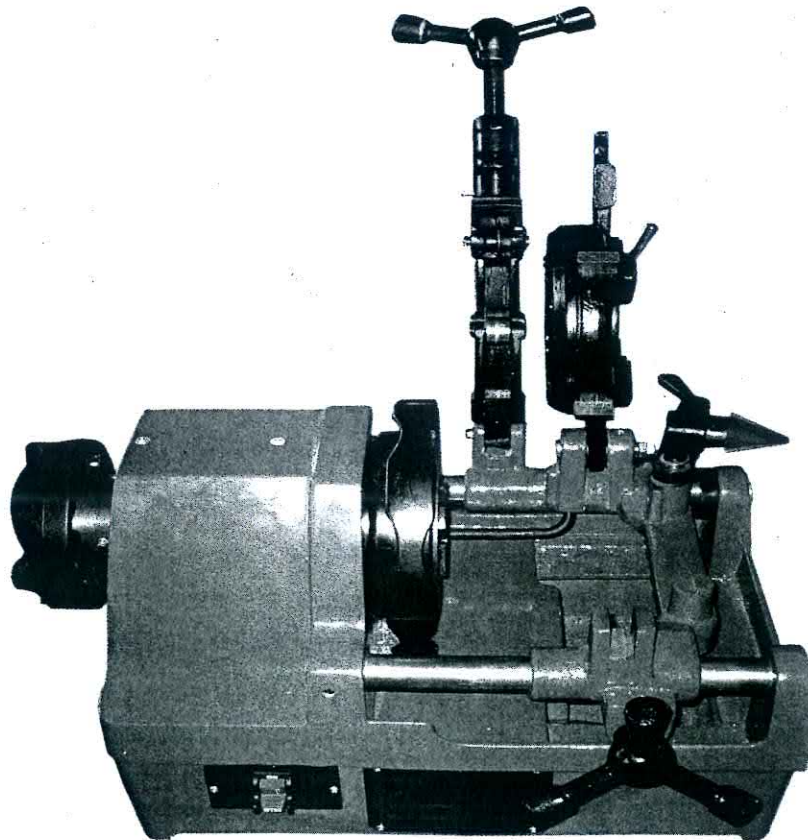




Item# 89137

Electric Pipe Cutting Threader

User's Manual



Assembly and Operation Instructions

MADE IN CHINA



NORTHERN™
TOOL + EQUIPMENT

2800 Southcross Drive, West. P.O. Box 1219. Burnsville, MN 55337-0219
Phone 952-894-9510. Fax: 952-894-1020

For technical questions and replacement parts, please call 1-800-556-7885.

Thank you very much for choosing a NORTHERN TOOL & EQUIPMENT CO.,
Product! For future reference, please complete the owner's record below:

Model: _____ Purchase Date: _____

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

This machine is designed for certain applications only. Northern Tool & Equipment strongly recommends that this machine is not modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, DO NOT use the machine until you have first contacted Northern Tool & Equipment to determine if it can or should be performed on the product.

Before using the Portable Electric Pipe Threader, please read the following instructions carefully.

I. Introduction

This machine is for threading of various water, electricity or gas pipes ranging from $\frac{1}{4}$ " – $1\frac{1}{2}$ ". It is efficient and can be widely used in equipment installation and construction industries and is an ideal device for increasing efficiency, shortening construction time, securing construction quality, and decreasing working intensity. Read this manual carefully before using the machine.

Caution: The electric threader is for threading. Follow directions and instructions of the Electric Threader User's Manual to avoid danger while operating it.

II. Technical Specifications

Item	Parameter
Range of work	$\frac{1}{4}$ " – $1\frac{1}{2}$ " inches British Standard thread
Screwing Die	$\frac{1}{4}$ " – $\frac{3}{8}$ " one set 18threads/inch $\frac{1}{2}$ " – $\frac{3}{4}$ " one set 11.5threads/inch 1 " – $1\frac{1}{2}$ " one set 11.5threads/inch Rockwell Hardness: HRC58-62
Electric Motor	Alternative current: 110V, 60Hz, Input: 1050W.
Maximal Output rotational Speed	40 revolutions/minute (idle)
Maximal Chuck Capacity	51mm
Sledge Travel	110mm



Oil Feeder	Geared pump, automatic circulation
Noise	90dB
Physical Dimension	Length x width x height: 500 x 470 x 400mm (not including the height of the stand bar)
Weight	37Kg

III. Special Safety Requirements

1. Keep the working site clean and bright (illumination condition 600lux) for disorder and darkness may cause accidents.
2. To avoid electric shock, do not expose the machine to the rain or operate it in moist workshops.
3. Operators should to wear tight clothing. Operators should remove gloves, jewelry, watch or likewise and should not loosen long hair.
4. When the threading machine (including its accessories) is installed in the working site, use only the 30mA leakage resistance switch.
5. The following is forbidden when the machine is running:
 - Touching or grabbing the workpieces.
 - Replacing or removing components (pipe accessories, valve, or pipes, etc)
 - Cutting or sawing pipes using hand tools.
6. If the dangerous areas in the machine or its workpieces cannot be examined closely, the spinning workpieces or the dangerous areas should be protected. The protective devices must be reliably and stably placed. The supporting devices must be stable if they are used. Install three support legs and adjust three screws to ensure height and stability.
7. Keep children away when the machine is running. They are forbidden to operate the machine or drag the cables and wires.
8. Avoid overload operation. The unsuitable accessories, overload operation and blunt or damaged screwing die must not be used for fear that the machine would be damaged.
9. Extending too long pipes to operate the machine is forbidden. Keep this machine balanced and stable all the time. Calculate the danger caused by suddenly-broken workpieces (based on the length of the workpieces, the section, the material and the rotational speed) and use enough supports to avoid danger.
10. Maintain this machine with care. Lubricate the machine and replace the accessories according to the instructions of this manual to make it more safely operated. Check the cables of this machine regularly. If there is any danger, it must be repaired by the technician. Keep various handles clean and tidy all the time. Keep them free of oil pollution.
11. Turn the power off. Pull the attaching plug out when the machine is not in use.
12. Starting the motor carelessly is forbidden. Make sure the switch is at the position of "off" before the plug is connected with the machine.
13. Do not operate the machine when the operator is tired, or if he has used any drugs.
14. Check the damaged spares: Check any cutting tools and spares carefully before using them, and see if they are in normal working condition and able to function. Any damaged spares must be repaired and replaced by specially trained technicians.
15. Operation is forbidden when any switch can not be properly turned on or off.
16. Replacing spares and accessories: Use the spares of Tiger King Electric threader for safety and proper operation.



IV. Directions

Unpacking:

When unpacking the case, check if the accessories below are attached:

1. C
2. Three sets of screwing dies (4 pieces each set);
3. Three inner hexagon spanners and one screwdriver;
4. One hand hold

Assembling:

Put the accessories aside, suspend the body, install and fix the support leg to put it on the ground or work station and ready for use.

Preparations to threading:

Replacing screwing die

There are three sets of screwing dies, each of which threads different pipes. They are shown below:

Pipe	Screwing die
1/4" - 3/8"	1/4" - 3/8" one set 18threads/inch
1/2" - 3/4"	1/2" - 3/4" one set 11.5threads/inch
1" - 1 1/2"	1" - 1 1/2" one set 11.5threads/inch

1. Select the set of screwing die that matches the diameter of the pipe.

There are two groups of figures on each screwing die, one of which represents its specification, the other representing the assembly sequential numbers (such as 1, 2, 3, 4).

2. Remove the die head from the sledge, loosen the nut of the handle, turn the curve disk (Fig 1).

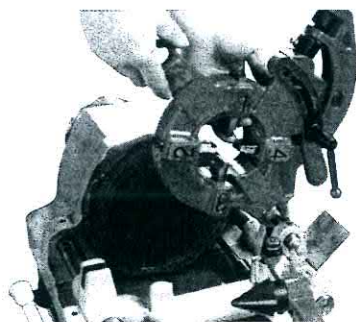


Fig 1



Fig 2

3. Put the selected screwing dies into die grooves according to their sequential numbers, turn the curved disk, then adjust the scratch of the thread to that of the support disk. Tighten the hand screw, and then the screwing die is fixed (Fig 2).

Check cutting oil:

1. Check whether there is enough cutting oil in the tank;
2. Add oil when needed through the oil disk;
3. Cutting oil will overflow over the die head after the machine starts;

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



Fig 3

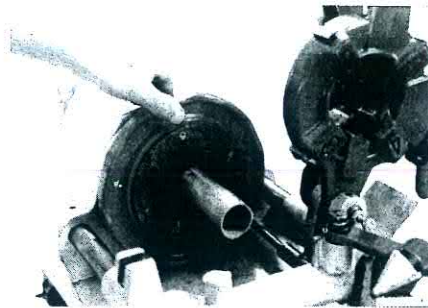


Fig 4

Threading operation:

Any operation requiring non-rotating condition should be done only when the machine stops running:

1. Rotate the fore and rear chucks clockwise. Then loosen three claws, install the pipe from beside the rear chuck, make it pass through the fore chuck and extend by 100 mm.
2. Rotate the fore and rear chucks counter-clockwise, clamp the pipe.
3. Pull up the cutting knife rack and beveling rack, push down the screwing die head, turn the carriage handle to let the die head join the pipe (Fig 5).

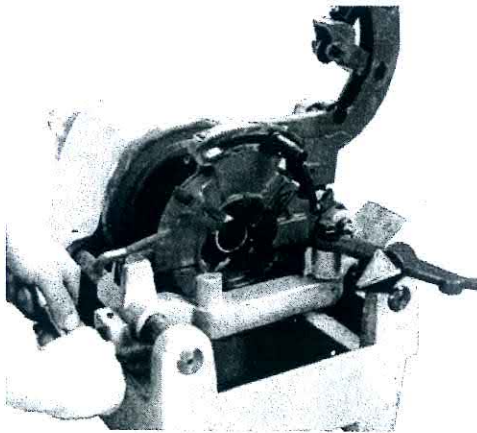


Fig 5

4. Start the motor, and the chucks should turn around counter-clockwise. Rotate the handle of the carriage strongly to make the die head cut into the pipe, when 2-3 threads are made the operator could loosen his hand.
5. When the screw is cut to the required length, i.e. the right face of the pipe is at the same level of the screwing die, push ahead the spanner above the die head to release the screwing die and thread.
6. Stop the machine and withdraw the die head from the right side to the idle position.
7. Loosen the fore and rear chucks clockwise, and remove the pipe from the rear chuck.

Cutting the pipe:

1. Pull up the screwing die head and the beveling device so that the fore and rear chucks fasten the pipe.
2. Push down the cutting knife rack and rotate the handle. Open the rack to let the cutting knife roller straddle on the pipe.
3. Rotate the sledge handle to move the cutting knife to the cutting position
4. Rotate the cutting knife handle to move the cutting knife to the pipe.

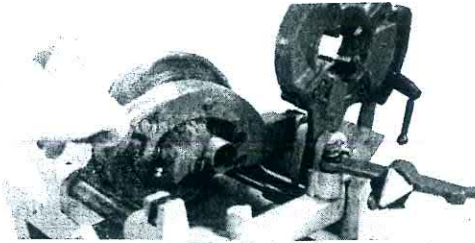


Fig 6

5. Start the machine. Switch the gear shift hand to the top gear and make the knife cut into the pipe. Cut about 0.15 – 0.25 mm for one turn of the pipe, i.e. for each turn of the basic shaft the cutting knife handle forwards about $\frac{1}{10}$ turn. Quit the cutting knife and pull up the rack to its position after cutting.

Caution: Cut with moderate speed and force to avoid distortion of the pipe and damage to the cutting knife.

Inner diameter beveling:

1. Pull up the screwing die head and cutting knife rack and push down the beveling rack to make the fore and rear chucks fasten the pipe.
2. Start the machine. Rotate the sledge hand wheel and drive the beveling device to the inside of the pipe.
3. Stop the machine after the beveling. Move the beveling rack to its position.

V. Maintenance

1. Turn the master switch to the position of “off” or unplug the power when the machine is checked or maintained.
2. The body of this machine is cast with a whole piece of aluminum alloy. Its reduction gearbox keeps lubricating permanently. Do not knock the body violently.
3. Cooling oil system: Clean the oil filter disk and oil suction filter disk after running for 8 – 12 hours. Clean the oil tank and refill if the oil is dirty or turns black.
4. Small iron filings may fall into the oil tank when threading. It is therefore essential to clean the filter disk once a week to keep the machine in order.
5. Check the cutting blade each week. Replace it when it is blunt.
6. 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 threads of high quality.
7. 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.
8. There are two oil cups on the shell of main shaft. Oil at least twice each shift to lubricate the fore and rear bearings.
9. Unplug the power when the machine is not in use. Coat corrosion resistant oil on both fore and rear guideposts and other working surfaces. Store it in a dry and ventilated place.

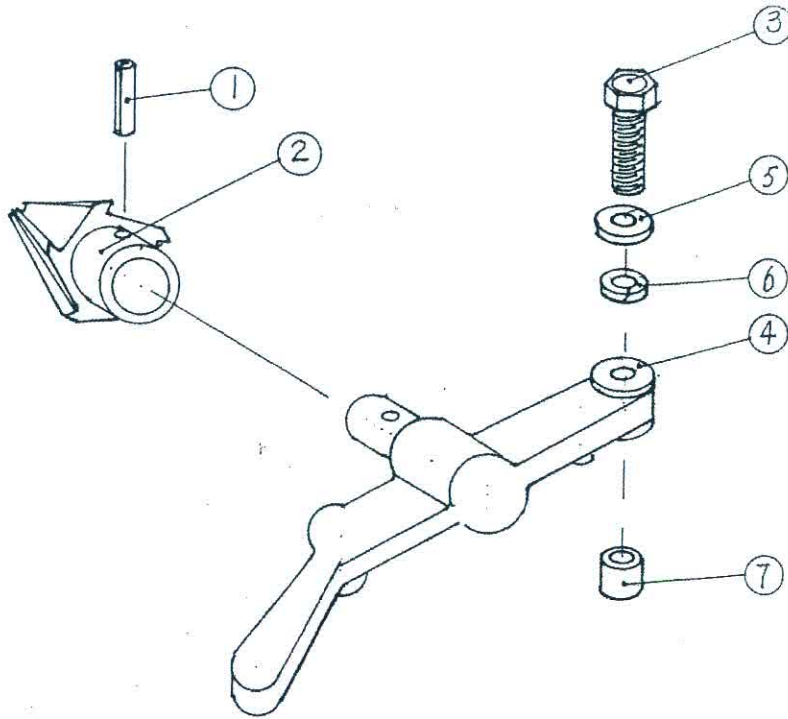
VI. Problem and Remedy



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 insider of the cable is broken.	Locate the point broken with 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 outer diameter of the pipe is too big.	Select appropriate pipe.
The fore chuck body is loose.	M6 bolts are loose for long-term use.	Check at all times.
The main shaft heats up.	Lack of oil	Oil regularly.
		Remove the beam barrel and scratch the shaft.
The cooling oil can not 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.
The threads are deflected.	The pipe is curved too much or is out of round.	Select appropriate pipe.
	The long pipe isn't supported by bracket.	Equip with bracket.

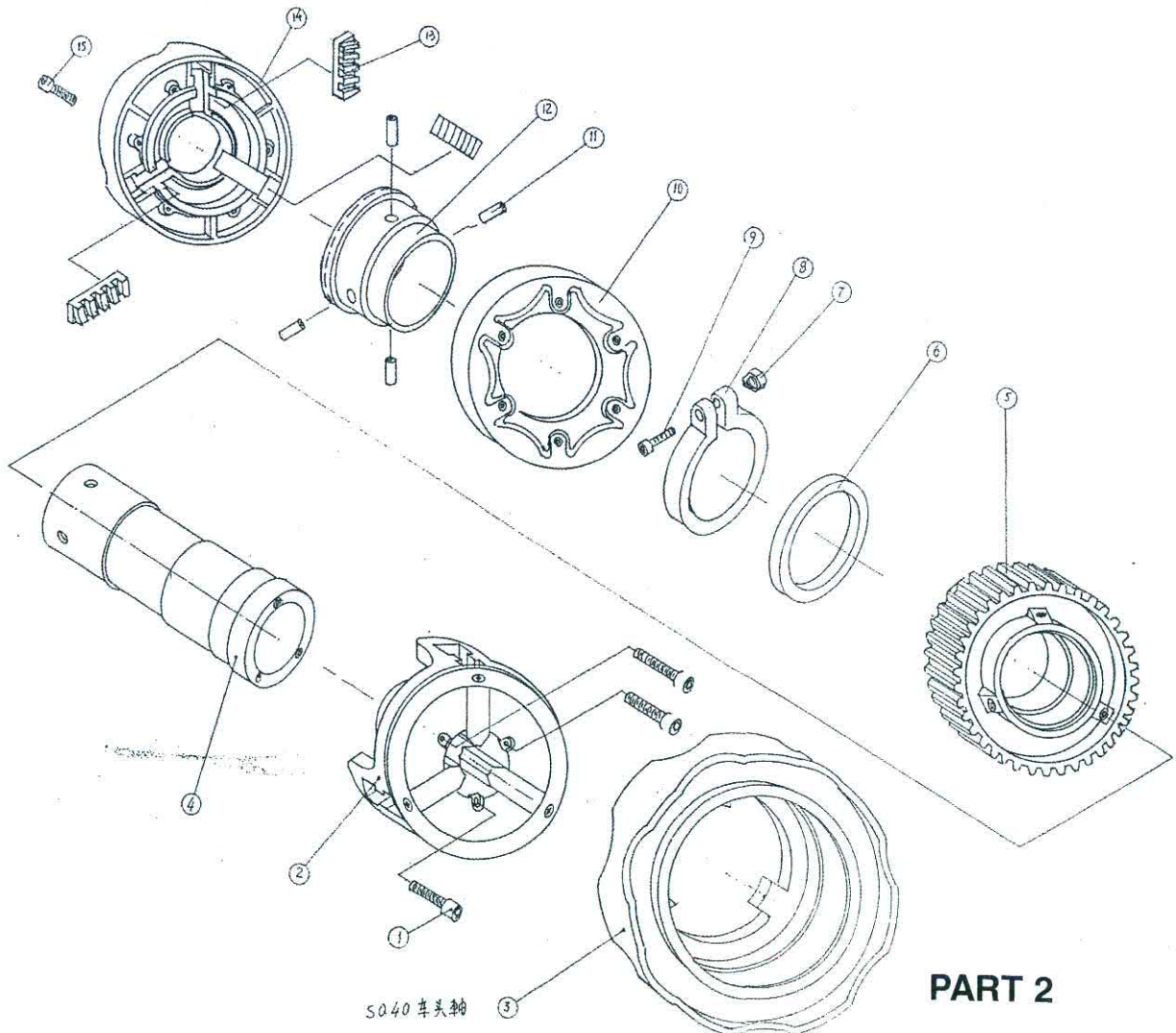


	There is extra substance in the claw point.	Remove extra substance.
	One of the claw points is broken or notch-edged.	Replace the claw point.
The threads are shapeless and the threads are thin instead of thick.	The rigidity of the pipe is slightly higher.	Select appropriate pipe.
	The cutting edge of the pipe is out of vertical.	Machining it vertical.
	The carriage moved hard.	Find out the reason and modify it.
	The order of the die doesn't match with the groove.	Correct the order of the dies.
	The gap of the die head is too wide.	Repair or replace the die head.
The surface of the threads is not perfect.	The dies are blunt.	Chang the dies.
	The oil isn't infused.	Use cutting oil.



Part 1

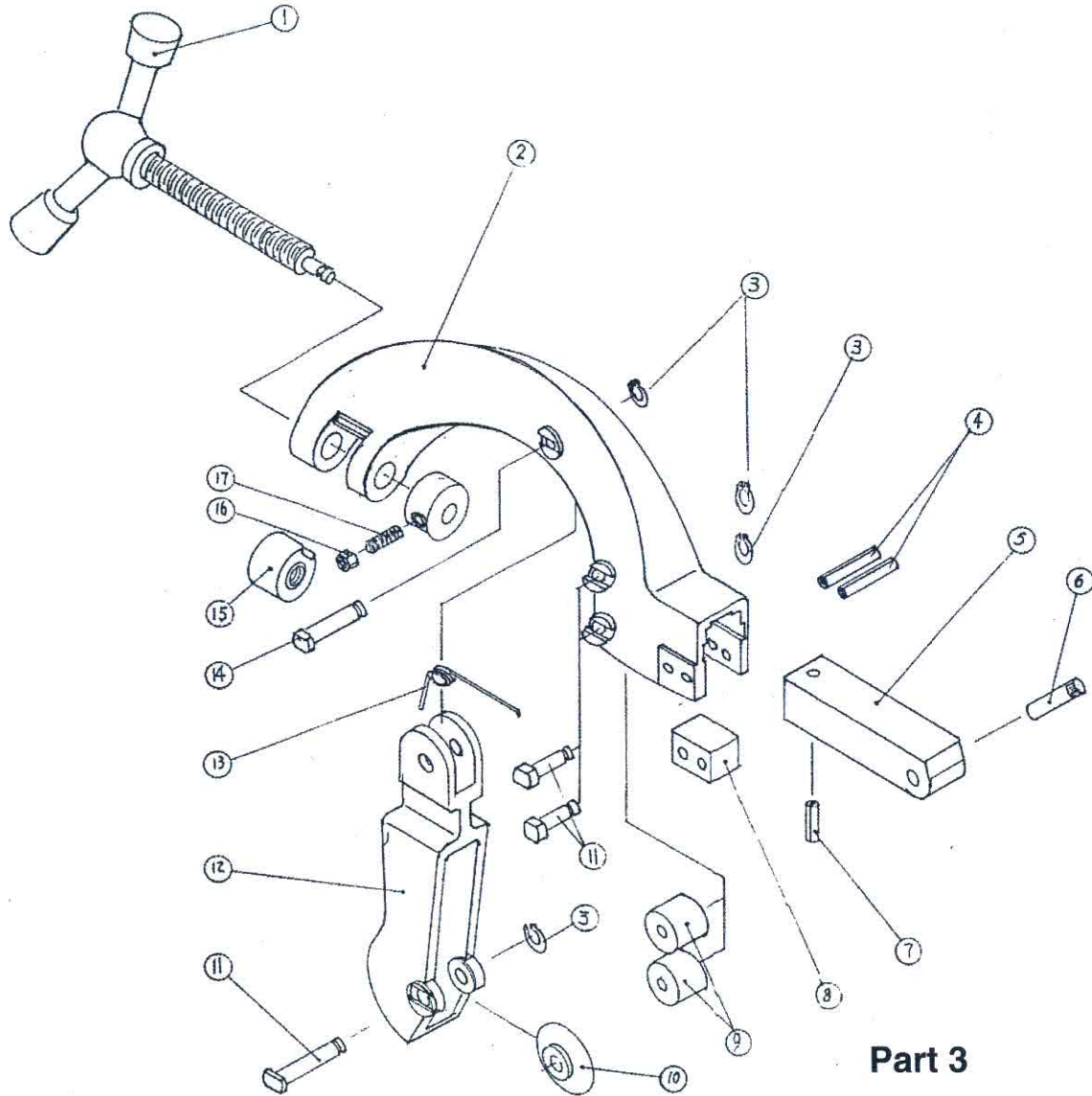
Parts No	Description	Quantity
1-1	GB879-86	1
1-2	SQ40-503	1
1-3	GB5782-86	1
1-4	SQ40-501	1
1-5	GB97-85	1
1-6	GB93-87	1
1-7	SQ40-502	1



PART 2



Parts No	Description	Quantity	Parts No	Description	Quantity	Parts No	Description	Quantity
2-1	GB70-85	3	2-6	SQ40-213	1	2-11	GB879-86	4
2-2	SQ40-210	1	2-7	GB6170-86	1	2-12	SQ40-204	1
2-3	SQ40-208	1	2-8	SQ40-214	1	2-13	SQ40-202	3
2-4	SQ40-215	1	2-9	GB70-85	1	2-14	SQ40-201	1
2-5	SQ40-216	1	2-10	SQ40-203	1	2-15	GB70-85	6



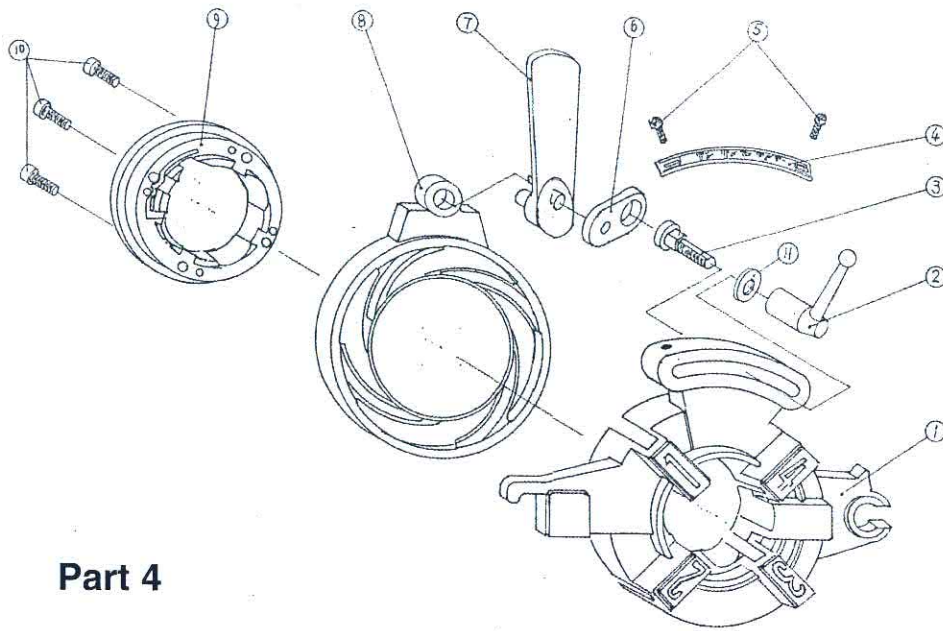
Part 3

Parts No	Description	Quantity	Parts No	Description	Quantity	Parts No	Description	Quantity
3-1	SQ40-601	1	3-7	GB879-86	1	3-13	SQ40-604	1
3-2	SQ40-605	1	3-8	SQ40-608	1	3-14	SQ50B-604	1
3-3	GB894-88	4	3-9	SQ40-609	2	3-15	SQ40-603	1
3-4	GB879-86	2	3-10	SQ80A-606K	1	3-16	GB41-86	1
3-5	SQ40-606	1	3-11	SQ40-610	3	3-17	GB75-85	1
3-6	SQ40-607	1	3-12	SQ40-611	1			



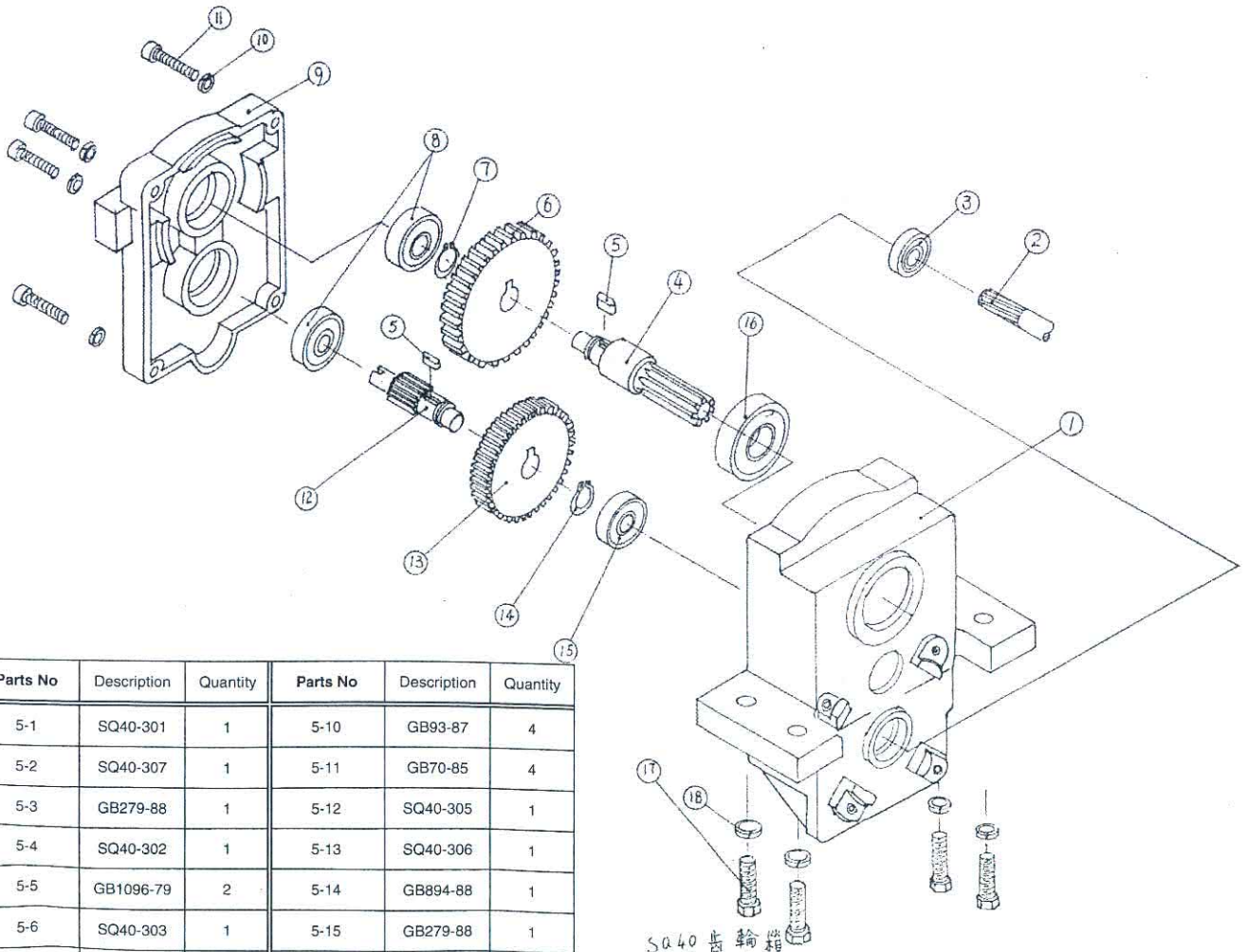
NORTHERN
TOOL + EQUIPMENT

2800 Southcross Drive, West, P.O. Box 1219, Burnsville, MN 55337-0219
Phone 952-894-9510, Fax: 952-894-1020



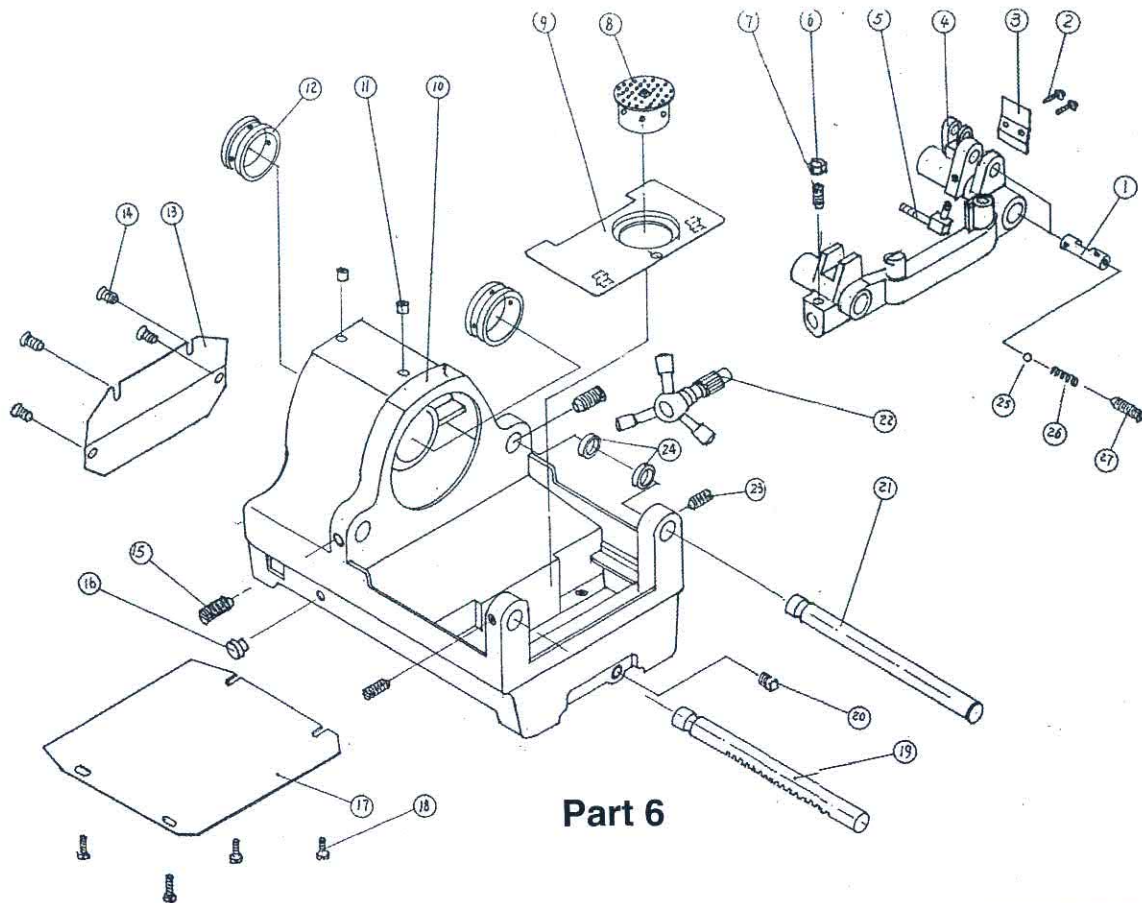
Parts No	Description	Quantity
4-1	SQ40-407	1
4-2	SQ40-405	1
4-3	SQ40-404	1
4-4	SQ40-406	1
4-5	GB67-85	2
4-6	SQ40-403	1
4-7	SQ40-408	1
4-8	SQ40-402	1
4-9	SQ40-401	1
4-10	GB70-85	4
4-11	GB97.1-85	1

Part 4



Parts No	Description	Quantity	Parts No	Description	Quantity
5-1	SQ40-301	1	5-10	GB93-87	4
5-2	SQ40-307	1	5-11	GB70-85	4
5-3	GB279-88	1	5-12	SQ40-305	1
5-4	SQ40-302	1	5-13	SQ40-306	1
5-5	GB1096-79	2	5-14	GB894-88	1
5-6	SQ40-303	1	5-15	GB279-88	1
5-7	GB894-88	1	5-16	GB279-88	1
5-8	GB279-88	2	5-17	GB5782-86	4
5-9	SQ40-304	1	5-18	GB93-87	4

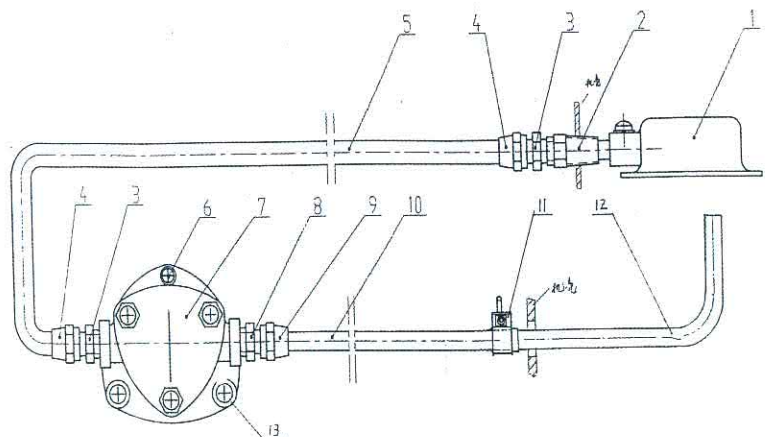
Part 5



Part 6

Parts No	Description	Quantity	Parts No	Description	Quantity	Parts No	Description	Quantity	Parts No	Description	Quantity
6-1	SQ40-105	1	6-8	SQ40-002/3	1	6-15	GB71-85	2	6-22	SQ40-107	1
6-2	GB65-85	2	6-9	SQ40-002/2	1	6-16	SQ40-006	2	6-23	GB71-85	2
6-3	SQ40-005	1	6-10	SQ40-101	1	6-17	SQ40-004	1	6-24	SQ40-108	2
6-4	SQ40-106	1	6-11		2	6-18	GB67-85	4	6-25	GB308-84	1
6-5	SQ40-703	1	6-12	SQ40-102	2	6-19	SQ40-103	1	6-26	SQ40-105/1	1
6-6	GB6170-86	1	6-13	SQ40-003	1	6-20	GB3289.31-82	1	6-27	GB71-85	1
6-7	GB79-85	1	6-14	GB818-85	4	6-21	SQ40-104	1			

Parts No	Description	Quantity	Parts No	Description	Quantity
7-1	SQ40-701	1	7-8	ZG 1/8" M10x1	2
7-2	SQ40-702	1	7-9	M10x1	1
7-3	ZG 1/8" M12x1	2	7-10	φ 8x1	1
7-4	M12x1	2	7-11	φ 12	1
7-5	φ 10x1	1	7-12	SQ40-703	1
7-6	GB818-85	3	7-13	GB93-87	3
7-7	QB/JF01-94	1			



Part 7