4 Inch Pipe Threader

Owner's Manual

WARNING: Read carefully and understand all ASSEMBLY AND OPERATION INSTRUCTIONS before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

Item #49671

Thank you very much for choosing a Klutch product!

For future reference, please complete the owner's record below:

Serial Number/Lot Date Code: _____

Purchase Date: _____

Save the receipt, warranty, and this manual. It is important that you read the entire manual to become familiar with this product before you begin using it.

This 4 inch pipe threader is designed for certain applications only. Northern Tool and Equipment cannot be responsible for issues arising from modification or use of this product in an application for which it was not designed. We strongly recommend that this product not be modified and/or used for any application other than that for which it was designed.

For technical questions, please call **1-800-222-5381**.

Table of Contents

Intended Use

This 4 inch pipe threader is designed for threading various water, electric and gas pipes ranging from 1/2"- 4" and includes 3 sets of HSS dies designed for use on 1/2" - 3/4", 1" - 2", and 2-1/2" - 4" pipes.

Technical Specifications

Property	Specification
Range of work	1/2"-4" inches BSPT / NPT threads
Die	1/2"-3/4", 14 threads/inch 1"-2", 11 threads/inch 2-1/2"-4", 11 threads/inch Rockwell Hardness: HRC58-62
Die Heads	1/2" - 2" 2-1/2" - 4"
Electric Motor	750W induction type 220V/50-60Hz 900W induction type 110V/50-60Hz
Maximal Output Rotational Speed	26/11 turns/minute
Maximal Chuck Capacity	ф125mm
Sledge Travel	180mm
Oil Feeder	Geared pump, automatic circulation
Noise	＜ 85dB
Physical Dimension	Length x width x height: 900 x 550 x 450 (not including the height of the stand bar)
Shipping Weight	370 lbs.

Important Safety Information

⚠WARNING

- Read and understand all instructions. Failure to follow all instructions may result in serious injury or property damage.
- The warnings, cautions, and instructions in this manual cannot cover all possible conditions or situations that could occur. Exercise common sense and caution when using this tool. Always be aware of the environment and ensure that the tool is used in a safe and responsible manner.
- Do not allow persons to operate or assemble the product until they have read this manual and have developed a thorough understanding of how it works.
- Do not modify the pipe threader in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the product. There are specific applications for which the product was designed.
- Use the right tool for the job. DO NOT attempt to force small equipment to do the work of larger industrial equipment. There are certain applications for which this equipment was designed. It will do the job better and more safely at the capacity for which it was intended. DO NOT use this equipment for a purpose for which it was not intended.
- Industrial or commercial applications must follow OSHA requirements.

⚠WARNING

- This product may contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.
- Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm. Some examples of these chemicals are:

  - lead from lead-based paints,
  - crystalline silica from bricks and cement and other masonry products, and
  - arsenic and chromium from chemically-treated lumber.

  Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well-ventilated area, and work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.
- Handling power cords on corded products may expose you to lead, a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. Wash your hands after handling.

⚠WARNING

WORK AREA SAFETY

- Inspect the work area before each use. Keep work area clean, dry, free of clutter, and well lit. Cluttered, wet, or dark work areas can result in injury. Using the tool in confined work areas may put you dangerously close to other cutting tools and rotating parts.
- Do not use the pipe threader where there is a risk of causing a fire or an explosion; e.g., in the presence of flammable liquids, gases, or dust. The product can create sparks, which may ignite the flammable liquids, gases, or dust.
- Do not allow the pipe threader to come into contact with an electrical source. The tool is not insulated and contact will cause electrical shock.
- Keep children and bystanders away from the work area while operating the tool. Do not allow children to handle the tool.
- Be aware of all power lines, electrical circuits, water pipes, and other mechanical hazards in your work area. Some of these hazards may be hidden from your view and may cause personal injury and/or property damage if contacted.

⚠WARNING

PERSONAL SAFETY

- Stay alert, watch what you are doing, and use common sense when operating the tool. Do not use the tool while you are tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating the tool may result in serious personal injury.
- Dress properly. Do not wear loose clothing, dangling objects, or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts. Air vents on the tool often cover moving parts and should be avoided.
- Wear the proper personal protective equipment when necessary. Use ANSI Z87.1 compliant safety goggles (not safety glasses) with side shields, or when needed, a face shield. Use a dust mask in dusty work conditions. Also use non-skid safety shoes, hardhat, gloves, dust collection systems, and hearing protection when appropriate. This applies to all persons in the work area.
- Do not overreach. Keep proper footing and balance at all times.
- Do not use the pipe threader when tired or under the influence of drugs, alcohol or medication.
- Ensure the power switch is off prior to plugging in the tool.
- Remove keys or wrenches before connecting the tool to an air supply, power supply, or turning on the tool. A wrench or key that is left attached to a rotating part of the tool may cause personal injury.
- Secure the work with clamps or a vise instead of your hand when practical. This safety precaution allows for proper tool operation using both hands.

⚠WARNING

ELECTRICAL SAFETY

- Grounded tools must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances. Never remove the grounding prong or modify the plug in any way. Do not use any adapter plugs. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. If the tools should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.
- Double insulated tools are equipped with a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way. Double insulation eliminates the need for the three wire grounded power cord and grounded power supply system.
- Do not allow the pipe threader to come into contact with an electrical source. The tool is not insulated and contact will cause electrical shock.
- Avoid body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerators. There is an increased risk of electric shock if your body is grounded.
- Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- Do not abuse the power cord. Never use the power cord to carry the tools or pull the plug from an outlet. Keep the power cord away from heat, oil, sharp edges, or moving parts. Replace damaged power cords immediately. Damaged power cords increase the risk of electric shock.
- When operating a power tool outside, use an outdoor extension cords marked “W-A” or “W”. These extension cords are rated for outdoor use, and reduce the risk of electric shock.

⚠CAUTION

PRODUCT USE AND CARE

- Do not force the pipe threader. Products do a better and safer job when used in the manner for which they are designed. Plan your work, and use the correct product for the job.
- Check for damaged parts before each use. Carefully check that the product will operate properly and perform its intended function. Replace damaged or worn parts immediately. Never operate the product with a damaged part.
- Do not use a pipe threader with a malfunctioning switch. Any power tool that cannot be controlled with the power switch is dangerous and must be repaired by an authorized service representative before using.
- Disconnect the power/air supply from the product and place the switch in the locked or off position before making any adjustments, changing accessories, or storing the tool. Such preventive safety measures reduce the risk of starting the tool accidentally.
- Store the pipe threader when it is not in use. Store it in a dry, secure place out of the reach of children. Inspect the tool for good working condition prior to storage and before re-use.
- Use only accessories that are recommended by the manufacturer for use with your pipe threader. Accessories that may be suitable for one product may create a risk of injury when used with another tool. Never use an accessory that has a lower operating speed or operating pressure than the tool itself.
- Keep guards in place and in working order. Never operate the product without the guards in place.
- Do not leave the tool running unattended.

Specific Operation Warnings

⚠WARNING

- To prevent serious injury or property damage read owner's manual before operating.
- DO NOT wear loose clothing, jewelry, gloves, or unrestrained hair that may get caught in moving parts of the machine.
- Wear the proper safety gear including ANSI Z87.1 approved eye protection.
- Be sure the pipe ends and threads of the die are sufficiently oiled at all times.
- Moving Parts Hazard. Keep hands clear of cutting tools.
- Remove keys and adjusting wrenches before starting the machine.
- Always secure work piece before machining operation.
- DO NOT operate without guards in place.
- Electric shock hazard. Be sure equipment is properly grounded.
- Turn power OFF before servicing.
- Not for use by or around children.

Grounding

⚠WARNING

- This machine must be grounded while in use to protect the operator from electrical shock. This drill press is equipped with an electrical cord that has an equipment grounding conductor and a grounding plug. The plug MUST be plugged into a matching receptacle that is properly installed and grounded in accordance with ALL local codes and ordinances.
- DO NOT MODIFY THE PROVIDED PLUG. If it will not fit the receptacle, have the proper receptacle installed by a qualified electrician.
- CHECK with a qualified electrician or service person if you do not completely understand the grounding instructions, or if you are not sure the tool is properly grounded.

Grounded Tools: Tools with 3-Prong Plugs

Tools marked with **Grounding Required** have a 3-wire cord and 3-prong grounding plug. The plug must be connected to a properly grounded outlet. If the tool should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user, reducing the risk of electric shock. (See Figure A.)

The grounding prong in the plug is connected through the green wire inside the cord to the grounding system in the tool. The green wire in the cord must be the only wire connected to the tool's grounding system and must never be attached to an electrically live terminal.

Your tool must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. The plug and outlet should look like those in the following illustration.

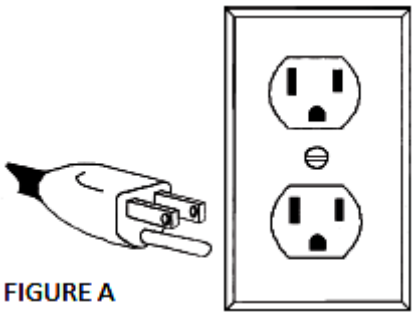


FIGURE A

Double Insulated Tools: Tools with Two-Prong Plugs

Tools marked **Double Insulated** do not require grounding. They have a special double insulation system which satisfies OSHA requirements and complies with the applicable standards of Underwriters Laboratories, Inc., the Canadian Standard Association, and the National Electrical Code. (See Figure B.)

Double insulated tools may be used in either of the 120 volt outlets shown in the following illustration.

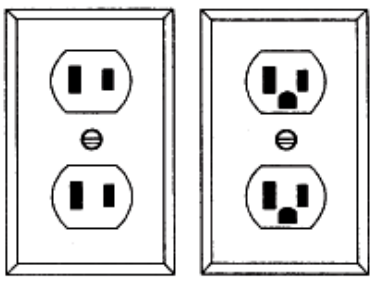


FIGURE B

Extension Cords

⚠WARNING

- USE A PROPER EXTENSION CORD. Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage, resulting in loss of power and cause overheating.
- Be sure your extension cord is properly wired and in good condition. Always replace a damaged extension cord or have it repaired by a qualified person before using it. Protect your extension cords from sharp objects, excessive heat and damp or wet areas.

- Grounded tools require a 3-wire extension cord. Double Insulated tools can use either a 2- or 3-wire extension cord.
- As the distance from the supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible tool damage.
- The smaller the gauge number of the wire, the greater the capacity of the cord. For example, a 14-gauge cord can carry a higher current than a 16-gauge cord. Minimum extension cord wire size is shown in the following table:

Minimum Wire Size Of Extension Cords				
Nameplate AMPS	**Cord Length**			
	25'	**50'**	**100'**	**150'**
0-6	18 AWG	16 AWG	16 AWG	14 AWG
6-10	18 AWG	16 AWG	14 AWG	12 AWG
10-12	16 AWG	16 AWG	14 AWG	12 AWG
12-16	14 AWG	12 AWG	NOT RECOMMENDED	

- When using more than one extension cord to make up the total length, make sure each cord contains at least the minimum wire size required.
- If you are using one extension cord for more than one tool, add the nameplate amperes and use the sum to determine the required minimum cord size.
- If you are using an extension cord outdoors, make sure it is marked with the suffix **W-A** (**W** in Canada) to indicate it is acceptable for outdoor use.
- Make sure your extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified electrician before using it.
- Protect your extension cords from sharp objects, excessive heat, and damp or wet areas.

Assembly

Unpacking

When unpacking the shipping crate, verify that all the accessories below are present:

- Three sets of dies in a tool box (4 pieces each set)
- Two die heads ranging from 1/2 – 4 inches
- One set of support legs and carriage
- One bottle of cutting oil (5 liters)
- One inner hexagon spanner and one screwdriver

Assembling

Stand Assembly

1. Connect the two wheels with wheel link. (see Figure 1-1)

Figure 1-1

2. Install the four support legs into the hole at the bottom of the machine. (see Figure 1-2)

Figure 1-2

3. Install the wheels onto the stand. (see Figure 1-3)

Figure 1-3

4. Install the tray with screws. (see Figure 1-4)

Figure 1-4

5. Install two handles. (see Figure 1-5)

Figure 1-5

6. Please fasten all screws safely and reliably. Then finish assembly. (see Figure 1-6)

Figure 1-6

7. Suspend the threader and make it stable with supporting legs and ready for use.

Before Each Use

⚠WARNING

- Inspect the work area before each use. Keep work area clean, dry, free of clutter, and well lit. Cluttered, wet, or dark work areas can result in injury. Using the tool in confined work areas may put you dangerously close to other cutting tools and rotating parts.
- Check for damaged parts before each use. Carefully check that the tool will operate properly and perform its intended function. Replace damaged or worn parts immediately. Never operate the tool with a damaged part.

Replacing the Screwing Die for Threading

There are three sets of dies, each of which are used to thread different size pipes. They are shown below:

Pipe	Die (4pcs/set)
1/2" - 3/4"	1/2" - 3/4", 14 threads/inch
1" - 2 "	1" - 2", 11 threads/inch
2-1/2" - 4"	2-1/2" - 4", 11 threads/inch

There are two die heads, 1/2" - 2" and 2-1/2" - 4":

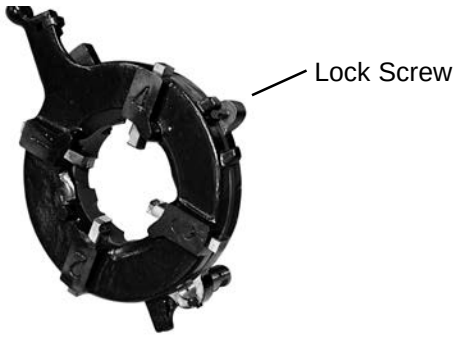
Die head No.1 (1/2" - 2")

Side A

Side B

Die head No.2 (2-1/2" - 4")

Side A



Side B

The index on the outside the die head represents the pipe diameter, and in Figure 3 below, the numbers 1, 2, 3, and 4 represent the assembly sequence for the die pieces.

1. Select a set of dies that match the diameter of the pipe. **Note:** The 1/2"-- 3/4 " and 1"--2" dies are installed in the small die head (No. 1), while the 2-1/2" - 4" dies are installed in the big die head (No. 2).
2. Remove the die head from the sledge (see direction arrow in Fig.2), then:
   a. Loosen the clamp lever (die head No. 1) or loosen the lock screw (die head No.2, see Fig. 1).
   b. Rotate the curve disk to the highest position of the scale on the outside edge.
   c. Tighten the clamp lever (die head No. 1) or tighten the lock screw (die head No. 2).

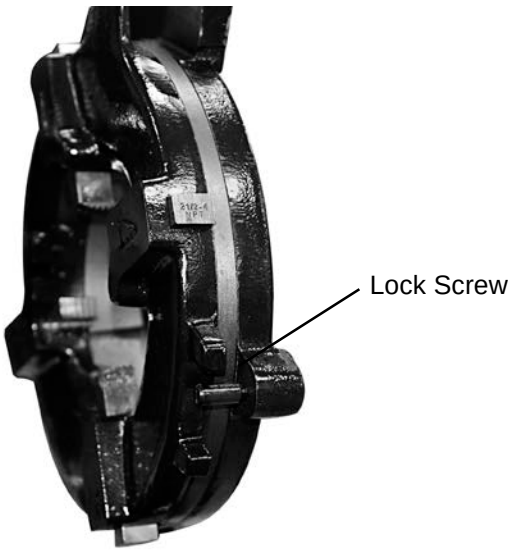


Fig. 1

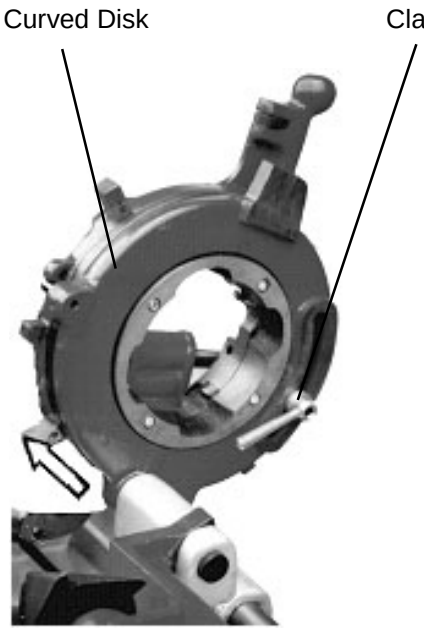


Fig. 2

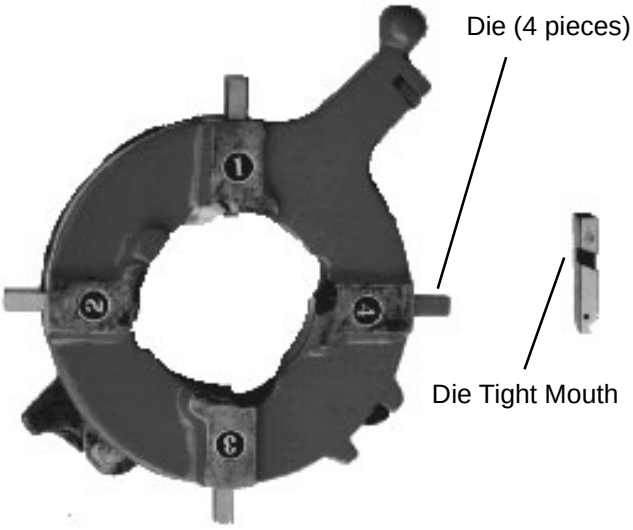


Fig. 3

3. Place the dies in the die head:
   a. Put the selected dies into grooves of the die head according to their sequential numbers (Fig. 4) and lock the die notches in the curved disk.
   b. Loosen the clamp lever (die head No. 1) or loosen the lock screw (die head No. 2, see Fig. 1).
   c. Rotate the curved disk until the scale on the outside edge points at the pipe size.
   d. Tighten the clamp lever (die head No. 1) or tighten the lock screw (die head No 2).

   The die head is ready for operation.
4. Place the assembled die head plate back onto the sledge (reverse the direction arrow in Fig 2).
5. Turn the adjustable screw to the position as required (Fig. 4). The indicator next to the screw refers to the length of threading on the pipe.

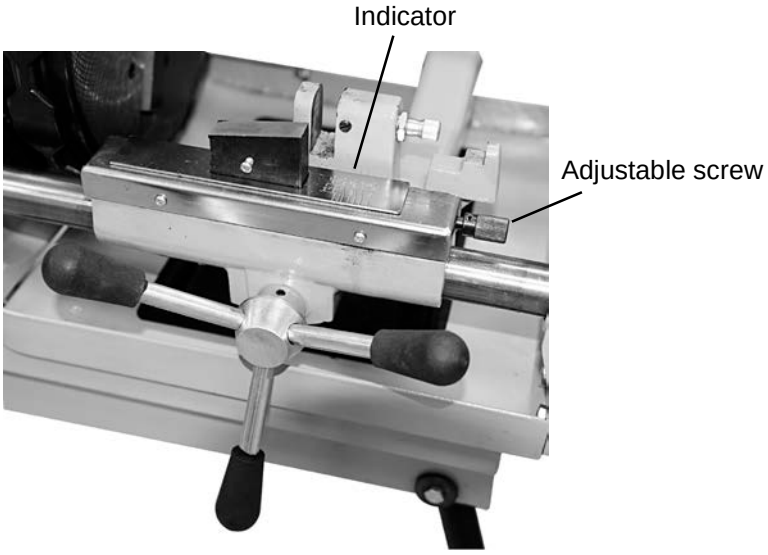


Fig. 4

Check Cutting Oil Level

1. Check whether there is enough cutting oil in the tank. Make sure that the oil level in the tank should cover the oil filter (8). Please see Figure 4-1

Figure 4-1

2. Add oil when needed through the oil disk (21).
3. Cutting oil will overflow over the die head after the machine starts. Please see Figure 4-2

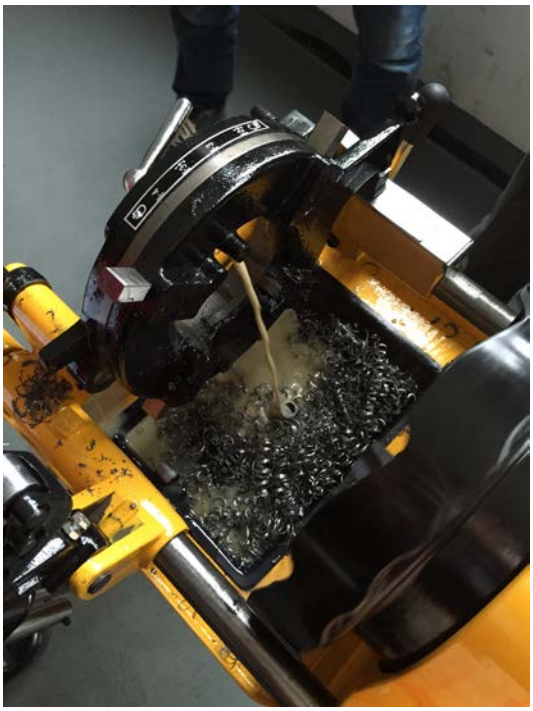


Figure 4-2

Note: Use only thread cutting oil to ensure high-quality threads.

Operating Instructions

⚠WARNING

- Do not force the pipe threader. Tools do a better and safer job when used in the manner for which they are designed. Plan your work, and use the correct tool for the job.
- Be sure the pipe ends and threads of the die are sufficiently oiled at all times.
- Keep guards in place and in working order. Never operate the threader without the guards in place.
- Do not use the threader with a malfunctioning switch. Any power tool that cannot be controlled with the power switch is dangerous and must be repaired by an authorized service representative before using.
- Do not leave the threader running unattended.
- Do not use the threader where there is a risk of causing a fire or an explosion; e.g., in the presence of flammable liquids, gases, or dust. The threader can create sparks, which may ignite the dust or fumes.
- Keep children and bystanders away from the work area while operating the threader. Do not allow children to handle or operate the threader.

Threading Pipe

Note: Any step requiring a non-rotating condition should be done only when the machine is stopped.

1. Turn the fore and rear chucks clockwise. Then loosen the three claws and install the pipe from behind the rear chuck, passing it through the fore chuck and past it by about 4 inches (100 mm).
2. Holding the pipe, turn the fore and rear chucks counterclockwise to secure the pipe then moderately tighten the hammer disk by turning it counterclockwise (Fig. 5).

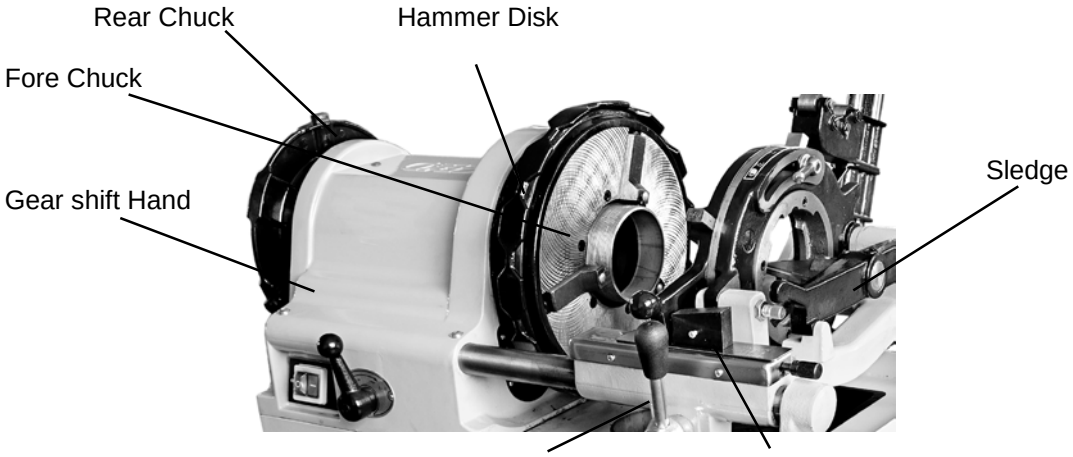


Fig. 5

3. Rotate the cutting knife rack (cutter; Fig. 9) and beveling rack (reamer; Fig. 10) up out of the way then rotate die head in until it touches the copying block. Lock it in place with locking pin (Fig. 6).

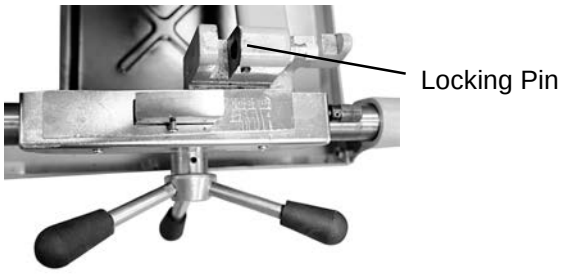


Fig. 6

4. After the die head is secured in position, move the gear shift to Slow for 2-1/2" – 4" pipes or Fast for smaller

pipes, then push the start button (Fig. 7).

Caution: To achieve good pipe threads, the gear shift should be placed at Slow when threading larger pipes with a diameter bigger than two inches or at Fast for smaller pipes (see Fig. 7).

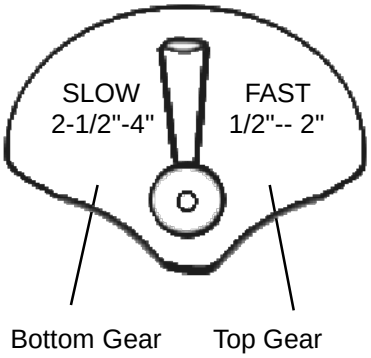


Fig. 7

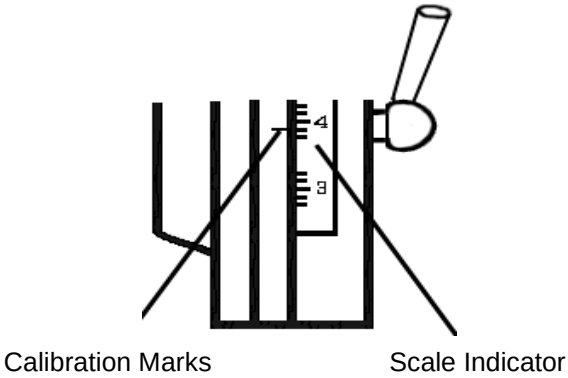


Fig. 8

5. The pipe must rotate counterclockwise. Then rotate the sledge handle to move the die head to the pipe.
6. Apply force on the sledge handle (Fig. 5) until 3 - 4 threads are cut on the pipe.
7. Stop applying force. The machine will begin to thread automatically until the roller of the die head passes the copy block and drops.
8. Turn off the threader
9. Move the die head to the up-right unused position.
10. Loosen the fore and rear chucks, by turning them clockwise, and remove the pipe from the rear chuck.

Cutting Pipe

Note: Any step requiring a non-rotating condition should be done only when the machine is stopped.

1. Turn the fore and rear chucks clockwise. Then loosen the three claws and install the pipe from behind the rear chuck, passing it through the fore chuck and past it by about 4 inches (100 mm).
2. Holding the pipe, turn the fore and rear chucks counterclockwise to secure the pipe then moderately tighten the hammer disk by turning it counterclockwise (Fig. 5).
3. Rotate the die head and the beveling rack (reamer; Fig. 10) up out of the way then rotate the knife rack in.
4. Push down the cutting knife rack and rotate the handle to open the rack until the cutting knife roller and cutting wheel straddle the pipe (Fig. 9).
5. Rotate the sledge handle (fig. 5) to move the cutting knife into position (see Fig. 9).

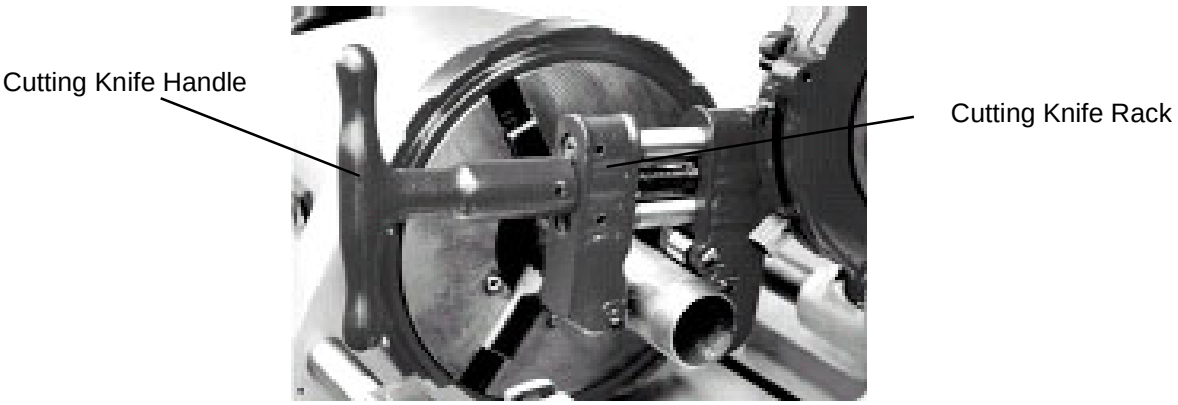


Fig. 9

6. Rotate the cutting knife handle to move the cutting knife to the pipe.
7. Move the gear shift to Fast (Fig. 7) and start the threader to start cutting into the pipe.
8. For each turn of the pipe, turn the cutting knife handle about 1/10 turn.

   Caution: Cut with moderate speed and force to avoid the distortion of the pipe and the damage of the cutting knife.
9. When cutting is done, loosen the cutting knife and pull the rack up, then turn off the threader.
10. Loosen the fore and rear chucks, by turning them clockwise, and remove the pipe from the rear chuck.

Inner Beveling

1. Turn the fore and rear chucks clockwise. Then loosen the three claws and install the pipe from behind the rear chuck, passing it through the fore chuck and past it by about 4 inches (100 mm).
2. Holding the pipe, turn the fore and rear chucks counterclockwise to secure the pipe then moderately tighten the hammer disk by turning it counterclockwise (Fig. 5).
3. Rotate the die head and cutting knife rack (Fig. 9) up out of the way then rotate the beveling rack (reamer, Fig. 10) in.
4. Move the gear shift to Fast (Fig. 7) and start the threader.
5. Rotate the sledge handle (Fig. 5) to move the beveling device (reamer) to the pipe then apply force to the handle to start beveling the pipe.

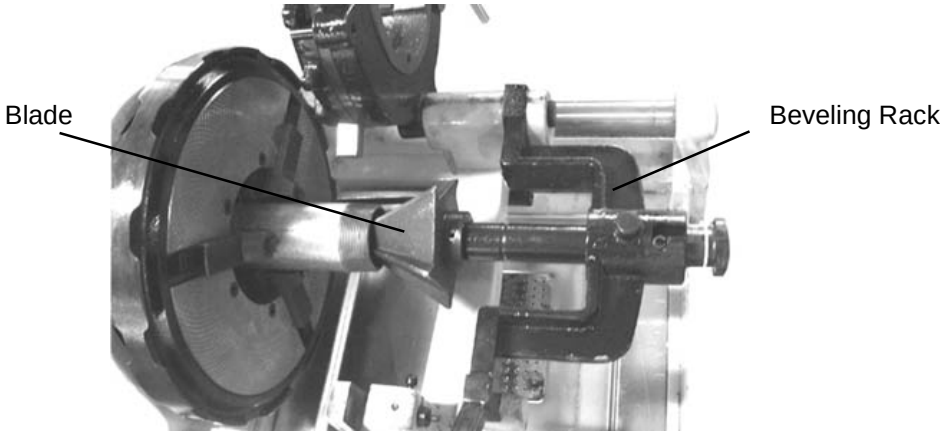


Fig. 10

6. Stop the machine after the beveling is complete and rotate the beveling rack to the upward.
7. Loosen the fore and rear chucks, by turning them clockwise, and remove the pipe from the rear chuck.

After Each Use

- Unplug power when the machine is not in use.
- Clean the machine of metal scraps and excess oil.
- Coat corrosion resistant oil on working surfaces
- Store the pipe threader when it will not be used for a long time. Inspect the threader for good working condition prior to storage and again before re-use. Store it in a dry, secure place out of the reach of children. Please refer to Maintenance for more information.

Maintenance

⚠WARNING

- Put the power switch in the locked or off position before making any adjustments, changing accessories, or storing the threader. Such preventive safety measures reduce the risk of accidental starting.
- Use only identical parts with the threader. Parts that may be suitable for one tool may create a risk of injury when used with another tool. Never use a part that has a lower operating speed than the tool itself.

Maintain the threader. It is recommended that the general condition of any tool be examined before it is used. Keep the threader in good repair by adopting a program of conscientious repair and maintenance.

- The shell of this machine is cast with a single piece of aluminum alloy. Do not impact the shell violently.
- The gearbox is permanently lubricated.
- Keep handles dry, clean, and free from oil and grease.

Every Shift

- Cooling oil system: Clean the oil filter disk and oil suction filter disk after each use. Clean the oil tank and refill if the oil is dirty or turns black.
- Add machine oil into the two holes (see figure 11) on two ends of the top of the housing after running for 8 – 12 hours.

Fig. 11

- Clean screwing dies and die heads every shift. Check if the teeth of the screwing die are broken. If they are, remove the cuttings between the teeth. If the die is already broken, replace a set of dies instead of the broken one only.
- There are two oil cups on the shell of main shaft. Oil at least TWICE EACH SHIFT to lubricate the fore and rear bearings.

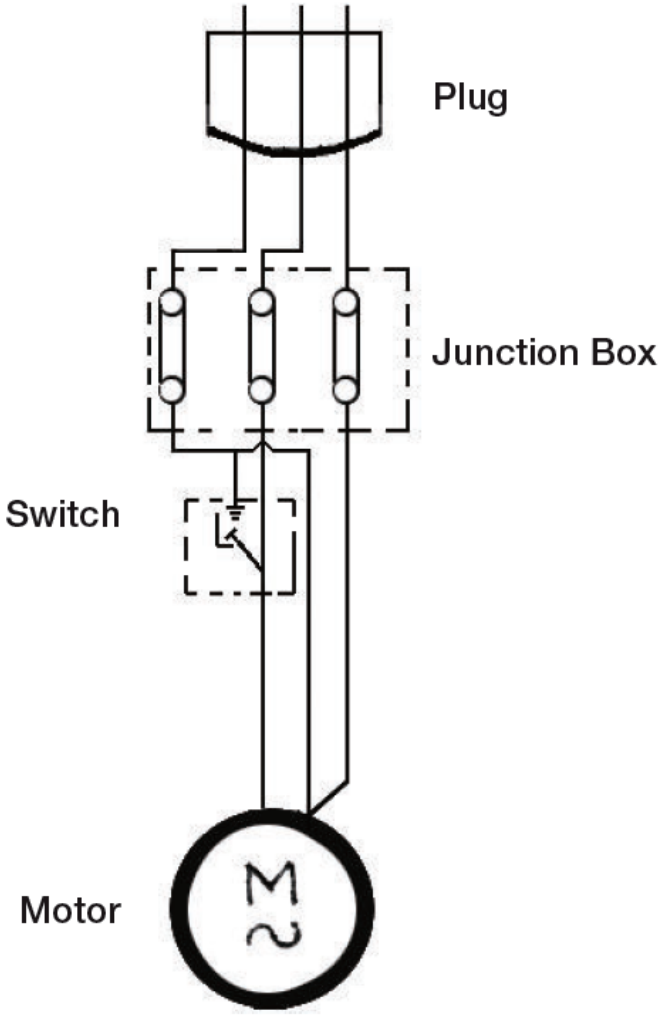
Weekly

- Small iron filings may fell into the oil tank when threading. It is therefore essential to clean the filter disk once a week to keep the machine in order.
- Check the cutting blades each week. Replace any of them when they are blunt.

Monthly

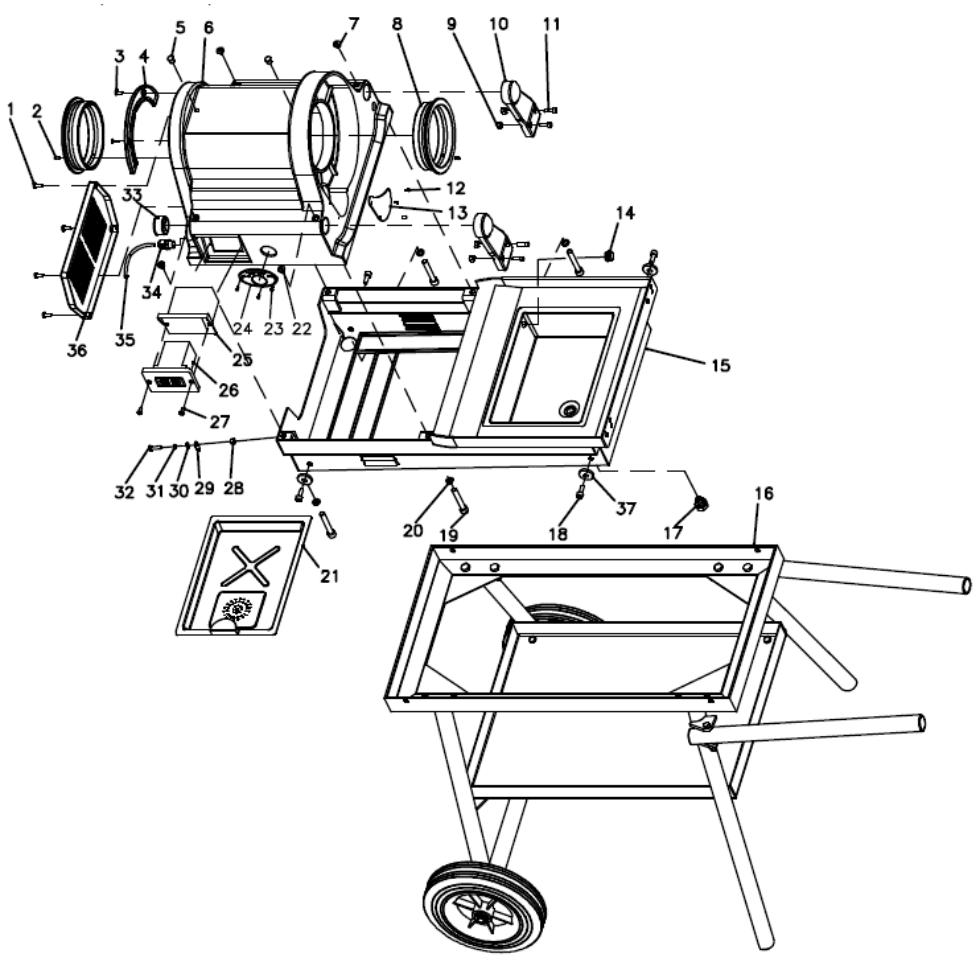
- Check the attrition of the claw points in the claw once a month. If the claw points are worn, replace them (three each set) to ensure to produce the threads of high quality.

Wiring Diagram



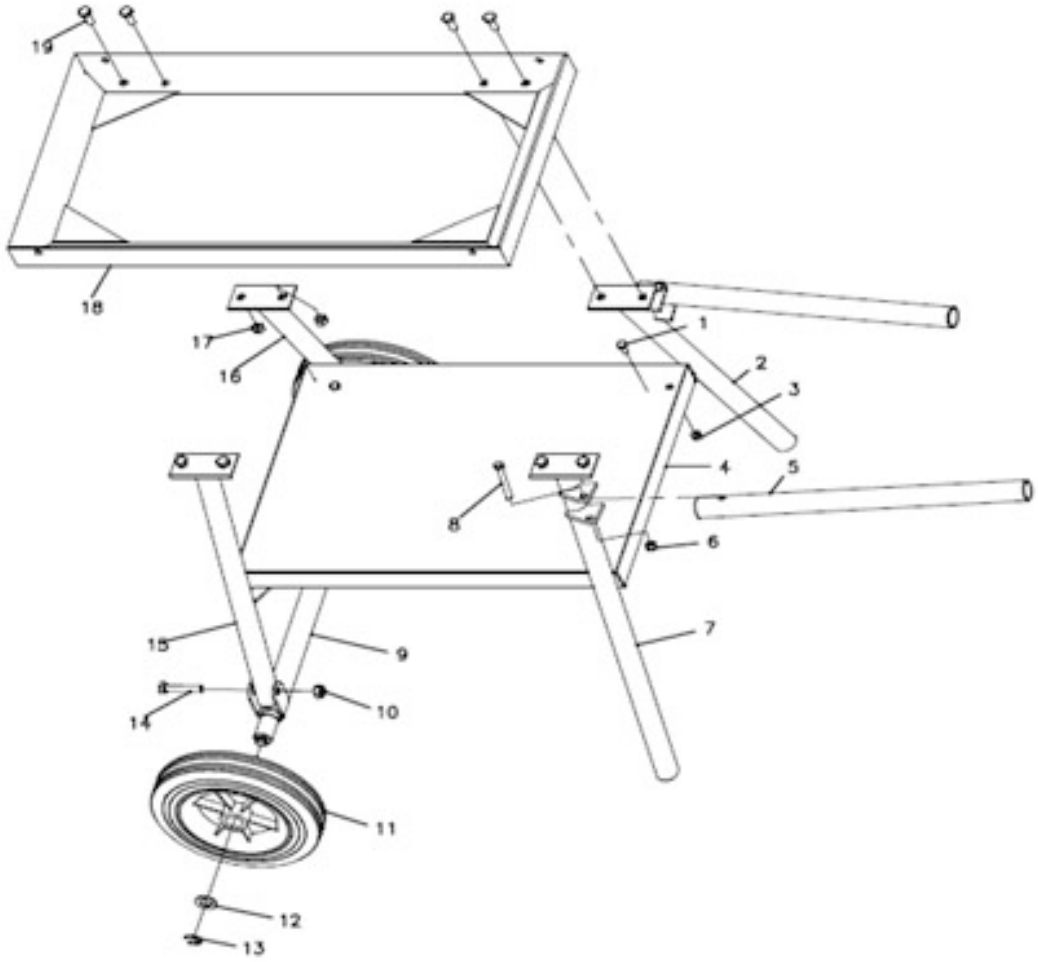
Parts Diagrams and Lists

Main Components



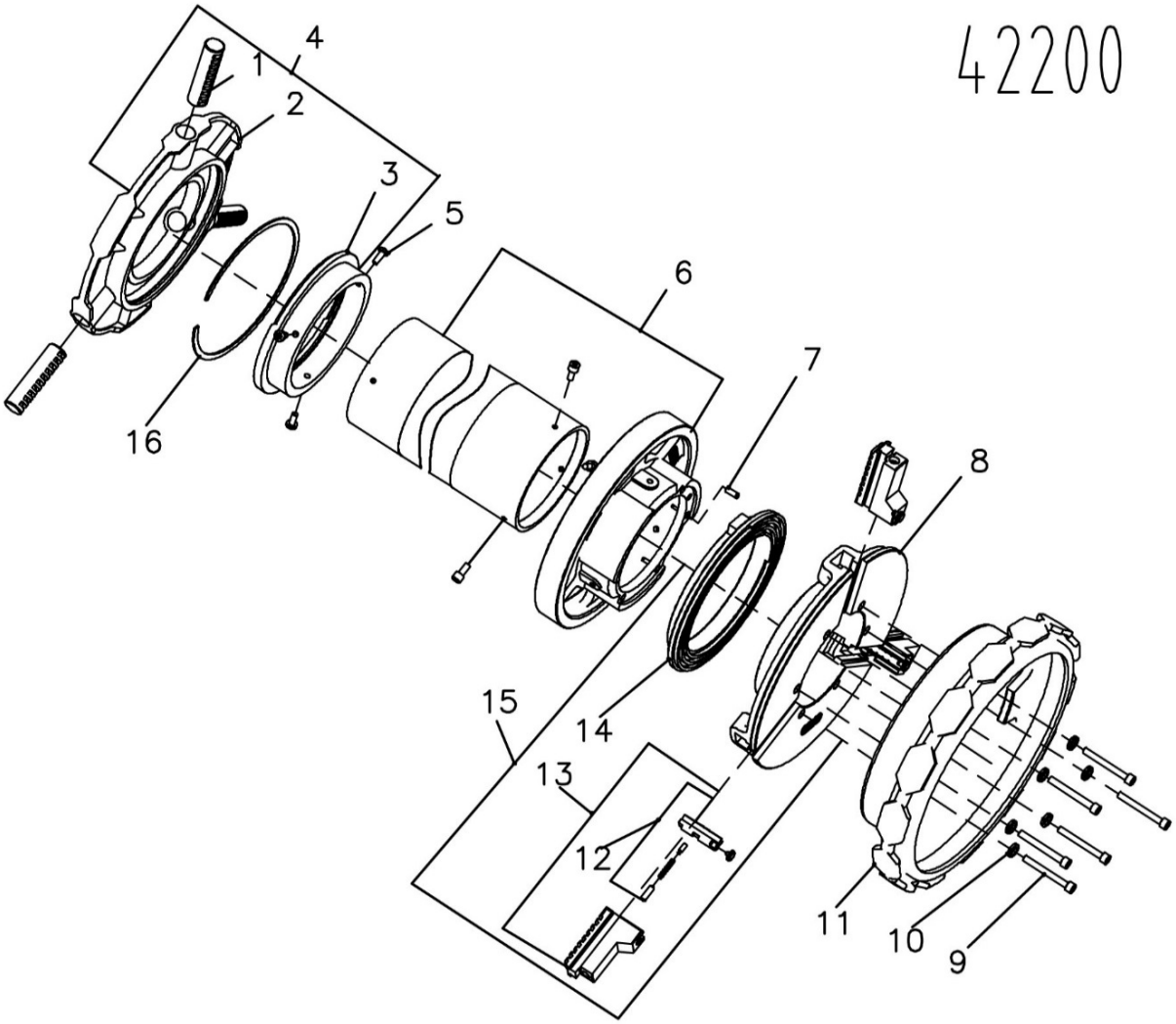
Part No.	Description	Qty.	Part No.	Description	Qty.
1	Screw M6*16	4	20	Elastic spacer M10	4
2	Elastic pin 4.5*16	2	21	Chip pan assembly	1
3	Screw M5*10	2	22	Screw	1
4	Rear block plate	1	23	Speed index	1
5	Grease fitting	1	24	Rivet	3
6	Upper Casting body	1	25	Switch box	1
7	Set screw	3	26	Switch	1
8	Bearing	2	27	Screw M4*10	2
9	Type 2 Hex nut M8	4	28	Nut M4	1
10	Rail support	2	29	Earth wire label	1
11	Screw M8*20	4	30	Ring D=4	1
12	Screw 4*8	3	31	Standard spacer D=4	1
13	Block plate	1	32	Screw M4*16	1
14	Tube sleeve	1	33	Rail plug	1
15	Lower machine body	1	34	Grommet M18	1
16	Cart Complete 652	1	35	Power cord	1
17	Oil plug	1	36	Rear cover	1
18	Screw M8*25	4	37	Rubber pad	4
19	Screw M10*65	4			

Frame



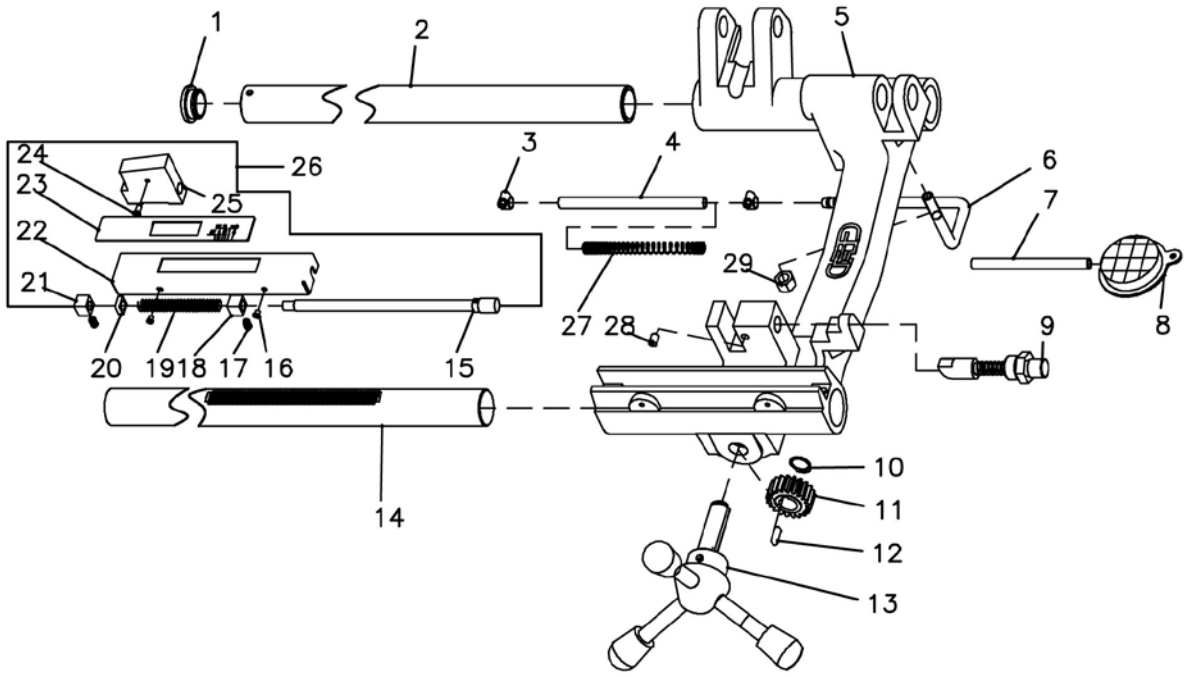
Part No.	Description	Qty.	Part No.	Description	Qty.
1	Bolt M8*15	4	11	Wheel	2
2	Front Support leg assembly	1	12	Flat washer	2
3	Nut M8	4	13	Ring D16	2
4	Tool Tray	1	14	Bolt M10*60	2
5	Handle	2	15	Wheel Support leg assembly	1
6	Nut M8	2	16	Wheel Support leg assembly A	1
7	Front Support leg assembly A	1	17	Nut M8	8
8	Bolt M8*65	2	18	Tray assembly	1
9	Axle assembly	1	19	Bolt M10*24	8
10	Nut M10	2			

Drive Components:



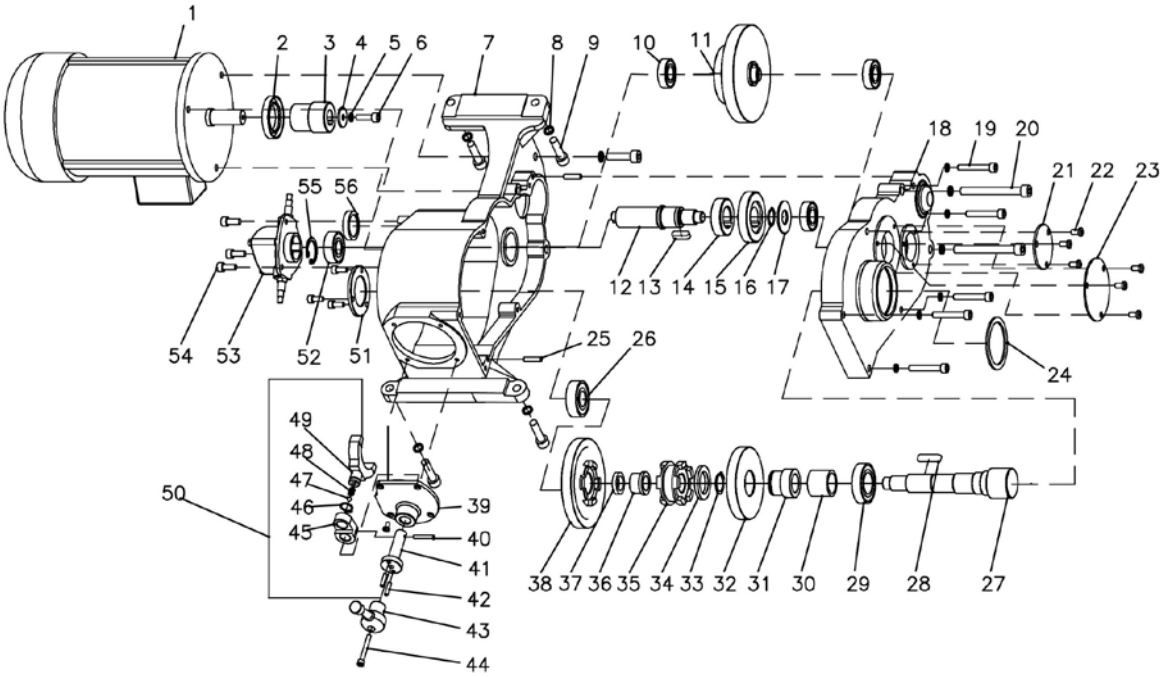
Part No.	Description	Qty.
1	Rear jaws	3
2	Rear centering head	1
3	Rear scroll	1
4	Rear centering assembly	1
5	Screw M5*16	3
6	Drive shaft assembly	1
7	Pin 8*30	1
8	Cap	1
9	Screw M8*55	6
10	Ring D=8	6
11	Hand wheel	1
12	Jaw insert set	3
13	Jaw holder assembly	3
14	Front scroll	1
15	Front chuck assembly	1
16	Ring D=180	1

Carriage



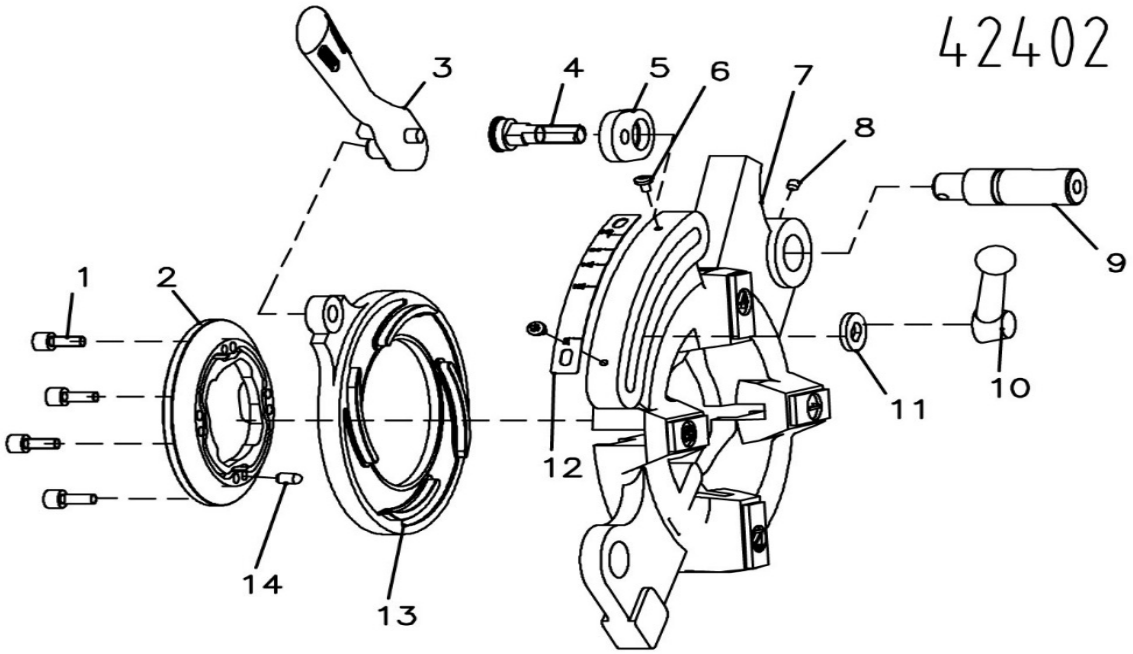
Part No.	Description	Qty.	Part No.	Description	Qty.
1	Rail plug	1	16	Screw M5*10	1
2	Rear rail	1	17	Spring	2
3	Clamp M12	2	18	Front block	1
4	Inlet oil tube φ10.5*15*600	1	19	Spring	1
5	Carriage	1	20	Nut	1
6	Oil elbow	1	21	Rear block	1
7	Outlet oil tube φ10.5*15*620	1	22	Copy frame	1
8	Oil filter	1	23	Plate	1
9	Lock	1	24	Screw M5*16	2
10	Retaining ring D=18	1	25	Copy block	1
11	Gear	1	26	Copy assembly	1
12	Key 5*5*20	1	27	spring	1
13	Handle assembly	1	28	Screw M8*12	1
14	Front rail	1	29	I type nut M10	1
15	Screw shaft	1			

Gear Box



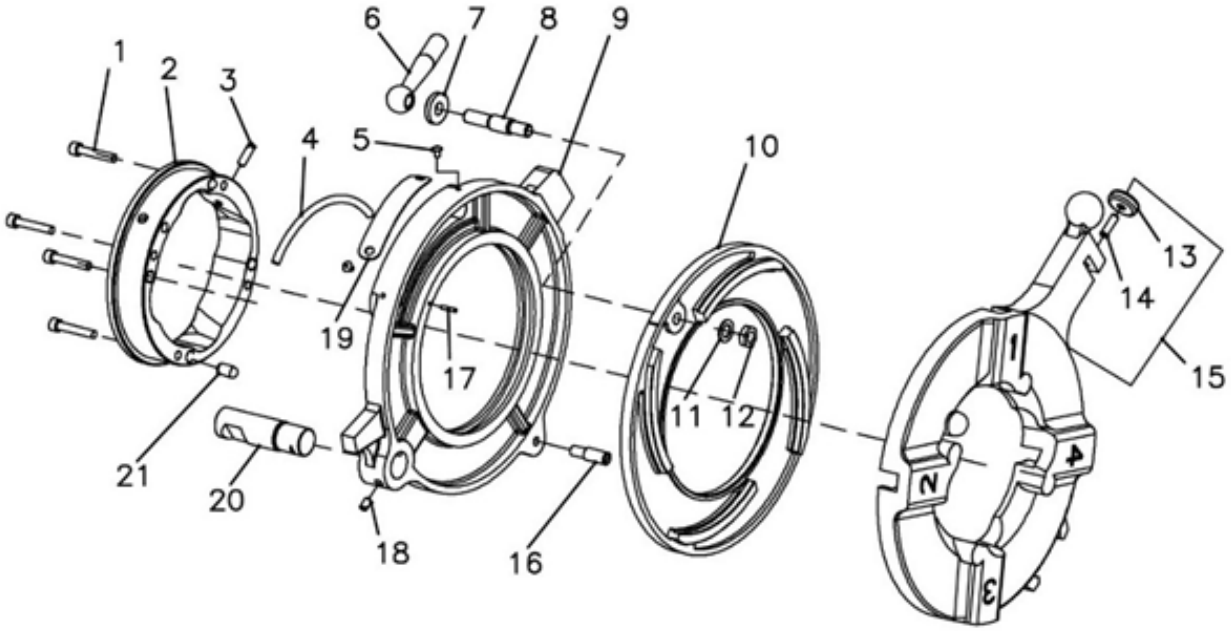
Part No.	Description	Qty.	Part No.	Description	Qty.
1	Motor 110V	1	29	Bearing 6006	1
2	Seal 30*47*7	1	30	Sleeve	1
3	Motor gear	1	31	Big sleeve	1
4	Spacer	1	32	Clutch gear	1
5	Elastic spacerφ6	6	33	A type retaining ring D=25	1
6	Screw M6*15	1	34	Ring	1
7	Gear housing	1	35	Middle clutch	1
8	Spacerφ8	7	36	Sleeve	1
9	Screw M8*30	1	37	Spacer	1
10	Bearing 6002	3	38	Clutch gear	1
11	1st gear set 3400RPM	1	39	Fork cover	1
12	Oil pump gear shaft	1	40	Pinφ5*30	1
13	A type key 8*7*26	1	41	Shifting shaft	1
14	Special gear	1	42	Pinφ5*20	2
15	Specific gear 3400RPM	1	43	Adjust handle	1
16	A type ring D=20	1	44	Screw M10*65	5
17	Spacer	1	45	Fork coupling	1
18	Gear box cover	1	46	A type retaining ring D=15	1
19	Screw M6*40	5	47	Steel ballφ6	1
20	Screw M8*75	2	48	Spring	1
21	Cover	1	49	Fork	1
22	Screw M5*10	13	50	Fork assembly	1
23	Cover plate	1	51	Cover	1
24	A type retaining ringφ55	1	52	Bearing 15*35*11	1
25	Pinφ5*35	2	53	Oil pump	1
26	Bearing 6203	1	54	screw M6*12	3
27	Output gear shaft	1	55	A type ring	1
28	A type key 8*7*35	1	56	Spacer	1

1/2-2" Die Head



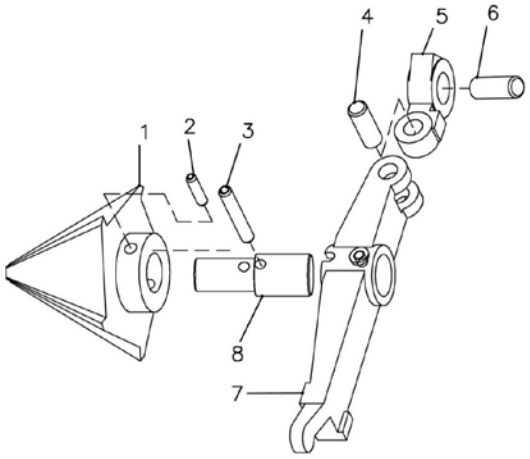
Part No.	Description	Qty.
1	Screw M6*18	4
2	Retaining ring	1
3	Throw-out lever	1
4	Lock screw	1
5	Throw-out link	1
6	Screw M4*6	2
7	Head w/post NPT	1
8	Screw M6*12	1
9	Post	1
10	Clamp lever	1
11	Spacer	1
12	Index	1
13	Cam plate	1
14	Detent ball	1

2 1/2 - 4" Die Head



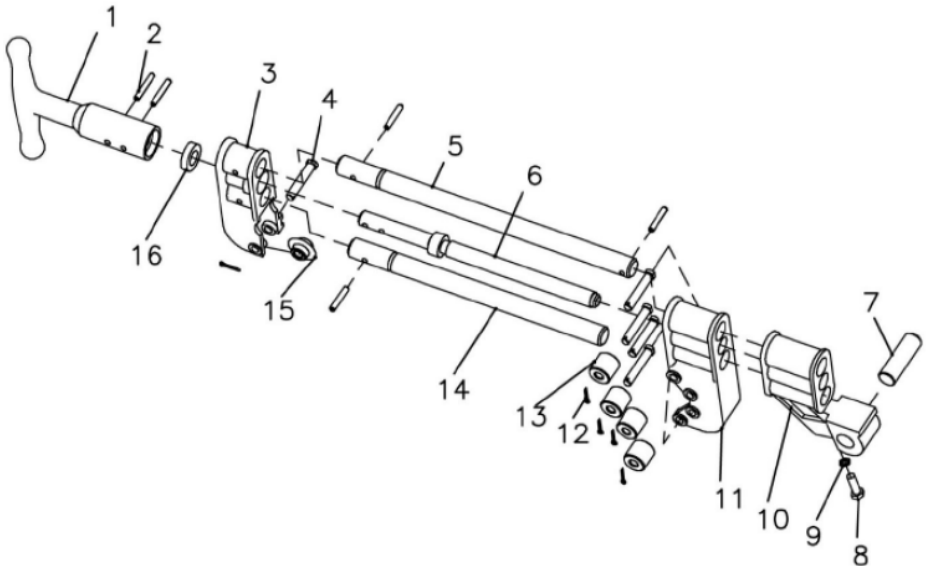
Part No.	Description	Qty.
1	Screw M6*35	4
2	Retaining ring	1
3	Screw M6*20	1
4	Spring	1
5	Screw M4*8	2
6	Clamp lever	1
7	Spacer	1
8	Lock screw	1
9	Rear plate	1
10	Cam plate	1
11	Spacer D=10	1
12	Flat nut	1
13	Roller	1
14	Pinφ6*25	1
15	Head plate	1
16	Lock pin	1
17	Pinφ2.5*14	1
18	Set screw M8*12	1
19	Index	1
20	Post	1
21	Detent ball	1

Reamer



Part No.	Description	Qty.
1	5-blades reamer cone	1
2	Elastic pin φ8*50	1
3	Elastic pin φ8*50	1
4	Pin 15*40	1
5	Hinged link	1
6	Pin 20*	1
7	Reamer frame	1
8	Reamer shaft	1

Cutter



Part No.	Description	Qty.	Part No.	Description	Qty.
1	Cutter handle	1	9	Hex Nut M8	1
2	Elastic pinφ6*35	2	10	Cutter head	1
3	Wheel housing	1	11	Roller housing	1
4	Wheel pin	1	12	Pin D=1.5	5
5	Long guide bar	1	13	Roller	4
6	Screw post	1	14	Short guide bar	1
7	Post	1	15	Cutting wheel	1
8	Bolt M8*25	1	16	Bearing 8103	1

Troubleshooting

Problem	Cause	Remedy
The motor does not run or makes breaking sounds when running.	The fuse is blown.	Replace the fuse.
	A poor power contact	Replace the plug wire.
	The inside of the cable is broken.	Locate the broken point with a multimeter.
	Electric capacity is broken down.	Replace the electric capacity.
The pipe cannot be fastened or it slips when threading.	Less forceful stroke.	Hammer with force.
	The claw point is upside-down.	Adjust the claw point.
	One of claw points is broken or notch-edged.	Replace the claw point.
The cutting knife cannot cut.	The point of the cutting knife is worn-out and not sharp.	Replace the blade.
	The pin roll of the cutting knife is worn down.	Replace the pin roll.
	Apply less force when starting to cut.	Cut with force.
The cutting knife does not work when threading.	The knife does not open widely when starting to thread.	Use the knife properly.
	A few teeth of the cutter head are broken.	Replace the knife.
	The type and size of the knife is not suitable.	Reinstall the knife.
	There are iron filings in the grooves.	Clean the screwing die head.
The fore chuck body is loose.	M6 bolts are loose after long-term use.	Check tightness periodically.
The main shaft heats up.	Lack of oil	Oil regularly.
		Remove the beam barrel and scratch the shaft.
The cooling oil cannot be sufficiently provided.	The oil circuit is blocked.	Clean the oil circuit.
	The oil hole is not installed properly after the fulcrum shaft of the screwing die head is removed.	Reinstall it.
	The oil in the oil pump has leaked out.	Fill some cooling oil in the oil pump.
The cooling oil leaks into the motor.	The oil seal of the oil pump PD8 x 22 x 8 has been damaged.	Replace the oil seal.

Replacement Parts

- For replacement parts and technical questions, please call Customer Service at **1-800-222-5381**.
- Not all product components are available for replacement. The illustrations provided are a convenient reference to the location and position of parts in the assembly sequence.
- When ordering parts, the following will be required: model number, serial number/lot date code, and description.
- The distributor reserves the rights to make design changes and or improvements to product lines and manuals without notice.

Limited Warranty

Northern Tool and Equipment Company, Inc. ("We" or ""Us") warrants to the original purchaser only ("You" or "Your") that the Klutch product purchased will be free from material defects in both materials and workmanship, normal wear and tear excepted, for a period of **one year** from date of purchase. The foregoing warranty is valid only if the installation and use of the product is strictly in accordance with product instructions. There are no other warranties, express or implied, including the warranty of merchantability or fitness for a particular purpose. If the product does not comply with this limited warranty, Your sole and exclusive remedy is that We will, at our sole option and within a commercially reasonable time, either replace the product or product component without charge to You or refund the purchase price (less shipping). This limited warranty is not transferable.

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This limited warranty does not cover: (a) normal wear and tear; (b) damage through abuse, neglect, misuse, or as a result of any accident or in any other manner; (c) damage from misapplication, overloading, or improper installation; (d) improper maintenance and repair; and (e) product alteration in any manner by anyone other than Us, with the sole exception of alterations made pursuant to product instructions and in a workmanlike manner.

Obligations of Purchaser
You must retain Your product purchase receipt to verify date of purchase and that You are the original purchaser. To make a warranty claim, contact Us at 1-800-222-5381, identify the product by make and model number, and follow the claim instructions that will be provided. The product and the purchase receipt must be provided to Us in order to process Your warranty claim. Any returned product that is replaced or refunded by Us becomes our property. You will be responsible for return shipping costs or costs related to Your return visit to a retail store.

Remedy Limits
Product replacement or a refund of the purchase price is Your sole remedy under this limited warranty or any other warranty related to the product. We shall not be liable for: service or labor charges or damage to Your property incurred in removing or replacing the product; any damages, including, without limitation, damages to tangible personal property or personal injury, related to Your improper use, installation, or maintenance of the product or product component; or any indirect, incidental or consequential damages of any kind for any reason.

Assumption of Risk
You acknowledge and agree that any use of the product for any purpose other than the specified use(s) stated in the product instructions is at Your own risk.

Governing Law
This limited warranty gives You specific legal rights, and You also may have other rights which vary from state to state. Some states do not allow limitations or exclusions on implied warranties or incidental or consequential damages, so the above limitations may not apply to You. This limited warranty is governed by the laws of the State of Minnesota, without regard to rules pertaining to conflicts of law. The state courts located in Dakota County, Minnesota shall have exclusive jurisdiction for any disputes relating to this warranty.

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