

Volume

1.0

OPERATIONAL MANUAL

MODEL: **PTK-300** PIPE THREADING KIT FOR PD-300/PTM-300



by BLUEROCK® Tools

PTK-300 PIPE THREADING KIT

UNPACKING THE ITEM

Caution: This machine is packed together with items that may be sharp, oily and overly heavy objects. Remove the machine from the packaging in a safe manner. Check to ensure all accessories are included with the item while unpacking. If any parts are found to be missing, contact the retailer as soon as possible. Do not throw away the packaging until the item is out of the guarantee period. Dispose of the packaging in an environmentally responsible manner. Recycle if possible. Keep all plastic bags away from children due to risk of suffocation.



WEEE - Waste Electrical & Electronic Equipment. Note this machine should be disposed of as electrical & electronic waste.

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Safety

DO NOT USE THIS MACHINE UNLESS YOU HAVE READ THE OPERATING INSTRUCTIONS!



Safety glasses must be worn at all times in work areas. Use a full face mask whenever possible.



Long and loose hair must be contained.



Appropriate footwear must be worn.



Close fitting/protective clothing must be worn.



Read operational manual prior to use.



Hearing protection should be worn when using this machine.

PRE-OPERATIONAL SAFETY CHECKS

- Examine the power cord and plug for damage.
- Examine the body of the machine and inspect for damage or defects.
- Examine the cutting dies and die head to insure they are operable.
- Ensure that the die head and dies are correctly attached to the machine.
- Make certain the on/off switch is in the off position before plugging into power to prevent unintentional starting.

OPERATIONAL SAFETY CHECKS

- ONLY to be operated by qualified personal who have read instructions.
 - NOTE: Failure to read and follow instructions could result in electrical shock, fire, property damage and/or serious injury!
- DO ensure all non-essential people are clear of the immediate work area.
- DO stay alert and use common sense when using this tool.
- DO remove adjusting keys or wrenches prior to turning machine on.
- DO guard against electric shock by preventing body contact with grounded surfaces such as pipes, radiators, ranges, refrigerators, etc.
- DO keep the working area clean and brightly illuminated for optimum operational safety.
- DO secure machine to bench or stand. Support long heavy pipe with pipe supports. This practice will prevent tipping.

PTK-300 PIPE THREADING KIT

➤ DO operate machine from side with REV/OFF/FOR switch. This eliminates the need to reach over the machine.
➤ DO 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 tighten the chuck handwheel and engage rear centering device on the pipe BEFORE turning on the machine. This will prevent oscillation of the pipe.
➤ DO be mindful that power tools can expose an operator to vibrations transmitted through contact with the machine. Prolonged exposure can lead to medical issues, which should be discussed with a medical professional.
➤ 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.
➤ DO NOT use this machine if the foot switch is broken or missing. Foot switch is a safety device to prevent serious injury.
➤ DO NOT make adjustments to machine while the machine is running.
➤ DO NOT cut or saw work-pieces by hand while the machine is running
➤ DO NOT use dull cutting dies as the machine is more likely to bind and the user lose control. This can also overload the motor.
➤ DO NOT use excessively long pieces of pipe in the machine. Keep the machine balanced and stable at all times.
➤ DO NOT leave the machine running when not in use.
➤ DO NOT hold the work piece by hand or using body. Always mechanically clamp or secure work piece.
➤ DO NOT allow liquids or dust to enter the machine's ventilation system.
➤ DO NOT operate machine outside of machine specifications.
➤ DO NOT touch moving parts while the machine is running as death or dismemberment could occur.
➤ DO NOT remove machine's panels while machine is connected to a power source. Only to be removed for service by qualified personal and put back on the machine after service is complete.
➤ DO NOT allow children or untrained personal to operate machine.
➤ DO NOT use this machine in the rain or a wet environment. If using outdoors, make sure the machine is dry.
➤ DO NOT operate in the presence of explosive materials as power tools create sparks which may ignite dust or fumes.
➤ DO NOT use on a pipe that may contain a live electrical wire/circuit.
➤ DO NOT use this machine if the ON/OFF switches are broken.
➤ 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.
➤ DO NOT operate the machine with covers removed. Exposure to moving parts may result in entanglement and serious injury.
➤ DO NOT operate this machine on the same work surface where welding is being performed. This could result in severe damage to the machine or personal injury to the user.
➤ DO NOT operate this machine on a lower voltage as this could limit the motor life and work efficiency.
○ NOTE: Use of long small gauge power extension cords can result in decreased voltage. As local voltages can vary, it may be a good idea to test the voltage at the end of the extension cord to ensure proper voltage requirements are met. You might also consult an electrician to make sure the length of cord matches up with the proper wire gauge for this size motor. Make sure to use outdoor cords when operating outdoors. Use a GFCI circuit if using in wet locations.

Specifications

MECHANICAL DATA	
Pipe Capacity	½" to 2" Diameter NPT
811A Die Head Size	½"-¾" One Set 14 Threads/Per Inch 1"-2" One Set 11 Threads/Per Inch Rockwell Hardness HRC58-62 (Interchangeable with Ridgid® 811A/815A Die Head)
Die Size	HSS NPT (Interchangeable with Ridgid® 811A/815A Dies)

SHIPPING DATA	
Shipping Weight	53lbs
Shipping Carton	560mm x 350mm x 300mm

Included Accessories

DESCRIPTION	QTY
Instruction Manual	1
BLUEROCK PTK-300 Pipe Threading Kit	1
811A Die Head	1
Set of 4: ½"-¾" Dies	1
Set of 4: 1"-2" Dies	1
Pipe Reamer	1
Pipe Cutter	1
Carriage	1

Additional Available Accessories

Additional accessories for this machine can be found in BLUEROCK® Tools online shop at www.bluerocktools.com or from your local retailer.

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Operations

Note

THOROUGHLY READ THROUGH THE ENTIRE MANUAL BEFORE OPERATING THIS MACHINE!

MACHINE COMPONENTS

- The main components of the BLUEROCK PTK-300 Pipe Threading Kit Assembly is the 811A die head, pipe cutting assembly, and pipe reamer assembly and assembly carriage.
 - These components must not be removed except by a qualified technician. Power must be disconnected prior to any service.

PURPOSE

- The BLUEROCK PTK-300 Pipe Threading Kit Assembly (die head, pipe cutting assembly, and pipe reamer assembly) is designed to fit on a power drive unit. It will fit on either a BLUEROCK ® PD-300 Power Drive or a Ridgid ® type 300 power drive.
 - The BLUEROCK PD-300 (base power drive unit) 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.

MACHINE SET-UP (IF USING THE OPTIONAL PD-300 POWER DRIVE)

- The PD-300 Power Drive machine is designed to mount securely to the H-300 Tri-Stand.
 - CAUTION: This machine should be picked up and moved with at least 2 people
 - DO NOT allow the cord or plug to drag along the floor when transporting.
- Make certain the set-up work area is dry.
- Use barriers to keep non-essential personnel away from rotating pipe.
- Place machine away from passageways and make certain the operator is able to see all parts of the work-piece.
- DO NOT set-up or modify the machine in a manner that is not intended.
- If using pipe extending more than 1 meter from the rear output of the machine chuck, make certain to use a pipe support. Add multiple supports if necessary, to ensure machine stability.

PREPERATION FOR THREADING WITH THE PTK-300

➤ **CAUTION:** Before making any adjustments, ensure the main machine switch is in the “off” position.

➤ **Installing pipe in power drive**

○ **Chuck operations**

▪ Check to insure the cutter, reamer and die head is swung to the rear of the carriage.

▪ Mark the pipe at the desired length if it is being cut to length

▪ Rotate the forward and rear chucks clockwise to open them up and make room for the pipe.

▪ 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.

▪ 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.

• **CAUTION:** Use pipe supports when necessary to prevent machine tipping.

▪ To close the chuck around a piece of pipe, turn the chuck handwheel in the counter-clockwise direction.

• Check the pipe is perfectly centered in the chuck and attempt to spin the handwheel tight again.

○ If the pipe is not centered, reverse the operation until the pipe is loose and re-center the pipe.

• 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.

○ **NOTE:** This prevents movement of the pipe that can result in poor thread quality.

• **CAUTION:** Keep hands and fingers away from the chuck jaws when the machine is plugged into a power source. Closing chuck jaws can cause serious damage to bodily parts.

➤ **Removing pipe from the optional power drive**

○ Flip directional switch to “off” position.

○ 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.

○ If necessary, loosen the rear centering device using a clockwise rotation of the handwheel at the rear of the Power Drive.

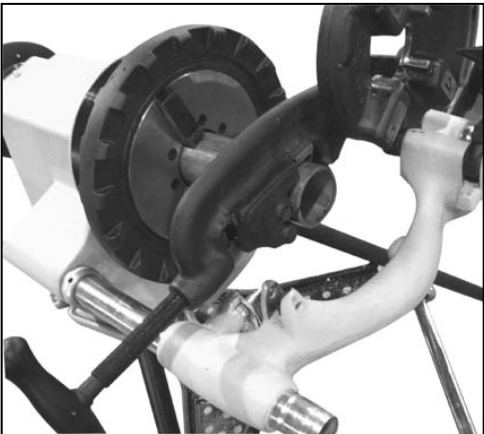
○ Slide the workpiece out of the Power Drive, keeping a firm grip on the workpiece as it clears the Power Drive. To avoid injury from falling parts or equipment tip-overs when handling long workpieces, make sure that the end farthest from the Power Drive is supported prior to removal.

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

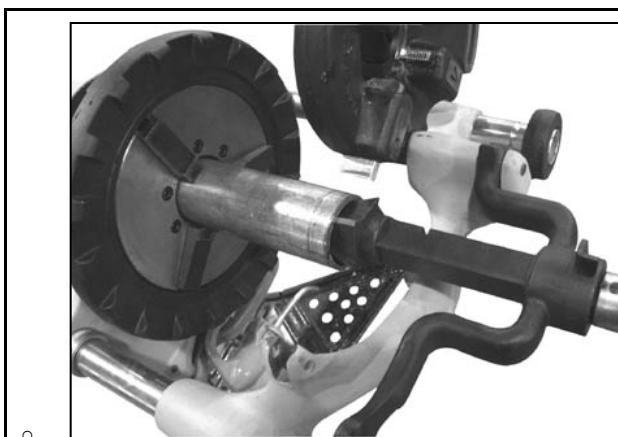
➤ **Pipe cutter operations**

○ Check to insure the reamer and die head are in the UP position.

○ Securely clamp the pipe into the chuck as described in the above section.

○	Move pipe cutter down onto pipe and move carriage with carriage lever to line up cutter wheel with mark on pipe.
○	Set the pipe-cutting wheel at the point where the pipe will be cut.
○	Open the cutting knife rack so that the rollers are straddling the pipe (see figure below).
○	Switch the main on/off switch to the "FOR" (Forward) position. Depress and hold down the foot switch with the left foot.
○	Grasp the pipe cutter's feed handle with both hands.
○	Slowly cut into the pipe by feeding the cutting wheel into the pipe by rotating the handle clockwise while the pipe is rotating (see figure below).
	<ul style="list-style-type: none"> DO NOT force the cut, as it will distort the pipe and cause damage to the pipe cutting assembly.
	<ul style="list-style-type: none"> CAUTION: Once the pipe piece is cut, the steel remnant will fall.
○	Release the foot switch and remove your foot from the housing.
○	Swing pipe cutter back to the UP position.
○	

➤ Pipe reamer operations	
○	Move reamer arm down into reaming position.
○	Check the directional switch to insure it is in the FOR (Forward) position. Depress and hold the foot switch down with the left foot.
○	While the pipe is still secured in the chuck, position the center of the reamer tip to be placed inside the spinning pipe with the right hand (see figure below).
○	Gently apply pressure to the outside reamer assembly taking extreme caution with metal fragments and the spinning pipe.
○	Continue until pipe is reamed.
○	Retract reamer bar and return reamer to the UP position.
○	Release foot switch and remove your foot from the housing.



➤ Pipe threading operations

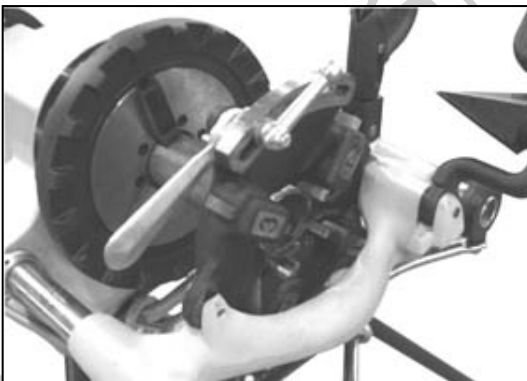
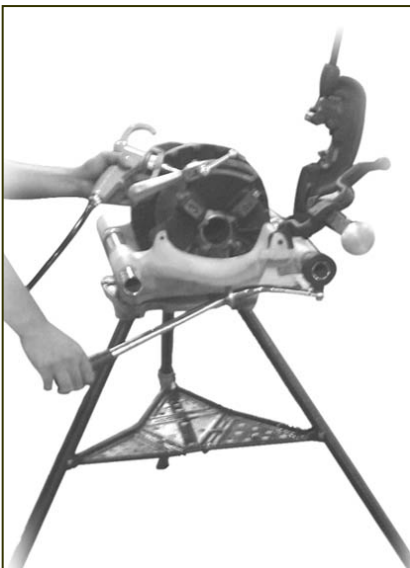
- Check to insure the cutter and reamer are to the rear of the carriage
- Ensure pipe is securely fastened in the chuck.
- Always install the correct dies for the die assembly.
- Set die head to proper size.
- Lower die head into threading position.
- Rotate throwout lever to the CLOSED position. Push throwout lever down until the release trigger cocks.
- Apply Thread Cutting Oil to end of the pipe.

▪ NOTE: Apply plenty of thread cutting oil to the dies during threading. Cutting oil is a necessary part of pipe threading. T

- Assume the correct operating posture.
- Check directional switch to insure it is in the FOR (Forward) position. Depress and hold the foot switch down with the left foot.
- CAUTION: To avoid serious injury from rotating parts, allow adequate clearance between your hand and rotating parts when oiling.
- Feed the diehead into contact with the pipe.

- Apply pressure to the diehead assembly arm until the dies are engaged and start threading.
- When thread is completed, raise throwout lever to open position, retracting dies. When die head trigger contacts end of pipe, throwout lever automatically opens.
- Release foot switch and remove your foot from the housing.
- Turn the main on/off switch to the "off" position.
- Manually push the spanner forward on top of the diehead assembly to release the dies from the threads.
- Move carriage lever away from pipe end and return die head to the UP position.
- Check the thread for length and depth.

- Loosen the chuck handwheels clockwise and remove the pipe from the rear of the machine. Be careful not to damage the threads.

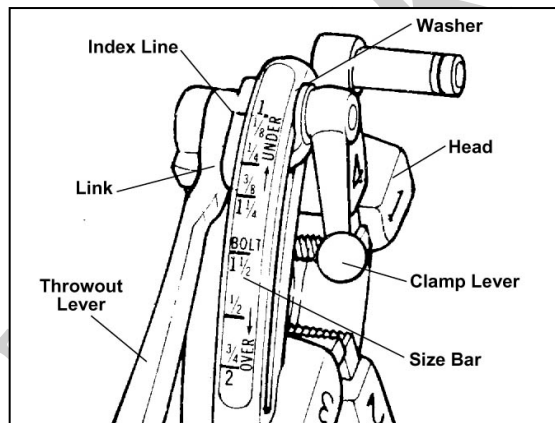
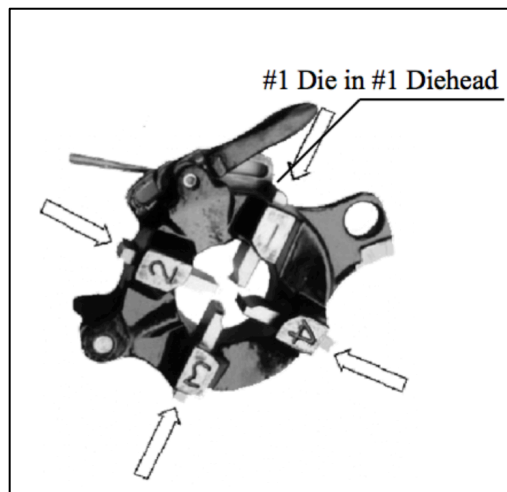


➤ Installing Dies in the Diehead (for 811A Diehead that comes with the PTK-300 Pipe Threading Kit)

- CAUTION: Ensure the machine is unplugged.
- Remove the diehead assembly from the sledge.
- Lay die head on bench with numbers face up
- Flip throwout lever to OPEN position (see figure below)
- Loosen clamp lever approximately three turns.
- 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).
- Remove dies from die head.
- Select the dies that are the correct size for the pipe diameter you are cutting.
- Insert the dies (numbered 1, 2, 3, 4) into the corresponding diehead slots (also numbered 1, 2, 3, 4). See Figure below.

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- Slide throwout lever back so that tongue of clamp lever washer will drop in slot under size bar.
- Adjust 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.
- Tighten clamp lever.
- If oversize or undersize threads are required, set the index line in direction of OVER or UNDER size mark on size bar.
- Place the diehead assembly back in the sledge.



RUNNING THE OPTIONAL POWER DRIVE WITH PTK-300 Pipe Threading Kit

- Do all pre-operational and operational safety checks from Chapter 1.
- Consider your security and stability as well as the orientation of the machine in the work area.
 - Consider the work surface material, condition, strength, density and rigidity. These factors directly affect the tools operation and user safety.
- Ensure the machine handles are free of grease or oil.
- Select appropriate die head and die depth for the specific pipe you are threading.
 - Inspect the dies to ensure they are sharp and in the correct position.

<ul style="list-style-type: none"> Improperly installed or dull cutting dies can cause binding or poor quality threads. 	
<ul style="list-style-type: none"> To prevent tipping, long lengths of pipe should be supported by a pipe stand. 	
➤	Plug the machine into power source.
➤	Place pipe in the chuck and secure, evenly tightening the chuck handwheel (see section above for specifics about using the chuck).
➤	Ensure the machine main power and footswitch are operating correctly.
<ul style="list-style-type: none"> Turn the main machine switch to the “on/FOR” position. 	
<ul style="list-style-type: none"> Depress the on/off foot pedal to check the rotation and engagement of the chuck. 	
<ul style="list-style-type: none"> Disengage the foot pedal to ensure the “off” function is working properly. 	
<ul style="list-style-type: none"> NOTE: Be sure to position the foot pedal in an accessible place. 	
<ul style="list-style-type: none"> CAUTION: Always allow the pipe to completely stop turning before touching the chuck handwheel, pipe, die assembly, pipe cutting assembly or pipe reamer assembly. 	
<ul style="list-style-type: none"> CAUTION: Ensure the main on/off switch is “off” before making adjustments any adjustments. 	
➤	Cut the pipe end to ensure a clean edge (see figure above for specifics using the pipe cutter)
➤	Use the pipe reamer to clean the inside edge (see figure above for specifics using the pipe reamer).
➤	Engage the cutting dies with the clean rotating pipe end (see above section for specifics on engaging cutting dies).
<ul style="list-style-type: none"> Apply plenty of thread cutting oil to the dies during threading. This will reduce the and on the motor and extend the life of motor components and dies. 	

Troubleshooting

Note

SERVICING SHOULD ONLY BE DONE BY A QUALIFIED TECHNICIAN.

DON'T FORGET TO UNPLUG POWER TO UNIT PRIOR TO SERVICE!

PROBLEM	CAUSE	CORRECTION
Motor does not start (IF USING OPTIONAL PD-300)	Threading machine unplugged	Plug into power source
	Fuse blown	Replace the fuse
	Capacitor blown	Replace capacitor
	Bad on/off switch	Replace Switch
The cutting knife will not cut	Cutting blade is dull	Replace blade
	Lead screw on cutting blade assembly is damaged	Replace assembly
	Too much force being applied	Cut slower
Motor sounds Overloaded (IF USING OPTIONAL PD-300)	Overload because of dull dies	Replace dies
	Bad quality or insufficient thread cutting oil	Use thread cutting oil in adequate quantity
Sparks coming from motor (IF USING OPTIONAL PD-300)	Bad contact between brushes and brush holder	Tighten the screws, make sure brush is pressed firmly onto armature
	Brushes do not touch armature properly	Replace worn brushes
	Sharp edge on brush	Break edge with sand paper
Die head does not start threading	Dull or broken dies	Replace dies
	Improperly set dies	Reset dies
Damaged Thread	Dull dies	Replace dies
	Dies not assembled in correct sequence	Put dies in correct sequence
	Low quality pipe	Make sure only pipe of good quality is used
	Bad quality or insufficient thread cutting oil	Use only thread cutting oil in adequate quantity
	Chuck jaws are not tightening enough	Inspect chuck jaws
Pipe turns while threading	3-jaw chuck not tight	Tighten handwheel chuck
	3-jaw chuck teeth dirty	Clean with wire brush
	3 jaw chuck teeth damaged or dull	Replace 3-jaw chuck

General Maintenance

Note

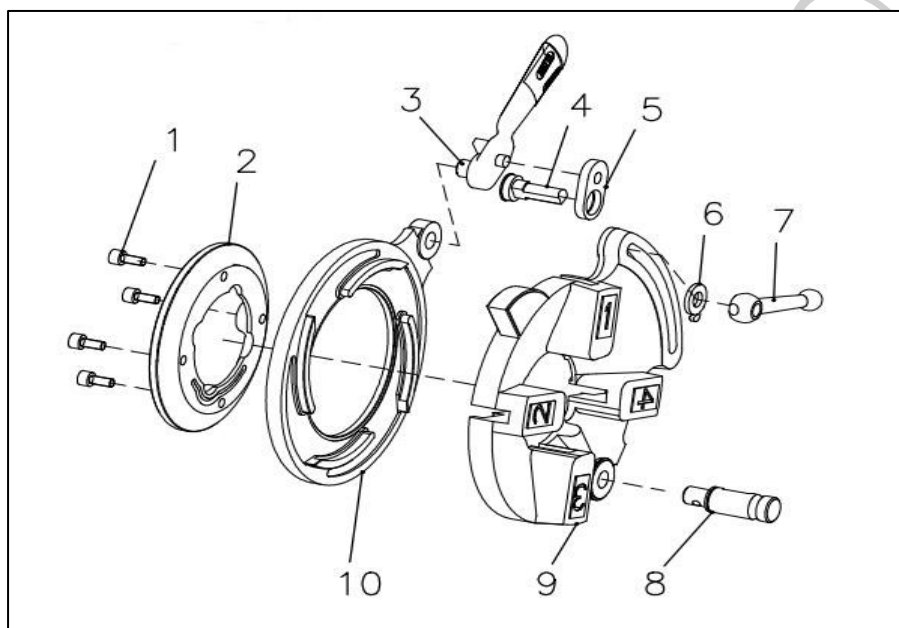
SERVICING SHOULD ONLY BE DONE BY A QUALIFIED TECHNICIAN.

DON'T FORGET TO UNPLUG POWER TO UNIT PRIOR TO SERVICE!

➤	Inspect electrical cords and electrical connections if using optional PD-300 power drive.
➤	Keep machine clean and free of debris.
➤	Check for misalignment, binding and breakage of all moving parts. If damaged, repair tool before use.
➤	Check the cutting blade on the pipe cutting assembly.
➤	Clean dies and inspect for chips. Also check the sharpness on the dies. If they are dull or broken, replace ALL dies with identical set.
➤	Clean chuck teeth with wire brush if using optional PD-300 power drive. Check the attrition of the claw points on the 3-jaw chuck. If the points are worn, replace with identical piece.
➤	Proper lubrication is essential to trouble-free operation and long life of the optional PD-300 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.
➤	After each use coat all working surfaces with corrosion resistant oil.
➤	Check brushes for wear and replace if worn if using optional PD-300 power drive.

Parts List

PTK-300 811A Diehead (425/811A - 37400)

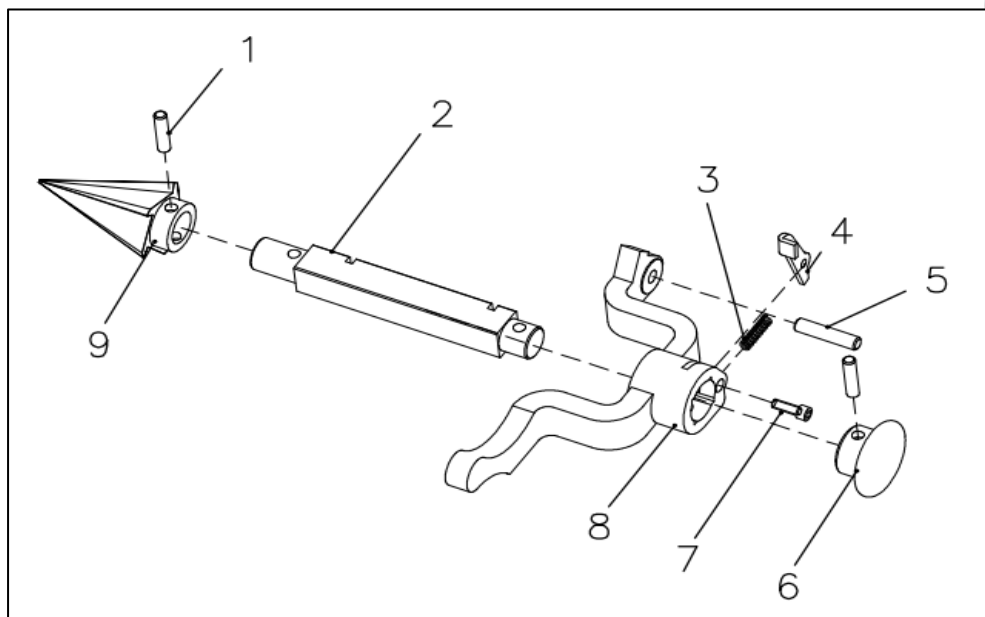


S/N	new Ref. No.	Ridgid Ref.	Description
1	50103153	32205	Screw UNC1/4-20x5/8
2	40303028	97020	Retaining Ring
3	40901028	46520	Throw-Out Lever
4	40401013	39860	Lock Screw
5	41802013	39950	Link

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6	41001008	26957	Lever Washer
7	40901027	39970	Clamp Lever
8	30108019	59832	Post Component
9	40303027	40922	Head w/post
		40957	
10	40303026	43360	Cam Plate

PTK-300 Pipe Reamer (524 - 37500)

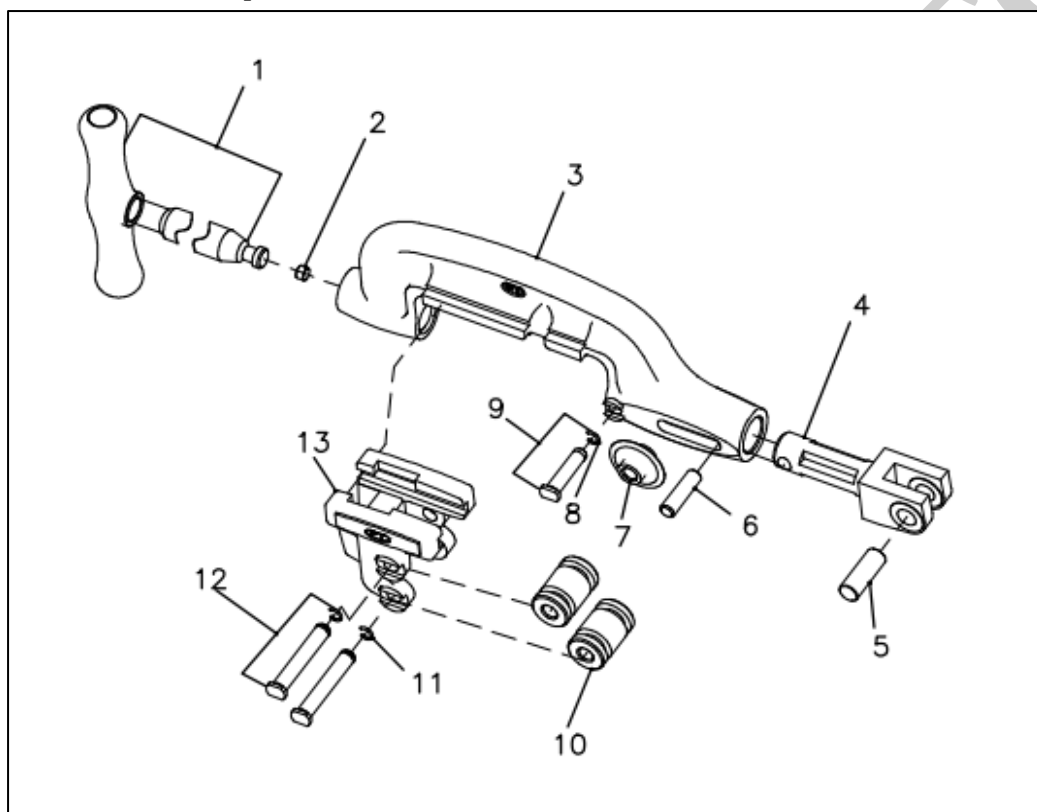


S/N	new Ref. No.	Ridgid Ref.	Description
1	40402007	47155	Pin (2)
2	41701007	43790	Reamer Bar
3	50702003	44700	Latch Spring 1x6.5x3012.5
4	41001009	46665	Reamer Latch
5	42001016	47065	Hinge Pin
6	41801009	46585	Reamer Knob

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7	50103154	46515	Screw UNC1/4-20x3/4
8	40304017	43230	Reamer Arm
9	40602006	36277	Cone
	10701004	42365	Reamer complete

PTK-300 Pipe Cutter (624 - 37600)

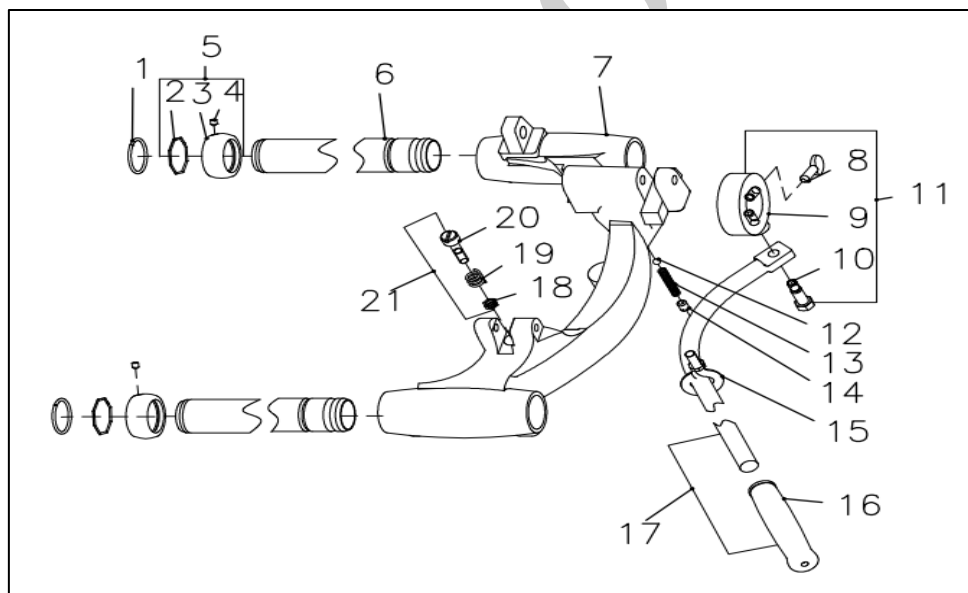


S/N	new Ref. No.	Ridgid Ref.	Description
1	30104004	43625	Handle Component
2	41801010		Support Pillar
3	40304019	43595	Cutter Frame
4	42001017	45505	Support Arm

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5	40402009	45520	Pin
6	40402008	45435	Retaining Pin
7	40601003	33105	Cutting Wheel H.D.
	40601008	44185	Cutting Wheel Std.
8	50705005		Cutter Shaft Ring $\Phi 1.4 \times 9$
9	42001018	34780	Wheel pin
10	40403029	34305	Roll (2)
11	50705006		Ring $\Phi 1.4 \times 10$ (2)
12	42001019	34310	Roll pin (2)
13	40304018	33400	Roll Housing Assembly
	10801003	42370	Cutter complete

PTK-300 Carriage (10401006 - 227 - 37800)



PTK-300 PIPE THREADING KIT

S/N	new Ref. No.	RIDGID Ref.	Description	
1	41502021	44525	Spring ring (2)	
2	41502020	44720	Snap Ring (2)	
3	41502022			
4	50103174	46050	Screw UNF1/4-28x1/4 (2)	
5	30108016	44725	Ring Assembly (2)	
6	41703009	44425	Support bar (2)	
7	30109026		Carriage Assembly (7+21)	
8	40401014	46220	Thumb Screw	
9	41502019		Collar	
10	40401015	46210	Shoulder bolt	
11	30108017	46215	Collar Assembly (2)	
12	50402004	46810	Detent assembly	
13	50702005			
14	50103187			
15	40401016	46205	Eye Bolt assembly	
16	41902001	46235	Hand Grip	
	30104006	42385	Lever Assembly	
17	30104005	43400	Lever arm	
18	50102032		Nut UNC5/16-18	
19	50702006		Adjusting Compression Spring 2x14x16x45	
20	50103169		Adjusting Screw UNC5/16-18x18	
21	30108018	45515	Stop bolt assembly	