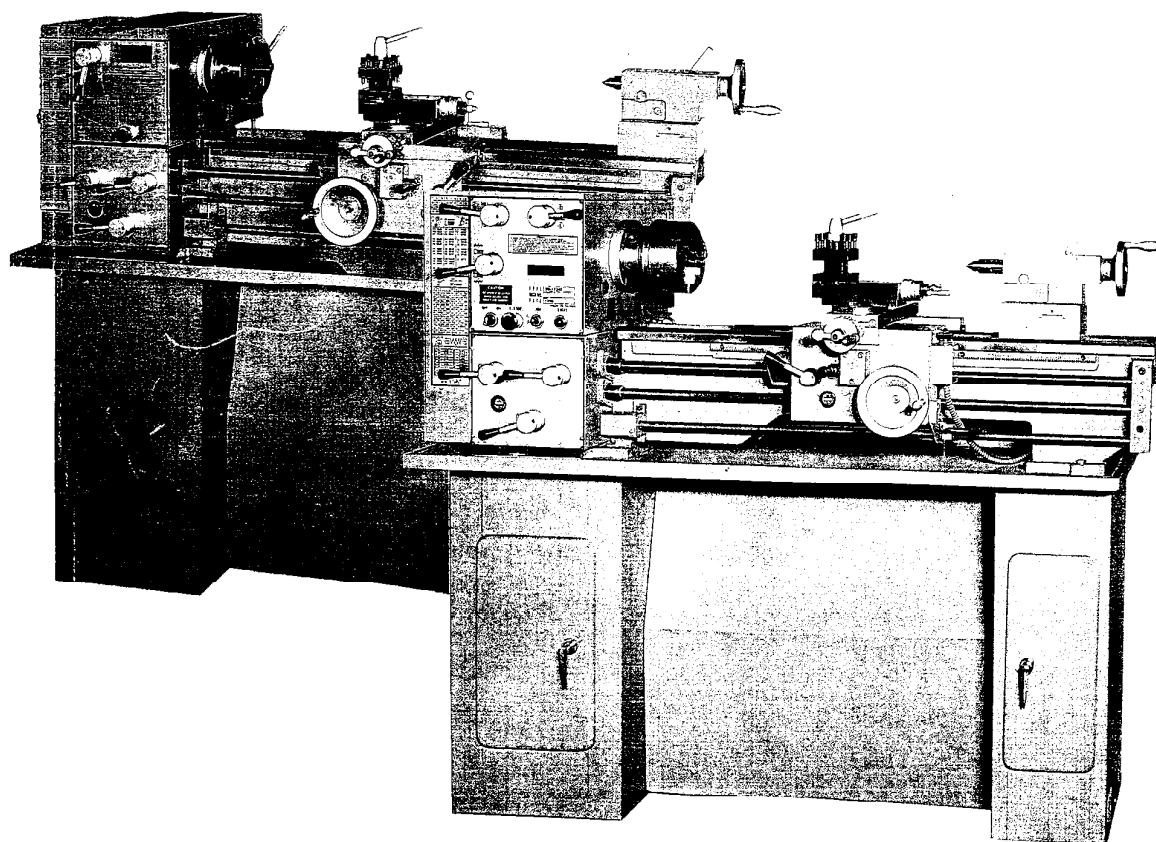


# SPARE PARTS AND OPERATIONS MANUAL



## SAFETY RULES FOR LATHE

Safety is a combination of operator common sense and alertness at all times when the lathe is being used. Study these rules before operating and retain for future use.

1. Wear eye protection.
2. Never attempt any operation or adjustment if procedure is not understood.
3. Keep fingers away from revolving parts and cutting tools while in operation.
4. Never force cutting action.
5. Never perform an abnormal or little used operation without study and use of adequate blocks, jigs, stops, fixtures, etc.
6. Use of shop manual such as " Machinery's Handbook " or similar is recommended for cutting speeds, feeds and operation details.
7. Do not remove drive cover while in operation and make sure it is always closed.
8. Always remove chuck key, even when machine is not in operation.
9. Do not attempt to adjust or remove tools when in operation.
10. Always keep cutters sharp.
11. Never use in an explosive atmosphere or where a spark could ignite a fire.
12. Always use identical replacement parts when serving.

- \* THIS CATALOG SUPERCEDES ALL PREVIOUS CATALOGS.
- \* ERRORS AND OMISSIONS EXPECTED.
- \* DESIGNS AND SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.
- \* CATALOG NO. 91.05.300

## UNPACKING AND CLEANING

### UNPACKING

- \* To prevent moisture or possible rust during transportation all unpainted surfaces are applied with slushing oil to prevent corrosion.
- \* Both standard and optional accessories are packed either in a small wooden box or attached to the base of shipping crate by steel band.
- \* The inspection report is included inside the case.

### CLEANING

- \* After unpacking wipe off the anti-rust preventive by using a soft cloth.
- \* Clean the greased covered surfaces by non-volatile solvent, ( such as Kerosene, etc. )

#### \* Note

During the transportation and unpacking, it is likely to have the debris on top of the lathe; do not move the carriage or Tailstock until the bedway has been thoroughly cleaned.

## INSTALLATION

- \* It is preferable to use a rigid metal or wooden stand/bench located onto a concrete floor.
- \* If possible, the stand/bench should be firmly attached to the floor to avoid any unsteadiness.
- \* Place the chip tray on top surface of the stand/bench and use a marker to mark off the locations of the bedway mounting holes, then drill these 6 holes with washerd and nuts to combine the lathe with stand/bench.

## LEVELING

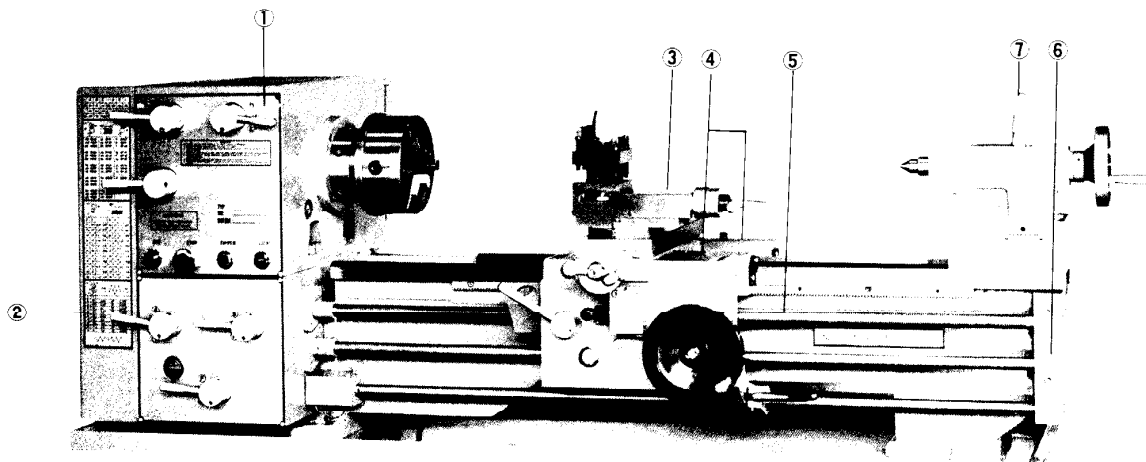
To maintain accuracy of the lathe, it is important to keep the bedway leveled. Please use following methods.

- \* Use a thoroughly cleaned precision level by minimum length of 150mm ( 6" ).
- \* Move the carriage to the headstock as close to the end of the bedway. Place the level in a 99 degree position to the bedway and on top of the cross slide. Loosen the mounting bolts and place a shim under the base casting , then to center the bubble in the level, retighten the mounting bolts.
- \* Move the carriage to the tailstock & repeat the same as above.
- \* After doing so, recheck the headstock end and continue the same way until both ends of the bedway are in a leveled position.

## WTRTING

- \* Before connecting the lathe to the power source, check the supplied voltage to be in accordance with the motor specification.
- \* The switch is wired for counter-clockwise: spindle rotation in forward postion; & clockwise.: spindle rotation in reverse position. Check the electrical connection to confirm these 2 positions.
- \* Consult with local electrician if any difficulties or problem arise.

All moving parts and sliding surfaces should be regularly lubricated with clean lubricant. Below is a picture showing the lubricating holes.



Lubricating point	refilling intervals	Viscosity SSU 100°F
1. Headstock	every 2 monthes	160
2. Feed Gear Box	"	160
3. Tool Slide	every day	320
4. Apron & Carriage	every 3 monthes	320
5. Saddle	"	320
6. End Bracket	every day	320
7. Tailstock	"	320

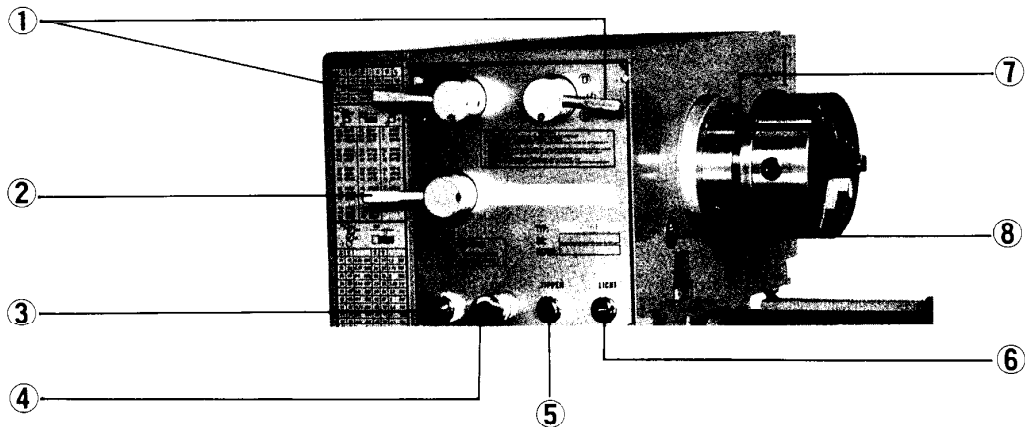
Recommended lubricant :

1. For Headstock & Feed Box - Mobile D.T.E. Light.
2. For other parts                      Mobile Vetro no.2.

\* Note

For Headstock & Feed Box, the lubricant is to be exchanged after first 72 hours of working.

## OPERATION



1. High - Low Speed change Levers  
To select the required spindle speed according to the chart; note that the machine must be stopped when changing the lever position.
2. Leadscrew Forward/Reverse Lever  
To select the spindle rotation; lever in middle is neutral position.
3. Power Supply  
On & Off switch
4. Emergency Stop Button  
For cut-off Power in Emergency; turn the switch clockwise to reset.
5. Jog Button  
For adjusting spindle speed.
6. Work Lamp  
The power is connected when the light is on.
7. Spindle Camlock  
For changing of chucks - clockwise to tighten, counterclockwise to loosen.
8. Oil glass  
Lubricant must be refilled when the oil level is below center line.

## OPERATION ( BELT-DRIVEN TYPE )

### Headstock

#### Back Gear Drive

To engage the back gear for the low spindle speed range, please use following steps :

1. Place the motor switch in the "OFF" position.
2. Raise the headstock cover.
3. Rotate the spindle until the lock pin on the Bull-gear appears.
4. Disengage the lock pin by pulling out and rotating 90 degree.
5. Pull up on the spring loaded back gear lever and move the lever toward front of the motor until it snaps into the lock hole.
6. Lower the headstock cover.
7. Place the motor switch in the "ON" position to continue machining.

CAUTION : NEVER ATTEMPT TO ENGAGE THE BACK GEAR LEVER UNTIL THE SPINDLE HAS COME TO A COMPLETE STOP, DOING SO WILL RESULT IN DAMAGE TO THE DRIVE TRAIN.

#### Direct Drive

To disengage the back gear for the high spindle speed range, please use the following steps :

1. Place the motor switch in the "OFF" position.
2. Raise the headstock cover.
3. Pull up on the spring loaded back gear lever ( Fig. ) and move the lever toward front of the lathe until the lever snaps into the lock hole.
4. Rotate the spindle nose by hand until the Bull-gear lock pin appears.
5. Pull out on the Bull gear lock pin and rotate it 90 degree.
6. Holding the spindle nose in position, rotate the main spindle drive pulley until the Bull gear lock pin engages with the main spindle pulley.
7. Lower the headstock cover.
8. Place the motor switch in the "ON" position to continue machining.
9. Please lubricate as per oil hole in Fig.2. after 80 hours of working.

FOR SAFETY, NEVER START THE LATHE WHEN THE HEADSTOCK COVER IS IN THE OPEN POSITION.

#### \* Adjusting V-Belt tension

Over a period of time, the V-Belt will elongate slightly. To adjust, turn Lever A ( Fig.3 ) in a counter clockwise direction, to loosen tension and return the same after adjustment.

#### \* Change of spindle speeds

To change the spindle speeds, please use following steps :

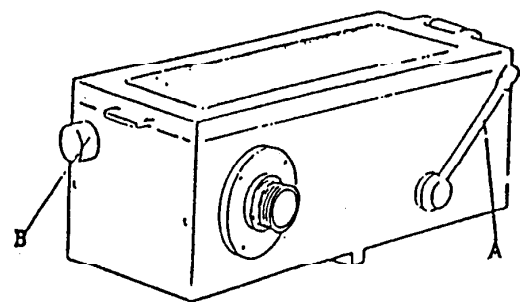
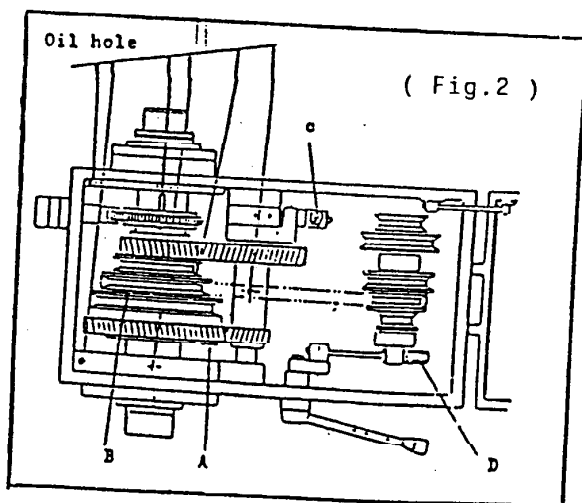
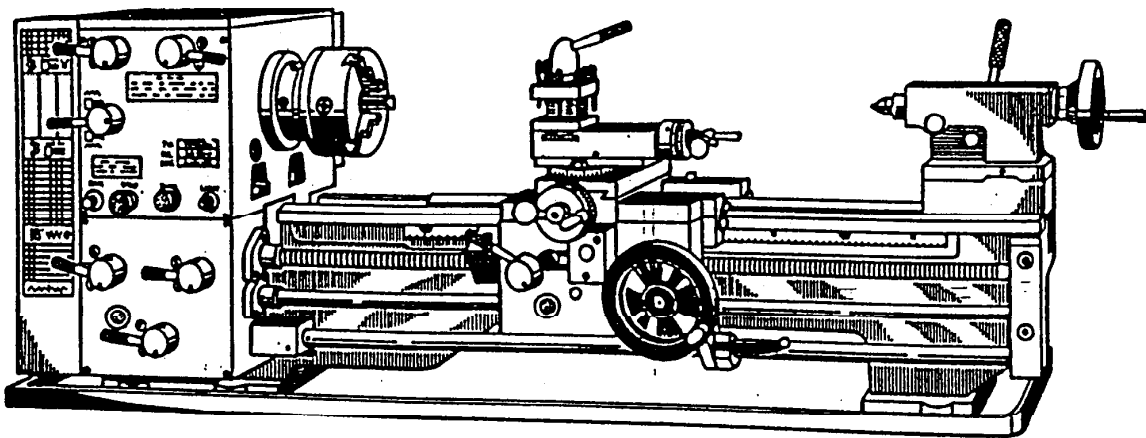
1. Place the motor switch in the "OFF" position.
2. Refer to the spindle speed chart on the front of the lathe for belt/pulley combination desired.
3. Pull the belt tension lever toward the front of the headstock to loosen the belt. ( Fig.3-A )
4. Raise the headstock cover and place the spindle the spindle drive belt on the selected spindle drive pulley.
5. Push the belt tension lever toward the rear of the headstock to tighten the drive belt ( Fig.3-A )

6. Change the high or low speed range if necessary.
7. Lower the headstock cover.
8. Place the motor switch in the "ON" position to continue machining.

\* Lead/feed screw direction knob : ( Fig. 3-B )

1. The center position is neutral ( Lead/feed screw does not rotate.)
2. Turning right will feed the carriage toward the tailstock.
3. Turnign left will feed the carriage toward the headstock.

CAUTION : ALWAYS STOP THE SPINDLE BEFORE SHIFTING THE LEAD/FEED SCREW SELECTION KNOB.

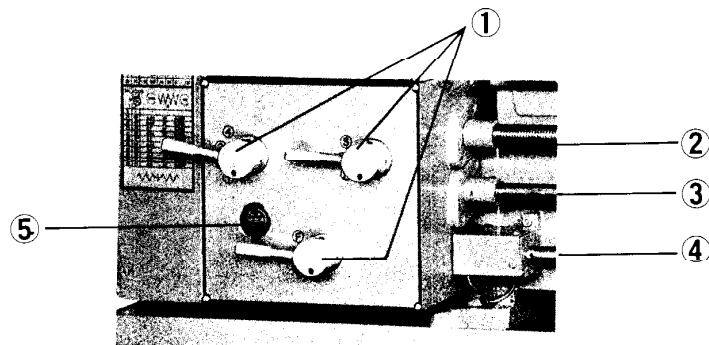


( Fig.3 )

QUICK CHANGE GEAR BOX  
Same as per Gear Head Drive model in page 5.



## OPERATION



1. Feed & Threading Change Lever ( Fig.3 )

To determine the shaft for turning or threading according to Threading Chart on the left.

2. Threading Spindle ( Fig 3 )
3. Feed Spindle ( Fig. 4 )
4. 3rd Rod ( for switch on & off )

5. Oil glass

Lubricant must be refilled when the oil level is below center line.

# FOR METRIC LEADSCREW


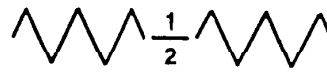
Note : Change gears 42T mounted on "X" & 21T on "Y" initially.

Following change gears are standard accessories & supplied in the tool box :

13 pcs : 20T, 24T, 25T, 27T,  
28T, 30T, 40T, 50T,  
51T, 53T, 60T, 70T,  
72T.

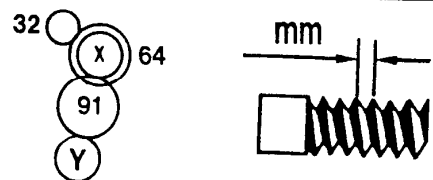
Low/High Speed Chart Fig. 4

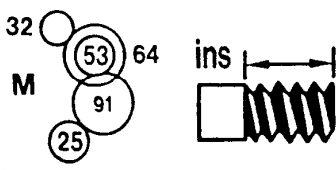
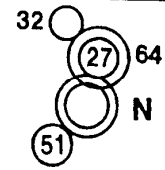
II	A	B	C	I	A	B	C
D	70	95	135	D	100	140	195
L	195	275	385	L	280	395	550
H	535	755	1050	H	770	1080	1500

				
X	Y			
21	60	0.05	4F	0.002
21	60	0.08	2E	0.003
21	30	0.1	4F	0.004
21	28	0.15	3E	0.006
42	30	0.2	4F	0.008
42	30	0.25	2F	0.01
42	28	0.3	3E	0.012
42	28	0.4	1E	0.016
50	21	0.5	3F	0.020
50	21	0.6	3E	0.024
				

Feed Chart Fig.4

Threading Chart Fig.3.

					
X	Y		X	Y	
21	42	0.25 S3E	21	42	1.5 T1F
28	40	0.35 S3E	70	20	1.75 S3E
20	25	0.4 R3E	42	21	2 R3E
24	40	0.45 S1F	42	28	2.25 R1F
21	42	0.5 R3E	50	20	2.5 R3E
42	30	0.7 S3E	42	21	3 R1F
21	42	0.75 R1F	70	20	3.5 R3E
40	25	0.8 S3E	42	21	4 T3E
24	40	0.9 R1F	42	28	4.5 T1F
42	21	1 S3E	50	20	5 T3E
50	20	1.25 S3E	42	21	6 T1F

			
112 NS4E	32 NR1F	9	MR2F
104 NS4F	28 NT4E	8	MR1F
96 NS3E	26 NT4F	7	MT4E
92 NS2E	24 NT3E	6 1/2	MT4F
88 NS1E	23 NT2F	6	MT3E
80 NS3F	22 NT1E	5 3/4	MT2E
72 NS2F	20 NT3F	5 1/2	MT1E
64 NS1F	18 NT2F	5	MT3F
56 NR4E	16 NT1F	4 1/2	MT2F
52 NR4F	14 MR4E	4	MT1F
48 NR3E	13 MR4F		
46 NR2E	12 MR3E		
44 NR1E	11 1/2 MK2E		
40 NR3F	11 MR1E		
36 NR2F	10 MR3F		

# FOR IMPERIAL LEADSCREW

Note : Change gears 42T mounted on "X" & 21T on "Y" initially.

Following change gears are standard accessories & supplied in the tool box :

7 pcs : 24T, 28T, 30T, 35T, 50T, 60T, 72T.

Low/ High Speed Chart Fig.4

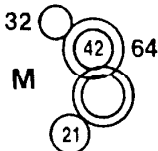

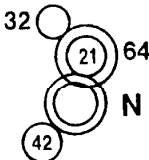
II	A	B	C	I	A	B	C
D	70	95	135	D	100	140	195
L	195	275	385	L	280	395	550
H	535	755	1050	H	770	1080	1500

Feed Chart Fig.4

X	Y				
21	60	0.05	4F	0.002	
21	60	0.08	2E	0.003	
21	30	0.1	4F	0.004	
21	28	0.15	3E	0.006	
42	30	0.2	4F	0.008	
42	30	0.25	2F	0.01	
42	28	0.3	3E	0.012	
42	28	0.4	1E	0.016	
50	21	0.5	3F	0.020	
50	21	0.6	3E	0.024	

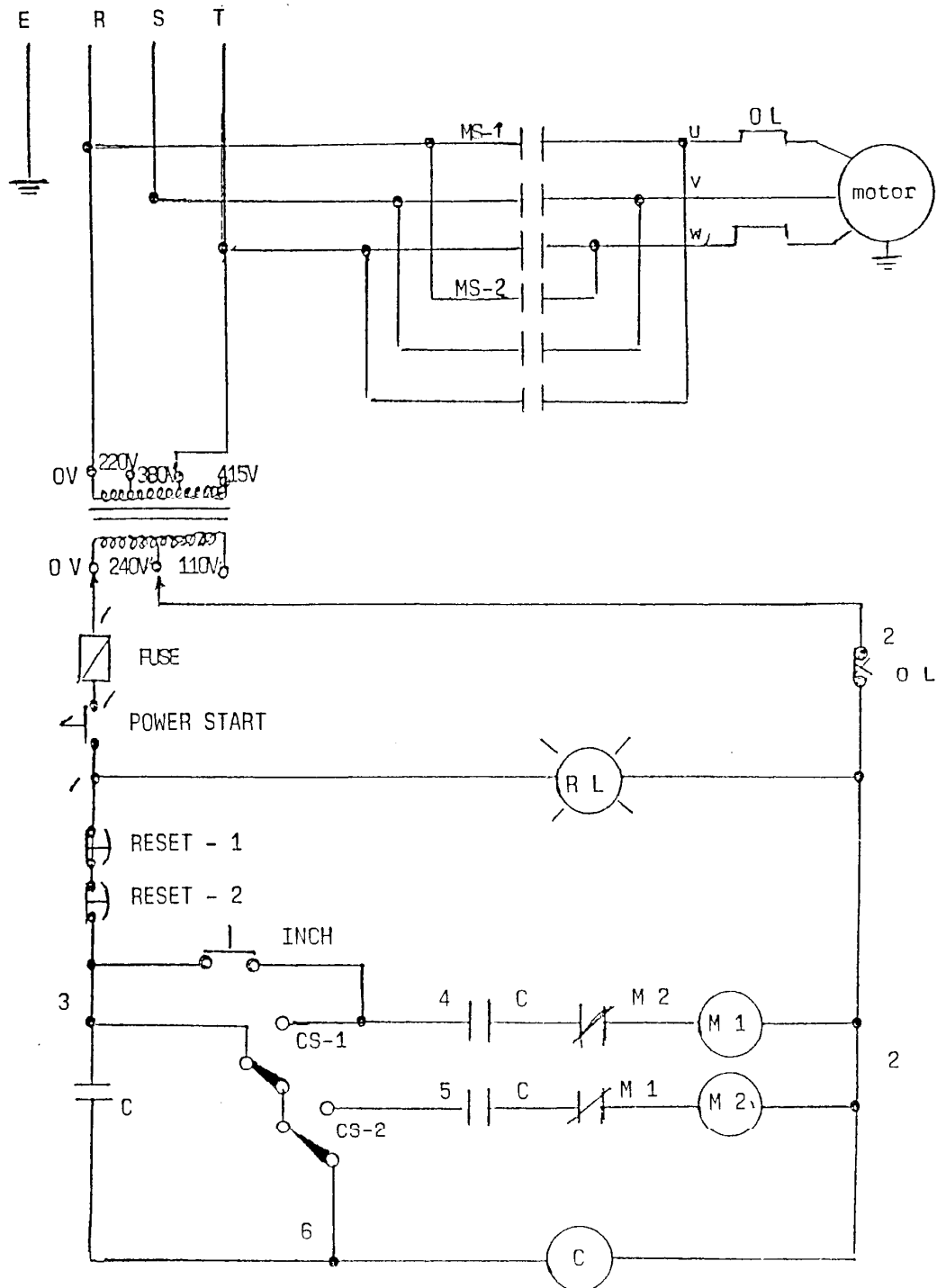
Threading Chart Fig.3

X	Y			X	Y		
21	42	0.25	S3E	42	21	1.5	S1F
21	30	0.35	S3E	35	30	1.75	R1F
24	30	0.4	R3E	42	21	2	R3E
21	35	0.45	S1F	21	28	2.25	T1F
21	42	0.5	R3E	35	21	2.5	R1F
21	30	0.7	R3E	42	21	3	R1F
21	42	0.75	R1F	35	30	3.5	T1F
24	30	0.8	R3E	42	21	4	T3E
21	35	0.9	R1F	42	28	4.5	T1F
42	21	1	S3E	35	21	5	T1F
35	21	1.25	S1F	42	21	6	T1F

 M		 N
112 NS4E	32 NR1F	9 MR2F
104 NS4F	28 NT4E	8 MR1F
96 NS3E	26 NT4F	7 MT4E
92 NS2E	24 NT3E	6½ MT4F
88 NS1E	23 NT2E	6 MT3E
80 NS3F	22 NT1E	5¾ MT2E
72 NS2F	20 NT3F	5½ MT1E
64 NS1F	18 NT2F	5 MT3F
56 NR4E	16 NT1F	4½ MT2F
52 NR4F	14 MR4E	4 MT1F
48 NR3E	13 MR4F	
46 NR2E	12 MR3E	
44 NR1E	11½ MK2E	
40 NR3F	11 MR1E	
36 NR2F	10 MR3F	

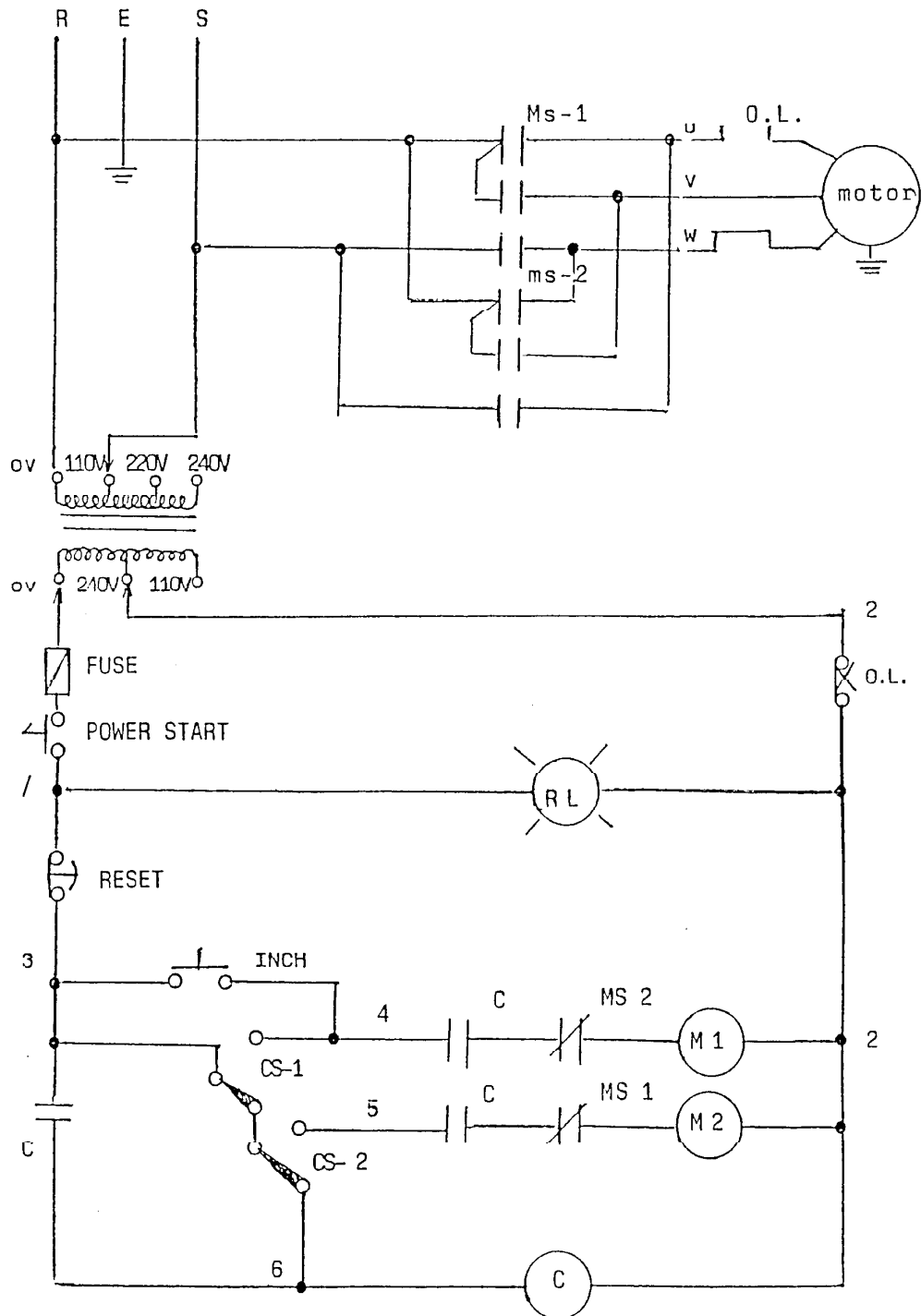
# ELECTRICAL WIRING

FOR GEAR-HEAD TYPE 380V, 3-Phase.

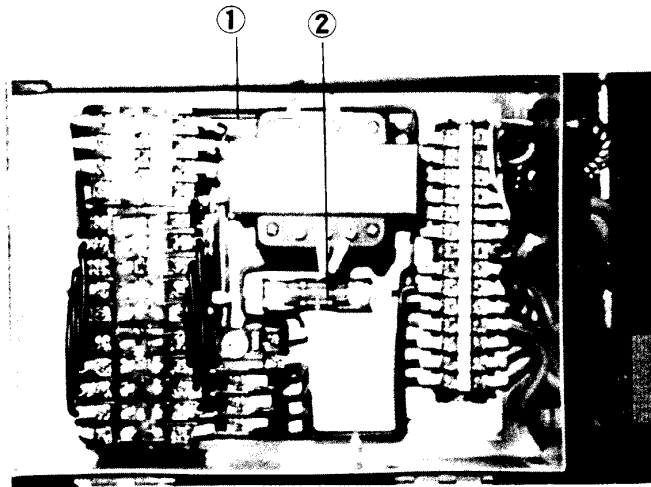


# ELECTRICAL WIRING

FOR GEAR-HEAD TYPE 110V/220V, single- Phase



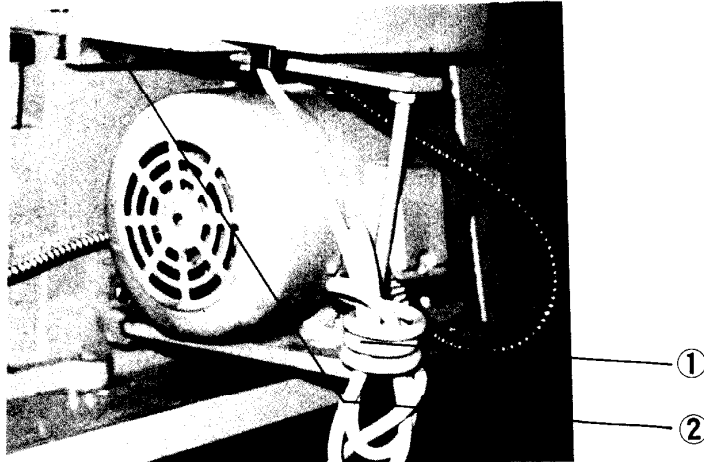
## OPERATION



1. Transformer

2. Fuse

Check the fuse if the power is off while the lamp is on.



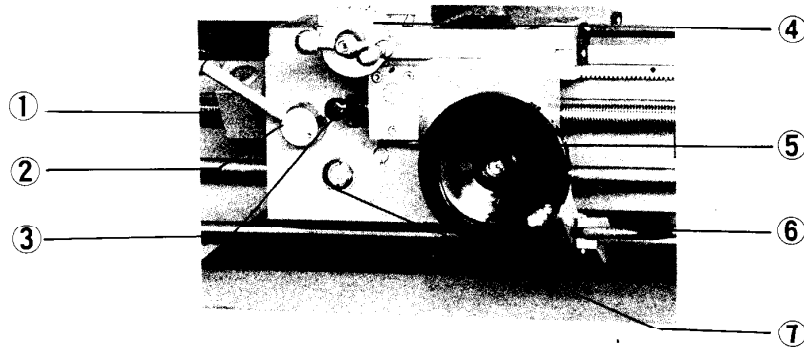
1. Adjusting Screw

For adjustment of Motor V-Belt.

2. Headstock adjusting Screws

For alignment of headstock to adjust these 2 screws.

## OPERATION



1. Threading Dial

For threading indication purpose.

2. Threading Lever for Threading spindle

Press down the lever to engage threading function, upward position when not used. ( Fig.2 )

3. Infeed Lever for Feed Spindle

Press down to engage the longitudinal movement; upward position for cross travel. ( Fig.3 )

\* Note : Do not engage threading lever & Infeed lever at the same time.

5. Hand Wheel for cross travel with Dial Indicator.

6. Spindle Rotation Lever

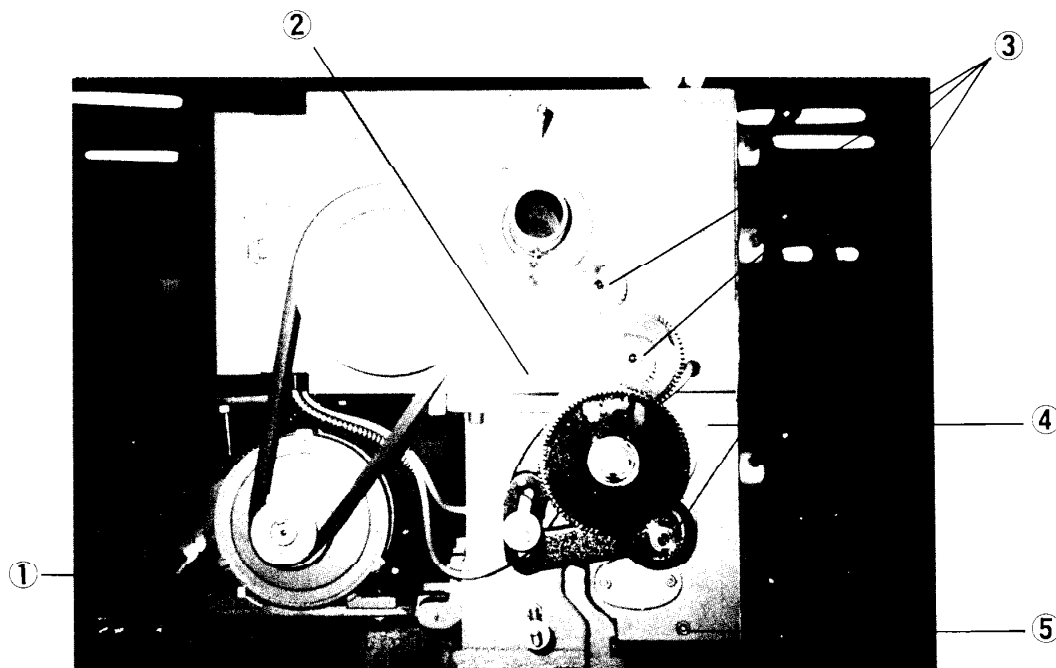
Lever on Upward position - spindle counter-clockwise.  
Downward position - spindle clockwise position.  
middle position - neutral

7. Oil glass

Lubricant must be refilled when the oil level is below center line.

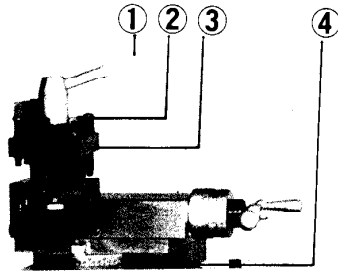
## OPERATION

1. Adjusting Screw  
For adjustment of Motor V-Belt.
2. Oil Drain Hole  
For draining of lubricant from Headstock, loosen the screw to let out, & tighten again before refilling.
3. Change Gears  
For threading purpose with reference of Threading Chart.
4. Oil Filling Hole  
For refilling of lubricant in Gear Feed Box.
5. Oil Drain Hole  
For draining of lubricant from Gear Feed Box, loosen the screw to let out, & tighten again before refilling.

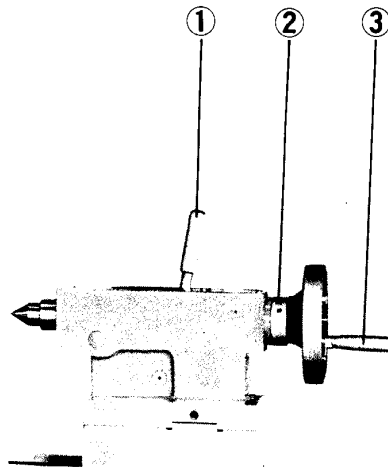




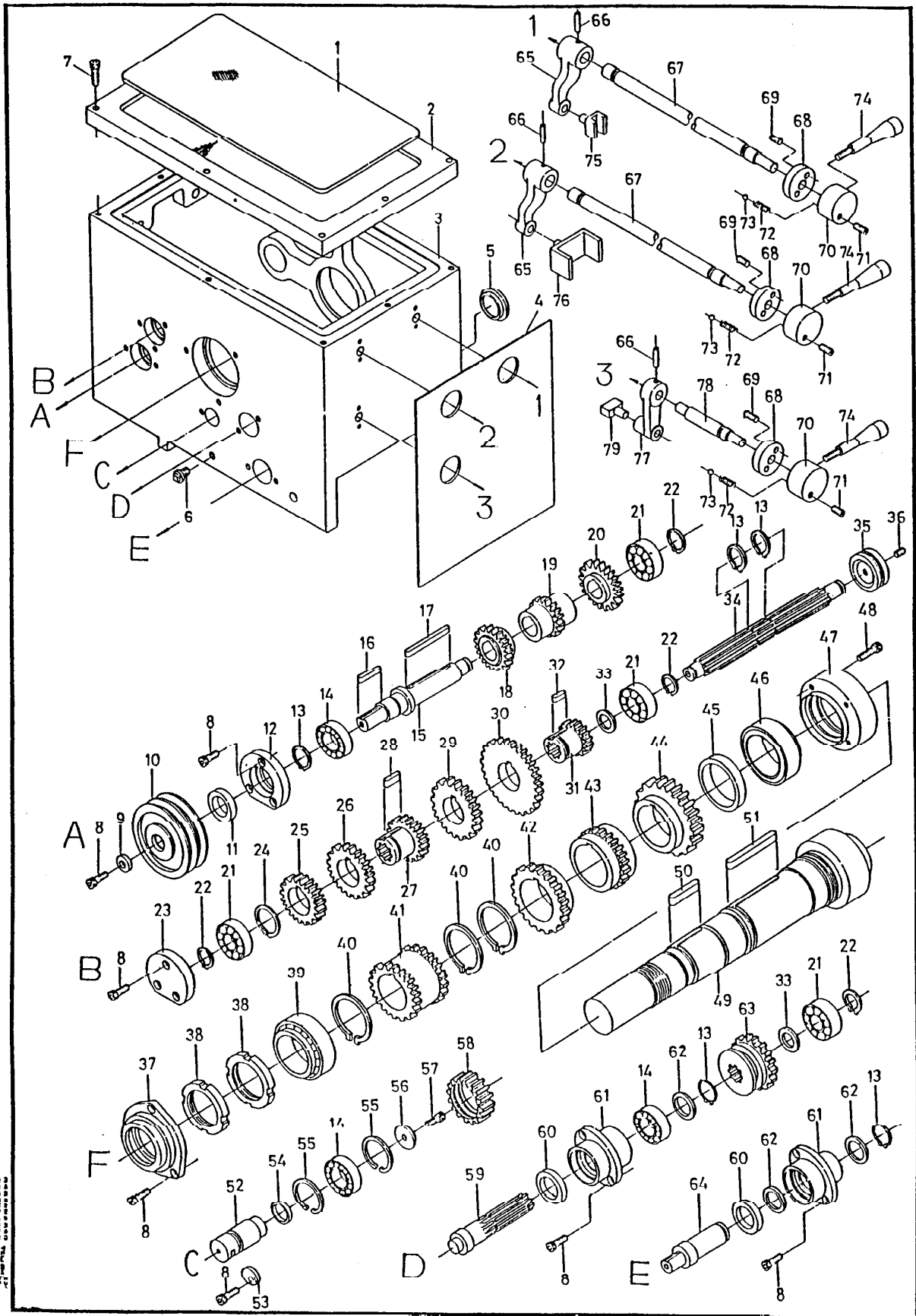
## OPERATION



1. Tool Post Wrench  
For changing of turning angle of tool post.
2. Tool Post Setting Screws  
For fastening the turning tools.
3. Cross Slide Feed Handle
4. Scale for indicating turning angle.



1. Tailstock locking handle  
For loosening to press down the handle.  
For fastening to keep the handle in upward position.
2. Dial Indicator
3. Hand Wheel for Tailstock  
For taking out the center to turn the hand wheel backward to the end position.

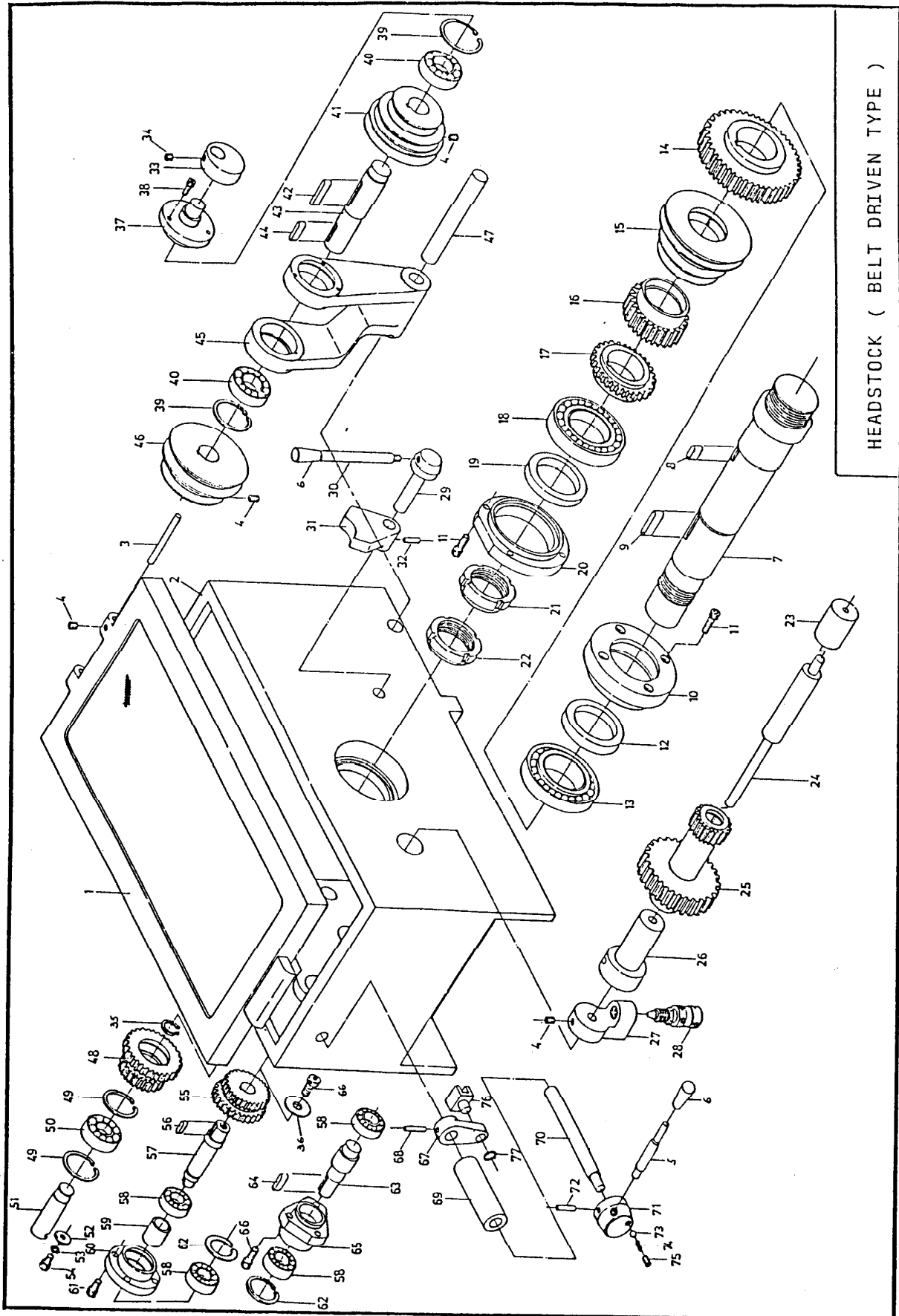


# HEADSTOCK

No.	Description	Q'ty	Part No.	No.	Description	Q'ty	Part No.
1	Packing	1		31	Gear	1	1011
2	Cover	1	1050	32	Key	1	
3	Main Casting	1	1001	33	Washer	2	1015
4	Name Plate	1		34	Shaft	1	1007
5	Oil Sight	1		35	Cover	1	1016
6	Screw	1		36	Set Screw	1	M6xP1x8L
7	Socket Head Cap Screw	8		37	Cover	1	1033
8	"	15	M6xP1x20L	38	Nut	2	1032
9	Washer	1		39	Bearing	1	30211
10	Pulley	1	A9034	40	Circlip	3	STW56
11	Oil Seal	1	TC25408	41	Gear	1	1031
12	Cover	1	1006	42	Gear	1	1030
13	Circlip	4	STW25	43	Gear	1	1029
14	Bearing	3	6005	44	Gear	1	1028
15	Shaft	1	1002	45	Washer	1	1027
16	Key	1	6x6x30L	46	Bearing	1	30212
17	Key	1	6x6x80L	47	Cover	1	1026
18	Gear	1	1003	48	Socket Head Cap Screw	4	M6xP1x30
19	Gear	1	1004	49	Spindle	1	1025
20	Gear	1	1005	50	Key	1	8x7x45L
21	Bearing	4	6204	51	Key	1	8x7x85L
22	Circlip	4	STW20	52	Shaft	1	1017
23	Cover	1	1014	53	Washer	1	1018
24	Circlip	2	STW36	54	Washer	1	
25	Gear	1	1010	55	Circlip	2	RTW47
26	Gear	1	1009	56	Washer	1	1020
27	Gear	1	1008	57	Socket Head Cap Screw	1	
28	Key	1	6x6x22L	58	Gear	1	1019
29	Gear	1	1013	59	Shaft	1	1021
30	Gear	1	1012	60	Oil Seal	2	TC30458

# HEADSTOCK

No.	Description	Q'ty	Part No.	No.	Description	Q'ty	Part No.
61	Cover	1	1024				
62	Washer	1	1022				
63	Gear	1	1023				
64	Shaft	1	1021-1				
65	Shift Lever	2	1037				
66	Taper Pin	3					
67	Shaft	2	1036				
68	Wedge	3	1041				
69	Set Screw	6					
70	Handle	3	1042				
71	Set Screw	3					
72	Spring	3					
73	Steel Ball	3					
74	Lever	3	1043				
75	Shift Fork	1	1038				
76	Shift Fork	1	1045				
77	Shift lever	1	1046				
78	Shift	1	1048				
79	Shift Fork	1	1047				



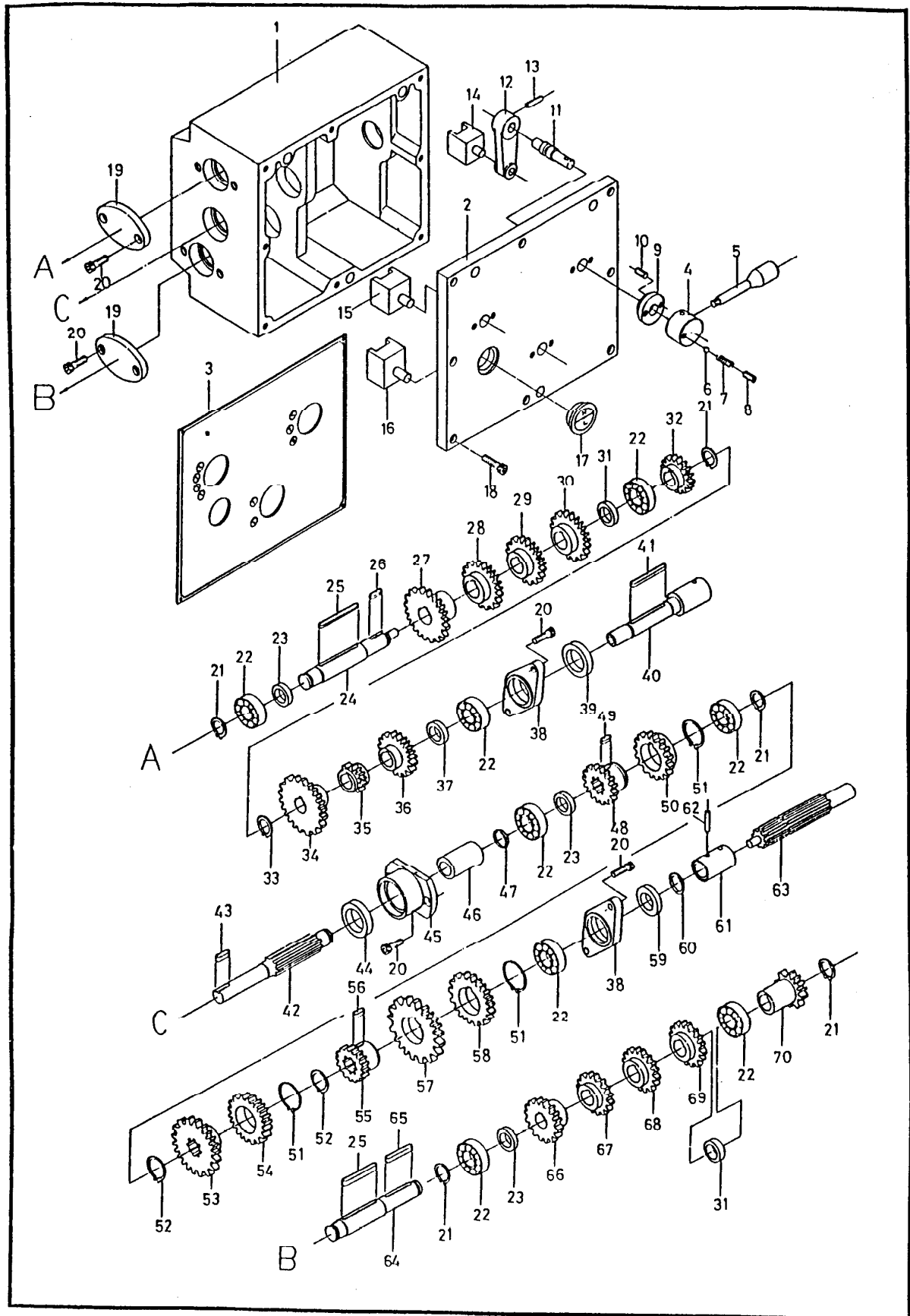
HEADSTOCK ( BELT DRIVEN TYPE )

# HEADSTOCK ( BELT DRIVEN TYPE )

No.	Description	Q'ty	Part No.	No.	Description	Q'ty	Part No.
1	Cover	1	C1004	33	Boss	1	C1063
2	Headstock	1	C1001	34	Screw	1	
3	Shaft	1	A1029	35	Circlip	1	
4	Screw	4		36	Washer	1	
5	Handle	1	101043	37	Shaft	1	C1062
6	Knob	2		38	Screw	1	
7	Spindle	1	C1005	39	Circlip	2	
8	Key	1	8×7×20L	40	Bearing	2	# 6205
9	Key	1	8×7×32L	41	Pulley	1	C1016
10	Cover	1	C1044	42	Key	1	5×5×50
11	Screw	8		43	Shaft	1	C1015
12	Oil Seal	1	729512	44	Key	1	5×5×30
13	Bearing	1	#30211	45	Bracket	1	C1060
14	Gear	1	C1007	46	Pulley	1	C1017
15	Pulley	1	C1010	47	Shaft	1	
16	Gear	1	C1012	48	Gear	1	C1057
17	Gear	1	C1020	49	Circlip	2	
18	Bearing	1	#30211	50	Bearing	1	# 6204
19	Oil Seal	1	608512	51	Shaft	1	C1023
20	Cover	1	C1038	52	Washer	1	
21	Nut	1	N9047	53	Spring Washer	1	
22	Nut	1	N9047	54	Screw	1	
23	Collar	1	C1047	55	Gear	1	C1056
24	Shaft	1	C1018	56	Key	1	
25	Gear	1	C1019	57	Shaft	1	C1026
26	Collar	1	C1053	58	Bearing	4	# 6004
27	Collar	1	N1018	59	Collar	1	C1027
28	Spring Detent Knob	1	A1021	60	Cover	1	C1059
29	Boss	1	C1065	61	Screw	1	
30	Handle	1	N1006	62	Circlip	2	
31	Shift Lever	1	C1064	63	Shaft	1	C1058
32	Pin	1		64	Key	1	5×5×18L

# HEADSTOCK ( BELT DRIVEN TYPE )

No.	Description	Q'ty	Part No	No.	Description	Q'ty	Part No.
65	Cover	1	C1026				
66	Screw	3					
67	Shifter	1	N3058				
68	Pin	1					
69	Collar	1	C1055				
70	Shaft	1	1048				
71	Boss	1	1042				
72	Pin	1					
73	Ball	1					
74	Spring	1					
75	Screw	1					
76	Shifter	1	C1042				
77	Circlip	1					



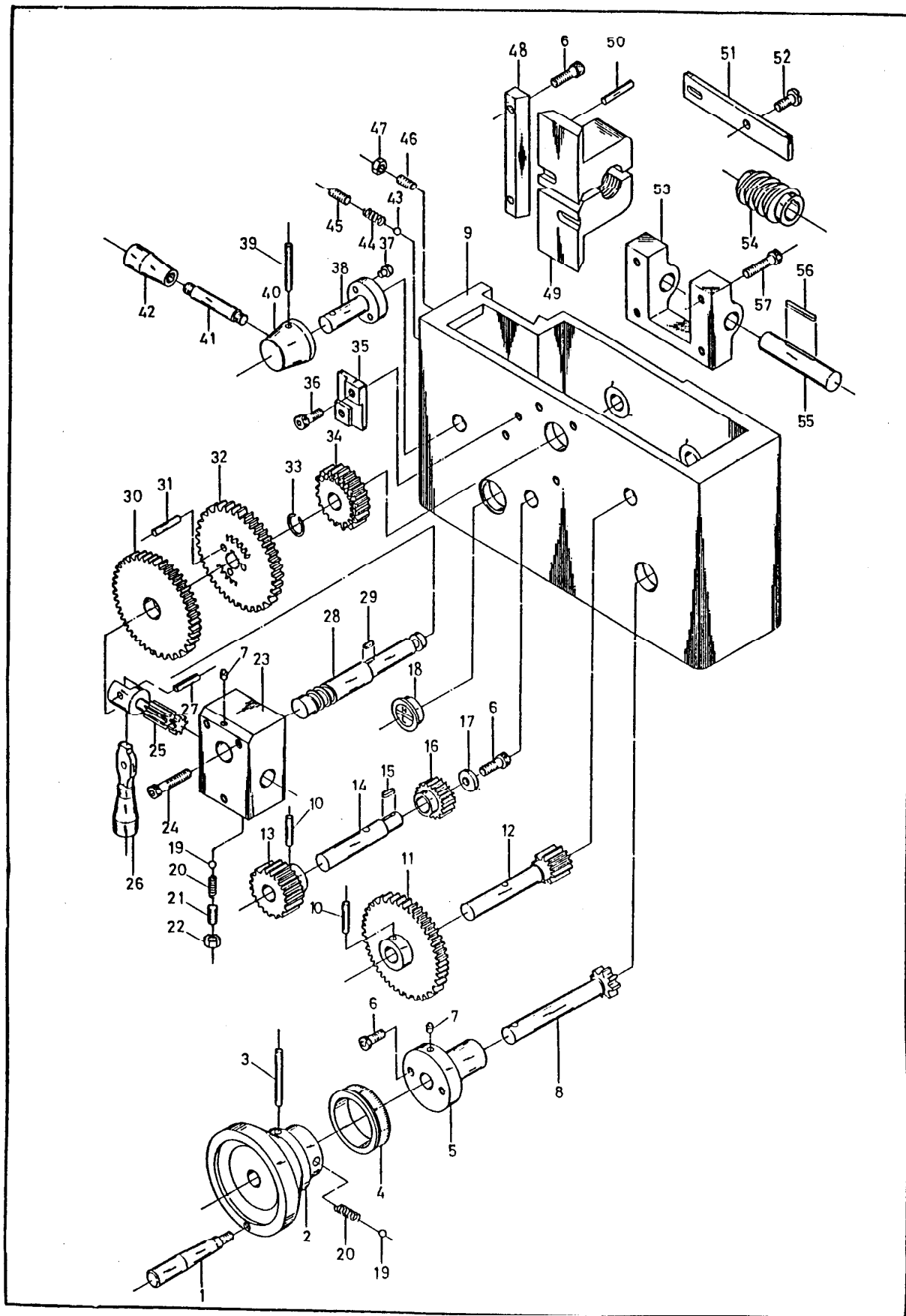


GEAR BOX

No	Description	Q'ty	Part No.	No.	Description	Q'ty	Part No.
1	Gear Box Housing	1	2001	31	Washer	2	2008
2	Cover	1	2035	32	Gear	1	2009
3	Name Plate	1		33	Circlip	1	STW19
4	Handle	3	1042	34	Gear	1	2033
5	Lever	3	1043	35	Gear	1	2032
6	Steel Ball	3	Ø½	36	Gear	1	2031
7	Spring	3		37	Washer	1	2030
8	Set Screw	3	M8X10	38	Cover	2	2034
9	Wedge	1	1041	39	Oil Seal	1	TC30458
10	Set Screw	6	M6X12	40	Shaft	1	2029
11	Shaft	3	2036	41	Key	1	5x5x60L
12	Shaft Lever	3	2037	42	Shaft	1	2017
13	Taper Pin	3	5X30	43	Key	1	
14	Shift Fork	1	2040	44	Oil Seal	1	TC30458
15	Shift Fork	1	2039	45	Cover	1	2020
16	Shift Fork	1	2038	46	Sleeve	1	2021
17	Oil Sight	1		47	O-ring	1	P 20
18	Socket Head Cap Screw	8	M6X16	48	Gear	1	2019
19	Cover	2	2010	49	Key	1	5x5x12L
20	Socket Head Cap Scre	10	M6X12	50	Gear	1	2018
21	Circlip	5	STW20	51	Circlip	3	STW34
22	Bearing	8	6004	52	Circlip	1	STW25
23	Washer	3	2003	53	Gear	1	2027
24	Shaft	1	2002	54	Gear	1	2028
25	Key	2	5X5X70L	55	Gear	1	2024
26	Key	2	5X5X15L	56	Key	1	5x5x9L
27	Gear	1	2004	57	Gear	1	2025
28	Gear	1	2005	58	Gear	1	2026
29	Gear	1	2006	59	Oil Seal	1	TC30458
30	Gear	1	2007	60	O-ring	1	P 20

# GEAR BOX

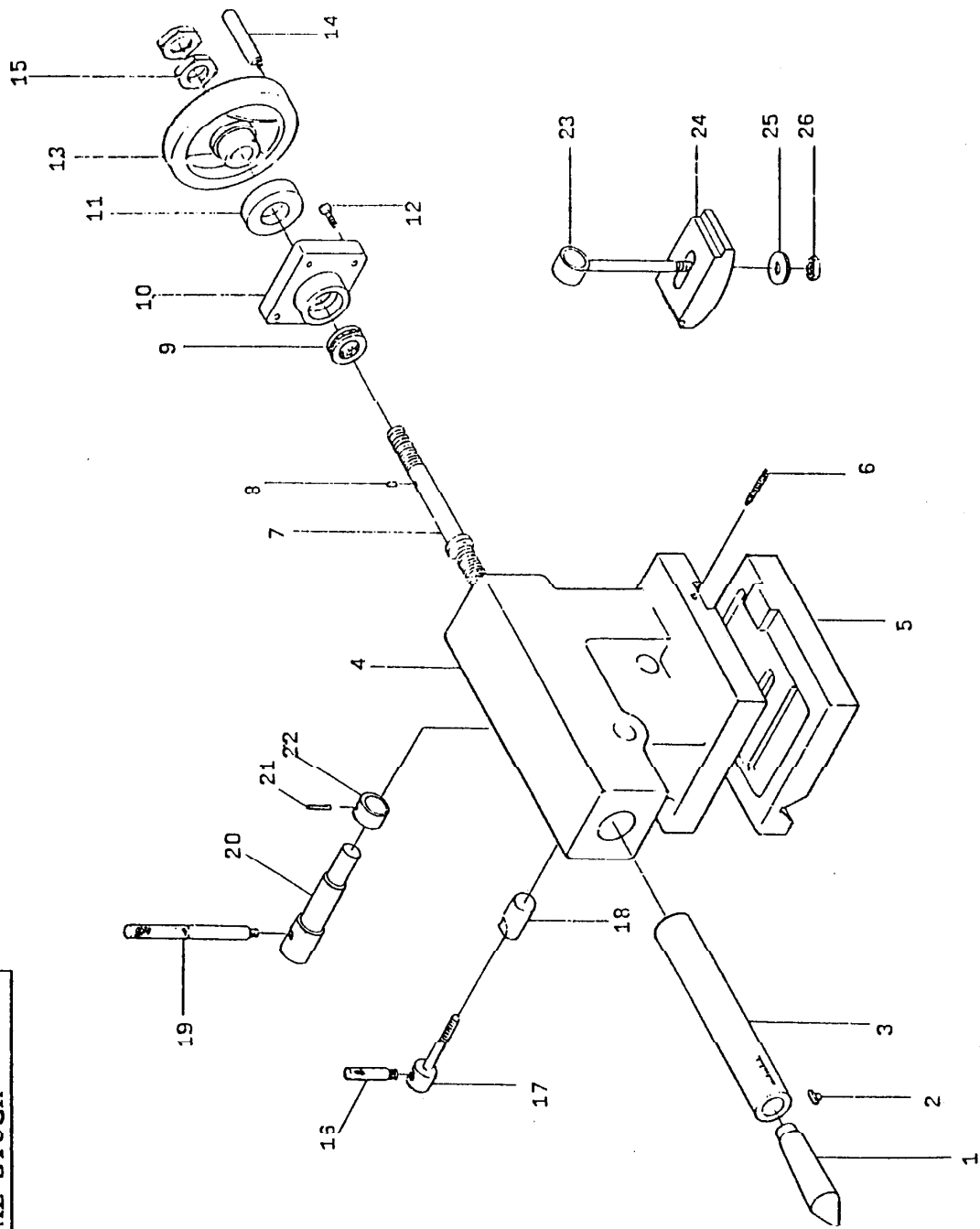
No.	Description	Q'ty	Part No.	No.	Description	Q'ty	Part No.
61	Sleeve	1	2023				
62	Taper Pin	1	5X30				
63	Shaft	1	2022				
64	Shaft	1	2011				
65	Key	1	5x5x45L				
66	Gear	1	2012				
67	Gear	1	2013				
68	Gear	1	2014				
69	Gear	1	2015				
70	Gear	1	2016				



APRON

No.	Description	Q'ty	Part No.	No.	Description	Q'ty	Part No.
1	Handle	1	M8xP1.25	33	Circlip	1	STW 16
2	Handle Wheel	1	3004	34	Gear	1	3017
3	Pin	1	Ø 5x60L	35	Wedge	1	3026
4	Index Ring	1	3005	36	Screw	2	M6X12
5	Sleeve	1	3003	37	Screw	2	3029
6	Screw	9	M6xP1x20L	38	Shaft	1	3019
7	Oil Plug	2	Ø ¼	39	Pin	1	Ø5x40L
8	Gear Shaft	1	3002	40	Boss	1	3020
9	Apron Case	1	3001(33)	41	Lever	1	3023
10	Pin	2	Ø 5x30L	42	Knob	1	3/8"
11	Gear	1	3007	43	Steel Ball	1	3/16"
12	Gear Shaft	1	3006	44	Spring	1	Ø4.2
13	Gear	1	3011	45	Screw	1	M6X6
14	Shaft	1	3008	46	Screw	1	M6X16
15	Key	1	5x5x15L	47	Nut	1	M6
16	Gear	1	3009	48	Gib	1	3022
17	Washer	1	3010	49	Half Nut	1	3021
18	Oil Sight	1	Ø 29mm	50	Pin	1	3027
19	Steel Ball	2	Ø ¼	51	Gib	1	3030
20	Spring	2		52	Screw	1	3031
21	Screw	1	M18x1.25x10	53	Worm Frame	1	3024
22	Nut	1	M8	54	Worm	1	3025
23	Boss	1	3012	55	Shaft	1	A7048
24	Screw	3	M8X40	56	Key	1	5X5X30
25	Handle	1	3018	57	Screw	1	M6X20
26	Lever	1	3028				
27	Pin	1	5X25				
28	Shaft	1	3013				
29	Key	1	4X4X8L				
30	Gear	1	3014				
31	Pin	3	3016				
32	Gear	1	3015				
		1					

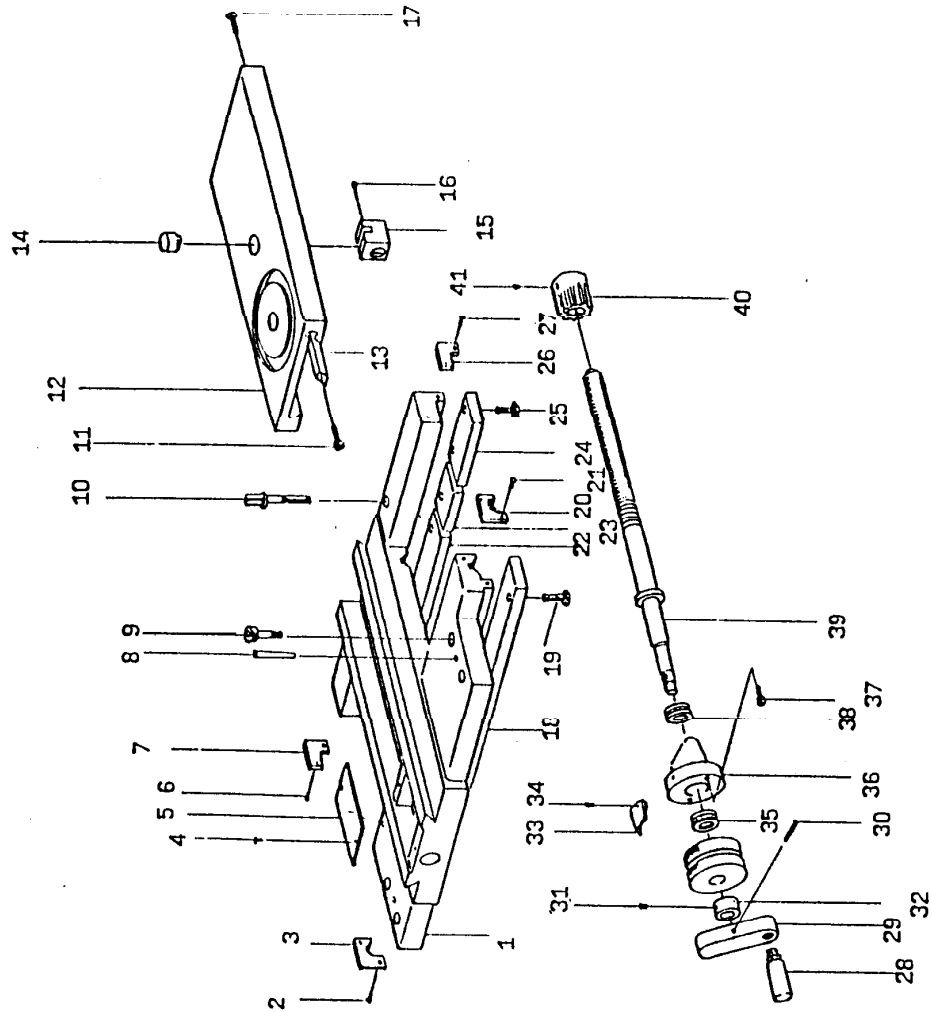
# TAIL STOCK



# TAILSTOCK

NO.	Description	Q'ty	Part No.	NO.	Description	Q'ty	Part No.
1	Center	1		25	Washer	1	
2	Key	1	A8019	26	Nut	1	
3	Quill	1	A8003				
4	Tailstock	1	A8001				
5	Base	1	A8002				
6	Screw	2					
7	Screw	1	A8004				
8	Pin	1	A8008				
9	Bearing	1	51101				
10	Bracket	1	A8005				
11	Index Ring	1	A8006				
12	Screw	4					
13	Hand Wheel	1	A8007				
14	Handle	1	A8009				
15	Nut	2	A8020				
16	Handle	1	A8015				
17	Lock Screw	1	A8014				
18	Lock Shaft	1	A8013				
19	Handle	1	A8016				
20	Shaft	1	A8012				
21	Pin	1					
22	Collar	1	A8011				
23	Shaft	1	A8010				
24	Base Shoe Block	1	A8017				

# SADDLE

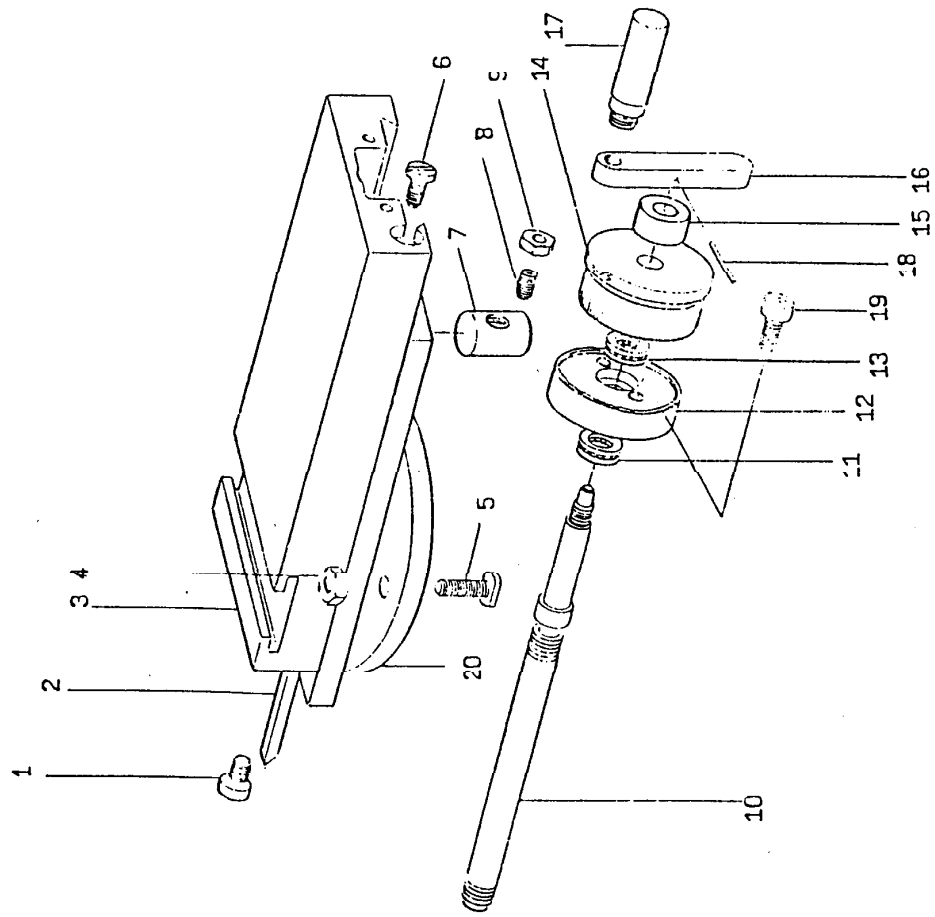


SADDLE

No.	Description	Q'ty	Part No.	No.	Description	Q'ty	Part No.
1	Saddle	1	A-5001	35	Bearing	1	51102
2	Screw	2		36	Bracket	1	A-5006
3	Wiper	1	A5035L	37	Screw	2	
4	Screw	2		38	Bearing	1	51102
5	Cover	1	A5009	39	Screw	1	A5042
6	Screw	2		40	Gear	1	A 5007
7	Wiper	1	A5035	41	Screw	1	
8	Pin	2					
9	Screw	4					
10	Screw	1	A-5012				
11	Screw	1	A-5016				
12	Tool Post Slide	1	A-5018				
13	Gib	1	A-5017				
14	Key	1	B5022				
15	Nut	1	A5052				
16	Screw	1					
17	Screw	1	A-5016				
18	Slide Plate	1	A-5014				
19	Screw	3					
20	Wiper	1	A5035R				
21	Screw	2					
22	Slide Plate	1	A-5013				
23	Slide Plate	1	A-5013				
24	Slide Plate	1	A-5013				
25	Screw	4					
26	Wiper	1	A5035				
27	Screw						
28	Handle	1	C5005				
29	Bracket	1	C5005				
30	Pin	1					
31	Screw	1					
32	Collar	1	C-5007				
33	Cover	1					
34	Screw	2					



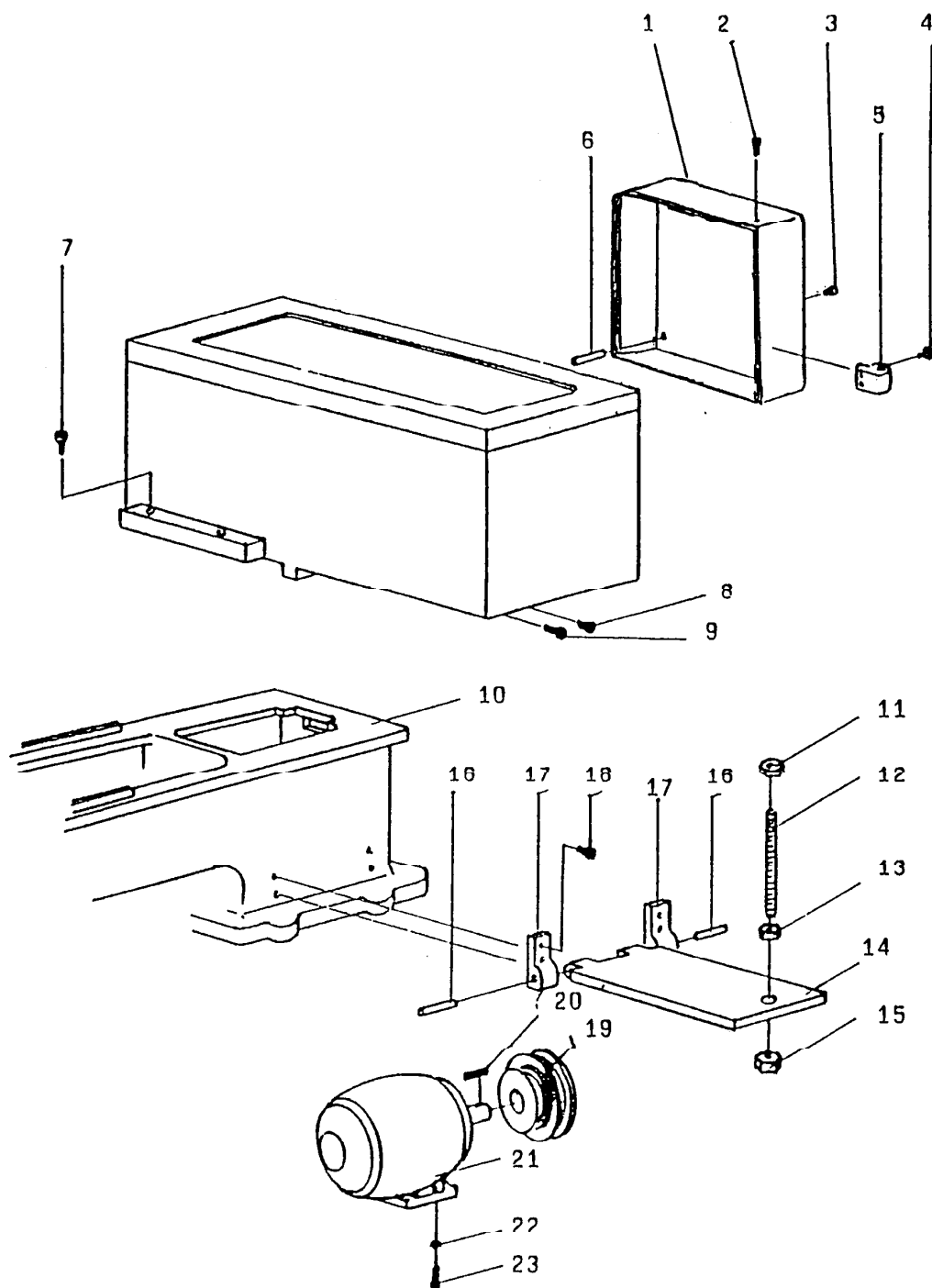
TOOL POST



TOOL POST

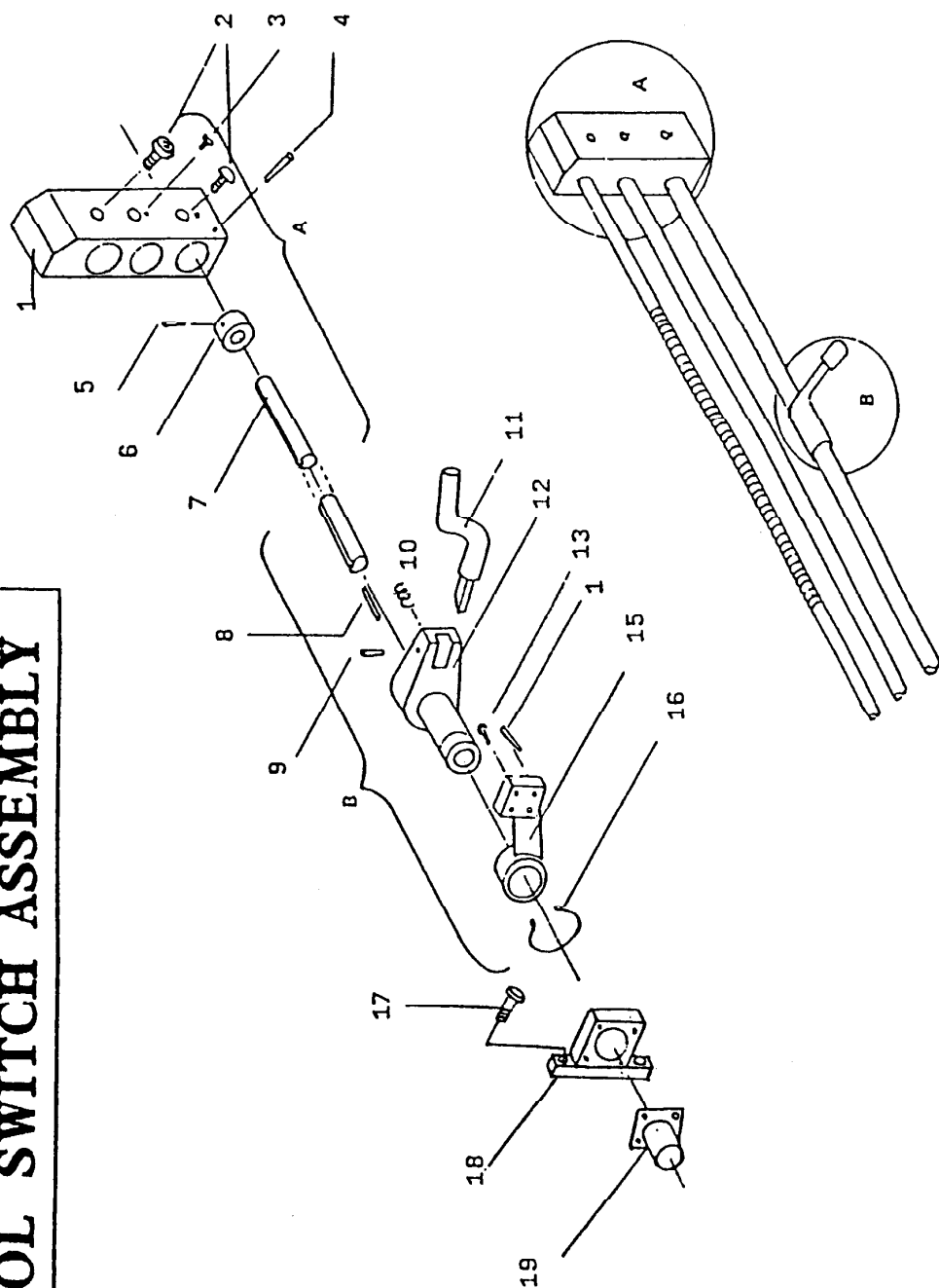
NO.	Description	Q'ty	Part No.	NO.	Description	Q'ty	Part No.
1	Screw	1	A6012				
2	Gib	1	A6011				
3	Compound Slide	1	A6010				
4	Nut	2					
5	Screw	2	A6017				
6	Screw	1	A6012				
7	Nut	1	A6016				
8	Screw	1					
9	Nut	1					
10	Screw	1	A6015				
11	Bearing	1	51101				
12	Bracket	1	A6017				
13	Bearing	1	51101				
14	Index Ring	1	A6020				
15	Nut	1	A6019				
16	Bracket	1	A6021				
17	Handle	1	A6022				
18	Pin	1					
19	Screw	1					
20	Compound Rest	1	A6013				

# BED AND DRIVE ASSEMBLY

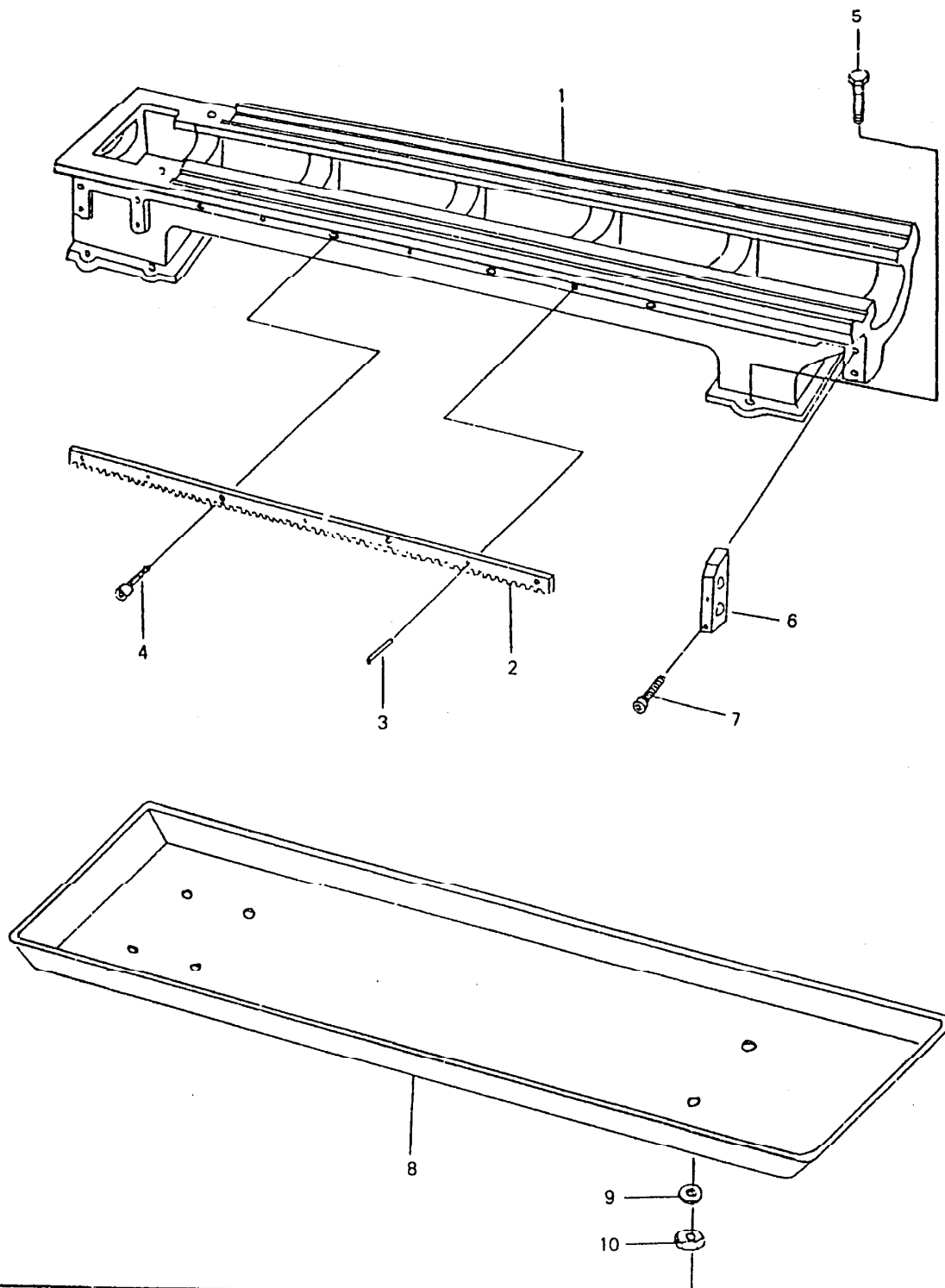


No.	Description	Q'ty	Part No.	No.	Description	Q'ty	Part No.
1	Cover	1	C1067				
2	Screw	2					
3	Screw	1					
4	Screw	4					
5	Bracket	2	C-7015				
6	Shaft	1	C-7017				
7	Screw	4					
8	Screw	2					
9	Screw	2					
10	Bed	1	A-7001				
11	Nut	1					
12	Screw	1	C7028				
13	Nut	1					
14	Plate	1	C7012				
15	Nut	1					
16	Shaft	2	C-7013				
17	Bracket	2	B-7032				
18	Screw	4					
19	Pulley	1	C-7011				
20	Key	1					
21	Motor	1					
22	Nut	4					
23	Screw	4					

# CONTROL SWITCH ASSEMBLY



# BED ASSEMBLY



## CONTROL SWITCH ASSEMBLY

## BED ASSEMBLY

No.	Description	Q'ty	Part No.	No.	Description	Q'ty	Part No.
1	Bracket	1	A-7039	1	Lathe Bed	1	
2	Screw	2		2	Rack Gear	1	G2016
3	Oil Cup	2		3	Pin	3	
4	Pin	1		4	Screw	4	
5	Pin	1		5	Screw	6	
6	Collar	1	C5007	6	Bracket	1	A-7039
7	Rod	1	A7048B	7	Screw	2	
8	Key	1		8	Chip Pan	1	A7045B
9	Pin	1		9	Washer	6	
10	Spring	1		10	Nut	6	
11	Handle	1	A7026				
12	Bracket	1	A7027				
13	Screw	4					
14	Pin	2					
15	Bracket	1	A7028				
16	Clip Ring	1					
17	Screw	1					
18	Bracket	1	A7026B				