Threading Machine. Check the level and quality of the thread cutting oil. Replace or add oil if necessary. Reservoir in the base will hold approximately one (1) gallon of thread cutting oil.

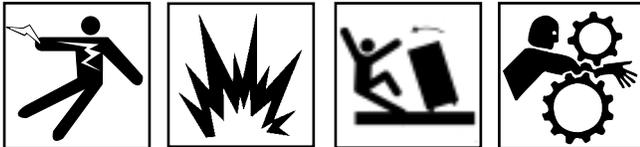
NOTE! Thread cutting oil lubricates and cools the threads during the threading operation. A dirty or poor grade cutting oil can result in poor thread quality.

NOTE! For improved thread quality use RIDGID Stainless Steel Oil and thread at 16 RPM.

NOTE! To drain dirty oil and properly maintain the oil system, refer to the "Maintenance Instructions".

Machine and Work Area Set-Up

▲ WARNING



To prevent serious injury, proper set-up of the machine and work area is required. The following procedures should be followed to set-up the machine.

1. Locate a work area that has the following:
 - Adequate lighting
 - No flammable liquids, vapors or dust that may ignite.
 - Grounded electrical outlet
 - Clear path to the electrical outlet that does not contain any sources of heat or oil, sharp edges or moving parts that may damage electrical cord.
 - Dry place for machine and operator. Do not use the machine while standing in water.
 - Level ground
2. Clean up the work area prior to setting up any equipment. Always wipe up any oil that may have splashed or dripped from the machine to prevent slips and falls.
3. If the workpiece extends more than four (4) feet beyond the Threading Machine, use one or more pipe stands to prevent tipping and the oscillation of the pipe.
4. If the workpiece extends beyond the Threading Machine, set-up guards or barricades to create a minimum of three (3) feet of clearance around the Threading Machine and workpiece. This "safety zone"

prevents others from accidentally contacting the machine or workpiece and either causing the equipment to tip or becoming entangled in the rotating parts.

5. If mounted on a 1406 Folding Wheel Stand, make sure 1460 Oil Pan Cover is removed.
6. If necessary, fill the reservoir with RIDGID Thread Cutting Oil.
7. Make sure OPEN/OFF/CLOSE switch is in the OFF position.
8. Position the foot switch so that the operator can safely control the machine, tools and workpiece. It should allow the operator to do the following:
 - Stand facing the directional switch.
 - Use the foot switch with his left foot.
 - Have convenient access to the directional switch and tools without reaching across the machine.

Machine is designed for one person operation.
9. Plug the threading machine into the electrical outlet making sure to position the power cord along the clear path selected earlier. If the power cord does not reach the outlet, use an extension cord in good condition.

▲ WARNING To avoid electrical shock and electrical fires, never use an extension cord that is damaged or does not meet the following requirements:

- The cord has a three-prong plug similar to shown in Electrical Safety section.
- The cord is rated as "W" or "W-A" if being used outdoors.
- The cord has sufficient wire thickness (14 AWG below 25'/12 AWG 25'-50'). If the wire thickness is too small, the cord may overheat, melting the cord's insulation or causing nearby objects to ignite.

▲ WARNING To reduce risk of electrical shock, keep all electrical connections dry and off the ground. Do not touch plug with wet hands.

10. Check the Threading Machine to insure it is operating properly.
 - Flip the control switch to CLOSE. Press and release the foot switch. Check that the Threading Machine rotates in a counterclockwise direction as you are facing the front chuck and that the jaws close down toward center. Have the Threading Machine serviced if it rotates in the wrong direction or if the foot switch does not control its stopping or starting.

- Depress and hold the foot switch. Inspect the moving parts for misalignment, binding, odd noises or any other unusual conditions that may affect the safe and normal operation of the machine. If such conditions are present, have the machine serviced.
- Flip the control switch to OPEN. Press and release the foot switch. Check that the Threading Machine rotates in a clockwise direction as you are facing the chuck.
- Release the foot switch and flip the control switch to OFF.

Operation Using Machine-Mounted Tools



Do not wear gloves or loose clothing when operating Threading Machine. Keep sleeves and jackets buttoned. Do not reach across the machine, pipe, or inside chuck openings.

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

Keep hands away from rotating pipe and fittings. Stop the machine before wiping pipe threads or screwing on fittings. Allow the machine to come to a complete stop before touching the pipe.

Do not use this machine to “make-on” or “break off” fittings. This practice is not an intended use of this Threading Machine.

Installing and Chucking Pipe In Threading Machine:

1. Check to insure the cutter, reamer and die head are in the UP position.
2. Mark the pipe at the desired length if it is being cut to length.
3. Place speed selector in 45 RPM position.
4. Insert the pipe into the Threading Machine so that the end to be worked or the cutting mark is located a sufficient distance to complete desired operation.
5. Insert workpieces less than 2 feet long from the front of the machine. Insert longer pipes through either end so that the longer section extends out the rear of the Threading Machine.

▲ WARNING To avoid equipment tip-overs, position the pipe supports under the workpiece.

6. Place the control switch in the CLOSE position and step on machine’s foot switch. The machine will automatically center and grip the pipe or bolt stock.

NOTE! If pipe is chucked off-center, run the machine in the OPEN switch position to release pipe and rechuck. Slight off-center chucking can be corrected with a normal ream or cut-off operation.

Cutting Pipe with No. 364 Cutter

1. Swing reamer and die head to UP position.
2. Move pipe cutter DOWN onto pipe and move carriage with handwheel to line up cutter wheel with mark on pipe.
3. Tighten cutter feed screw handle on pipe keeping wheel aligned with the pipe (*Figure 8*).

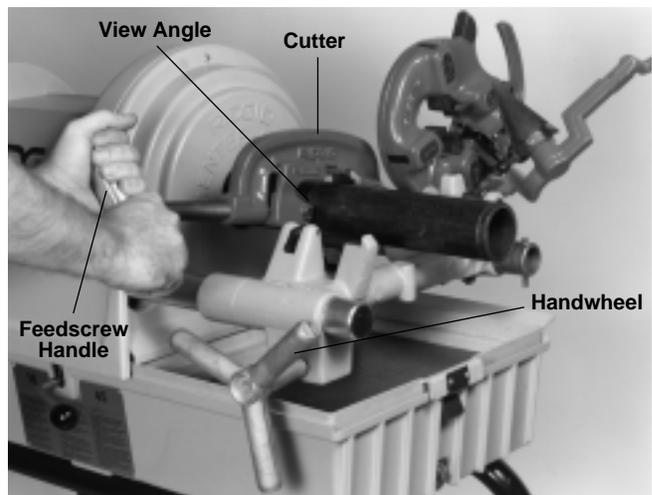


Figure 8 – Cutting Pipe with 364 Cutter

4. Assume the correct operating posture.

▲ WARNING This will allow you to maintain proper balance and to safely keep control of the machine and tools.

- Be sure you can quickly remove your foot from the foot switch.
 - Stand facing the control switch.
 - Be sure you have convenient access to control switch and tools.
 - Do not reach across the machine or workpiece.
5. Grasp the pipe cutter’s feedscrew handle with both hands.
 6. Depress and hold down the foot switch with the left foot.

7. Tighten the feedscrew handle slowly and continuously until the pipe is cut. Do not force the cutter into the workpiece.
8. Release the foot switch and remove your foot from the housing.
9. Swing pipe cutter back to the UP position.

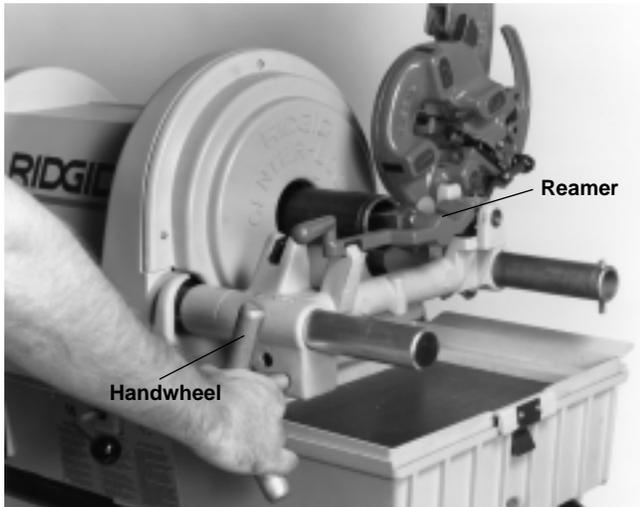


Figure 9 – Reaming with 344 Reamer

Reaming Pipe with No. 344 Reamer

1. Move reamer arm into DOWN position.
2. Depress and hold the foot switch down with left foot and feed carriage handwheel towards pipe.
3. Position reamer into pipe and complete reaming by exerting slight pressure on handwheel (Figure 9).
4. Retract reamer and return reamer to UP position.
5. Release foot switch and remove your foot from the housing.

Threading Pipe or Rod with Self-Opening, Quick-Opening, or Semi-Automatic Die Head

1. Install die set. Refer to die installation procedure. Set die head to proper size.
2. Swing cutter and reamer to UP position.
3. Swing die head to DOWN position with throwout lever set to CLOSE position.
4. Check gear shift lever and place it in the proper speed shown in the speed selection chart.

Speed Selection Chart

Size/Material	Recommended RPM
1/8" – 2" Pipe	45
1/4" – 1" Bolt	45
High Torque Applications • Stainless Steel • Bolt Above 1"	16
Low Voltage Conditions	16

NOTE! 20 amp circuits with good line voltage and minimal extension cords will allow threading 2" pipe at 45 RPM. If the machine stalls due to low voltage, complete the thread at 16 RPM. On 15 amp circuits, 1 1/2" – 2" pipe must be threaded at 16 RPM.

NOTE! Failure to select proper speed may result in motor stalling under low voltage conditions.

5. Turn carriage handwheel to bring dies against end of pipe. Slight pressure on handwheel will start dies (Figure 10).

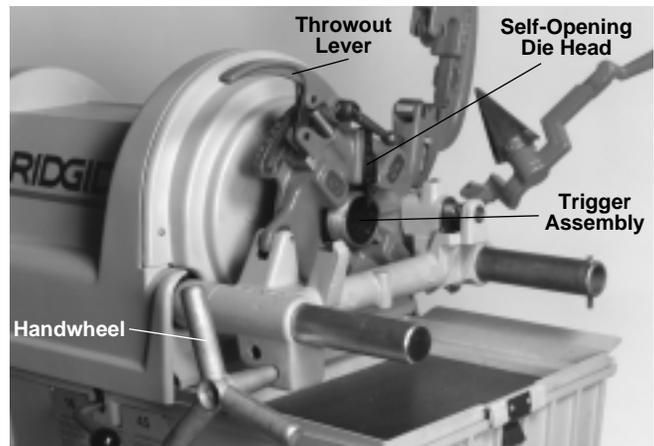


Figure 10 – Threading Pipe with No. 815A Die Head

6. Self-Opening 815A Die Head (Figure 11) – When the die head trigger contacts end of pipe, throwout lever is automatically opened.

NOTE! For 1/2" to 2" pipe, die head will open automatically when proper length of thread has been cut. For 1/8", 1/4" and 3/8" pipe, die head must be opened manually.

Quick-Opening 811A Die Head (Figure 12) – When the end of pipe being threaded is flush with the end of the Number 1 die, rotate throwout lever to OPEN position, retracting dies.

Semi-Automatic Die Head (Figure 13) – When the end of the pipe being threaded is flush with the end of the Number 1 Die, hit the handle to release the dies from the pipe.

7. Turn carriage handwheel to back die head off pipe.

8. Move die head to UP position.
9. Release foot switch and remove your foot from the housing.

Removing Pipe From The Threading Machine

1. Turn the control switch to the OPEN position. Depress foot switch and machine will release the pipe.
2. Release foot switch and turn control switch to the OFF position.

▲ WARNING Never reach inside chuck cover while machine is connected to a power source. Fingers can be crushed.

3. Slide the workpiece out of the Threading Machine, keeping a firm grip on the workpiece as it clears the Threading Machine.

▲ WARNING To avoid injury from falling parts or equipment tip-overs when handling long workpieces, make sure that the end farthest from the Threading Machine is supported prior to removal.

4. Clean up any oil spills or splatter on the ground surrounding the Threading Machine.

Installing Dies In Self-Opening Die Head (Right Hand Only)

The No. 815A Self-Opening Die Head (*Figure 10*) for right hand threads requires four sets of dies to thread pipe ranging from 1/8" through 2". One set of dies is required for each of the following pipe size ranges: (1/8"), (1/4" and 3/8"), (1/2" and 3/4") and (1" through 2"). Bolt threading requires a separate set of dies for each bolt size.

NOTE! High speed dies are recommended for threading 1" to 2" pipe at 45 RPM.

1. Place self-opening die head on bench in vertical position.
2. Make sure trigger assembly is released.
3. Loosen clamp lever approximately six full turns.
4. Pull lock screw out of slot under size bar so that roll pin in lock screw will bypass slot. Position size bar so that index line on lock screw is aligned with the end of REMOVE DIES position.
5. Lay die head down with numbers up.
6. Remove dies from die head.
7. Insert new dies to mark on side of dies. Numbers 1 through 4 on the dies must match numbers on the die head.
8. Move throwout lever back to lock in dies.

9. With head in vertical position, rotate cam plate until roll pin on lock screw can be positioned in slot under size bar. In this position dies will lock in die head. Make sure roll pin points toward end of size bar marked REMOVE DIES.
10. Adjust die head size bar until index line on lock screw is aligned with proper size mark on size bar.

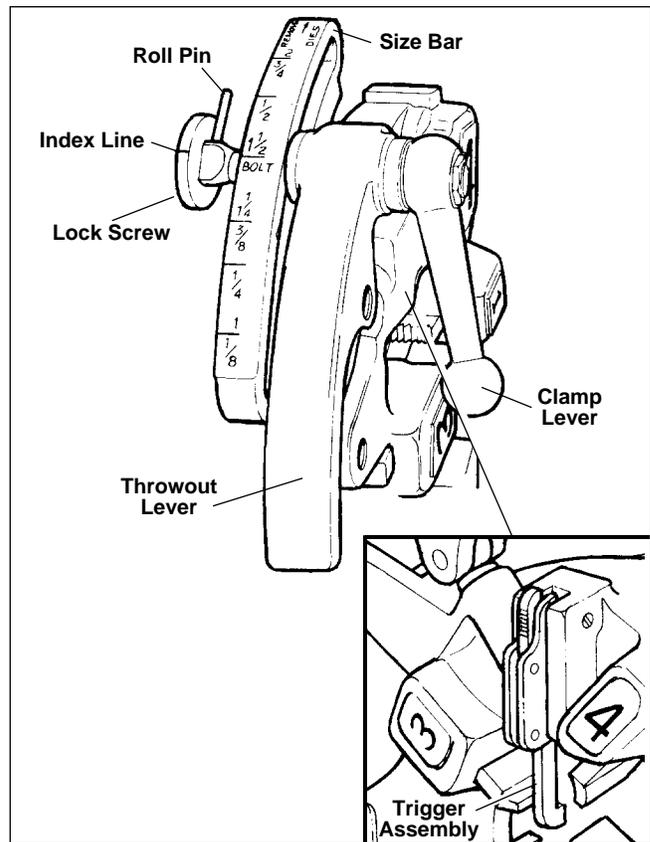


Figure 11 – Universal Self-Opening Die Head

11. Tighten clamp lever.
12. If oversize or undersize threads are required, set the index line in direction of OVER or UNDER size mark on size bar.

NOTE! When left hand threading the UNDER/OVER positions are reversed.

Installing Dies In Quick-Opening Die Head (Right and Left Hand)

The No. 811A Universal Die Head (*Figure 11*) for right hand threads requires four sets of dies to thread pipe ranging from 1/8" through 2". One set of dies is required for each of the following pipe size ranges: (1/8"), (1/4" and 3/8"), (1/2" and 3/4") and (1" through 2"). Bolt threading requires a separate set of dies for each bolt size. No bolt dies are available for left hand universal die heads.

NOTE! High speed dies are recommended for threading 1" to 2" pipe at 45 RPM.

1. Lay die head on bench with numbers face up.
2. Flip throwout lever to OPEN position.
3. Loosen clamp lever approximately three turns.
4. Lift tongue of clamp washer up and out of slot under size bar. Slide throwout lever all the way to end of slot in the change die direction indicated on cam plate.
5. Remove dies from die head.
6. Insert new dies to mark on side of dies. Numbers 1 through 4 on the dies must match numbers on the die head.
7. Slide throwout lever back so that tongue of clamp lever washer will drop in slot under size bar.
8. Adjust die head size bar until index line on link is aligned with proper size mark on size bar. For bolt threads (of any size), align index line with bolt line on size bar.
9. Tighten clamp lever.
10. If oversize or undersize threads are required, set the index line in direction of OVER or UNDER size mark on size bar.

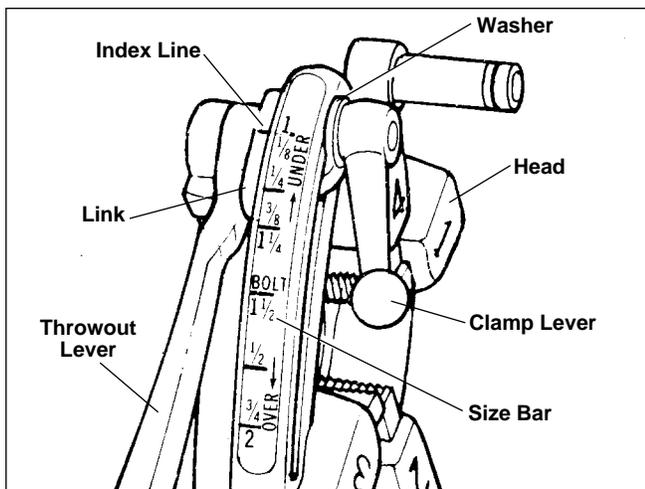


Figure 12 – Universal Quick-Opening Die Head

Installing Die In Model 816/817 Die Heads

The Semi-Automatic Die Head (Figure 13) for right hand threads requires four sets of dies to thread pipe ranging from 1/8" through 2". One set of dies is required for each of the following size ranges: (1/8", (1/4" and 3/8"), (1/2" and 3/4") and (1" through 2"). Bolt threading requires a separate set of dies for each bolt size.

1. Depress handle and rotate so that cam plate rests

(Figure 13 – Model 816/817 Die Head) against the plunger knob (as shown).

2. Lay the die head down flat on a table or bench with the numbers facing up.
3. Pull up on the plunger knob and rotate the handle counter-clockwise all the way (to the left).
4. Select the correct dies for the size desired (size marked on the back end or face of the dies).
5. Numbers on the dies must correspond with those on the die head slots. Insert dies to the line marked on the dies – numbered edge up.
6. Rotate the handle clockwise (to the right) so that the plunger knob pops back down flush against the die head.
7. To set or adjust for desired size, loosen the screw for the desired size stop, move the block to the right to make it Under-Sized and to the left to make it Over-Sized. When setting blocks for new dies, start with the position block on the middle mark and adjust from there.

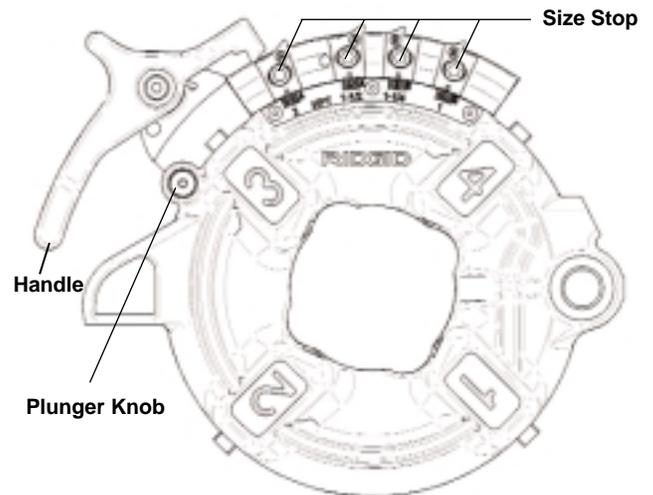


Figure 13 – Semi-Automatic Die Head

Checking Thread Length

(Figure 14)

1. Thread is cut to proper length when end of pipe is flush with edge of dies (Figure 14A).
2. Die Head is adjustable to obtain proper thread diameter. If possible, threads should be checked with a thread ring gage (Figure 14B). A proper thread is cut when end of pipe is plus or minus one turn of being flush with face of ring gage.

Operation Instructions Using Geared Threaders

⚠ WARNING



Do not wear gloves or loose clothing when operating Threading Machine. Keep sleeves and jackets buttoned. Do not reach across the machine or geared threader.

Do not use this Threading Machine 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.

No. 141 Geared Threader weighs 95 pounds. Two (2) persons should be used to lift this threader.

Adjusting No. 141 Geared Threader

1. With the No. 141 Geared Threader on floor and drive shaft facing up, pull two cam plate knobs and rotate cam plate to desired size. Locating pins will drop into holes in selector plate.

Thread Size Adjustment

1. For standard thread depth, hold workholder stationary and rotate gear case by hand until standard line on pinion sleeve is flush with bottom of die head or the standard line on guide post is flush with top of die head (*Figure 18*).
2. For oversized threads, rotate gear case until the 2T Over Line on guide post is flush with top of die head.
3. For undersized threads, rotate gear case until the 2T Under Line on guide post is flush with top of die head.

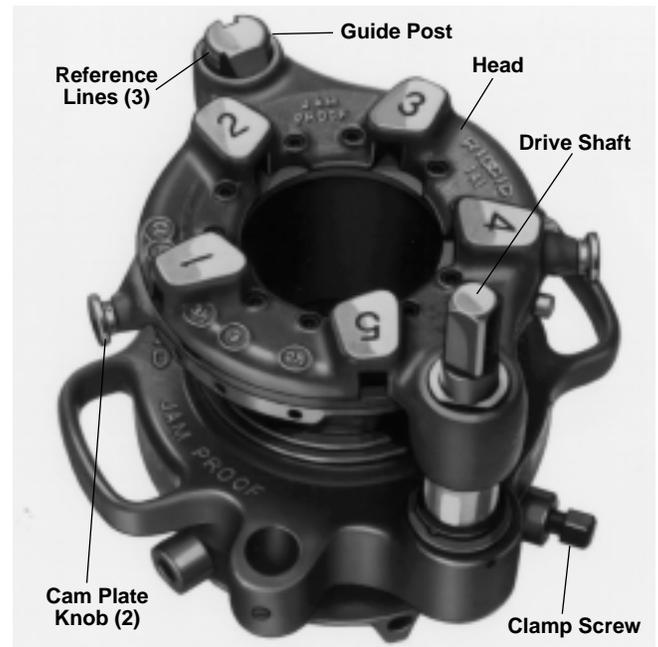


Figure 18 – No. 141 Geared Threader with Drive Shaft Up

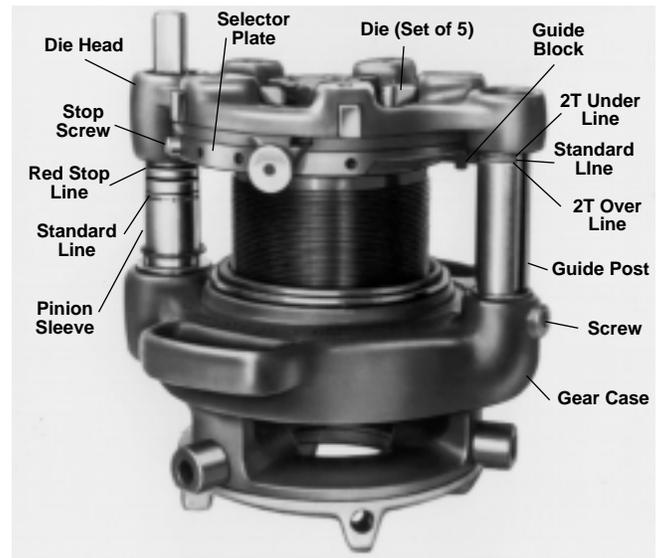


Figure 19 – No. 141 Geared Threader showing Pinion Sleeve and Guide Post Reference Lines

Indexing Guide Post For Straight Or Tapered Threads

(*Figure 19*)

1. At a standard size thread setting, remove set screw at base of guide post and pull post through die head.
2. For tapered threads, insert guide post with the diagonal slot inward through die head. Guide block will engage diagonal slot and post will rotate toward gear case.

3. For straight threads, insert guide post with straight slot inward through die head to the gear case.
4. With guide block in diagonal/straight slot, replace set screw.

Changing Dies

(Figure 19)

1. Remove stop screw.
2. Pull knobs and rotate cam plate to "CD" mark.
3. Remove Die #1 and insert new Die #1 (repeat).
4. Rotate cam plate to size.
5. Replace stop screw.

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

Operating No. 141 Geared Threader

Installing No. 141 Geared Threader

(Figure 20)

Mounting No. 141 Geared Threader on machine requires a No. 241 Carriage Mount Kit. The kit includes a carriage saddle, carriage connecting link, reversing drive shaft and oil routing manifold. The control switch must be in the CLOSE position for No. 141 Geared Threader operation.

1. Remove cutter, die head and reamer from machine.
2. Install carriage saddle.
3. Install oil manifold (see No. 821 Blade Cutter).
4. From the front of machine, install drive shaft through spindle tube up to front cover. A counter-clockwise rotation is necessary for drive shaft installation or removal.

CAUTION Jaws must be fully open to install or remove drive shaft.

CAUTION DO NOT install or remove drive shaft through rear chuck. Rear centering fingers could be bent/broken.

5. With carriage away from chuck, carefully place No. 141 Geared Threader on the carriage saddle and install connecting link.
6. From machine rear, rotate and push drive shaft onto square shaft of No. 141. Tighten set screws. Tighten connecting link set screw.
7. With No. 141 set at standard line, rotate carriage handwheel until assembly is 1" from front chuck cover.

Threading 2½" to 4" Pipe (45 RPM)

1. Adjust No. 141 Geared Threader and install on 1822-I Threading Machine.
2. Support pipe with a pipe stand.
3. Insert pipe into the throat of dies and tighten workholder and clamp screw.
4. Direct oil spout at dies and place oil manifold lever in required position.
5. Place control switch in the CLOSE position and with transmission lever in the 45 RPM position, depress foot switch.
6. Thread until the red stop line appears on pinion sleeve (reference the guide post markings for oversized or undersized threads).
7. To back off threader, place control switch in the OPEN position and depress foot switch.
8. After ¼ turn of pipe, stop machine, pull cam plate knobs and rotate cam plate toward "CD" mark of die head.
9. Loosen clamp screw and open workholder. Remove the pipe.
10. Depress foot switch and reset No. 141 to standard line.

CAUTION If threaded barrel becomes disengaged from workholder, it must be re-engaged by hand on a workbench. DO NOT use power.

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 made to the 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").