300 Power Drive

Model **300 Complete** pictured above including Stand, Threading Carriage, Tool Tray and Oiler.

⚠ WARNING!

Read this Operator's Manual carefully before using this tool. Failure to understand and follow the contents of this manual may result in electrical shock, fire and/or serious personal injury.

300 Power Drive	
Record Serial Number below and retain product serial number which is located on nameplate.	
Serial No.	

Safety Symbols

In this operator's manual and on the product, safety symbols and signal words are used to communicate important safety information. This section is provided to improve understanding of these signal words and symbols.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE NOTICE indicates information that relates to the protection of property.


This symbol means read the operator's manual carefully before using the equipment to reduce the risk of injury. The operator's manual contains important information on the safe and proper operation of the equipment.


This symbol means always wear safety glasses with side shields or goggles while using this equipment to reduce the risk of injury.


This symbol indicates the risk of fingers, hands, clothes and other objects catching on or between gears or other rotating parts and causing crushing injuries.


This symbol indicates the risk of fingers, legs, clothes and other objects catching and/or wrapping on rotating shafts causing crushing or striking injuries.


This symbol indicates the risk of electrical shock.


This symbol indicates the risk of machine tipping, causing striking or crushing injuries.


This symbol means do not wear gloves while operating this machine to reduce the risk of entanglement.


This symbol means always use a foot switch when using a threading machine/power drive to reduce the risk of injury.


This symbol means do not disconnect foot switch to reduce the risk of injury.


This symbol means do not block foot switch (lock in ON position) to reduce the risk of injury.

General Power Tool Safety Warnings*

⚠ WARNING

Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE!

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

Work Area Safety

- **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
- **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Power tools create sparks which may ignite the dust or fumes.
- **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

Electrical Safety

- **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electrical shock if your body is earthed or grounded.
- **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electrical shock.
- **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or**

* The text used in the General Power Tool Safety Warnings section of this manual is verbatim, as required, from the applicable UL/CSA 62841-1 edition standard. This section contains general safety practices for many different types of power tools. Not every precaution applies to every tool, and some do not apply to this tool.

moving parts. Damaged or entangled cords increase the risk of electric shock.

- **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
- **If operating a power tool in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI) protected supply.** Use of a GFCI reduces the risk of electric shock.

Personal Safety

- **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- **Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- **Prevent unintentional starting. Ensure the switch is in the OFF-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energizing power tools that have the switch ON invites accidents.
- **Remove any adjusting key or wrench before turning the power tool ON.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- **Dress properly. Do not wear loose clothing or jewelry. Keep your hair and clothing away from moving parts.** Loose clothes, jewelry, or long hair can be caught in moving parts.
- **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.
- **Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles.** A careless action can cause severe injury within a fraction of a second.

Power Tool Use And Care

- **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it is designed.
- **Do not use the power tool if the switch does not turn it ON and OFF.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- **Disconnect the plug from the power source and/or remove the battery pack, if detachable, from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
- **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
- **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
- **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.
- **Keep handles and grasping surfaces dry, clean and free from oil and grease.** Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

Service

- **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

Specific Safety Information

⚠ WARNING

Read this operator's manual carefully before using the 300 Power Driver. Failure to understand and follow the contents of this manual may result in electrical shock, fire and/or serious personal injury.

Call the Ridge Tool Company, Technical Service Department at (800) 519-3456 if you have any questions.

⚠ WARNING Foot Switch Safety

Using a power drive or threading machine without a foot switch increases the risk of serious injury. A foot switch provides better control by letting you shut off the motor by removing your foot. If clothing should become caught in the machine, it will continue to wind up, pulling you into the machine. Because the machine has high torque, the clothing itself can bind around your arm or other body parts with enough force to crush or break bones.

Machine Safety

- **Power Drive is made to thread and cut pipe or bolt and to power RIDGID roll grooving equipment. Follow instructions on proper use of this machine. Do not use for other purposes such as drilling holes or turning winches.** Other uses or modifying this power drive for other applications may increase the risk of serious injury.
- **Secure machine to bench or stand. Support long heavy pipe with pipe supports.** This practice will prevent tipping.
- **Do not wear gloves or loose clothing when operating machine. Keep sleeves and jackets buttoned. Do not reach across the machine or pipe.** Clothing can be caught by the pipe or machine resulting in entanglement and serious injury.
- **Operate machine from side with REV/OFF/FOR switch.** Eliminates need to reach over the machine.
- **Do not use this machine if the foot switch is broken or missing.** Foot switch is a safety device to prevent serious injury.
- **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 or machine chucks.** This practice will prevent entanglement and serious injury.
- **Do not use this machine to make or break fittings.** This practice is not an intended use of the machine and can result in serious injury.
- **Tighten chuck handwheel and engage rear centering device on the pipe before turning on the machine.** Prevents oscillation of the pipe.
- **Keep covers in place. Do not operate the machine with covers removed.** Exposure to moving parts may result in entanglement and serious injury.
- **Lock foot switch when machine is not in use *(Figure 1)*.** Avoids accidental starting.

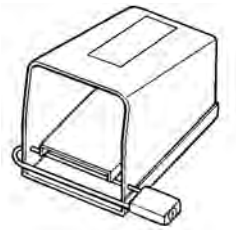


Figure 1 – Locked Foot Switch

Description, Specifications and Standard Equipment

Description

The RIDGID® Model 300 Power Drive is an electric motor-driven machine which centers and chucks pipe, conduit and rod (bolt stock) and rotates it while threading, cutting and reaming operations are performed. Forward (clockwise) or Reverse (counterclockwise) rotation can be selected with the FOR/OFF/REV switch and a foot switch provides ON/OFF control of the motor.

The threading, cutting and reaming operations can be performed by conventional hand tools or tools designed for mounting on the Power Drive. A manual oiling system is available to flood the workpiece with thread cutting oil during the threading operation. Geared Threaders can also be used with the Power Drive to thread larger diameter pipe.

The RIDGID Model 300 Power Drive can also be used as a power source for roll grooving equipment. Designed to attach to the support arms of the Power Drive, the roll grooving equipment forms standard roll grooves on a variety of pipe sizes and materials.

NOTE! Contact a RIDGID distributor or consult the RIDGID catalog for specifications on roll grooving equipment.

Specifications

Threading Capacity .....Pipe 1/8" through 2"
Bolt 1/4" through 2"

Geared Threaders:
Pipe 2½" through 6"

Chuck .....Speed Grip Chuck with Replaceable Jaw Inserts

Rear Centering Device....Cam Action Rotates with Chuck

Operating Speed .....38 RPM or 57 RPM

Motor:
Type .....Universal
Horsepower.....½ HP
Volts .....120V Single Phase AC 25-60 Hz (230V Available On Request)
Amps.....15 Amps (36 RPM) 18 Amps (57 RPM)

Controls .....FOR/OFF/REV Switch and ON/OFF Foot Switch

Weight (machine only) ....87 lbs. (39.5 kg)

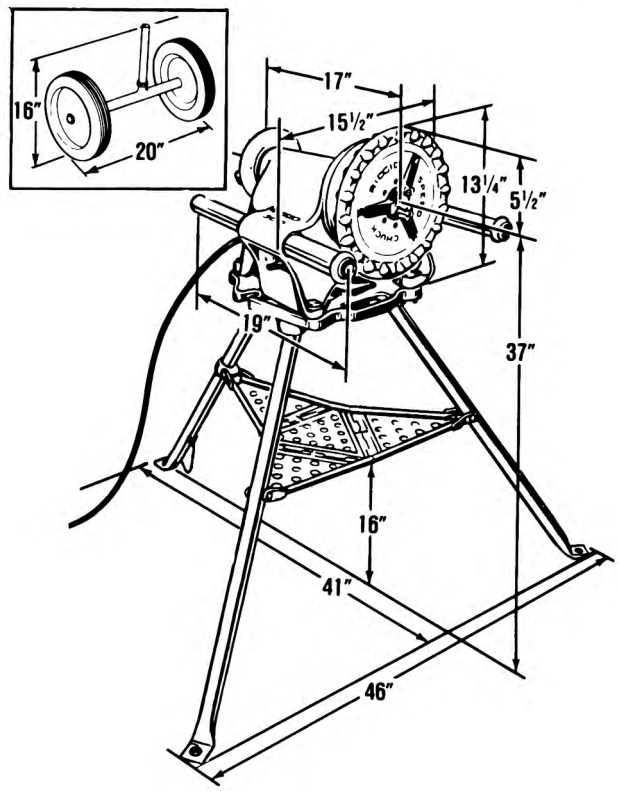


Figure 2 – No. 300 Power Drive and No. 1206 Stand

Standard Equipment

Power Drive Only:

- 300 Power Drive

Power Drive Complete:

- 300 Power Drive
- 1206 Stand
- 311 Carriage with Lever
- 341 Reamer
- 360 Cutter
- 811A Universal Die Head
- Set ½" – ¾" Universal Alloy Dies
- Set 1" – 2" Universal Alloy Dies
- 4 oz. Can White Sealant w/PTFE
- 418 Oiler
- 1 Gallon Nu-Clear Thread Cutting Oil
- 32 Transporter

Catalog No.	Model No.	Description	Spindle Speed RPM	Weight	
				Lb.	Kg.
41855	300 Only	115V,25-60 Hz	38	94	43.0
75075	300 Only	115V,25-60 Hz	57	94	43.0
41860	300 Only	230V,25-60 Hz	38	94	43.0
75435	300 Only	230V,25-60 Hz	38	94	43.0
15682	300 Complete	115V,25-60 Hz 1/2″ – 2″ NPT	38	212	96.2
15722	300 Complete	115V,25-60 Hz 1/2″ – 2″ NPT	57	212	96.2

Machine Assembly

⚠ WARNING

To prevent serious injury, proper assembly of the Power Drive is required. Failure to mount the Power Drive to a stable stand or bench may result in tipping and serious injury. The following procedures should be followed:

Mounting on No. 1206 Stand

1. Set up the 1206 Stand by opening legs and pushing down on the tray. Legs should be stiff and the stand should not wobble.

NOTE! The tristand leg stiffness can be increased or decreased by the following procedure:

- Place stand upside down on a flat surface.
- Unlock tray so legs are loose.
- Locate the set screw on the tray leg support on the rear leg *(Figure 3).*

- Loosen the set screw to make the adjustment. To increase stiffness, move the tray leg support up towards the base. To decrease stiffness, move the tray leg down towards the feet.
- Tighten the set screw (increasing leg stiffness increases tray tension).

2. Mount power drive on the stand using bolts and wing nuts *(Figure 3).*

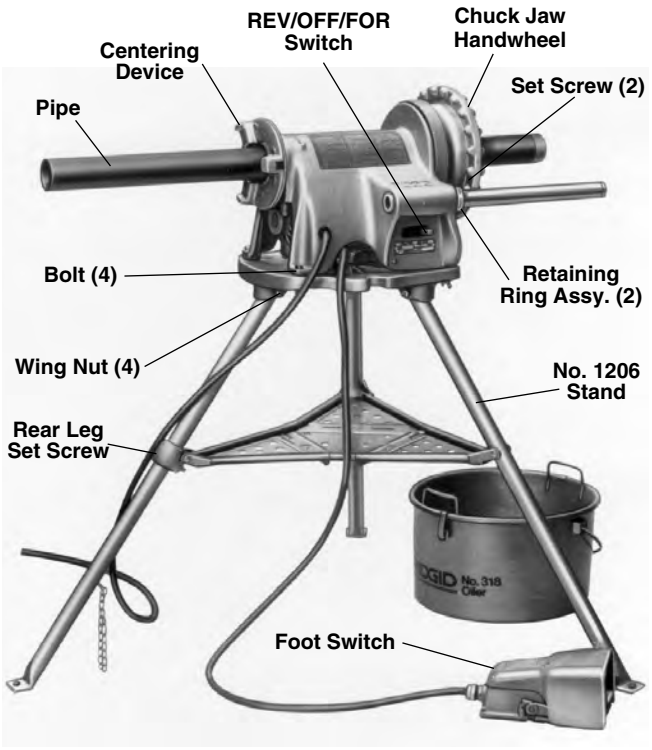


Figure 3 – 300 Power Drive Mounted on No. 1206 Stand with 418 Oiler

Mounting 311A Carriage and Tools

1. Inspect the support bars to insure they are forward and secured by two (2) retaining ring assemblies. Retaining ring set screws must be tight *(Figure 4).*
2. Secure eyebolt to the 311A Carriage. Slide lever arm through the eyebolt assembly and secure to collar assembly with shoulder bolt *(Figure 4).*
3. Tighten collar assembly thumb screw into groove on support bar.
4. Install the 360 Cutter and 341 Reamer by inserting arm in the slot provided in the carriage and secure with the drive pin *(Figure 4).*
5. Install 811A Die Head by inserting die head post into the mating hole in the carriage.

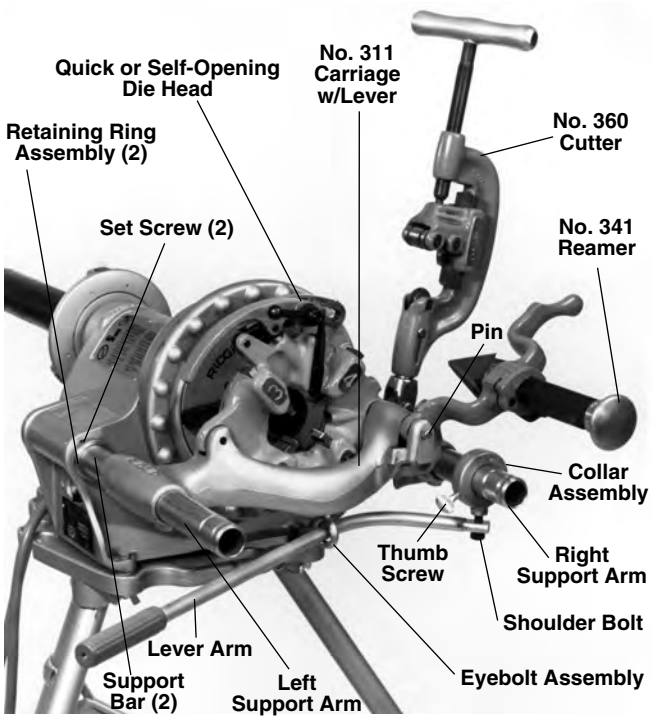


Figure 4 – No. 300 Power Drive with 311A Carriage, 360 Cutter, 341 Reamer and Die Head

NOTE! When fully inserted, spring-loaded ball will hold die head in place.

Machine Inspection

⚠ WARNING

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

1. Make sure Power Drive is unplugged and the directional switch is set to the OFF position *(Figure 3)*.
2. Clean the speed chuck jaws with a wire brush.
3. Inspect the jaw inserts for excessive wear. Refer to the Maintenance Instructions if they need to be replaced.

NOTE! For plastic and coated work pieces, special jaw inserts (Part No. 97365) should be used to prevent damaging the workpiece.

4. Make sure the foot switch is present and attached to the Power Drive *(Figure 3).*

⚠ WARNING Do not operate the Power Drive 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 Power Drive until the cord has been replaced.
6. Inspect the Power Drive 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 Power Drive until any problem has been repaired.
7. Lubricate the Power Drive spindle bearings if necessary according to the Maintenance Instructions.
8. Use tools and accessories that are specifically designed for your Power Drive and meet the needs of your application. The correct tools and accessories allow you to do the job successfully and safely. Accessories suitable for use with other equipment may be hazardous when used with this Power Drive.
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.

   Inspect the cutting edges of your tools and dies. If necessary, have them replaced prior to using the Power Drive. Dull or damaged cutting tools and dies can lead to binding, tool breakage and poor quality threads.
10. Clean metal shavings and other debris from the chip tray of the 418 Oiler. Check the level and quality of the thread cutting oil. Replace or add oil if necessary.

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.

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 or oiler to prevent slips and falls.
3. Set up the Power Drive on a flat, level surface.
   - For a Power Drive mounted on a 1206 Stand, open legs of stand and push down on the tray. Legs should be stiff and stand should not wobble.

NOTE! To increase or decrease leg stiffness, refer to instructions on “Mounting On 1206 Stand”.

4.. If the workpiece extends more than four (4) feet beyond the Power Drive, use one or more pipe stands to prevent tipping and the oscillation of the pipe.

5. If the workpiece extends beyond the Power Drive, set-up guards or barricades to create a minimum of three (3) feet of clearance around the Power Drive 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.
6. If necessary, fill the 418 Oiler with RIDGID Thread Cutting Oil. Position the oiler under the front of the Power Drive *(Figure 3).*
7. Make sure FOR/OFF/REV switch is in the OFF position.
8. Position the foot switch so that the operator can safely control the machine, tools and workpiece. As shown in *Figure 8,* 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, tools and chucks without reaching across the machine.

   Machine is designed for one person operation.
9. Plug the Power Drive 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 Power Drive to insure it is operating properly.
    - Flip the directional switch to FOR (Forward). Press and release the foot switch. Check that the Power Drive rotates in a counterclockwise direction as you are facing the front chuck. Have the Power Drive 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 power drive serviced.
    - Flip the directional switch to REV (Reverse). Press and release the foot switch. Check that the Power Drive rotates in a clockwise direction as you are facing the chuck.
    - Release the foot switch and flip the directional switch to OFF.

Operating Instructions For Using Hand Tools

⚠ WARNING

Do not wear gloves or loose clothing when operating Power Drive. Keep sleeves and jackets buttoned. Do not reach across the machine or pipe.

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.

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 or machine chucks.

Do not use this machine to "make-on" or "break off" fittings. This practice is not an intended use of this Power Drive.

Installing Pipe In Power Drive:

1. Mark the pipe at the desired length if it is being cut to length.
2. Insert the pipe into the Power Drive so that the end to be worked or the cutting mark is located about 12 inches to the front of the speed chuck jaws.
3. 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 beyond the rear of the Power Drive.

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

4. Tighten the rear centering device around the pipe by using a counterclockwise rotation of the handwheel at the rear of the Power Drive. This prevents movement of the pipe that can result in poor thread quality.
5. Secure the pipe by using repeated and forceful counterclockwise spins of the speed chuck handwheel at the front of the Power Drive. This action "hammers" the jaws tightly around the pipe.
6. Extend both support bars fully beyond the front of the Power Drive.

Cutting Pipe with Hand Cutter

1. Position the pipe cutter on the workpiece with the cutter wheels facing up (see "Accessories" section for pipe cutters recommended for use with this Power Drive).
2. Align the cutter wheels with the mark on the pipe and rest the pipe cutter's body on the left support bar *(Figure 5).* Hand-tighten the pipe cutter to the workpiece using the feedscrew handle while keeping the cutter wheels aligned with the mark.
3. Assume the correct operating posture *(Figure 8).* 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 directional switch.
    - Be sure you have convenient access to directional switch, tools and chucks.
    - Do not reach across the machine or workpiece.

4. Flip the directional switch to FOR (Forward).
5. Grasp the pipe cutter's feedscrew handle with both hands *(Figure 5)* and depress and hold down the foot switch with the left foot.

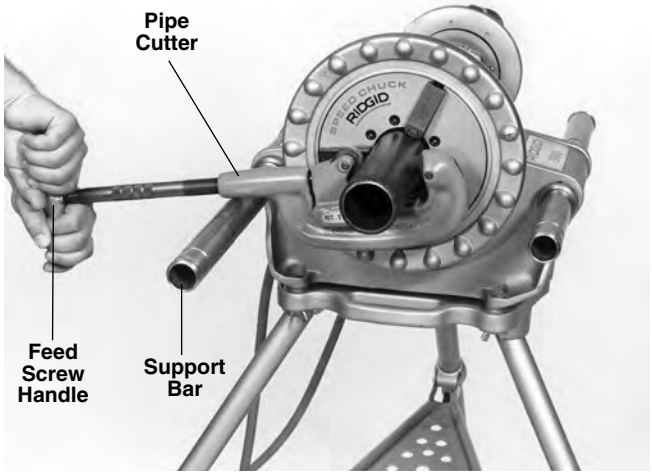


Figure 5 – Cutting Pipe with Hand Cutter

6. Tighten the feedscrew handle slowly and continuously until the pipe is cut. Do not force the cutter into the workpiece.

⚠ WARNING To avoid impact injuries, keep a firm grip on the pipe cutter and be sure it is resting on the support bar. If not held firmly or supported, the tool may rotate or fall to the ground.

7. Release the foot switch and remove your foot from the housing.

Reaming Pipe with Hand Reamer

⚠ WARNING To prevent serious injury, do not use self-feeding spiral reamers with the 300 Power Drive.

1. Flip the directional switch to FOR (Forward).
2. Place the reamer in the end of the pipe (see the "Accessories" section for reamers recommended for use with this Power Drive).
3. Assume the correct operating posture.
4. Rest handle on the left support bar *(Figure 6)* and hold the reamer handgrip with the right hand. To avoid pinch point injuries, keep your fingers from coming between the reamer and the support bar.
5. Firmly grasp the end of the reamer handle with the left hand, then depress and hold the foot switch down.
6. Push the reamer firmly into the pipe with your right hand until ream is complete. Keep your hand and arm away from any rotating parts and use a firm grip on the handgrip.
7. Release the foot switch and remove your foot from the housing while holding the reamer with both hands.

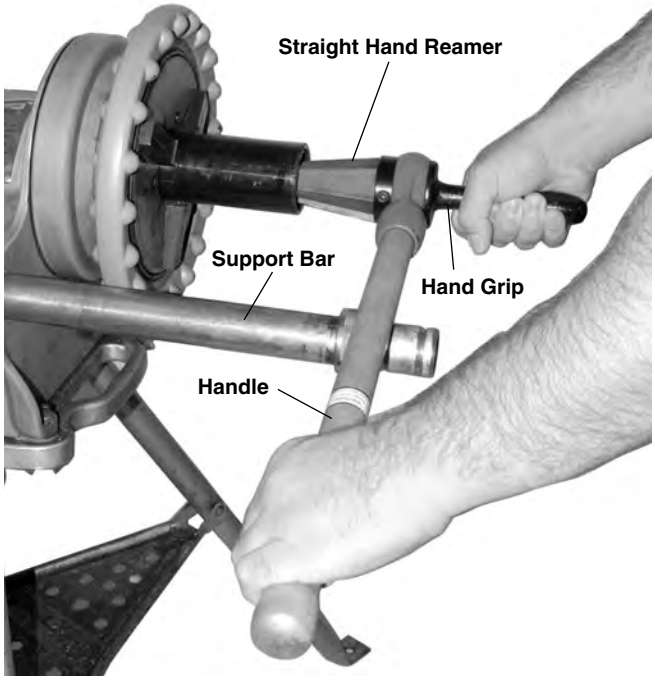


Figure 6 – Reaming Pipe with Hand Reamer

8. Remove the reamer from the workpiece once the Power Drive has stopped rotating.

Threading Pipe with Hand Threader

1. Place the die head of the hand threader on the end of the pipe (see "Accessories" section for hand threaders recommended for use with this Power Drive).
2. Position the ratchet knob on the hand threader so that the arrow on the knob points up.
3. Rest the hand threader ratchet handle on the left support bar (as viewed when facing the front of the Power Drive – *Figure 7).*

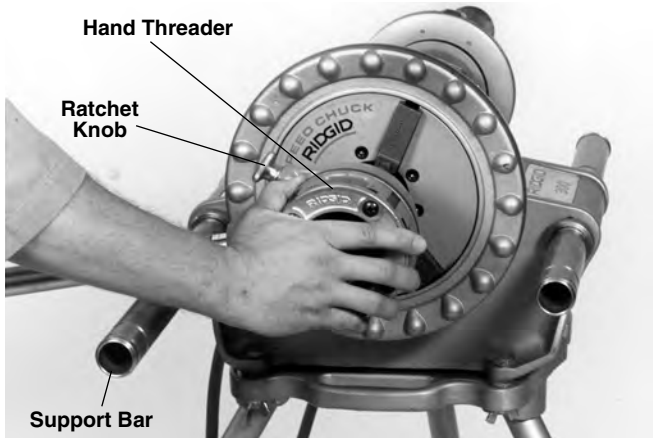


Figure 7 – Pushing Hand Threader onto Pipe to Engage Dies

⚠ WARNING To avoid pinch point injuries, keep your fingers from coming between the hand threader and the support bar.

4. Apply RIDGID Thread Cutting Oil to the end of the pipe.
5. Assume the correct operating posture. Check to ensure directional switch is in the FOR (Forward) position.
6. Hold the die head against the workpiece with the right hand.

⚠ WARNING To avoid injury from rotating parts or sharp surfaces, keep hands and fingers away from anything other than the outer body of the die head.

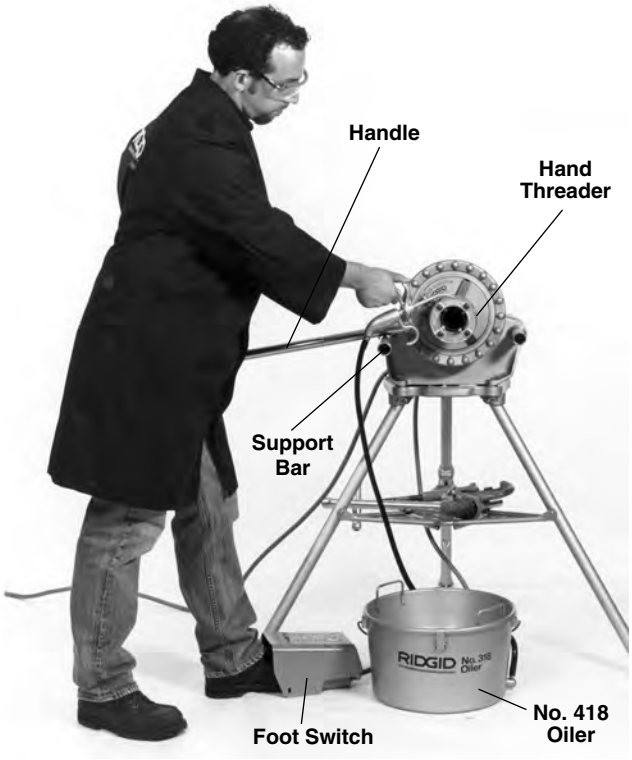


Figure 8 – Threading with Hand Threader

7. Depress and hold down the foot switch.
8. Push the die head against the pipe using the palm of the right hand until the dies engage the workpiece. Once engaged, the threads will be cut as the dies pull themselves onto the end of the pipe *(Figure 7)*.
9. Remove the right hand from the area of the die head and liberally oil the dies while the pipe is threaded *(Figure 8).*

⚠ WARNING To avoid serious injury from rotating parts, allow adequate clearance between your hand and the rotating parts while oiling.

10. Release the foot switch and remove your foot from the housing when the pipe reaches the end of the dies.
11. Lift the threader handle slightly with the right hand while sliding the left support bar all the way toward the rear of the drive.
12. Reverse the ratchet knob. The arrow on the knob should point down.
13. Lower the threader handle below the height of the left support bar.
14. Slide the left support bar back to its fully extended position in front of the Power Drive.
15. Lift and hold the threader handle against the left support bar.
16. Flip the directional switch to REV (Reverse). Depress and hold the foot switch down until the threader has unscrewed itself from the workpiece.

⚠ WARNING To avoid injury due to falling parts, maintain a firm grip on the threader as the threader will drop to the floor if not supported when unthreaded completely.

17. Release the foot switch and remove your foot from the housing.
18. Set the threader down and, if necessary, wipe oil and debris off the threads with a rag, taking care not to cut your hand or fingers on any sharp debris or edges.
19. Check the thread for length and depth *(Figure 14).*

Removing Pipe from the Power Drive

1. Flip the directional switch to OFF.
2. Use repeated and forceful clockwise spins of the speed chuck handwheel at the front of the Power Drive to release the workpiece from the speed chuck jaws.
3. If necessary, loosen the rear centering device using a clockwise rotation of the handwheel at the rear of the Power Drive.
4. Slide the workpiece out of the Power Drive, keeping a firm grip on the workpiece as it clears the Power Drive.

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

5. Clean up any oil spills or splatter on the ground surrounding the Power Drive.

Operating Instructions for Carriage-Mounted Power Drive Tools

⚠ WARNING

Do not wear gloves or loose clothing when operating Power Drive. Keep sleeves and jackets buttoned. Do not reach across the machine or pipe.

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.

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 or machine chucks.

Do not use this machine to "make-on" or "break off" fittings. This practice is not an intended use of this Power Drive.

Installing Pipe in Power Drive

1. Check to insure the cutter, reamer and die head is swung to the rear of the carriage.
2. Mark the pipe at the desired length if it is being cut to length.
3. Insert the pipe into the Power Drive so that the end to be worked or the cutting mark is located about 12 inches to the front of the speed chuck jaws.
4. Insert workpieces less than 2 feet long form the front of the machine. Insert longer pipes through either end so that the longer section extends out beyond the rear of the Power Drive.

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

5. Tighten the rear centering device around the pipe by using a counterclockwise rotation of the handwheel at the rear of the Power Drive. This prevents movement of the pipe that can result in poor thread quality.
6. Secure the pipe by using repeated and forceful counterclockwise spins of the speed chuck handwheel at the front of the Power Drive. This action "hammers" the jaws tightly around the pipe.

Cutting Pipe with No. 360 Cutter

1. Check to insure the reamer and die head are in the UP position *(Figure 9).*
2. Move pipe cutter down onto pipe and move carriage with carriage lever to line up cutter wheel with mark on pipe.
3. Tighten cutter feedscrew handle while keeping the cutter wheel aligned with the mark.
4. Assume the correct operating posture *(Figure 11).*

⚠ 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 directional switch.
- Be sure you have convenient access to directional switch, tools and chucks.
- Do not reach across the machine or workpiece.

5. Flip the directional switch to FOR (Forward).
6. Grasp the pipe cutter's feed handle with both hands *(Figure 9).*

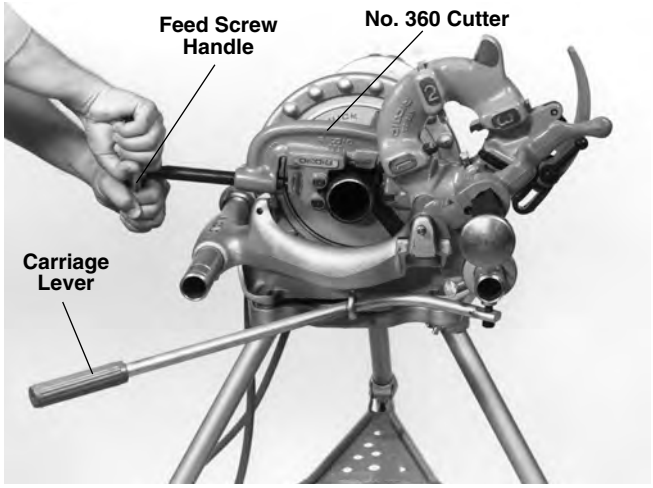


Figure 9 – Cutting Pipe with No. 360 Cutter

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

Reaming Pipe with No. 341 Reamer

1. Move reamer arm down into reaming position *(Figure 10).*
2. Extend reamer by pressing latch and sliding knob toward pipe until latch engages.

3. Check the directional switch to insure it is in the FOR (Forward) position. Depress and hold the foot switch down with the left foot.
4. Position reamer into pipe and complete reaming by pushing carriage lever with right hand.
5. Retract reamer bar and return reamer to the UP position.

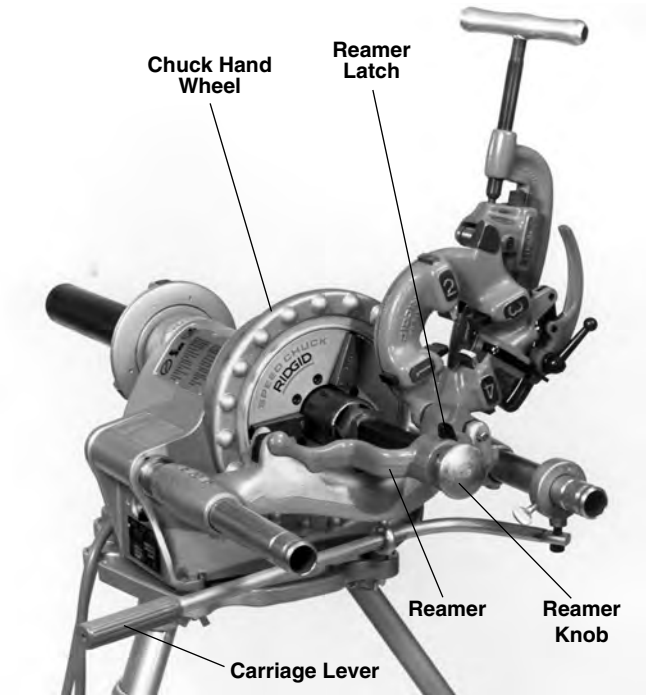


Figure 10 – Reaming Pipe with No. 341 Reamer

6. Release foot switch and remove your foot from the housing.

Threading Pipe with Quick-Opening or Self-Opening Die Head

1. Check to insure the cutter and reamer are to the rear of the carriage *(Figure 11).*
2. Lower die head into threading position.
3. Check that the proper size dies are in the die head. One set of dies is required for each of the following pipe size ranges: (1/8"), (1/2" – 3/8"), (1/2" – 3/4") and (1" – 2"). Bolt threading requires a separate set of dies for each bolt size.
4. Set die head to proper size.

NOTE! Refer to the Section on the No. 811A or No. 815A Die Head for instructions on changing dies and adjusting for proper size.

5. Quick-Opening 811A Die Head *(Figure 12)* – Rotate throwout lever to the CLOSED position.

   Self-Opening 815A Die Head *(Figure 13)* – Push throwout lever down until the release trigger cocks.
6. Apply RIDGID Thread Cutting Oil to end of the pipe.
7. Assume the correct operating posture.

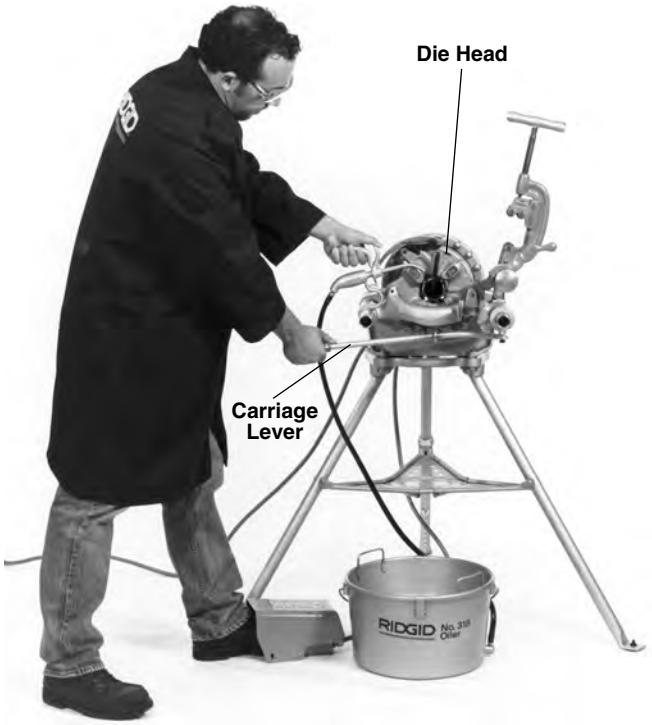


Figure 11 – Threading Pipe with Quick or Self-Opening Die Head

8. Check directional switch to insure it is in the FOR (Forward) position. Depress and hold the foot switch down with the left foot.
9. Engage dies with pipe using carriage lever and oil dies with plenty of RIDGID Thread Cutting Oil until thread is completed.

⚠ WARNING To avoid serious injury from rotating parts, allow adequate clearance between your hand and rotating parts when oiling.

10. Quick-Opening 811A Die Head *(Figure 12)* – When thread is completed, raise throwout lever to open position, retracting dies.

    Self-Opening 815A Die Head *(Figure 13)* – When die head trigger contacts end of pipe, throwout lever automatically opens.
11. Release foot switch and remove your foot from the housing.
12. Move carriage lever away from pipe end and return die head to the UP position.
13. Check the thread for length and depth *(Figure 14).*

Removing Pipe from the Power Drive

1. Flip directional switch to OFF.
2. Use repeated and forceful clockwise spins of the speed chuck handwheel at the front of the Power Drive to release the workpiece from the speed chuck jaws.
3. If necessary, loosen the rear centering device using a clockwise rotation of the handwheel at the rear of the Power Drive.
4. Slide the workpiece out of the Power Drive, keeping a firm grip on the workpiece as it clears the Power Drive.

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

5. Clean up any spills or splatter on the ground surrounding the Power Drive.

Installing Dies in No. 811A Quick-Opening Die Head (Right and Left Hand)

NOTE! The No. 811A Universal Die Head *(Figure 12)* 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" – 3/8"), (1/2" – 3/4") and (1" – 2"). The 1/8" pipe dies are not available for left hand die head. Bolt threading requires a separate set of dies for each bolt size. No bolt dies are available for left hand universal die heads.

1. With machine unplugged, remove die head. 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 lever washer up and out of slot under size bar. Slide throwout lever all the way to end of slot in the OVER direction indicated on size bar (in direction of CHANGE DIES arrow on rear of cam plate).
5. Remove dies from die head.
6. Insert new dies to mark on side of dies. Die numbers 1 through 4 on the dies must agree with those on die head.
7. Slide throwout lever back so that tongue of clamp lever washer will drop in slot under size bar.
8. Adust die head size bar until the index line on lock screw or link is aligned with proper size mark on size bar. For bolt threads, 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.
11. Replace die head in machine.

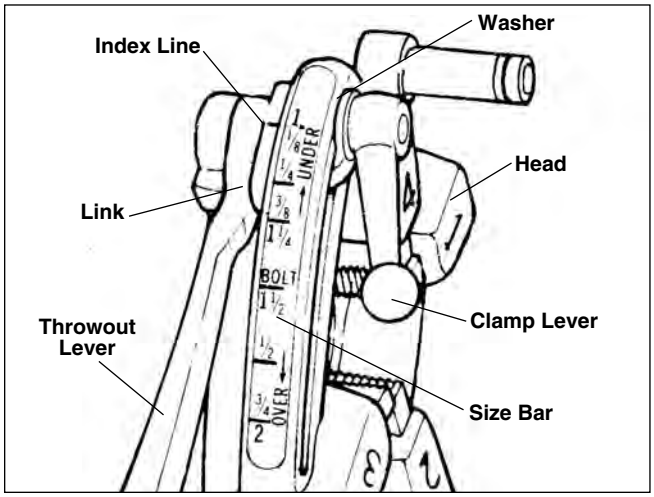


Figure 12 – Universal Quick-Opening Die Head

Installing Dies in No. 815A Self-Opening Die Head (Right Hand Only)

NOTE! The No. 815 Self-Opening 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 pipe size ranges: (1/8"), (1/4" – 3/8"), (1/2" – 3/4") and (1" – 2"). Bolt threading requires a separate set of dies for each bolt size.

1. With machine unplugged, remove die head. Place self-opening die head on bench in vertical position.
2. Make sure trigger assembly is released.
3. Loosen clamp lever approximately six turns.
4. Pull lock screw out of slot under size bar so that roll pin in lock screw will by-pass slot. Position size bar so that index line on lock screw is all the way to the end of REMOVE DIES position.
5. Lay head down with numbers up.
6. Remove worn dies from die head.
7. Insert new dies to mark on side of dies. Die numbers 1 through 4 on the dies must agree with those on die head.
8. Rotate cam plate lever back to lock dies in head.

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 or links is aligned with proper size mark on size bar. For bolt threads, align index line with BOLT line on size bar.
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.
13. Replace die head in machine.

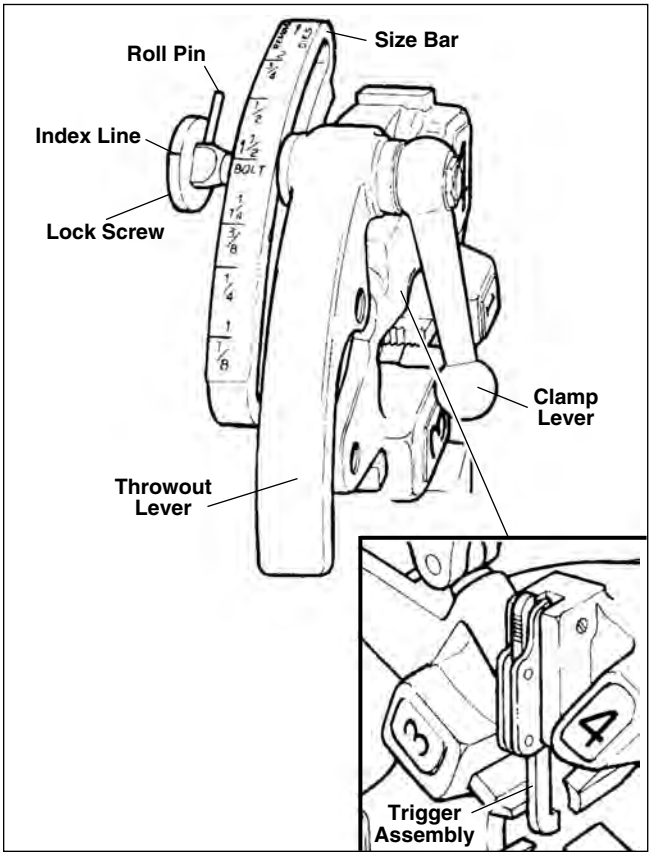


Figure 13 – No. 815 Self-Opening Die Head

Checking Thread Length

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.

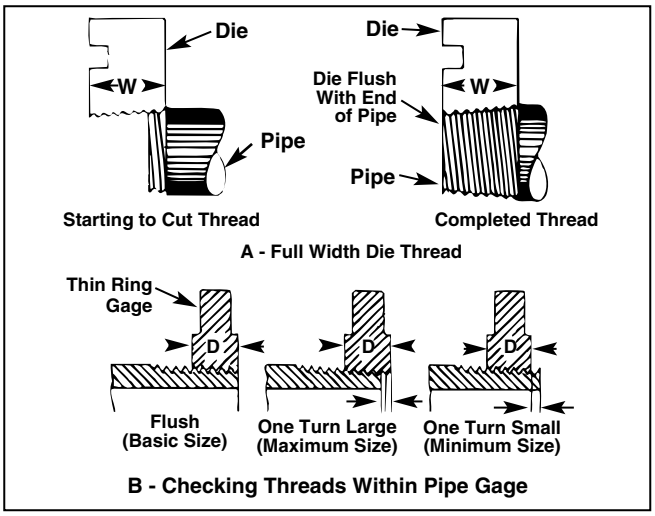


Figure 14 – Checking Thread Length

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)*.

Accessories

⚠ WARNING

Only the following RIDGID products have been designed to function with the 300 Power Drive. Other accessories designed for use with other tools may become hazardous when used on this Power Drive. To prevent serious injury, use only the accessories listed below.

Accessories for Power Drive

Model No.	Description
1206	Stand for 300 Power Drive
32	Transporter (for Power Drives and Tri-Stand Vises)
819	Nipple Chuck Complete, 1/2″ – 2″ (12mm – 50 mm)
1452	Clip-On Tool Tray
–	Jaw Inserts for Coated Pipe
E-863	LH/RH Reamer Cone
–	Gearhead Motor Grease

Hand Tools Recommended for Use with Power Drive

Threaders:

- 12-R Pipe Threader
- OO-R Pipe Threader
- 11-R Pipe Threader
- OO-RB Bolt Threader

Cutters:

- No. 1-A and 2-A Cutter
- No. 202 Cutter

Reamers:

- No. 2 and 3 Ratchet Reamers

Contact a RIDGID distributor or consult the Ridge catalog for specifications and catalog numbers.

311A Carriage and Tools as Accessories

Model No.	Description
311	Carriage with No. 312 Lever
341	Reamer for No. 311 Carriage
360	Cutter for No. 311 Carriage
811A	Universal Quick Opening Die Head Only, Right Hand Only
815A	Self-Opening Die Head Only, Right Hand Only

Geared Threaders:

- No. 141 2½" – 4" Pipe (NPT or BSPT)
- No. 161 4" – 6" Pipe (NPT or BSPT)

Accessories for Threading by Close-Coupled Method

Model No.	Description	Geared Threaders	
		141	161
	Pipe Supports		
758	Loop	X	
844	Drive Bar	X	X
346	Support Arm (2)		X
NOTE!	If gear case does not have loop hole, use No. 3675 Adapter Bracket instead of No. 758 Loop.		

Accessories for Threading with Drive Shaft

Catalog No.	Model No.	Description
61122	840-A	Universal Drive Shaft
72037	460	Tristand
42510	92	Adjustable Pipe Support

NOTE! See Ridge Tool catalog for listing of pipe support, thread cutting oil, die heads and dies.

Maintenance Instructions

⚠ WARNING

Make sure machine is unplugged from power source before performing maintenance or making any adjustment.

Jaw Inserts

1. Clean teeth of jaw inserts daily with wire brush.
2. Replace jaw inserts when teeth become worn and fail to hold pipe or rod.

NOTE! Replace entire set of jaw inserts to insure proper gripping of the pipe or rod.

Jaw Insert Replacement

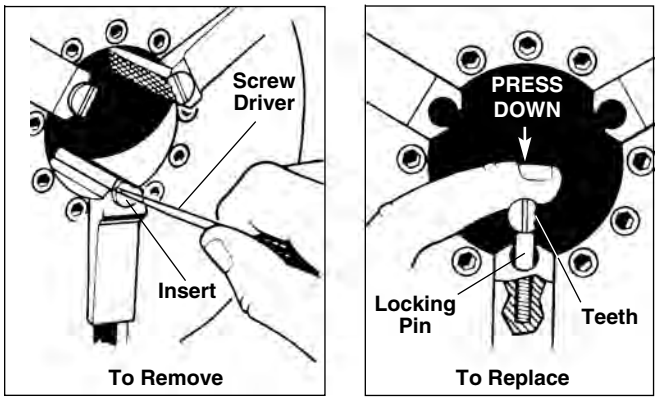


Figure 15 – Replacing Jaw Inserts

1. Place screwdriver in insert slot and turn 90 degrees in either direction.
2. Place insert sideways on locking pin and press down as far as possible.
3. Hold insert down firmly with screwdriver, turn until teeth face up.

Lubrication

Proper lubrication is essential to trouble-free operation and long life of Power Drive.

Grease main shaft bearings every 2 to 6 months depending upon amount of Power Drive use. Grease fittings are provided on side base, one at each end of shaft. Use a good grade of cup grease.

Motor Brush Replacement

1. Check motor brushes every six (6) months and replace when worn to less than ½ inch.
2. If communicator is worn, the outer dimension of the communicator should be turned and the mica should be undercut before replacing brushes. This should only be done by qualified repair personnel.

Motor Replacement

1. Unplug motor receptacle from switch box.
2. Remove two (2) screws (E-891) holding motor.
3. Loosen back screw (E-4548) in body at neck of motor and lift motor out.

Machine Storage

⚠ WARNING Motor-driven equipment must be kept indoors or well covered in rainy weather. Store the machine in a locked area that is out of reach of children

and people unfamiliar with power drives. This machine can cause serious injury in the hands of untrained users.

Service and Repair

⚠ WARNING

Service and repair work on this Power Drive must be performed by qualified repair personnel. Power Drive should be taken to a RIDGID Independent Authorized Service Center or returned to the factory. All repairs made by Ridge service facilities are warranted against defects in material and workmanship.

When servicing the Power Drive, only identical replacement parts should be used. Failure to follow these instructions may create a risk of electrical shock or other serious injury.

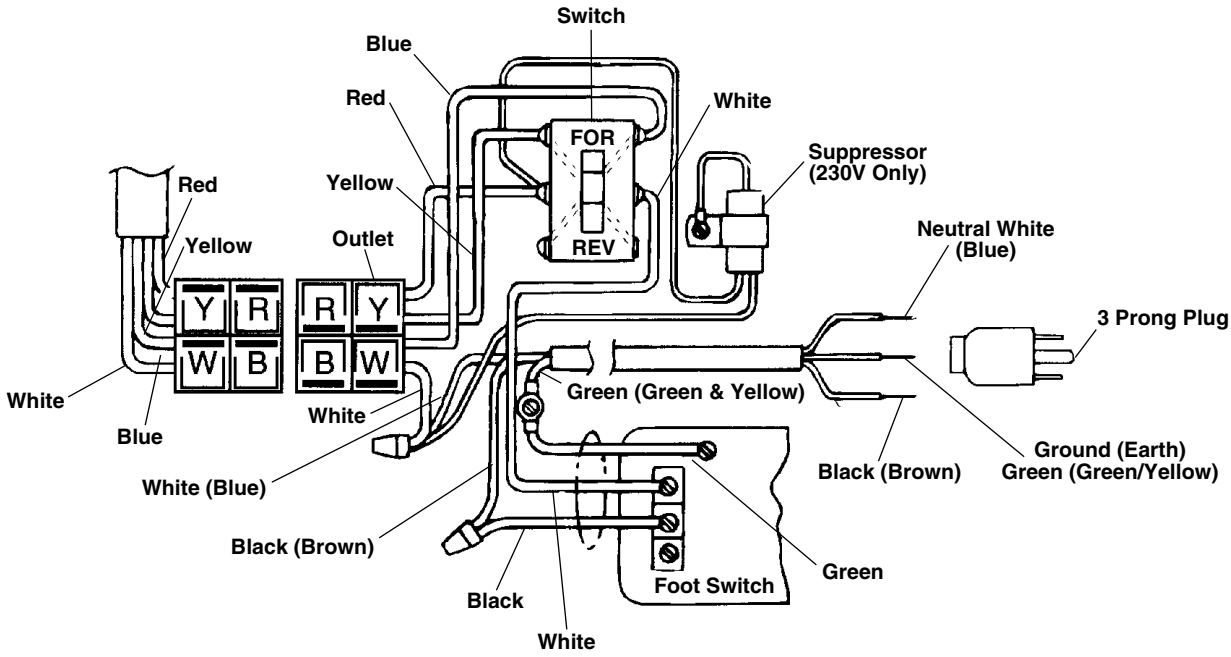
If you have any questions regarding the service or repair of this machine, call or write to:

Ridge Tool Company
Technical Service Department
400 Clark Street
Elyria, Ohio 44035-6001
Tel: (800) 519-3456
E-Mail: rtctechservices@emerson.com

For name and address of your nearest Independent Authorized Service Center, contact the Ridge Tool Company at (800) 519-3456 or http://www.RIDGID.com

Wiring Diagram (115/230V)

1. Brush and Armature Leads may be solid colors or white with a colored stripe.
2. Wire Colors in parenthesis represent European color code. European cord is the same except for plug.



Wiring Schematic (115/230V)