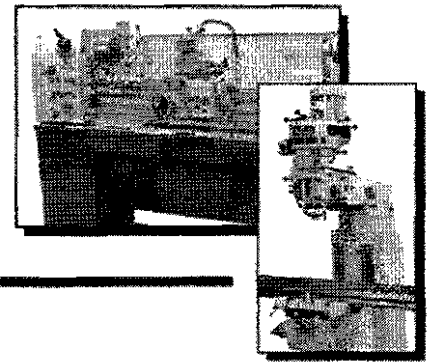


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MODEL GRIP-1640GH LATHE

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PARTS REQUEST FORM

YOUR COMPANY NAME:

STATE/PROVINCE

YOUR NAME

PHONE # + EXT

FAX #

MACHINE INFO:

MAKE/MANUFACTURER

MODEL NUMBER

YEAR MADE

SERIAL#

PARTS REQUESTED:

PART#

DESCRIPTION

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

PLEASE INCLUDE COPY(S) OF THE PARTS DRAWING FROM THE
MANUAL AND CIRCLE THE PARTS NEEDED

FAX PARTS REQUEST TO (800) 862-1740

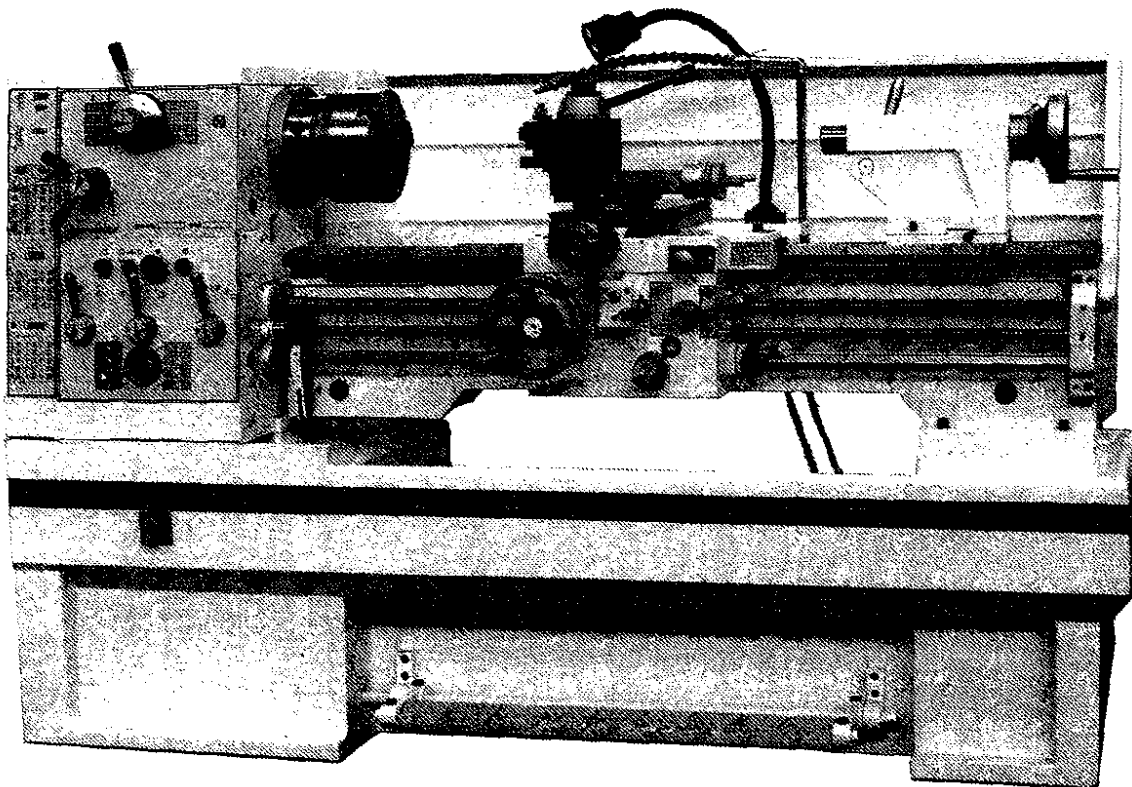
E-MAIL PARTS REQUEST TO: machinery@kbctools.com

THANKS; KBC MACHINERY - MICHIGAN

GRIP-1640GH

PRECISION ENGINE LATHE

INSTRUCTION MANUAL & PARTS LIST



CONTENTS

1. General Safety Rules for Power Tools.....	2
2. Specification	3
3. Lifting.....	4
4. Cleaning.....	4
5. Installing.....	5
6. Lathe Alignment Part.1.....	6
7. Lathe Alignment Part.2.....	7
8. Slide Ways Attention.....	8
9. Cross-Slide Nut.....	8
10.Electrical Controls.....	9
11.Speed Controls.....	10
12.Threading Dial Indicator.....	11
13.Chucks and Chucks Mounting.....	12
14.Electric Circuit Control.....	13
15.Bed Assembly.....	16
16.Headstock Assembly.....	20
17.Gear Box Control.....	27
18.Apron (L.H.)	34
19.Cross Slide & Compound.....	41
20.Tailstock Assembly.....	46
21.Lubrication.....	50
22.Chuck Guard Cover.....	52
23.Follow Rest.....	54
24.Steady Rest.....	55

1. General Safety Rules for Power Tools

Warning: Do not attempt to operate until you have read thoroughly and understand completely all instructions, rules etc. Contained in this manual failure to comply can result in accidents involving fire, electric shock, or serious personal injury. Maintain owners' manual and review frequently for continuing safe operation, and instructing possible third-part user.

Read all instructions

1. Know your power tool.
2. Guard against electrical shock by preventing body contact with grounded surfaces.
3. Keep guards in place and in working order.
4. Remove adjustment keys and wenches.
5. Keep work area clean.
6. Don't use in dangerous environment.
7. Keep children away.
8. Make workshop kid proof.
9. Don't force tool.
10. Use right tool.
11. Wear proper apparel.
12. Always use safety glasses.
13. Secure work.
14. Don't overreach.
15. Maintain tools in top condition.
16. Disconnect tools from power source.
17. Avoid accidental starting.
18. Use recommended accessories.
19. Never stand on tool.
20. Check damaged parts.
21. Direction of feed.
22. Never leave tool running unattended turn power off.

2. Specification

Capacity

Swing Over Bed	360mm(14") or 410mm(16")
Swing Over Cross Slide	215mm(8 ¹ / ₂ ") or 255mm(10")
Swing In Gap Diameter×Width	540(21 ¹ / ₄ ") or 580(22")×190(7 ¹ / ₂ ")
Height of Center	185mm(7 ¹ / ₂ ") or 205mm(8")
Distance Between Centers	1000mm(40")/1500 mm
Width of Bed	250mm(10")
Cutting Tool Max Section	20×20mm(³ / ₄ "× ³ / ₄ ")
Total Travel of Cross Slide	210mm(8 ¹ / ₂ ")
Total Travel of Top Slide	140mm(5 ¹ / ₂ ")

Headstock

Spindle Bore	52mm(2")
Spindle Nose	D ₁ -6
Spindle Morse Taper in Bore	M.T.No. 6
Spindle Speeds Number	16
Spindle Speeds Range	45-1800R.P.M

Thread & Feeds

Leadscrew Diameter & Thread	28mm×6mm or 4T.P.I
Threads Imperial Pitches	2-72T.P.I(45Nos)
Threads Metric Pitches	0.2-14mm(39Nos)
Longitudinal Feeds Imperial	0.002"-0.067"/Rev (17Nos)
Longitudinal Feeds Metric	0.05-1.7mm/Rev (17Nos)
Cross Feeds Imperial	0.001"-0.0335"/Rev (17Nos)
Cross Feeds Metric	0.025-0.85mm/Rev (17Nos)
Range of Module Pitches	0.3-3.5MP(18Nos)
Range of Diametral Pitches	8-44DP(21Nos)

Tailstock

Total Travel of Tailstock Quill	120mm(4 ³ / ₄ ")
Tailstock Quill Diameter	50mm(2")
Taper in Tailstock Quill	M.T.No.4

Motors

Spindle Drive Motor	4P/8P, 3PH 3.3/2.2kw or 4.5/3kw
Coolant Pump Motor	4P, 3PH 90W

Weight & Measures

Machine Space Requires (L×W×H)	194 (244) cm×85cm×130cm or 132cm
Packing Case Dimensions (L×W×H)	206(81") (256) ×90(35 ⁷ / ₁₆ ")×164cm(64 ⁹ / ₁₆ ")
Net Weight	1300kg or 1350kg/ 1550kg or 1600 kg
Gross Weight	1500kg or 1555kg / 1750 kg or 1755 kg

3. Lifting

Use a sling-chain to sling the lathe as in fig position the saddle and tailstock along the bed to obtain balance.

Important: The sling-chain should not touch the leadscrew or Feed-shaft to avoid damage.

Unloading of the machine. When the machine is unloaded from the car or to be moved, please proceed with following steps (Fig.1)

1. Preparing two round sticks (long approx.800mm dia 35mm) insert into the preserved holes on lathe bed. Then lift up with applying wires on both end of the stick.

2. Lifting the machine by a crane.

3. Before lifting adjust the position of Lathe Apron and Tailstock to maintain the balance of machine.

4. When the machine was shifted to its destination, always handle with care to put it down. Don't let go of it to hit the ground or it will affect the accuracy of the machine

Note: Machine weight can be seen in Specification Table.

5. For the adjustment of electric control, keep the distance between machines and wall not less than 600mm.

4. Cleaning

Before operating any controls remove the anticorrosion coating from all slideways and the end gear train, using white spirit or kerosene.

Do not use cellulose solvents for cleaning, as they will damage the paint finish.

Oil all bright-machined surfaces immediately after cleaning using machine oil or slide way lubricant; use heavy oil or grease on the end gear.

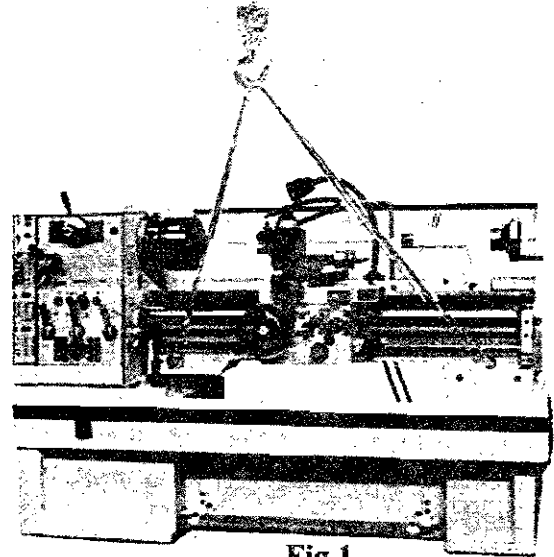


Fig.1

5. Installing

Locate the machine on a solid foundation, allowing sufficient area all around for easy working and maintenance (see Foundation plan). The lathe may be used freestanding or bolted to the foundation.

Freestanding: Position lathe on foundation and adjust each of the six mounting feet to take equal share of the load. Then using an engineer's precision level on the bedways (Fig.2) adjusts the feet to level up machine. Periodically check bed level to ensure continued lathe accuracy.

Fixed installation: Position lathe over six bolts (1/2 in. or 12mm.dia.) set into the foundation to correspond with holes in the mounting feet; Accurately level the machine, then tighten hold-down bolts, Re-check bed level.

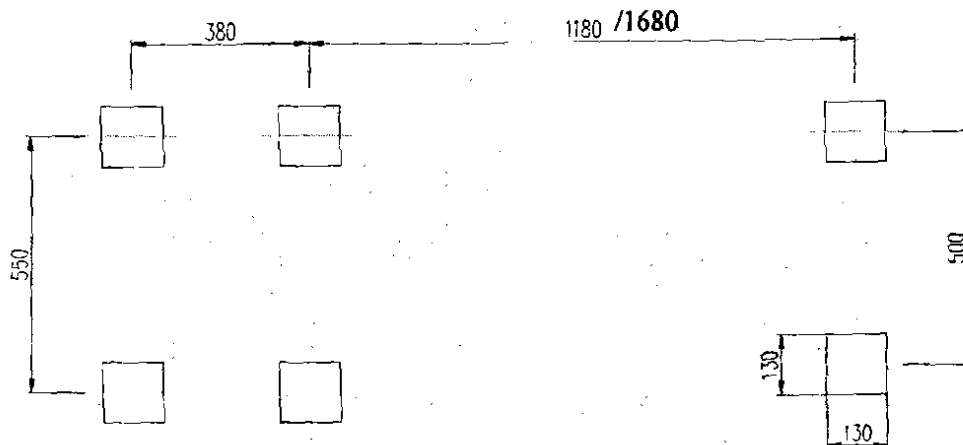
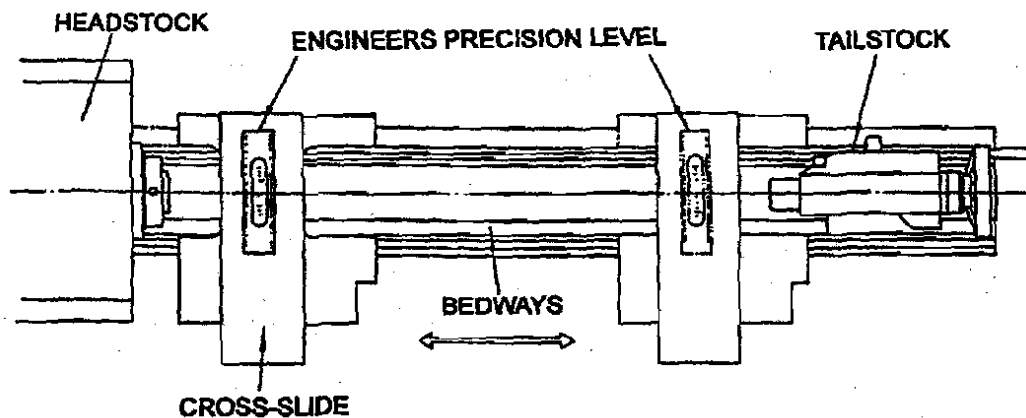


Fig.2

Construction of the Ground

Due to the recent tendency of utilizing Ultra-Hard Alloy Steel tools, it surely increases the speed of heavy cutting comparing to the previous steel tool. But, in the mean time, it easily happens to the vibration of the machine. For assuring better cutting result, it requires a very strong and steady construction of ground. (Please refer to right illustration of construct in of ground)(Fig.3)

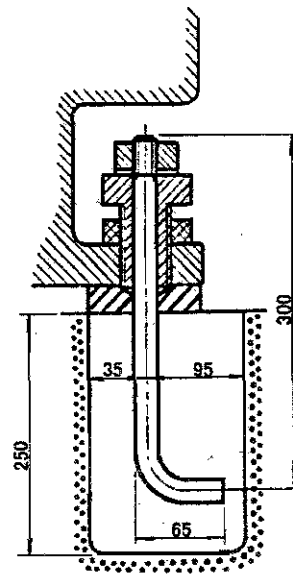


Fig.3

6. Lathe Alignment Part.1

With the lathe install and running. We recommend a check on machine alignment before commencing work. Check leveling and machine alignment at regular periods to periods to ensure continued lathe accuracy.

Headstock check: Take a light cut-with a keen tool over a 6 in. (150mm.) length of 2 in. dia. (50mm) steel bar gripped in the chuck but not supported at the free end. Micrometer reading at each end of the turned length (at A and B of Fig.4) should be the same.

To correct a difference in readings, slacken and release the four-headstock hold-down screws (J) shown in Fig.4 and adjust the set-over screw (K) beneath the headstock. Then tighten

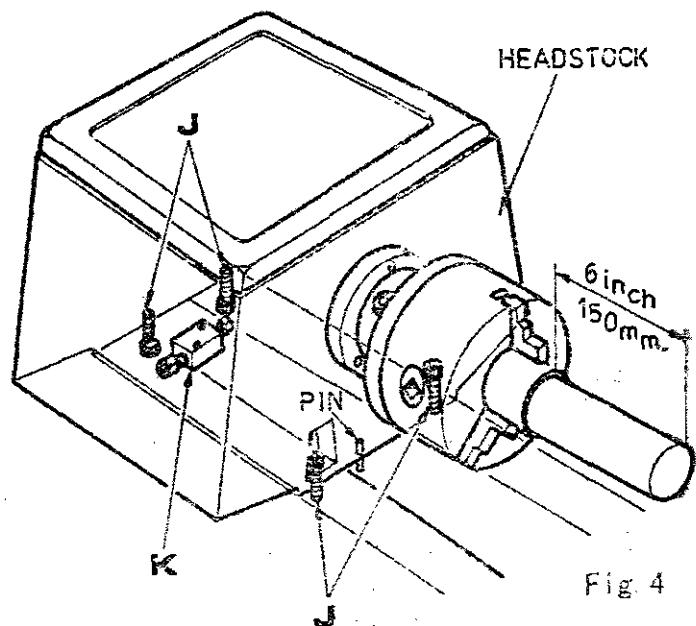


Fig 4

all screws, after adjustment and repeat the test-cut/micrometer-reading sequence until micrometer readings are identical, so machine now cutting absolutely parallel.

The Importance and Methods of Spindle Leveling Adjustment

1. Switch on to make the Spindle turn while the Spindle is set up at 1170r.p.m. By putting the palm of the left hand on the Headstock cover to feel its chatter. An unrevealing Spindle will lead to lathe chatter. Move Leveling Block (either "A" or "B") left or right to adjust until your left hand feels the minimum chatter.

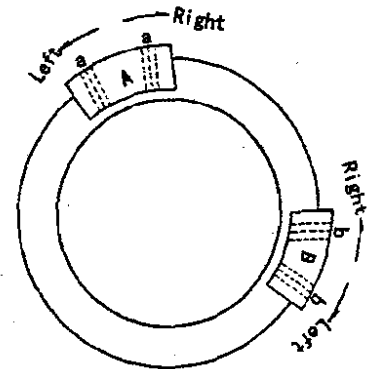


Fig.5

2. Afterwards, change the Spindle speed to 1800r.p.m. or 770r.p.m. and check the Leveling with the same way as we did at 770r.p.m. by adjusting the Leveling Block "A" or "B".

7. Lathe Alignment Part.2

Using a 12in. (305mm.) ground steel bar fitted between headstock and tailstock centers, check the alignment by fitting a dial-test indicator to the topside and traversing the center line of the bar. (Fig.6).

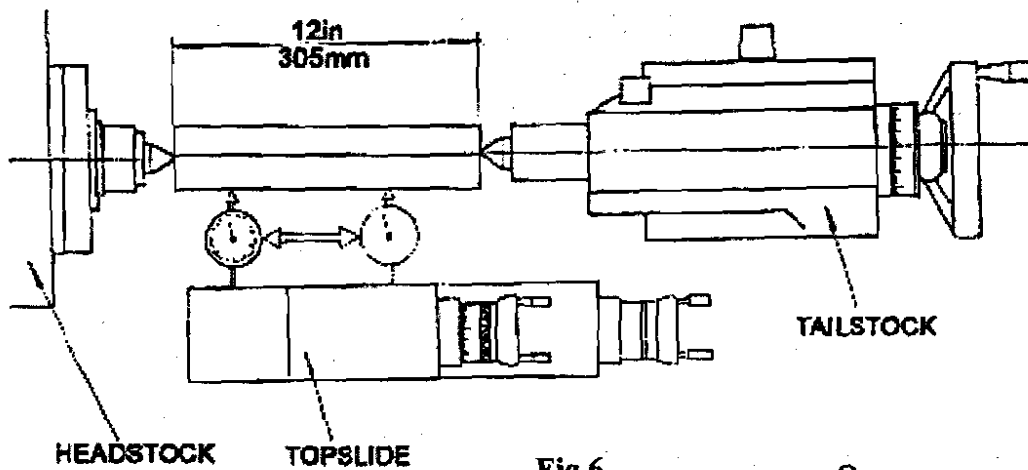
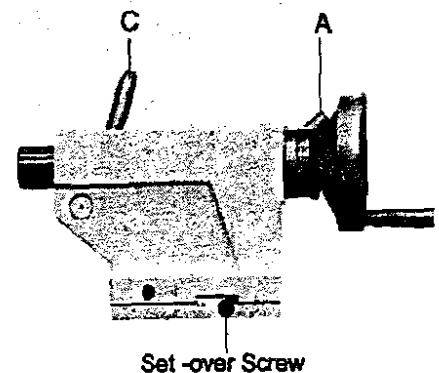


Fig.6

To correct error release the tailstock clamp lever (Fig.7) A and adjust the two set-over screws (Fig.7) provided. Continue with checking and correction until the alignment is perfect.



8. Slide Ways Attention

Tapered gib strips are fitted to slideways of saddle cross-slide and top (compound) slides so that any slackness, which may develop can be rectified.

Ensure that slideways are thoroughly cleaned and lubricated before attempting adjustment. Then reset the gib screw and tightening the front screw, a little at a time. Check constantly for smooth action throughout full slide travel; avoid over adjustment which can result in increased wear-rate or stiff or jerky action. (Fig.8)

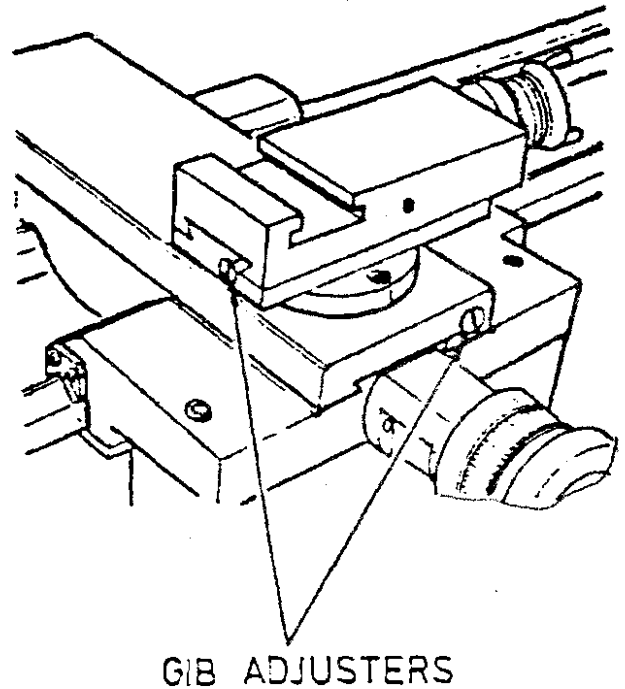


Fig.8

9. Cross-Slide Nut

This is adjustable for elimination of slackness, which may develop in service. Reduce backlash by the cap-head screw rear of the nut. Before operating the cross-slide several times by hand to be sure of smooth operation throughout travel. (Fig.9)

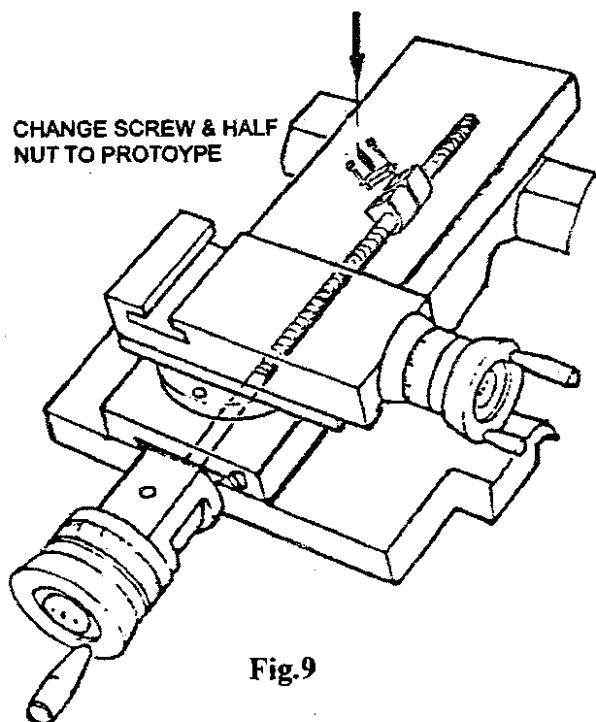


Fig.9

10. Electrical Controls

The power switches are fitted on the face of electrical box in back of the bed and below the headstock. Except the main switch, all electrical controls are fitted in the front of the headstock.

1. Move the power switch set at ON position then the indicator lamp glows.

2. Press the GREEN button. The main drive motor can be running with a moment. (With the main motor rotation lever is set in the neutral position.)

3. Coolant pump ON/OFF push button.

4. Press the RED button to stop the main motor and coolant pump.

Check the rotating direction of spindle after wiring:

1. Turn on the power switch.

2. Slightly push "INTREMITENT" button.

3. Look at the rotating direction of Main Spindle from Tailstock.

4. If it is of anti-clockwise, you've got a right wiring.

5. If oppositely, exchange any of two wires among R", "S", "T" terminals.

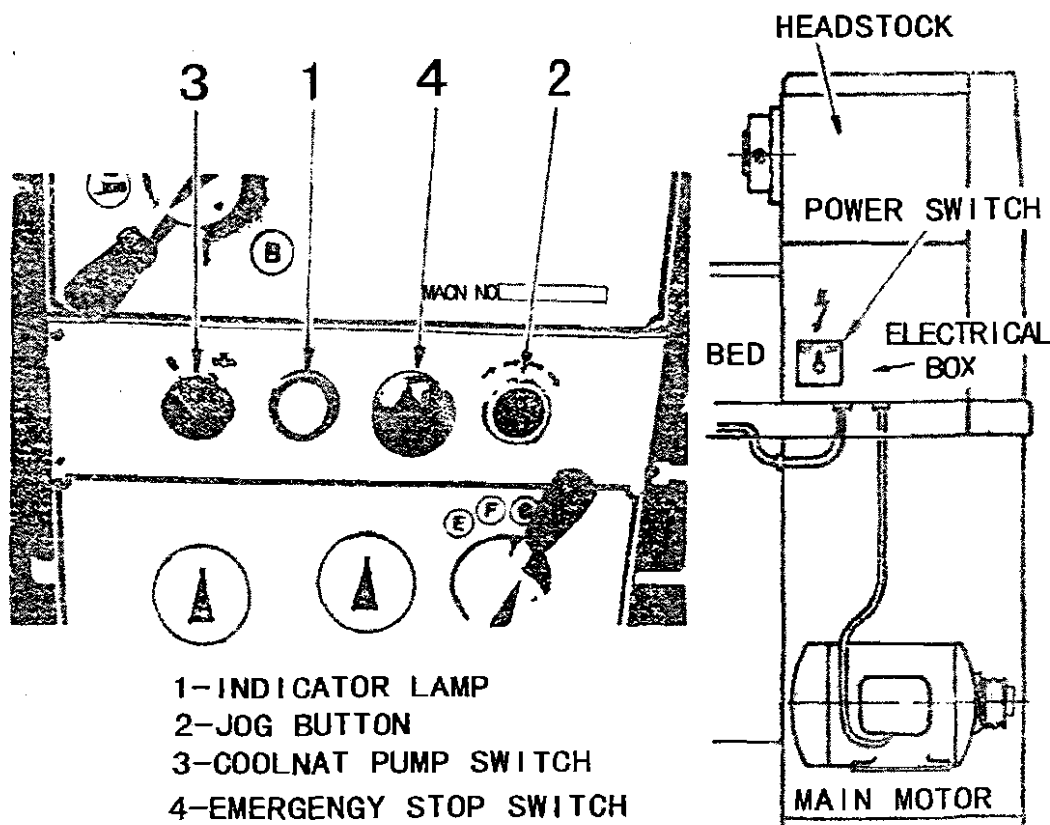


Fig.10

11. Speed Controls (2 Speed Motor)

Spindle speeds: Selected by the two lever controls and electrical switch, on the headstock and stand. The sixteen available speeds are shown directly on the data plate. While the electrical switch set at (1) position, the small lever rotated right-hand side, it provides speeds from 1800-510r.p.m., and rotated to left-hand side, it provides speeds from 330-90r.p.m. Then move the large lever to the appropriately colored arrow aligned with the required speed on the data plate. While the electrical switch set at (2) position, it provides speeds from 900-255 R.P.M. and 165-45 R.P.M. When the small lever set at upper or bottom position, the spindle is free for hand rotation.

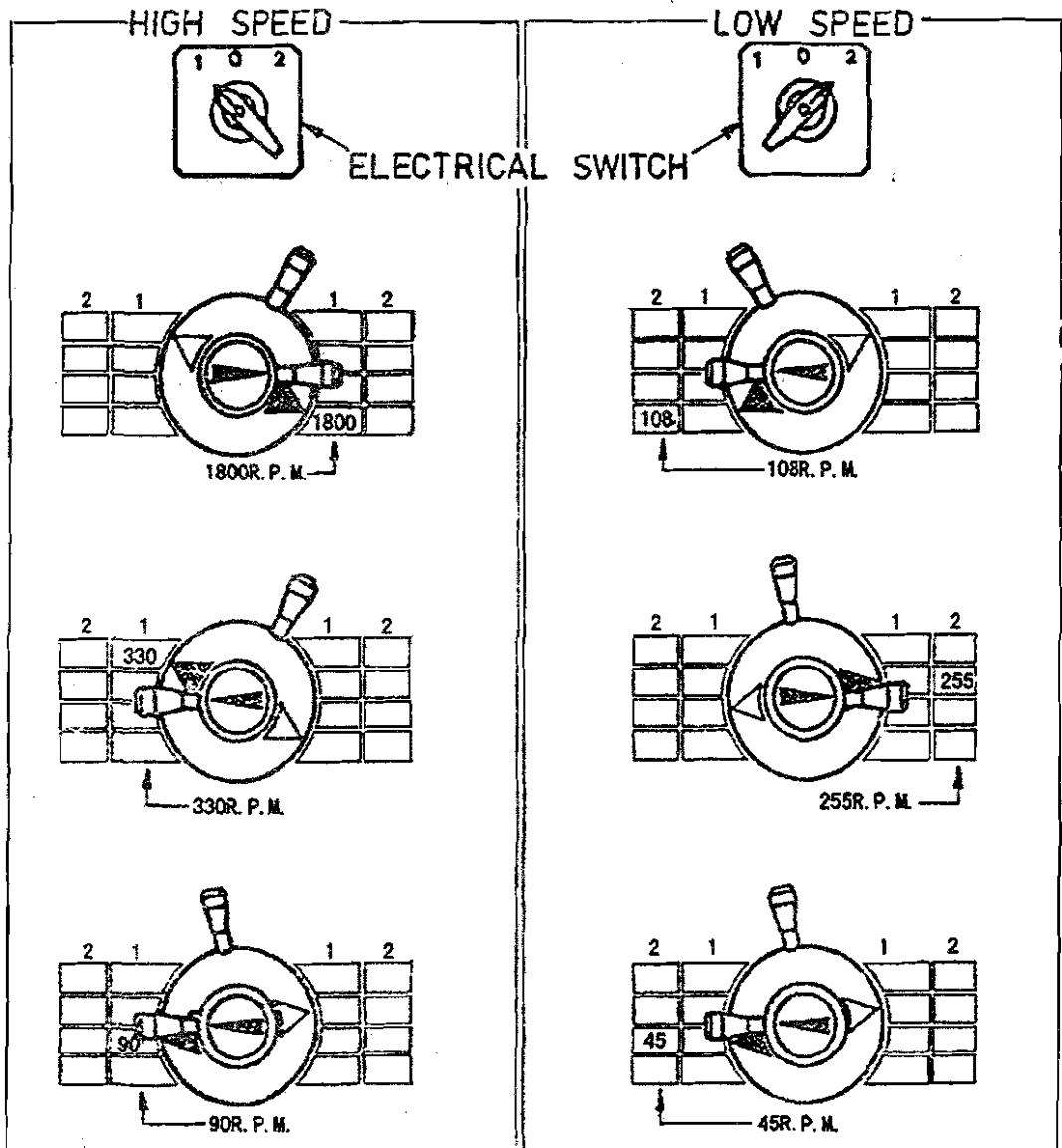


Fig.11

12. Threading Dial Indicator

A. Whitworth threads

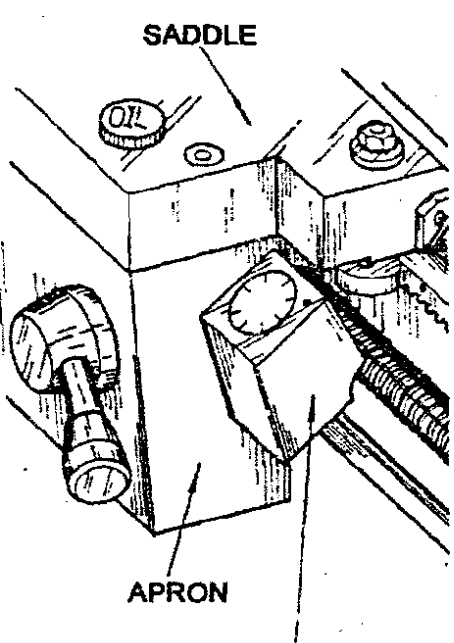
Located on right-hand side of the apron on lathes having an Imperial leadscrew. Engage the indicator pinion with the leadscrew and tighten the hand nut to retain indicator in engagement.

To cut threads of an even number per inch, close the leadscrew nut as ANY line on the dial passes the datum mark. To cut threads of odd numbers per inch, close the leadscrew nut at any NUMBERED line.

Fractional threads of 1/2 or 1/4 T.P.I. may be cut by closing the nut at the SAME numbered line on each pass of the tool.

This dial cannot be used with an Imperial leadscrew to cut metric threads, or fractional threads. For these the leadscrew nut must be kept closed and the machine reversed by use of the changeover switch, after each cutting pass and tool with drawl.

Leadscrew Pitch 4T.P.I
Leadscrew Pitch 6mm



THREADIGN DIAL INDICATOR

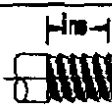

		INDICATOR TABLE		
 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 56, 60, 72	 ANY POSITION			1
2, 6, 10, 14, 18, 22, 26, 30, 54	NON NUMBERED POSITION			
3, 5, 7, 9, 11, 13, 15, 19, 23, 27	NUMBERED POSITION 1, 2, 3, 4			
2 1/2, 3 1/2, 4 1/2, 7 1/2, 11 1/2, 13 1/2	POSITION 1, 3 OR 2, 4			
2 1/4, 2 3/4, 3 1/4, 3 3/4	POSITION 1 ONLY			
2 1/8	SAME METRIC THREADS CUTTING			

Fig.12

B. Metric threads

Same as above when a Metric Screw is installed.

To provide for the various pitches of metric threads, several gears having different numbers of teeth are mounted on the lower end of the shaft. The

vertical position of the thread dial indicator is changed as required so that the correct gear for the pitch of the thread to be cut will mesh with the leadscrew.

Each graduation on the dial is marked with a letter, which indicates the points at which the half nuts may be engaged for certain threads. A diagram is supplied with the thread dial to show which gear and graduations must be used for each pitch of metric screw thread.

13. Chucks and Chucks Mounting

When fitting chucks or faceplates, first ensure that spindle and chuck tapers are scrupulously clean and that all cams lock in the correct positions; see Fig.12. it may be necessary to re-set the cam lock studs (A) when mounting a new chuck. To do this, remove the cap-head locking screws (B) and set each stud so that the scribed ring (C) is flush with the rear face of the chuck-with the slot lining up with the locking screw hole. See Fig.13.

Now, mount the chuck or faceplate on the spindle nose and tighten the three cams in turn. When fully tightened, the cam lock line on each cam should be between the two V marks on the spindle nose. If any of the cams do not tighten fully within these limit

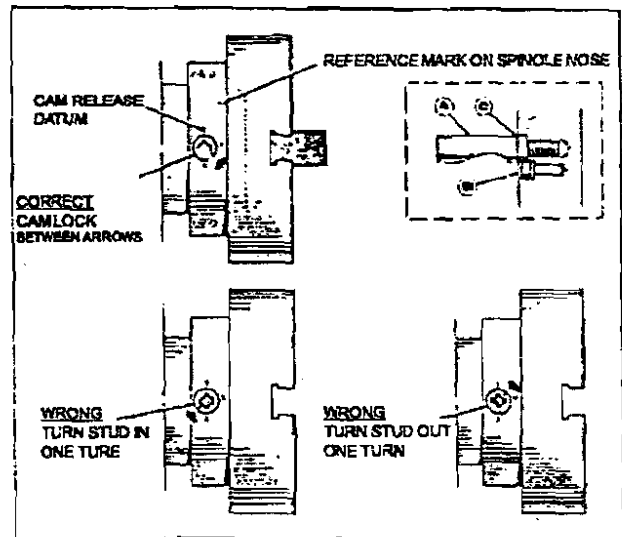
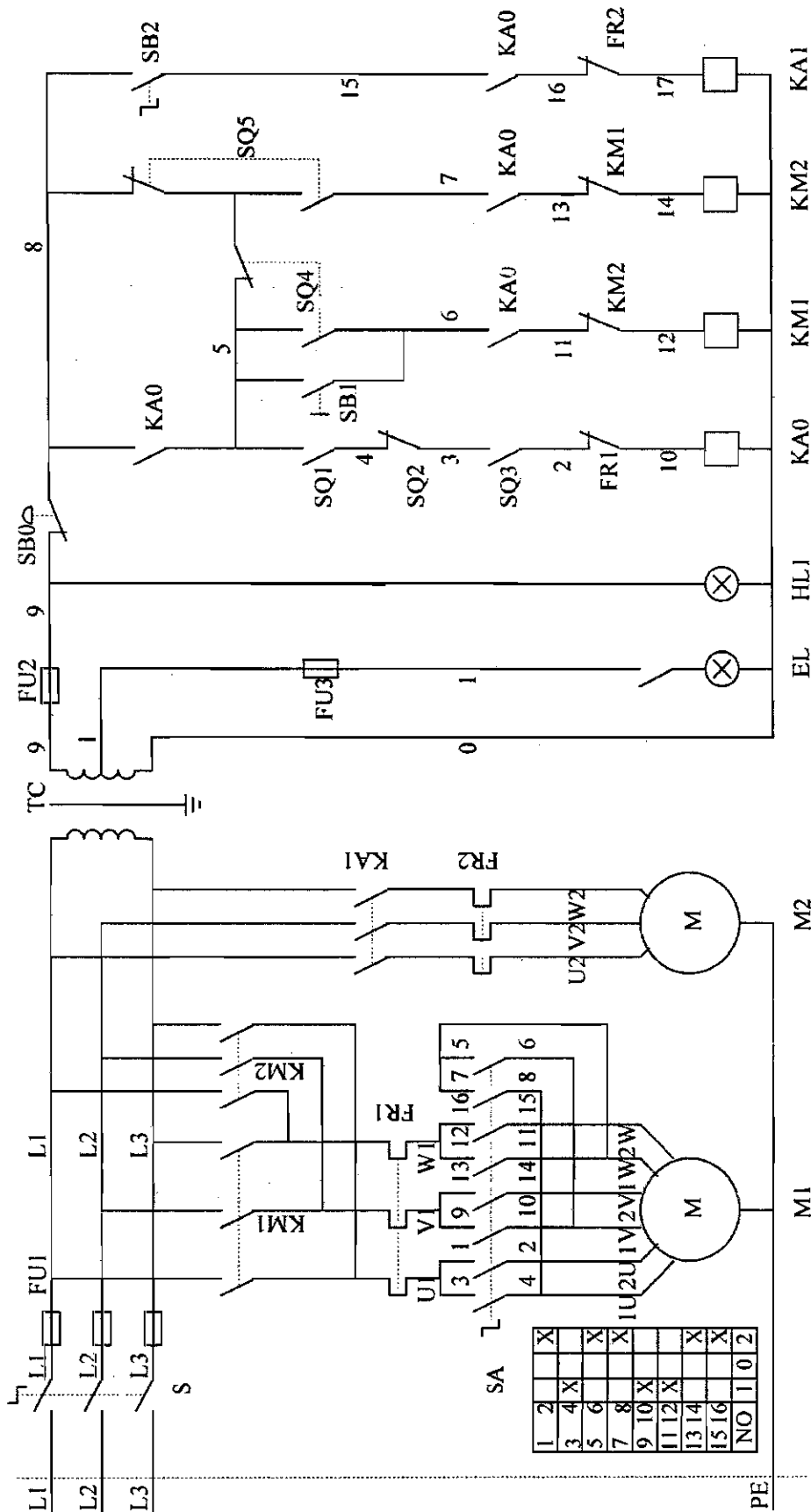


Fig.13

marks, remove the chuck or faceplate and re-adjust the stud as indicated in the illustration. Fit and tighten the locking screw (B) at each stud before remounting the chuck for work. A reference mark should be made on each correctly fitted chuck or faceplate to coincide with the reference mark scribed in the spindle nose. This will assist subsequent remounting.

IMPORTANT: Do Not Interchange Chucks or Face Plates Between Lathes Without Checking For Correct Cam Locking.

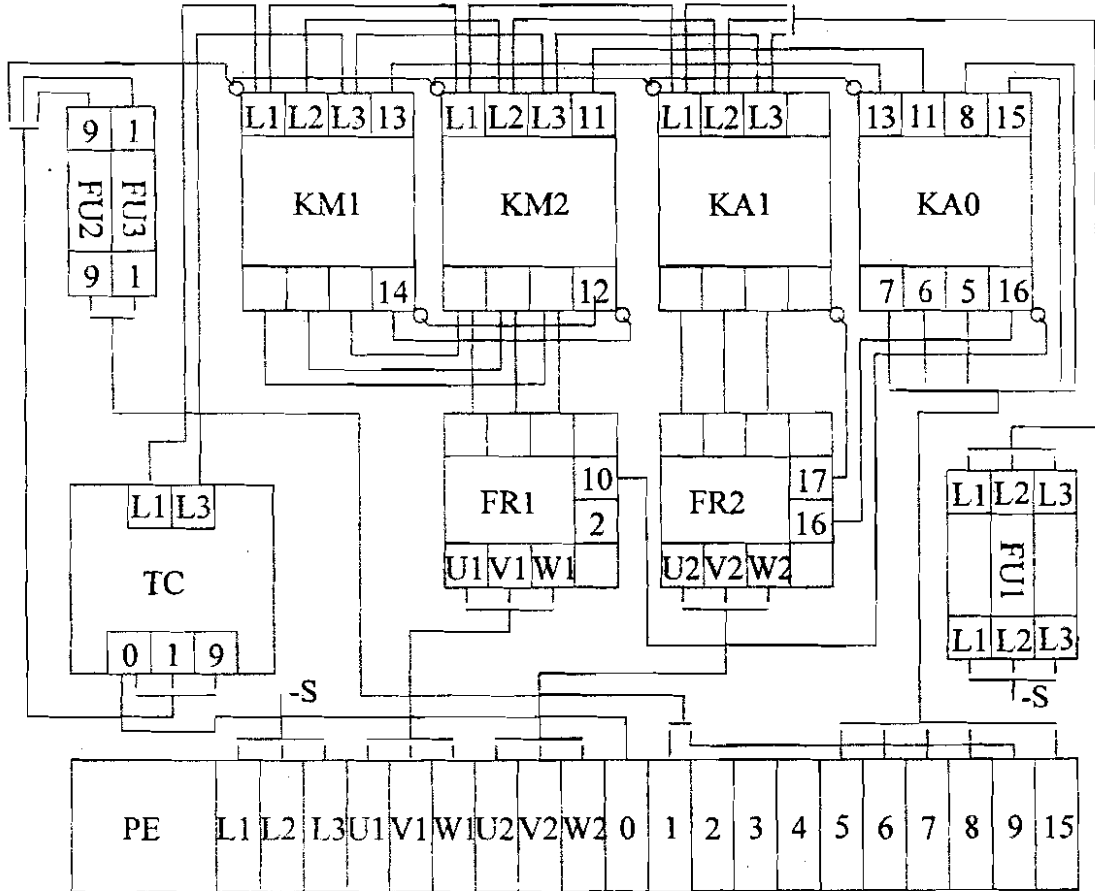
14. Electric Circuit Control



WIRING DIAGRAM

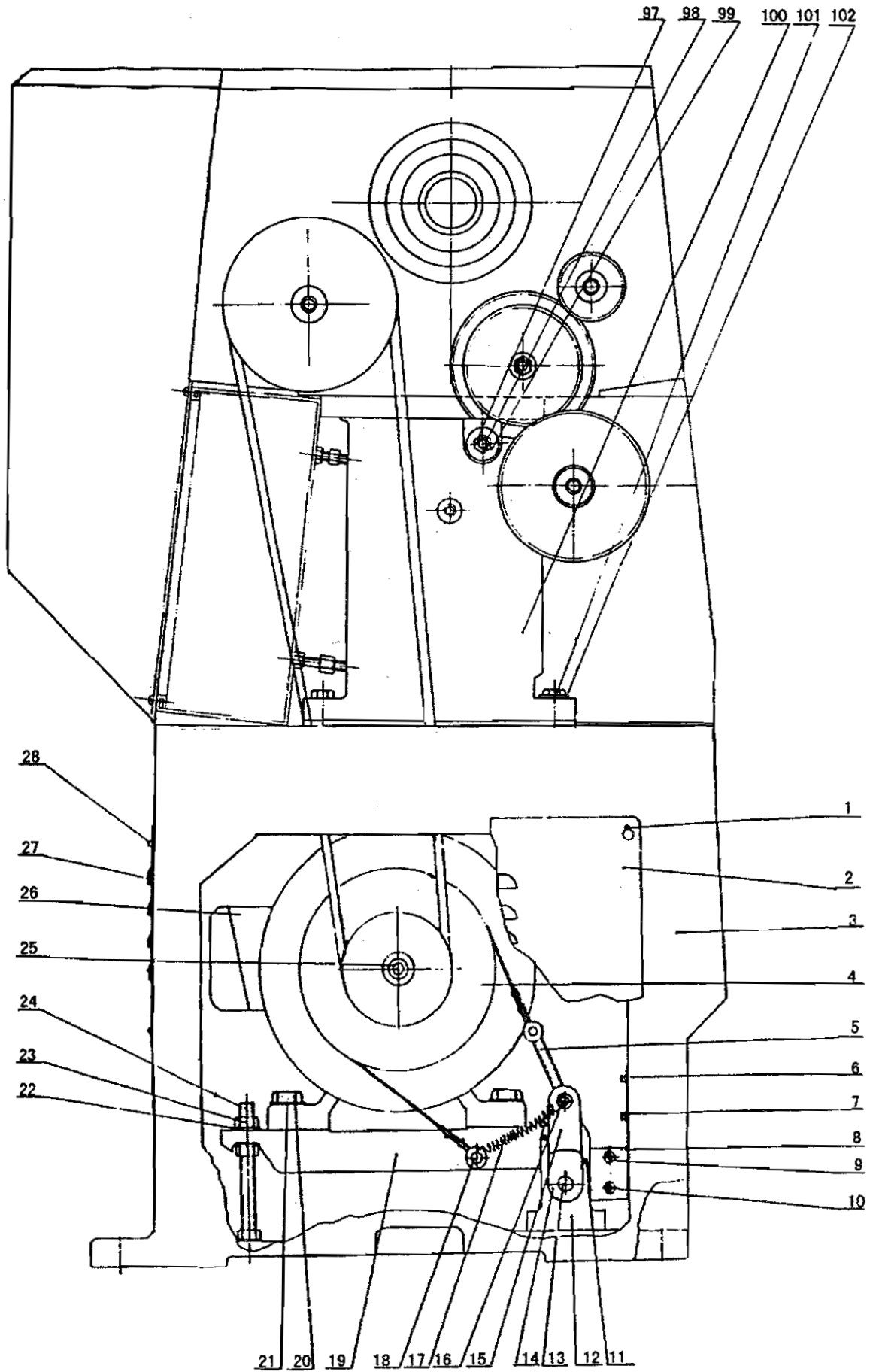
1	2	X			
3	4	X	X		
5	6	X			
7	8	X			
9	10	X			
11	12	X			
13	14	X			
15	16	X			
NO	1	0	2		

Electric Board Diagram

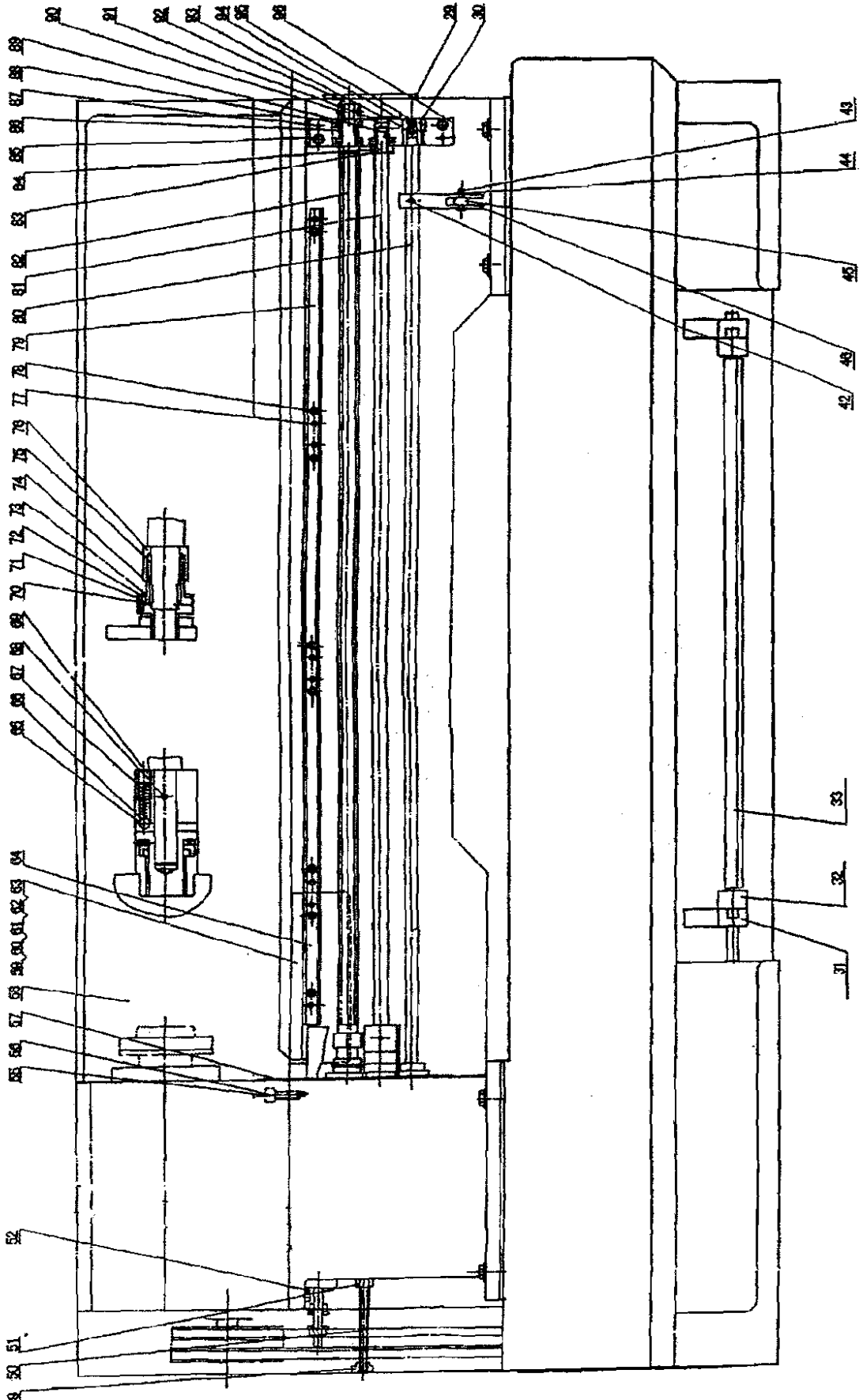


Code	Name	Function	Electric Rating
M1	AC 3PH Motor	Spindle	YD132M-8/4 3/4.5KW 400V50HZ
M2	Pump	Coolant	AB25 90W 400V50HZ
FU1	Fuse	Main Circuit Protection	RT18 32A
FU2	Fuse	Control Circuit Protection	RT18 5A
FU3	Fuse	Working Lamp Protection	RT18 3A
S	Switch	Power On/Off	LW8GS-25/4-2
SA	Switch	High/Lower Speed	LW8PS-25/4D305
TC	Transformer	Control Voltage	JBK3-160 400V/24V
KM1	Ac Contactor	Forward Control	3TB4322 24V50HZ
KM2	Ac Contactor	Reverse Control	3TB4322 24V50HZ
KA0	Relay	Auto Restart Protection	3TH8040 24V50HZ
KA1	Relay	Pump Control	3TH8040 24V50HZ
FR1	Thermo relay	M1 Overload Protection	3UA5240 10-16A
FR2	Thermo relay	M2 Overload Protection	3UA5040 0.25-0.4A
EL	Working Lamp	Working Lamp	JC34A 24V50W
HL1	Indicator Lamp	Power Indicator	LA58-XD 24V
SB0	Button	Emergency Stop	LA58-01ZS/1
SB1	Button	Jog Control	LA58-10
SB2	Button	Pump Switch	LA58-10X
SQ1	Limit Switch	brake Control	LXW5-11G1
SQ2	Limit Switch	Chuck Cover Protection	LXW5-11Q1
SQ3	Limit Switch	Safe Limit Switch	LW5-11M
SQ4	Limit Switch	Forward Limit Switch	LXW5-11Q1
SQ5	Limit Switch	Reverse Limit Switch	LXW5-11Q1

15. Bed Assembly (1/2)



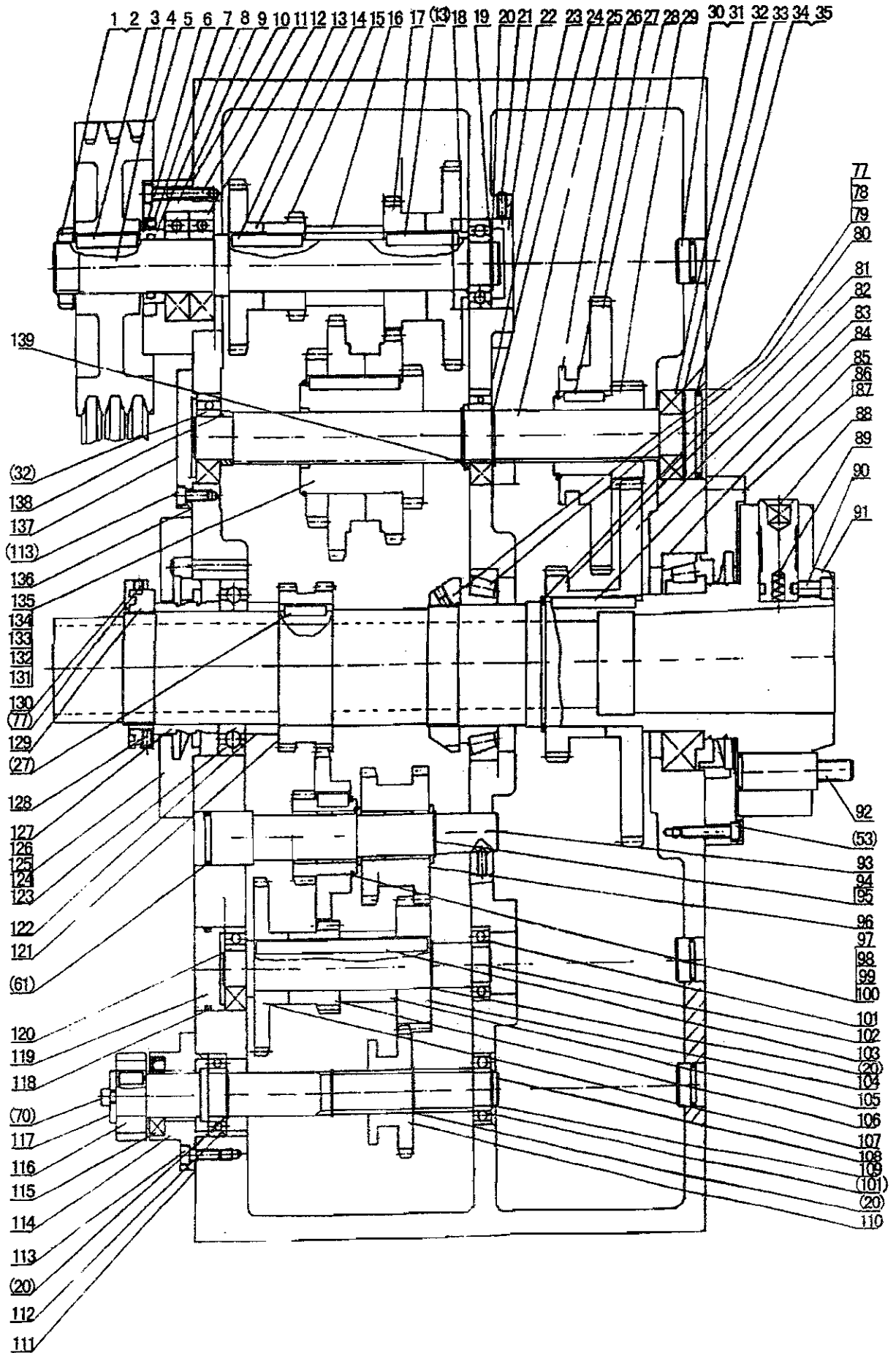
15. Bed Assembly (2/2)



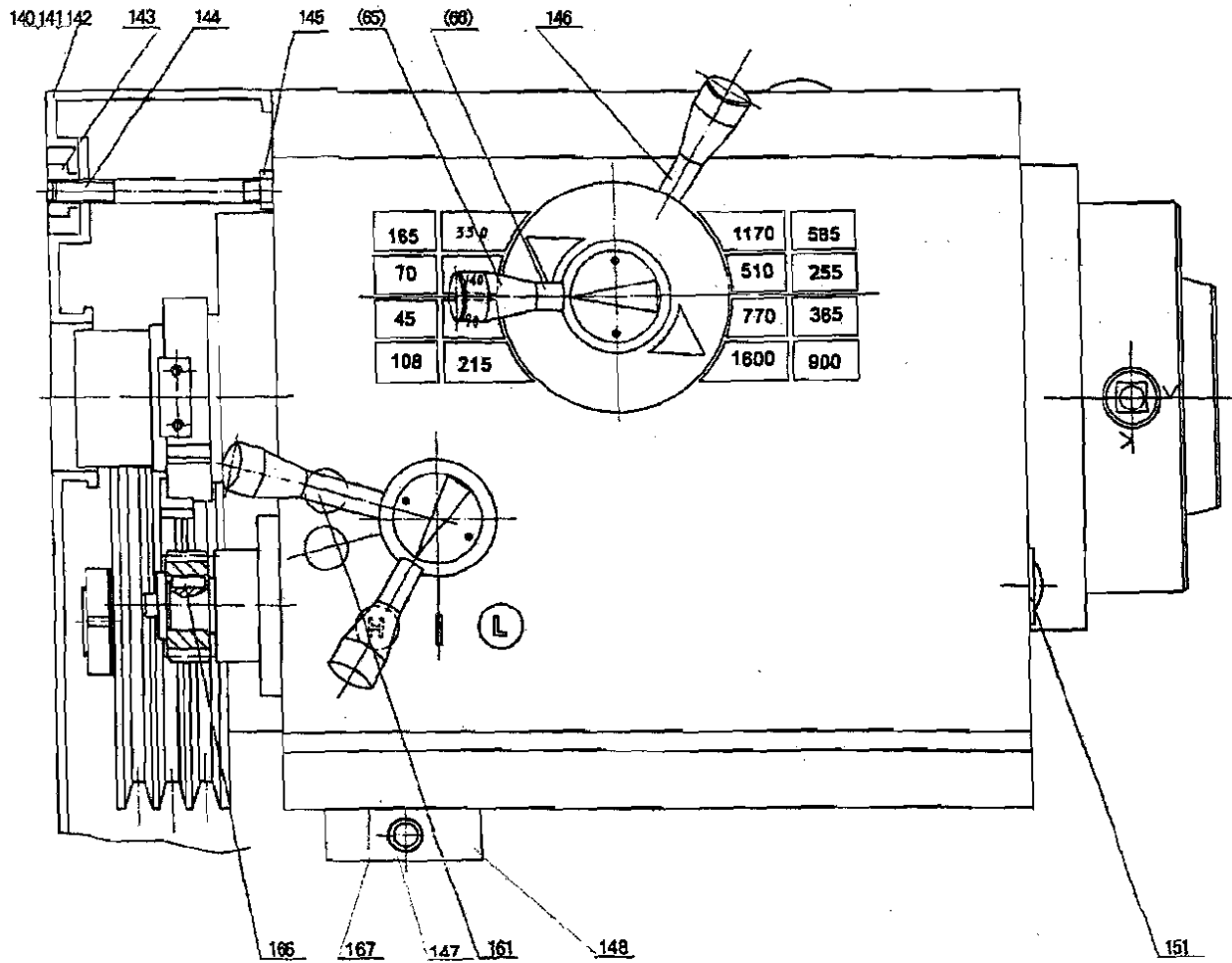
No.	Part No.	Name	Specification
1	GB818-85	Cross Screw	M6×10
2	RUN6141-106028	Cover	
3	CD6236-01-01A CD6236-01-01nb	Stand	
4	CD6236-01-05	Belt Pulley	
5	RUN6141-106047	Belt Brake	
6	GB818-85	Cross Screw	M6×10
7	GB818-85	Cross Screw	M6×10
8	CD6236-01-59	Limited Switch Seat	
9	GB6172-86	Nut	M4
10	GB818-85	Screw	M4×30
11	LXW5-11G2	Limited Switch	
12	RUN6141-106041	Bracket Motor Seat	
13	CD6236-01-50	Shaft	
14	RUN6141-106037	Cam	
15	RUN6141-106040	Arm Brake	
16	RUN6141-106039	Shaft	
17	RUN6141-106038	Spring	
18	RUN6141-106050	Shaft	
19	RUN6141-106034	Motor Seat	
20	GB30-76	Bolt	M10×40
21	GB93-86	Washer	10
22	RUN6141-106079	Washer	
23	GB41-76	Nut	M16
24	RUN6141-106046	Screw	
25	RUN6141-106049	Washer	
26	Y132M-8/4	Motor	
27	RUN6141-106028-01	Cover	
28	GB818-85	Cross Screw	M6×10
29	CD6236-01-54	Cover	
30	CD6236-01-55	Sleeve	
31	RUN6141-106036	Bracket	
32	RUN6141-106042	Arm	
33	CD6236-01-51 CD6236-01-51N1	Pedal Brake	
42	GB77-85	Screw	M8×8
43	CD6236-01-21	Pin	
44	GB896-86	Circlip	6
45	CD6236-01-22	Rod	
46	CD6236-01-23	Lever	
49	CL6132-04-77	Nut	
50	CD6236-01-24	Bolt	
51	GB54-76	Nut	M10
52	GB21-76	Bolt	M12×40
55	GB70-85	Socket Head Cap Screw	M12×40
56	GB70-85	Pin	12×30
57	CD6236-01-25	Cover	
58	CD6236-01-26	Guard Assay	
59	CD6236-01-27	Gap Block	

No.	Part No.	Name	Specification
60	GB70-85	Socket Head Cap Screw	M10×45
61	GB881-86	Taper Pin	8×85
62	GB53-76	Nut	M8
63	GB70-85	Socket Head Cap Screw	M8×50
64	CD6236-01-28	Rack	
65	CD6236-01-29	Clutch	
66	GB308-84	Steel Ball	8
67	GB117-86	Taper Pin	5×45
68	GB2089-80	Spring	1.2×6×46
69	GB77-85	Screw	M10×10
70	CD6236-01-30	Sleeve	
71	CD6236-01-31	Pin	
72	CD6236-01-32	Washer	
73	GB894.2-86	External circlip	28
74	GB1567-86	Key	5×16
75	GB2089-80	Spring	1.8×2.5×55
76	CD6236-01-33	Cover	
77	GB70-85	Socket Head Cap Screw	M6×30
78	GB879-86	Spring Pin	6×30
79	CD6236-01-34	Rock	
80	CD6236-01-35	Started Rod	
	CD6236-01-35N1		
81	CD6236-01-36	Feed Rod	
	CD6236-01-36 N1		
82	CD6236-01-37	Lead Screw(Inch)	
	CD6236-01-37 N1		
82	CD6236-01-37G	Lead Screw(Metric)	
	CD6236-01-37G N1		
83	CD6236-01-38	Sleeve	
84	GB77-85	Set Screw	M6×6
85	GB70-85	Socket Head Cap Screw	M8×35
86	CD6236-01-39	Sleeve	
87	GB117-86	Taper Pin	6×50
88	GB301-84	Thrust Bearing	8203
89	CD6236-01-40	Sleeve	
90	GB78-85	Set Screw	M6×8
91	CL6132-06-11	Plug	
92	CD6236-01-41	Nut	
93	GB308-84	Steel Ball	9.5
94	GB2089-80	Spring	1×9×20
95	GB77-85	Set Screw	M12×8
96	CD6236-01-42	Bracket	
97	CD6236-01-43	Screw	
98	GB41-76	Nut	M14
99	CD6236-01-44	Washer	45
100	CD6236-01-45	Bed	
	CD6236-01-45N1		
101	GB5783-86	Bolt	M12×45
102	GB97.1-86	Washer	12

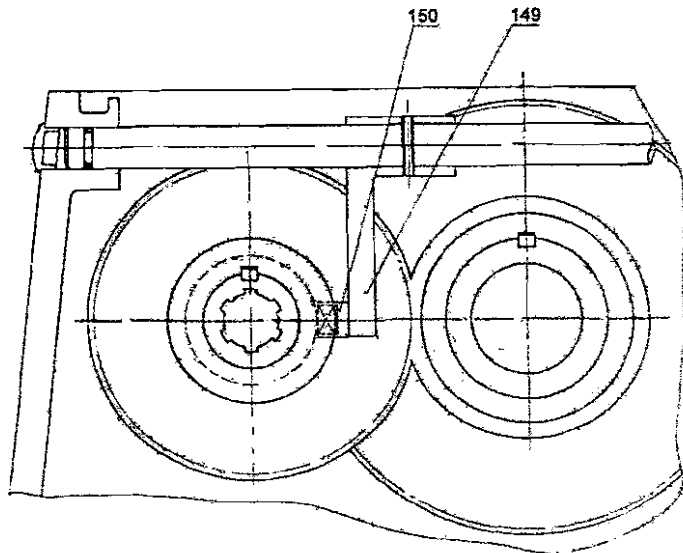
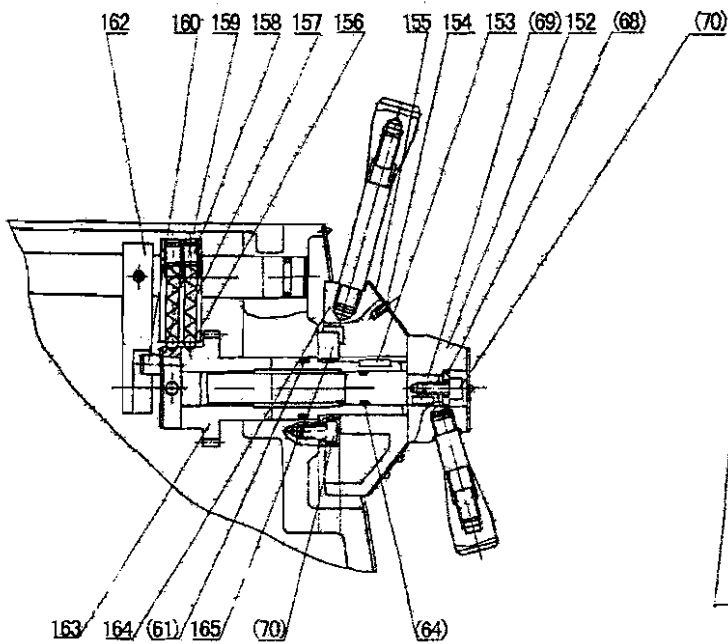
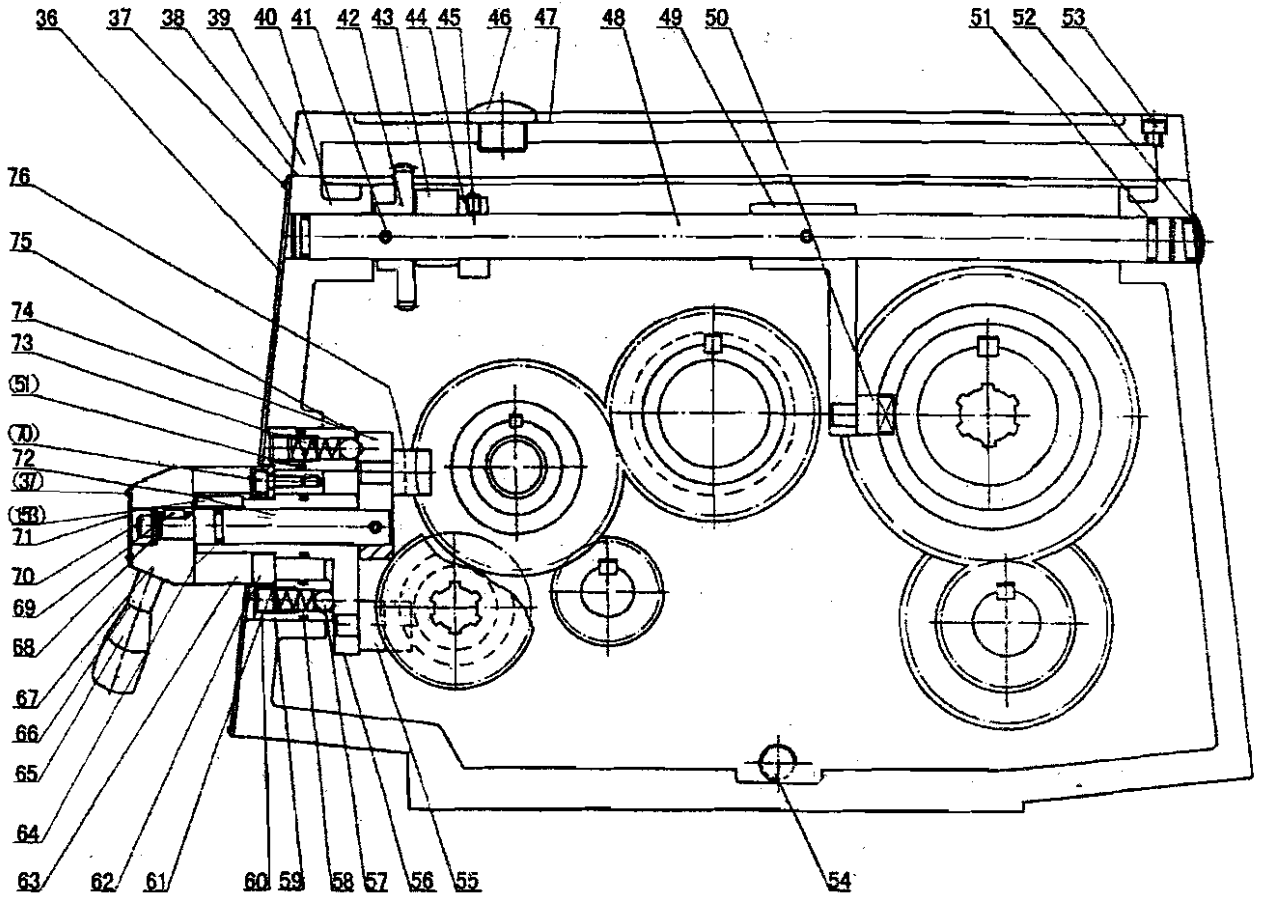
16. Headstock Assembly (1/3)



16. Headstock Assembly (2/3)



16. Headstock Assembly (3/3)



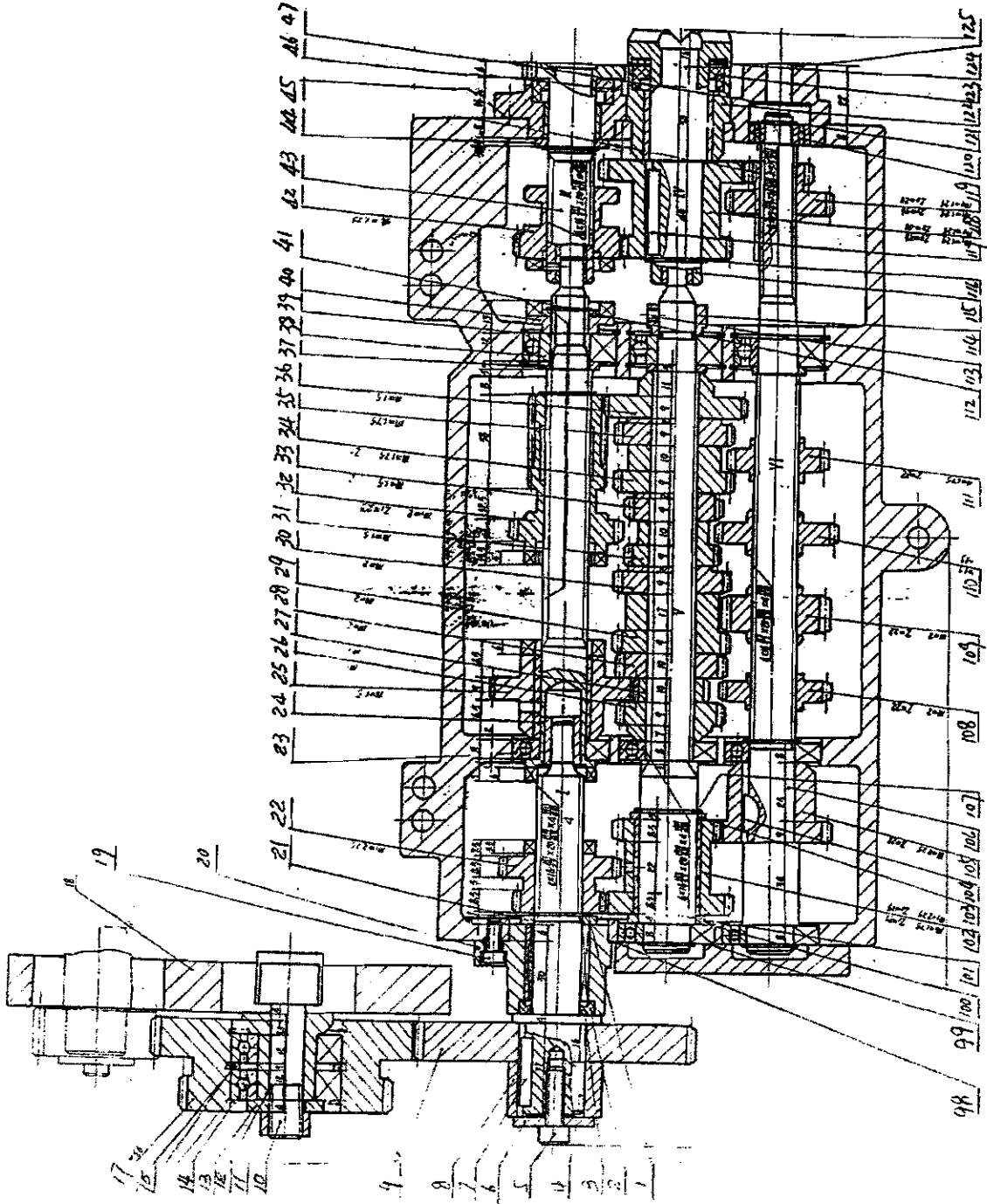
No.	Part No.	Name	Specification
1	GB812-88	Nut	M30×1.5
2	GB858-88	Toothed Lock Washer	30
3	GB1096-79	Key	8×40
4	CD6236-04-01	Shaft	
5	CD6236-04-02	Belt Pulley	
6	RUN6246-101009	Spacer	
7		Oil Seal	TC55×42×9
8	GB1235-76	O-Ring	36×3.5
9	RUN6246-101010	Bearing Cover	
10	RUN6246-101010-1	Packing	
11	GB70-85	Socket Head Cap Screw	M6×40
12	GB278-89	Ball Bearing	80206
13	GB1096-79	Key	8×50
14	CD6236-04-03	Gear	
15	CD6236-04-04	Gear	
16	CD6236-04-05	Sleeve	
17	CD6236-04-06	Gear	
18	CD6236-04-07	Gear	
19	GB278-89	Ball Bearing	80205
20	GB894.1-86	External Circlip	25
21	GB78-85	Fix Screw	M5×16
22	CD6236-04-08	Plug	
23	GB276-89	Ball Bearing	E206
24	GB894.1-86	External Circlip	30
25	CD6236-04-09	Shaft	
26	GB894.1-86	External Circlip	45
27	GB1096-79	Key	8×30
28	CD6236-04-10	Gear	
29	CD6236-04-11	Gear	
30	CL6132-04-40	Plug	
31	GB3452.1-82	O-Ring	19×2.65
32	GB278-89	Ball Bearing	80305
33	GB893.1-86	External Circlip	62
34	CD6236-04-12	Cover	
35	GB1235-76	O-Ring	56×3.5
36	CD6236-04-13	Plate	
37	GB818-85	Cross Recessed Head Screw	M3×15
38	CD6236/6240-04-14	Packing(360/410)	
39	CD6236/6240-04-15	Headstock Cover(360/410)	
40	CD6236/6240-04-16	Headstock(360/410)	
41	GB879-85	Spring Pin	5×30
42	CD6236-04-17	Gear	
43	CD6236-04-18	Bracket	
44	CL6132-04-99	Sleeve	
45	GB80-85	Fix Screw	M6×10
46	CL6132-04-06	Plug-Oil Inlet	

No.	Part No.	Name	Specification
47	CD6236-04-19	Cover Dress	
48	CD6236-04-20	Shaft	
49	CD6236-04-21	Lever	
50	CD6236-04-22	Fork	
51	GB3452.1-82	O-Ring	14×2.65
52	CL6132-04-03	Plug	
53	GB70-85	Socket Head Cap Screw	M6×30
54	Q/ZB285.3	Oil Plug	ZG 3/8"
55	CD6236-04-23	Fork	
56	CD6236-04-24	Lever	
57	GB308-84	Steel Ball	φ 10
58	GB2089-80	Spring	0.9×9×35
59	CD6236-04-25	Bracket	
60	GB77-85	Fix Screw	M12×10
61	GB1235-76	O-Ring	28×3.1
62	CD6236-04-26	Cover	
63	CD6236-04-27	Lever Head	
64	GB3452.1-82	O-Ring	10×2.65
66	CD6236-05-63A	Lever	
67	CD6236-04-28	Lever Head	
68	CL6132-04-62	External Circlip	
69	GB1096-79	Key	4×10
70	GB70-85	Socket Head Cap Screw	M6×12
71	CL6132-04-90	Plate	
72	CD6236-04-29	Shaft	
73	GB2089-80	Spring	0.9×9×40
74	CD6236-04-30	Lever	
75	CD6236-04-31	Bracket	
76	CD6236-04-32	Fork	
77	GB77-85	Fix Screw	M6×8
78	CD6236-04-33	Set Nut	
79	CD6236-04-34	Fix Black	
80	GB297-84	Taper Roller	D2007114E
81	GB894.1-86	External Circlip	75
82	CD6236-04-35	Gear	
83	CD6236-04-36	Gear	
84	GB1096-79	Key	8×60
85	GB297-84	Taper Roller	D2007116E
86	CD6236-04-37	Cover	
87	CD6236-04-38	Packing	
88	RUN6246-101081	Cam Lock	
89	RUN6246-101082-1	Spring	
90	RUN6246-101087	Screw	
91	CD6236-04-39	Spindle	D1-6
92	RUN6246-101082	Cam Lock Stud	

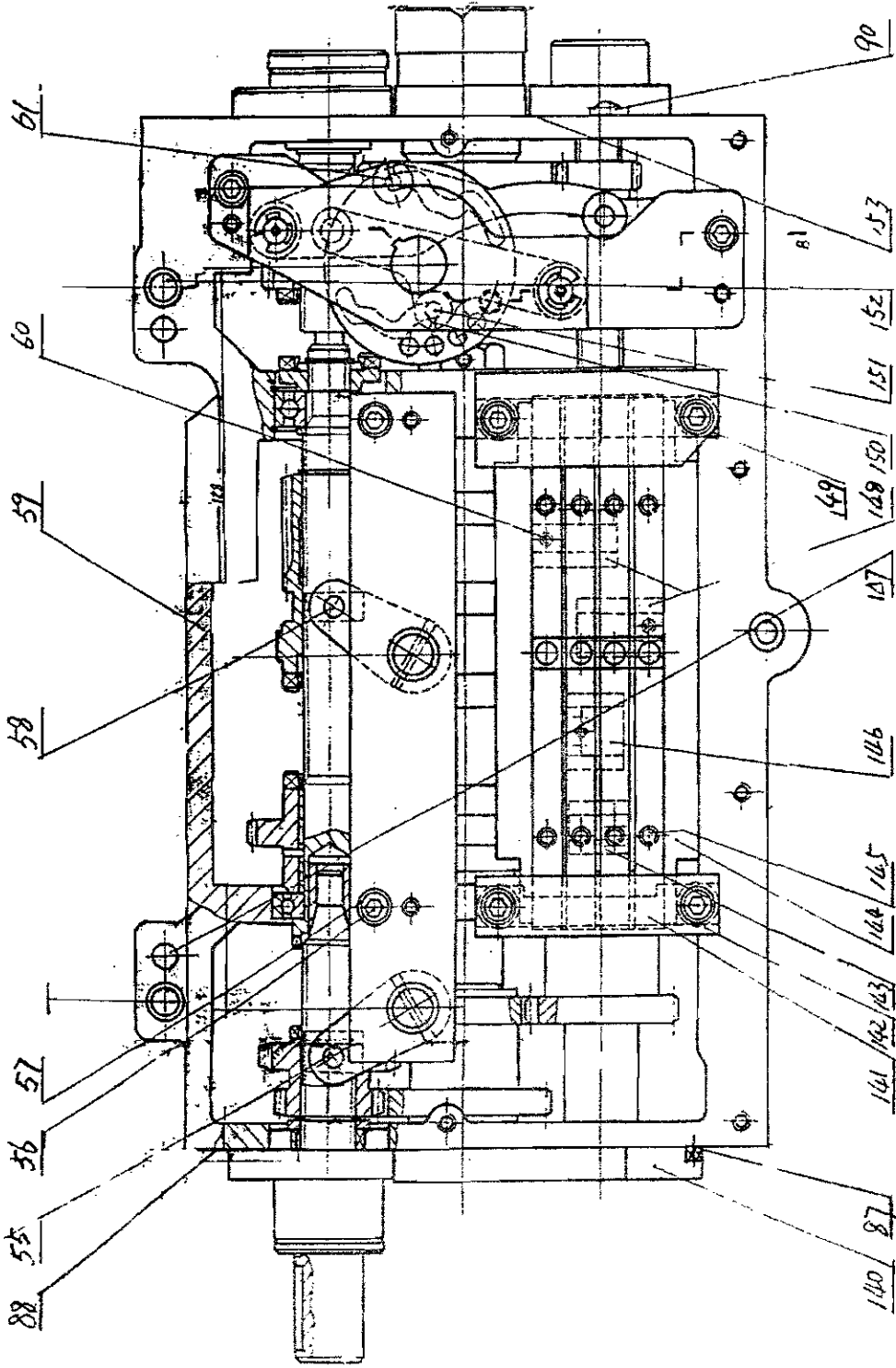
No.	Part No.	Name	Specification
93	CD6236-04-40	Shaft	
94	CD6236-04-41	Spacer	
95	GB894.1-86	External Circlip	22
96	CD6236-04-42	Gear	
97	CD6236-04-43	Gear	
98	CD6236-04-44	Gear	
99	GB1096-79	Key	5×20
100	GB894.1-86	External Circlip	42
101	GB278-89	Ball Bearing	80104
102	CD6236-04-45	Shaft	
103	GB1096-79	Key	8×115
104	CD6236-04-46	Gear	
105	CD6236-04-47	Sleeve	
106	CD6236-04-48	Gear	
107	CD6236-04-49	Gear	
108	CD6236-04-50	Shaft	
109	GB894.1-86	External Circlip	20
110	CD6236-04-51	Gear	
111	CD6236-04-52	Packing	
112	GB278-89	Ball Bearing	80105
113	GB70-85	Socket Head Cap Screw	M6×14
114	CD6236-04-52	Cover	
115	HG4-692-67	Oil Seal	SD25×40×10
116	CD6240-04-53G1	Change Gear	Metric(33T)
116	CD6236-04-53	Change Gear(360)	Inch(24T)
116	CD6240-04-53	Change Gear(410)	Inch(24T)
117	CD6236-04-54	Spacer	
118	GB1235-76	O-Ring	46×3.5
119	CD6236-04-55	Cover	
120	GB278-89	Ball Bearing	80204
121	CD6236-04-56	Gear	
122	CD6236-04-57	Sleeve	
123	GB276-89	Ball Bearing	E213
124	CD6236-04-58	Cover	
125	CD6236-04-59	Packing	
126	GB70-85	Socket Head Cap Screw	M6×25
127	CD6236-04-60	Cycle Oil Ring	
128	GB77-85	Fix Screw	M6×10
129	CD6236-04-61	Set Nut	
130	CD6236-04-62	Balance Piece	
131	CD6236-04-63	Gear	
132	CD6236-04-64	Gear	
133	CD6236-04-65	Gear	
134	CD6236-04-66	Gear	
135	GB894.1-86	External Circlip	65
136	CD6236-04-67	Packing	

No.	Part No.	Name	Specification
137	CD6236-04-68	Cover	
138	CD6236-04-69	Spacer	
139	CD6236-04-70	Spacer	
140	CD6236-04-71	Plate	
141	CD6236-04-72	Cover(360)	
141	CD6240-04-72	Cover(410)	
142	GB818-85	Screw	M3×8
143	CL6132-04-77	Nut	
144	GB900-88	Bolt	M10×85
145	GB6172-86	Nut	M10
146	CD6236-05-63A	Lever	
147	GB70-85	Screw	M12×20
148	CD6236-04-73	Limited Bracket	
149	CD6236-04-74	Bracket	
150	CL6132-04-76	Fork	
151	GB1160.1-86	Oil Sight	16
152	CL6132-04-91	Lever Bracket	
153	GB1096-79	Key	5×18
154	GB827-86	Rivet	2×5
155	CL6132-04-92	Plate	
156	GB308-84	Steel Ball	6.5
157	GB2089-80	Spring	1×5×22
158	GB77-85	Screw	M8×12
159	CD6236-04-75	Lever Shaft	
160	CL6132-04-94	Pin	
161	CD6236-05-63A	Lever	
162	CD6236-04-76	Bracket	
163	CD6236-04-77	Gear Shaft	
164	CL6132-04-98	Lever Bracket	
165	CL6132-04-68	Cover	
166	GB1096-79	Key	6×14
167	CL6132-04-82	Adjust Screw	

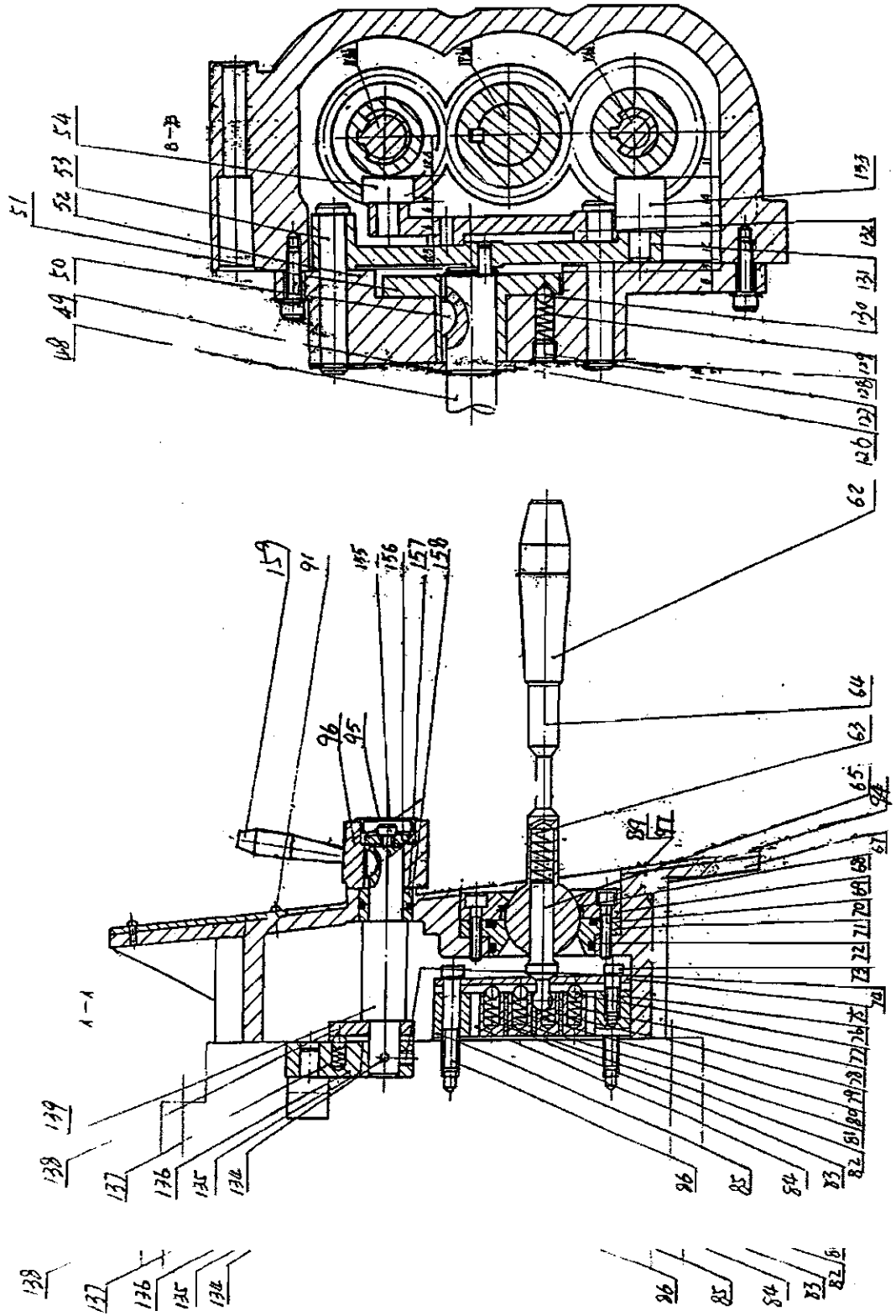
17. Gear Box Control (1/3)



17. Gear Box Control (2/3)



17. Gear Box Control (3/3)



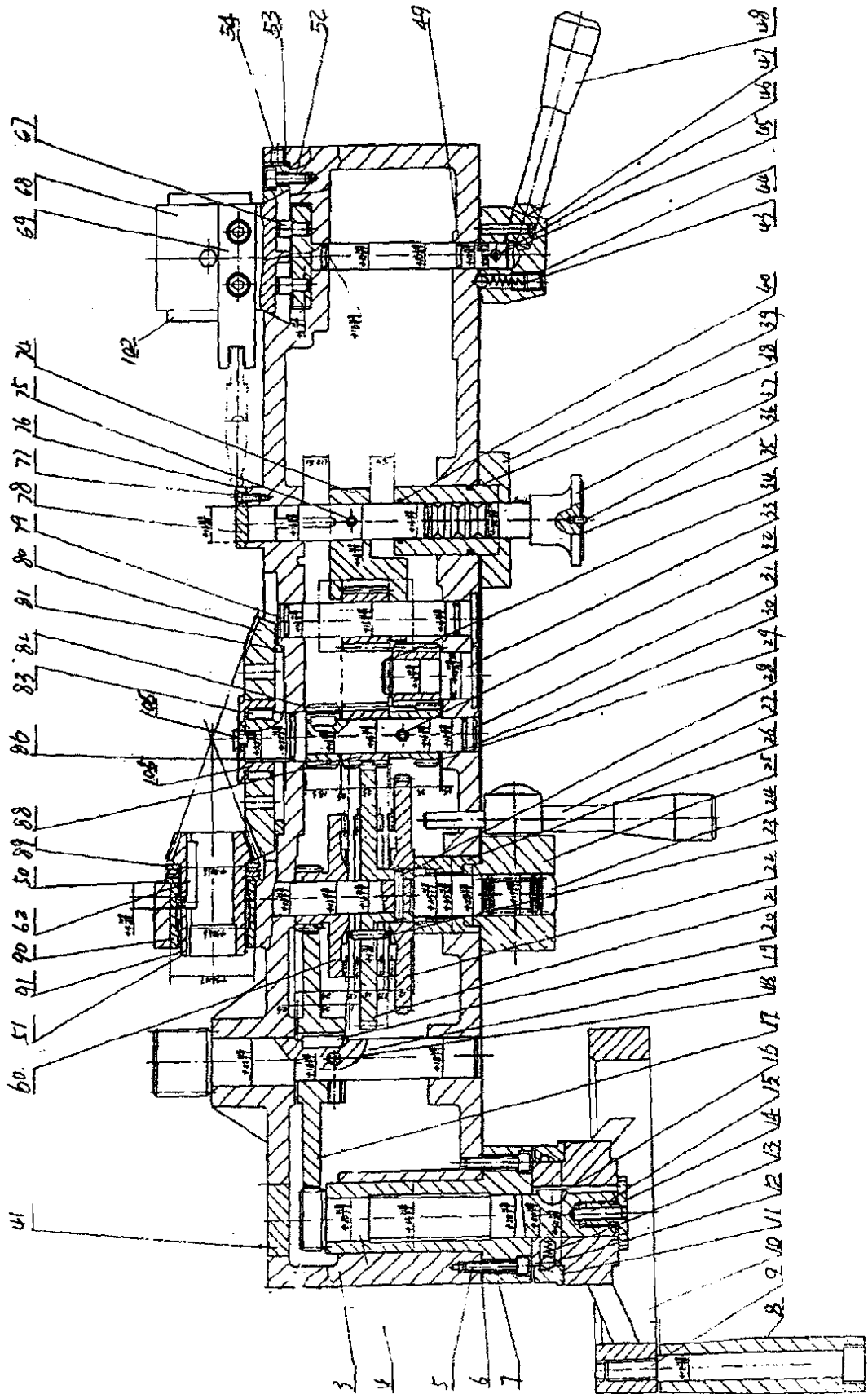
No.	Part No.	Name	Specification
1	GB894.1-86	Circlip	20
2	GB290-64	Roller Bearing	943/20
3	HG4-692-67	Oil Seal	PD20×35×10
4	CD6236-05-01	Shaft	
5	GB70-85	Socket Head Cap Screw	M8×16
6	CD6236-05-02	Washer	
7	GB1096-79	Key	8×28
8	CD6236-05-03	Sleeve	
9	CD6240-05-04G1	Change Gear	Metric(54T)
9	CD6236-05-04	Change Gear(360)	Inch(57T)
9	CD6240-05-04	Change Gear(410)	Inch(57T)
10	CD6236-05-05	Shaft	
11	GB6172-86	Nut	M14
12	CD6236-05-06	Sleeve	
13	GB97.1-84	Washer	14
14	GB279-88	Roller Bearing	160105
15	GB893.1-86	Circlip	47
17	CD6240-05-09G1	Change Gear	Metric(35/48T)
17	CD6236-05-09	Change Gear(360)	Inch(44/52T)
17	CD6240-05-09	Change Gear(410)	Inch(44/52T)
18	CD6240-05-10	Swing France	
19	GB70-85	Socket Head Cap Screw	M6×16
20	CD6236-05-11	Bracket	
21	CD6236-05-12	Washer	
22	CD6236-05-13	Gear	
23	GB276-84	Ball Bearing	7000104
24	CD6236-05-14	Shaft	
25	CD6236-05-15	Gear	
26	CD6236-05-16	Gear	
27	CD6236-05-17	Gear	
28	CD6236-05-18	Gear	
29	CD6236-05-19	Gear	
30	CD6236-05-20	Gear	
31	CD6236-05-21	Gear	
32	CD6236-05-22	Gear	
33	CD6236-05-23	Gear	
34	CD6236-05-24	Gear	
35	CD6236-05-25	Gear	
36	CD6236-05-26	Gear	

No.	Part No.	Name	Specification
37	CD6236-05-27	Washer	
38	GB276-82	Ball Bearing	203
39	GB893.1-86	Circlip	40
40	CD6236-05-28	Clutch	
41	GB894.1-86	Circlip	14
42	CD6236-05-29	Clutch Gear	
43	CD6236-05-30	Shaft	
44	CD6236-05-31	Washer	
45	CD6236-05-32	Packing	
46	CD6236-05-33	Cover	
47	CD6236-05-34	Washer	
48	CD6236-05-35	Lever	
49	GB894.1-86	Circlip	17
50	GB1096-79	Key	3×12
51	CD6236-05-36	Cam	
52	CD6236-05-37	Bracket	
53	CD6236-05-38	Shaft	
54	CD6236-05-39	Fork	
55	CD6236-05-40	Fork	
56	GB70-85	Socket Head Cap Screw	M6×16
57	GB93-87	Spring Washer	6
58	CD6236-05-41	Fork	
59	CD6236-05-42	Gear Box Casting	
60	GB70-85	Socket Head Cap Screw	M5×20
61	CD6236-05-43	Fork	
62	CD6236-05-44/02	Lever	
63	GB2089-80	Spring	1×8×32
64	CD6236-05-44/01	Lever	
65	CD6236-05-46	Selector	
67	CD6236-05-48	Cover	
68	GB3452.1-82	O-Ring	30×2.65
69	CD6236-05-49	Cover	
70	GB70-85	Socket Head Cap Screw	M5×25
71	CD6236-05-50	Bracket	
72	GB3452.1-82	O-Ring	38.7×2.65
73	GB70-85	Socket Head Cap Screw	M6×16
74	GB77-85	Bracket	
75	CD6236-05-51	Set Screw	M6×5
76	CD6236-05-52	Screw	
77	GB308-84	Steel Ball	6

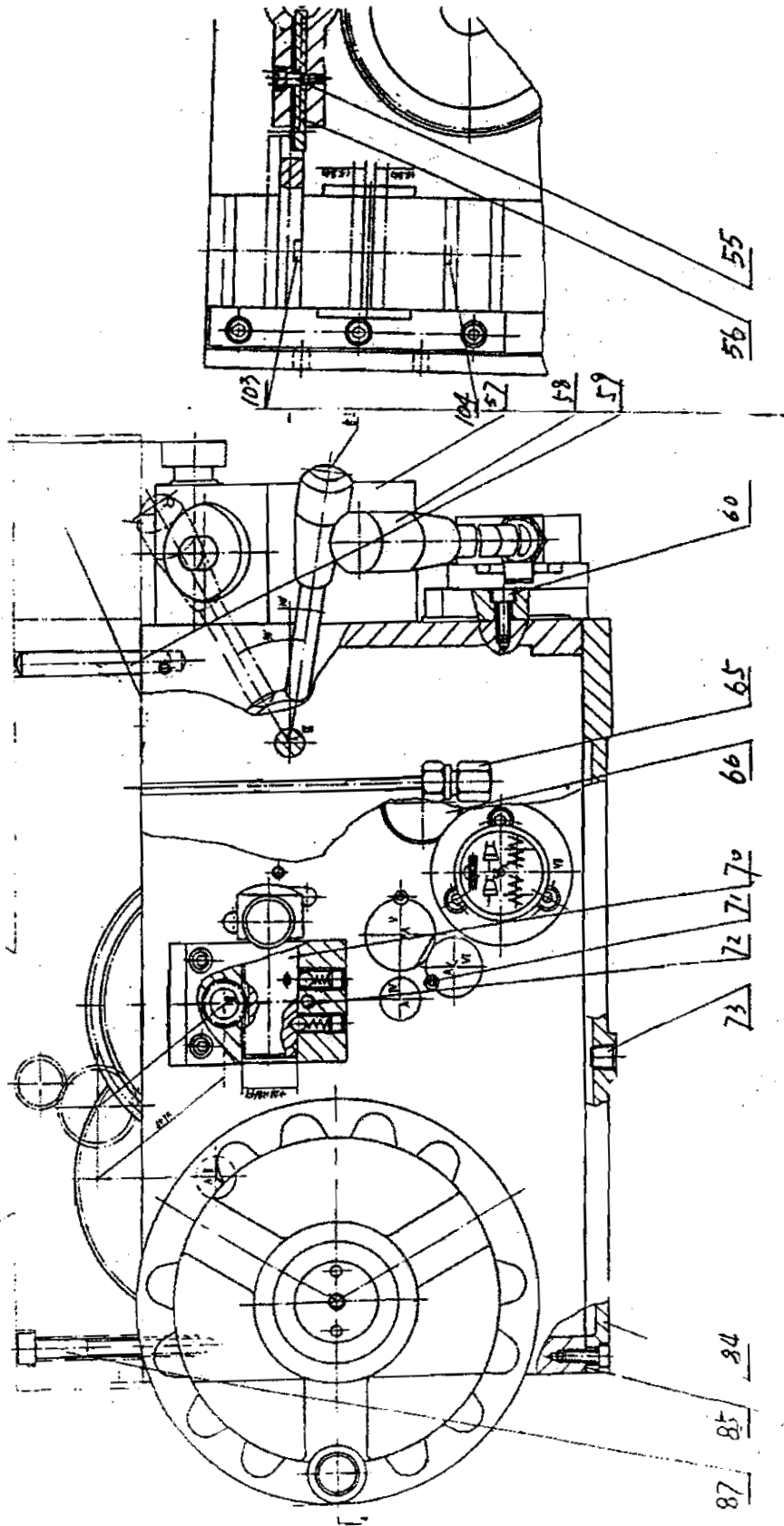
No.	Part No.	Name	Specification
78	CD6236-05-53	Fork	
79	CD6236-05-54	Fork	
80	CD6236-05-55	Fork	
81	CD6236-05-56	Fork	
82	CD6236-05-57	Drive Plate	
83	GB2089-80	Spring	0.8×5×17
84	CD6236-05-58	Top Plate	
85	CD6236-05-59	Sleeve	
86	GB70-85	Socket Head Cap Screw	M6×35
87	GB3289.31-82	Plug	ZG1/2"
88	GB3289.2-82	Oil Inlet Pip	ZG1/2"
89	GB70-85	Socket Head Cap Screw	M6×65
90	GB1160.1-89	Oil Sight Glass	20
91	GB819-85	Cross Screw	M5×8
94	CD6236-05-62	Plate	
95	CL6132-04-90	Plate	
96	CD6236-05-63	Lever	
97	GB70-85	Socket Head Cap Screw	M6×80
98	CD6236-05-64	Packing	
99	CD6236-05-65	Packing	
100	CD6236-05-66	Washer	
101	CD6236-05-67	Shaft	
102	CD6236-05-68	Gear	
103	CD6236-05-69	Washer	
104	GB1096-79	Key	5×16
105	CD6236-05-70	Gear	
106	CD6236-05-71	Shaft	
107	GB894.1-86	Circlip	25
108	CD6236-05-72	Gear	
109	CD6236-05-73	Gear	
110	CD6236-05-74	Gear	
111	CD6236-05-75	Gear	
112	CD6236-05-76	Washer	
113	GB77-85	Nut	
114	CD6236-05-77	Set Screw	M5×5
115	CD6236-05-78	Shaft	
116	GB894.1-86	Circlip	22
117	GB1096-79	Key	5×35
118	CD6236-05-79	Gear	
119	CD6236-05-80	Gear	

No.	Part No.	Name	Specification
120	GB276-86	Roller Bearing	101
121	GB894.1-86	Circlip	12
122	CD6236-05-81	Bracket	
123	HG4-692-67	Oil Seal	PD25×40×10
124	GB301-84	Thrust Bearing	8105
125	CD6236-05-82	Bracket	
126	CD6236-05-83	Washer	
127	GB77-85	Set Screw	M8×8
128	GB896-86	Circlip	8
129	GB2089-80	Spring	0.8×5×17
130	GB308-84	Steel Ball	Φ6.5
131	CD6236-05-84	Lever	
132	CD6236-05-85	Lever	
133	CD6236-05-86	Fork	
134	GB879-86	Spring Pin	4×25
135	CD6236-05-87	Packing	
136	CD6236-05-88	Lever	
137	GB2089-80	Spring	0.8×5×17
138	CD6236-05-89	Selector Bar	
139	CD6236-05-90	Shaft	
140	CD6236-05-91	Cover	
141	CD6236-05-92	Plate	
142	CD6236-05-93	Plate	
143	CD6236-05-94	Fork	
144	GB879-86	Spring Pin	5×18
145	GB879-86	Spring Pin	3×10
146	CD6236-05-95	Fork	
147	GB118-86	Taper Pin	A8×90
148	CD6236-05-96	Fork	
149	CD6236-05-97	Plate	
150	GB879-86	Spring Pin	3×4
151	CD6236-05-98	Fork	
152	GB70-85	Socket Head Cap Screw	M8×60
153	CD6236-05-99	Packing	
154	GB876-86	Cross Screw	M4×8
155	GB70-85	Socket Head Cap Screw	M5×12
156	CD6236-05-10	Washer	
157	CD6236-05-101	Sleeve	
158	GB3452.1-82	O-Ring	16×2.65
159	CD6236-05-63A	Lever	

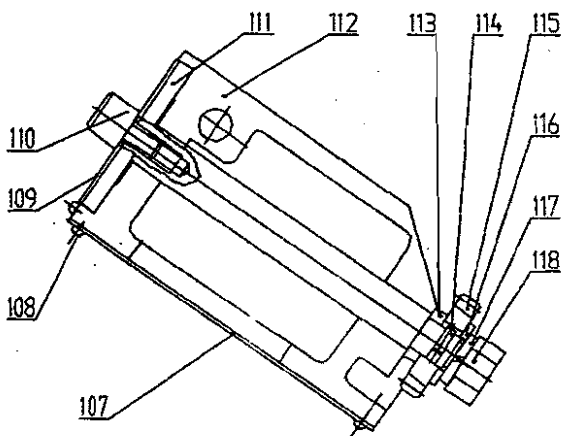
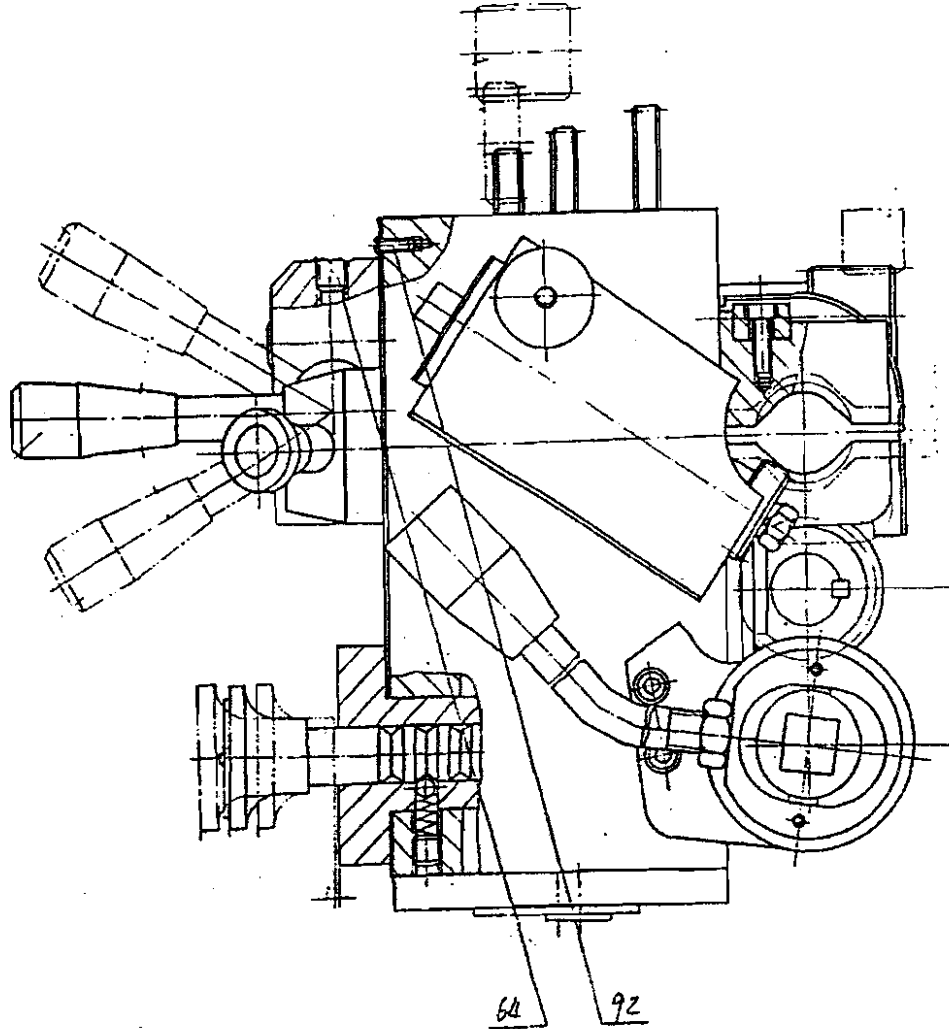
18. Apron (L.H.) (1/3)



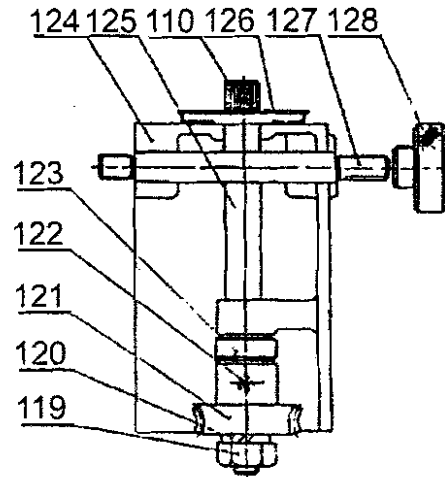
18. Apron (L.H.) (2/3)



18. Apron (L.H.) (3/3)



Thread Dial Body for Metric Leadscrew(6mm)



Thread Dial Body for Inch Leadscrew(4TPI)

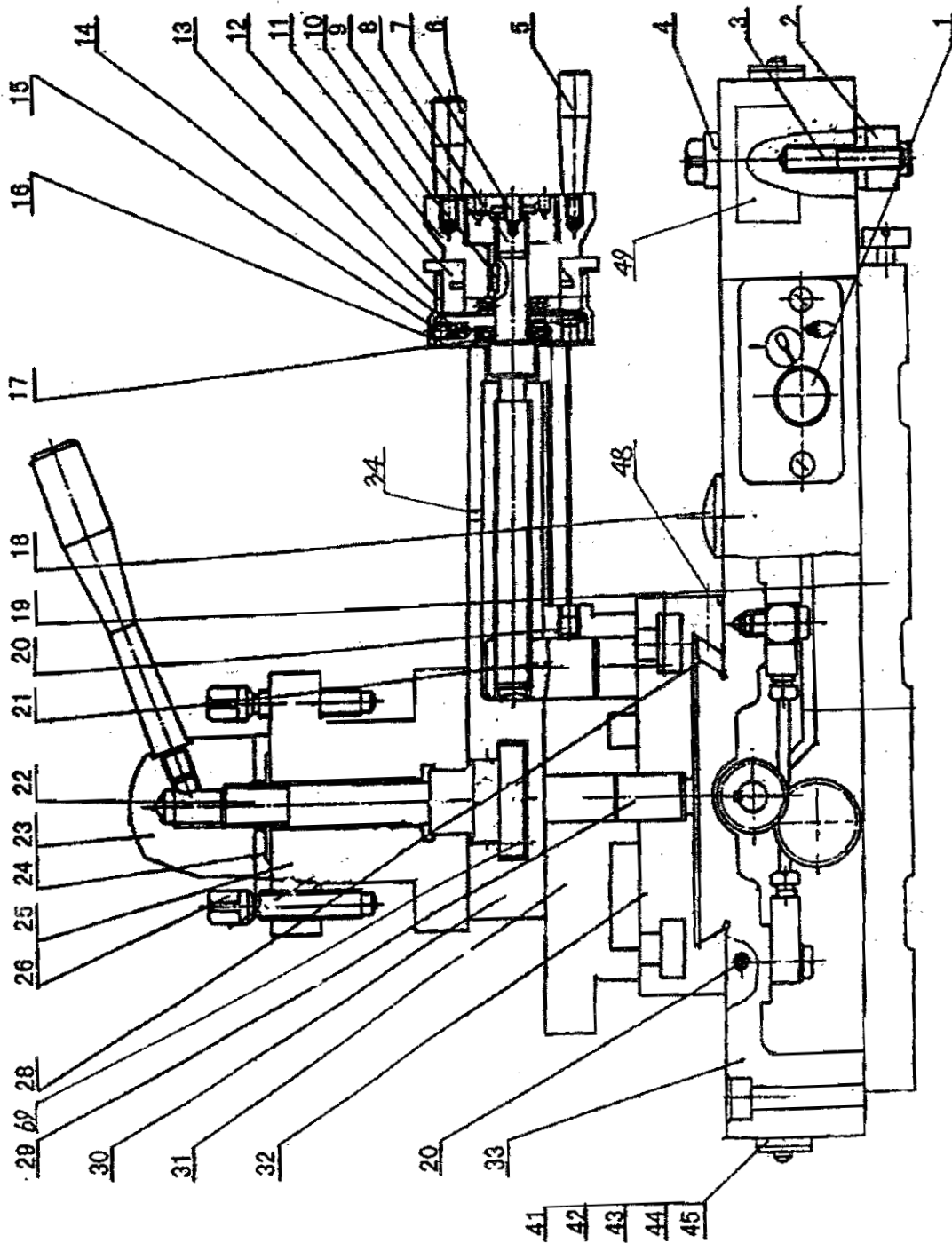
No.	Part No.	Name	Specification
3	CD6236-06-01	Apron Casting	
4	CD6236-06-02	Shaft	
5	GB70-85	Socket Head Cap Screw	M5×25
6	CD6236-06-03	Name Plate	
7	CD6236-06-04	Sleeve	
8	CD6236-06-05	Handle	
9	CD6236-06-06	Bolt	
10	CD6236-06-07	Hand Wheel	
11	CD6236-06-08	Dial	
12	GB308-84	Steel Ball	φ 6.5
13	GB2089-80	Spring	
14	CD6236-08-16	Screw Plug	
15	GB79-85	Set Screw	M5×25
16	GB1099-79	Wood ruff Key	5×6.5×16
17	CD6236-06-09	Gear	
18	GB78-85	Screw	M6×10
19	CD6236-06-10	Shaft	
20	GB1096-79	Key	6×18
21	CD6236-06-11	Gear	
22	CD6236-06-12	Gear	
23	GB119-86	Pin	D4×20
24	CD6236-06-13	Shaft	
25	CD6236-06-14	Lever Head	
26	CD6236-06-15	Sleeve	
27	CD6236-06-16	Lever	
28	GB879-86	Spring Pin	5×22
29	CD6236-06-17	Gear	
30	GB3452.1-82	O-Ring	11.2×2.65
31	CD6236-06-18-01	Shaft	
32	GB879-86	Spring Pin	5×22
33	CD6236-06-19	Shaft	
34	GB894.1-86	External Circle	16
35	CD6236-06-20	Name Plate	
36	GB827-86	Rivet	2×6
37	CD6236-06-21	Shaft	

No.	Part No.	Name	Specification
38	GB3452.1-82	O-Ring	25.8×3.55
39	CD6236-06-22	Sleeve	
40	GB3452.1-82	O-Ring	16×1.8
41	CD6236-06-23	Plug	
43	GB896-86	Clip	8
44	GB77-85	Socket Head Cap Screw	M8×6
45	GB879-86	Spring Pin	5×42
46	CD6236-06-25	Shaft	
47	CD6236-06-26	Lever Head	
48	CD6236-06-27	Handle	
49	GB3452.1-82	O-Ring	11.2×2.65
50	CD6236-06-28	Washer	
51	CD6236-06-29	Gear-Drive Level	
52	GB70-85	Socket Head Cap Screw	M5×16
53	CD6236-06-30	Gib	
54	GB79-85	Socket Head Set Screw	M5×6
55	CD6236-06-51	Bolt	
56	CD6236-06-31	Lever	
57	CD6236-06-32	Worm Gear Bracket	
58	CD6236-06-33	Spindle Control Lever	
59	GB117-86	Pin	B8×60
60	GB70-85	Socket Head Cap Screw	M6×16
61	CD6236-06-34	Gear	
62	CD6236-06-35	Key	
64	GB1155-79	Oil Cup	8
65	RUN6246-103073	Valve	
66	GB1160-86	Sight Glass	B20
67	CD6236-06-37	Pin	
68	CD6236-06-38	Half Bracket	
69	CD6236-06-39	Stopper	
70	CD6236-06-40	Gear Shaft	
71	GB77-85	Socket Head Set Screw	M6×6
72	GB70-85	Socket Head Cap Screw	M5×40
73	Q/ZB285.3	Oil Plug	R 3/8"
74	CD6236-06-41	Fork	

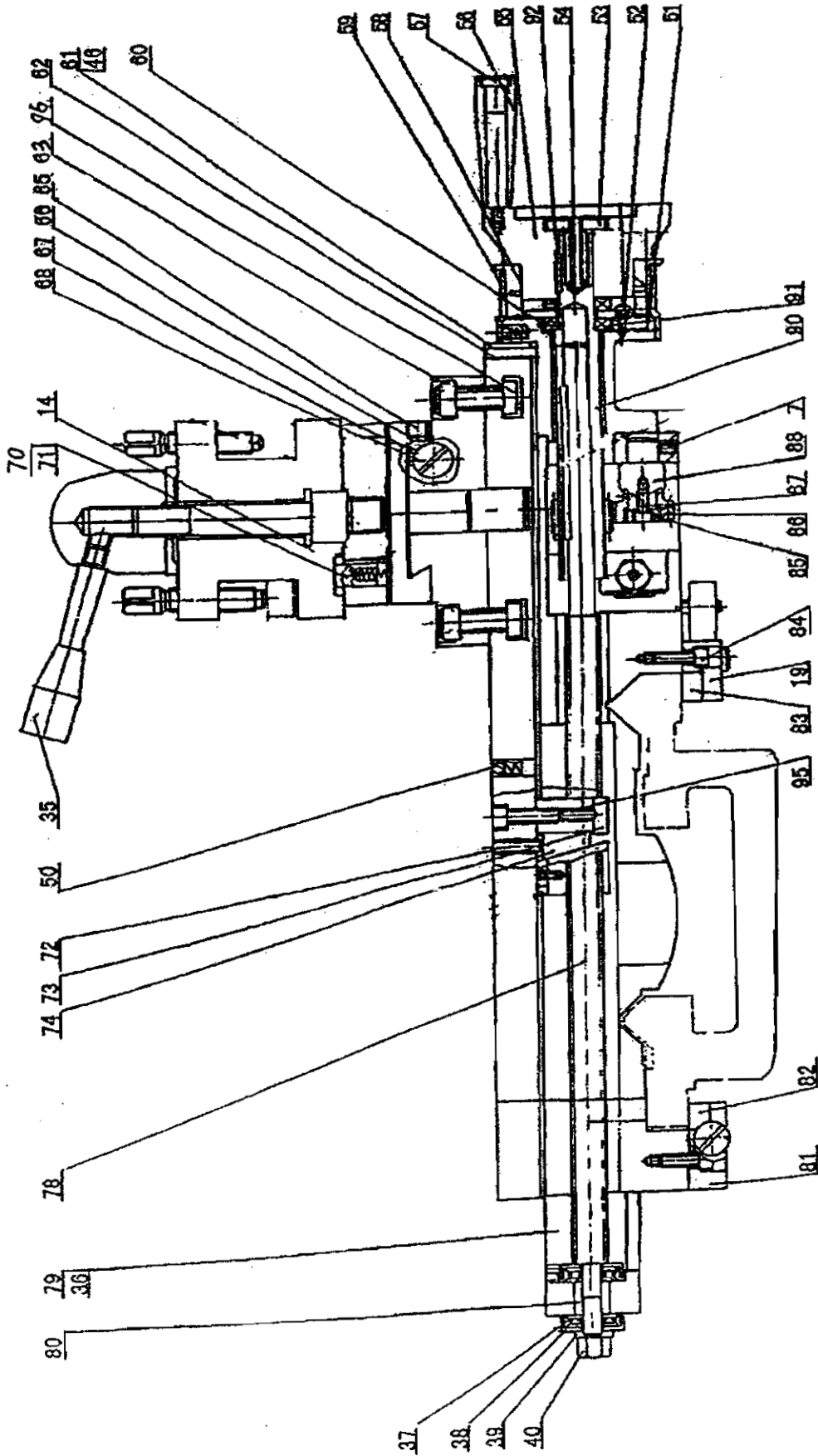
No.	Part No.	Name	Specification
75	GB879-86	Spring Pin	4×30
76	CD6236-06-42	Packing	
77	GB818-85	Screw	M4×10
78	CD6236-06-43	Cover	
79	CD6236-06-44	Shaft	
80	CD6236-06-45	Gear-Drive Bevel	
81	CD6236-06-46	Washer	
82	CD6236-06-47	Gear	
83	GB1096-79	Key	5×12
84	CD6236-06-48	Bottom Plate	
85	CD6236-06-49	Packing	
86	GB3452.1-82	O-Ring	17×2.65
87	GB70-85	Socket Head Cap Screw	M8×60
88	CD6236-06-50	Gear	
89	GB308-84	Thrust Bearing	8106
90	GB290-82	Needle Bearing	7943/30
91	GB894.1-86	Clip	30
92	GB818-85	Screw	M4×10
102	CD6236-06-52G	Half Nut(Metric)	6mm
102	CD6236-06-52	Half Nut(Inch)	4TPI
103	GB5782-86	Bolt	M6×12
104	GB5782-86	Bolt	M6×10
105	CD6236-06-18-02	Input Bush	
106	GB818-85	Screw	M6×20
107	CD6236-06-32 5/5G	Plate	
108	GB827-86	Rivet	2×5
109	CD6236-06-32-3G	Plate	
110	CD6236-06-32 1/9	Screw	
111	CD6236-06-32-1G	Shaft	
112	CD6236-06-32G	Worm Unit	
113	CD6236-06-32-2G	Washer	
114	GB879-86	Spring Pin	3×8
115	CD6236-06-32 2/5G	Worm Gear	14Z
116	GB97.1-85	Washer	10
117	GB93-86	Spring Washer	10

No.	Part No.	Name	Specification
118	GB6170-86	Nut	M10
119	GB6175-86	Nut	M8
120	GB93-87	Washer	8
121	CD6236-06-32 7/9	Gear	16T
122	GB77-85	Screw	M5×16
123	CD6236-06-32 6/9	Washer	
124	CD6236-06-32 8/9	Thread Dial Body	
125	CD6236-06-32 3/9	Stem	
126	CD6236-06-32 2/9	Dial	
127	CD6236-06-32 9/9	Stud	
128	CD6236-06-32 4/9	Nut	

19. Cross Slide & Compound (1/2)



19. Cross Slide & Compound (2/2)

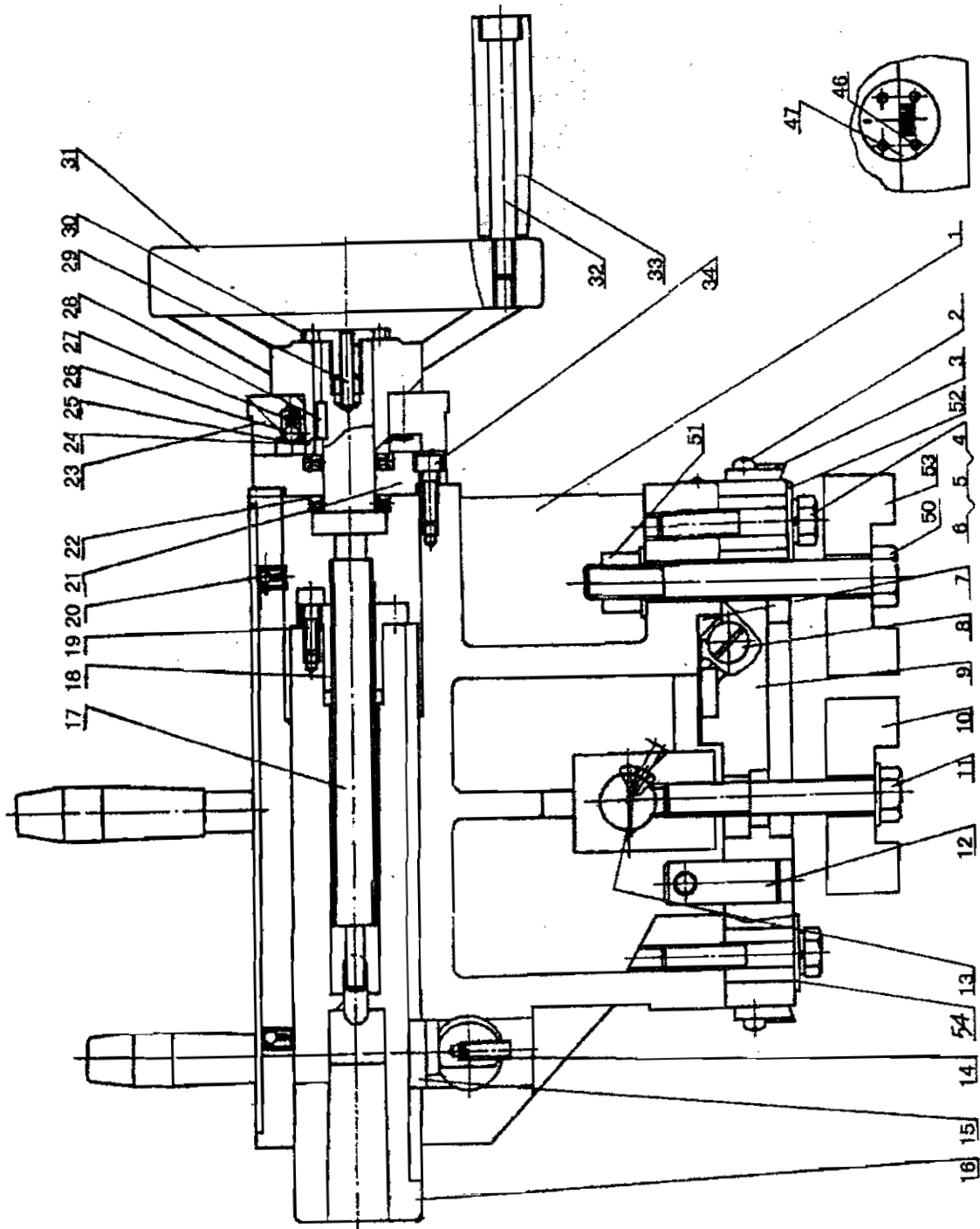


No.	Part No.	Name	Specification
1	CD6236-07-01	Body Pump	
2	CD6236-07-02	Clamp Block	
3	CD6236-07-03	Support Screw	
4	CD6236-07-04	Clamp Screw	
5	CD6236-07-05	Handle	
6	CD6236-07-06	Handle	
7	GB77-85	Screw	M6×8
8	CD6236-07-07G	Feed Screw(Metric)	
8	CD6236-07-07	Feed Screw(Inch)	
9	CD6236-07-08	Screw Plug	
10	GB1096-79	Key	4×12
11	CD6236-07-10	Handle	
12	CD6236-07-11G	Dial-Compound Rest(M)	
12	CD6236-07-11	Dial-Compound Rest(Inch)	
13	CD6236-07-12G	Steel Ball(Metric)	
13	CD6236-07-12	Steel Ball(Inch)	
14	GB2089-80	Spring	0.5×5×18
15	GB308-77	Steel Ball	6
16	CD6236-07-13	Seat	
17	GB301-84	Thrust Bearing	8101
18	CD6236-07-15	Plug	
19	CD6236-07-16	Gib	
20	GB77-85	Screw	M6×10
21	CD6236-07-17G	Nut(Metric)	
21	CD6236-07-17	Nut(Inch)	
22	CD6236-07-18A	Tool Post Shaft(S-Post)	
22	CD6236-07-18	Tool Post Shaft(T-Post)	
23	CD6236-07-19	Clamping Handle	
24	CD6236-07-20	Washer	
25	CD6236-07-21	Tool Post	
26	GB98-83	Screw	M10×50
28	CD6236-07-23	Gib	
29	CD6236-07-24	Shaft	
30	CD6236-07-25A	Compound Rest(360S-Post)	
30	CD6240-07-25A	Compound Rest(410S-Post)	
30	CD6236-07-25	Compound Rest(360T-Post)	
30	CD6240-07-25	Compound Rest(410T-Post)	
31	CD6236-07-26	Swivel Table(360)	
31	CD6240-07-26	Swivel Table(410)	
32	CD6236-07-27	Cover-Cross Sliding	
33	CD6236-07-28	Carriage	
34	GB1155-79	Ball Cup	6
35	CD6236-07-29	Clamp Handle	
36	GB70-85	Screw	M8×20
37	GB301-84	Thrust Bearing	8100
38	CD6236-07-30	Bearing Cover	
39	CD6236-07-09	Bracket	

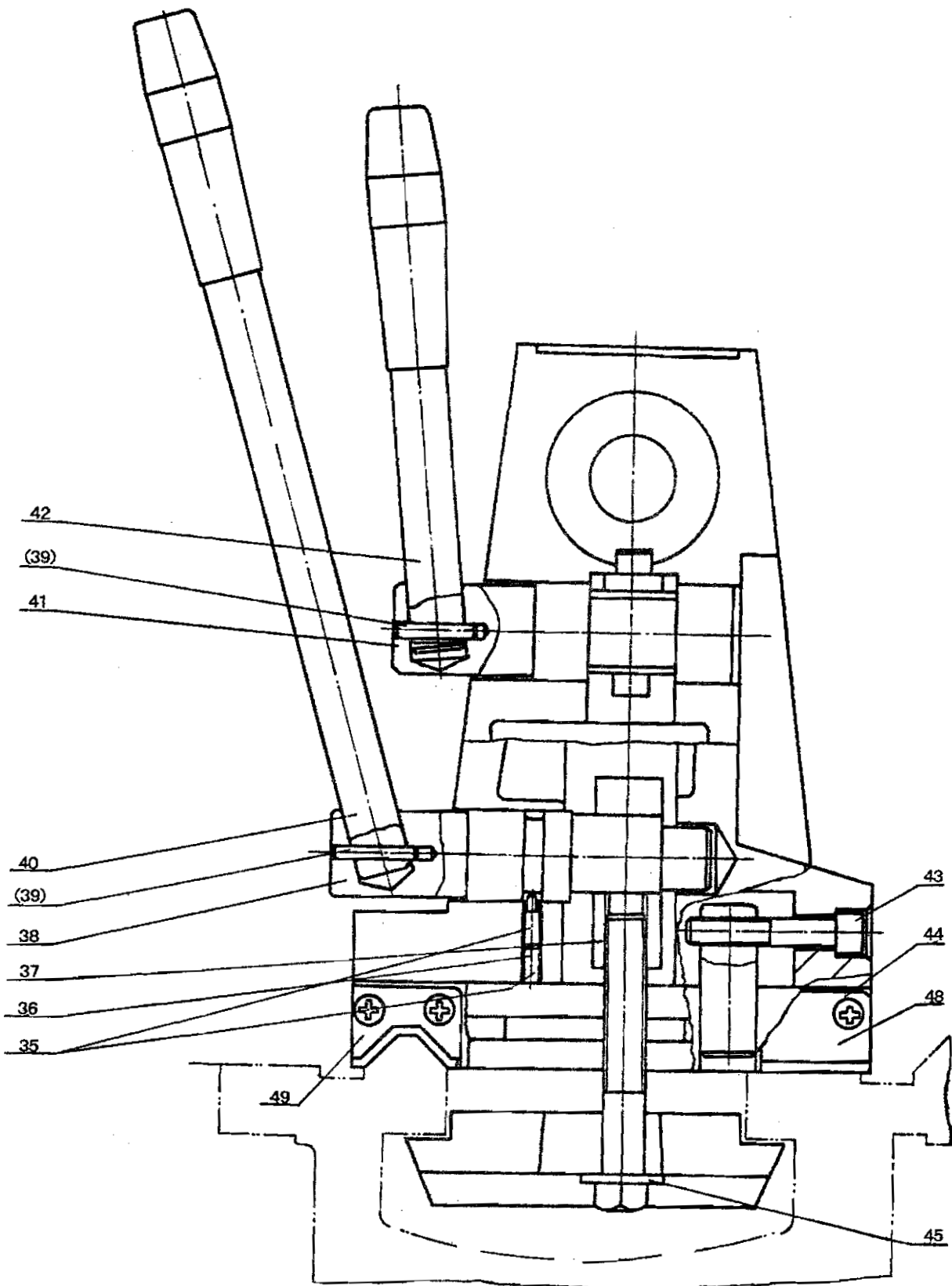
No.	Part No.	Name	Specification
40	GB6175-86	Clamping Nut	M10
41	CD6236-07-31	Wiper	
42	CD6236-07-32	Wiper Cover	
43	GB818-85	Screw	M5×16
44	CD6236-07-33	Wiper	
45	CD6236-07-34	Wiper Cover	
46	GB819-85	Screw	M5×12
48	GB77-85	Screw	M8×16
49	CD6236-07-35	Plate	
50	GB1155-79	Ball Cup	8
51	CD6236-07-36	Bracket	
52	GB818-85	Screw	M4×10
53	CD6236-07-37	Clamping Screw	
54	GB77-85	Screw	M6×35
55	CD6236-07-38	Wheel;	
56	CD6236-07-39	Handle Spacer	
57	CD6236-07-40	Screw	
58	CD6236-07-41G	Dial-Feed(Metric)	
58	CD6236-07-41	Dial-Feed(Inch)	
59	CD6236-07-42G	Handle Spacer(Metric)	
59	CD6236-07-42	Handle Spacer(Inch)	
60	CD6236-07-43	Washer	
61	CD6236-07-44	Wiper Cover	
62	CD6236-07-45	Wiper	
63	GB70-85	Screw	M10×25
65	GB77-85	Screw	M8×8
66	CD6236-07-46	Bottom	
67	CD6236-07-47	Gib	
68	CD6236-07-48	Screw	
69	GB77-85	Screw	M8×20
70	CD6236-07-49A	Bush(S-Post)	
70	CD6236-07-49	Bush(T-Post)	
71	CD6236-07-50	Pin	
72	GB77-85	Screw	M6×20
73	CD6236-07-51Ga	Nut(Metric)	
73	CD6236-07-51a	Nut(Inch)	
74	RUN6246-103004	Bracket	
78	CD6236-07-55G	Feed Screw(Metric)	
78	CD6236-07-55	Feed Screw(Inch)	
79	CD6236-07-22	Bracket	
80	CD6236-07-14	Spacer	
81	CD6236-07-56	Gib	
82	CD6236-07-57	Gib	
83	CD6236-07-58	Gib	

No.	Part No.	Name	Specification
84	GB70-85	Screw	M6×20
85	CD6236-07-59	Washer	
86	CD6236-07-60	Gear	
87	GB70-85	Screw	M5×10
88	CD6236-07-61	Shaft	
90	CD6240-07-63a	Gear Shaft	
91	GB301-84	Thrust Bearing	8103
92	GB1096-86	Key	3×3×20
95	GB70-85	Screw	M6×25
96	CD6236-07-64	T-Bracket	

20. Tailstock Assembly (1/2)



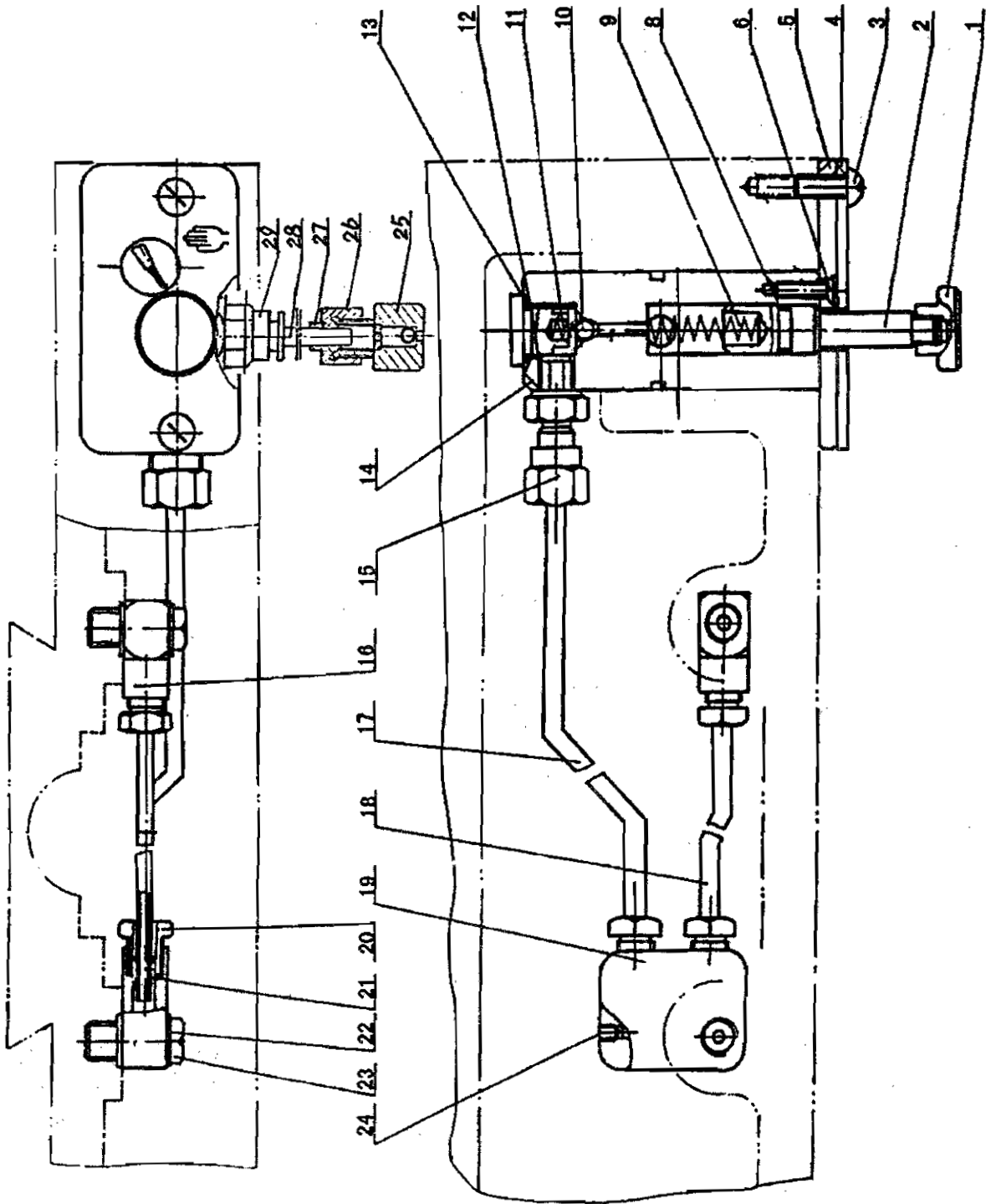
20. Tailstock Assembly (2/2)



No.	Part No.	Name	Specification
1	CD6236-08-01	Tailstock	
2	GB818-85	Screw	M4×10
3	CD6236-08-02	Bedway Wiper	
4	GB5780-86	Bolt	M10×45
5	GB93-85	Spring Washer	10
6	Gb97.1-86	Washer	10
7	CD6236-08-03	Gib	
8	CD6236-08-04	Screw	
9	CD6236-08-05	Tail Stock Base	360(14")
9	CD6240-08-05	Tail Stock Base	410(16")
10	CD6236-08-06	Clamping Block	
11	GB5780-86	Bolt	M12×100
12	CD6236-08-07	Shaft	
13	GB879-86	Spring Pin	5×15
14	GB77-85	Socket Head Set Screw	M6×15
15	CD6236-08-09	Key	
16	CD6236-08-10	Quill	
17	CD6236-08-11G	Feed Screw	
18	CD6236-08-12G	Feed Nut	
19	GB70-85	Socket Head Set Screw	M6×16
20	GB1155-79	Ball Cup	8
21	CD6236-08-13	Bracket	
22	GB301-84	Thrust Bearing	8104
23	CD6236-08-14	Dial	
24	GB894.1-86	Retaining Ring	32
25	CD6236-08-15	Retaining Ring	
26	GB308-84	Steel Ball	Φ 6.5
27	GB2089-80	Spring	0.6×5×16

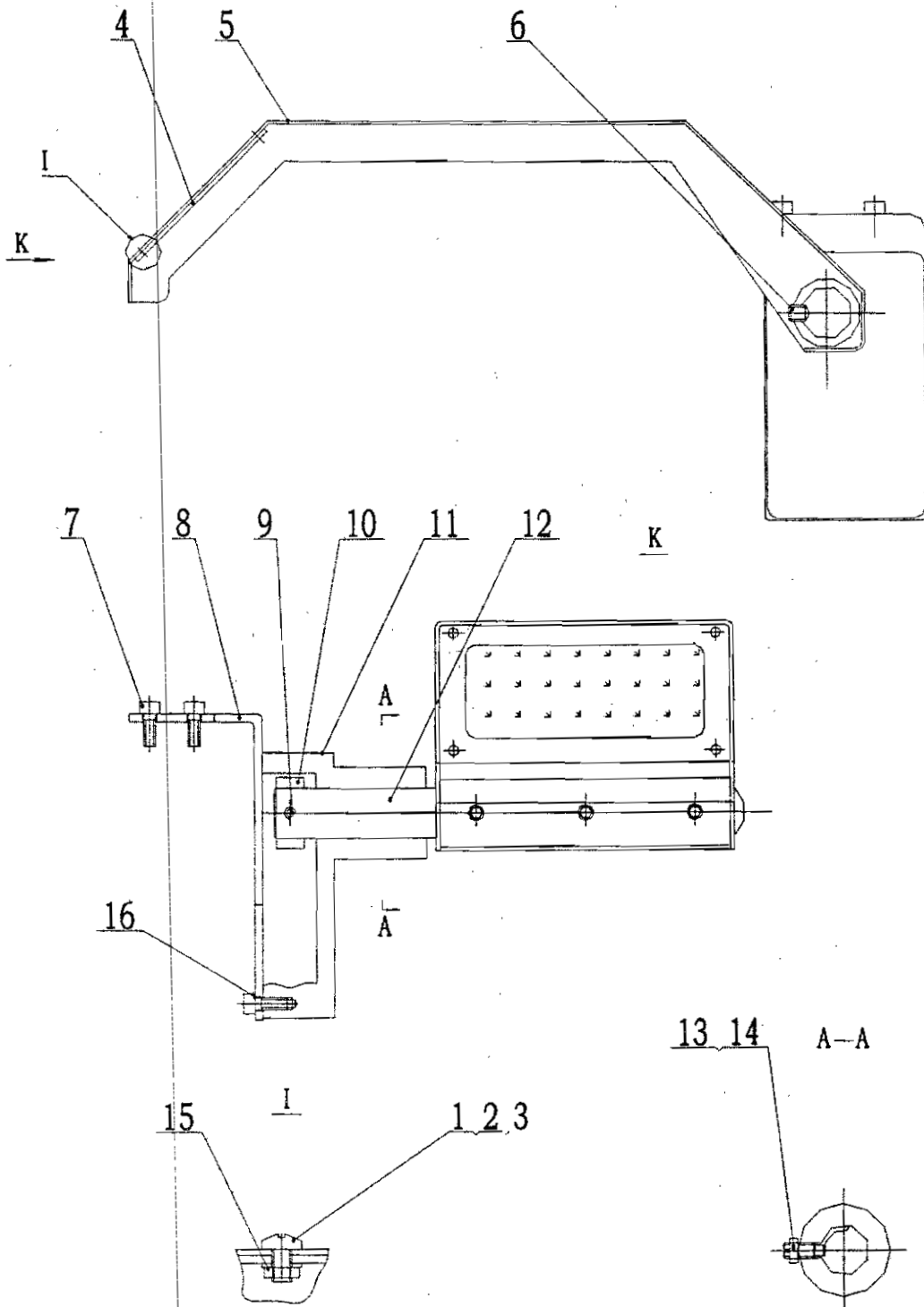
No.	Part No.	Name	Specification
28	GB1096-79	Key	5×25
29	GB78-85	Socket Head Set Screw	M5×25
30	CD6236-08-16	Screw Plug	
31	CD6236-08-17	Hand Wheel	
32	CD6236-08-18	Bolt	
33	CD6236-08-19	Handle	
34	GB70-85	Socket Head Cap Screw	M5×20
35	GB77-85	Socket Head Set Screw	M6×10
36	GB79-85	Socket Head Set Screw	M6×10
37	CD6236-08-20	Adjusting Block	
38	CD6236-08-21	Clamping Block	
39	GB879-86	Spring Pin	4×25
40	CD6236-08-22	Clamping Lever	
41	CD6236-08-23	Clamping Shaft	
42	CD6236-08-24	Clamping Lever	
43	GB70-85	Socket Head Cap Screw	M8×50
44	CD6236-08-25	Bedway Wiper	
45	GB95-86	Washer	12
46	GB827-85	Button Head Rivet	2×8
47	CD6236-08-26	Set-Over Indication Chart	
48	CD6236-08-27	Bedway Wiper Plate	
49	CD6236-08-28	Bedway Wiper Plate	
50	GB5780-86	Hexagon Head Screw	M12×110
51	GB55-76	Hexagon Thick Nut	M12
52	GB97-85	Washer	12
53	CD6236-08-29	Clamping Block	
54	CD6236-08-30	Washer	

21. Lubrication



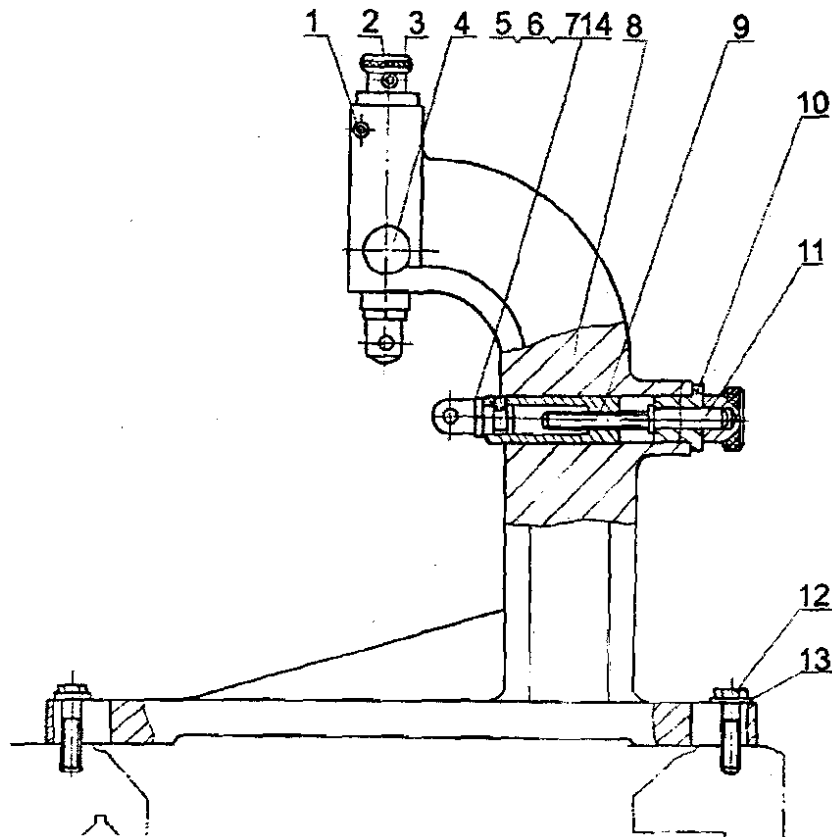
No.	Part No.	Name	Specification
1	RUN6241-103067	Knob	
2	CD6236-07-01 2/13	Piston	
3	GB67-85	Screw	M5×15
4	CD6236-07-01 3/13	Name Plate	
5	CD6236-07-01 4/13	Plate	
6	GB819-85	Screw	M5×12
8	GB3452.1-82	O-Ring	8×2.65
9	GB2089-80	Spring	1×7×45
10	GB308-77	Ball	5
11	GB2089-80	Spring	0.5×4×15
12	CD6236-07-01 5/13	Plug	
13	GB3452.1-82	O-Ring	11.2×1.8
14	CD6236-07-01 6/13a	Pump	
15	2143SC	Tie-in	φ 5/Z1/8
16	CD6236-07-01 7/13	Joint	
17		Lubrication Tube	φ 5
18		Lubrication Tube	φ 5
19	CD6236-07-01 10/13	Distributor	
20	15326C	Tie-in	
21	B1061C	Double Taper Sheath	4
22	GB97.1-85	Washer	10
23	CD6236-07-01 13/13	Proper Screw	
24	GB77-85	Screw	M4×5
25	RUN6246-103073	Valve	
26	RUN6246-103072	Nut	
27	RUN6246-103071	Tie-in	
28		Lubrication Tube	φ 6×150
29	22587T	Tie-in	φ 6/Z1/8

22. Chuck Guard Cover



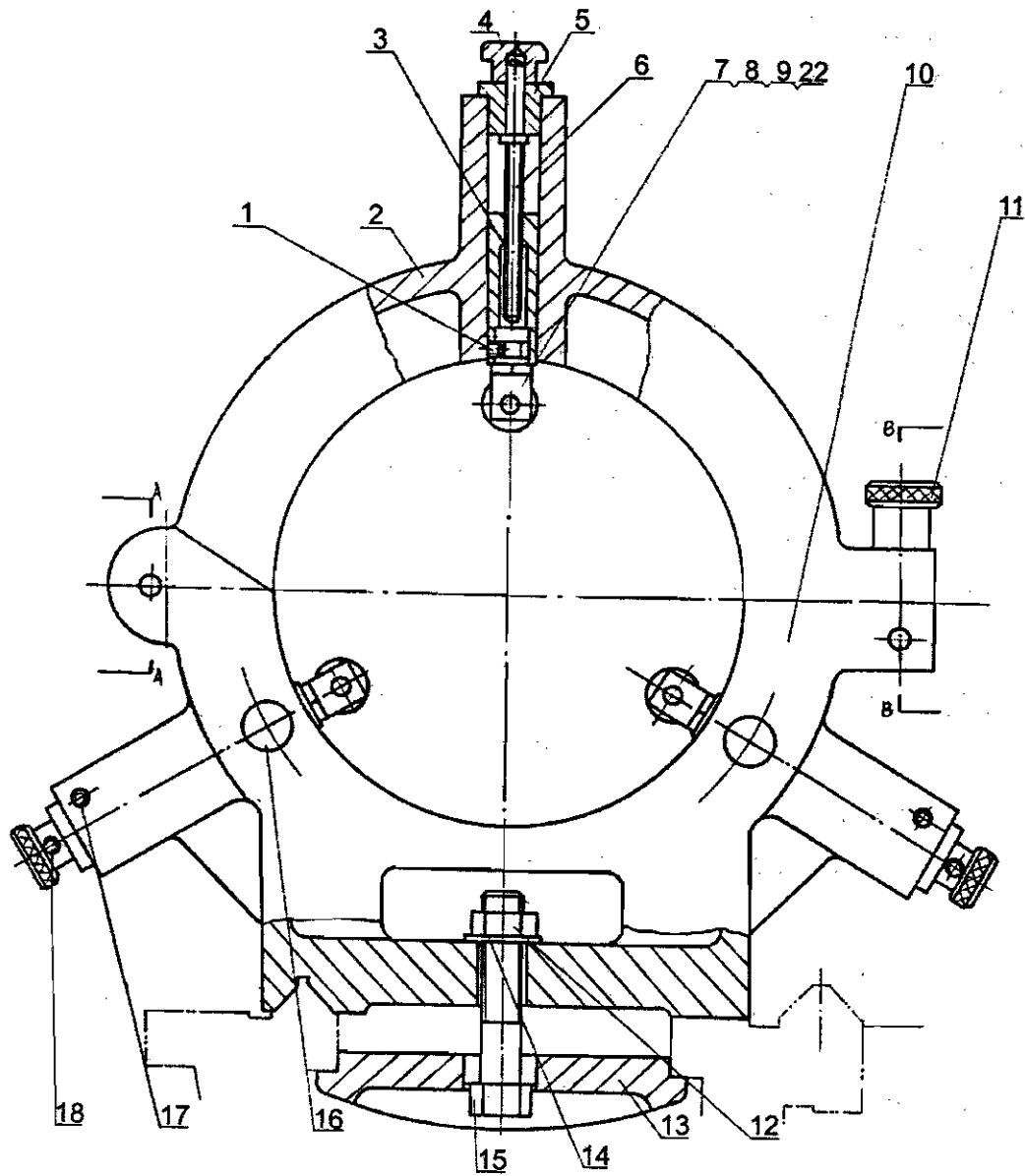
No.	Part No.	Name	Specification
1	GB818-85	Cross Recessed Head Screw	M5X10
2	GB6172-80	Nut	M5
3	GB97.1-85	Washer	5
4	CD6236-04F-03	Bright Shutter	
5	CD6236-04F-01	Cover	
6	GB78-85	Screw	M8X10
7	GB70-85	Screw	M6X12
8	CD6236-04F-02	Support Bracket	
9	GB78-85	Screw	M6X10
10	CM6233-F1005	Sleeve	
11	RUN6246-101101	Cover Bracket	
12	CD6236-04F-04	Shaft	
13	GB78-85	Screw	M8X20
14	GB6172-86	Nut	M8
15	GB/T955-1987	Washer	5
16	GB93-86	Washer	5

23. Follow Rest

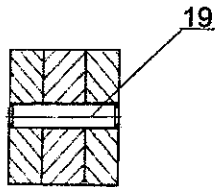


No.	Part No.	Name	Specification
1	GB879-86	Spring Pin	5×26
2	GB78-85	Screw	M6×8
3	RUN6246-110019	Rotate Handle	
4	RUN6246-110018	Limited Screw	
5	CD6236-10-08	Support Shaft	
6	GB77-85	Screw	M6×6
7	GB278-88	Bearing	80026
8	CD6236-10-09	Follow Rest	360(14")
8	CD6240-10-09	Follow Rest	410(16")
9	CD6236-10-10	Sleeve	
10	RUN6246-110004	Bush	
11	CD6236-10-11	Screw Shaft	
12	GB5782-86	Bolt	M10×40
13	GB97.1-86	Washer	10
14	GB119-86	Pin	6×16

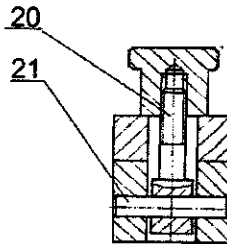
24. Steady Rest



A-A



B-B



No.	Part No.	Name	Specification
1	GB77-85	Screw	M6×6
2	CD6236-10-02	Upside of Steady Rest	
3	CD6236-10-04	Sleeve	
4	RUN6246-110019	Rotate Handle	
5	RUN6246-110004	Bush	
6	CD6240-10-05	Screw Shaft	
7	CD6236-10-06	Support Shaft	
8	CD6240-10-07	Guard Bush	
9	GB278-88	Bearing	80026
10	CD6236-10-01	Downside of Steady Rest	360(14")
10	CD6240-10-01	Downside of Steady Rest	410(16")
11	RUN6246-110014	Handle	
12	GB6170-86	Nut	M16
13	CD6240-10-03	Clamping Bracket	
14	GB97.1-86	Washer	16
15	GB5780-86	Bolt	M16×80
16	RUN6246-110018	Limited Screw	
17	GB879-86	Spring Pin	5×32
18	GB78-85	Screw	M6×8
19	GB119-86	Pin	10×50
20	RUN6246-110013	Clamping Screw	
21	GB119-86	Pin	10×50
22	GB119-86	Pin	6×20