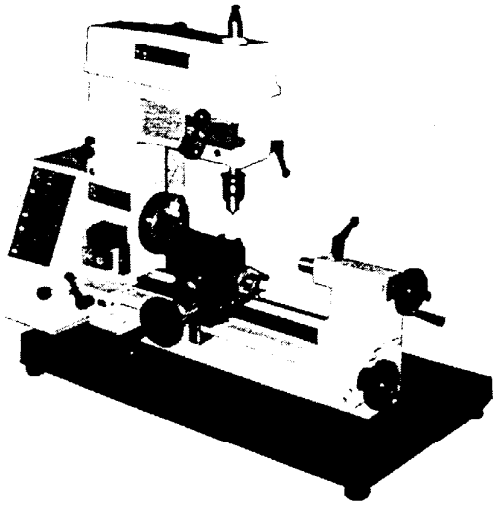
CENTRAL MACHINERY

PRECISION MULTI-PURPOSE MACHINE

Model 39743

ASSEMBLY and OPERATING INSTRUCTIONS



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For technical questions and replacement parts, please call 1-800-444-3353

Specifications

General

ITEM	DESCRIPTION
Motor	115V/60Hz, single phase motor, 2.5 load amps; 3500 RPM
Spindle Speeds for Drill/Mill Functions	I - 560, 800, 1180, 1700, and 2500 RPM II - 500, 710, 1050, 1500, and 2200 RPM
Spindle Speeds for Lathe Function	560, 800, 1180, 1700, and 2500 RPM
Drill Shaft Spindle Taper	MT #1
Chuck	2-1/2 inch Diameter; 2-1/2 inch Capacity
Drill	Reverse Chuck Jaws 1/4 inch Chuck Mill Capacity 1/4 inch Maximum Drill Capacity 1-3/6 inch Shaft Stroke
Weight	35.2 lbs.; 16 kg
Overall Dimensions	52 x 30 x 41 cm; 20.5 x 11.8 x 16.1 inches

Cutting

CUTTING FUNCTION	DIMENSIONS	METRIC
Swing Diameter over Bed	4.92 inches (max.)	125 mm
Length of Work Piece	7.08 inches (max.)	180 mm
Swing Diameter over tool post	2.36 inches (max.)	60 mm
Spindle Bore	0.35 inches	9 mm
Taper of Hole in Spindle Morse	MT #1	
Metric Thread Types on Processing		8
Metric Thread Pitch on Processing		0.4~1.5 mm
Inch Thread Types on Processing	8	
Inch Thread Pitch on Processing	0.0208~0.0625 inch	
Longitudinal Feed Grade	2	
Longitudinal Feed on Spindle Tool Post	0.0028~0.0051 inch	0.07~0.13 mm
Stroke of Tail Stock Sleeve	0.71 inch	18 mm
Taper of Hole in Tail Stock	MT #1	
Spindle Speed Grade	5	
Spindle Speed Scope	560~2500 RPM	

Drilling

DRILLING FUNCTION	DIMENSIONS	METRIC
Drilling Capacity, Maximum	0.24 inch	6 mm
Distance from Bench to Spindle Nose	4.72~7.08 inches	120~180 mm
Distance between Spindle Center and Surface of Upright Column	4.92 inches	125 mm
Swivel Angle of Drill-Mill Head Stock Around Upright Column	360 degrees	
Spindle Speed Grade	10	
Spindle Speed Range	500~2500 RPM	

Milling

MILLING FUNCTION	DIMENSIONS	METRIC
Width of Working Surface of Table	2.56 inches	65 mm
Length of Working Surface of Table	3.35 inches	85 mm
Width of T-shaped groove	0.315 inches	8 mm
Stroke on Spindle Sleeve	1.58 inches	40 mm

Save This Manual

You will need the manual for the safety warnings and precautions, assembly instructions, operating and maintenance procedures, parts list and diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep the manual and invoice in a safe and dry place for future reference.

Safety Warnings and Precautions

WARNING: When using tool, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

Read all instructions before using this tool!

1. **Keep work area clean**. Cluttered areas invite injuries.
2. **Observe work area conditions**. Do not use machines or power tools in damp or wet locations. Don't expose to rain. Keep work area well lighted. Do not use electrically powered tools in the presence of flammable gases or liquids.
3. **Keep children away**. Children must never be allowed in the work area. Do not let them handle machines, tools, or extension cords.
4. **Store idle equipment**. When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep out of reach of children.

5. **Do not force tool.** It will do the job better and more safely at the rate for which it was intended. Do not use inappropriate attachments in an attempt to exceed the tool capacity.

6. **Use the right tool for the job.** Do not attempt to force a small tool or attachment to do the work of a larger industrial tool. Do not use a tool for a purpose for which it was not intended.

7. **Dress properly.** Do not wear loose clothing or jewelry as they can be caught in moving parts. Protective, electrically non-conductive clothes and non-skid footwear are recommended when working. Wear restrictive hair covering to contain long hair.

8. **Use eye and ear protection.** Always wear ANSI approved impact safety goggles. Wear a full face shield if you are producing metal filings or wood chips. Wear an ANSI approved dust mask or respirator when working around metal, wood, and chemical dusts and mists.

9. **Do not overreach.** Keep proper footing and balance at all times. Do not reach over or across running machines.

10. **Maintain tools with care.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and, if damaged, have them repaired by an authorized technician. The handles must be kept clean, dry, and free from oil and grease at all times.

11. **Disconnect power.** Unplug when not in use.

12. **Remove adjusting keys and wrenches.** Check that keys and adjusting wrenches are removed from the tool or machine work surface before plugging it in.

13. **Avoid unintentional starting.** Be sure the switch is in the Off position when not in use and before plugging in.

14. **Stay alert.** Watch what you are doing, use common sense. Do not operate any tool when you are tired.

15. **Check for damaged parts.** Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment and binding of moving parts; any broken parts or mounting fixtures; and any other condition that may affect proper operation. Any part that is damaged should be properly repaired or replaced by a qualified technician. Do not use the tool if any switch does not turn On and Off properly.

16. **Guard against electric shock.** Prevent body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerator enclosures.

17. **Replacement parts and accessories.** When servicing, use only identical replacement parts. Use of any other parts will void the warranty. Only use accessories intended for use with this tool. Approved accessories are available from Harbor Freight Tools.

18. **Do not operate tool if under the influence of alcohol or drugs.** Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate the tool.

19. **Secure machine**. Properly mount machine before using.

20. **Close all covers**. Do not operate machine with gear box open or drill/mill head exposed.

21. **Protect hands**. Do not touch moving parts or work pieces, or try to stop chucks with hands.

22. **Use proper size stock**. Do not attempt to drill or mill material larger than the machine specs specify.

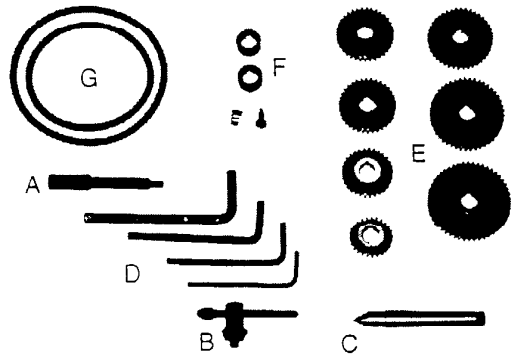
23. **Always attend machine while it is running**. Only when motor, gears, and chucks are stopped, can operator leave the machine area.

Note: Performance of this tool may vary depending on variations in local line voltage. Extension cord usage may also affect tool performance.

Warning: The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

Unpacking

When unpacking, check to make sure the following parts are included. If any parts are missing or broken, please call Harbor Freight Tools at the number on the cover of this manual as soon as possible.



ITEM No.	DESCRIPTION
A	Lathe Chuck Took
B	Drill Chuck Key
C	MT #1 Dead Center, 2-pieces
D	Hex Wrenches: # 3, 4, 5, and 6 mm
E	Tooth Gears: 25, 30, 34, 35, 40, 45, and 50
F	Threading Gear Bushing
G	Spare Belts

Installation

1. Place the machine on a suitable work table with sufficient light.

2. Secure the machine to the table using two hex screws (M6 x 75), by screwing them through the two mounting holes on the bed of the machine.

3. An optional oil pan can be placed under the machine before it is mounted to the table.

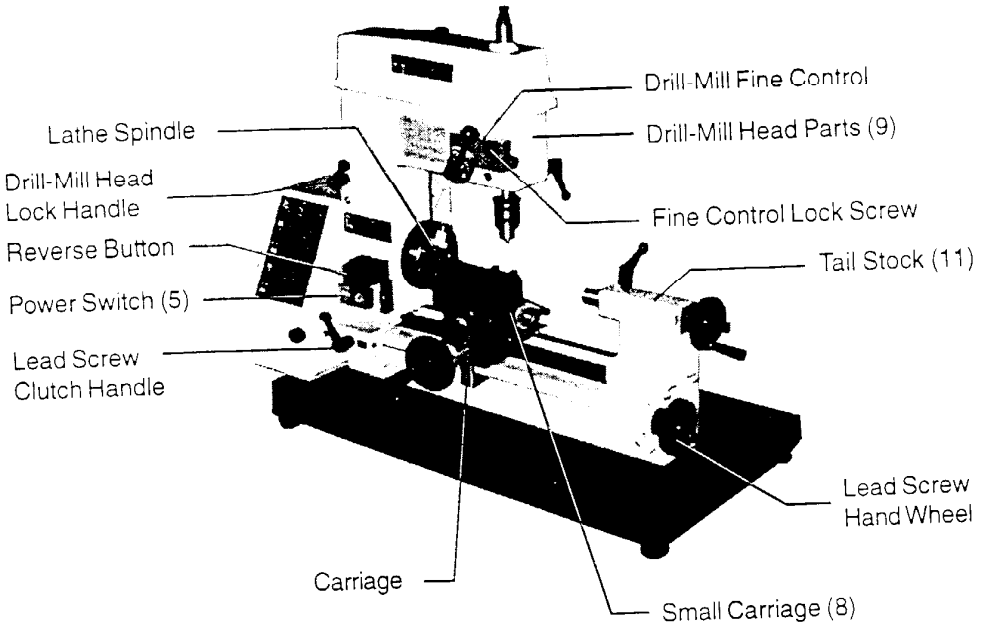
4. Before operation, loosen the slide, worktable, and drill-mill spindle. They were locked for shipping.

5. Clean machine with non-flammable solvent and oil the machine according to the lubrication requirements (see Lubrication section) before running the machine.

Operation

This Precision Multi-purpose Machine is capable of machining metal and non-metallic stock by cutting, drilling, and milling. It can cut circular surfaces, both inside and out, cones, mill planes or grooves, and other cutting functions depending on the tools used.

The machine consists of the Bed (12), Lathe Headstock (4), Drill-Mill Head (9), Slide, Electric Motor, and Safety Guides. Refer to the photo below, and the Main Assembly drawing.



Drive System

The drive system consists of the Main Drive System (Lathe Spindle, Drill-mill Spindle Gear-shift), and the Feed Drive System (the Longitudinal Slide Feed). The table below shows the Drive System flow.

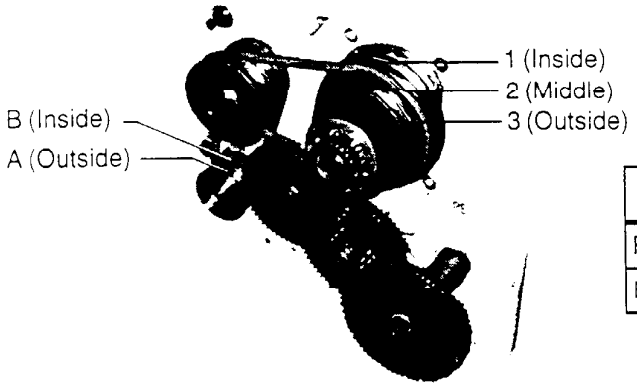
Electric Motor ⇓					
⇓ Middle Pulley					
⇓ Input Pulley	⇒Taper Gear	⇒Drive Shaft	⇒Double Pulleys	⇒Drill-mill Spindle	
	⇒Lathe Spindle	⇒Change Gear	⇒Driving Spindle	⇒Clutch	⇒Lead Screw

The drive system uses pulleys, belts, and gears to enable the setting of various operational speeds for machining different types of materials and functions.

Setting Lathe Spindle Speed

The Lathe Spindle drive uses a two-stage belt mechanism: position "A" and "B" represent the first stage belt. Refer to the photo below. Numbers 1, 2, and 3 represent the three positions of the second-stage belt. Both belts are located in the Change Gear Box (1). The table below shows the various combinations of belt settings (letters and numbers) to achieve the desired speeds.

Change Gear Box

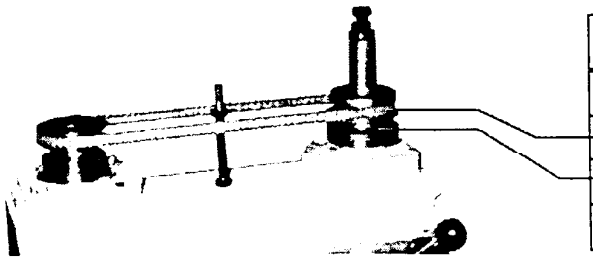


LATHE SPINDLE SPEED SETTING					
RPM	560	800	1180	1700	2500
Belt Setting	B1	B2	B3	A2	A3

For example, a "B2" setting (800 RPM) means that the first stage belt is placed at position "B," and the second stage belt is placed at position 2. The speed set here affect the speed of the Drill-Mill Spindle (see next paragraph).

Setting Drill-Mill Spindle Speed

The Drill-Mill Spindle drive speed is set at two places. The first place is at the Lathe Spindle Speed setting (see previous paragraph), and the second place is within the Drill-Mill Head Cover (9). Removing the Drill-Mill Head Cover exposes the drive belt. It can be set to position "M" or "N." Refer to the photo below.



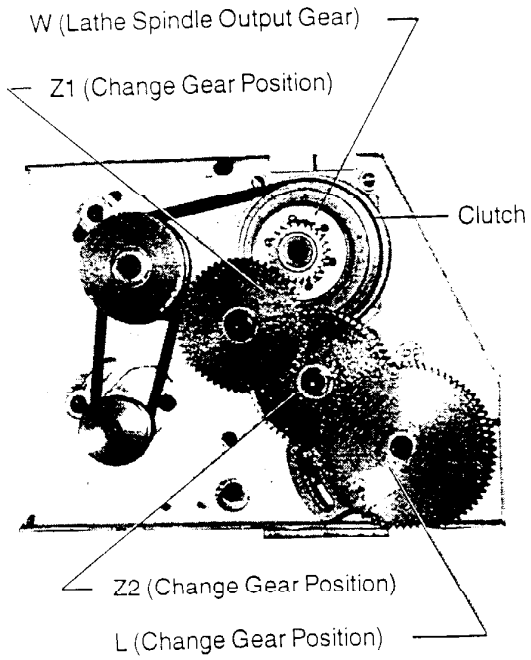
DRILL-MILL SPINDLE SPEED SETTING					
Belt Setting	B1	B2	B3	A2	A3
M	560	800	1180	1700	2500
N	500	700	1050	1500	2200
	RPM				

For example, when the belts in the Change Gear Box are positioned at B2, and the belt in the Drill-Mill Head Cover is positioned at "M" (upper pulley), the rotating speed of the Drill-Mill Spindle is 800 RPM.

Setting Gears to Drive Lathe or Drill-mill Spindles

The Gears shown below can be shifted to different positions to enable cutting threads of different pitch. Gear "W" generally requires no change. "Z1", "Z2", and "L," are positions of change gears. One or two change gears can be placed at positions "Z1" or "Z2," but only one change gear can be placed at position "L."

For example, setting change gears where "Z" = 60 at "Z1," "Z" = 25, and "Z" = 45 at "L," the threads are cut at a 1.25 mm pitch. Refer to the table below for different settings for different pitch thread cuts. The change gears are factory set with a longitudinal feed on the Spindle Tool Post at 0.07 mm.



	mm			0.07	0.13
			W	24	24
			Z1	55 21	60 35
			Z2	20 60	21 50
			L	72	72
		0.4	0.5	0.6	0.75
	W	24	24	24	24
	Z_1	55	60	55	55
	Z_2	40 21	35 25	21 20	34 30
	L	50	50	60	45
		0.8	1.0	1.25	1.5
mm	W	24	24	24	24
	Z_1	60	60	60	60
	Z_2	20 21	34 40	25 45	40 55
	L	50	45	55	35
		16	20	22	28
	W	24	24	24	24
	Z_1	60	60	60	55
	Z_2	21 35	20 30	21 35	35 50
	L	40	45	55	60
1/in"		32	36	40	48
	W	24	24	24	24
	Z_1	60	55	55	55
	Z_2	20 21	30 25	30 25	30 25
	L	50	45	50	60

The **Clutch** directs the motor power to the Lathe Spindle or the Drill-Mill Spindle. To direct power to the Lathe Spindle, grasp the Clutch sleeve, pulling it out and turn to the left. Reseat the three locking pins. To direct power to the Drill-Mill Spindle, grasp the Clutch sleeve, pulling it out and turn to the right. Reseat the three locking pins.

Cutting Threads

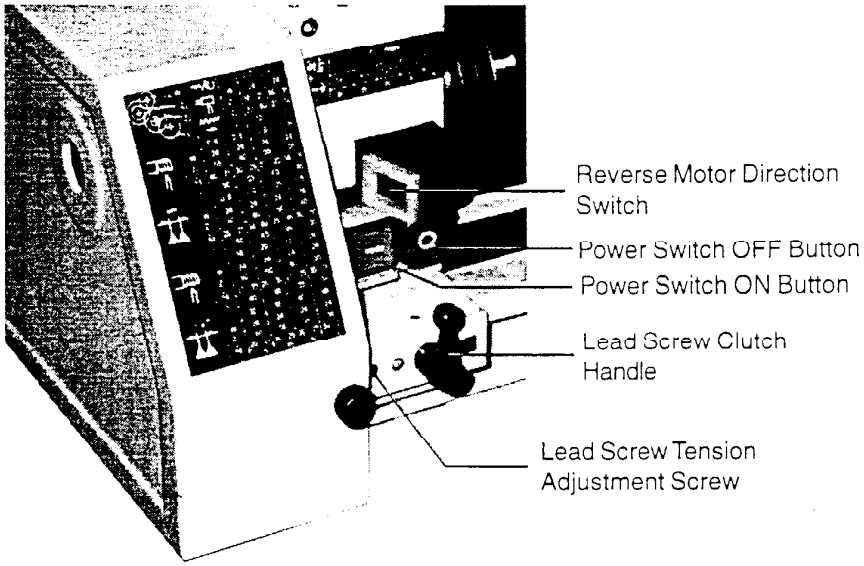
1. Set the Change Gears for the proper pitch.
2. Engage the Lead Screw Clutch for the carriage feeding forward automatically.

   If the carriage must move backward, first move the Tool Rest back, then turn the Spindle in the reverse rotation, and do not release clutch. Repeat this operation to cut the threads. The travel speed of the Carriage matches the Spindle speed (with Clutch unengaged).

   Note: If the Clutch is released during this operation, the Spindle and Lead Screw speed with be different, and threads will not be cut correctly.

Lead Screw Tension Adjustment

When the Lead Screw Tension Screw is loosened (see photo below), the rotation resistance of the Lathe Spindle is increased to slow the Lathe Spindle rotation. This can be adjusted for Drilling or Milling functions.



Lead Screw Clutch Handle

1. To engage Lead Screw for movement, turn the Lead Screw Clutch Handle to the left.
2. To disengage the Lead Screw, turn the handle to the right (see photo above).

Power and Direction Switches

The green (I) button is the ON button. The red (0) button is the OFF button. The Reverse Motor Direction Switch when pressed, reverses the polarity to the motor, and the motor turns in the opposite direction. This should only be done when the motor is OFF or damage can occur to the motor.

Drill-Mill Head Locking Handle

The Drill-Mill Head can revolve 360 degrees around the upright column, and it can move up or down. See photo on page 6. When drilling or milling, the Drill-Mill Head must be locked in place using this handle.

Drill-Mill Fine Control

The Drill-Mill Fine Control mechanism can be used when a micro-feed is required (see photo on page 6). The Locking Screw on the mechanism, when loosened, allows movement of the fine control mechanism. Turned far enough, it engages the Worm Gear for automatic and controlled (upward or downward movement). The Locking Screw is adjusted using the Hex Wrench. Generally, the only time the fine control should be used is while milling, not drilling.

Maintenance

All bearings in the machine must be lubricated periodically and cleaned once a year. Working surfaces such as the Guideway surface, Lead Screw, Slide, Tailstock Sleeve, Drill-Mill Spindle Sleeve, should be lubricated as listed in the following Lubrication table. The recommended scheduled maintenance assumes daily use of the machine.

- The recommended lubrication grease is # 3 radical grease, and the recommended machine oil is SAE 20 machine oil.
- During operation, always verify that the Guideway, Lead Screw, and worktable have sufficient lubrication for operation.
- Check that all belts are tight for proper operation.
- Stop the machine immediately if abnormal noise is heard. Check and repair if necessary.

Refer to the Lubrication schedule found on the next page.

Maintenance Schedule

ITEM	LOCATION	PART	LUB METHOD	LUB TYPE	SCHEDULE
	Drive Box	Gears, Bearings	Greasing	Lub Grease	Monthly
	Lathe Headstock	Bearings	Greasing	Lub Grease	Yearly
	Left Trestle	Bearing Sleeve	Gun Oiling	Machine Oil	Daily
	Bed	Guideway	Gun Oiling	Machine Oil	Daily
	Bed	Lingitudinal Screw, Nut	Gun Oiling	Machine Oil	Daily
	Bed	Cross Screw, Nut	Gun Oiling	Machine Oil	Daily
	Work Table	Surface, Guideway	Gun Oiling	Machine Oil	Daily
	Tool Post	Guideway, Leadscrew	Gun Oiling	Machine Oil	Daily
	Trestle	Bearing Sleeve	Gun Oiling	Machine Oil	Daily
	Upright Column	Bearings	Greasing	Lub Grease	Yearly
	Spindle Sleeve	Spindle Sleeve	Gun Oiling	Machine Oil	Daily
	Fine Control Mechanism	Worm Gear, Worm	Greasing	Lub Grease	Monthly
	Drill-Mill Headstock	Bearings	Greasing	Lub Grease	Yearly
	Tailstock	Leadscrew, Nut	Gun Oiling	Machine Oil	Daily
	Tailstock	Tailstock Sleeve	Gun Oiling	Machine Oil	Daily

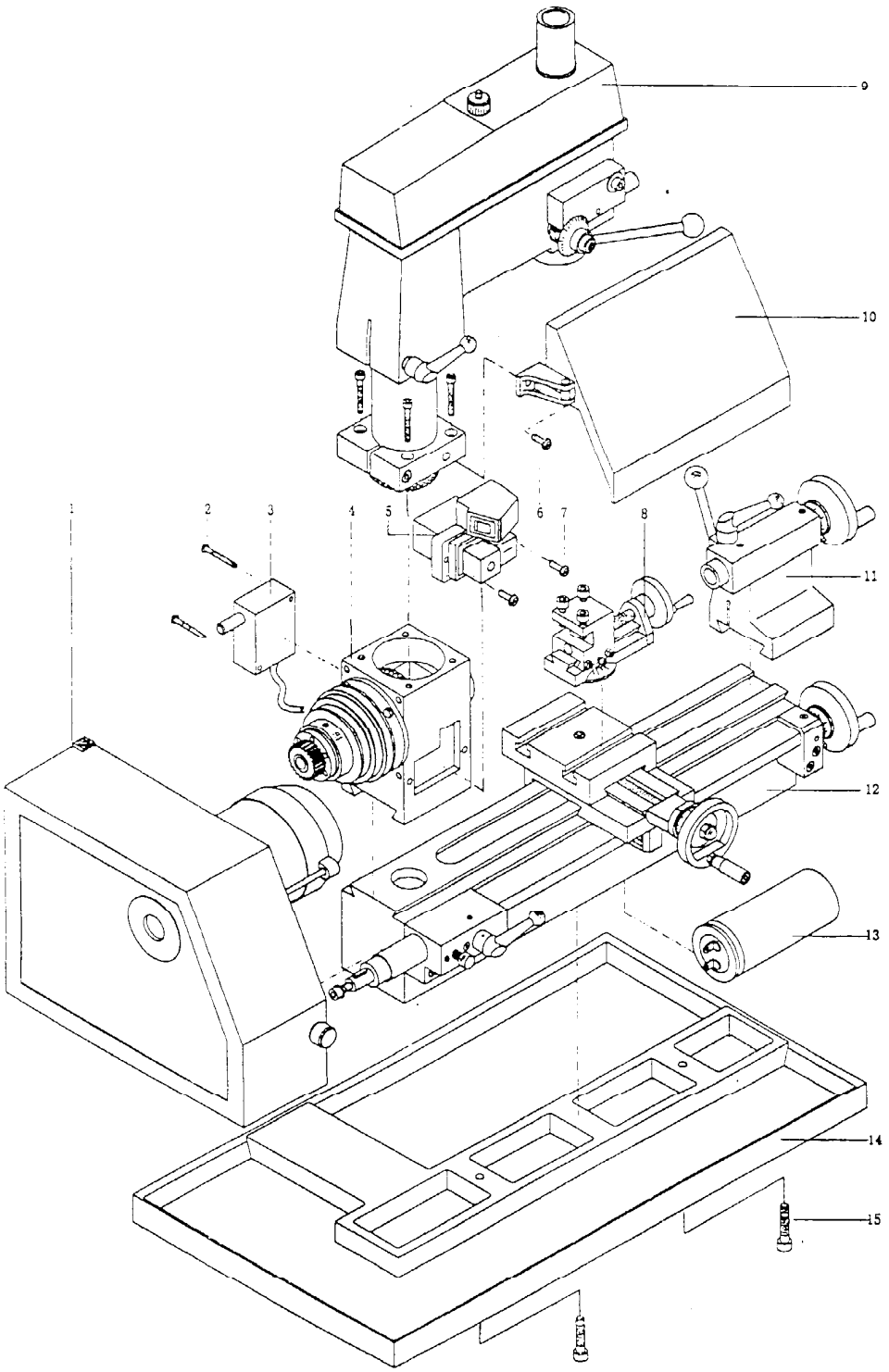
Parts Lists

The following Main Parts table lists major assemblies for the machine. Most major assemblies have detailed drawings and parts lists for them. When looking at the Main Parts drawing on the next page, an item number refers to the Item No. on the Main Parts list. The detailed drawing number is listed for the major part assembly. Those detailed drawings numbers can be found at the top of each drawing that follow the Main Parts drawing.

AT125-00 Main Assembly Parts List

Item No.	Description	Qty	Dwg. No.
1	Change Gear Box Parts	1	AT125-05
2	Screws (M3x25)	2	GB67-85
3	Stroke Switch	1	JW12-11
4	Lathe Head Parts	1	AT125-04
5	Switch Box Parts	1	AT125-00
6	Screws (M5x10)	1	GB65-85
7	Screws (M4x12)	2	GB65-85
8	Small Camage Parts	1	AT125-06
9	Drilling-Milling Head Parts	1	AT125-01
10	Protective Cover Parts	1	AT125-00
11	Tailstock Parts	1	AT125-02
12	Bed Parts	1	AT125-03
13	Capacitor (25uf)	1	n/a
14	Oil Disc	1	AT125-00-201
15	Screws (M6x25)	2	GB70-85

Main Assembly Drawing



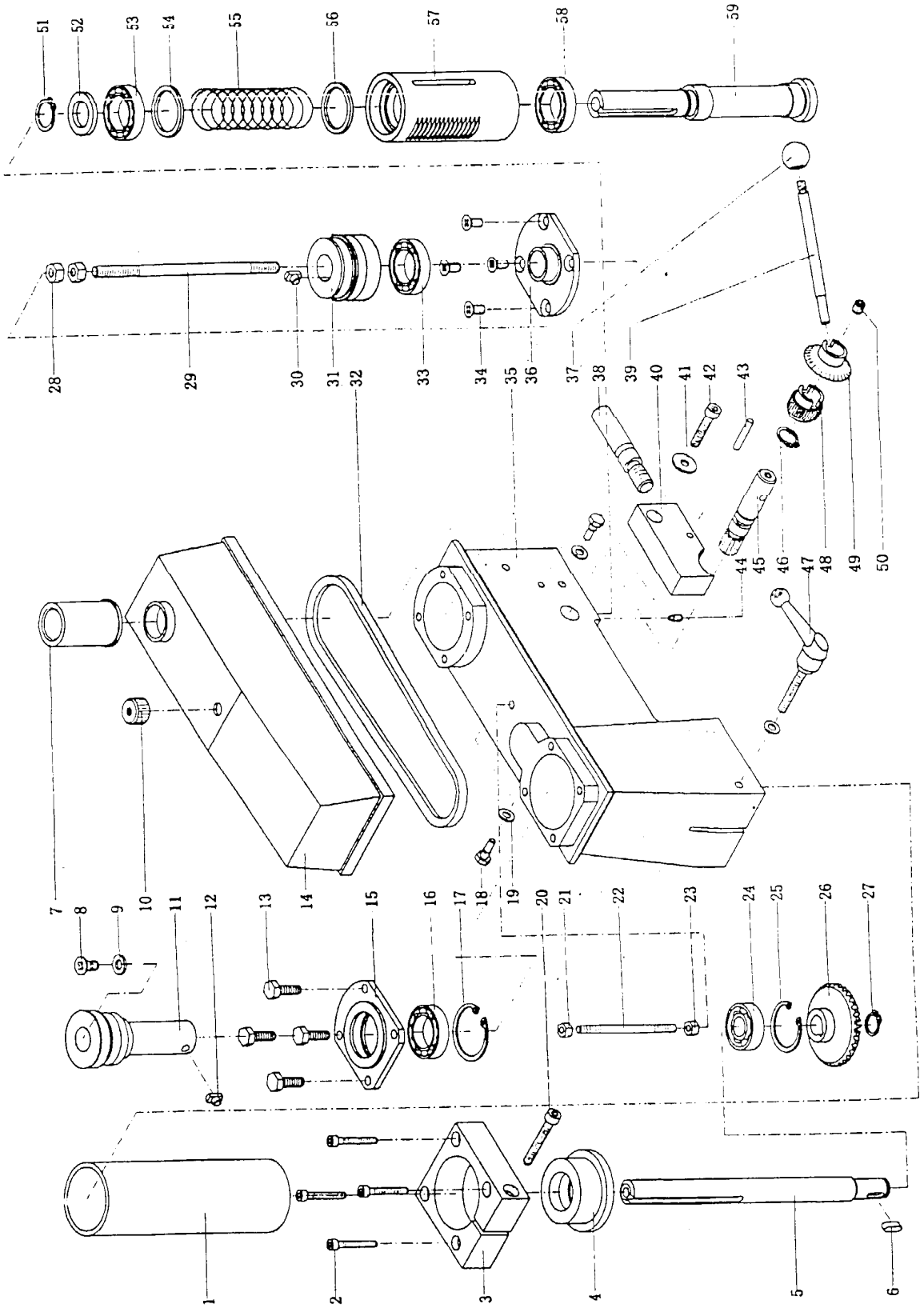
Drilling Milling Head Parts

Ser No.	NAME		DRAWING NO.	QUANTITY
1	Uprigt colum		AT12-001-114	1
2	Screws	M4×22	GB70-85	4
3	Uprigt colum seat		AT125-01-117	1
4	Bearing seat		AT125-01-115	1
5	Driving shaft		AT125-01-116	1
6	Flat key	4×12	GB1096-79	1
7	Protective cover		AT125-01-106	1
8	Screw	M6×10	GB819-85	1
9	Plain washer	6	GB97-85	1
10	Screw cover		AT125-01-105	1
11	Pulley		AT125-01-104	1
12	Set key		AT125-01-102	1
13	Hexagon bolts	M5×10	GB5782-86	4
14	Pulley shell		AT125-01-107	1
15	Bearing seat		AT125-01-103	1
16	Deep groove ball bearing	1000804	GB276-82	1
17	Circlip for hole	32	GB893.1-86	1
18	Screw pins		AT125-01-113	2
19	Washers	5	GB97-85	2
20	Screw	M5×35	GB70-85	1
23	Hexagon nut	M5	GB6170-86	1
24	Radial ball bearing	101	GB276-82	1
25	Circlips for hole	28	GB893.1-86	1
26	Bevel gear		AT125-01-118	1
27	Circlip for shaft	12	GB894.1-86	1
28	Hexagon nut	M6	GB6170-86	1
29	Double end stud		AT125-01-128	1
30	Set key		AT125-01-102	1
31	Pulley		AT125-01-125	1
32	Veebelt	Y400	GB11544-89	1
33	Deep groove ball bearing	1000804	GB276-82	1
34	Screws	M5×10	GB819-85	4
35	Drilling-milling head box		AT125-01-101	1

Drilling Milling Head Parts (continued)

Ser No.	NAME		DRAWING NO.	QUANTITY
36	Pulley seat		AT125-01-124	1
37	Ball knob	M×16	GB4141.11-84	1
38	Worm shaft		AT125-01-112	1
39	Handle lever	5×63×8	GB4141.11-84	1
40	Microadjust body		AT125-01-108	1
41	Washer	5	GB96-85	1
42	Screw	M5×25	GB70-85	1
43	Parallel	4×22	GB119-86	1
44	Screw	M4×25	GB75-85	1
45	Gear shaft		AT125-01-110	1
46	Circlips for shaft	12	GB894.1-86	2
47	Locking handle	5×40	Z18-1	1
48	Worm gear		AT125-01-109	1
49	Dial		AT125-01-111	1
50	Screw	M6×6	GB77-85	1
51	Circlip for shaft	16	GB894.1-86	1
52	Adjusting washer		AT125-01-123	1
53	Deep groove ball bearing	1000804	GB276-82	1
54	Washer		AT125-01-120	1
55	Eyling drieal spiral spring		At125-01-121	1
56	Washer		AT125-01-120	1
57	Spindle sleeve		AT125-01-122	1
58	Deep groove ball bearing	1000804	GB276-82	1
59	Drilling-milling spindle		AT125-01-119	1

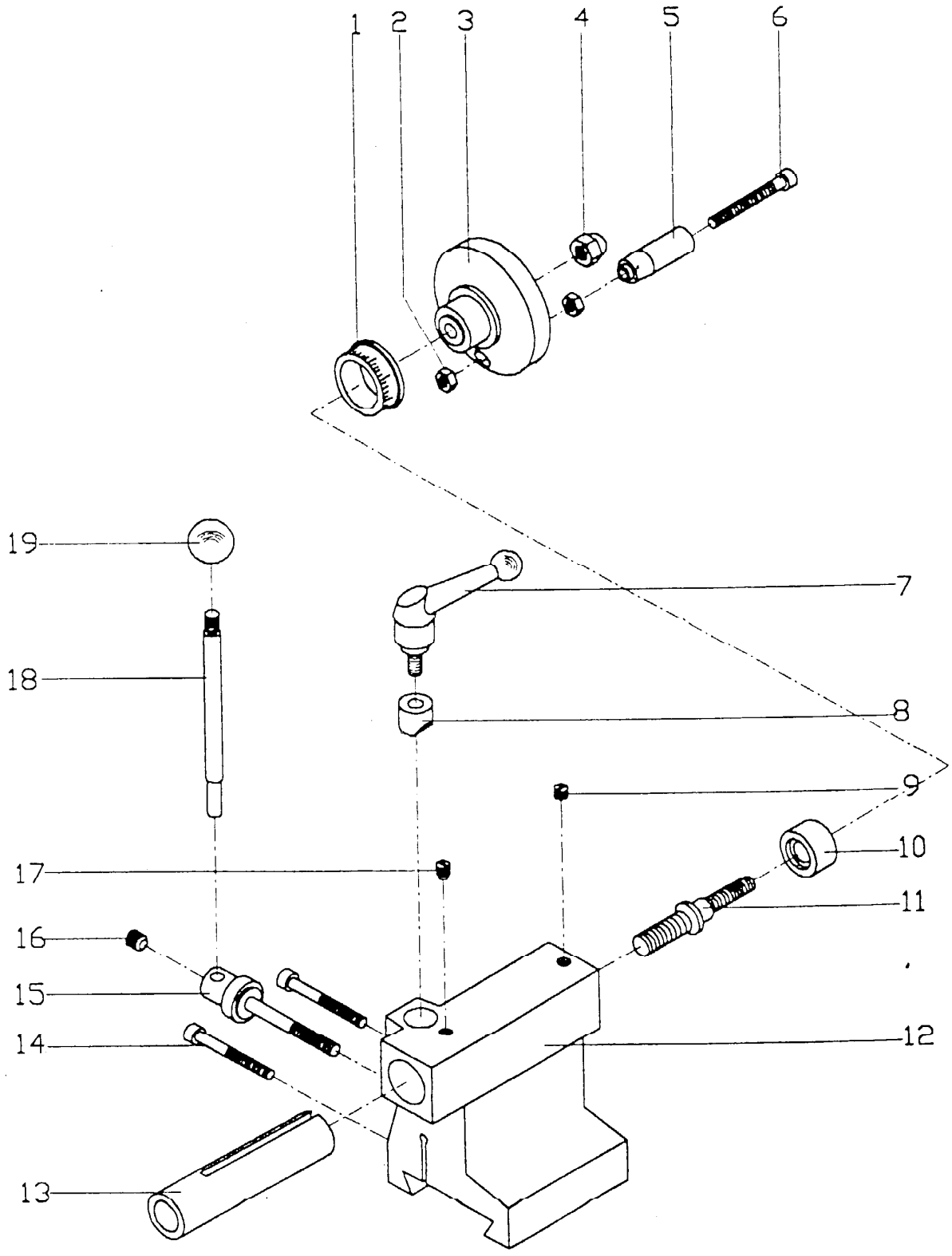
Head Parts - Parts Diagram



Tailstock Parts

Ser No.	NAME	DRAWING NO.	QUANTITY
1	Dial	AT125-02-105	1
2	Hexagon nuts M4	GB6170-86	2
3	Handwheel	AT125-02-106	1
4	Acorn nut M6	GB923-88	1
5	Sleeve knob	AT125-02-107	1
6	Screw M4×35	GB70-85	1
7	Handle BM5 40×16	Z18-1	1
8	Locking sleeve	AT125-04-109	1
9	Screw M5×6	GB71-85	1
10	Sleeve	AT125-02-104	1
11	Tailstock lead screw	AT125-02-103	1
12	Tailstock	AT125-02-101	1
13	Tailstock sleeve	AT125-02-102	1
14	Screws M4×35	GB70-85	2
15	Locking screw stem	AT125-02-108	1
16	Screw M6×6	GB77-85	1
17	Screw M5×6	GB75-86	1
18	Handle lever 5×63×16	GB4141.15-84	1
19	Ball knob M5×16	GB4141.11-84	1

Tailstock Parts Diagram



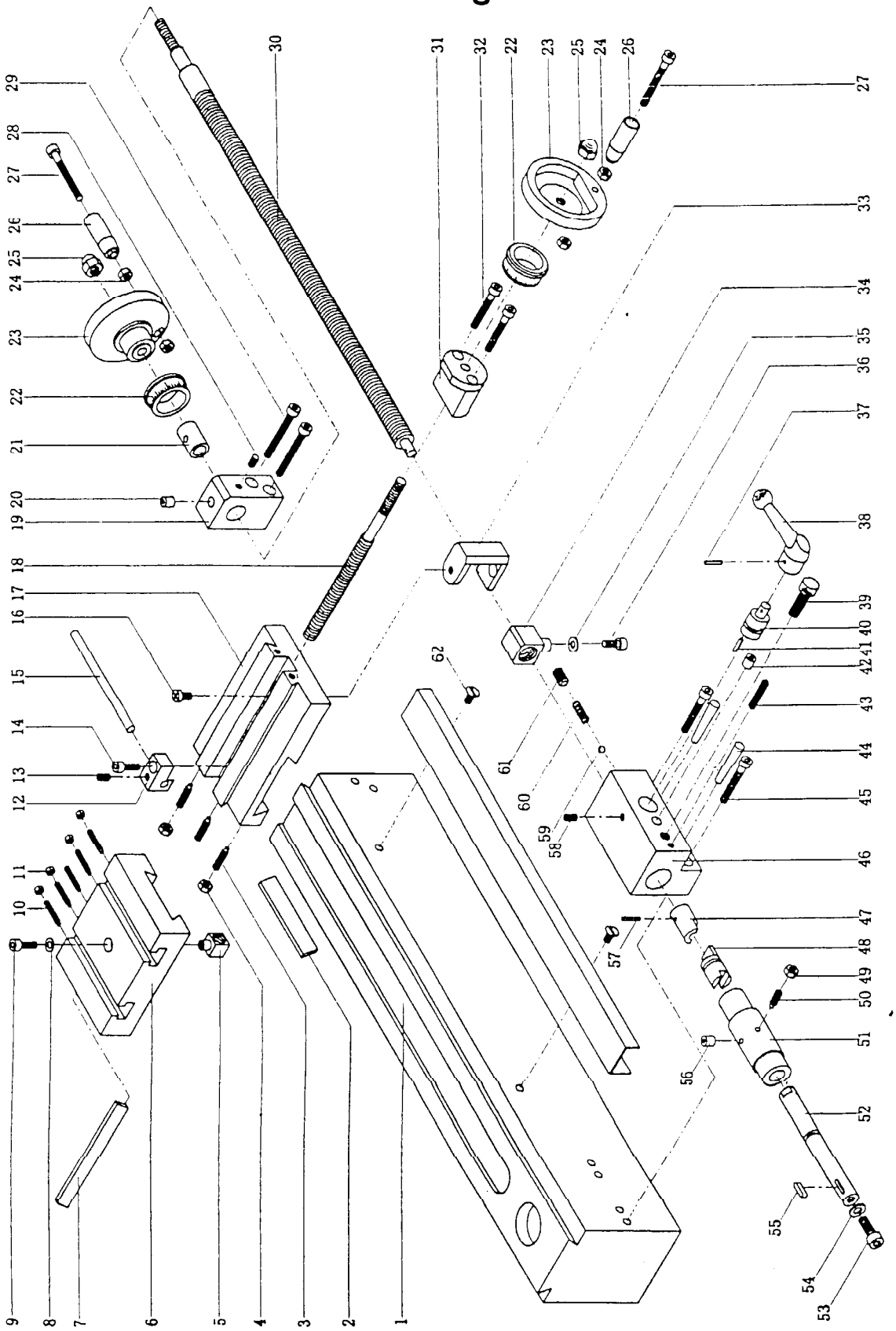
Bed Parts

Ser No.	NAME		DRAWING NO.	QUANTITY
1	Bed		AT125-03-106	1
2	Chock		AT125-03-117	1
3	Screws	M4×16	GB75-85	3
4	Hexagon nuts	M4	GB6170-85	2
5	Cross feed screw nut		AT125-03-119	1
6	Table		AT125-03-109	1
7	Chock		AT125-03-112	1
8	Plain washer	4	GB97.1-85	1
9	Screw	M4×10	GB70-85	1
10	Screws	M3×16	GB75-85	5
11	Hexagon nuts	M3	GB6170-85	4
12	Pin seat		AT125-03-118	1
13	Screw	M4×8	GB75-85	1
14	Screw	M4×12	GB70-85	1
15	Parallel pin	5×80	GB119-86	1
16	Screw	M4×6	GB822-88	1
17	Carriage		AT125-03-111	1
18	Cross feed screw rod		AT125-03-123	1
19	Seat of longitudinal feed screw rod		AT125-03-113	1
20	Oil cup	6	GB1155-79	1
21	Sleeve		AT125-03-114	1
22	Dials		AT125-02-105	2
23	Handwheeles		AT125-02-106	2
24	Hexagon nuts	M4	GB6170-86	4
25	Acorn nuts	M5	GB923-88	2
26	Handle sleeves		AT125-02-107	2
27	Screws	M4×40	GB70-85	2
28	Screw	M4×8	GB71-85	1
29	Screws	M4×30	GB70-85	2
30	Longitudinal feed screw rod		AT125-03-108	1
31	Seat of cross feed screw rod		AT125-03-110	1
32	Screws	M4×25	GB70-85	2
33	Base of longitudinal screw nut		AT125-03-120	1

Bed Parts (continued)

Ser No.	NAME	DRAWING NO.	QUANTITY
34	Longitudinal feed screw nut	AT125-03-120	1
35	Plain washer 4	GB97.1-85	1
36	Screw	GB70-85	1
37	Spring-type straight pin-slotted 2×10	GB879-86	1
38	Locking handle 5×40×16	Z18-1	1
39	Screw	AT125-03-115	1
40	Zcentril axis seat	AT125-03-116	1
41	Roller pin 2×10	GB309-84	1
42	Oil cup 6	GB1155-79	1
43	Screw M4×22	GB71-85	1
44	Taper pins 4×30	GB117-86	2
45	Screws M4×15	GB70-85	2
46	Jaw clutch seat	AT125-03-105	1
47	Semi-column sleeve	AT125-03-104	1
48	Coneeting slide column	AT125-03-103	1
49	Nut M4	GB6170-85	1
50	Screw M4×12	GB75-85	1
51	Shaft sleeve	AT125-03-102	1
52	Jaw clutch shaft	AT125-03-101	1
53	Screw M5×10	GB70-85	1
54	Plain washer 5	GB97.1-85	1
55	Plain parallel key 3×12	GB6170-85	1
56	Oil cup 6	GB1155-79	1
57	Spring-type straight pin-slotted 2×12	GB879-86	1
58	Screw M4×8	GB75-85	1
59	Iron ball 4	GB308-84	1
60	Spring	GB2089-80	1
61	Screw M6×10	GB73-86	1
62	Screws M4×8	GB68-85	2

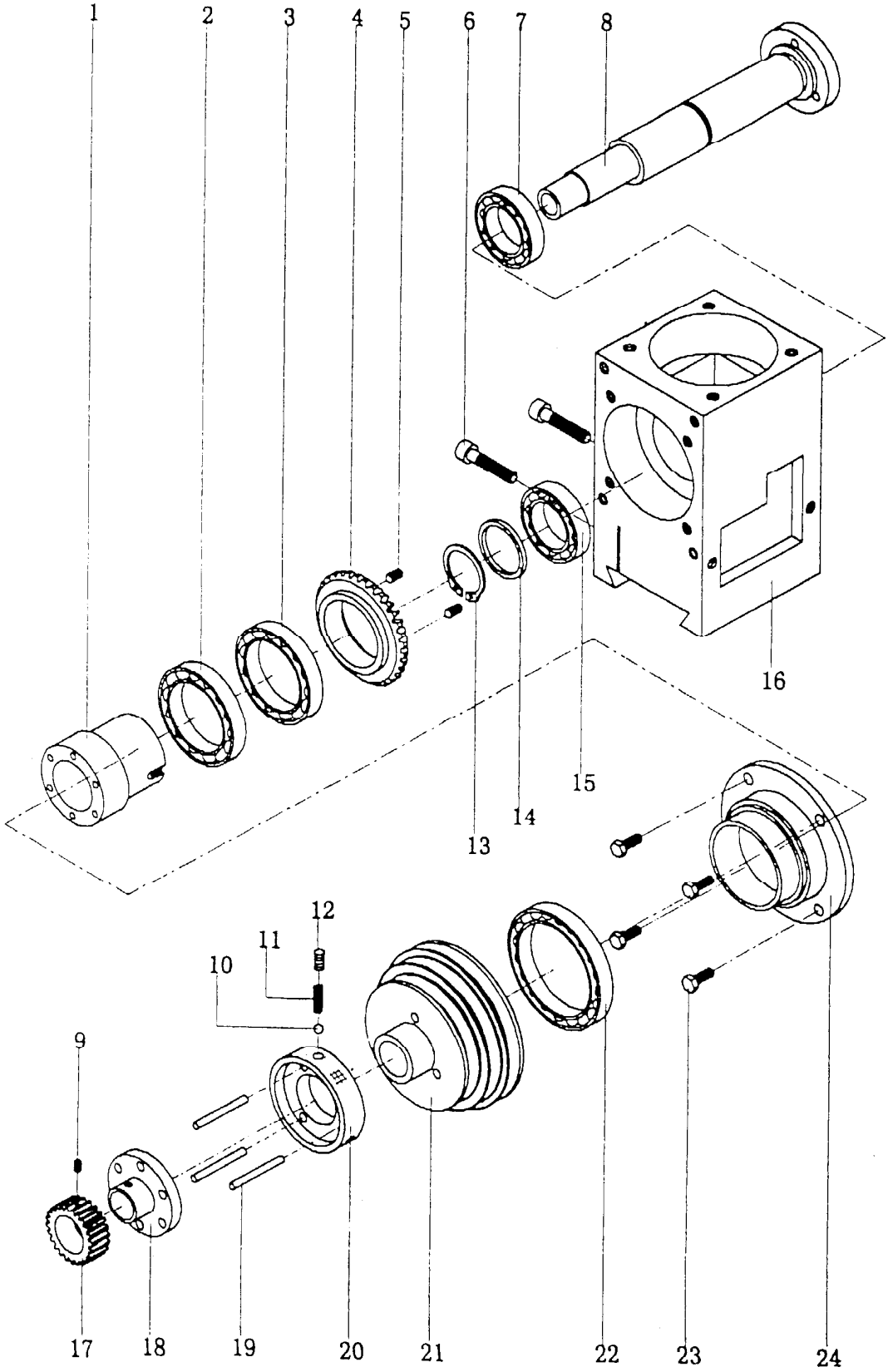
Bed Parts Diagram



Headstock Parts

Ser No.	NAME		DRAWING NO.	QUANTITY
1	Jaw clutch right		AT125-04-106	1
2	Ball bearing	1000806	GB276-89	1
3	Ball bearing	1000806	GB276-89	1
4	Bevel gear		AT125-04-107	1
5	Screws	M4×6	GB71-85	2
6	Screws	M5×25	GB70-85	2
7	Ball bearing	1000804	GB276-89	1
8	Lathe spindle		AT125-04-109	1
9	Screw	M3×5	GB78-85	1
10	Iron ball	2	GB308-79	1
11	Spring		AT125-04-111	1
12	Screw	M3×5	GB73-85	1
13	Snap ring	20	GB894.1-86	1
14	Washer		AT125-04-108	1
15	Ball bearing	1000804	GB276-89	1
16	Headstock		AT125-04-110	1
17	Gear		AT125-04-102	1
18	Gear sleeve		AT125-04-101	1
19	Straight pins		GB119-86	3
20	Clutch sleeve		AT125-04-103	1
21	Input pulley		AT125-04-104	1
22	Ball bearing	1000808	GB276-89	1
23	Screws	M4×12	GB5782-86	4
24	Bearing seat		AT125-04-105	1

Headstock Parts Diagram



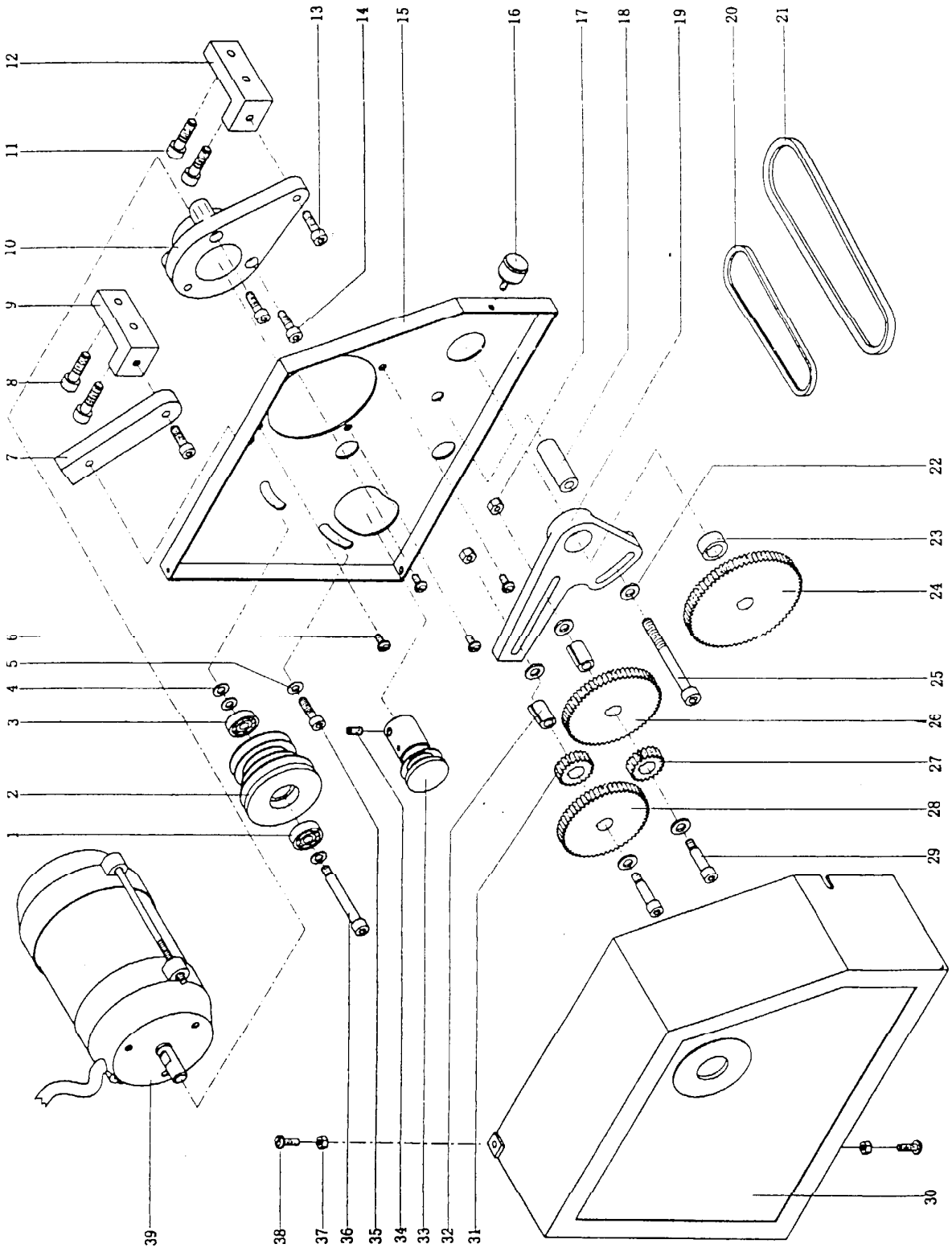
Change Gear Box Parts

Ser.No.			DRAWING NO.	QUANTITY
1	Deep groove ball with shield	80026	GB278-82	1
2	Middle pulley		AT125-05-114	1
3	Deep groove ball with shield	80026	GB278-82	1
4	Washers	5	GB97.2-85	2
5	Washer	5	GB97.2-85	1
6	Screws	M4×8	GB67-85	4
7	Bearer plate		AT125-05-112	1
8	Screws	M5×16	GB70-85	2
9	Frome		AT125-05-109	1
10	Dead motor plate		AT125-05-111	1
11	Screws	M5×16	GB70-85	2
12	Frome		AT125-05-109	1
13	Screw	M5×6	GB70-85	1
14	Screws	M5×6	GB70-85	3
15	Base plate of change gear box		AT125-05-107	1
16	Knob		AT125-05-108	1
17	Hexagon nuts	M5	GB6170-85	2
18	Sleeve		AT125-05-115	1
19	Change gear frome		AY125-05-105	1
20	Vee belt	Y250	GB11544-89	1
21	Vee belt	Y315	GB11544-89	1
22	Washer	6	GB97.2-85	1
23	Key sleeve		AT125-05-104	1
24	Change gear	(72)	AT125-05-103	1
25	Screw	M6×60	GB70-85	1
26	Change gear	(60)	AT125-05-103	1
27	Change gear	(20)	AT125-05-103	1
28	Change gear	(55)	AT125-05-103	1
29	Screws		AT125-05-105	2
30	Cap of change gear box		AT125-05-101	1
31	Change gear	(21)	AT125-05-103	1
32	Key sleeves		AT125-05-104	2
33	Motor pulley		AT125-05-114	1

Change Gear Box Parts (continued)

Ser No.	NAME	DRAWING NO.	QUANTITY
34	Screw M5×8	GB80-85	1
35	Screw M5×18	GB70-85	1
36	Screw	AT125-05-113	1
37	Hexagon nuts M3	GB6170-85	2
38	Screws M3×10	GB67-85	2
39	Motor	YY3812A	1

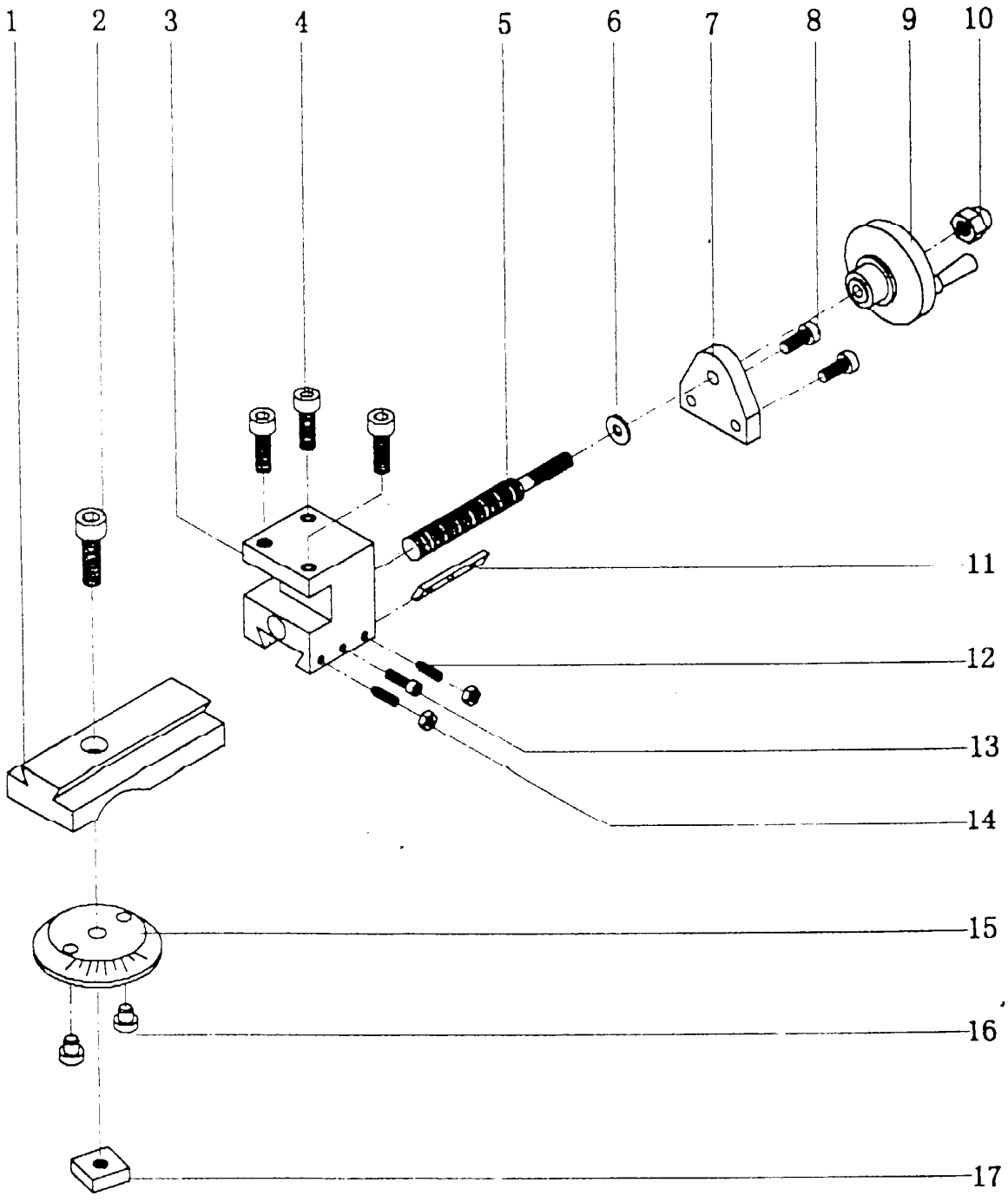
Change Gear Box Parts Diagram



Small Carriage Parts

Ser No.	NAME & SPECITIONS	DRAWING NO.	QUANTITY
1	Small carriage	AT125-06-101	1
2	Screw M6×20	GB70-85	1
3	Tool post	AT125-06-104	1
4	Screws M5×16	GB70-85	3
5	Screw rod	AT125-06-106	1
6	Plain washer 5	GB97.2-85	1
7	Dead plate	AT125-06-107	1
8	Screws M4×10	GB70-85	2
9	Handwheel	AT125-06-108	1
10	Acorn nut M5	GB923-88	1
11	Chock	AT125-06-109	1
12	Screws M3×10	GB79-85	2
13	Screw M3×10	GB70-85	1
14	Hexagon nuts M3	GB6170-85	2
15	Seat	AT125-06-103	1
16	Shaft pin	AT125-06-102	2
17	Square nut	AT125-06-105	1

Small Carriage Parts Diagram



Protective Cover Parts

Ser No.	NAME	DRAWING NO.	QUANTITY
1	Protective cover	AT125-00-120	1
2	Hinge mount	AT125-00-121	1
3	Plastic rivet	AT125-00-122	1
4	Hinge plate	AT125-00-123	1

Protective Cover Parts Diagram