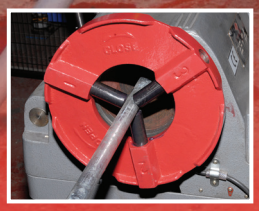
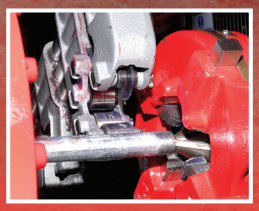
Threading Machine

This machine is for threading of various water, electric or gas pipes ranging from ½" to 4". 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.





1. Introduction

This machine is suitable for threading, cutting and bevelling various water, electricity and gas pipes with a size of 1/2" to 4". It is compact in design, easy to operate and is highly efficiency.

Because this device has automatic threading and cutting taper thread of standard pipe, good clamping and advanced cooling lubricant system, working life could be prolonged, pipe could be installed stably without deforming, and as a result, machine could make high quality taper thread.

The machine could be widely used in equipment installation and construction industries and is an ideal piece of equipment for improving efficiency, shortening the process of construction, ensuring construction quality and decreasing manpower workload.

2. Main Specification & Parameters

1 Capacity: 1/2" to 4"

2 Applicable Threader Standard: BSPT/NPT

3 Die:
- 1/2" to 3/4" (one set)
- 1" to 2" (one set)
- 2.1/2" to 4" (one set)
- Rockwell Hardness: HRC58-62

4 Die Head:
- 1/2" to 2" Automatic Die Head (one set)
- 2.1/2" to 4" Automatic Die Head (one set)

5 Motor: YL7132, 6.5A, 2800RPM

6 Rotation Speed of Axis:
- 26 RPM for: 1/2" to 2" threading
  1/2" to 4" cutting and beveling
- 12RPM for: 2.1/2" to 4" threading

7 Output Power: 750W

8 Maximum Chuck Capacity: 124mm

9 Sledge Stroke: 150mm

10 Oil Feeder: gerotor oil pump, constant oil flow

11 Net Weight: 130kg

12 Overall Dimensions: 950 x 560 x 520mm (without tubular supporters)

3. Special Safety Requirement

1 Keep the working site clean with bright (illumination condition 600lux) to avoid accidents.

2 To avoid electric shock, do not expose the machine to rain or operate in a moist workshop.

3 Operators should not wear loose clothing and should remove gloves, jewellery or watches. Long hair should be tied back.

4 When the threading machine (including its accessories) is installed, use a 30mA leakage resistant switch.

5 When the machine is running:
- Do not touch or grab the workpieces
- Do not replace or remove components (pipe accessories, valve or pipes, etc.)
- Do not cut or saw pipes with 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. Installing four pieces of tubular supporters and adjusting screws can ensure height and stability.

7 Keep children away when the machine is running; they must not operate the machine or touch any cables and wires.

8 Avoid overload operation. Unsuitable accessories, overloading and blunt or damaged screwing die must not be used as this will damage the machine.

9 Do not use pipes that are too long when operating the machine. Keep the machine balanced and stable at all times. Calculate the danger caused by suddenly broken workpieces (based on the length of workpieces, the section, the material and the rotate 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 in this manual to make the operation safer. Check the cables of the machine regularly. If there is any damage, it must be repaired by a technician immediately. Keep various handles clean and tidy at all times. Keep them free of oil pollution.

11 Turn the power off and unplug the machine when not in use.

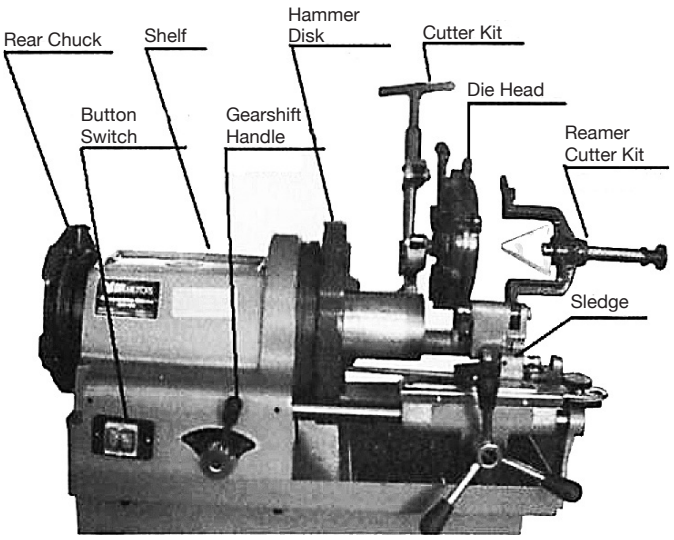
12 When starting the motor, ensure the power switch is in the 'off' position before the plug is switched on.

13 Do not operate the machine when tired or when taking drugs/medication.

14 Check spare parts for damage and check any cutting tools and parts carefully before use to make sure they are suitable for working conditions and function. Any damaged parts must be repaired or replaced by professional technicians.

15 Do not operate the machine if any of the switches cannot be turned on and off correctly.

16 Use genuine parts and accessories to ensure safety and correct operation.



4. Machine Structure

The machine is constructed of high-strength aluminium alloy and high-quality cast iron, making it both strong and lightweight.

The die head and cutter kits are installed on a sledge that can be moved longitudinally.

The electric motor, gearbox and cooling oil pump are set inside of the machine body.

5. Operation

5.1 Unpacking

When unpacking the case, check that the following accessories are enclosed:

- 1 x cutting oil (2.5L)
- 2 x threading die sets in plastic box (4 pieces per set)
- 1 x automatic type die head
- 4 x tubular supports
- 1 x hexagonal inner spanner
- 1 x screwdriver
- 1 x wrench
- 1 x dope can

5.2 Transportation

1 Prepare the machine for transportation by fixing the die head at the threading position.

2 Opening all dies completely.

3 Put the short pipe in the front chuck and tighten, and put the cutter kit on the pipe.

4 Reamer cutter kit is fixed at the position of reaming doesn't need to be adjusted for transportation.

5.3 Installtion

1 Set all the accessories to one side.

2 Place the tube supports into the holes underneath the machine and screw into place.

3 Adjust tube supports to ensure that the rear chuck in slightly higher than the front chuck.

4 Remove the short pipe from the front chuck (this is to be used when transporting the machine).

5.4 Operation

Replacing the Die

a There are three sets of dies to thread different sizes of pipe. Choose a set that matches the diameter of your pipe:

Pipe Size	Die
1/2" to 3/4"	1/2" to 3/4" – 11.5 threads per inch
1" to 2"	1" to 2" – 11.5 threads per inch
2.1/2" to 4"	2.1/2" to 4" – 8 threads per inch

There are two sets of figures on each die: the specification and the assembly sequential numbers, e.g. 1, 2, 3, 4.

b Remove the die head from the sledge (Fig. 1). Loosed the nut of the handle and turn the curve plate around to the maximal position of the scale.

c Put the selected dies into the die grooves according to their sequential numbers, and its lock notch will fit to the curve plate. Pull the curve plate until the scale indicator of the curve plate points at the scale on the ruler of the job. Then the die is fixed.

Note: 1/2" to 3/4" and 1" to 2" dies are installed in small die heads, while 2.1/2" to 4" die is installed in the large one.

d Place the assembled die head on the sledge.

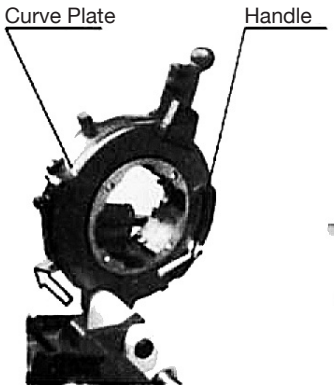


Fig. 1

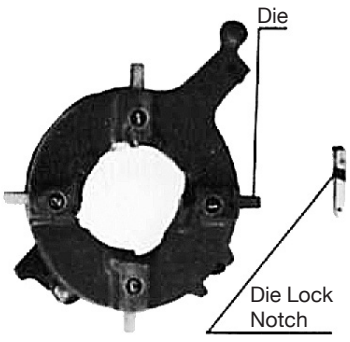


Fig. 2

5.4 Operation continued

Checking the Cutting Oil

a Check that there is sufficient cutting oil in the tank.

b Add oil if needed via the oil-filling opening.

c The cutting oil will flow over the die head one the machine is running.

Note: use cutting oil only to ensure production of high-quality threads.

Threading Operations

a Any task requiring non-rotating operations should be carried out only when the machine has stopped running.

b Loosed the front and rear chucks.

c Hold the pipe in place then tighten the rear chuck first and then the front chuck to secure the pipe. Turn the hammer disk counter-clockwise until tight to ensure the pipe is clamped well.

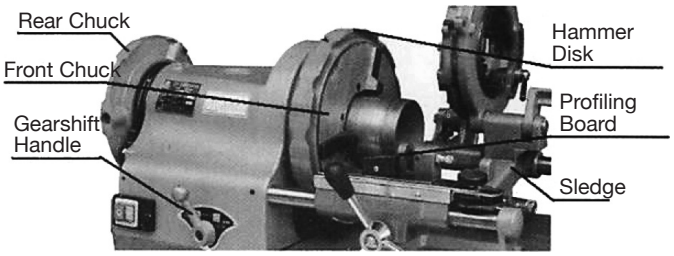


Fig. 3

d If your length of pipe is short and doesn't reach the rear chuck, loosed the front chuck slightly and insert the pipe so that it touched the die. This should ensure the pipe is in the central position when tightening the front chuck (see Fig. 4).

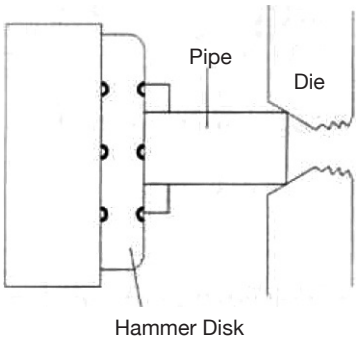


Fig. 4

e Pull up the cutter and reamer cutter kits to make room, then push down the die head to make it touch the profiling board (see Fig. 5). Lock it tight with the locking pin. Push the button switch to start the machine once the die head is fixed in its proper position.

The gearshift handle should be placed in the 'bottom gear' position when threading pipe with a diameter greater than 2". Otherwise, place the gearshift handle in the 'top gear' position (see Fig. 6)**.**

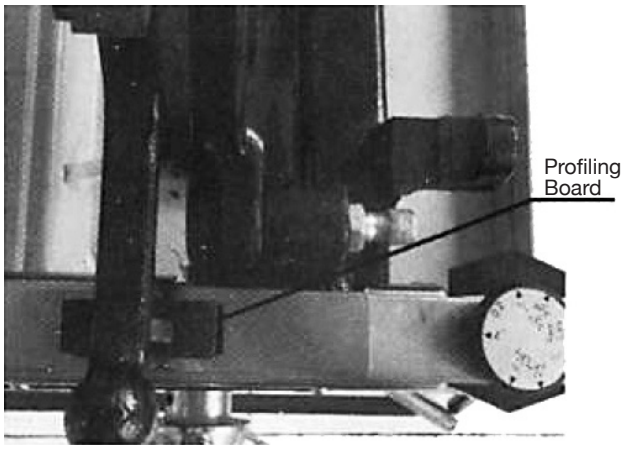


Fig. 5

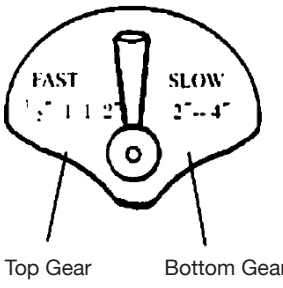


Fig. 6

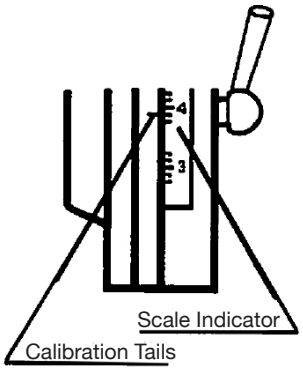


Fig. 7

f The pipe must rotate in a counter-clockwise direction, then rotate the sledge handle to move the die head to the pipe.

g Apply force to the sledge handle wheel until 3 to 4 threads are made on the pipe.

h Stop applying force; the machine will begin to thread automatically until the roller of the die head passes the profiling board and falls down.

Two steps should be followed when threading pipes with a diameter greater than 2". Firstly, place the size scales one scale lower than the scale required. Secondly, make the scale indicator point to the required scale.

i Stop the machine and move the die head to the default position.

j Loosen the front and rear chucks clockwise and remove the pipe from the rear chuck.

5.4 Operation continued

Cutting the Pipe

a Pull up the die head and reamer cutter kit and secure the pipe using the front and rear chucks.

b Push down the cutter kit and rotate the handle to open the rack to let the cutting wheel touch the pipe.

c Rotate the sledge handle to move the cutter kit to the cutting position (see Fig. 8).

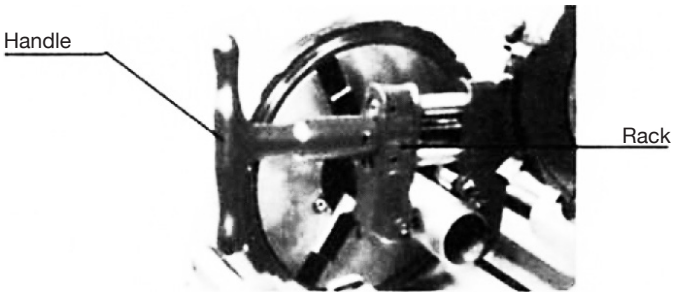


Fig. 8

d Rotate the handle to move the cutter wheel to touch the pipe.

e Start the machine. Switch the gearshift handle to the top gear and make the cutting wheel cut into the pipe. Cut approximately 0.15mm to 0.25mm for one turn of the pipe. (i.e. for each turn of the basic shaft, move the handle forwards about 1/10 turn). Stop moving the cutter wheel and pull up the cutter kit to its default position after cutting.

Cut with moderate speed and force to avoid distortion of the pipe and damage to the wheel.

Inner Wall Bevelling

a Pull up the die head and cutter kit and push down the reamer cutter kit. Secure the pipe using the front and rear chucks.

b Start the machine. Move the gearshift handle to the top gear. Rotate the sledge handle wheel and drive the reamer cutter kit to the inside of the pipe (see Fig. 9).

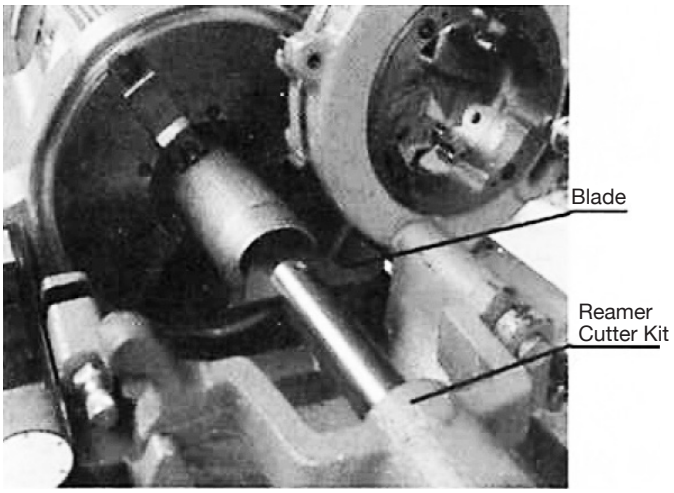


Fig. 9

c Stop the machine after bevelling and move the reamer cutter kit to its default position.

6. Maintenance

1 Turn the master switch to the ‘off’ position or unplug the machine when checks or maintenance is carried out.

2 The shell of the machine is cast from a whole piece of aluminium alloy. Its reduction gearbox keeps lubrication permanently. Do not impace the shell violently.

3 Cooling oil system: clean the oil filter disk and oil suction filter disk after the machine has been running for 8 to 12 hours. Clean the oil tank and refill it if the oil inside is dirty or turns black.

4 Small iron filing may fall into the oil tank when threading; it is therefore essential to clean the filter disk weekly to keep the machine in order.

5 Check the cutter wheel once per week and replace it if blunt.

6 Check the attrition of the chuck jaw inserts once per month. If the chuck jaw inserts are worn, replace them (three per set) to ensure your threads are of the highest quality.

7 Clean the die head after every shift. Check the die for broken teeth and remove the cuttings from between the teeth. Replace the die if broken.

8 There are two oil cups on the shell of the main shaft. Oil these as least twice per shift to lubricate the fore and rear bearings.

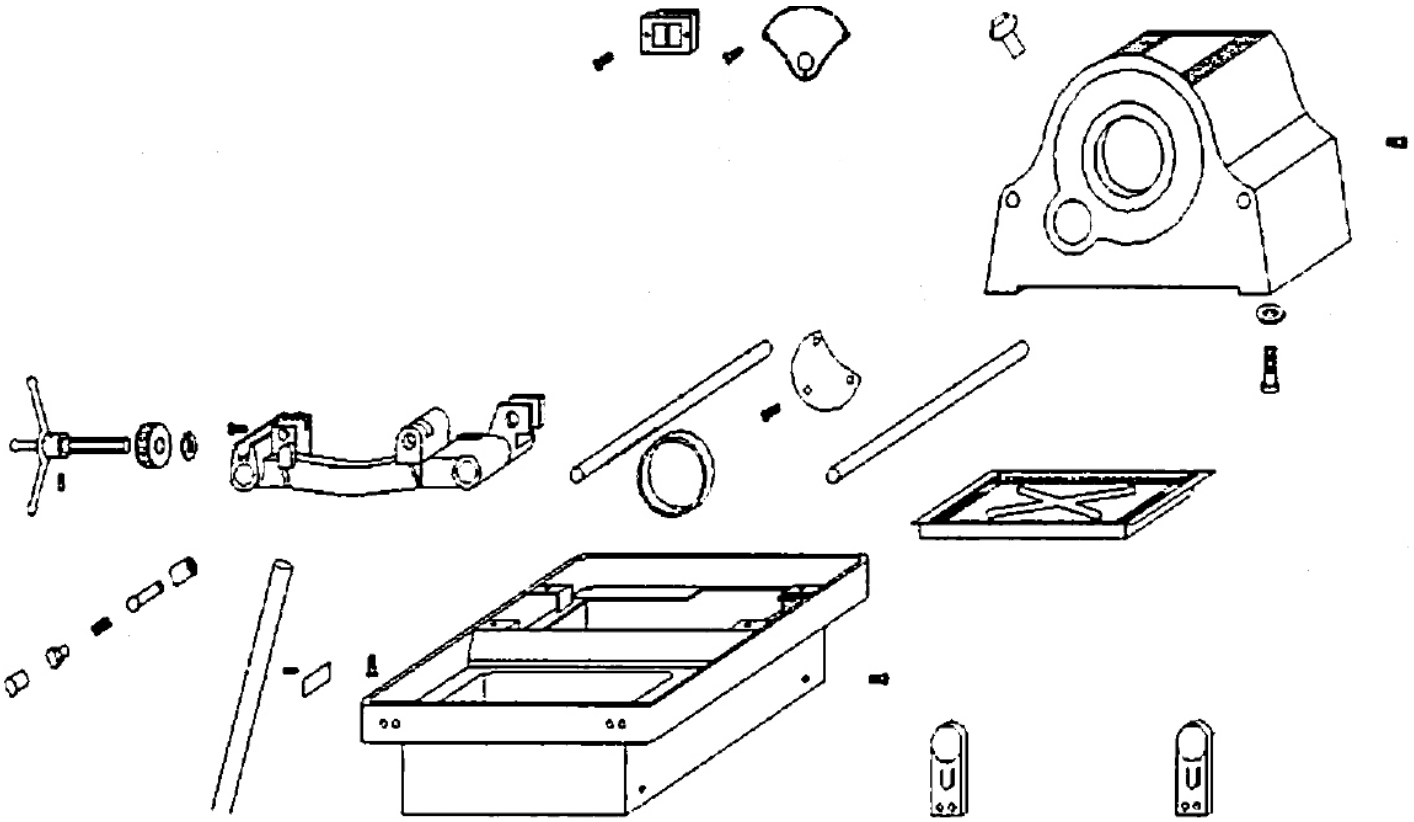
9 Unplug the machine when not in use. Coat the fore and rear guide posts, and other working surfaces, with corrosion-resistant oil. Store machine in a dry, ventilated place.

7. Troubleshooting

Problem	Cause	Remedy
The motor doesn't run or makes breaking sounds when running.	Blown fuse.	Replace the fuse.
	Poor power contact.	Replace the plug cable.
	Inside of cable is broken.	Locate the broken point with multimeter and repair/replace.
	Electric capacity has broken down.	Replace the electric capacity.
The pipe can't be secured or pipe slips when threading.	Applying insufficient force.	Use more force.
	Chuck jaw insert is upside down.	Adjust the chuck insert.
	One of the chuck jaw inserts is broken or damaged.	Replace the chuck jaw insert.
The cutting blade won't cut.	The cutting blade is no longer sharp.	Replace the blade.
	The pin roll of the cutting blade has worn down.	Replace the pin roll.
	Applying insufficient force the starting cut.	Use more force.
The cutting blade doesn't work when threading.	The blade isn't opened wide enough when starting to thread.	Use the blade properly.
	Broken teeth on the cutter head.	Replace the blade.
	The type and size of blade are not suitable.	Install a suitable blade.
	There are iron filings in the groove.	Clean the die head.
The front chuck body is loose.	M6 bolts have loosened over time.	Retighten and check regularly.
The main shaft is getting hot.	Lack of oil.	Replenish oil regularly.
		Remove the beam barrel and scratch the shaft.
The cooling oil isn't getting through.	Blocked oil circuit.	Clean the oil circuit.
	The oil hole hasn't been installed properly after the fulcrum shaft of the die head is removed.	Reinstall the oil hole.
	The oil pump is empty.	Replace the oil in the oil pump.
The cooling oil is leaking into the motor.	Damaged or worn oil seal in oil pump.	Replace the oil seal.
The threads are deflected.	The pipe is too curved or isn't round.	Use appropriate pipe.
	The pipe to long and isn't properly supported.	Ensure long lengths of pipe are supported.
	There is debris in the chuck jaw insert.	Clean the chuck jaw insert.
	One of the chuck jaw inserts is broken or damaged.	Replace the chuck jaw insert.
The threads are shapeless and are thin instead of thick.	The pipe is too rigid.	Use appropriate pipe.
	The outer diameter of the pipe is too large.	
	The cutting edge is out of alignment.	Adjust cutting edge so it is vertical.
	The carriage moved to hard.	Investigate reason and correct the problem.
	The order of the dies doesn't match the groove.	Reorder the dies.
	The gap of the die head is too wide.	Repair or replace the die head.
The surface of threads isn't perfect.	Using high speed.	Use low speed.
	The dies are blunt.	Replace the dies.
	The oil isn't infused.	Use cutting oil.
Can't change the speed.	The centre clutch in the gearbox is worn.	Replace the centre clutch and repair the gear.
	The connecting pin is broken.	Replace the connecting pin.

8. Section Drawings of Main Parts

8.1 40100 Machine Body

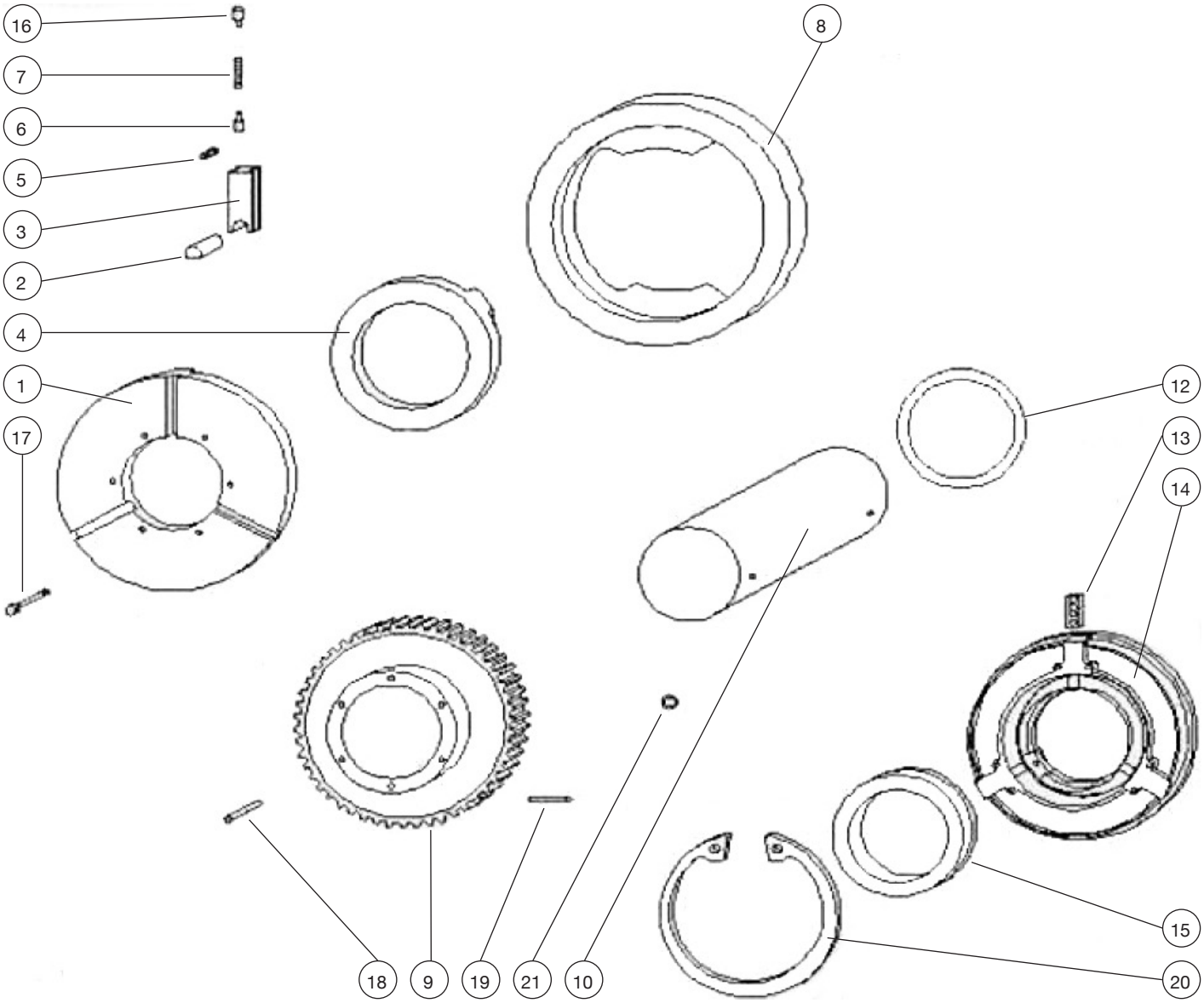


Item	Code	Name	Qty	Remark
1	40101	Seating	1	Z3T-R4111-0001
2	40102	Head Stock	1	Z3T-R4111-0002
3	40103	Bearing	2	Z3T-R4111-0003
4	40104	Gearshift Handle	1	-0004
5	40105	Sledge	1	-0005
6	40106	Shaft Gear of Handle Wheel	1	-0006
7	40107	Data Plate	1	Z3T-R4111-0003
8	40108	Front Lead Screw	1	Z3T-R4-0009
9	40109	Rear Lead Screw	1	Z3T-R411-0010
10	40110	Chip Pan	1	Z3T-R4111-0005
12	40112	Pull Knob	1	-0015
13	40113	Cover for Oil Filling Opening	1	-0016
14	40114	Cover	2	-0018
15	40115	Handle Wheel	1	Z3T-R411-0008-1
16	40116	Handle Spindle	1	-0008-2
17	40117	Tubular Support	1	-0006
18	40118	Circlip	1	-0009
19	40119	Lock Tongue	1	-0011
20	40120	Lock Stem	1	-0012

Item	Code	Name	Qty	Remark
21	40121	Spring	1	-0013
22	40122	Bolt Sleeve	1	-0014
25	40125	Slotted Cap Screw M5X10	2	GB67-85
26	40126	Hexagonal Socket Head Screw M10X70	4	GB70-85
27	40127	Hexagonal Socket Holding Screw	6	GB77-85
28	40128	Slotted Cap Screw M4X14	2	GB67-85
29	40129	Slotted Cap Screw M4X8	3	GB67-85
30	40130	Square Head Holding Screw	4	GB85-88
31	40131	Spring Washer Ø10	4	GB93-86
32	40132	Rivet for Gearshift Handle 3X15	2	GB27-86
33	40133	Rivet for Data Plate 3X15	4	GB27-86
34	40134	Flexible Round Pin 6X35	1	GB879-87
36	40136	Cable Clamp	1	Z1T-R2-0118
37	40137	Button Switch	1	KAO-5
39	40139	Lifter	2	Z3T-R4111-0004

8. Section Drawings of Main Parts continued

8.2 40200/40222 Front Chuck/Rear Chuck

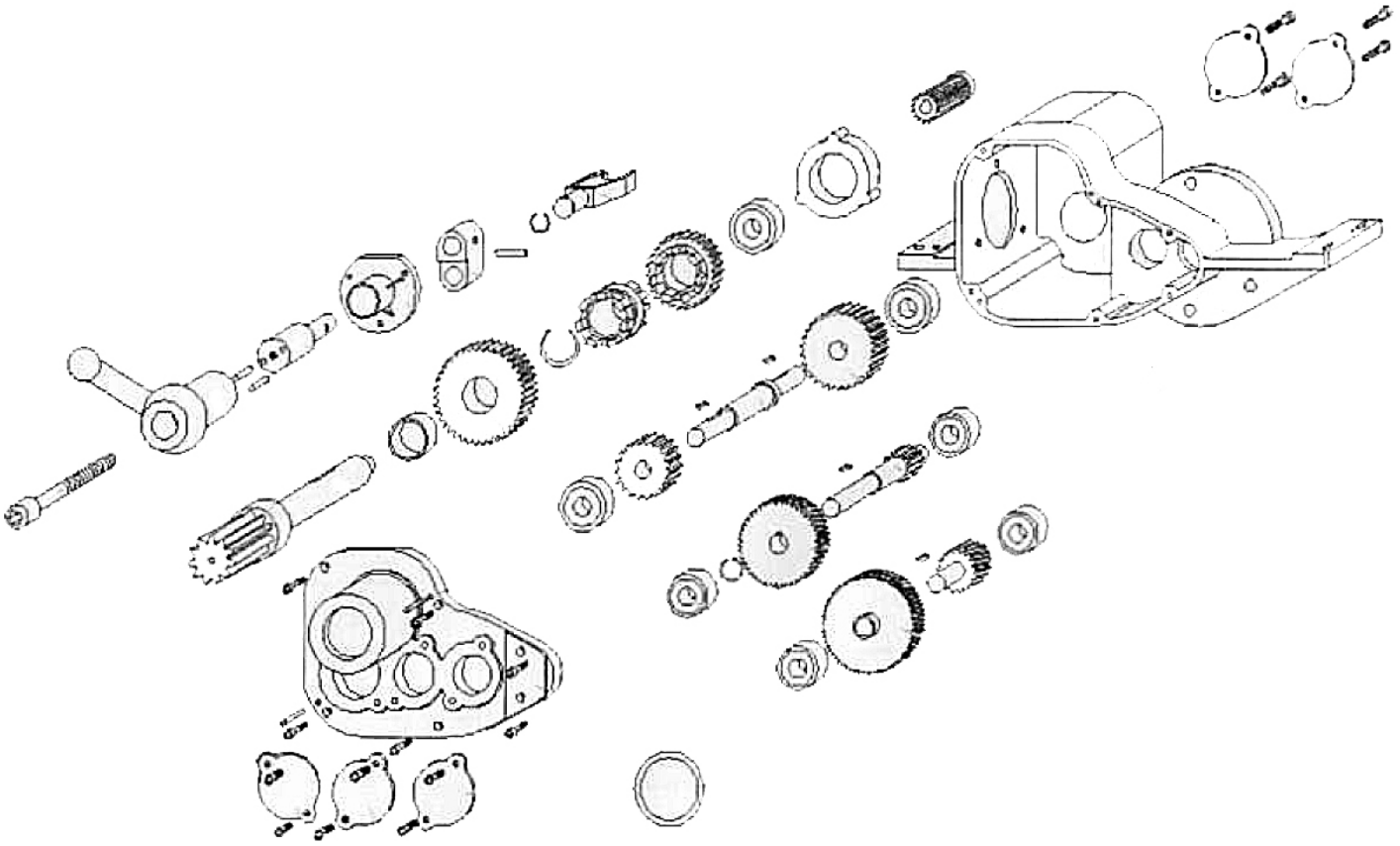


Item	Code	Name	Qty	Remark
1	40201	Chuck Plate	1	Z3T-R4111-0601
2	40202	Chuck Jaw Inserts	3	Z3T-R4-0604
3	40203	Chuck Jaws	3	Z3T-R411-0603
4	40204	Large Screw Caliper	1	Z3T-R4-0608
5	40205	Supporting Screw	3	Z3T-R4-0606
6	40206	Stock Foot	3	Z3T-R4-0605
7	40207	Spring	3	Z3T-R4-0607
8	40208	Hammer Disk	1	Z3T-R411-0602
9	40209	Large Gear	1	Z3T-R411-0027-2
10	40210	Hollow Spindle	1	Z3T-R4111-0027-1
12	40212	Washer	1	Z3T-R4-0705

Item	Code	Name	Qty	Remark
13	40213	Rear Chuck Jaw	3	Z3T-R4-0704
14	40214	Back Plate of Rear Chuck	1	Z3T-R4-0702
15	40215	Small Screw Caliper	1	Z3T-R4-0703
16	40216	Hexagonal Socket Screw M6X14	3	GB70-85
17	40217	Hexagonal Socket Screw M8X55	6	GB70-85
18	40218	Round Pin 8X20	1	GB119-86
19	40219	Hexagonal Socket Screw M8X25	3	GB70-85
20	40220	Circlip Ø180	1	
21	40211	Spring Washer M8	3	GB93-87

8. Section Drawings of Main Parts continued

8.3 40300 Gearbox



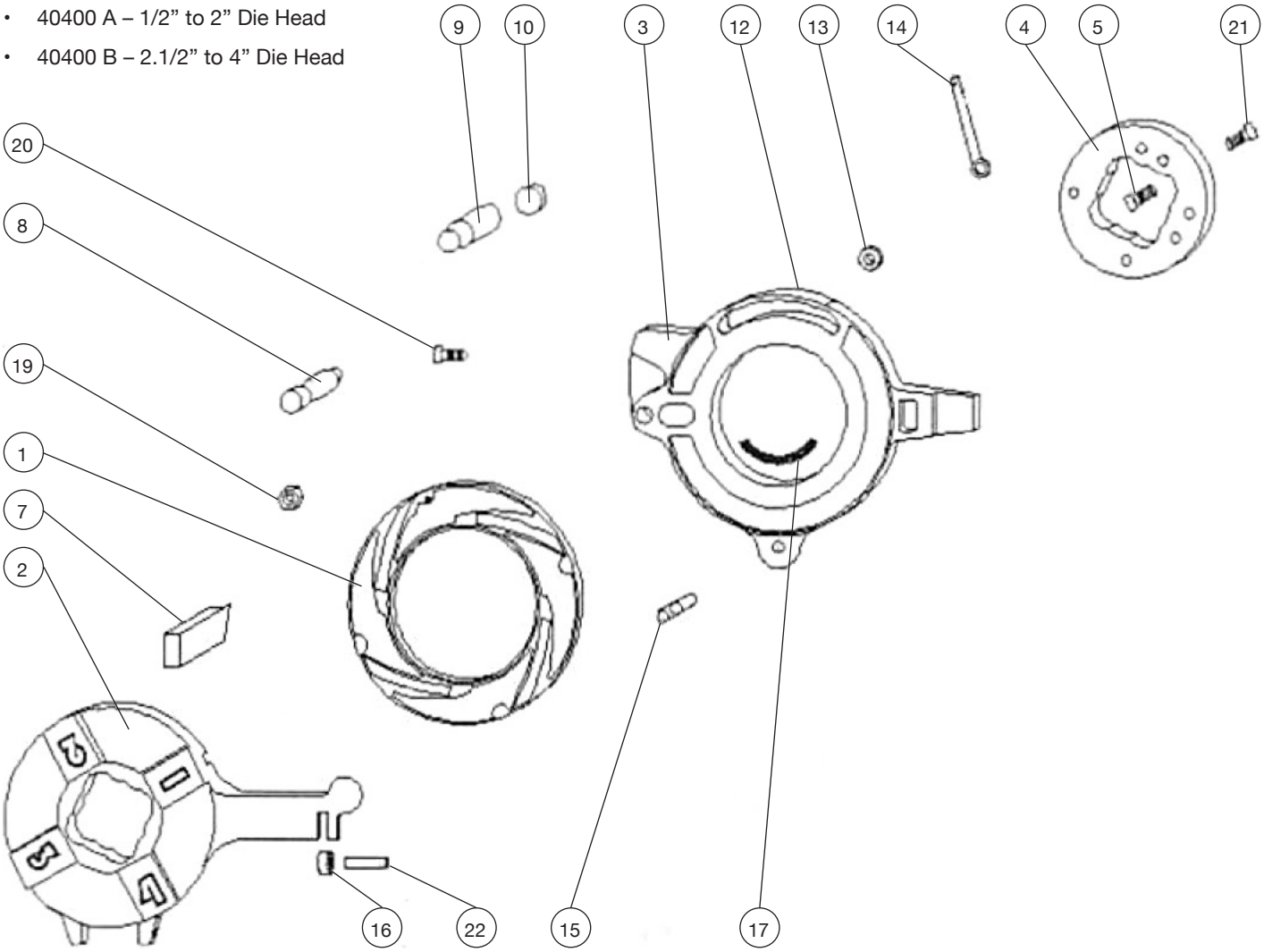
Item	Code	Name	Qty	Remark
1	40301	Body	1	Z3T-R4111-0518
2	40302	Cover	1	Z3T-R4111-0518
3	40303	Motor Gear	1	Z3T-R411-0501
4	40304	Oil Seal	1	HG4-692-67
5	40305	Bearing 6002	1	GB276-64
6	40306	High-speed Gear	1	Z3T-R4111-0502
7	40307	High-speed Gear Spindle	1	Z3T-R4111-0503
8	40308	Bearing 6002	1	GB276-64
9	40309	Cover	3	Z3T-R411-0502
10	40310	Oil Pump Seat	1	Z3T-R411-0526
11	40311	Bearing 6003	1	GB276-64
12	40312	2# Gear Spindle	1	Z3T-R411-0504
13	40313	Flat Key 5X12	3	GB1096-97
14	40314	Bull Gear of 2# Gear Spindle	1	Z3T-R4-0504
15	40315	Bearing 6202	1	GB276-64
16	40316	Cover	1	Z3T-R311-0529
17	40317	Socket Screw M5X16	6	GB70-86
18	40318	Cover	1	Z3T-R311-0528
19	40319	Bearing 6203	1	GB276-64
20	40320	Bull Gear of 3# Gear Spindle	1	Z3T-R311-0506
21	40321	Flay Key 5X12	2	GB1096-79

Item	Code	Name	Qty	Remark
22	40322	2# Gear Spindle	1	Z3T-R311-0508
23	40323	Pinion of 3# Gear Spindle	1	Z3T-R311-0507
24	40324	Bearing 6203	1	GB276-64
25	40325	Cover	1	Z3T-R4-0528
26	40325	Cover	1	Z3T-R4-0528
27	40327	Bearing 6203	1	GB276-64
29	40329	High-speed Gear	1	Z3T-R311-0529
30	40330	Joint	1	Z3T-R311-0512
31	40331	Sleeve	1	Z3T-R311-0514
32	40332	Low-speed Gear	1	Z3T-R311-0513
33	40333	Anti-extrusion Ring	1	Z3T-R311-0515
34	40334	Bearing 6205	1	GB278-64
36	40336	Output Gear Spindle	1	Z3T-R4111-0516
39	40339	Button-headed Screw M5X6	10	GB67-66
40	40340	Shifting Yoke	1	Z3T-R311-0519
41	40341	Connecting Rod of Gearbox	1	Z3T-R311-0511
42	40342	Axle Seat of Shifting Yoke	1	Z3T-R311-0522
43	40343	Declutch Shift Shaft of Gearbox	1	Z3T-R311-0523
44	40344	Speed-regulating Hand Wheel	1	Z3T-R311-0501
45	40345	Socket Screw M8X55	1	GB70-86

8. Section Drawings of Main Parts continued

8.4 40400 Die Head

- 40400 A – 1/2” to 2” Die Head
- 40400 B – 2.1/2” to 4” Die Head



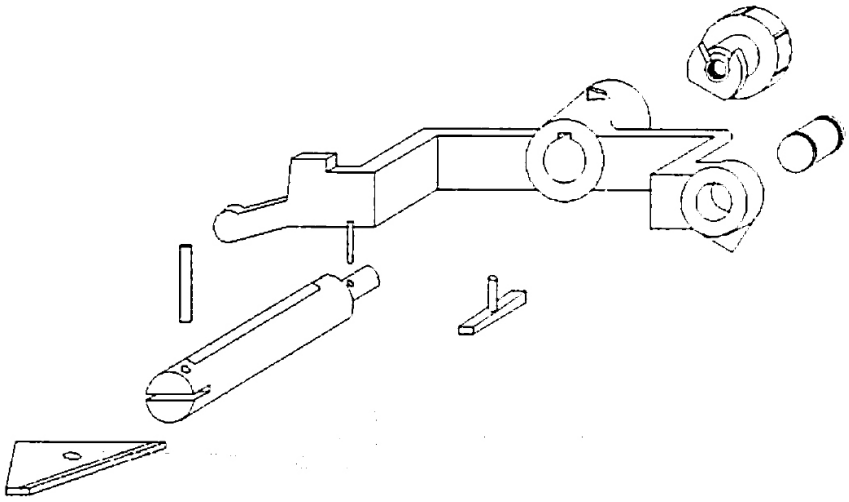
Item	Code	Name	Qty	Remark
1	40401 A	Curve Plate A (Small)*	2	Z3T-R411-0102A
	40401 B	Curve Plate B (Large)*		Z3T-R411-0102B
2	40402 A	Front Plate A (Small)*	2	Z3T-R411-0103A
	40402 B	Front Plate B (Large)*		Z3T-R411-0103B
3	40403 A	Rear Plate A (Small)*	2	Z3T-R411-0101A
	40403 B	Rear Plate B (Large)*		Z3T-R411-0101B
4	40404 A	Backing Ring A (Small)*	2	Z3T-R411-0104A
	40404 B	Backing Ring B (Large)*		Z3T-R411-0104B
5	40405	Hexagonal Socket Holding Screw M6X15	1	GB78-85
6	40406	Hoodle	8	
7	8002 8003 80011	Die 1-2” to 3/4”, 1” to 2”, 2.1/2” ti 4”	3	Z3T-R4-0107
8	40408	Pinching Screw	2	Z3T-R4-0110
9	40409	Support Shaft	2	Z3T-R4-0108
10	40410	Hexagonal Socket Holding Screw M12X12	2	GB78-85

Item	Code	Name	Qty	Remark
12	40412 A	Size Scales A (1-2” to 2”)	2	Z3T-R4-0111A
	40412 B	Size Scales A (1-2” to 4”)		Z3T-R4-0111B
13	40413	Washer	2	-0106
14	40414	Handle	2	-0105
15	40415	Dowel Pin	2	-0109
16	40416	Roller Wheel	2	-0112
17	40417	Inner Pull-out Piece Spring (40400 A Die Head Only)	1	-0113
18	40418	Slotted Cap Screw M4X8	4	GB67-85
19	40419	Hexagonal Nut M10 (Thin)	2	GB170-86
20	40420	Hexagonal Socket Holding Screw M8X10	2	GB78-85
21	40421	Hexagonal Socket Holding Screw M6X35	8	GB70-85
22	40422	Column Pin 6X25	2	GB119-86

*Die head large is 2.1/2” to 4”, and die head small is 1/2” to 2”.

8. Section Drawings of Main Parts continued

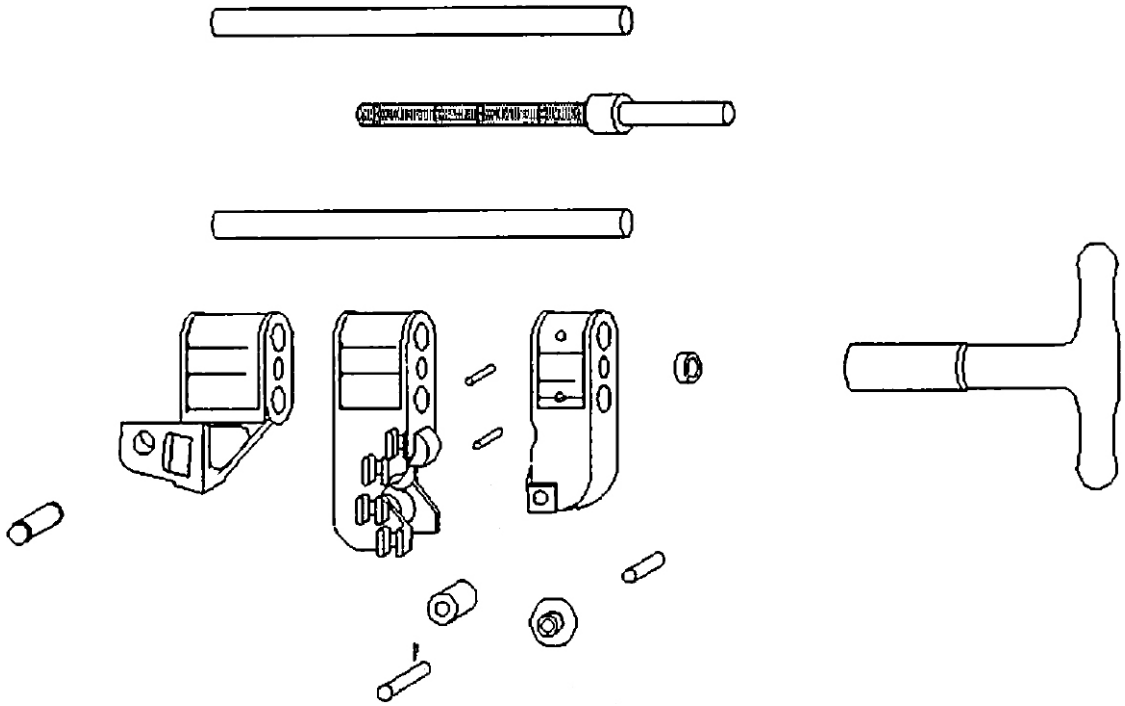
8.5 40400 Reamer Kit



Item	Code	Name	Qty	Remark
1	40501	Blade	1	Z3T-R4-0301
2	40502	Holder of Reamer Cutter	1	Z3T-R4II-0302
3	40503	Shaft of Reamer Cutter	1	Z3T-R4-0303A
4	40504	Handle	1	Z3T-R4-0304

Item	Code	Name	Qty	Remark
5	40505	Axle Pin	1	Z3T-R4-0305
6	40506	Flexible Round Pin 8X50	1	GB879-86
7	40507	Flexible Round Pin 4X12	1	GB879-86
8	40508	Key	1	Z3T-R4-0306

8.6 40600 Cutter Kit

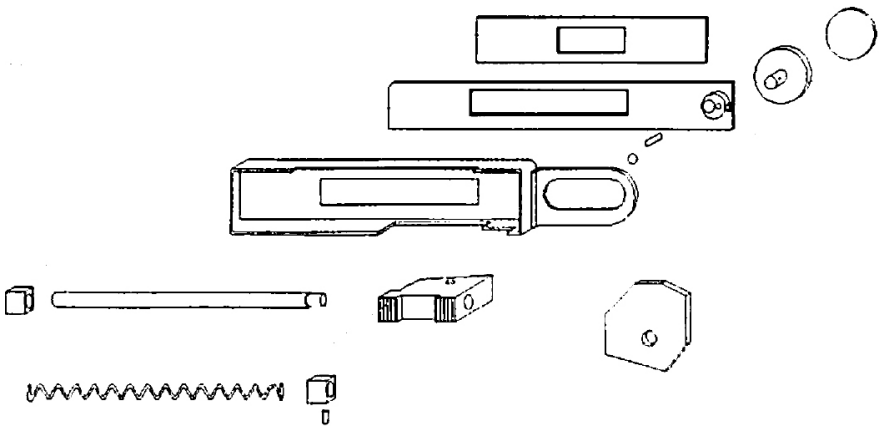


Item	Code	Name	Qty	Remark
1	40601	Cutter Handle	1	Z3T-R4-0201-1
3	40602	Cutter Holder	1	Z3T-R4-0203
4	40603	Roller Holder	1	Z3T-R4-0202
5	40604	Cutter Seat Frame	1	Z3T-R4II-0204
6	40606	Dowel Pin	1	Z3T-R4-0211
7	80606	Cutting Wheel	1	Z3T-R4-0210
8	40607	Rollers	4	Z3T-R4-0208

Item	Code	Name	Qty	Remark
9	40609	Axle Pin	5	Z3T-R4-0209
10	40610	Long Idler	1	Z3T-R4-0206
11	40611	Feed Screw	1	Z3T-R4-0205
12	40612	Short Idler	1	Z3T-R4-0207
13	40613	Pin 3X19	5	GB91-86
14	40614	Flexible Round Pin 6X35	5	GB897-86
15	40615	Bearing 8103	1	GB301-64

8. Section Drawings of Main Parts continued

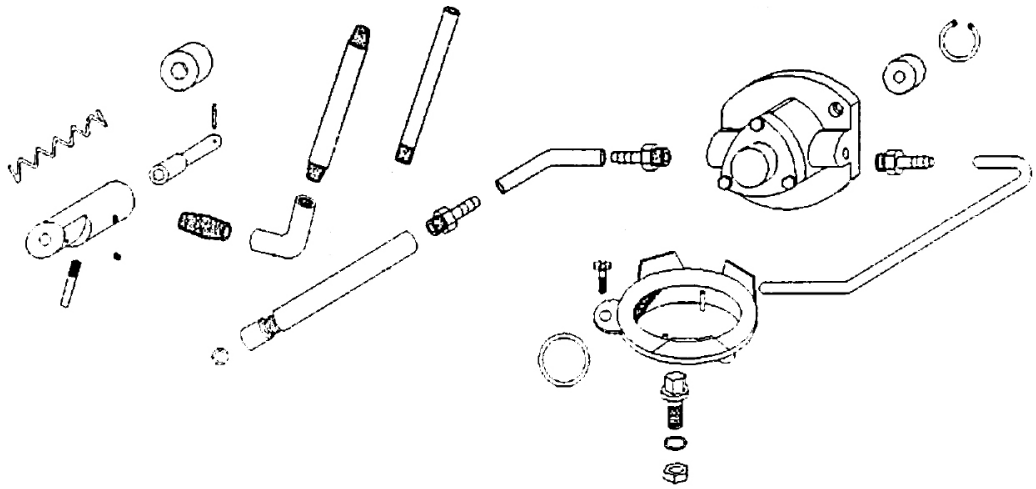
8.7 40700 Length Changing Apparatus



Item	Code	Name	Qty	Remark
1	40701	Front Anti-extrusion Ring	1	Z3T-R4-0402
2	40702	Axle	1	Z3T-R4-0411
3	40703	Body Frame	1	Z3T-R411-0401
4	40704	Distance Plate	1	Z3T-R411-0402
5	40705	Dust Proof Cover	1	Z3T-R4-0405
6	40706	Profiling Board	1	Z3T-R4-0401
7	40707	Spring	1	Z3T-R4-0406

Item	Code	Name	Qty	Remark
8	40708	Rear Anti-extrusion Ring	1	Z3T-R4-0403
9	40709	Bearing Spring	2	Z3T-R4-0408
10	40710	Size Plate	1	Z3T-R4-0409
11	40711	Length Changing Indicator	1	Z3T-R4-0407
12	40712	Spring	1	Z3T-R4-0413
13	40713	Displacing Plate	1	Z3T-R4-0410
14	40714	Steel Ball 5mm	1	GB308-77

8.8 40800 Cooling System



Item	Code	Name	Qty	Remark
1	80801	Oil Pump	1	Z3T-R4-0801
2	40802	Joint	3	Z3T-R4-0808
3	40803	Oil Filter	1	Z3T-R4-0809
4	40804	Oil Pipe	1	Z3T-R4-0810
5	40805	Throttle Valve Handle	1	Z3T-R4-0811
6	40806	Throttle Valve Body	1	Z3T-R4-0812
7	40807	Throttle Valve Core	1	Z3T-R4-0813
8	40808	Spring	1	Z3T-R4-0814
9	40809	Pipe Joint	1	Z3T-R4-0815
10	40810	Angle Fittings	1	Z3T-R4-0816
11	40811	Short Oil Pipe	1	Z3T-R4-0817
12	40812	Oil Overflowing Pipe	1	Z3T-R4-0818

Item	Code	Name	Qty	Remark
13	40813	Oil Draining Pipe	1	Z3T-R4-0819
14	40814	Column Pin 3X24	1	GB119-86
15	40815	Hexagon Socket Holding Screw M5X10	1	GB78-85
16	40816	O Type Locking Ring 13X1.9	1	GB3452.1-82
17	40817	Slotted Cap Screw M4X10	1	GB67-85
18	40818	O Type Lock Ring 33X2.65	1	GB3452.1-82
19	40819	Oil-proof Rubber Hose	2	
20	40820	Skeleton Type Rubber Oil Seal	1	HG4-692-67
21	40821	Circlip for Hole Ø22	1	GB893.1-86
22	40822	Screw of Oil Tank	1	