

MODEL - DEPENDENT PARTS

Part numbers for some assemblies and individual parts depend on the machine model, whether the machine is a HLV-H, HLV-EM, HLV-M or TFB-H. When locating a part number in the list, check the part description to make certain the assembly and/or individual part applies to your machine.

HOW TO ORDER REPLACEMENT PARTS

When ordering replacement parts, please provide the following information:

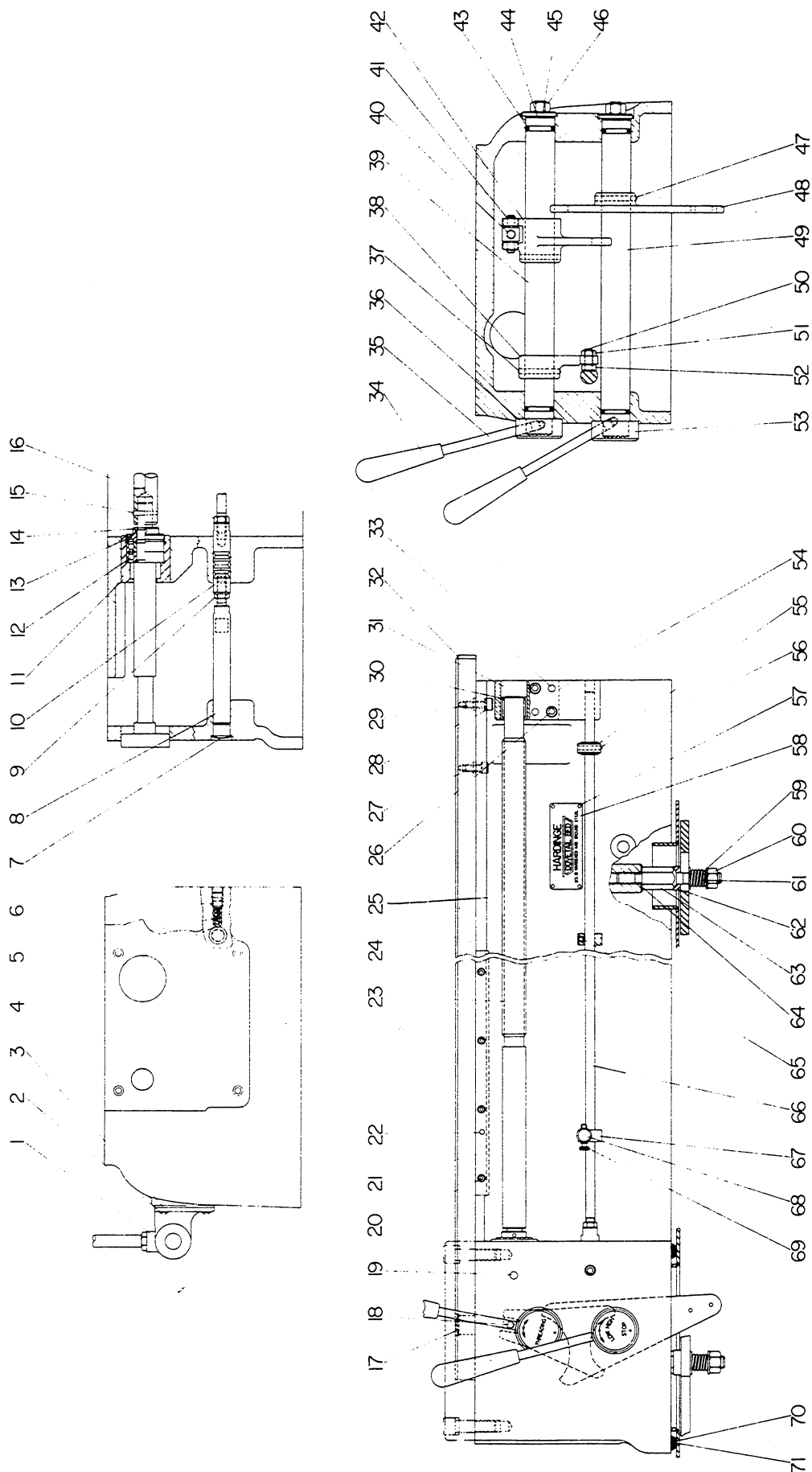
1. Include complete serial number of the machine. This is located on the bed at the tailstock end, and on the headstock at the pad for the collet closer bracket.
2. Give the parts list page number, key number, part name, and part number.
3. Indicate quantity of each part required.
4. Specify how and where to ship.

HARDINGE BROTHERS, INC.
Elmira, New York 14902

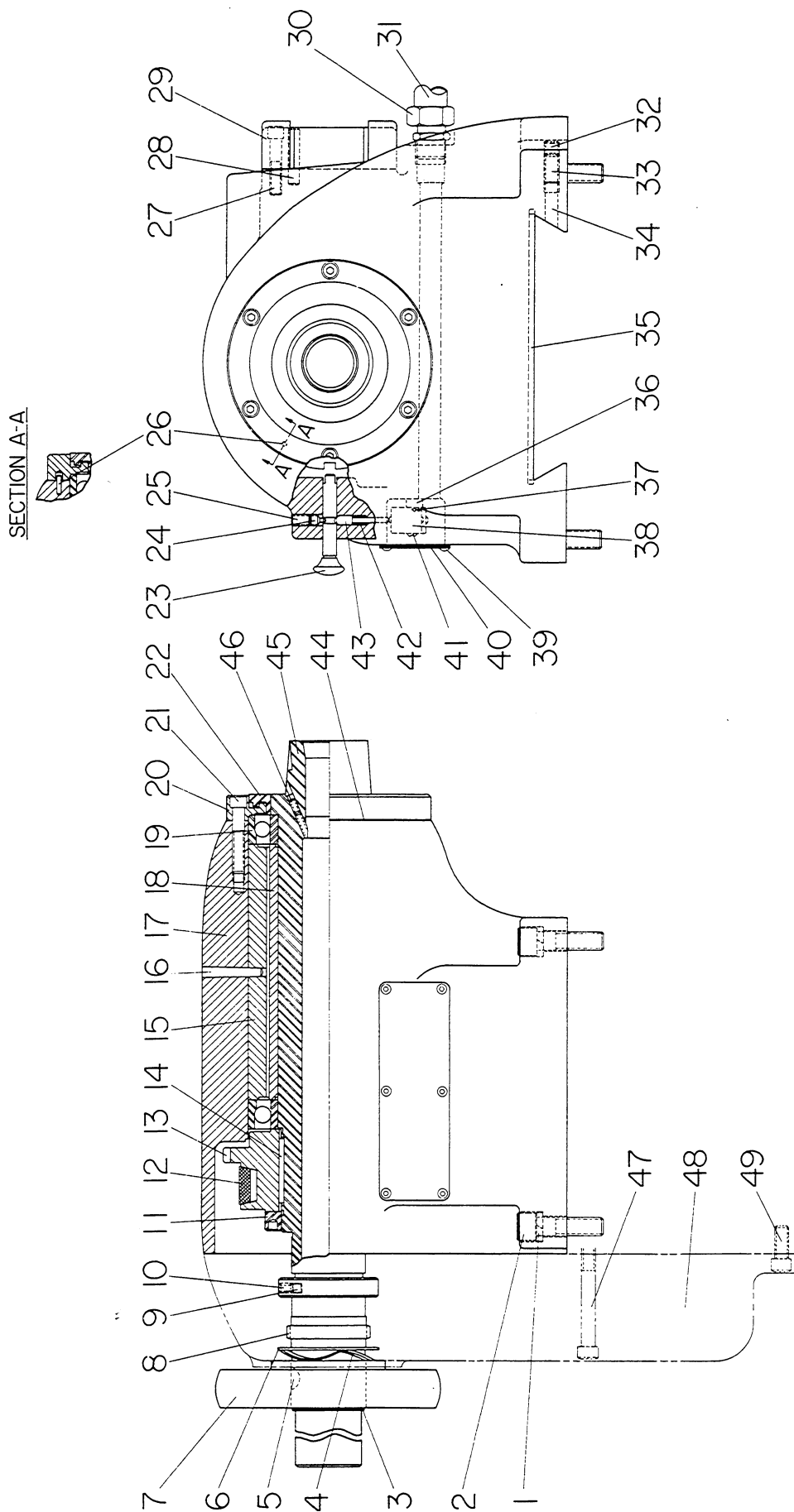
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BED ASSEMBLY (HLV)



HEADSTOCK ASSEMBLY

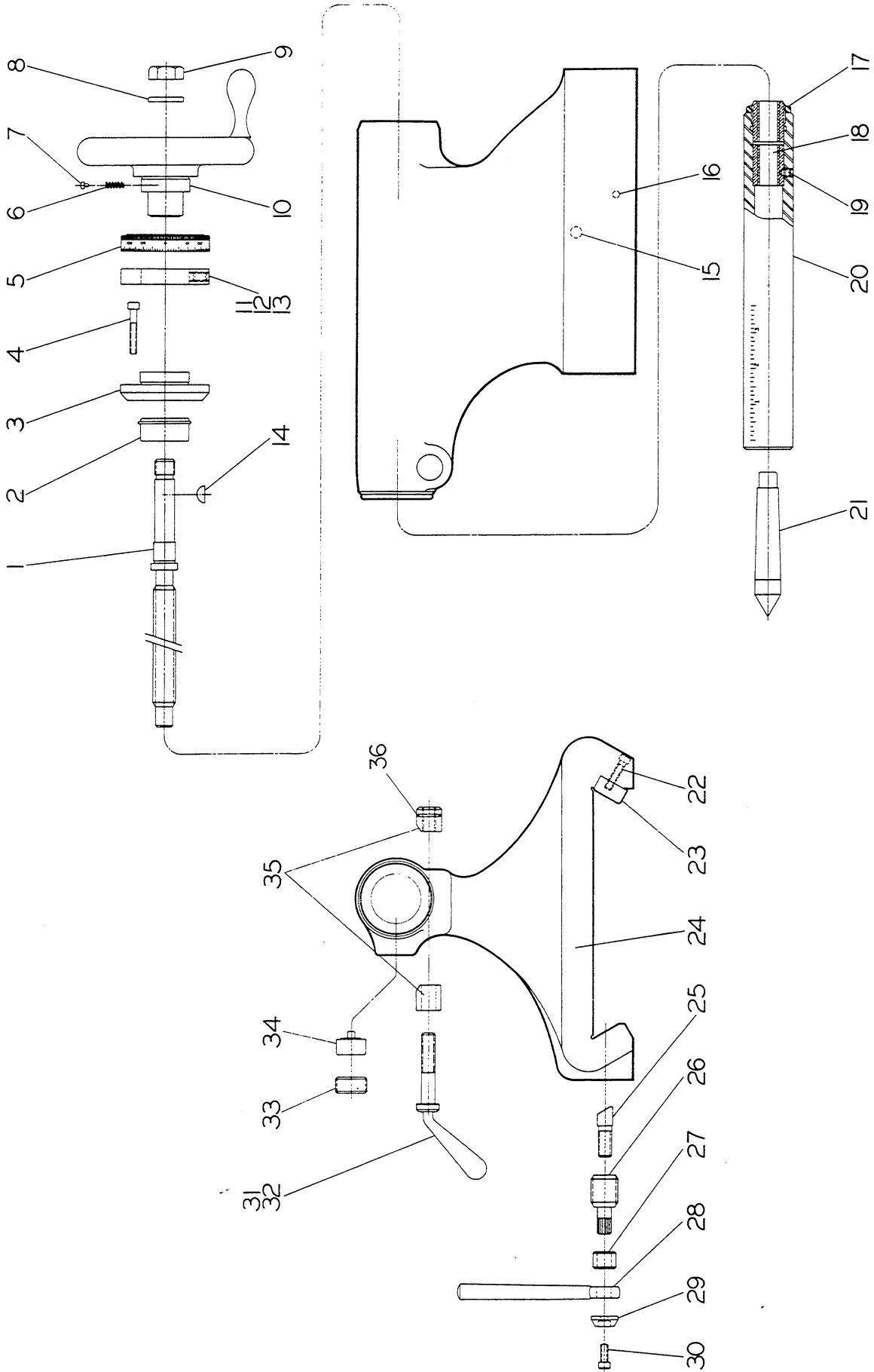


HEADSTOCK ASSEMBLY

KEY	PART NUMBER				PCS	NAME
	R	L	H	A		
24					1	Screw for Lock Pin
25					1	Lock Screw for Stop Pin Screw
26					1	Dowel Pin
27					3	Screw
28					2	Dowel Pin
29					1	Bracket
30					27"	1/2" Conduit
31					1	1/2" Connector
32					1	Screw
33					1	Screw
34					1	Locking Plug
35					1	Seal for Headstock
36					1	Switch Mounting Plate
37					2	Screw
38					1	Limit Switch
39					6	Screw
40					1	Nameplate
41					1	Seal for Nameplate
42					2	Screw
43					1	Spring
44					1	Plunger for Lock Pin
45					1	Gasket
					1	Spindle (Taper Nose)
					1	Spindle (Threaded Nose)
					1	Spindle (Camlock)
46					1	Lock Screw (Taper Nose)
					1	Lock Screw (Threaded Nose)
47					1	Lock Screw (Camlock)
48					2	Screw (TFB only)
49					1	Cover (TFB only)
					2	Screw (TFB only)
					4	Screw (HLV only)

KEY	PART NUMBER				PCS	NAME
	H	L	H	A		
1					4	Lock Washer
2					4	Mounting Bolt
3					1	Snap Ring
4					1	Wave Washer
5					1	Handwheel Key
6					1	Spacer for Wave Washer
7					1	Handwheel
8					1	Spindle Gear (HLV only)
9					1	Spacer (TFB only)
10					2	Cork
11					1	Spring Pin
12					1	Spindle Nut for Bearing
13					1	Pulley Belt
14					1	Spindle Pulley
					1	Key for Pulley
					1	Headstock Frame Assembly (Consists of Key #15-18)
15					1	Bearing Shoulder Bushing
16					1	Taper Pin
17					1	Headstock Frame
18					1	Bearing Spacer
19					1pr.	Bearing
20					1	Front Outside Cap
21					6	Screw
22					1	Seal (Taper Nose Spindle Only)
					1	Seal (Threaded and Camlock Spindle only)
23					1	Spindle Lock Pin

TAILSTOCK ASSEMBLY (SINGLE DIAL)



TAILSTOCK ASSEMBLY (SINGLE DIAL)

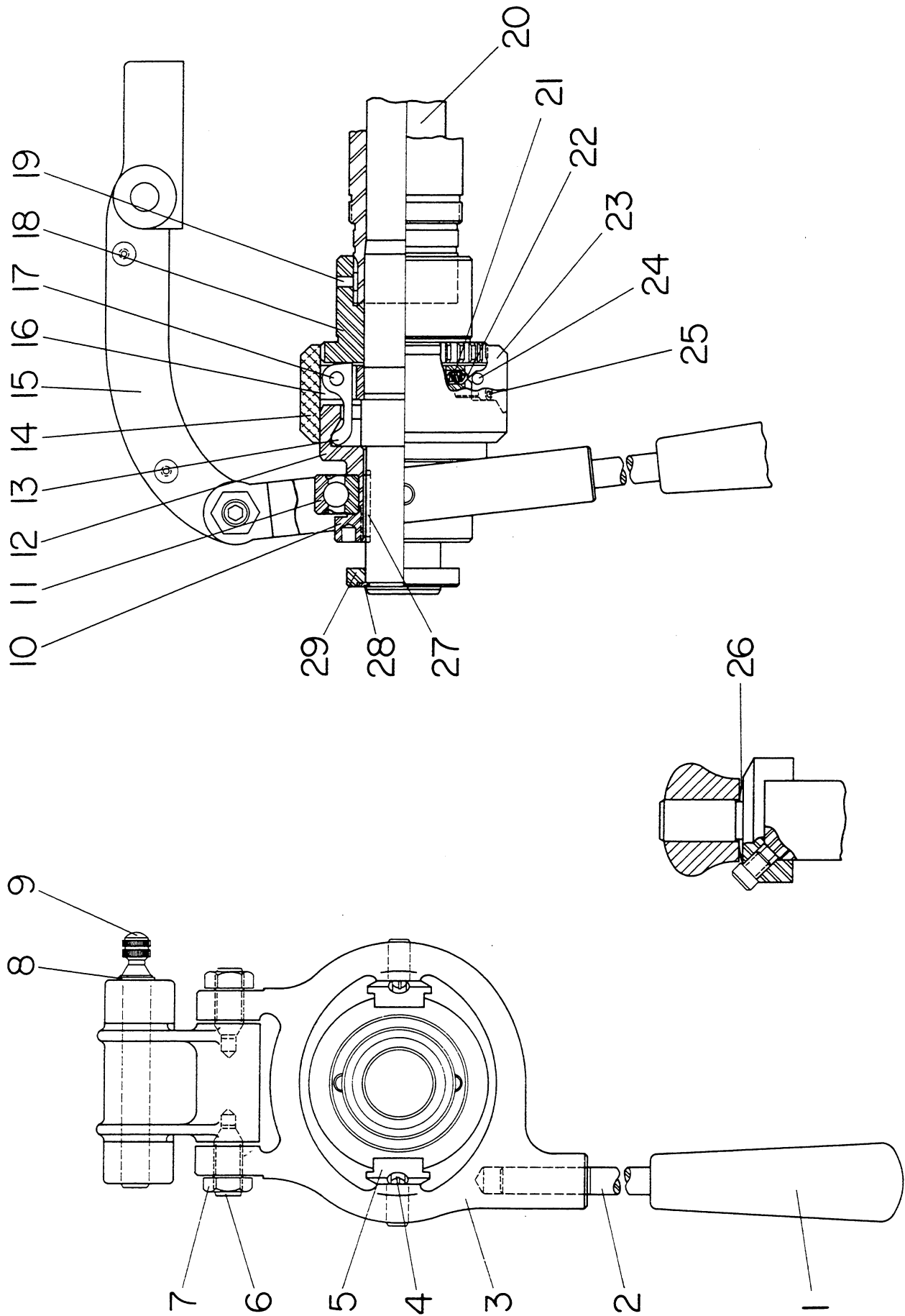
KEY	PART NUMBER	PCS	NAME
28	H 6	1	Handle
29	L 6	1	Washer
30	L 6	1	Screw
31	L 6	1	Handle
32	L 6	1	.044 Shim
	L 6	1	.050 Shim
	L 6	1	.056 Shim
	L 6	1	.070 Shim
33	L 6	1	Lock Screw
34	L 6	1	Spindle Key
35	L 6	1	Binding Nut (Two-Piece)
36	L 6	1	O-Ring

KEY	PART NUMBER	PCS	NAME
1	L 6	1	Feed Screw (English)
2	L 6	1	Feed Screw (Metric)
3	L 6	1	Bearing
4	L 6	1	End Cap
5	L 6	4	Screw
6	L 6	1	Dial and Support Assembly (English)
7	L 6	1	Dial and Support Assembly (Metric)
8	L 6	1	Spring
9	L 6	1	Plug
10	L 6	1	Washer
11	L 6	1	Nut
12	L 6	1	Handwheel Assembly
13	L 6	1	Plug
14	L 6	1	Screw
15	L 6	1	Zero Ring
16	L 6	1	Key
17	L 6	1	Handle Stop Pin
18	L 6	1	Stop Pin
19	L 6	1	Lock Nut
20	L 6	1	Feed Screw Nut (English)
21	L 6	1	Feed Screw Nut (Metric)
22	L 6	1	Screw
23	L 6	1	Tailstock Spindle (English)
24	L 6	1	Tailstock Spindle (Metric)
25	L 6	1	Tailstock Center
26	L 6	4	Screw
27	L 6	1	Gib
	L 6	1	Tailstock Body
	L 6	1	Locking Plug
	L 6	1	Clamp Bolt
	L 6	1	Spacer

TAILSTOCK (HLV-EM)

KEY	PART NUMBER										PCS	NAME	
1	3											1	Key
2												4	Screw
2A	D	D										1	End Cap
3	D	D										1	127 Tooth Drive Gear
4	D	D										1	Gear Bushing
5	D	D									2	1	Dial and Mount Assembly
5A												1	Set-Screw
5B	D	D										1	Window Frame
	D	D										1	Window
												1	Set Screw
												2	Screw
6	5											1	Washer
7	V	D										1	Nut
8	T	L										1	Handle
9	D	D										1	Handwheel
10	D	D									0	2	Dial and Mount Assembly
11	D	D										1	Front Bushing
11A	D	D										2	Brake Shoe
11B	D	D										1	Spring
11C	D	D									0	2	Spring
	D	D										1	Nylon Plug
12	D	D										1	Idler Gear
13	C	P										1	Bearing
14	D	D										1	Feed Screw
15	C	D										1	Handle Stop Pin
16	C	D										1	Stop Pin
17	V	D										1	Lock Nut
18	L	H										1	Feed Screw Nut
19												1	Screw
20	D	D										1	Tailstock Spindle
21	2	M	B									1	Tailstock Center
22												4	Screw
23	L	H										1	Gib
24	L	H										1	Tailstock Body
25	6											1	Locking Plug
26	H	L										1	Clamp Bolt
27	H	L										1	Spacer
28	H	L										1	Handle
29	6											1	Washer
30												1	Screw
31	L	H										1	Handle
32	T	L										1	.044 Shim
	T	L										1	.050 Shim
	T	L										1	.056 Shim
	T	L										1	.070 Shim
33	L	H										1	Lock Screw
34	L	H										1	Spindle Key
35	L	H										1	Binding Nut
	O	R										1	O-Ring

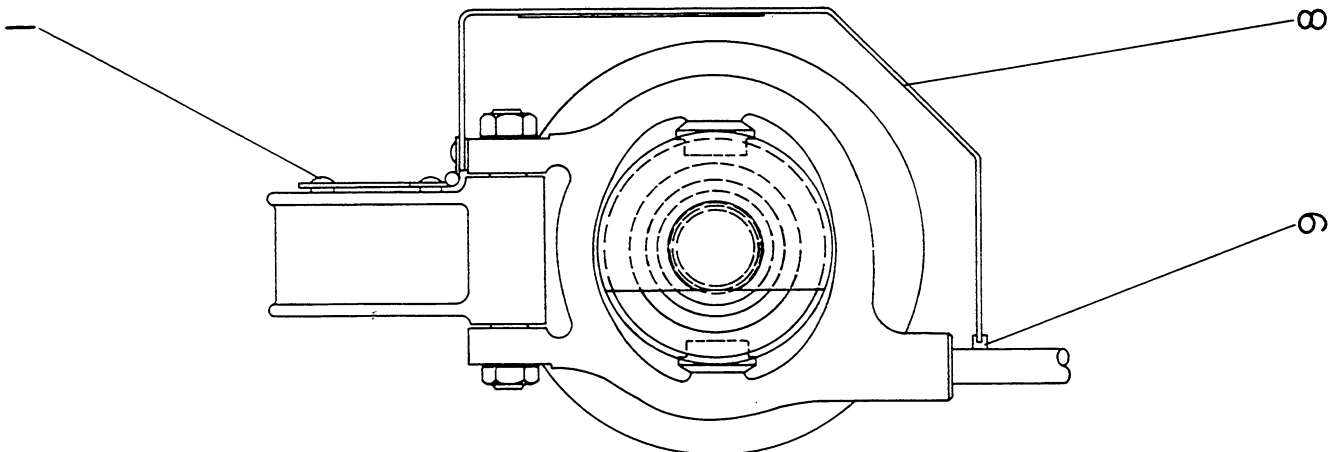
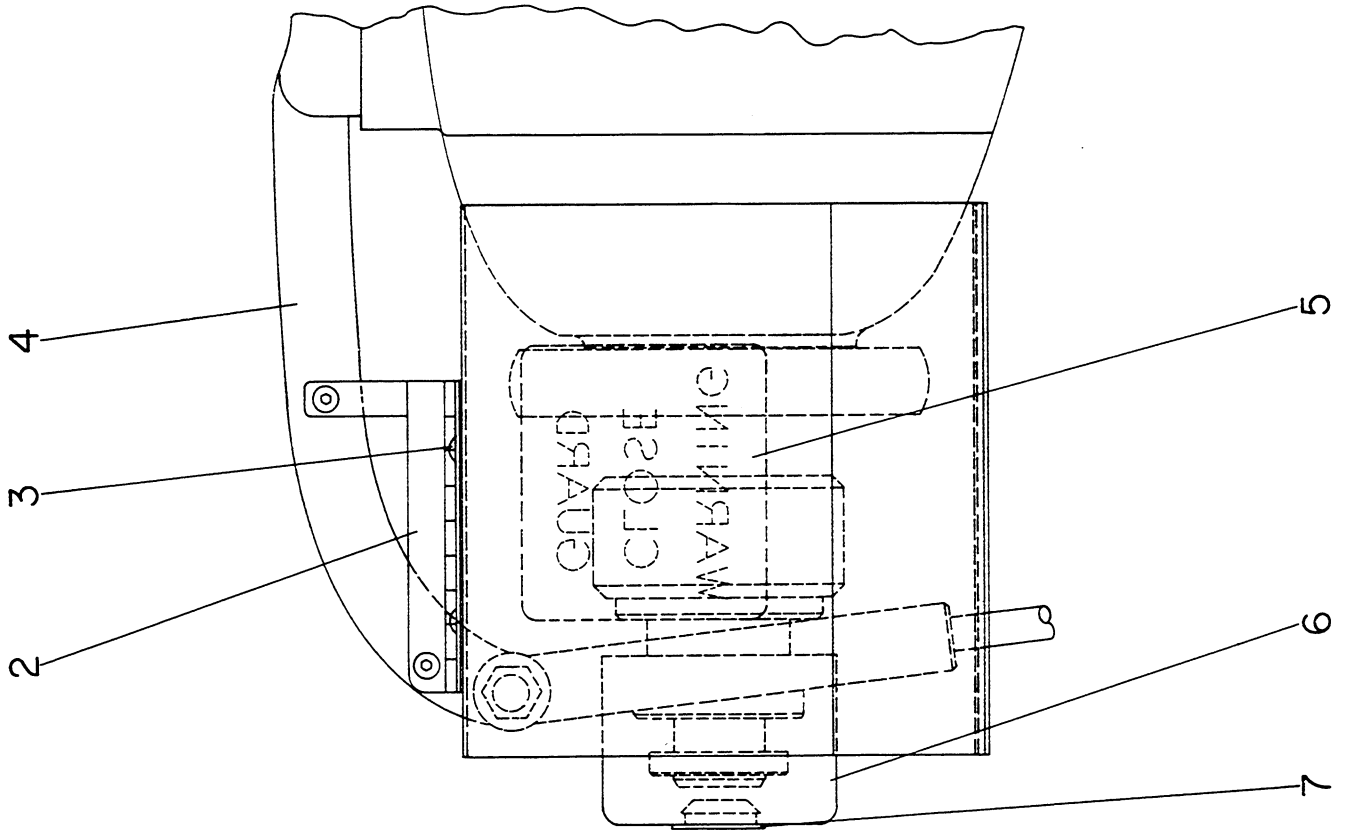
COLLET CLOSER



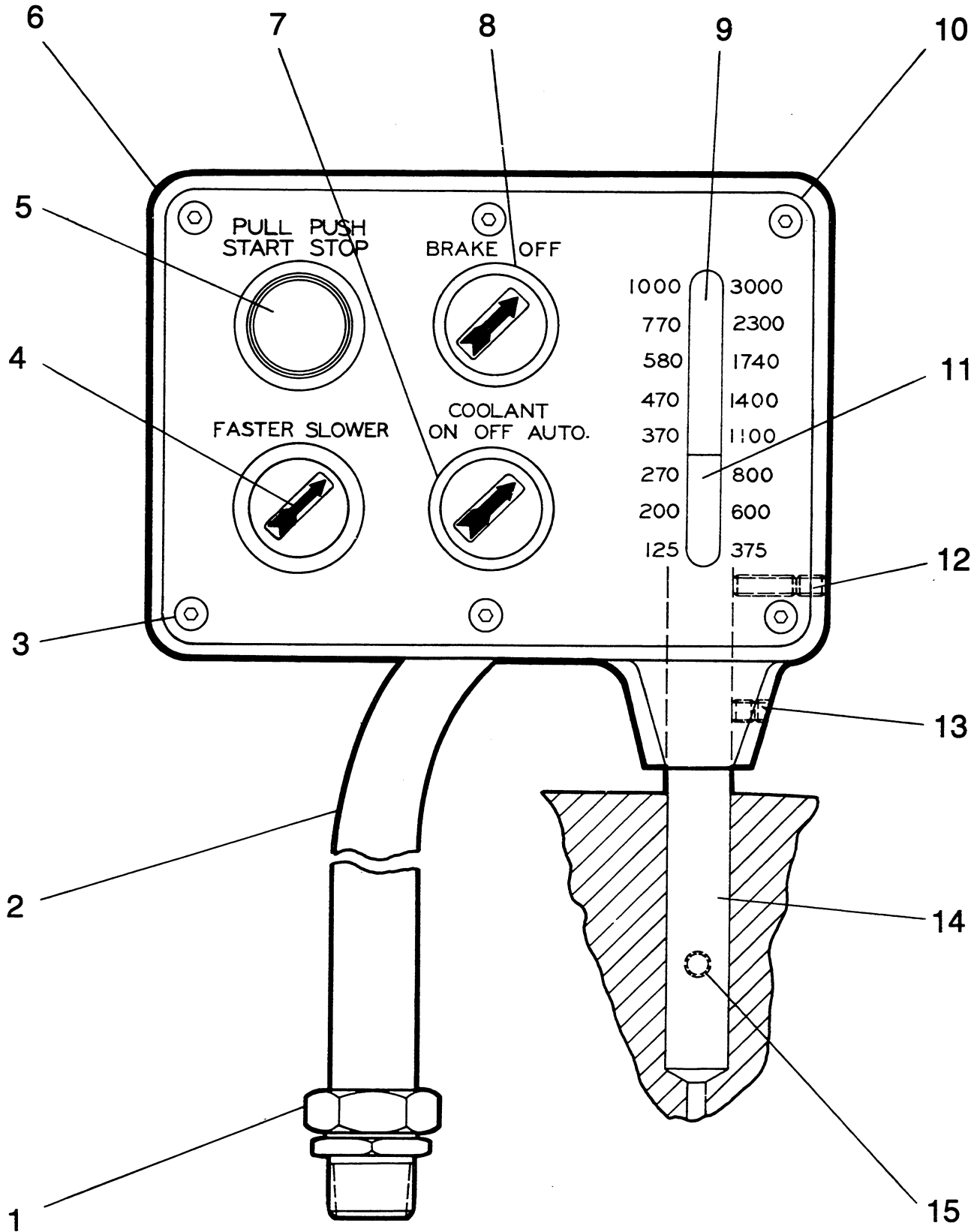
KEY	PART NUMBER										PCS	NAME	
	R	C											
1	7	9	A	0	0	0	0	0	5	0	0	1	Lever Yoke Assembly (Consists of Key #1-3)
2	C	W	B	0	0	0	0	8	6	7	2	1	Handle
3	R	E		0	0	0	0	5	0	1		1	Lever
4	R	R	A	0	0	0	8	2	3	2		1	Lever Yoke
5	R	A		0	0	0	8	2	3	0		2	Screw
6	6			0	0	0	9	0	3	4		2	Swivel Block
7	5			0	0	0	1	4	6	6		2	Pilot Screw
8	5	0		0	0	0	8	2	3	1	0	2	Nut
9	V	D		0	0	0	8	0	1	9		1	Retaining Ring Link Pin
*10	R	R		0	0	0	8	2	2	2		1	Retaining Nut
*11	R			0	0	0	8	2	3	3		1	Bearing
*12	5	7	A	0	0	0	0	4	9	6	A	1	Clutch Cone
13	3	7	A	0	0	0	0	4	8	5		3	Clutch Finger
14	R	G	A	0	0	0	0	4	9	4		1	Shell Guard
15	L	H	A	0	0	0	0	5	0	3		1	Connecting Link
16	5	7	C	0	0	0	0	4	8	4		1	Bracket
17	5			0	0	0	2	0	2	4		3	Retaining Pin
18	H	L	A	0	0	0	0	4	9	1		1	Adjusting Nut Assembly (Consists of Key -18 and 19)
19	6			0	0	0	0	4	9	3		1	Adjusting Nut
20	L	H		0	0	0	0	4	8	0		1	Key
21	L	H		0	0	0	0	4	8	0	C	1	Spindle (Tapered or Threaded Nose)
22	3	7		0	0	0	0	4	9	0		1	Spring
23	3	7	B	0	0	0	0	4	8	9		1	Cap
24	3	7		0	0	0	0	4	8	7		1	Adjusting Finger
25	3	7		0	0	0	0	4	8	8		1	Retaining Pin
26	L	H		0	1	0	0	3	0	8		4	Screw
27	T	L		0	0	1	0	5	9	7		2	Spring
28	1	3	1	0	0	0	6	1	1	7	0	1	Key
29	5	7	A	0	0	0	0	8	2	3	1	1	Retaining Ring Stop Ring

* Must be ordered together as Clutch Cone and Retaining Ring Assembly, 57A-0000496

COLLET CLOSER GUARD



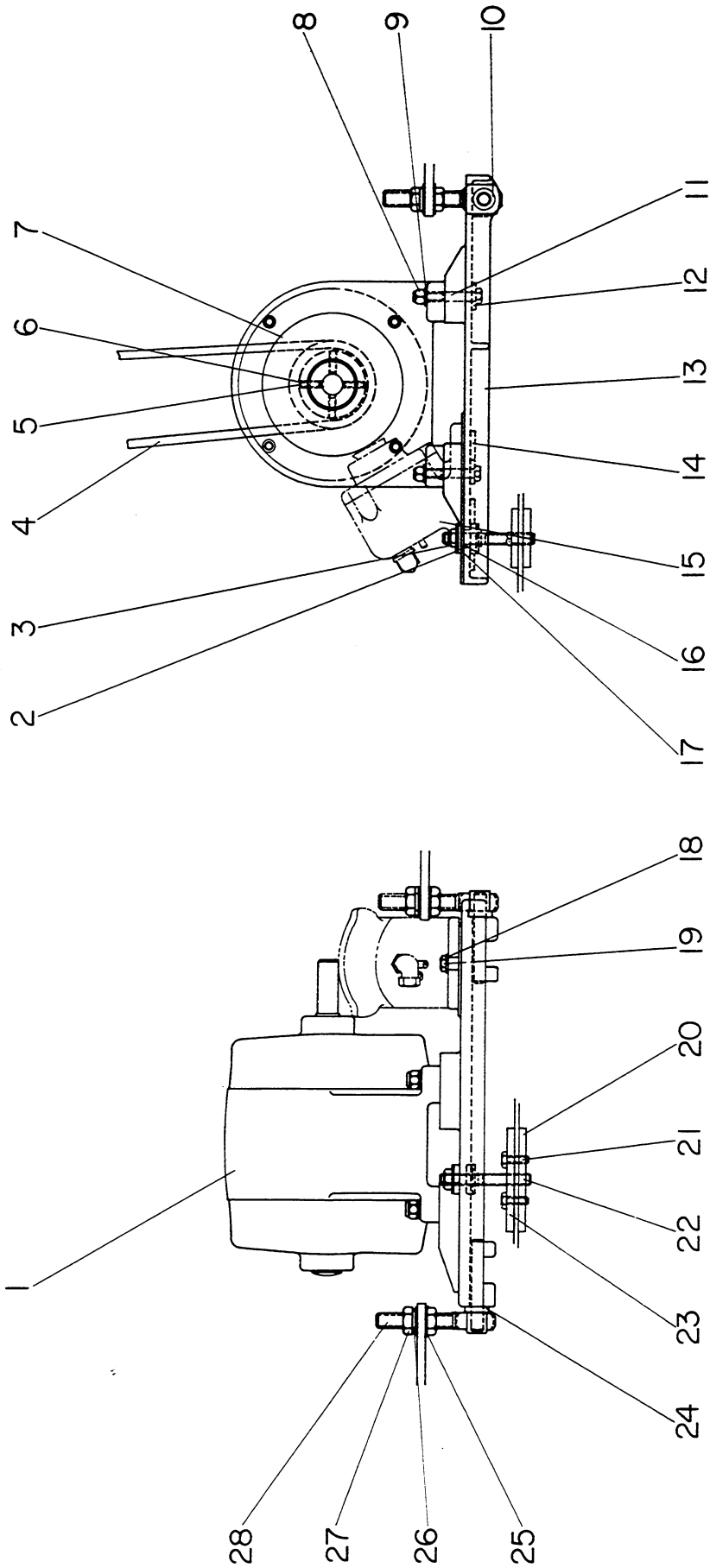
VARIABLE SPEED CONTROL BOX



VARIABLE SPEED BOX

KEY	PART NUMBER										PCS	NAME	
1	7	5	0	0	1	0	2	2	5			2	Connector
2	7	5	0	0	1	0	2	2	9			24"	Hose
3			0	3	0	0	3	0	6			6	Screw
4	A	H	0	0	0	9	9	7	2	0	5	1	Control Unit
5	L	M	0	0	0	3	6	5	0			1	On/Off Switch
6	K	L	0	0	1	0	1	8	1			1	Speed Control Box
7	V	D	0	0	0	9	5	5	3			1	Coolant Switch (HLVH and TFB with Coolant)
	L	H	0	0	0	7	8	7	6			1	Cover (TFB without Coolant)
	O	R	0	0	0	2	2	2	6			1	O-Ring (TFB without Coolant)
	L	H	0	0	0	0	8	7	0			1	Nut (TFB without Coolant)
8	H	L	0	0	0	9	5	5	3			1	Brake Switch (HLVH only)
9	L	H	0	0	1	0	1	8	9			1	Window
10	L	H	0	0	1	0	1	8	8	0	1	1	Front Plate (HLVH with Coolant)
	L	H	0	0	1	0	1	8	8	0	1	1	Front Plate (HLVH without Coolant)
	L	T	0	0	1	0	1	8	8			1	Front Plate (TFB only)
11	D	V	0	0	1	0	1	8	5			1	Indicator Tip
12			0	5	5	0	6	1	2			1	Set Screw
			0	5	5	0	6	0	6			1	Lock Screw
13			0	5	5	0	6	0	4			2	Screw
14	K	L	0	0	1	0	1	9	0			1	Support
15			0	5	5	0	6	0	6			1	Screw
			0	5	5	0	6	0	4			1	Screw

SPINDLE DRIVE MOTOR ASSEMBLY

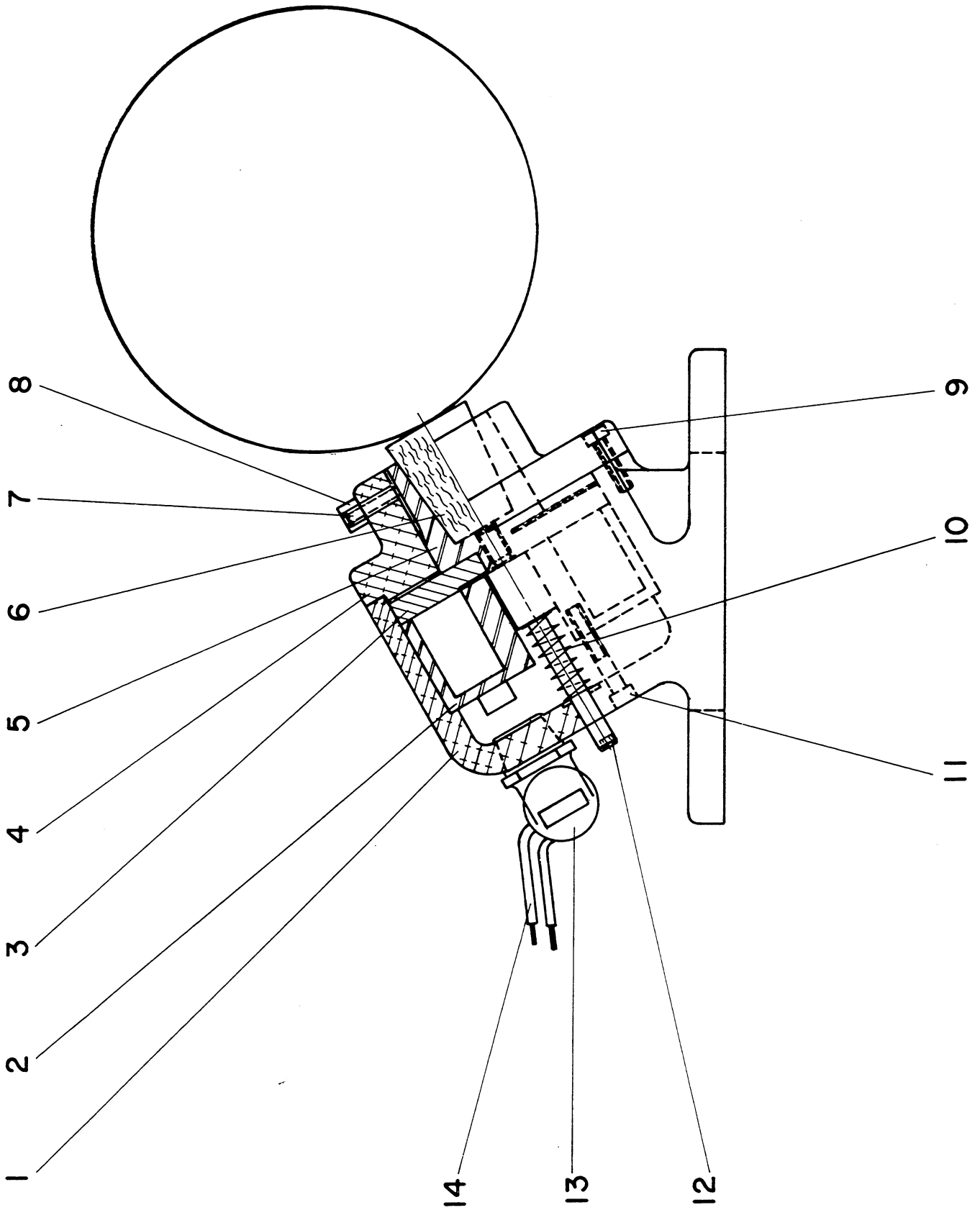


SPINDLE DRIVE MOTOR ASSEMBLY

KEY	PART NUMBER	PCS	NAME
23	H	1	Upper Plate
24	V	2	Rubber Bushing
25	3	4	Washer
26	U	2	Lock Washer
27	U	4	Nut
28	D	2	Hinge Bolt

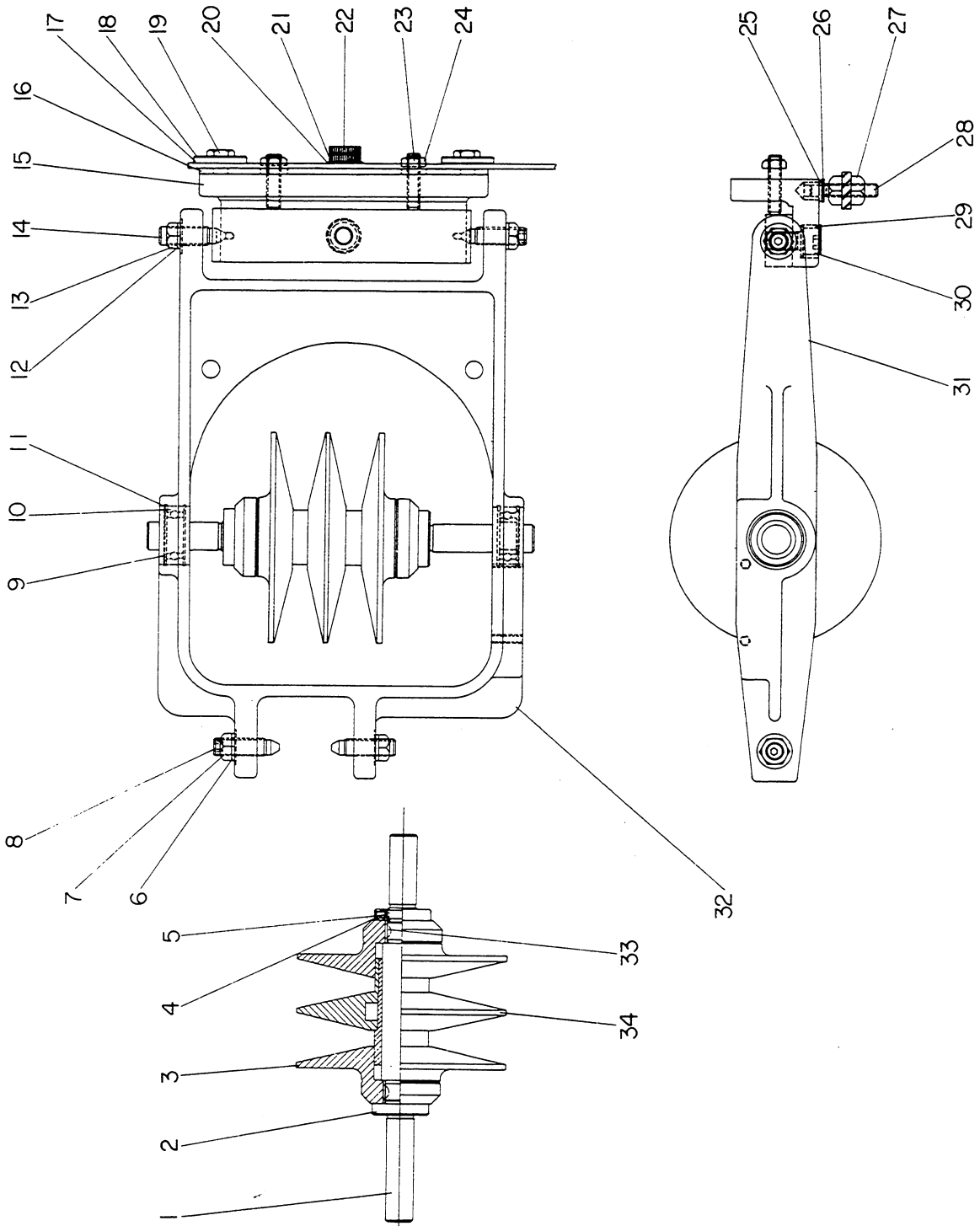
KEY	PART NUMBER	PCS	NAME
1	230063120	1	Motor (230 Volt, 60 Hz and 200V, 50Hz Machines Only)
	46063120	1	Motor (208V, 60Hz)
	5753063120	1	Motor (460V, 60Hz)
	23D3063120	1	Motor (575V, 60Hz)
	2203053120	1	Motor (230/460V, 60Hz)
	4153053120	1	Motor (230, 50Hz)
			Motor (380V, 400V, 415V, and 440V, 50Hz)
2	CM0002885	3	Washer
3	5VSG0001466	1	Nut
4	VS0009624	1	Motor Belt
5	SS00010032	4	Set-Screw
6	VS0550607	4	Screw
7	VSA0003177	1	Motor Pulley
			(60 Hz. Machines Only)
	HSA0015475	1	Motor Pulley
			(50 Hz. Machines Only)
8	TP0006836	4	Nut
9	MD0006826	4	Washer
10	HCB0009663	2	Stud
11	WA0151036	4	Bolt
12	WLA0009191	4	Washer
13	KLVA0001991	1	Motor Mounting Plate
14	DEV0010680	2	Nut
15	EBAA0009651	1	Electric Brake Assembly
16	HLL00010006	1	Insulator Bushing
17	HLL0009997	2	Insulator Bushing
18	BK00010438	2	Washer
	MD0003227	2	Lock Washer
19		2	Screw
20	HLLA0009999	1	Lower Plate
21		2	Screw
22	AD0010000	1	Support Screw

SPINDLE BRAKE

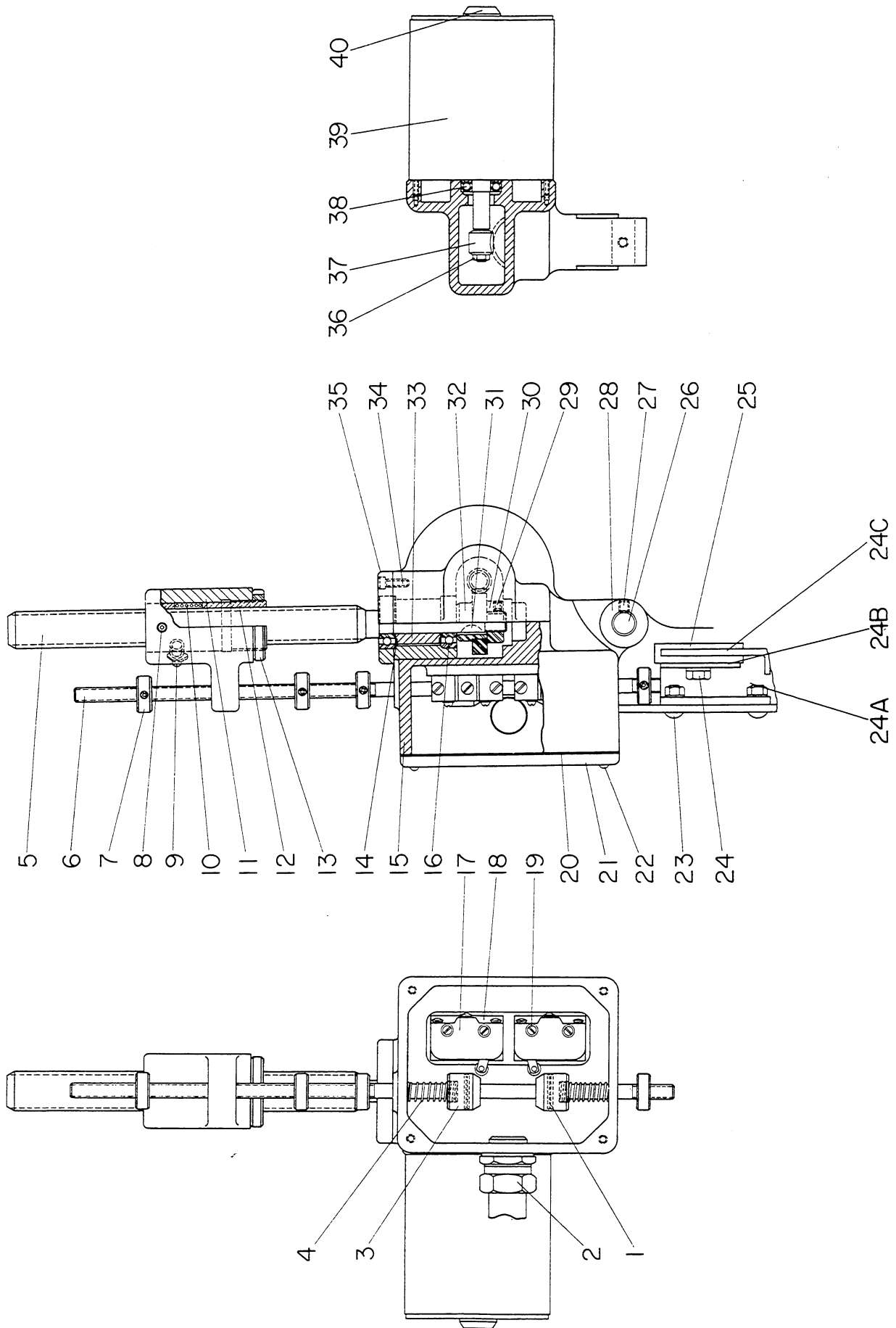


KEY	PART NUMBER										PCS	NAME	
1	E	B										1	Brake Housing
2	E	B										1	Coil
3	E	B	A									1	Armature Plate
4	E	B										1	Bushing Support
5	E	B										1	Adjusting Bushing
6	F	B	C									1	Cork
7	H	C										1	Key Screw
8	3	B										1	Nut
9												1	Screw
10	E	B										1	Spring
11												1	Screw
12	E	B										1	Adjusting Screw
13	5	0										1	90-Degree Connector
14	L	H										1	Insulator
	1	6	2									2	Wire (48")
	8	7	4									2	Terminal

VARIABLE SPEED PULLEY ASSEMBLY



VARIABLE SPEED ACTUATOR ASSEMBLY

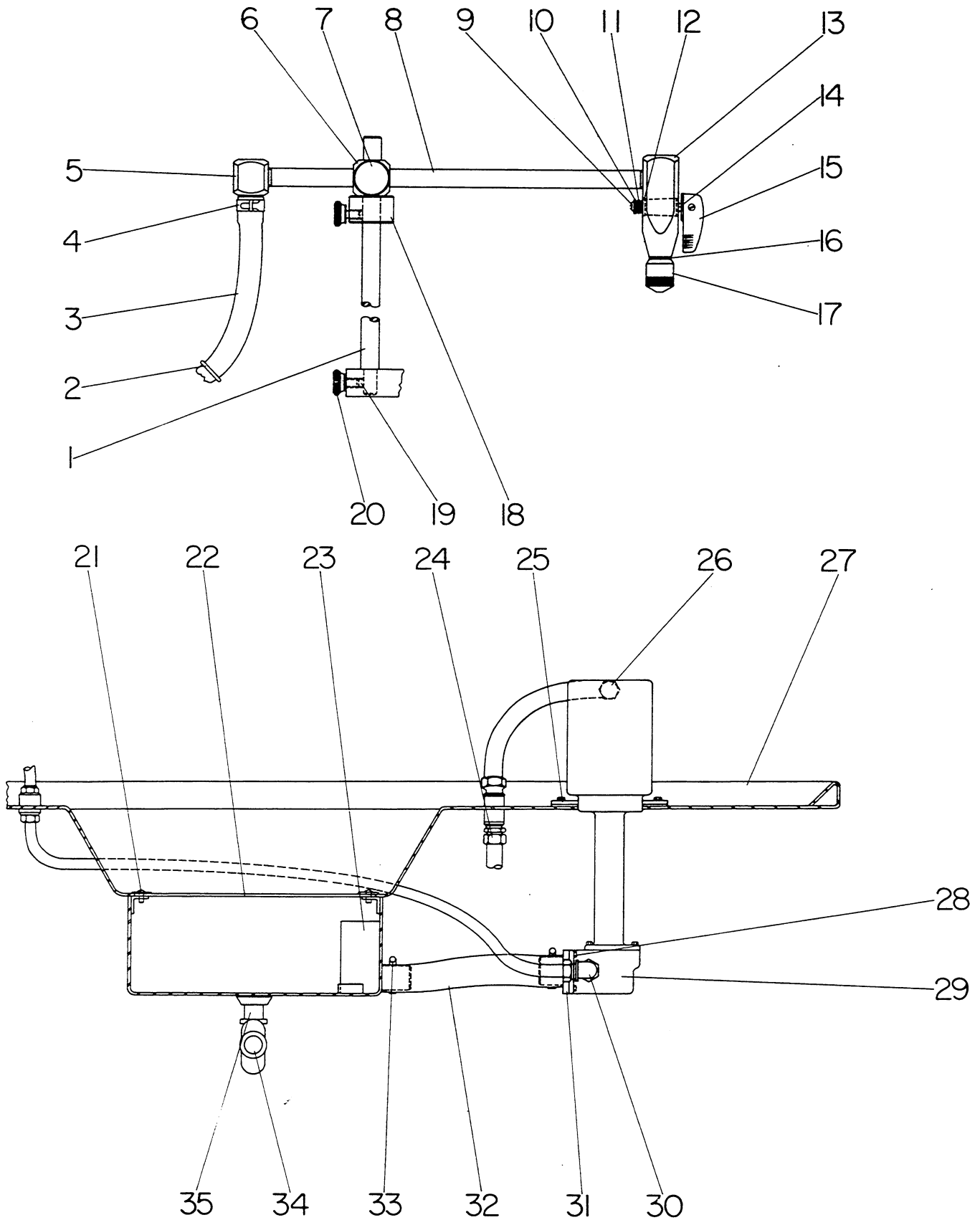


VARIABLE SPEED ACTUATOR ASSEMBLY

KEY	PART NUMBER				PCS	NAME
	D	V	A	8		
24A	K	L		0 0 1 0 5 3 8	1	Drive Support Bushing
24B	D	V	A	0 0 1 0 3 3 6	1	Drive Support
24C	D	V		0 0 1 0 5 6 1	1	Backing Plate
25	D	V		0 0 1 0 5 3 8	1	Bushing
26	D	V	A	0 0 1 0 5 4 0	1	Drive Support
27	D	V		0 0 1 0 1 8 2	1	Insulator
28	D	V	B	0 5 5 0 3 0 6	1	Swivel Pin
29	D	V		0 0 1 0 1 9 2	1	Screw
30	N	3	7	0 5 5 0 3 0 4	1	Drive Support
31	C	P		0 0 0 0 4 8 3	1	Lock Screw
32	D	V	C	0 0 0 1 4 6 5	1	Nylon Plug
33	D	V	S	0 0 0 1 0 1 8 3	1	Bearing Nut
34	D	V		0 0 0 1 7 9 9	1	Key
35	D	V	B	0 1 0 0 3 0 8	3	Worm Wheel
36	D	V		0 0 1 0 1 8 7	1	Bearing Spacer
37	D	V		0 0 1 0 4 2 2	1	Screw
38	L	H		0 0 1 0 2 3 1	1	Bearing Cap
39	2	2	D	3 7 6 1 5 5 1	1	Nut for Motor Shaft
	5	5	0	3 7 6 1 5 5 1	1	Worm for Motor
40	T	L		0 0 0 6 6 1 7	1	Bearing

KEY	PART NUMBER				PCS	NAME
	4	S	7	5		
1				0 0 0 9 8 6 2 1 6	2	Roll Pin
2	7	5		0 0 1 0 2 2 5	1	3/4" Connector
3	D	V		0 0 1 0 4 2 0	2	Trip for Switch
4	D	V		0 0 1 0 4 1 8	2	Spring
5	D	V	B	0 0 1 0 1 9 1	1	Vertical Screw
6	D	V	B	0 0 1 0 4 1 7	1	Trip Rod
7	D	V		0 0 1 0 4 1 9	4	Stop for Trip Rod
8	N	3	7	0 0 0 0 4 8 3	4	Nylon Plug
9	V	S		0 5 5 0 3 0 4	4	Lock Screw
10	D	V		0 0 1 0 3 7 9	1	Key for Nut Housing
11	D	V	B	0 0 1 0 3 2 7	1	Grease Fitting
12	D	V		0 0 1 0 3 1 1	1	Spring for Nut Housing
13	D	V	B	0 0 1 0 2 0 9	1	Grease Fitting
14	D	V		0 0 0 1 8 1 0	1	Spring for Nut Housing
15	T	L		0 0 0 1 8 1 1	1	Housing
16	T	L		0 0 0 1 8 1 1	1	Housing
17	T	L		0 0 0 6 4 8 0	2	for Feed Screw Nut
18	T	L		0 0 0 6 4 8 1	2	Nut for Vertical Screw
19	D	V	E	0 0 1 0 1 9 9	1	Locknut for Vertical Screw
20	D	V	L	0 0 0 6 6 1 8	2	Screw
21	D	V	B	0 0 1 0 2 2 4	2	Shim Washer (.001")
22	D	V		0 0 1 1 1 8 1	2	Shim Washer (.002")
23	S	L		0 3 5 0 1 1 6	4	Control Housing
24	D	V	A	0 0 0 8 1 3 7	4	Bearing For Vertical Screw
	D	V	A	0 0 1 0 2 1 6	1	Limit Switch
	D	V	A	0 0 1 0 1 9 5	2	Insulator
				0 3 0 0 3 0 8	4	Screw
				0 3 0 0 6 1 2	4	Lock Washer
	C	M		0 0 0 2 8 4 5	1	Housing Gasket
	5	P		0 0 0 2 8 4 3	1	Cover For Control Housing
	M	D		0 1 5 1 0 1 6	1	Screw
				0 0 0 3 5 9 1	1	Lock Washer

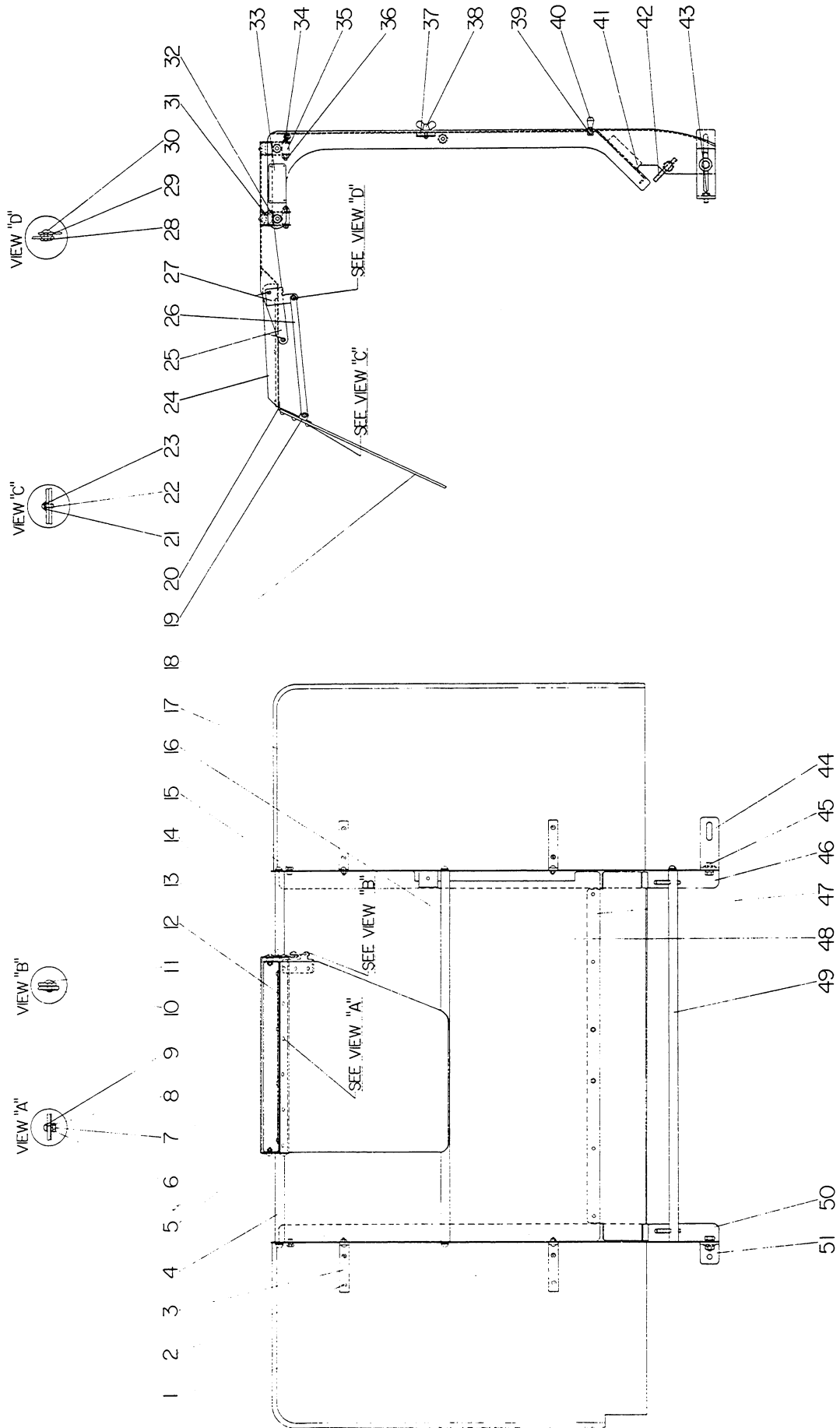
COOLANT FACILITIES



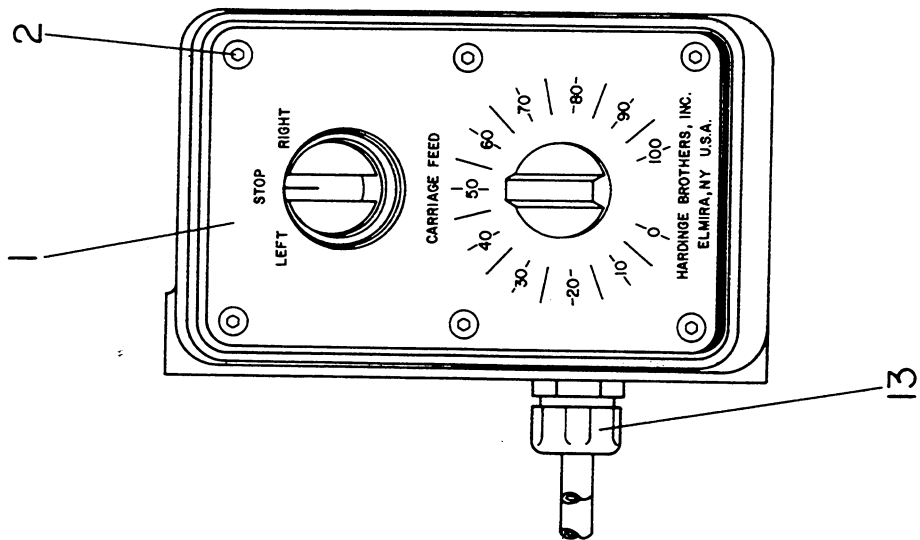
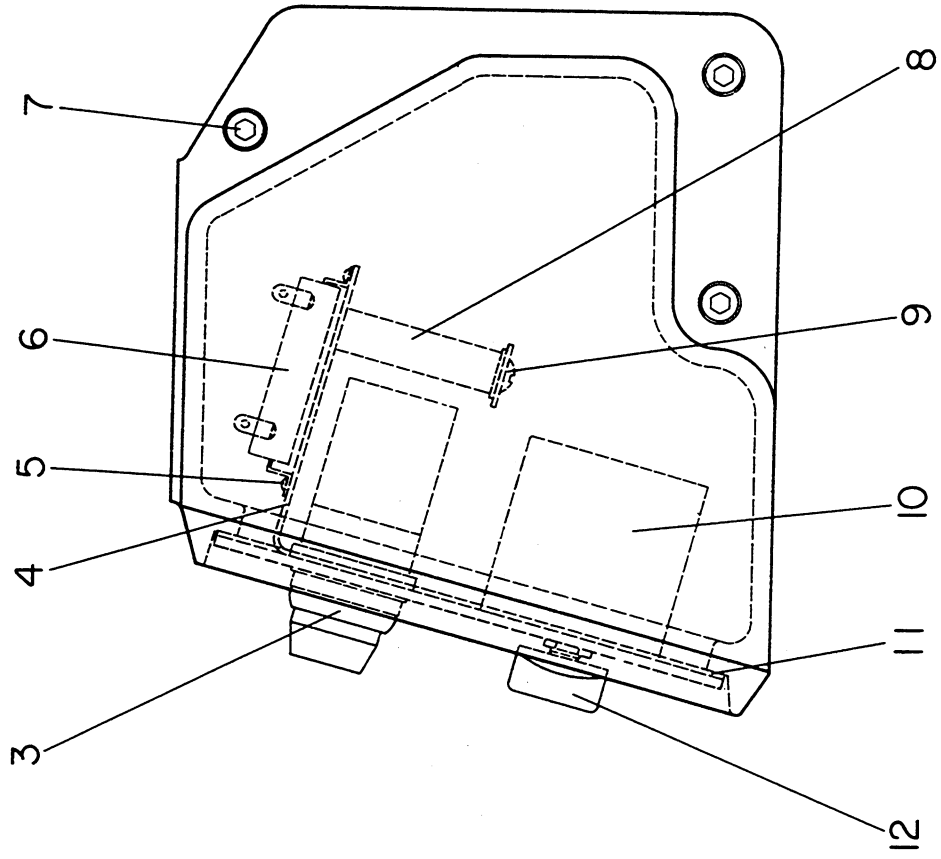
COOLANT FACILITIES

KEY	PART NUMBER										PCS	NAME	
1	H	L	0	0	0	9	9	2	6			1	Upright
2	O	R	0	0	0	0	8	1	1			1	O-Ring
3			0	0	0	6	9	6	5			72"	Hose
4	U	A	0	0	0	6	9	6	6			2	Clamp
5	O	F	A	0	0	0	9	9	2	8		1	Elbow
6	O	F	A	0	0	0	9	9	2	9		1	Slide Connector
7	U	A		0	0	0	8	7	1	0		1	Thumb Screw
	F	B		0	0	0	6	9	1	9		1	Brass Plug
8	O	F	L	0	0	0	9	9	2	4		1	Elbow Support
9				0	3	5	0	3	0	4		1	Screw
10	C	P		0	0	0	1	0	6	7		1	Washer
11	O	F		0	0	1	0	0	5	8		1	Spring
12	O	F		0	0	1	0	0	6	1		1	Washer
13	O	F	A	0	0	0	9	4	6	7		1	Valve Body
14	O	F		0	0	1	0	0	5	9		1	Valve Insert
15	O	F		0	0	1	0	0	6	0		1	Lever
16	O	F	A	0	0	0	9	4	3	1		1	O-Ring
17	O	F	B	0	0	0	9	4	6	8		1	Nozzle
18	O	F		0	0	1	0	4	1	2		1	Support
19	6	W		0	0	0	9	4	5	0		2	Brass Plug
20	O	R		0	0	0	9	4	7	1		2	Thumb Screw
21				0	3	0	0	5	0	8		4	Screw
	5	P		0	0	0	6	4	3	1	B	4	Washer
22	K	L		0	0	0	8	6	8	6	C	1	Sump Cover (With Oil)
	K	L		0	0	1	1	0	4	0		1	Sump Cover (Without Oil)
23	K	L		0	0	0	3	3	1	3		1	Close Nipple
24	5	O		0	0	1	0	2	2	5		1	Straight Connector
25	A	D		0	0	0	3	6	2	3		4	Nylon Washer (With Oil)
				0	1	5	0	5	1	2		4	Screw (With Oil)
	R	A		0	0	0	8	2	2	6		1	Gasket (With Oil)
	L	H		0	0	0	8	9	1	6		1	Cover (Without Oil)
				0	3	0	0	5	0	8		4	Screw (Without Oil)
	7	5		0	0	1	0	3	3	1		1	Dot Plug (Without Oil)
26	5	O		0	0	1	0	2	2	5	9 0	1	90-Degree Connector
	5	O		0	0	1	0	2	2	9		1	1/2" Conduit
	5	O		0	0	1	0	2	2	5	4 5	1	45 Degree Connector
	T	M		0	0	0	6	9	9	2		1	Pipe Plug (Without Oil)
27	K	L	B	0	0	0	3	3	1	5		1	Oil Pan
28				0	1	5	0	5	1	2		4	Screw
	C	M		0	0	0	2	8	4	5		4	Lock Washer
29	K	L		0	0	0	3	3	2	5		1	Pump Assembly
	A	D	A	0	0	1	1	4	0	5		1	Warning Tag
30	A	H		0	0	1	0	1	1	0	0 2	1	90-Degree Connector
	K	L		0	0	0	8	3	8	4		1	Hose Connector
31	K	L	A	0	0	1	0	1	1	5		1	Pump Inlet Assembly
32	L	H		0	0	0	8	2	2	1		1	Hose
33	L	H		0	0	0	6	9	6	6		2	Hose Clamp
34	M	D		0	0	0	3	4	8	7		1	Plug
	9	O		0	6	1	0	1	0	9		1	Pipe Nipple
	J	L		0	0	1	0	1	1	0		2	3/4 Elbow
35	2	5		0	0	1	0	1	0	9		1	Pipe Nipple

CHIP AND COOLANT GUARD



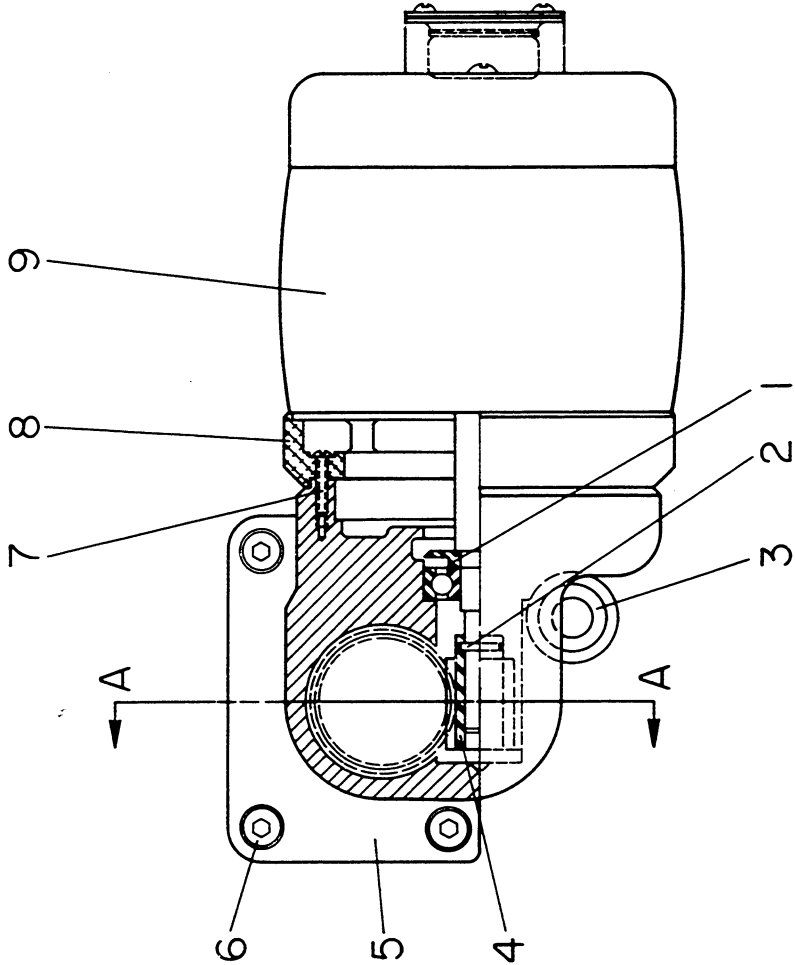
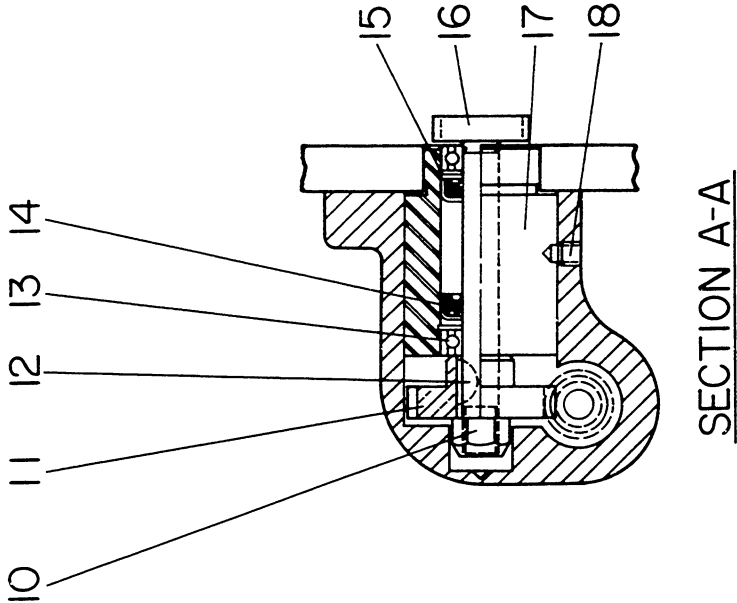
POWER FEED CONTROL ASSEMBLY



POWER FEED CONTROL ASSEMBLY

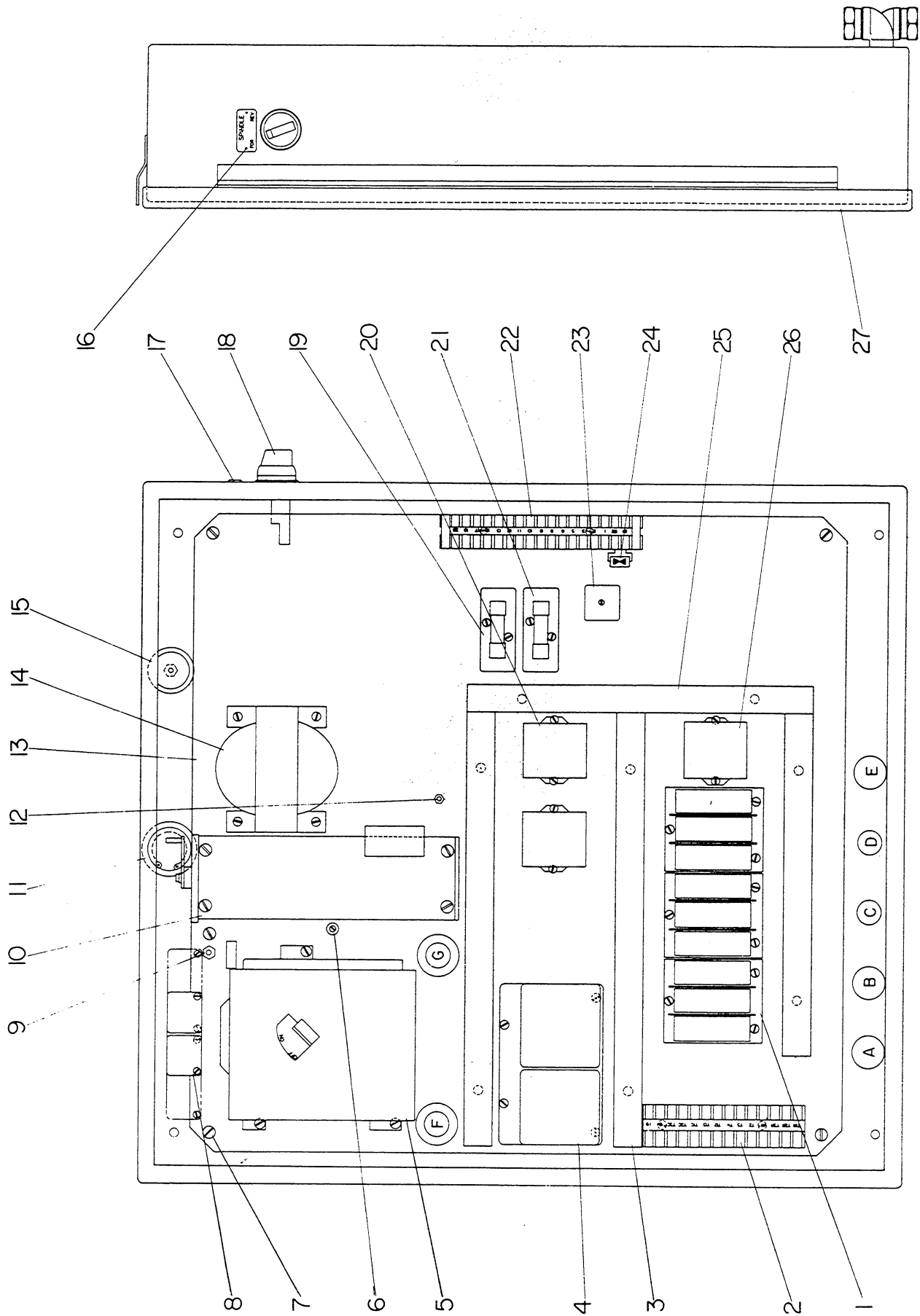
KEY	PART NUMBER										PCS	NAME	
1	K	L										1	Cover
2	R	B										6	Screw
3	K	L							A	B		1	Reversing Switch
4	K	L										1	Resistor Bracket
5	M	V										4	Screw
6												1	Resistor and Retaining Clips (500ohm/25Watt)
	K	L										2"	Tubing
	P	F										1	Resistor and Retaining Clips (50ohm/25Watt)
7	K	L										3	Tubing
8	P	F										1	Screw
	K	L										2"	Resistor and Retaining Clips (1500ohm/25Watt)
9	P	F										1	Tubing
	P	F										2	Screw
	P	F										2	Center Washer
10	M	V	B									2	Mica Washer
11	K	L										1	Power Feed Module
12	K	L										1	Gasket
13	6											1	Knob
												2	1/2" Connector

POWER FEED HOUSING



KEY	PART NUMBER										PCS	NAME	
1	H	C										1	Spacer
2	3	S										1	Spring Pin
3	T	L									0 8	1	Grommet
4	L	H										1	Shaft Worm Gear
5	L	H	A									1	Housing
6												3	Screw
*7												2	Screw
*8	L	H										1	Adapter
9	0	9	0									1	Motor
10	E	N										1	Nut
11	L	H	A									1	Gear
12	3	R										1	Key
13	R	A										1pr	Bearing
14	H	L										2	Seal
15	8	7										2	Retaining Ring
16	L	H										1	Shaft
17	H	L										1	Retaining Plug
18	L	L										1	Screw

HLV ELECTRIC CONTROL PANEL



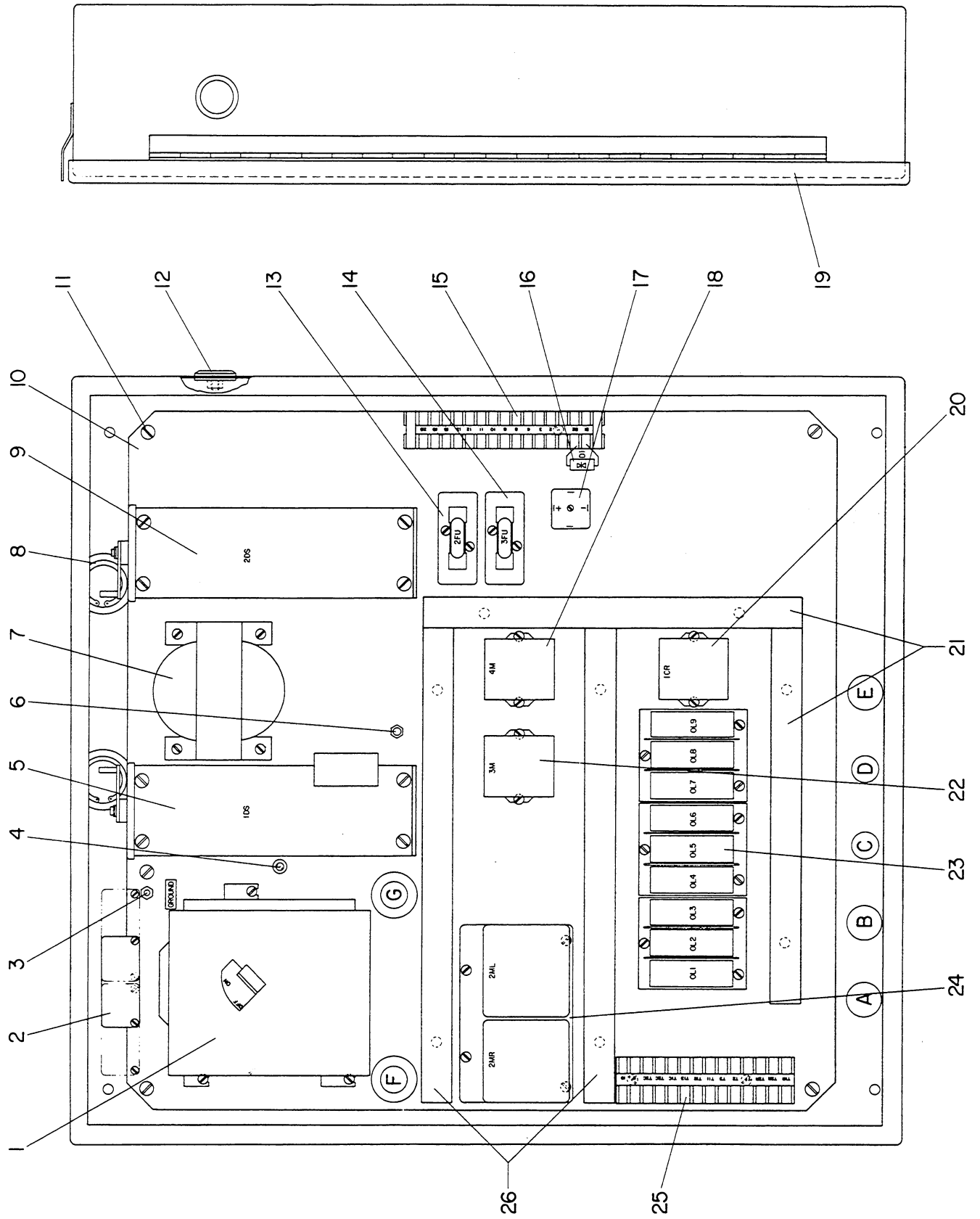
KEY	PART NUMBER										PCS	NAME
1	H	V	A	0	0	0	8	1	2	2	9	Overload Screw
	K	L	L	0	3	6	0	3	0	7	9	Screw
	K	L	L	0	0	0	9	8	6	4	3	Bracket
2	A	B	B	0	0	1	1	0	3	2	3	Insulator
	A	B	B	0	0	1	1	0	3	2	14	Terminal Block
	A	B	B	0	0	1	1	0	3	2	1	Barrier
	A	B	B	0	0	1	1	0	3	2	2	Clip
	A	B	B	0	0	1	1	0	3	2	1	Channel
	K	L	L	0	1	1	0	2	0	6	2	Screw
3	K	L	L	0	0	0	9	1	7	5	1	Marker Strip
	K	L	L	0	0	1	0	8	2	1	2	Wire Duct
	K	L	L	0	0	1	0	8	2	1	2	Cover
	S	D	D	0	0	1	0	8	2	1	4	Rivet
4	V	D	D	0	0	1	0	2	3	0	1	Contact
	J	G	G	0	3	6	0	3	0	7	4	Screw
	J	G	G	0	0	1	0	0	1	6	1	Disconnect
6	K	L	L	0	3	6	0	3	0	7	3	Screw
	A	D	D	0	0	0	8	1	0	4	1	Mounting Base Ty-Rap®
7	C	M	M	0	0	0	2	8	4	5	5	Screw
	K	L	L	0	0	1	0	3	0	2	1	Lock Washer
8	K	L	L	0	0	1	0	3	0	2	1	Instruction Plate
	K	L	L	0	0	1	0	3	0	2	1	Instruction Plate-French (Canadian Machines Only)
9	W	D	D	0	3	5	0	1	0	4	4	Screw
	D	V	V	0	0	0	9	0	2	8	1	Washer
	D	V	V	0	0	1	0	5	4	5	1	Ground Post
	D	V	V	0	0	1	0	5	4	6	3	Nut
10	D	V	B	0	0	0	2	8	3	5	1	Switch *
	6	L	A	0	0	0	9	1	8	1	4	Screw
11	K	L	A	0	0	0	9	9	7	4	1	Lock Washer
	1	3	7	0	0	0	8	2	3	1	1	Rubber Boot
12	W	D	D	0	0	0	8	2	3	1	1	Retaining Ring
	D	V	V	0	0	0	9	0	2	8	1	Washer
	D	V	V	0	0	1	0	5	4	5	1	Ground Post
13	K	L	G	0	0	0	1	0	5	4	3	Nut
14	K	L	L	0	0	0	8	7	7	6	1	Switch Plate
	K	L	L	0	0	0	8	7	7	6	1	Transformer (230V 60Hz, 460V 60Hz, 230/460V 60Hz Machines Only)
	K	L	L	0	0	0	8	7	7	6	1	Transformer (208V 60Hz Machines Only)
	5	0	0	0	0	0	8	7	7	6	1	Transformer (575V 60Hz Machines Only)
	K	L	L	0	3	6	0	3	0	7	4	Transformer (50Hz Machines Only)
15	K	L	L	0	0	0	7	8	7	6	1	Screw
	K	L	L	0	0	0	7	8	7	6	1	Hole Cover
	O	R	R	0	0	0	2	1	2	4	1	Washer
	5	P	P	0	0	0	2	8	4	3	1	O-Ring
16	R	K	L	0	0	0	8	0	4	4	2	Nut
17	K	L	L	0	0	0	1	0	3	6	9	Pin
18	L	T	T	0	0	0	9	5	5	3	1	Legend Plate
19	D	V	V	0	0	1	0	0	1	7	1	Switch
	J	H	H	0	3	5	0	2	0	6	2	Cutout
20	L	H	H	0	0	0	9	6	1	0	1	Screw
	L	H	H	0	0	0	8	7	7	5	2	Fuse
21	D	V	V	0	3	5	0	3	1	8	4	Contact
	M	V	V	0	0	0	9	6	1	0	2	Screw
	M	V	V	0	0	0	9	6	1	0	2	Cutout
22	S	D	D	0	0	0	1	0	3	2	2	Fuse
	S	D	D	0	0	1	1	0	3	2	17	Terminal Block
	S	D	D	0	0	1	1	0	3	2	1	Barrier
	S	D	D	0	0	1	1	0	3	2	2	End Clamp
	S	D	D	0	0	1	1	0	3	2	1	Nylon Plug
	K	L	C	0	0	0	9	3	3	5	2	Mounting Track
23	N	C	C	0	0	0	9	3	3	5	1	Screw
	S	D	D	0	0	0	9	3	3	5	0	*Marker Strip
	S	D	D	0	0	0	9	3	3	5	0	Rectifier
24	S	D	A	0	3	6	0	2	1	0	1	Screw
	D	Q	R	0	0	1	1	2	9	8	1	Arc Suppressor
25	K	L	L	0	0	1	0	8	2	1	17	Wire Insulation
	K	L	L	0	0	1	0	8	2	1	2	Wire Duct
	S	D	D	0	0	1	0	8	2	1	2	Cover
26	L	H	H	0	0	0	8	7	7	5	4	Rivet
	K	L	C	0	3	5	0	3	1	8	1	Contact
27	K	L	C	0	0	0	4	1	5	8	2	Screw
	A	7	5	0	0	1	0	2	5	9	1	Switch Case (See Switch Case Assembly)
	B	7	5	0	0	1	0	2	5	9	1	3/4" 90 Degree Connector
	C	5	0	0	0	1	0	2	5	9	1	3/4" 90 Degree Connector
	D	5	0	0	0	1	0	2	5	9	1	1/2" 90 Degree Connector
	E	5	0	0	0	1	0	2	5	9	1	1/2" 90 Degree Connector
	F	5	0	0	0	1	0	2	5	9	1	1/2" 90 Degree Connector
	G	5	0	0	0	1	0	2	5	9	1	1/2" 90 Degree Connector

* Lever and roller, part number R 0007934, and spring, part number R 0007932, required.

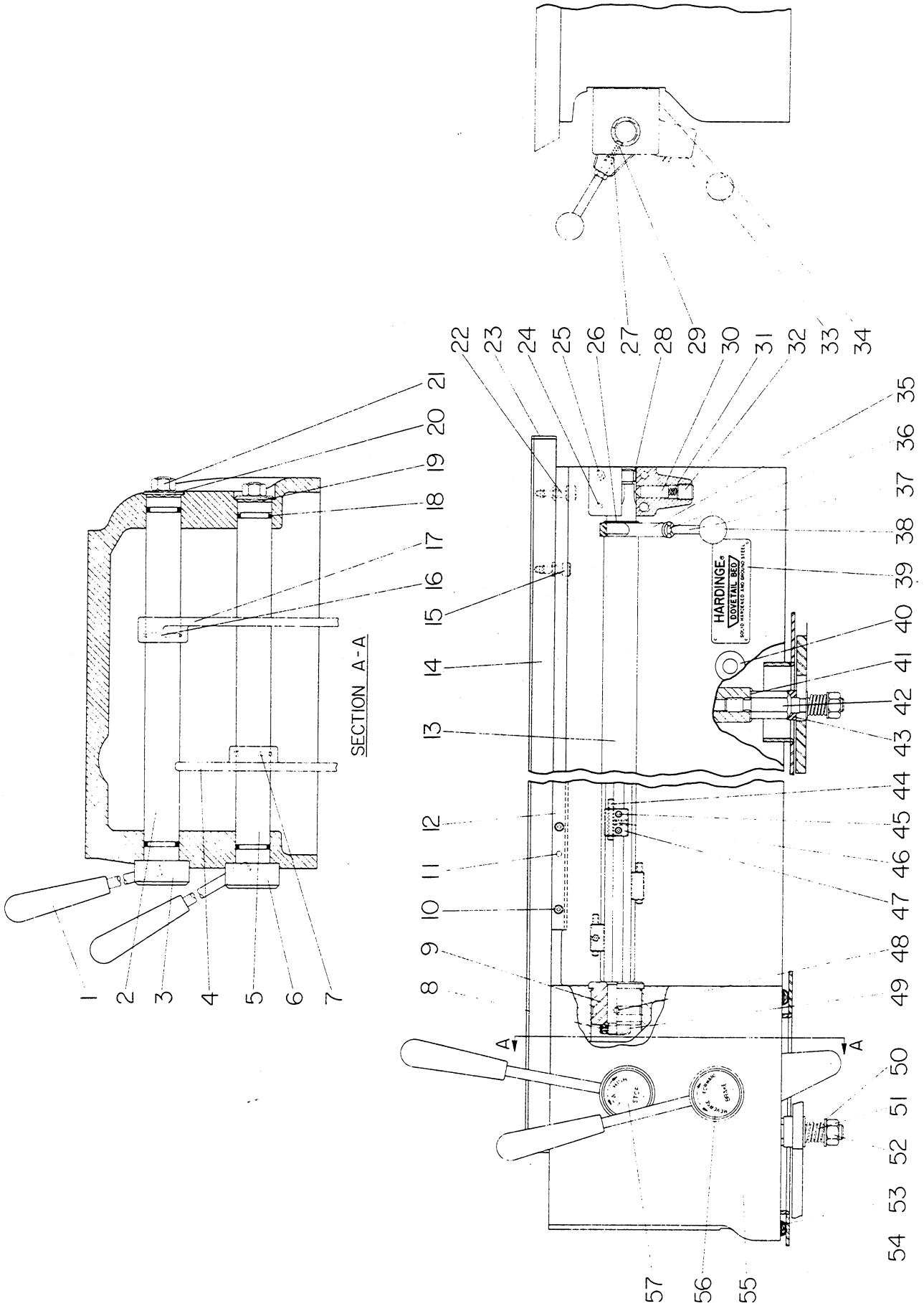
TFB ELECTRIC CONTROL PANEL

KEY	PART NUMBER										PCS	NAME	
	J	K	L	V	W	A	D	6	D	W			
1	G											1	Disconnect Screw
2	L											3	Instruction Plate (Canadian Machines only)
3	V											2	Ground Post
4	D											1	Washer
5	V	B										1	Mounting Base Ty-Rap
6	V											4	Switch
7	D											4	Screw
8	L	A										4	Lock Washer
9	T											3	Ground Post
10	L	G										1	Nut
11	K											2	Washer
12	H											1	Transformer (230/460 Volts,60 Hz)
13	P											1	Transformer (208 Volts,60 Hz)
14	V											1	Transformer (575 Volts,60 Hz)
15	D											1	Transformer (All 50 Hz Machines)
16	S											4	Screw
17	N											2	Rubber Boot
18	L											2	Retaining Ring
19	K											1	Switch
20	L											4	Screw
21	L											4	Lock Washer
22	L											4	Switch Plate
23	H											1	Screw
24	V											5	Lock Washer
25	A											5	Switch Plate
26	A											5	Screw
A	7											1	Lock Washer
B	5											1	Hole Cover
C	0											1	Washer for Hole Cover
D	5											1	O-Ring
E	0											1	Nut
F	0											1	Cutout
G	0											1	Cutout
	0											2	Screw
	0											1	Fuse
	0											1	Cutout
	0											2	Screw
	0											1	Fuse
	0											1	Terminal Block
	0											15	Barrier
	0											1	End Clamp
	0											1	Nylon Plug
	0											1	Mounting Track
	0											1	Screw
	0											2	Marker Strip
	0											1	Arc Suppressor
	0											1	Rectifier
	0											1	Screw
	0											1	Contact
	0											2	Screw
	0											1	Power Case
	0											1	Contact
	0											2	Screw
	0											2	Wire Duct
	0											2	Cover
	0											2	Rivet
	0											4	Contact
	0											1	Screw
	0											2	Overload
	0											9	Bracket
	0											3	Insulator
	0											3	Screw
	0											9	Screw
	0											9	Contact
	0											1	Screw
	0											4	Terminal Block
	0											14	Barrier
	0											1	Clip
	0											2	Channel
	0											1	Screw
	0											2	Marker Strip
	0											1	Wire Duct
	0											2	Cover
	0											2	Rivet
	0											4	3/4" 90 Deg. Connector
	0											1	1/2" 90 Deg. Connector
	0											1	1/2" 90 Deg. Connector
	0											1	1/2" 90 Deg. Connector
	0											1	1/2" 90 Deg. Connector
	0											1	1/2" 90 Deg. Connector
	0											1	1/2" 90 Deg. Connector

TFB ELECTRIC CONTROL PANEL



BED ASSEMBLY (TFB)



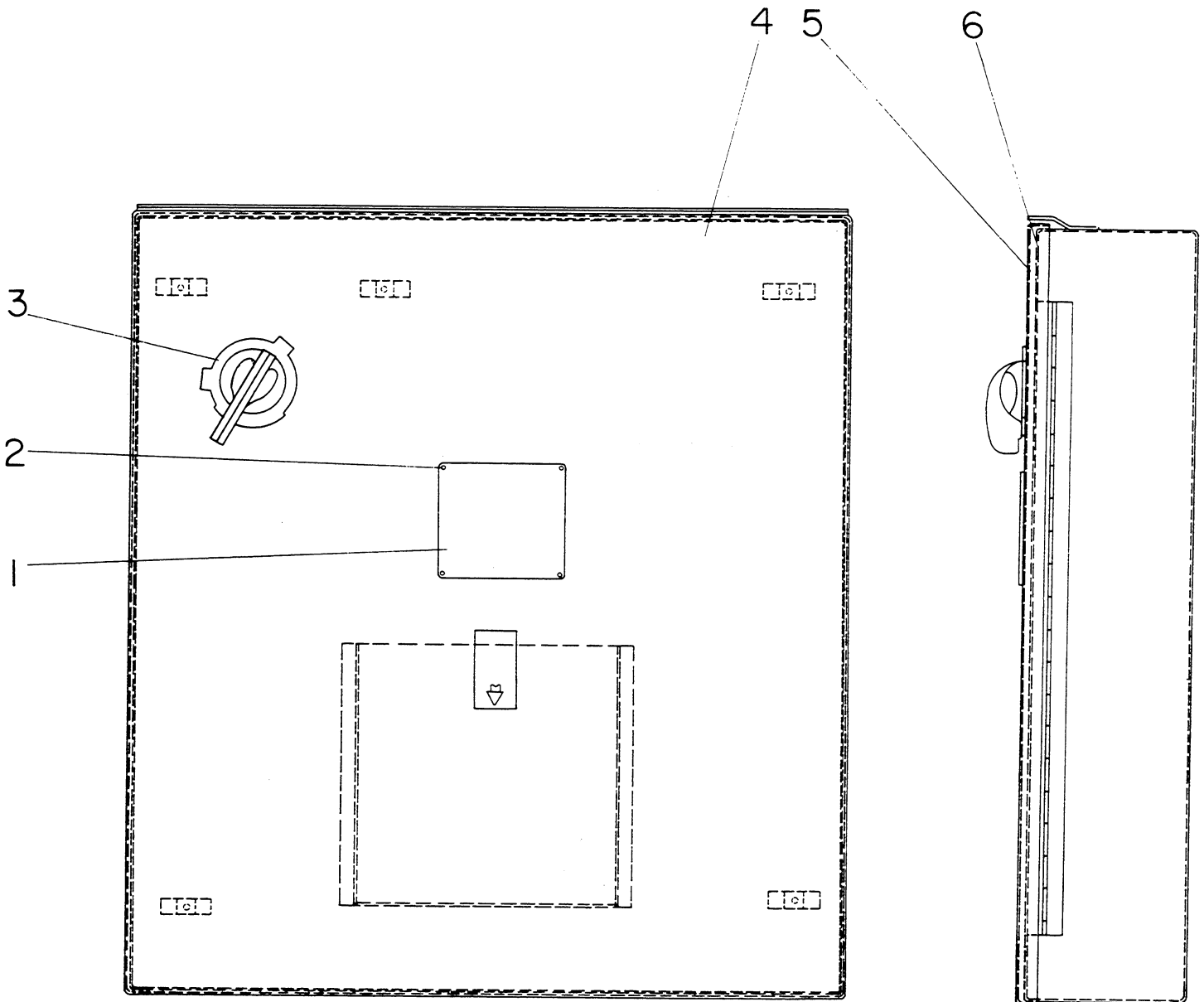
BED ASSEMBLY (TFB)

KEY	PART NUMBER	PCS	NAME
35	0000999505	3	Shim (.005")
36	0000999503	3	Shim (.032")
37	0001099399	1	Ratchet Holder
38	000004140	1	Jam Nut
39	00010240	1	Handle for Ratchet Holder
40	0006126	1	Knob
41	00002566	1	Front Name Plate
42	00002566	1	Rear Name Plate
43	00008044	8	Escutcheon Pin
44	00009532	1	Rubber Grommet
45	00009896	3	Shim Washer
46	00008265	3	Hold Down Stud
47	00008266	3	Bed Bolt Washer
48	0001083	4	Stop Screw
49	00560504	8	Screw
50	00049001	8	Brass Plug
51	00550507	4	Screw
52	00049001	4	Brass Plug
53	00010940	1	Stop (Stamped 1)
54	00010940	1	Stop (Stamped 2)
55	00010940	1	Stop (Stamped 3)
56	00010940	1	Stop (Stamped 4)
57	00550512	1	Set Screw
	00550524	1	Lock Screw
	00009342	1	Nut
	00006433	6	Washer
	00006553	3	Spring
	00004626	3	Nut
	00010565	1	Bed Seal & Insert Assembly
	00650006	8	Drive Screw
	00002622	1	Bed
	00001535	1	Forward-Reverse Plate
	00008044	2	Escutcheon Pin
	00001669	1	Low-High Plate
	00008044	2	Escutcheon Pin

KEY	PART NUMBER	PCS	NAME
1	00003285	1	Handle
2	00005070	1	Reverse Shaft
3	00002380	1	Control Lever Hub
4	00002800	1	Reverse Lever
5	00004050	1	Reverse Shaft
6	00006237	1	Control Lever Hub
7	00003277	1	Taper Pin
8	00550303	1	Set Screw
9	00004833	1	Brass Plug
10	00010031	1	Stop Rod Bearing
11	00009991	8	Screw
12	00006634	2	Dowel Pin for Rack
13	00010092	1	Rack for Bed
14	00008042	1	Stop Rod
15	00008044	1	Bed Plate
16	00010894	14	Front Bed Screw
17	00010324	14	Lock Washer
18	00003280	1	Taper Pin
19	00009431	1	Reverse Lever
20	00010597	4	O-Ring
21	00007621	2	Spring Washer
22	00004626	2	Washer
23	00100714	2	Nut
24	00010042	14	Rear Bed Screw
25	00010095	14	Lock Washer
26	00007945	1	Bed Plate Bumper
27	00007945	2	Dowel Pin
28	00010040	2	Screw
29	00010042	2	Lock Washer
30	00008231	1	Retaining Ring
31	00008988	1	Spring
32	00010096	1	Bearing
33	00010024	1	Pawl for Ratchet
34	00010093	1	Index Rod Plunger
35	00010097	1	Spring
36	00551810	1	Screw
37	00010087	1	Stop Rod Bracket
38	00009995	3	Shim (.001")
39	00009995	3	Shim (.003")

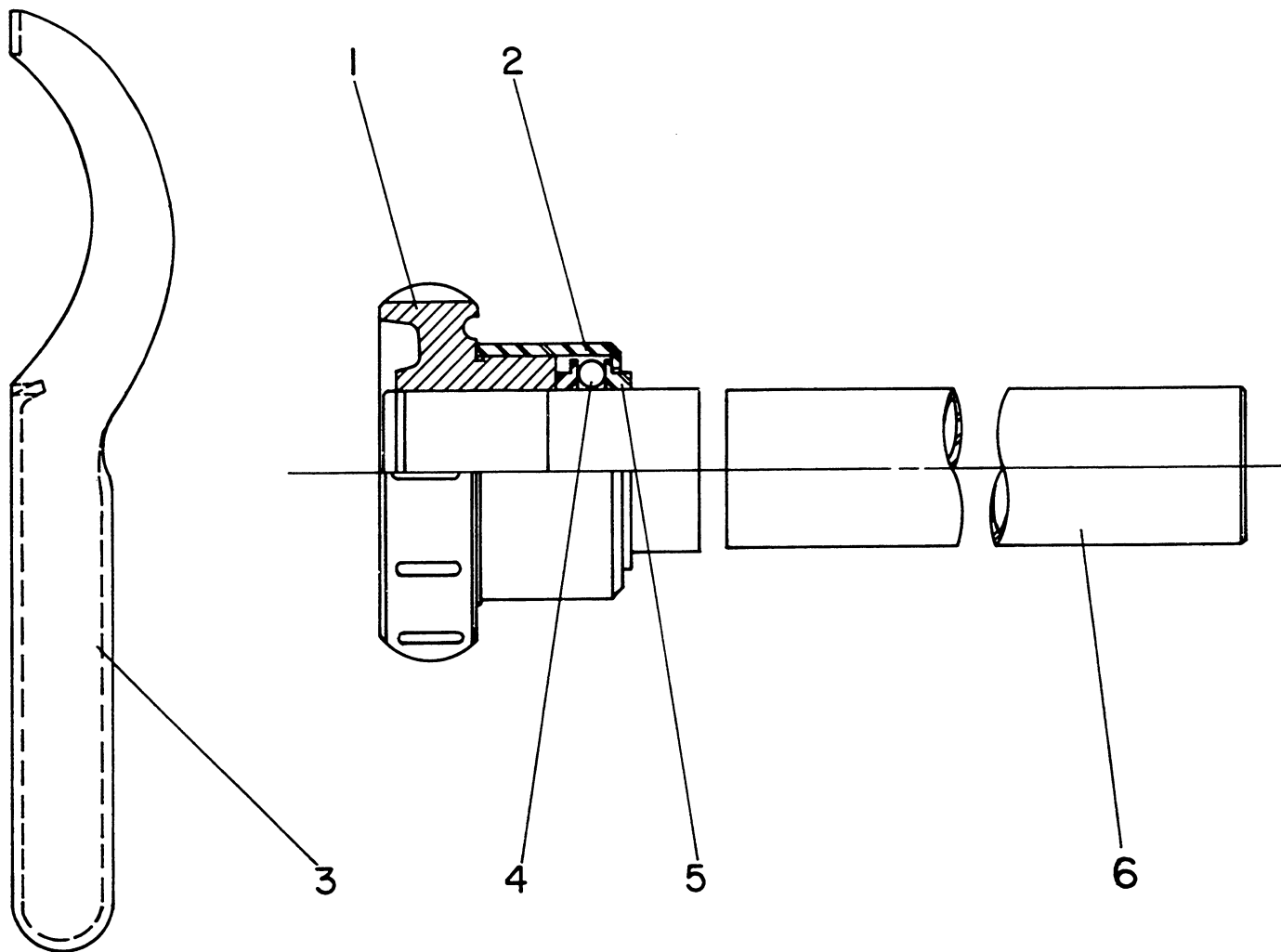
* These parts must be ordered together as KT-0003720, Speed Lever Assembly.
 † These parts must be ordered together as KT-0003721, Reverse Lever Assembly.

SWITCH CASE ASSEMBLY



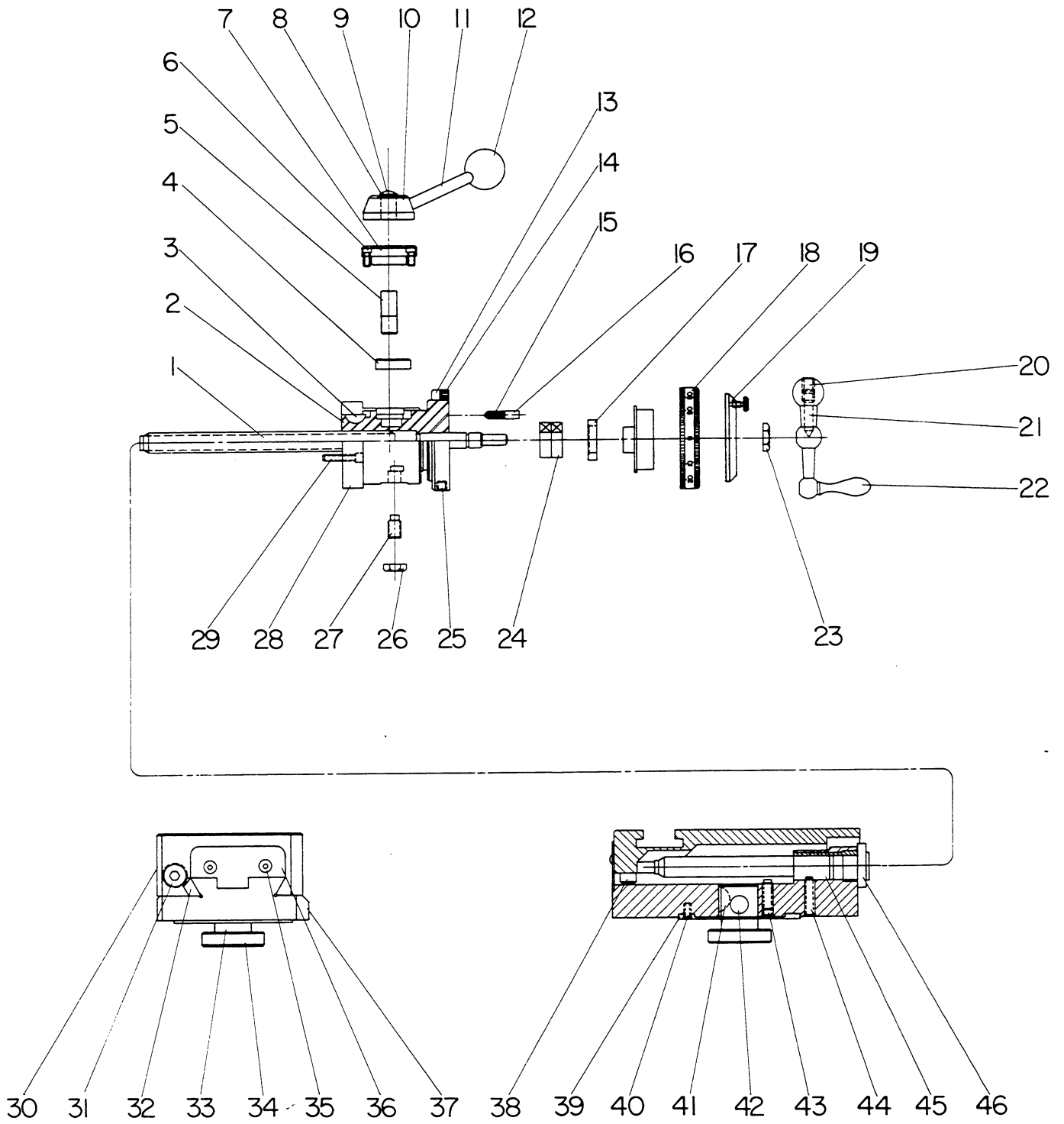
KEY	PART NUMBER										PCS	NAME		
1	D	V	C	0	0	0	8	0	7	4	1	Blank Data Plate		
2	R			0	0	0	8	0	4	4	4	Escutcheon Pin		
3	J	G		0	0	1	0	3	5	9	1	Operating Handle Assembly		
4	K	L	C	0	0	0	4	1	5	8	1	Switch Case Assembly		
5	K	L	A	0	0	0	4	1	5	8	0	2	Door Assembly	
												(Consists of)		
	K	L		0	0	0	4	1	5	8	D	1	Door	
	A	H		0	0	0	4	1	5	8	0	3	1	Data Case For Panel Switch
	K	L		0	0	0	4	1	5	8	0	7	2	Gasket Retainer
	K	L		0	0	0	4	1	5	8	0	8	2	Gasket Retainer
	2	0	A	0	0	0	8	5	9	9			1	Hinge
6	L	H		0	0	0	9	9	7	6			1	Gasket

DRAW SPINDLE AND WRENCH



KEY	PART NUMBER										PCS	NAME
1	F	B	A	0	0	0	0	3	0	2	1	Handle
2	F	B	A	0	0	0	1	8	6	5	1	Housing
3	3	7	D	0	0	0	0	3	0	7	1	Spanner Wrench
4	T	L		0	0	0	6	0	5	8	22	Ball
5	F	B	A	0	0	0	4	0	7	6	2	Ring
6	L	H		0	0	0	0	3	0	1	1	Draw Spindle

TOOL POST SLIDE ASSEMBLY (STANDARD)



KEY	PART NUMBER										PCS	NAME	
1	L	H		0	0	0	0	3	2	5	M	1	Feed Screw (Standard Machines only)
	L	H		0	0	0	0	3	2	5		1	Feed Screw (Metric Machines only)
2	L	H	A	0	0	0	9	7	8	7		1	Bearing
3	4	7		0	0	0	1	5	1	4		1	Key
4	L	H		0	0	1	1	0	0	9		1	Block
5	L	H	A	0	0	1	0	6	4	7		1	Eccentric Shaft
6				0	1	0	0	2	0	4		2	Screw
7	L	H		0	0	1	1	0	0	8		1	Eccentric Support
8	H	L		0	0	0	9	8	1	1		1	Wave Washer
9	L	H		0	0	0	2	3	0	2		1	Screw
10	L	H		0	0	0	6	2	3	7		1	Hub
11	L	H		0	0	0	6	1	5	8		1	Handle
12	T	L		0	0	0	6	1	2	6		1	Ball
13	L	H		0	0	0	0	4	0	7	0 1	1	Zero Ring
14	H	L		0	0	0	9	7	2	7		1	Plug
15	L	H		0	0	0	0	4	9	0		2	Spring
16	L	H		0	0	0	7	8	5	9		2	Friction Plug
17	L	H		0	0	0	3	9	5	0		1	Nut
18	H	L	E	0	0	1	0	3	3	5	1 A	1	Dial and Support Assembly (Standard)
	K	L		0	0	1	0	3	3	5	M 1	1	Dial and Support Assembly (Metric) (Consists Of Bushing And Dial and Mount Assembly)
	L	H		0	0	0	0	3	3	4		1	Bushing
	H	L	E	0	0	1	0	3	3	5	0 1	1	Dial and Mount Assembly (Consists Of)
	H	L	E	0	0	0	0	3	2	9		1	Dial
	H	L	B	0	0	1	0	2	4	7		1	Mount
19	H	L		0	0	1	0	2	4	6		1	Dial Washer and Lock Screw Assembly (Consists Of)
	H	L	A	0	0	0	8	4	7	3		1	Washer
	U			0	0	0	9	4	7	1		1	Lock Screw
	U			0	0	1	0	2	4	5		1	Plug

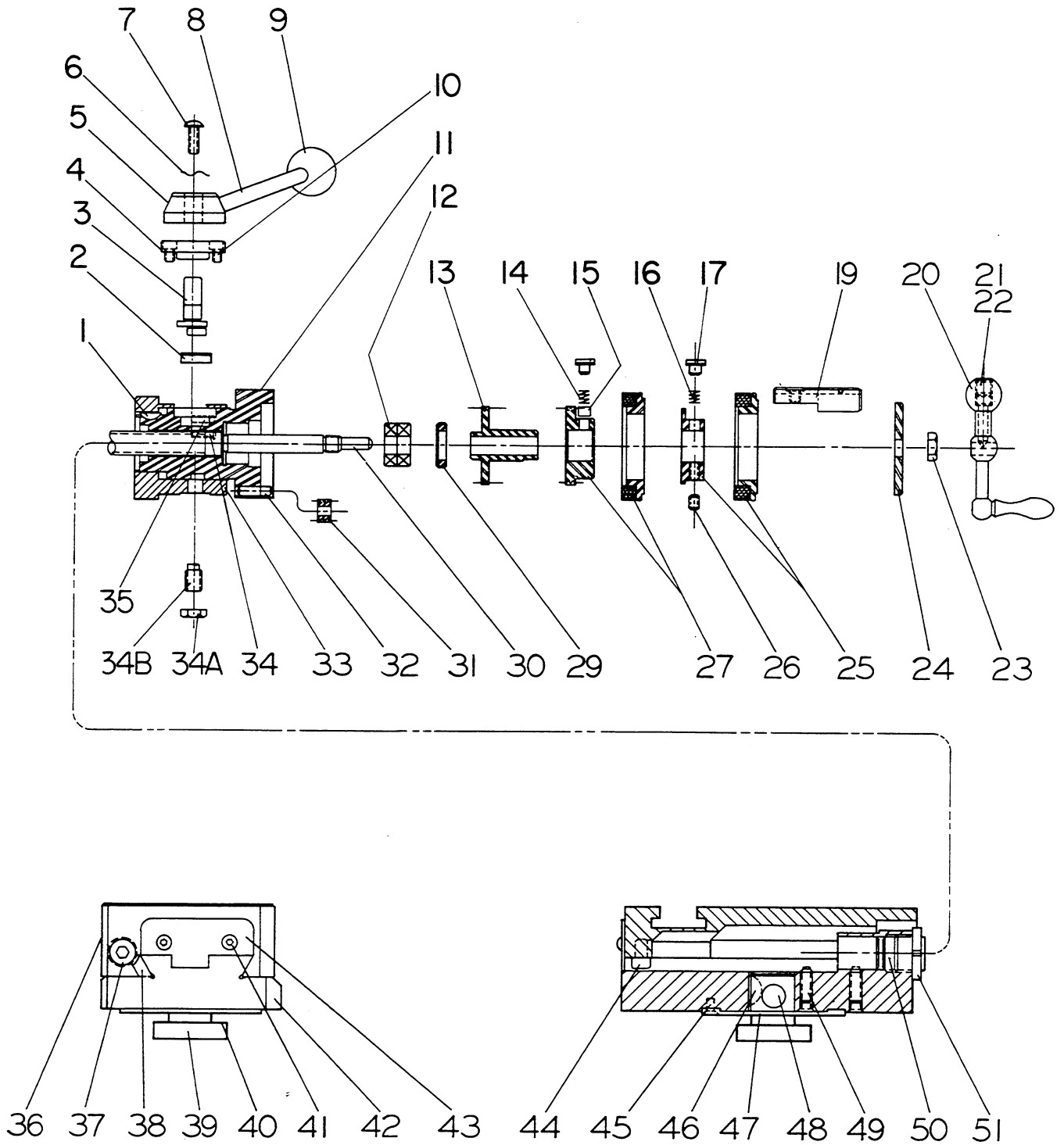
KEY	PART NUMBER										PCS	NAME	
20				0	5	5	0	7	0	5		1	Set-Screw
21	T	A		0	0	0	0	3	3	8		1	Lock Screw
22	T	A		0	0	0	0	3	3	5		1	Cross Feed Crank Assembly (Consists Of)
	T	A		0	0	0	0	3	3	6		1	Crank
	T	A		0	0	0	0	3	3	7		1	Handle
23	R	A		0	0	0	0	3	3	1		1	Nut
24	L	H		0	0	0	7	9	0	9	1pr.	1	Bearing
25				0	5	7	0	5	0	4		1	Screw
26	T	L		0	0	0	0	4	1	4		1	Nut
27	L	H		0	0	0	4	2	3	4		1	Stop Screw
28	L	H	B	0	0	0	6	6	3	0		1	End Cap
29	H	L		0	0	0	9	9	9	1		2	Dowel Pin
				0	3	0	0	5	1	6		4	Screw
	L	H	A	0	0	0	0	3	5	7		1	Tool Post Slide
31	H	M		0	0	0	6	1	6	0		2	Gib Screw
32	L	H		0	0	0	0	3	5	8		1	Gib
33	H	L		0	0	0	9	8	4	7		1	Shim Spacer (.005)
34	H	L	A	0	0	0	0	3	6	6		1	Center Draw Bolt
35				0	3	0	0	2	0	6		2	Screw
36	L	H	A	0	0	1	0	4	2	3		1	Wiper
37	L	H	A	0	0	0	0	3	6	2		1	Index Slide
38				0	1	0	0	5	0	6		1	Screw
39	6	A		0	0	0	8	6	4	8		1	Pilot Ring
40				0	4	5	0	1	0	5		2	Screw
41	5			0	0	0	1	4	6	5		1	Key
42	T	L		0	0	0	0	3	6	3		1	Eccentric Draw Bolt
43	N			0	5	9	0	5	1	2		1	Set-Screw
44	N			0	5	9	0	5	1	2		1	Set-Screw
45	D	S	A	0	0	0	0	3	2	8		1	Nut (Standard)
	L	H	A	0	0	0	0	3	2	8	M	1	Nut (Metric)
46	D	S	A	0	0	0	1	9	5	0		1	Lock Nut

TOOL POST SLIDE ASSEMBLY (Dual Dial)

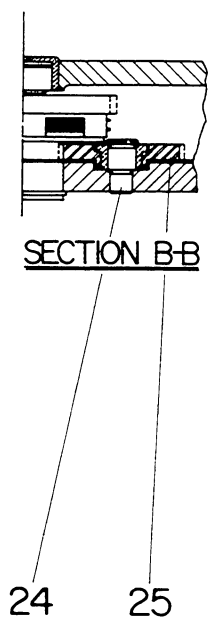
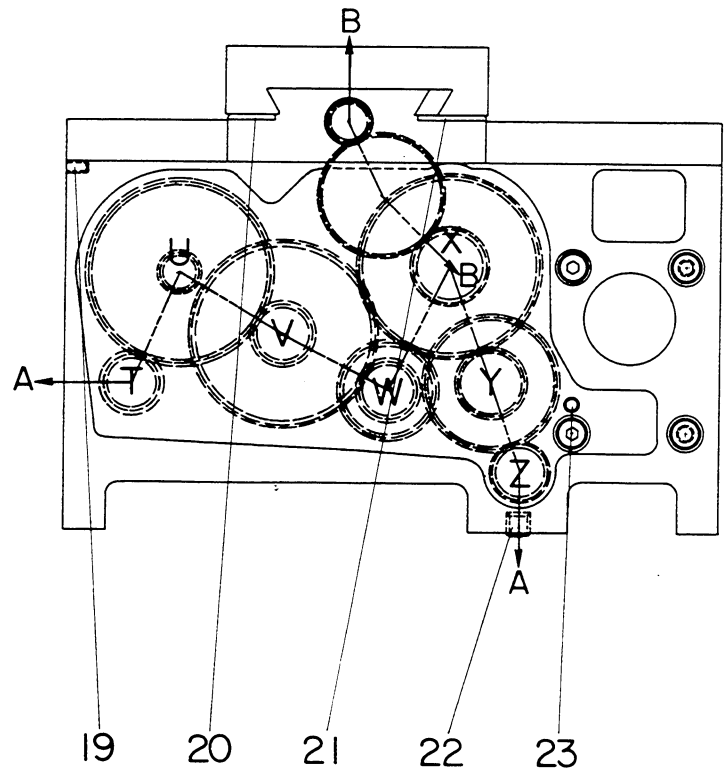
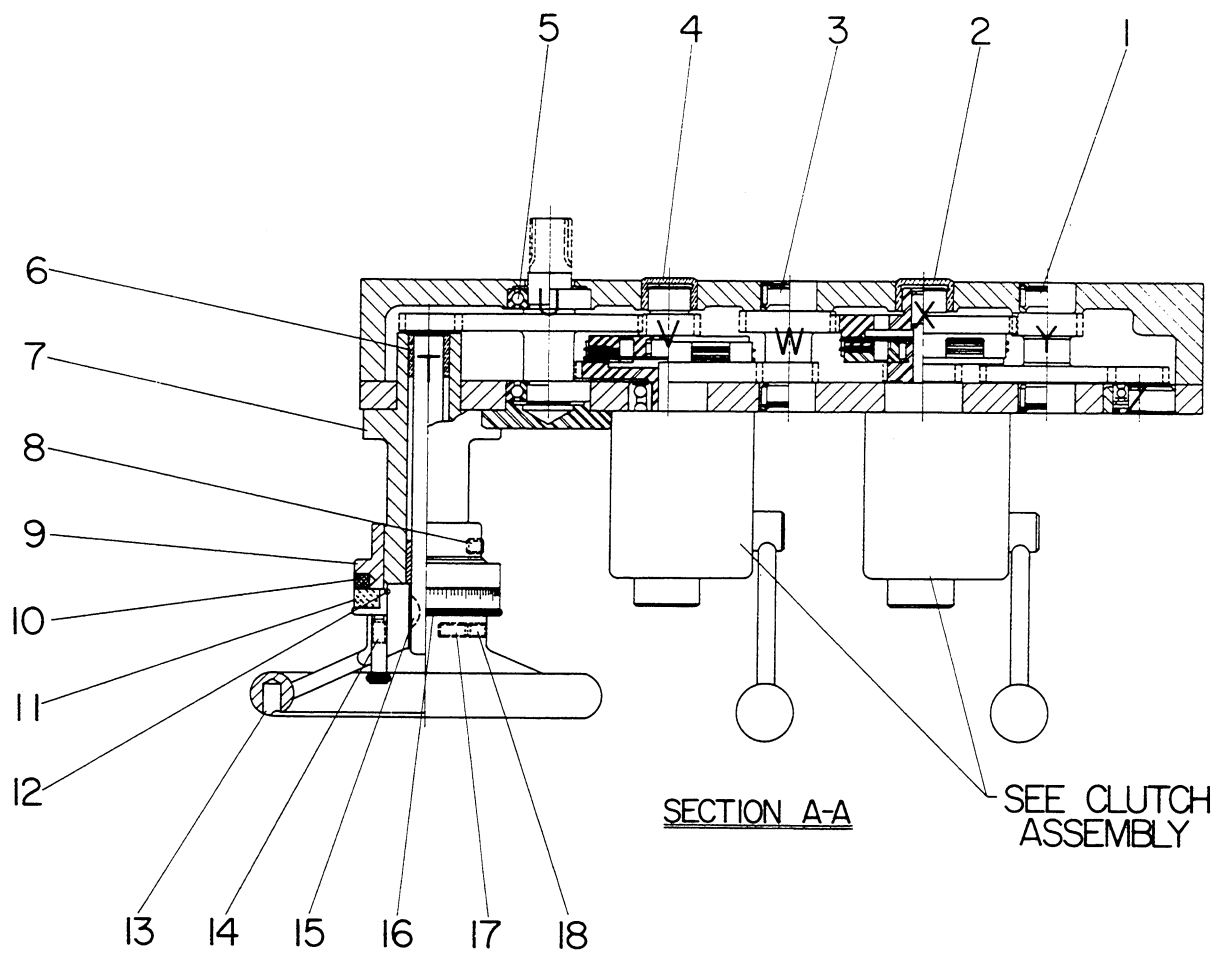
KEY	PART NUMBER										PCS	NAME
1	4	7	0	0	0	1	5	1	4		1	Key
2	L	H	0	0	1	1	0	0	9		1	Block
3	L	H	A	0	0	1	0	6	4	7	1	Eccentric Shaft
4	L	H	0	0	1	1	0	0	8		1	Support
5	L	H	0	0	0	6	2	3	7		1	Hub
6	H	L	0	0	0	9	8	1	1		1	Wave Washer
7	L	H	0	0	0	2	3	0	2		1	Screw
8	L	H	0	0	0	6	1	5	8		1	Handle
9	T	L	0	0	0	6	1	2	6		1	Knob
10			0	1	0	0	2	0	4		2	Screw
11	D	D	A	0	0	0	9	7	8	7	1	Bearing
12	L	H	0	0	0	7	9	0	9		1pr.	Bearings
13	D	D	0	0	1	1	7	7	1	0 1	1	127 Tooth Drive Gear
14	D	D	0	0	0	0	4	9	0	0 2	1	Spring
15	D	D	0	0	0	0	7	3	6		1	Plug
16	D	D	0	0	0	0	4	9	0		1	Spring
17	D	D	0	0	1	1	7	7	0	0 1	2	Brake Shoe
19	D	D	0	0	1	0	4	4	9	F	1	Window Frame
	D	D	0	0	1	0	4	4	9		1	Window
			0	5	5	0	0	0	2		1	Set Screw
			0	3	0	0	2	0	4		2	Button Head Screw
20	T	A	0	0	0	0	3	3	5		1	Cross Feed Crank Assembly (Consists Of)
	T	A	0	0	0	0	3	3	6		1	Crank
	T	A	0	0	0	0	3	3	7		1	Handle
21	T	A	0	0	0	0	3	3	8		1	Lock Screw
22			0	5	5	0	7	0	5		1	Set-Screw
23	R		0	0	0	0	3	3	1		1	Nut
24	D	D	0	0	0	8	4	7	3		1	Dial Washer
25	D	D	0	0	1	0	3	3	5	0 4	1	Dial And Mount Assembly (Consists Of)
	D	D	0	0	0	0	3	2	9		1	Dial
	D	D	0	0	0	0	3	3	4	1 F	1	Front Dial Bushing
	D	D	0	0	1	0	2	4	7		1	Mount For Dial

KEY	PART NUMBER										PCS	NAME
26			0	5	5	0	3	0	5		1	Set-Screw
27	D	D	0	0	1	0	3	3	5	4 M	1	Dial And Mount Assembly (Consists Of)
	D	D	0	0	0	0	3	2	9		1	Dial
	D	D	0	0	0	0	3	3	4	1 R	1	Rear Dial Bushing
	D	D	0	0	1	0	2	4	7		1	Mount For Dial
29	L	H	0	0	0	3	9	5	0		1	Nut
30	D	D	0	0	0	0	3	2	5		1	Feed Screw
31	D	D	0	0	0	9	4	8	8		1	32 Tooth Idler Gear
32	C	D	0	0	0	8	4	2	6		1	Dowel Pin
33	L	H	B	0	0	0	6	6	3	0	1	End Cap
34			0	3	0	0	5	1	6		4	Screw
34A	T	L	0	0	0	0	4	1	4		1	Nut
34B	L	H	0	0	0	4	2	3	4		1	Stop Screw
35	H	L	0	0	0	0	9	9	9	1	2	Dowel Pin
36	L	H	A	0	0	0	0	3	5	7	1	Tool Post Slide
37	H	M	0	0	0	6	1	6	0		2	Gib Screw
38	L	H	0	0	0	0	3	5	8		1	Gib
39	H	L	A	0	0	0	0	3	6	6	1	Draw Bolt
40	H	L	0	0	0	9	8	4	7		-	.005 Shim
41			0	3	0	0	2	0	6		2	Screw
42	L	H	A	0	0	0	0	3	6	2	1	Index Slide
43	L	H	A	0	0	1	0	4	2	3	1	Wiper
44			0	1	0	0	5	0	6		1	Screw
45			0	4	5	0	1	0	5		2	Screw
46	5		0	0	0	1	4	6	5		1	Key
47	6	A	0	0	0	8	6	4	8		1	Pilot Ring
48	T	L	0	0	0	0	3	6	3		1	Eccentric
49	N		0	5	9	0	5	1	2		2	Set-Screw
50	D	S	A	0	0	0	0	3	2	8	1	Nut
51	D	S	A	0	0	0	1	9	5	0	1	Lock Nut

TOOL POST SLIDE ASSEMBLY (DUAL DIAL)



CARRIAGE AND CROSS SLIDE (VIEW 1)

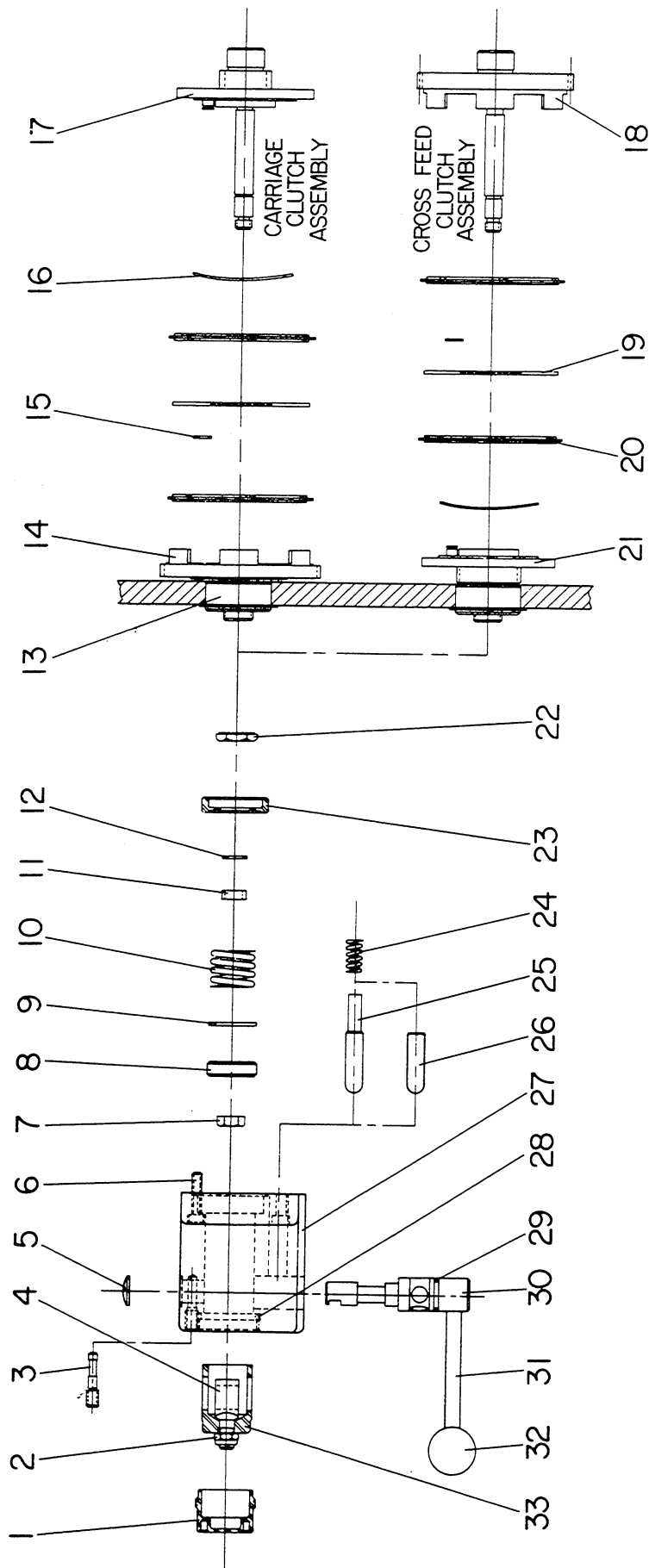


CARRIAGE AND CROSS SLIDE (VIEW 1)

KEY	PART NUMBER	PCS	NAME
1	C P 000414502	1	Needle Bearing
2	C H 000414401	1	Bearing
3	C P 000414502	1	Needle Bearing
4	C H 000414401	1	Bearing
5	K L 0000266	2	Bearing
6	T M B 0003977	2	Bearing
7	L H 0006656	1	Handwheel Bearing (English)
	K L 0006656	M	Handwheel Bearing (Metric)
*8	L 0570504	2	Screw
9	L H 0011015	1	Sleeve
10	H L 0009727	1	Plug
11	H L E 001033503	1	Dial and Mount Assembly (English)
	K L 00103353M	1	Dial and Mount Assembly (Metric) (consist of)
	H L E 0000329	1	Dial
	H L B 0010247	1	Dial Mount
	L H 0000334	1	Bushing
12	1 3 7 000823108	2	Retaining Ring
13	H L 0010250	1	Handwheel and Dial Assembly
	H L 0010249	1	Lock Screw
	H L C 00006195	1	Handwheel
14	U 0010245	2	Plug
15	5 0001465	1	Key
16	1 0010679	-	.001" shim
	2 0010679	-	.002" shim
	5 0010679	-	.005" shim
	15 0010679	-	.015" shim
17	0550608	1	Screw
18	S S 0010031	1	Lock Screw
19	0550406	1	Screw
20	K L A 0011576	L	Wear Strip (left)
21	K L A 0011576	R	Wear Strip (right)
22	L H 0010998	1	Drain Plug
23	L H 0004853	2	Dowel Pin
24	L H A 0010494	1	Stud
25	L H A 0010495	1	Idler Gear
	L H 000414402	1	Bearing
T	L H 0006660	1	Shaft for Handwheel (English)
	K L 0006660	M	Shaft for Handwheel (Metric)
	D D 0006660	1	Shaft for Handwheel (Dual Dial)
U	K L 0006655	1	Gear Rack (English)
	K L 0006655	M	Gear Rack (Metric)
V	L H 0006723	1	Clutch Disc Assembly
W	L H 0011020	1	Intermediate Gear
X	L H 0004746	1	Clutch Shaft Assembly
Y	L H 0011021	1	Intermediate P.F. Gear
Z	L H 0009559	1	21 Tooth Gear

*Note: Parts 8-18 are for English or Metric machines only. See parts list for Carriage and Cross slide (View II) for the dual dial equivalents to these parts.

POWER FEED CLUTCHES

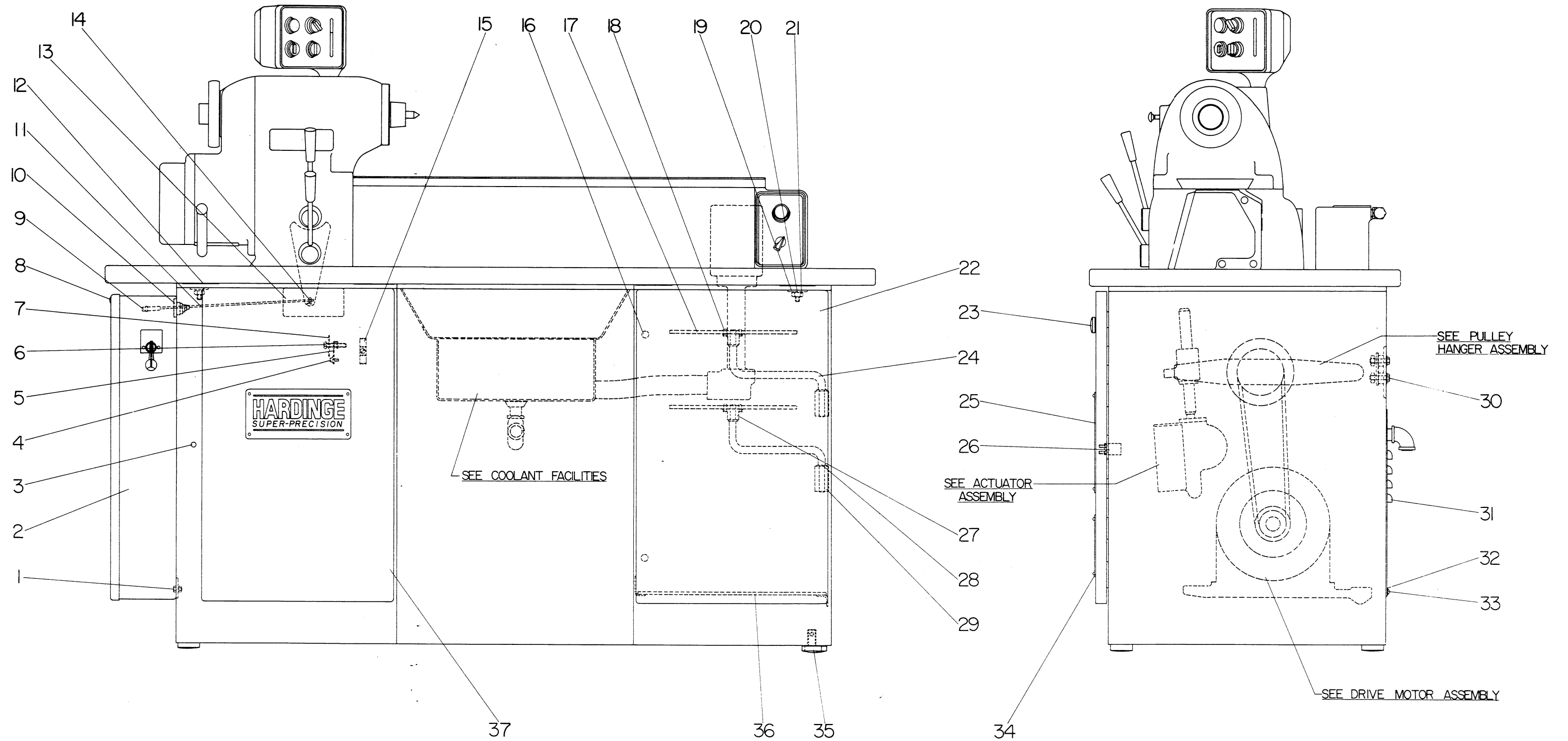


POWER FEED CLUTCHES

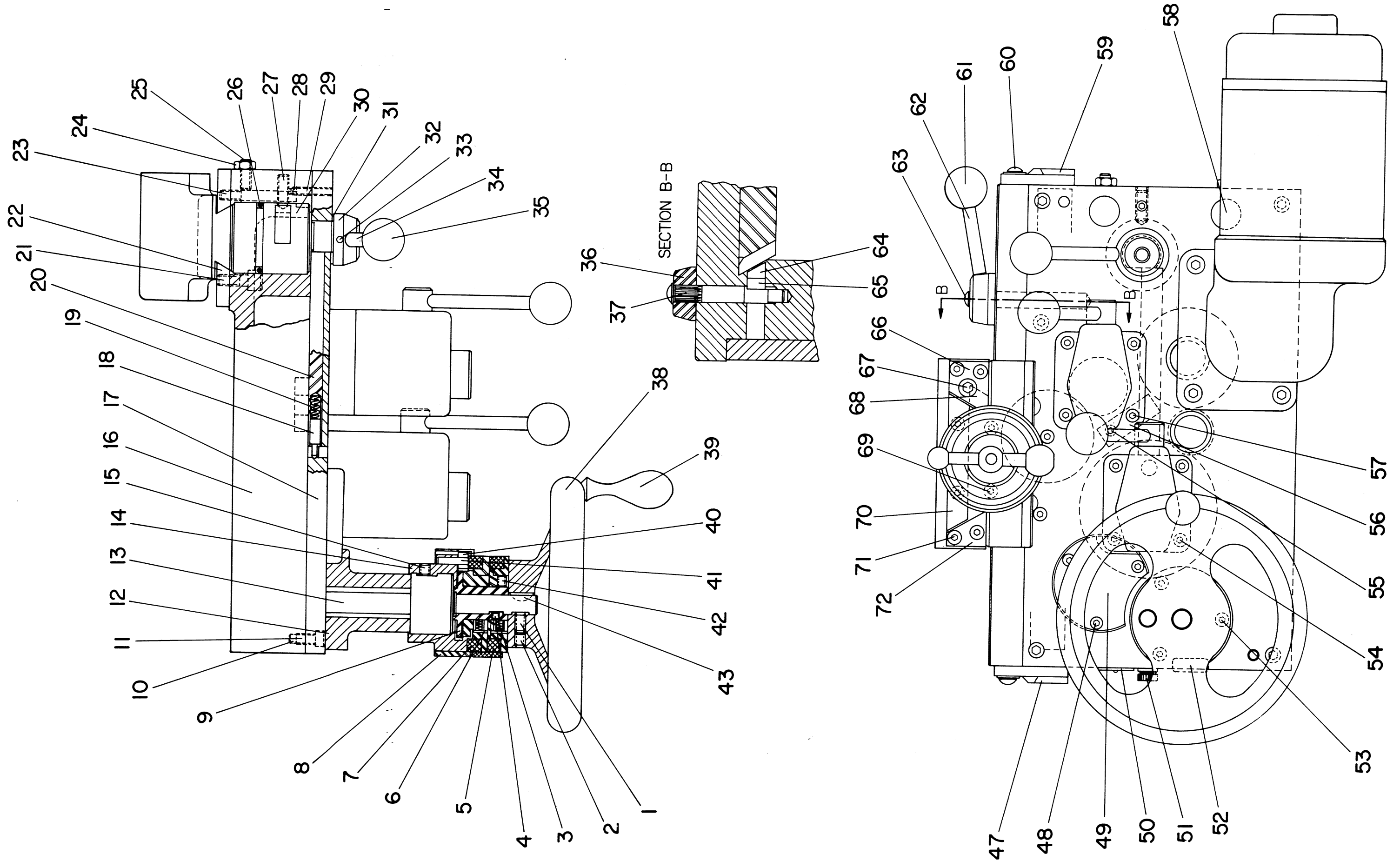
KEY	PART NUMBER										PCS	NAME
	C	P	A	0	0	0	0	0	0	0		
1	C	P	A	0	0	1	0	6	6	4	2	Cover
2	C	P	P	0	0	0	4	6	2	3	2	Adjusting Nut
3	C	P	P	0	0	1	0	6	7	4	2	Stop Screw
4	C	P	P	0	0	1	0	6	6	3	2	Adjusting Bolt
5	C	P	P	0	0	0	9	3	6	0	2	Welch Plug
6	T	L	P	0	1	0	0	3	1	4	8	Screw
7	T	L	P	0	0	0	4	1	4	4	2	Nut
8	C	P	P	0	0	0	9	3	2	3	2	Clutch Bearing
9	C	P	P	0	0	0	3	6	4	3	3	Spacer (2 on Carriage Clutch 1 on Cross Feed Clutch)
10	K	L	A	0	0	0	6	9	3	9	1	Clutch Spring for Carriage
11	C	P	A	0	0	0	6	9	3	9	1	Clutch Spring for Cross Feed
12	L	H	P	0	0	1	0	6	7	2	2	Spacer
13	3	5	P	0	0	0	8	2	3	1	2	Snap Ring
14	C	P	P	0	0	0	4	1	4	0	2	Clutch Bearing
15	L	H	P	0	0	1	0	8	9	9	1	Longitudinal Clutch Gear
16	2	5	P	0	0	0	8	2	3	1	6	Snap Ring
17	H	C	P	0	0	1	1	0	0	0	2	Bowed Washer
18	L	H	L	0	0	0	6	7	2	3	1	Clutch Disc Assembly (English Dials)
19	K	L	L	0	0	0	6	7	2	3	1	Clutch Disc Assembly (Metric Dials)
20	L	H	H	0	0	0	4	7	4	6	1	Cross Feed Clutch Shaft
21	L	H	H	0	0	1	0	8	9	6	2	Clutch Disc
22	L	H	H	0	0	1	0	8	9	8	4	Cork and Plate Assembly
23	C	P	P	0	0	1	1	0	2	4	1	Cross Feed Gear Assembly
24	C	P	P	0	0	1	0	6	7	3	2	Nut
25	S	P	A	0	0	0	7	8	7	2	2	Spring Seat
26	L	H	H	0	0	0	6	9	9	8	2	Spring for Clutch Plunger
27	L	H	H	0	0	0	6	9	9	8	1	Plunger (HLV-H), Carriage Feed
28	C	P	A	0	0	0	6	9	9	8	2	Plunger (HLV-H), Cross Feed
29	O	R	R	0	0	0	6	9	9	8	0	Plunger (TFB-H)
30	L	H	H	0	0	0	6	9	3	3	2	Clutch Body
31	L	H	H	0	0	0	1	8	2	1	2	O-Ring
32	T	L	P	0	0	0	0	9	1	1	2	O-Ring
33	C	P	P	0	0	0	6	9	3	5	2	Clutch Cam
				0	0	0	6	1	5	8	2	Handle
				0	0	0	6	1	2	6	2	Ball
				0	0	1	0	6	6	2	2	Pressure Sleeve

PEDESTAL ASSEMBLY

KEY	PART NUMBER										PCS	NAME	
1												4	Screw
	C	M										4	Lock Washer
	C	M										4	Nut
2	K	L	D									1	Control Panel Assembly
	K	L	C									1	Switch Case Assembly
3	U											1	Rubber Plug
4	F											1	Screw
	V	D										1	Washer
5	D	V	B								B	1	Support for Indicator Rod
6	H	L										1	Pivot Screw
7	G	D										1	Set-Screw
8	G	D	E									1	Speed Indicator Rod
9	W	E										2	Captive Screw
10	K	L										2	Bushing
	1	2	5									1	Link
11	L	H										1	Rubber Boot
12	K	L										1	Retaining Ring
13	H	P	E									1	Pull Rod
14	U	P										6	Cork Pad
15	D	V										1	Brake Adjusting Plate
												1	Cotter Pin
												2	Clamp
												1	Screw
16	W	D										1	Star Washer
17	U	E										4	Bumper
18	K	L										2	Collet Board
19	T	L										6	Screw
20	M	D										9	Washer
21	7											9	Lock Washer
22	K	L									B	9	Nut
23	K	L										1	Door
	K	L										1	Knob Assembly, Consists Of:
	K	L										1	Knob
	K	L										1	Stud
	5	P									B	2	Nut
24	K	L										2	Shaft
25	F	P	C									1	Nameplate
	L	H									M	1	Nameplate (Mexican Machines Only)
												6	Screw
26	R											1	Catch for Door
	R	A										9	Shim for Catch
	C	M										2	Lock Washer
	M	D									B	2	Washer
												4	Screw
	M	D									B	4	Nut
27	K	L										2	Bushing
	5	P									B	2	Washer
28	5	P										2	Washer
29	K	L										2	Bushing
30	L	H										1	Bracket
												4	Screw
	K	L										2	Spacer
31	V	D	A									1	Rear Cover
32	H	L										4	Washer
33												4	Screw
34	K	H									E	1	Warning Tag (European Machines only)
	R	T										2	Escutcheon Pin
35	T	L										1	Brass Plug
												1	Screw
36	K	L	A									1	Work Shelf
37	K	L	A									1	Motor Door
	L	H	A									1	Belt Replacement Tag



CARRIAGE AND CROSS SLIDE (VIEW 2)



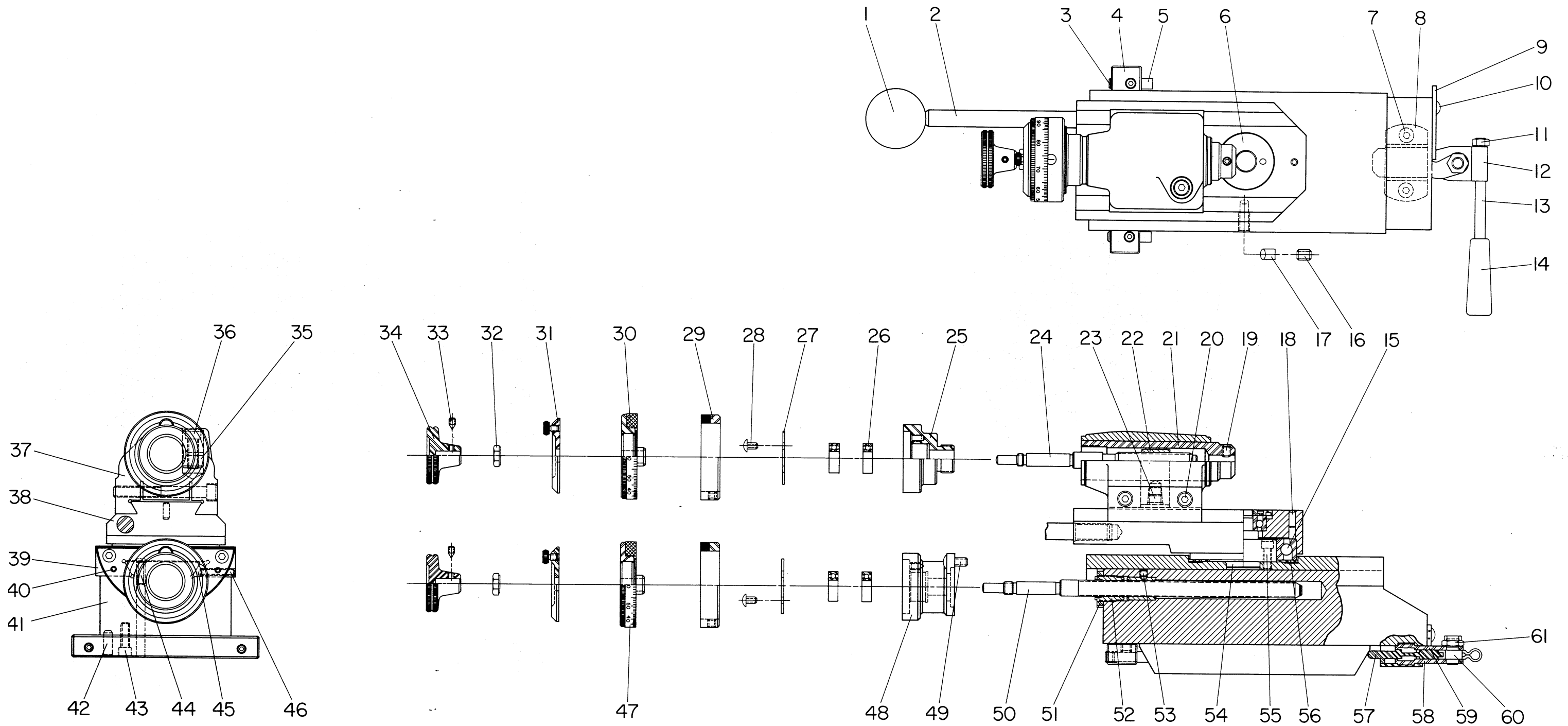
KEY	PART NUMBER		PCS	NAME
*1	S	0500608	1	Screw
*2	S	0010031	1	Lock Screw
*3	D	0000490	2	Spring
*4	D	0050303	1	Set Screw
*5	D	0001177	1	Dial and Front Bushing Assembly
*6	D	0001033	2	Brake Shoe
*7	D	0001044	1	Dial and Gear Bushing Assembly
*8	D	0001044	1	Window Frame
		0050002	1	Window
*9	D	0030020	1	Set Screw
10	L	0001177	2	Button Head Screw
11	L	0001485	1	127 Tooth Drive Gear
12	L	0000610	2	Dowel
*13	D	0000656	7	Screw
*14	D	0000660	1	Handwheel Bearing
*15	D	0001101	1	Handwheel Shaft
16	K	0057050	1	Sleeve
17	L	0000371	1	Screw
18	L	0000671	1	Carriage
19	H	0000948	1	Cover
20	H	0000733	1	Plunger
21	L	0000675	1	Spring
22	L	0001170	1	Interlock
23	L	0001172	1	Screw
24	L	0001177	2	Glb
25	C	0002843	2	Screw
26	O	0050512	2	Nut
27	H	0002327	2	Screw
28	3	0000687	1	O-Ring
29	L	0000483	1	Cam Adjusting Screw
30	L	0050316	1	Brass Plug
31	T	0000678	1	Screw
32	T	0000695	1	Cam
33	T	0000615	1	Fiber Washer
34	M	0000325	1	Hub for Handle
35	T	0000615	1	Taper Pin
36	H	0000979	1	Handle
37	H	0000683	1	Knob
38	D	0000619	1	Collar
39	T	0000683	1	Eccentric Shaft
40	D	0000683	1	Handwheel
41	C	0000842	1	Handle
42	3	0050304	1	32 Tooth Idler Gear
43	H	0000175	1	Dowel
47	C	0000805	1	Set Screw
48	K	0000308	1	Key
49	L	0001031	1	Wiper
50	C	0001001	3	Screw
51	H	0001002	1	Rack Bearing Retainer
52	O	0000079	1	Plate
53	W	0001009	1	Oil Cup
54		0010031	1	Carriage Feed Stop Screw
55	L	0000314	1	(TFB Machines only)
56	L	0000308	3	Oil Window
57	5	0000948	7	Screw
58	6	0000320	1	Screw
59	K	0001033	1	Plate
60	5	0000805	1	Screw
61	T	0030061	2	Dot Plug
62	T	0000643	1	Wiper
63	L	0000612	14	Screw
64	L	0000615	14	Washer
65	L	0000615	1	Ball
66	L	0000230	1	Handle
67	H	0000684	1	Screw
68	L	0000684	1	Lock Bolt
69	L	0000805	1	Spacer
70	L	0000370	2	Wiper
71	L	0000620	1	Glb Screw
72	L	0000805	1	Glb
		0000465	2	Screw
		0000465	1	Wiper
		0000465	6	Screw
		0000465	1	Wiper

*These parts are for dual dial machines only. See Carriage and Cross Slide (View 1) for English or Metric machines.
 †HLV- Machines only.

KEY	PART NUMBER										PCS	NAME	
	5	4	3	2	1	0	9	8	7	6			
24	L	H										1	Pipe Plug
25	L	H										1	Oil Junction Block Screw
26	L	H										4	O-Ring
27	L	H								0	3	2	Oil Tube Assembly (to cross slide) (Consists of)
	O	F	A									1	O-Ring
	L	H										1	Meter Unit
	L	H										1	Connector
	L	H										3 ^{13/16}	Oil Tube
	L	H										1	Compression Nut
	L	H										1	Compression Sleeve
	L	H										1	Oil Tube Assembly (to carriage) (Consists of)
	O	F	A									1	O-Ring
	L	H										1	Meter
	L	H										1	Connector
	L	H										5 ^{9/16}	Oil Tube
	L	H										1	Compression Nut
	L	H										1	Compression Sleeve
28	L	H										1	Oil Tube Assembly (to carriage) (Consists of)
	O	F	A									1	O-Ring
	L	H										1	Meter
	L	H										1	Connector
	C	H										6 ^{3/8}	Oil Tube
	L	H										1	Compression Nut
	L	H										1	Compression Sleeve
29	L	H										1	Oil Window
30	L	H										2	Bushing
31	C	H										2	Bushing
32	H	L										1	Teflon Sheet *
												1	Bearing
Note: Part Numbers 33-44 are for English or Metric machines only.													
33	L	H										1	End Cap
34	L	H										1pr.	Bearing
35	L	H										1	Nut
36	L	H										1	Bushing
37	L	H										1	Zero Ring
38	H	L	E									1	Dial and Support Assembly (English Machines Only)
	K	L										1	Dial and Support Assembly (Metric Machines Only)
39	U	H	L									1	Plug
40	H	L										1	Dial and Washer Assembly (Consists of)
41	H	L	A									1	Lock Screw
42	T	A										1	Washer
	T	A										1	Nut
	T	A										1	Crank Assembly (Consists of)
43	T	A										1	Crank
44	T	A										1	Handle
												1	Lock Screw
												1	Set-Screw
Note: Part Numbers 48-62 are for dual dial machines only.													
48	T	A										1	Set-Screw
49	T	A										1	Lock Screw
50	T	A										1	Crank Assembly (Consists of)
	T	A										1	Crank
	T	A										1	Handle
51	R	D										1	Nut
52	D	D										1	Dial Washer
53	D	D										1	Window Frame
	D	D										1	Window
54	D	D										2	Button Head Screw
55	D	D										1	Set Screw
	D	D										1	Dial and Mount Assembly (English)
	D	D										1	Front Dial Bushing
	D	D										1	Set-Screw
	D	D										1	Spring
	D	D										1	Brake Shoe
56	D	D										1	Dial and Mount Assembly (Metric)
57	D	D										1	Rear Dial Bushing
	D	D										1	Spring
	D	D										1	Brake Shoe
58	D	D										1	Nylon Plug
59	L	H										1	127 Tooth Drive Gear
60	L	H										1pr.	Nut
61	C	D										1	Bearing
62	D	D										1	Dowel Pin
	H	L										2	End Cap
	L	H										2	Screw
												2	Seal
63	H	L										1	Cross Feed Screw (English Machines Only)
64	L	H										1	Cross Feed Screw (Metric Machines Only)
	L	H										1	Cross Feed Screw (Dual Dial Machines Only)

* Factory installation required.

RADIUS TURNING ATTACHMENT

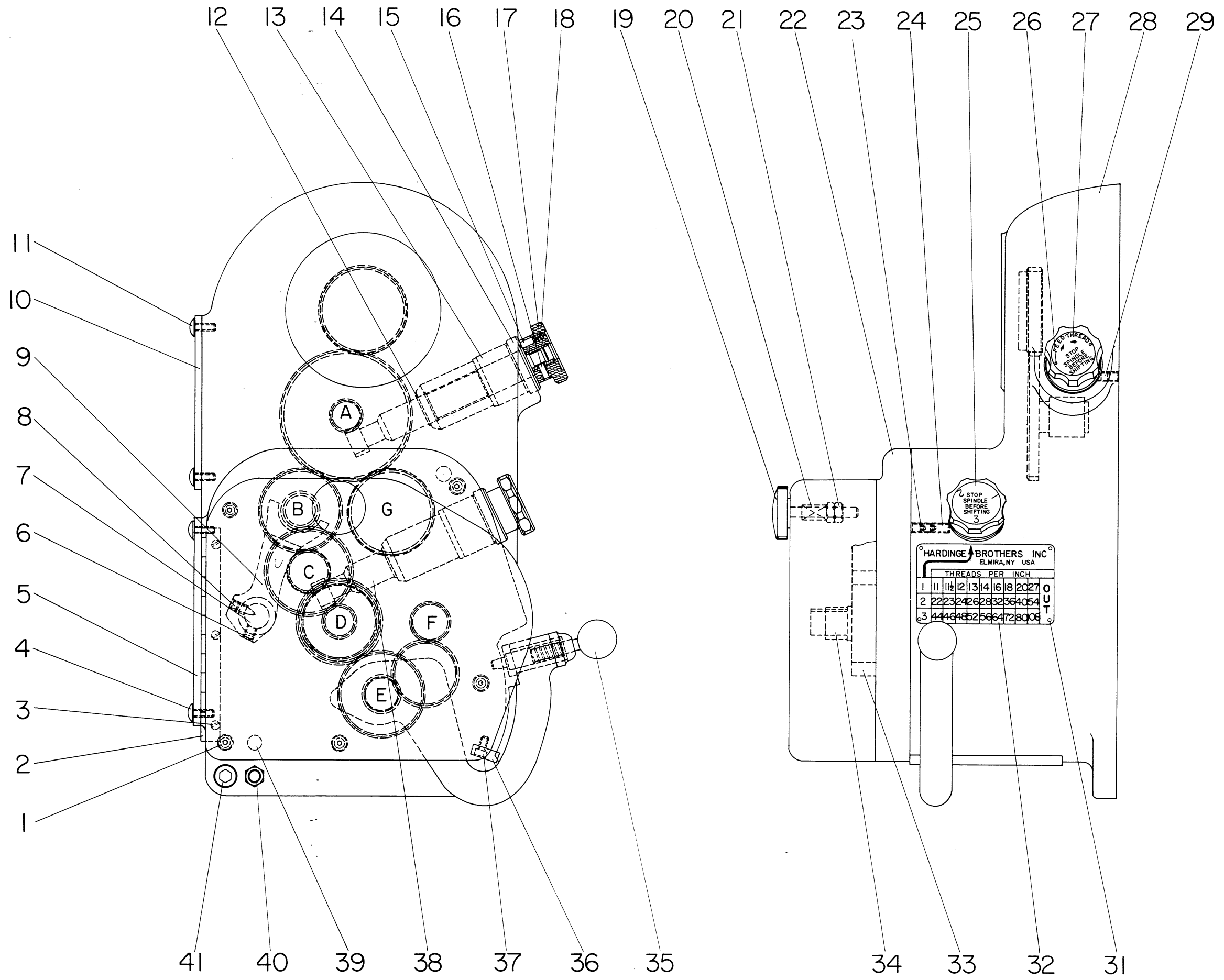


KEY	PART NUMBER										PCS	NAME
1	R	T	A	0	0	0	9	1	1	9	1	Ball
2	R	T	A	0	0	0	9	1	2	0	1	Lever
	6	C		0	0	1	0	6	1	3	1	Bed Stop Assembly (Consists of Key -3-5)
3				0	5	5	0	7	0	4	4	Screw
4	6	F		0	0	0	0	3	7	2	1	Bed Stop
5	6	A		0	0	0	9	4	2	3	2	Lock Plug
6	R	T		0	0	0	9	1	0	9	1	Bearing Nut
7				0	3	0	0	5	0	8	2	Screw
8	D	S		0	0	0	8	7	1	6	1	Bed Clamp Bracket
9	D	S		0	0	1	0	5	0	9	1	Safety Latch for Bed Lock
10				0	3	0	0	3	0	6	1	Screw
	D	S		0	0	1	0	5	6	8	1	Bushing for Safety Latch
11	C	M		0	0	0	2	8	4	3	1	Nut
12	D	S		0	0	0	8	2	9	1	1	Link for Locking Handle
13	D	S		0	0	0	6	1	5	8	1	Handle
14	D	S		0	0	0	6	1	2	6	1	Knob
*15	R	T	A	0	0	0	9	2	2	7	1pr	Bearings
16				0	5	5	0	8	0	7	1	Screw
17	R	T		0	0	0	9	1	1	4	1	Locking Plug
18	T	L		0	0	0	6	6	1	5	2	Dowel Pin
19				0	5	6	0	6	0	5	1	Screw
20				0	1	0	0	8	4	4	2	Screw
21	R	T	A	0	0	0	9	1	1	5	1	Spindle
22	R	T		0	0	0	0	4	0	2	1	Feed Screw Nut (Standard)
	R	T		0	0	0	0	4	0	2	1	Feed Screw Nut (Metric)
23	5			0	0	0	1	4	6	7	1	Pipe Plug
24	R	T	A	0	0	0	9	1	0	3	1	Top Feed Screw (Standard)
	R	T	A	0	0	0	9	1	0	3	1	Top Feed Screw (Metric)
25	R	T	B	0	0	0	0	4	0	7	1	End Bearing
26	L	H		0	0	0	7	9	0	9	2pr	Bearing
27	R			0	0	0	7	8	9	3	2	Bearing Plate
28				0	3	5	0	3	0	5	8	Screw
29	L	H		0	0	0	0	4	0	7	0 1	Zero Ring
	H	L		0	0	0	9	7	2	7	2	Zero Plug
				0	5	7	0	5	0	4	2	Screw
30	H	L	E	0	0	1	0	3	3	5	1 A	Dial and Support Assembly (Standard)
	K	L		0	0	1	0	3	3	5	M 1	Dial and Support Assembly (Metric)
31	H	L		0	0	1	0	2	4	6	2	Dial Lock Screw and Washer Assembly
	U			0	0	1	0	2	4	5	2	Plug

*This part consists of one 35mm O.D. bearing and one 80mm O.D. bearing.

KEY	PART NUMBER										PCS	NAME
32	R	T	A	0	0	0	0	3	3	1	2	Nut
33	R	T	A	0	0	0	9	1	1	3	2	Screw
34	R	T		0	0	0	9	1	0	4	2	Handle
35	R	T		0	0	0	9	1	1	1	1	Spindle Binding Nut
36				0	1	0	0	7	1	4	3 6	Screw for Binding Nut
37	R	T	B	0	0	0	9	1	0	1	1	Tool Holder Body
38	R	T	A	0	0	0	9	1	0	6	1	Swivel Base
39	L	H	A	0	0	0	9	1	0	7	1	Bottom Slide
40	C	D		0	0	0	4	6	2	9	2	Dowel Pin
41	L	H	A	0	0	1	1	0	4	3	1	Base for Bottom Slide
42	R			0	0	0	4	8	5	3	2	Dowel Pin for Bed Stop
43				0	1	0	0	5	1	2	2	Screw
44	N			0	5	9	0	5	1	2	1	Screw for Slide
45	R	B		0	0	0	0	3	7	0	1	Gib for Slide
46	N			0	5	5	0	3	1	6	4	Gib Screw
47	H	L	E	0	0	1	0	3	3	5	0 2	Dial and Support Assembly (Standard)
	K	L		0	0	1	0	3	3	5	M 1	Dial and Support Assembly (Metric)
48	D	S	C	0	0	0	0	3	4	3	1	Slide End Cap
49				0	3	0	0	6	1	0	2	Screw
50	D	S	A	0	0	0	0	3	2	5	1	Bottom Feed Screw (Standard)
	D	S		0	0	0	0	3	2	6	M	Bottom Feed Screw (Metric)
51	D	S	A	0	0	0	1	9	5	0	1	Nut for Feed Screw Nut
52	D	S	A	0	0	0	0	3	2	8	1	Feed Screw Nut (Standard)
	D	S	A	0	0	0	0	3	2	8	M 1	Feed Screw Nut (Metric)
53				0	5	9	0	5	0	4	1	Screw for Feed Screw Nut
54	R	T	A	0	0	0	9	1	0	8	1	Pivot Post
55				0	1	0	0	6	1	0	4	Screw
56	R	T	A	0	0	0	7	8	5	2	1	Lower Sealing Ring
57	D	S		0	0	0	8	2	9	0	1	Plunger for Bed Clamp
58	D	S	L	0	0	0	8	2	9	3	1	Lower Link for Bed Clamp
59	D	S	U	0	0	0	8	2	9	3	1	Upper Link for Bed Clamp
60	D	S	A	0	0	0	8	2	9	2	1	Adjusting Screw for Bed Clamp
61	D	S		0	0	0	0	3	3	1	1	Nut for Bed Clamp

STANDARD GEAR BOX ASSEMBLY



HARDINGE BROTHERS INC
ELMIRA, NY USA

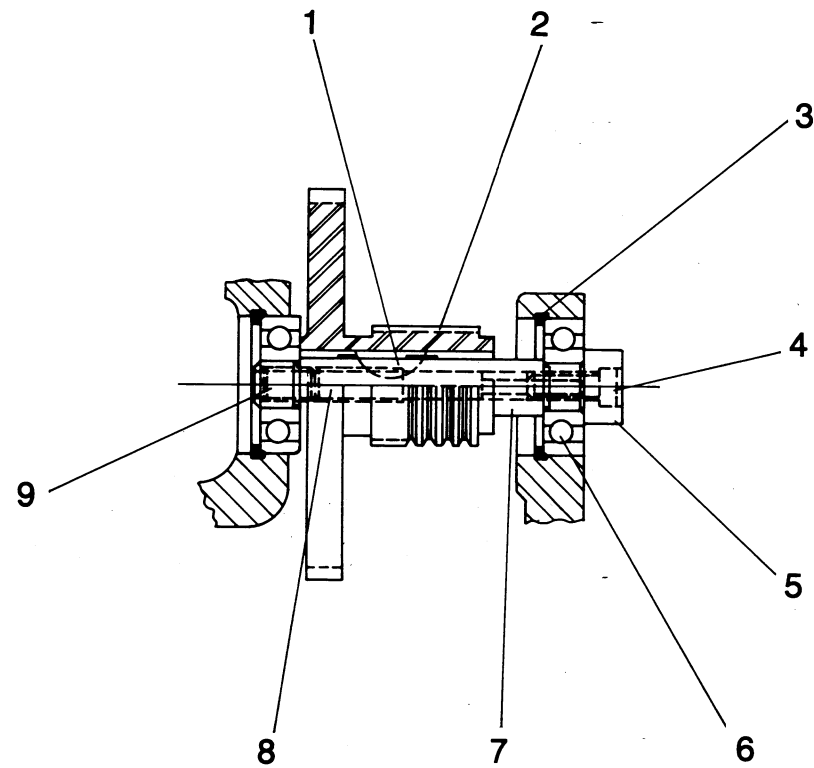
THREADS PER INCH		
1	11 12 13 14 16 18 20 27	O U T
2	22 32 42 62 83 236 405 4	
3	44 64 85 256 647 280 08	

KEY	PART NUMBER										PCS	NAME
1											5	Screw
2	H	M									1	Hinge
3											6	Hinge Screw
4											4	Screw
5	H	L									1	Cover Plate
6											2	Screw
7	L	H									1	Shift Fork Shaft
8	H	L	A								1	Shifter Fork Screw
9	H	L	A								1	Lock Screw
10	L	H									1	Shifter Fork
11											1	Cover Plate
12	7	5								0 2	4	Screw
13	H	L	A							L	2	Retaining Ring
14	H	L	B								1	Pinion Shaft
15	T	L									2	Bushing
16											2	Plunger
17	H	L									3	Screw
18	H	L	A								1	Spring
19	K	L								0 2	1	Knob
	K	L									1	Knob Assembly (Consists of:)
	K	L									1	Knob
	K	L									1	Stud
20	C	W									1	Spring
21	5	P									1	Nut
22	H	L	A								2	Plate
23											1	Screw
24											1	Screw
25	H	L									1	Three Change Plate
26	R										2	Escutcheon Pins
27	L	H									1	Thread Feed Plate
*28	L	H									1	Gear Box Housing Assembly
29											2	Screw

KEY	PART NUMBER										PCS	NAME
30	H	L	D								1	Spindle Gear
31	R										1	Escutcheon Pin
32	H	L	B								1	Name Plate
33	H	L									1	Gear Bracket Assembly (See Page 64)
34	T	L									2	Spacer
35	H	L									1	Plunger Handle Assembly (See Tumbler Shaft Assembly)
36	H	L	A								1	Tumbler Guide
37											2	Screw
	T	L									2	Dowel
38	H	L	A							L	1	Pinion Shaft
39	C	D									2	Dowel
40	H	L									1	Threaded Taper Pin
41											4	Screw
A	L	H									1	Idler Shaft (See Page 58)
B	H	L	B								1	Clutch Shaft Assembly (See Page 58)
C	H	L	A								1	Intermediate Shaft Assembly (See Page 59)
D	H	L	A								1	3 Change Shaft Assembly (See Page 60)
E	H	L	B								1	Tumbler Shaft Assembly (See Page 61)
F	H	L	A								1	Cluster Shaft Assembly (See Page 62)
G	H	L	A								1	Reverse Shaft (See Page 63)

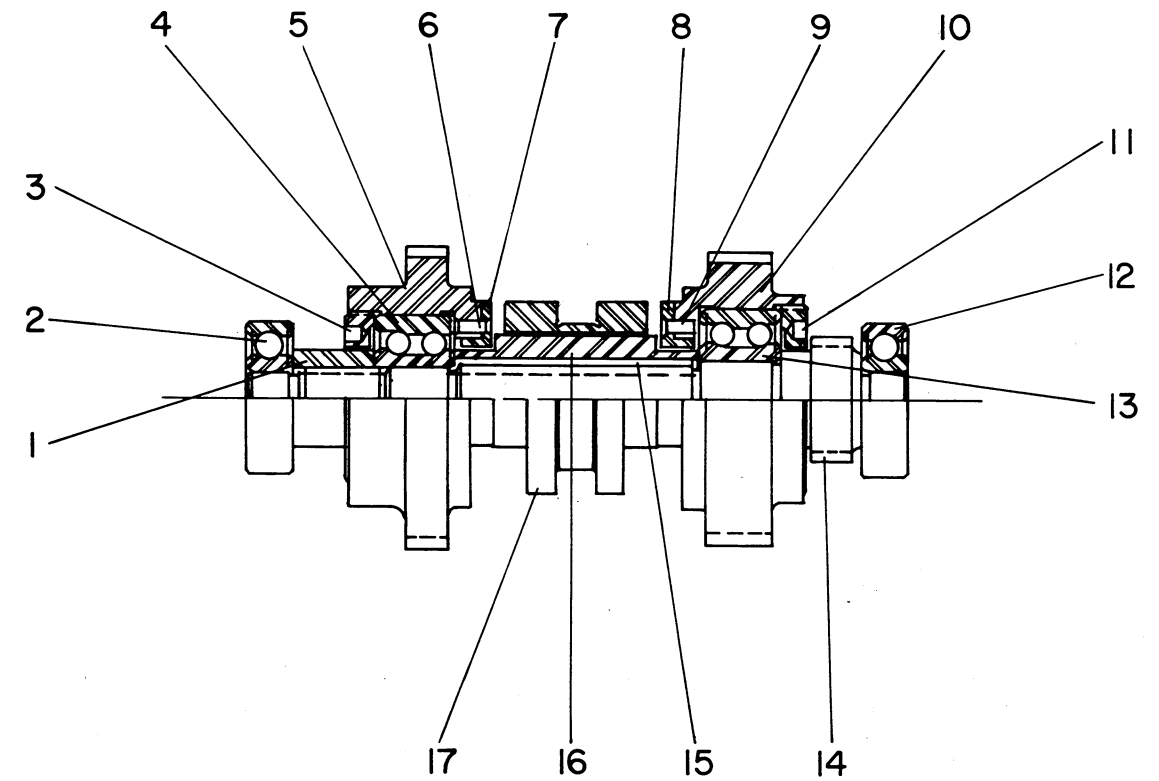
NOTE: Gearbox Assembly, LH-0006602, Consists of Key Numbers 1, 2, 22, 28.

STANDARD GEARBOX IDLER SHAFT (VIEW A)



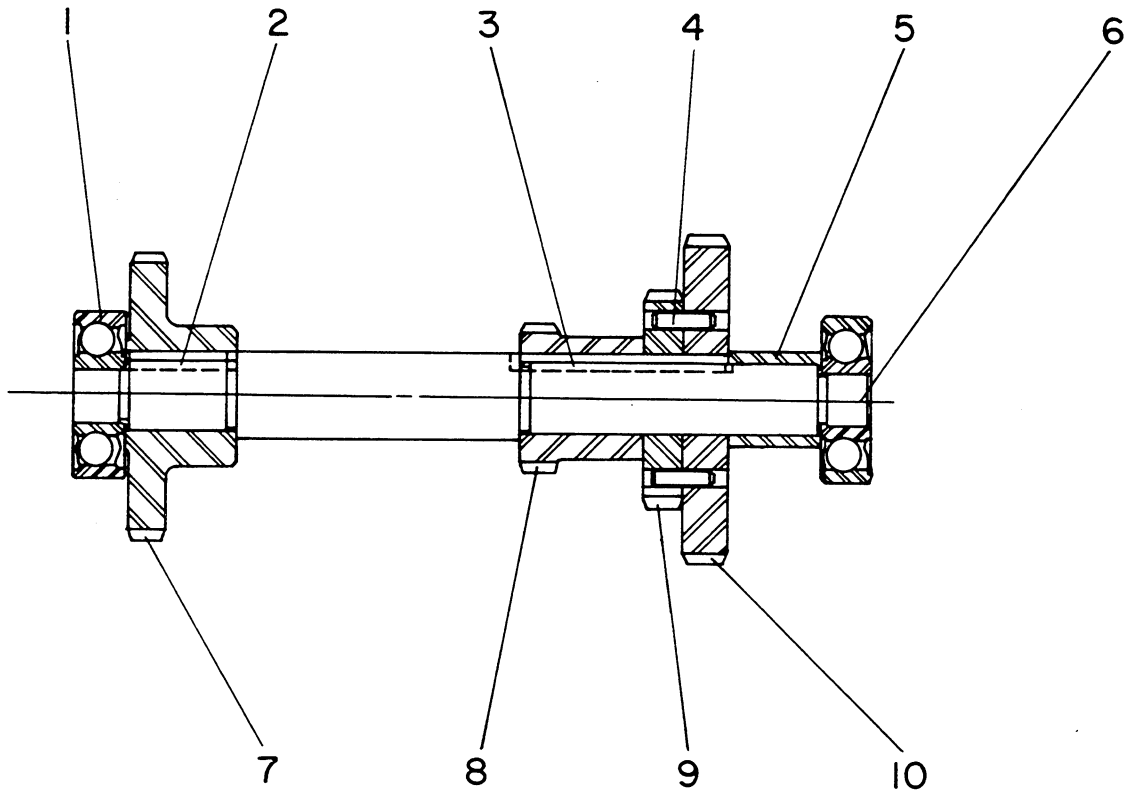
KEY	PART NUMBER										PCS	NAME	
1	L	H		0	0	0	1	4	6	5		1	Key
2	L	H		0	0	0	9	4	8	8		1	71 Tooth Gear
3	1	1	8	0	0	0	8	2	3	1	0	1	Retaining Ring
4				0	1	0	0	3	1	0		2	Screw
5	L	H		0	0	1	1	0	3	5		1	Stop Block
6	T	L		0	0	0	6	6	1	7		2	Bearing
7	L	H		0	0	0	9	4	8	7		1	Idler Shaft
8	L	H		0	0	1	1	0	3	6		1	Knockout Pin
9	N			0	5	5	0	5	0	6		1	Set Screw

CLUTCH SHAFT (VIEW B)



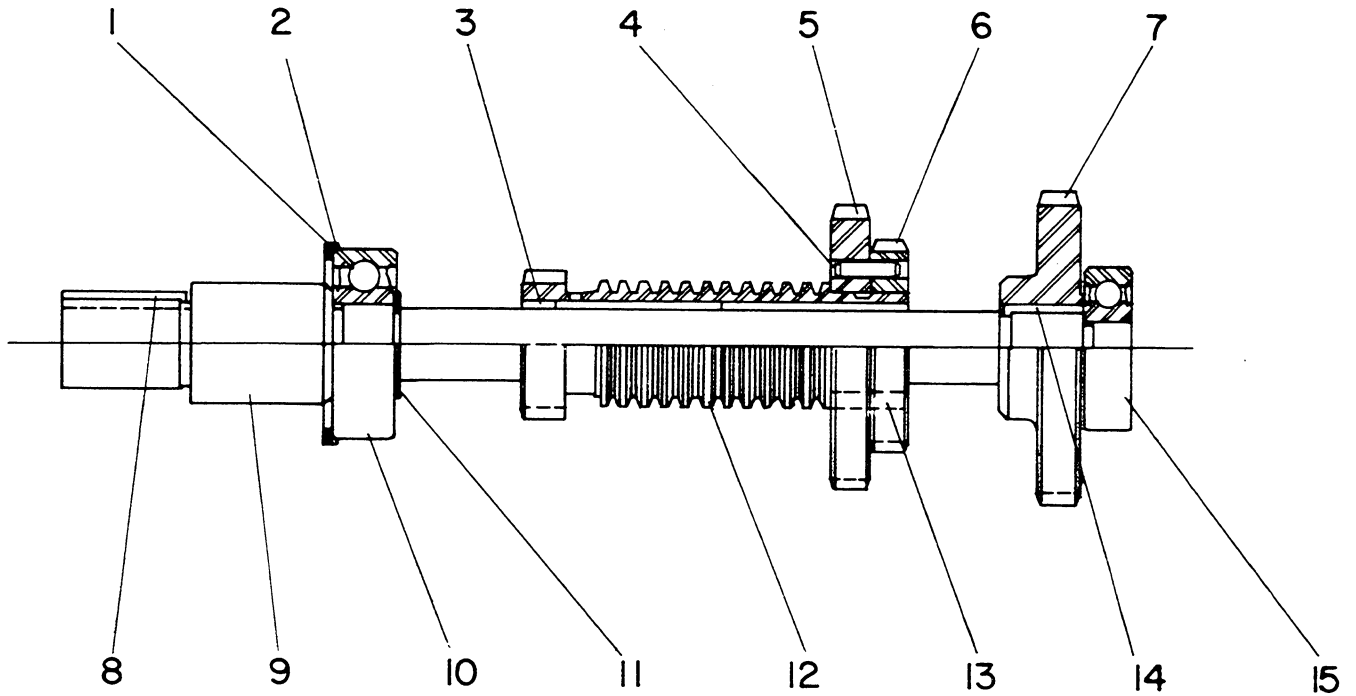
KEY	PART NUMBER										PCS	NAME	
1	T	A		0	0	0	6	2	1	6		1	Bushing
2	T	L		0	0	0	6	6	1	7		1	Bearing
3	H	L		0	0	0	9	9	4	9		1	Nut
4	T	L		0	0	0	6	6	1	6		1	Bearing
	H	L	B	0	0	0	6	4	5	8		1	Reverse Gear Assembly (Key Nos. 5-7)
5	H	L	B	0	0	0	6	2	9	6		1	Reverse Gear
6	T	L		0	0	0	6	4	5	7		2	Rivet
7	T	L		0	0	0	6	4	5	6		1	Clutch Tooth
	H	L	B	0	0	0	6	4	5	9		1	Forward Gear Assembly (Key Nos. 8-10)
8	T	L		0	0	0	6	4	5	6		1	Clutch Tooth
9	T	L		0	0	0	6	4	5	7		2	Rivet
10	H	L	B	0	0	0	6	2	8	1		1	Forward Gear
11	H	L		0	0	0	9	9	5	0		1	Nut
12	T	L		0	0	0	6	6	1	7		1	Bearing
13	2	V		0	0	0	6	5	0	4		1	Bearing
14	H	L	B	0	0	0	6	2	0	0		1	Shaft
15	T	L		0	0	0	6	3	1	7		1	Key
	T	L		0	0	0	6	2	7	0	0	1	Quick Reverse Assembly (Key Nos. 16-17)
16	T	L		0	0	0	6	2	7	2		1	Bushing
17	T	L		0	0	0	6	2	7	0		1	Clutch

INTERMEDIATE SHAFT (VIEW C)



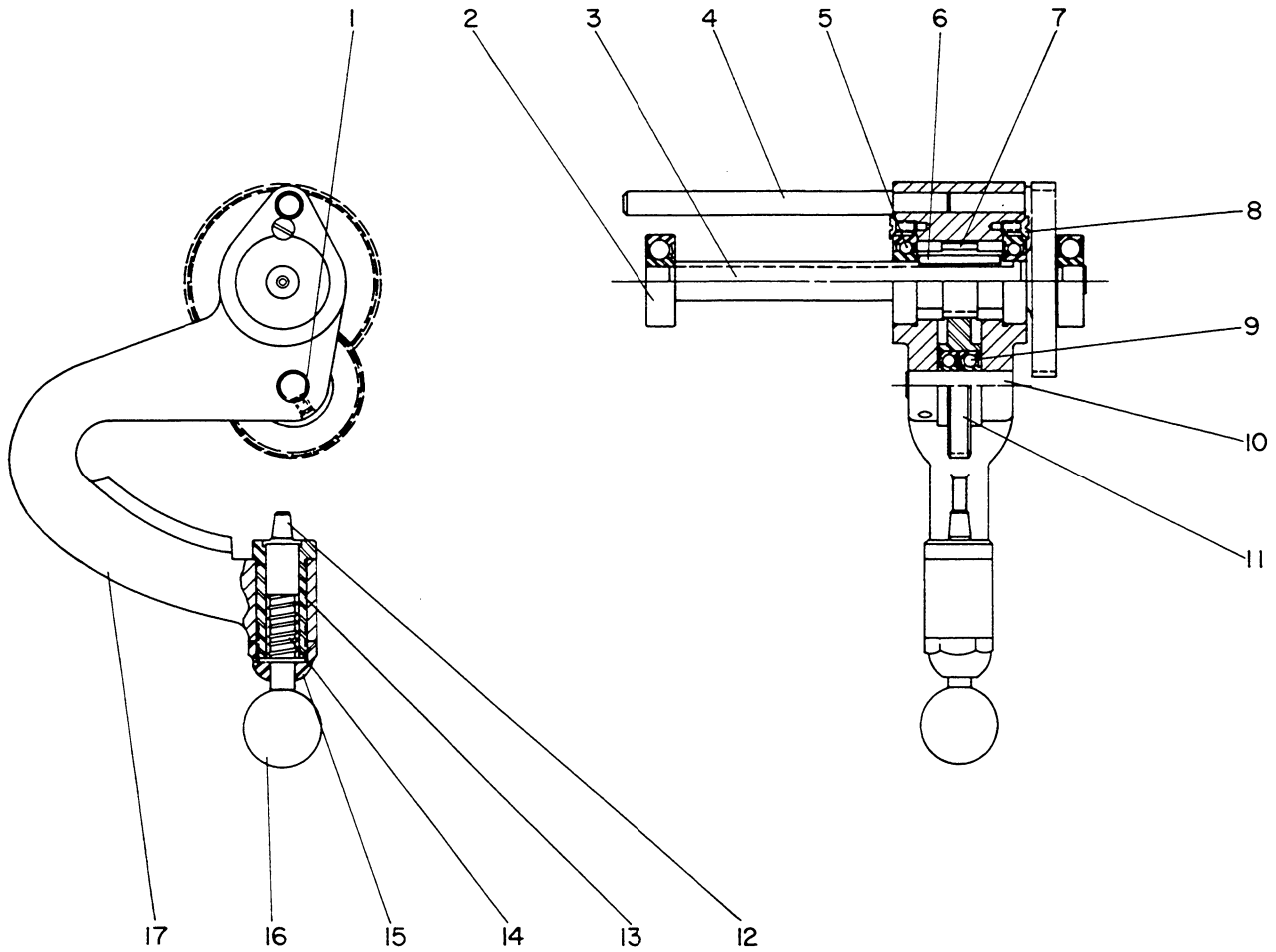
KEY	PART NUMBER										PCS	NAME
1	T	L		0	0	0	6	6	1	7	2	Ball Bearing
2	T	L		0	0	0	6	3	5	6	1	Key
3	T	L		0	0	0	6	3	1	8	1	Intermediate Shaft Key
4	C	D		0	0	0	4	6	2	9	2	Dowel Pin
5	T	L		0	0	0	6	2	1	9	1	Bushing
6	H	L		0	0	0	6	2	0	1	1	Intermediate Shaft
7	H	L	A	0	0	0	6	2	2	1	1	44 Tooth Gear
8	H	L	A	0	0	0	6	2	1	0	1	22 Tooth Gear
9	H	L	A	0	0	0	6	2	1	1	1	33 Tooth Gear
10	H	L	A	0	0	0	6	2	1	2	1	50 Tooth Gear

STANDARD 3 CHANGE SHAFT (VIEW D)



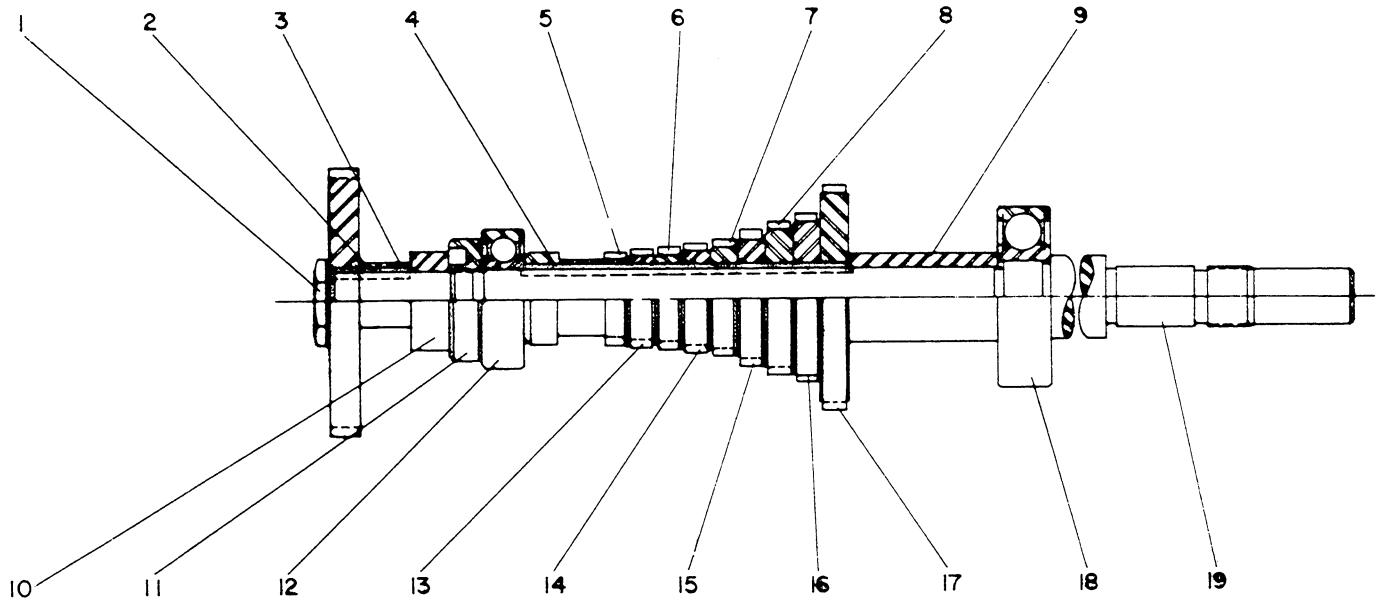
KEY	PART NUMBER										PCS	NAME		
1	1	3	7	0	0	0	8	2	3	1	0	1	1	Retaining Ring
2	T	L		0	0	0	8	0	5	6			3	Shim Washer
	T	L		0	0	0	6	4	8	0			1	Shim Washer
	T	L		0	0	0	6	4	8	1			1	Shim Washer
	T	L		0	0	0	6	4	8	2			1	Shim Washer
3	T	A		0	0	0	6	2	3	1			1	Key
4	C	D		0	0	0	4	6	2	9			2	Dowel Pin
5	H	L	A	0	0	0	6	2	1	4			1	44 Tooth Gear
6	H	L	A	0	0	0	6	2	1	3			1	33 Tooth Gear
7	H	L		0	0	0	6	7	4	5			1	48 Tooth Gear
8	T	L		0	0	0	6	2	7	8			1	Change Gear Key
9	H	L		0	0	0	6	2	1	5			1	3 Change Shaft
10	T	L		0	0	0	6	6	1	8			1	Bearing
11	5	0		0	0	0	8	2	3	1	0	2	1	Retaining Ring
12	H	L	A	0	0	0	6	7	4	7			1	22 Tooth Gear
13	T	L		0	0	0	6	2	7	6			1	Key
14	T	L		0	0	0	6	7	4	4			1	Key
15	T	L		0	0	0	6	6	1	7			1	Ball Bearing

TUMBLER AND SHAFT (VIEW E)



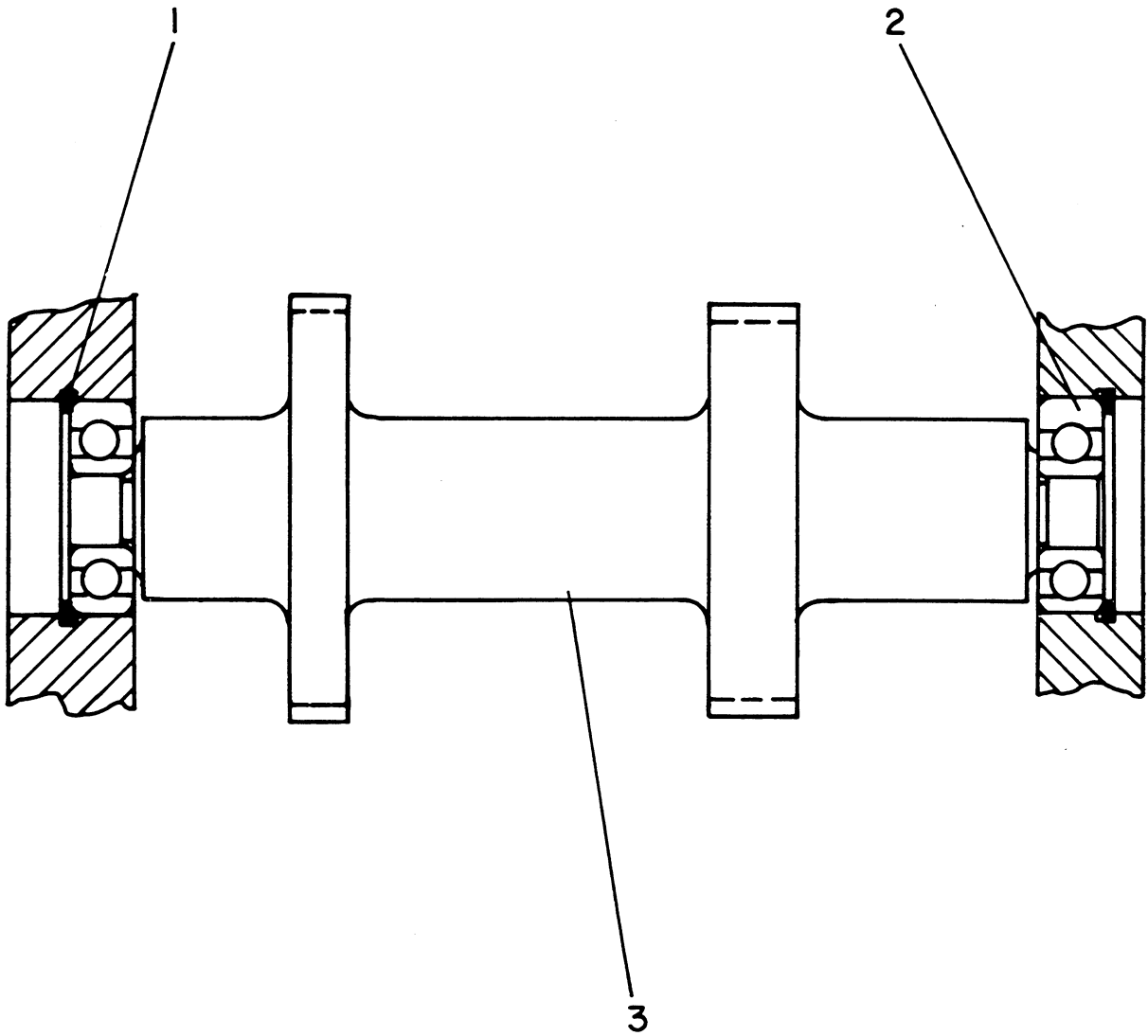
KEY	PART NUMBER								PCS	NAME			
1					0	5	5	0	3	0	3	1	Screw
2	T	L			0	0	0	6	6	1	7	2	Bearing
3	H	L	C		0	0	0	6	7	6	7	1	Tumbler Shaft and Gear
4	H	L			0	0	0	9	4	9	0	1	Interlock Shaft
5	H	L			0	0	1	0	4	4	2	2	Bearing
6	T	L			0	0	0	6	1	1	7	1	Key
7	H	L	B		0	0	0	6	2	2	8	1	20 Tooth Gear
8					0	4	5	0	1	0	5	2	Screw
9	R	A			0	0	0	7	9	0	9	2	Bearing
10	H	L			0	0	0	6	2	3	2	1	Shaft
11	H	L			0	0	0	6	2	2	5	1	Idler Gear
	H	L			0	0	0	8	4	4	9	1	Plunger Handle Assembly (Key Nos. 12-13)
12	H	L			0	0	0	6	2	4	1	1	Plunger
13	H	L			0	0	0	6	2	4	0	1	Bearing
14	T	L			0	0	0	6	2	4	2	1	Plunger Spring
15	H	L			0	0	0	9	6	2	0	1	Nut
16	T	L			0	0	0	6	1	2	6	1	Ball
17	H	L	A		0	0	0	6	2	6	8	1	Tumbler Body

STANDARD CLUSTER SHAFT (VIEW F)



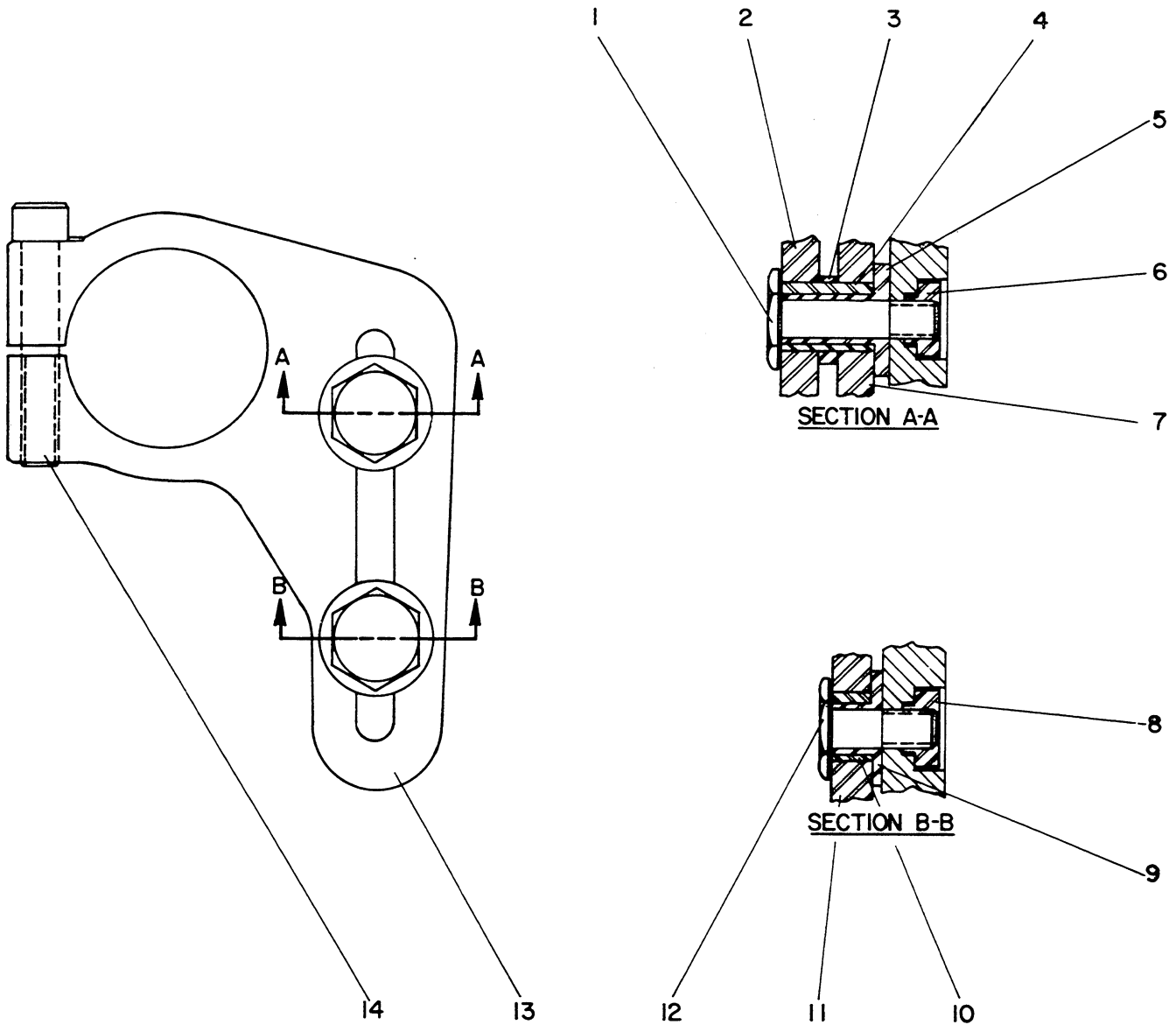
KEY	PART NUMBER								PCS	NAME		
1	T	L	0	0	0	6	2	8	0	1	Screw for Change Gear	
			0	5	5	0	3	1	2		1	Screw
2	T	L	0	0	0	6	2	7	8	1	Change Gear Key	
3	T	L	0	0	0	6	2	3	3	1	Spacer	
4	T	L	0	0	0	6	3	1	9	1	Key	
5	H	L	A	0	0	0	6	2	2	4	1	22 Tooth Gear
6	H	L	A	0	0	0	6	2	0	3	1	24 Tooth Gear
7	H	L	A	0	0	0	6	2	0	5	1	28 Tooth Gear
8	H	L	A	0	0	0	6	2	0	7	1	36 Tooth Gear
9	H	L		0	0	0	9	4	9	6	1	Spacer
10	H	L		0	0	0	6	2	2	6	1	Collar
11	H	L		0	0	0	9	4	9	5	1	Lock Nut
12	T	L		0	0	0	6	6	2	1	1	Ball Bearing
13	H	L	A	0	0	0	6	2	0	2	1	23 Tooth Gear
14	H	L	A	0	0	0	6	2	0	4	1	26 Tooth Gear
15	H	L	A	0	0	0	6	2	0	6	1	32 Tooth Gear
16	H	L	A	0	0	0	6	2	0	8	1	40 Tooth Gear
17	H	L	A	0	0	0	6	2	0	9	1	54 Tooth Gear
18	H	L		0	0	0	9	4	9	1	1	Ball Bearing
19	H	L		0	0	0	6	2	8	2	1	Cluster Shaft

STANDARD REVERSE GEAR SHAFT (VIEW G)

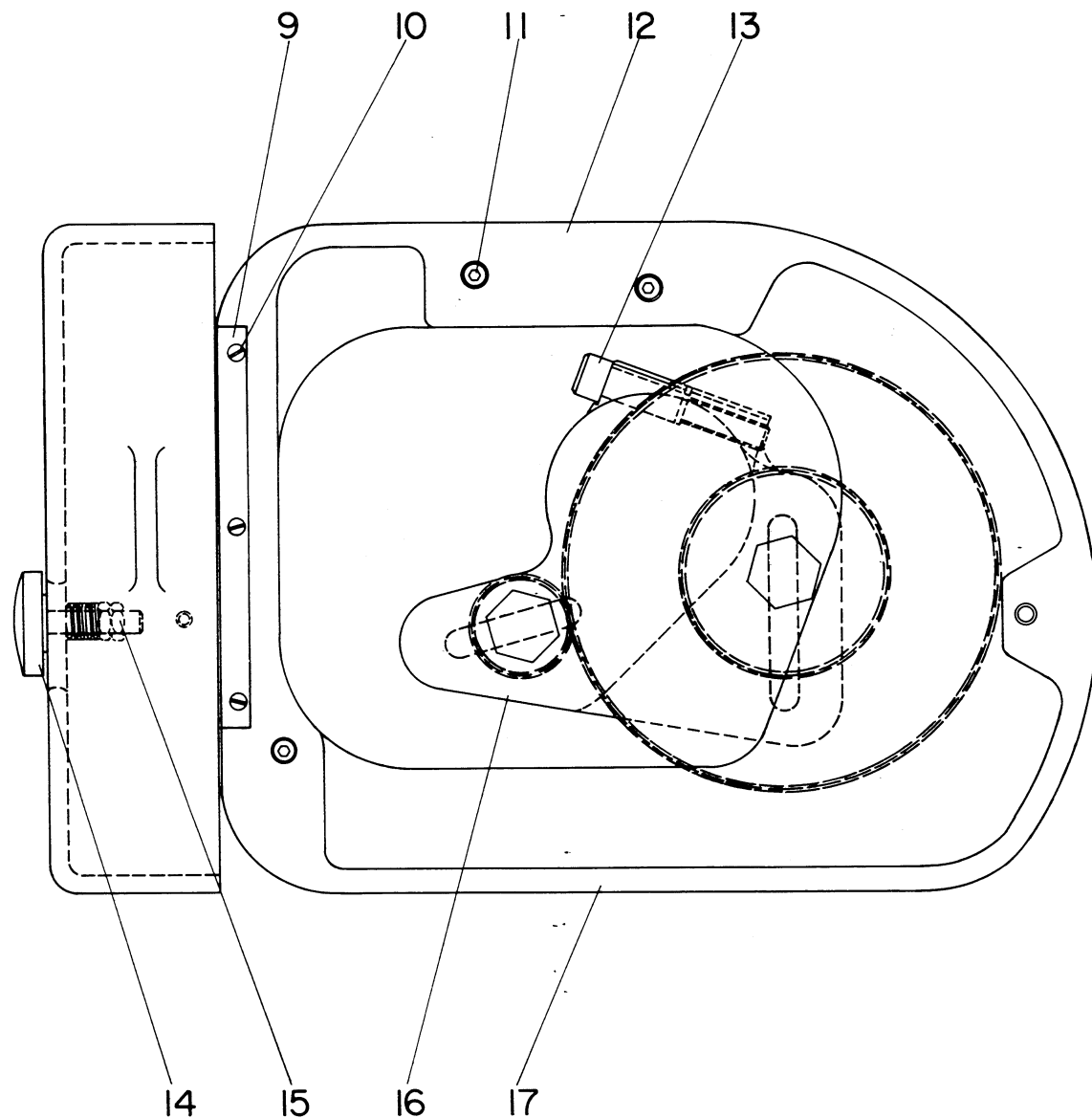
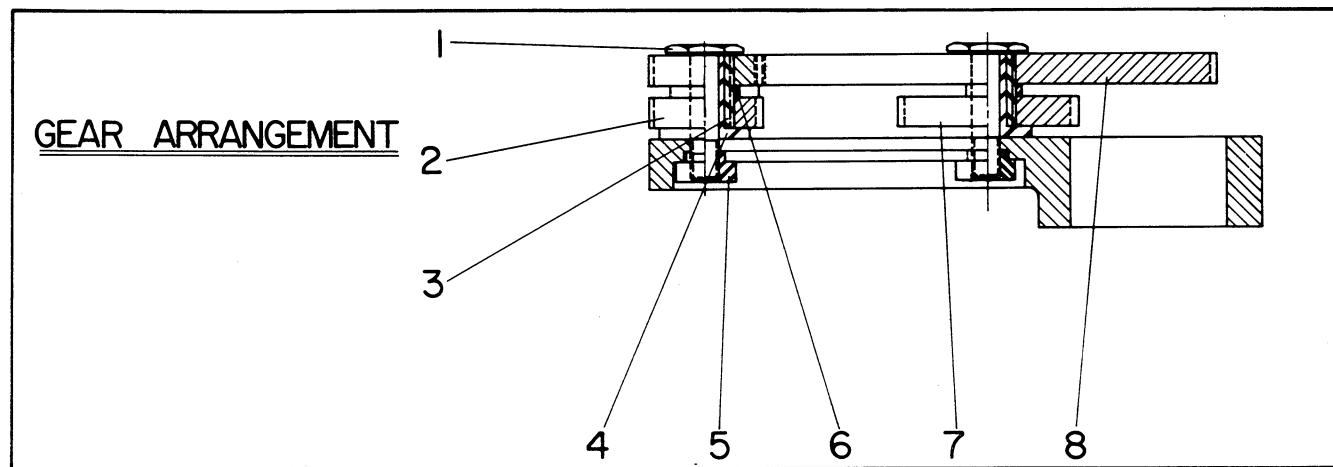


KEY	PART NUMBER											PCS	NAME	
1	1	1	8	0	0	0	8	2	3	1	0	1	2	Retaining Ring
2	T	L		0	0	0	6	6	1	7			2	Bearing
3	H	L	A	0	0	0	9	4	8	9			1	Shaft

GEAR BRACKET ASSEMBLY

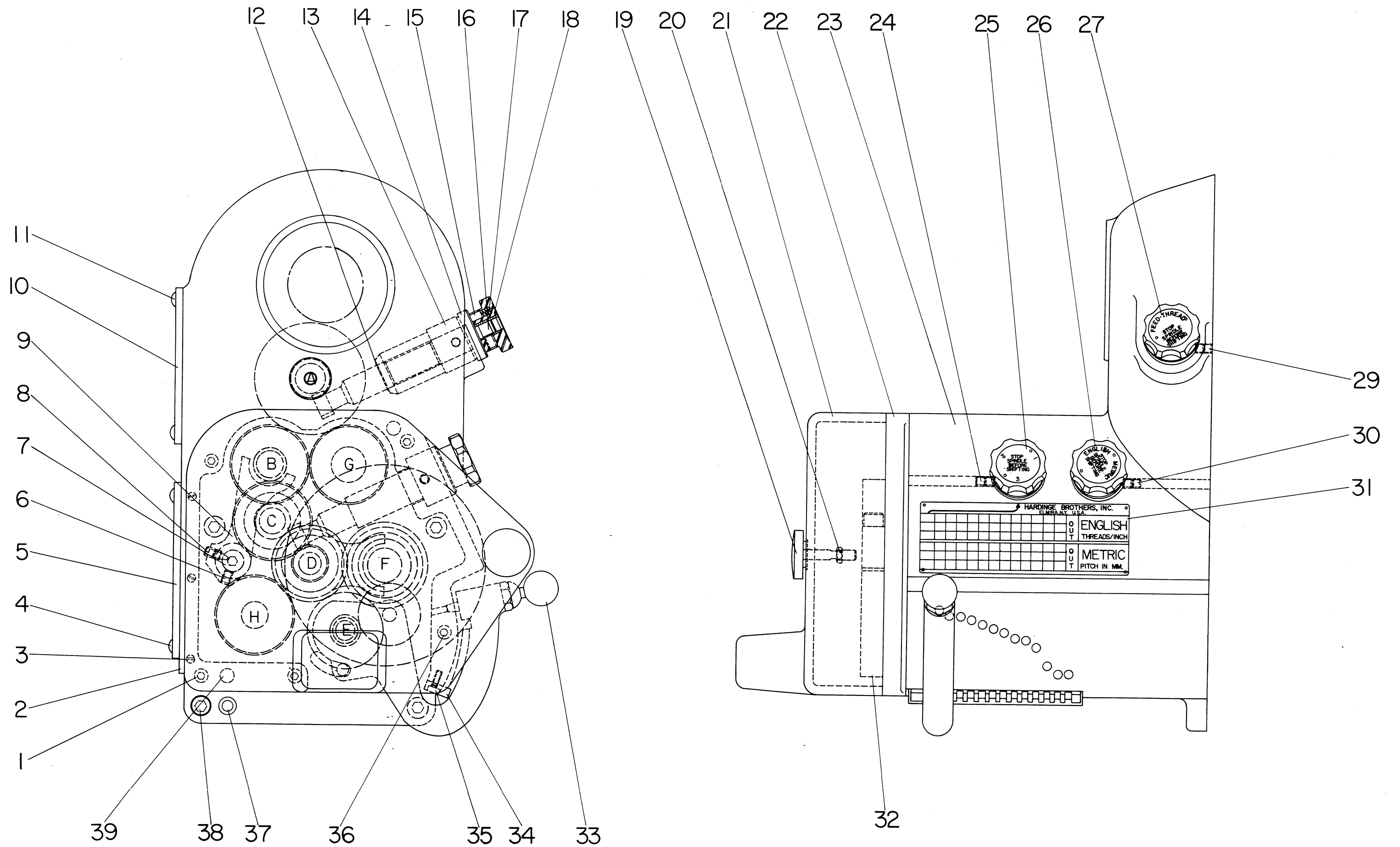


KEY	PART NUMBER								PCS	NAME	
1	T	L	0	0	0	6	2	5	2	1	Clamping Bolt
2	T	L	0	0	0	6	2	6	6	1	60 Tooth Gear
3	T	L	0	0	0	6	2	4	9	1	Spacer
4	T	L	0	0	0	6	2	4	8	1	Bushing
5	T	L	0	0	0	6	2	5	4	1	Bushing (Double)
6	T	L	0	0	0	6	2	5	1	1	Clamping Nut
7	T	L	0	0	0	6	2	5	7	1	22 Tooth Gear
8	T	L	0	0	0	6	2	5	1	1	Clamping Nut
9	T	L	0	0	0	6	2	5	5	1	Bushing (Single)
10	T	L	0	0	0	6	2	5	6	1	Gear Bushing
11	T	L	0	0	0	6	2	6	5	1	55 Tooth Gear
12	T	L	0	0	0	6	2	5	3	1	Clamping Bolt
13	H	L	0	0	0	6	6	0	6	1	Gear Bracket
14			0	1	0	1	0	3	6	1	Screw



KEY	PART NUMBER										PCS	NAME		
1	T	L	0	0	0	6	2	5	2			2	Clamping Bolt	
2	T	L	0	0	0	6	2	5	8			2	30 Tooth Gear	
3	T	L	0	0	0	6	2	4	8			2	Change Gear Bushing	
4	T	L	0	0	0	6	2	5	4			2	Stationary Bushing	
5	T	L	0	0	0	6	2	5	1			2	Clamping Nut	
6	T	L	0	0	0	6	2	4	9			2	Spacer	
7	T	L	0	0	0	6	2	6	4			1	50 Tooth Gear	
8	T	L	0	0	0	6	8	2	3			1	127 Tooth Gear	
9	H	M	0	0	0	9	3	7	3			1	Hinge	
10			0	4	5	0	0	0	6			6	Screw	
11			0	1	0	0	4	1	2			3	Screw	
12	H	L	B	0	0	0	9	7	4	6	M	P	1	Plate
13			0	1	0	1	0	3	6			2	Clamp Screw	
14	K	L	0	0	0	6	5	7	8	0	2	1	Knob Assembly, Consists of:	
	K	L	0	0	0	6	5	7	8			1	Knob	
	K	L	0	0	0	8	2	6	5			1	Stud	
	C	W	0	0	0	8	1	0	1			1	Spring	
15	5	P	0	0	0	2	8	4	3		B	2	Nut	
16	H	L	A	0	0	0	6	6	0	6		M	1	Metric Change Gear Bracket
	H	L	A	0	0	0	6	6	0	6		M	1	English Change Gear Bracket
17	H	L	A	0	0	0	6	2	5	0		M	1	Gear Guard

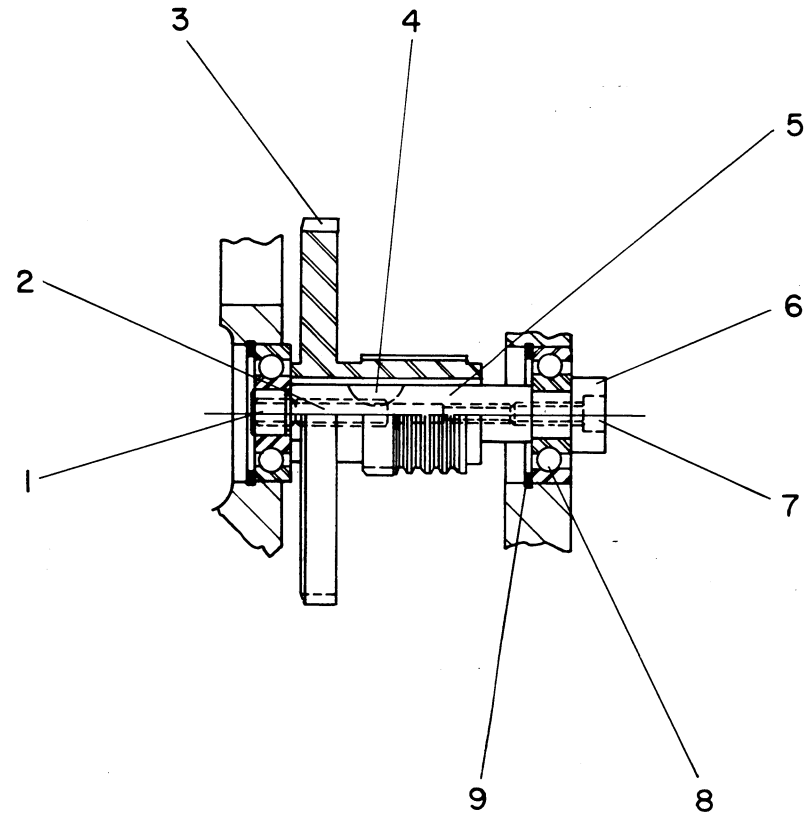
DUAL DIAL GEAR BOX



KEY	PART NUMBER										PCS	NAME		
1			0	1	0	0	6	1	6			4	Screw	
2	H	M	0	0	0	9	3	7	3			1	Hinge	
3			0	4	5	0	0	0	6			6	Screw	
4			0	3	0	0	3	0	8			4	Screw	
5	M	E	A	0	0	0	6	2	8	6	1	Cover		
6			0	5	5	0	6	0	6			2	Screw	
7	M	E	0	0	0	9	5	3	8			1	Shifter Fork Shaft	
8	H	L	A	0	0	0	9	6	3	5	1	Lock Screw		
			0	5	5	0	6	0	4			1	Set-Screw	
9	H	L	A	0	0	0	6	2	4	5	1	Fork		
10	L	H	0	0	1	1	0	1	3			1	Cover Plate	
11			0	3	0	0	3	0	8			4	Screw	
12	7	5	0	0	0	8	3	2	1	0	2	2	Retaining Ring (Shifter 1A only)	
13	H	L	A	0	0	0	6	2	8	3	1	Pinion Shaft (Shifter 1A only)		
	M	E	B	0	0	0	6	2	8	3	1	Pinion Shaft (Shifters 2A and 3A)		
14	H	L	B	0	0	0	9	5	2	4	2	Bushing (Shifter 1A only)		
	M	E		0	0	0	9	5	2	4	0	1	2	Bushing (Shifter 2A only)
	M	E		0	0	0	9	5	2	4	2	Bushing (Shifter 3A only)		
15	T	L	0	0	0	6	8	5	1			1	Plunger	
16			0	5	5	0	3	0	6			3	Screw	
17	H	L	A	0	0	0	6	4	9	5	1	Spring		
18	H	L	A	0	0	0	6	2	8	5	1	Knob		
19	U		0	0	0	6	5	7	8			1	Knob	
20	7	9	0	0	0	8	3	2	5			1	Nut	
21	M	E	A	0	0	0	6	2	5	0	1	Cover		
22	M	E	A	0	0	0	6	6	0	3	1	Plate		
23	M	E	A	0	0	0	6	6	0	2	1	Housing Assembly (Consists of Key Nos. 21 and 22)		
24			0	5	5	0	6	0	4			2	Screw	
25	M	E	0	0	1	1	7	6	6	0	1	1	Shifter Assembly (Shifter 2A) (Consists of)	
	H	L	0	0	0	9	5	2	6			1	Plate	
	R		0	0	0	8	0	4	4			2	Pin (See Also Key Nos. 12-18)	

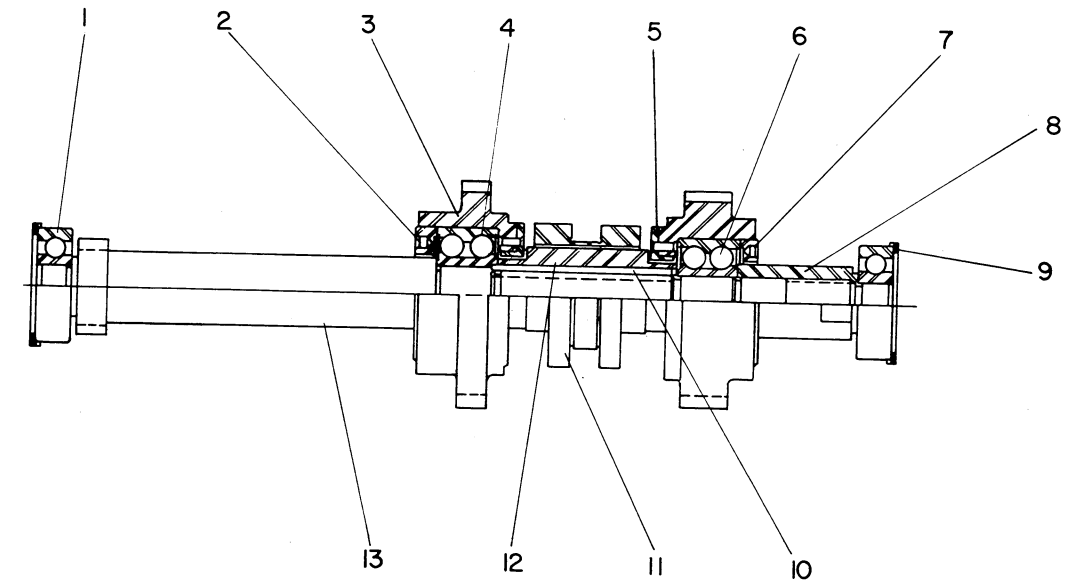
KEY	PART NUMBER										PCS	NAME		
26	M	E	0	0	1	1	7	6	6	0	2	1	Shifter Assembly (Shifter 3A) (Consists of)	
	M	E	0	0	0	9	5	2	5			1	Plate	
	R		0	0	0	8	0	4	4			2	Pin (See Also Key Nos. 12-18)	
27	L	H	0	0	1	1	7	6	6			1	Shifter Assembly (Shifter 1A) (Consists of)	
	L	H	0	0	0	9	5	2	5			1	Plate	
	R		0	0	0	8	0	4	4			2	Pin (See Also Key Nos. 12-18)	
28	H	L	D	0	0	0	6	2	8	4	1	Spindle Gear		
29			0	5	5	0	6	0	4			2	Screw	
30			0	5	5	0	6	0	4			2	Screw	
31	M	E	0	0	0	6	3	3	1			1	Chart	
	R		0	0	0	8	0	4	4			4	Pin	
32	M	E	0	0	0	6	7	4	3			1	Change Gear Assembly (See Page 78)	
33	H	L	0	0	0	8	4	4	9			1	Plunger Handle Ass'y (See Page 72)	
34	M	E	0	0	0	9	4	9	8			1	Guide	
35			0	1	0	0	2	0	8			2	Screw	
	T	L	0	0	0	6	7	7	0			2	Dowel	
36			0	1	0	0	6	1	4			1	Screw	
37	H	L	0	0	0	9	5	3	0			1	Threaded Taper Pin	
38			0	1	0	1	0	1	4			4	Screw	
39	C	D	0	0	0	4	6	3	7			2	Dowel	
A	L	H	0	0	0	9	4	8	7			1	Idler Shaft (See Page 68)	
B	M	E	0	0	0	6	5	8	1			1	Clutch Shaft Assembly (See Page 68)	
C	M	E	0	0	0	6	5	8	2			1	Intermediate Shaft Assembly (See Page 69)	
D	M	E	A	0	0	0	6	5	8	3			1	3 Change Shaft Assembly (See Page 70)
E	M	E	A	0	0	0	6	5	8	8			1	Tumbler Shaft Assembly (Standard Machines Only, See Page 72)
	M	E	A	0	0	0	6	5	8	8	1	9	1	Tumbler Shaft Assembly (Metric Machines Only) - Not Shown
F	M	E	A	0	0	0	6	5	8	8			1	Cluster Shaft Assembly (See Page 74)
G	M	E	0	0	0	9	4	8	9			1	Reverse Shaft (See Page 76)	
H	M	E	0	0	0	6	5	8	5			1	Metric Conversion Shaft Assembly (See Page 77)	

IDLER SHAFT ASSEMBLY (VIEW A)



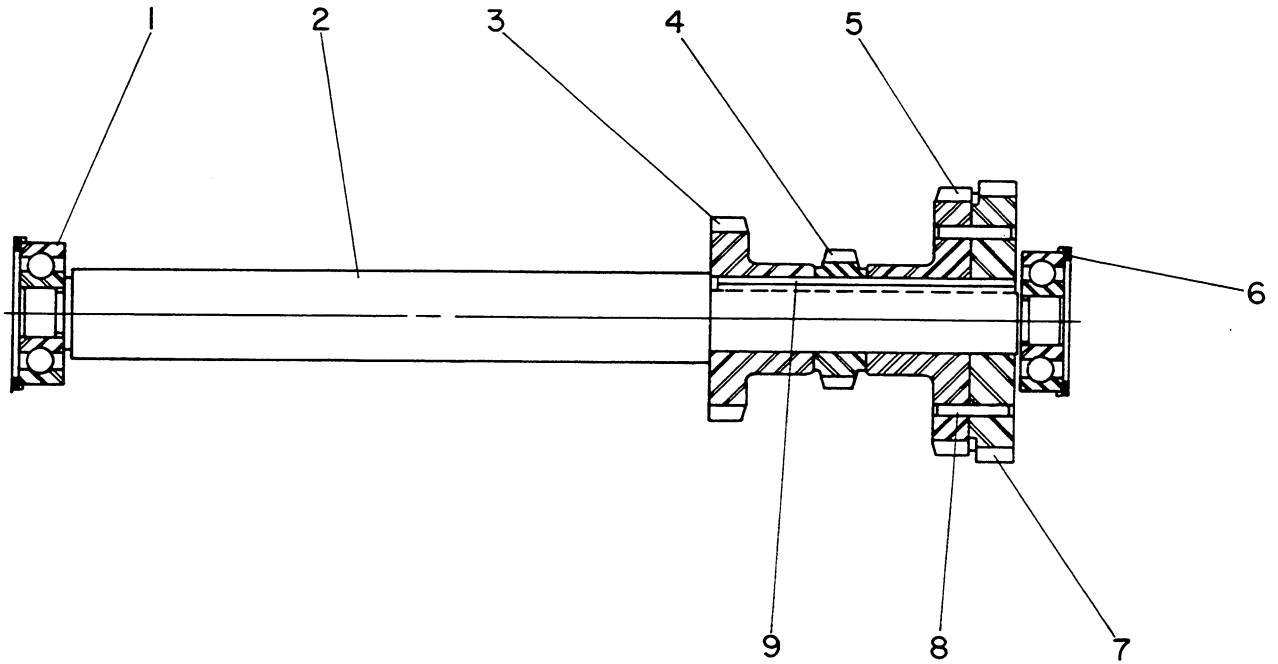
KEY	PART NUMBER										PCS	NAME	
1	N											1	Screw
2	L	H										1	Knockout Pin
3	L	H										1	Idler Gear
4	L	H										1	Key
5	L	H										1	Shaft
6	L	H										1	Block
7												2	Screw
8	T	L										2	Bearing
9	1	1	8									2	Retaining Ring

CLUTCH SHAFT (VIEW B)



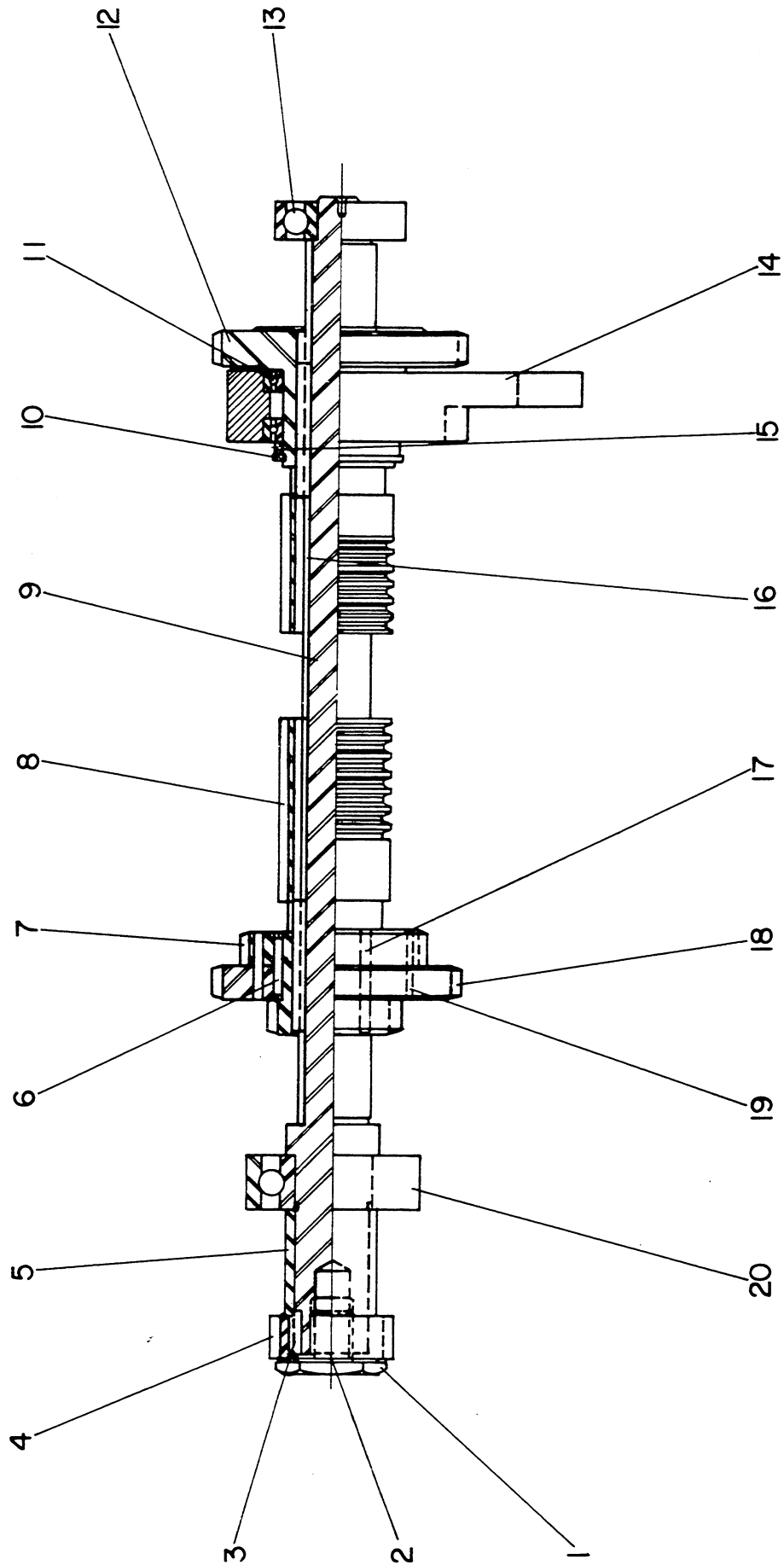
KEY	PART NUMBER										PCS	NAME	
1	T	L										2	Bearing
2	H	L										1	Nut
3	M	L										1	Reverse Gear Assembly
4	2	V										1	Bearing
5	M	L										1	Forward Gear Assembly
6	T	L										1	Bearing
7	H	L										1	Nut
8	M	L										1	Nut
9	1	1	8									2	Retaining Ring
10	T	L										1	Key
												1	Quick Reverse Assembly (Consists of Key Nos. 11-12)
11	T	L										1	Clutch
12	T	L										1	Bushing
13	M	L										1	Clutch Shaft

INTERMEDIATE SHAFT (VIEW C)



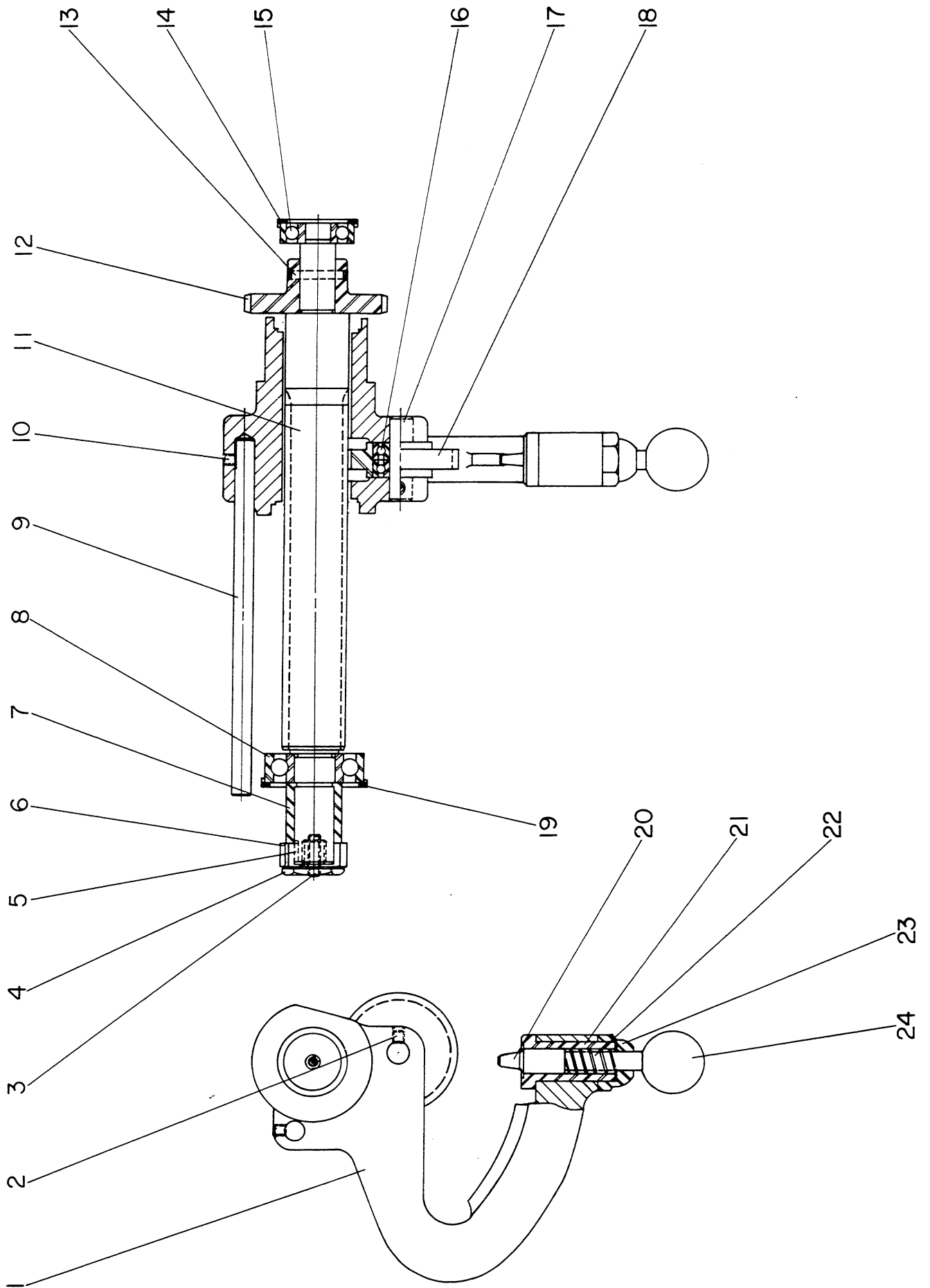
KEY	PART NUMBER										PCS	NAME	
1	T	L	0	0	0	6	6	1	7			2	Bearing
2	M	E	0	0	0	6	2	0	1			1	Shaft
3	M	E	0	0	0	6	2	2	1			1	36 Tooth Gear
4	M	E	0	0	0	6	2	1	1			1	24 Tooth Gear
5	M	E	0	0	0	6	2	2	1	0	1	1	48 Tooth Gear
6	1	1	8	0	0	0	8	2	3	1	0	1	Retaining Ring
7	M	E	0	0	0	6	2	1	2			1	50 Tooth Gear
8	3	S	0	0	0	9	8	6	2	1	0	2	Spring Pin
9	M	E	0	0	0	6	3	1	8			1	Key

3 CHANGE SHAFT (VIEW D)



KEY	PART NUMBER										PCS	NAME	
1	T	L										1	Cap Screw
2												1	Screw
3	T	L										1	Key
4	T	L										1	22-Tooth Gear
5	M	E									0	1	Spacer
6	T	L										1	Key
7	M	E										1	36-Tooth Gear
8	M	E										1	24-Tooth Gear
9	M	E										1	Shaft
10	1	0										1	Retaining Ring
11	M	E	A									2	Bearing
12	M	E	A									1	48-Tooth Gear
13	T	L										1	Bearing
14	M	E	A									1	Fork
15	M	E										1	Spacer
16	T	A										1	Key
17	T	A										1	Key
18	M	E										1	48-Tooth Gear
19	3	S										2	Spring Pin
20	T	L										1	Bearing

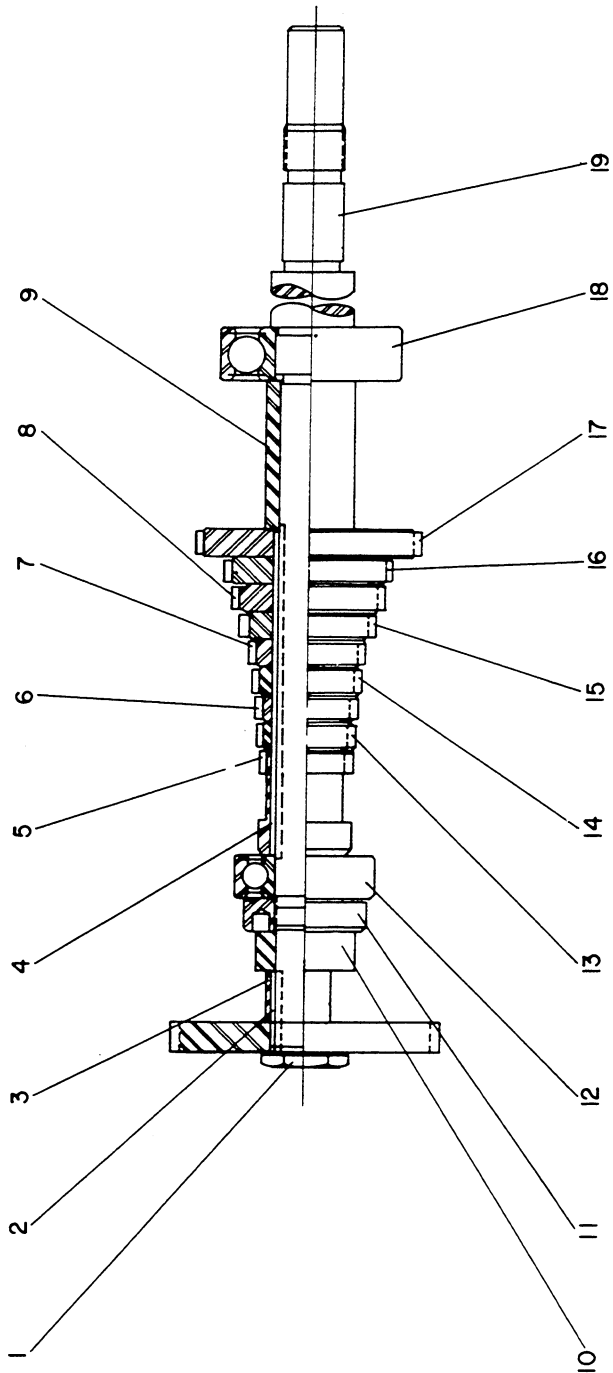
TUMBLER SHAFT (VIEW E)



TUMBLER SHAFT

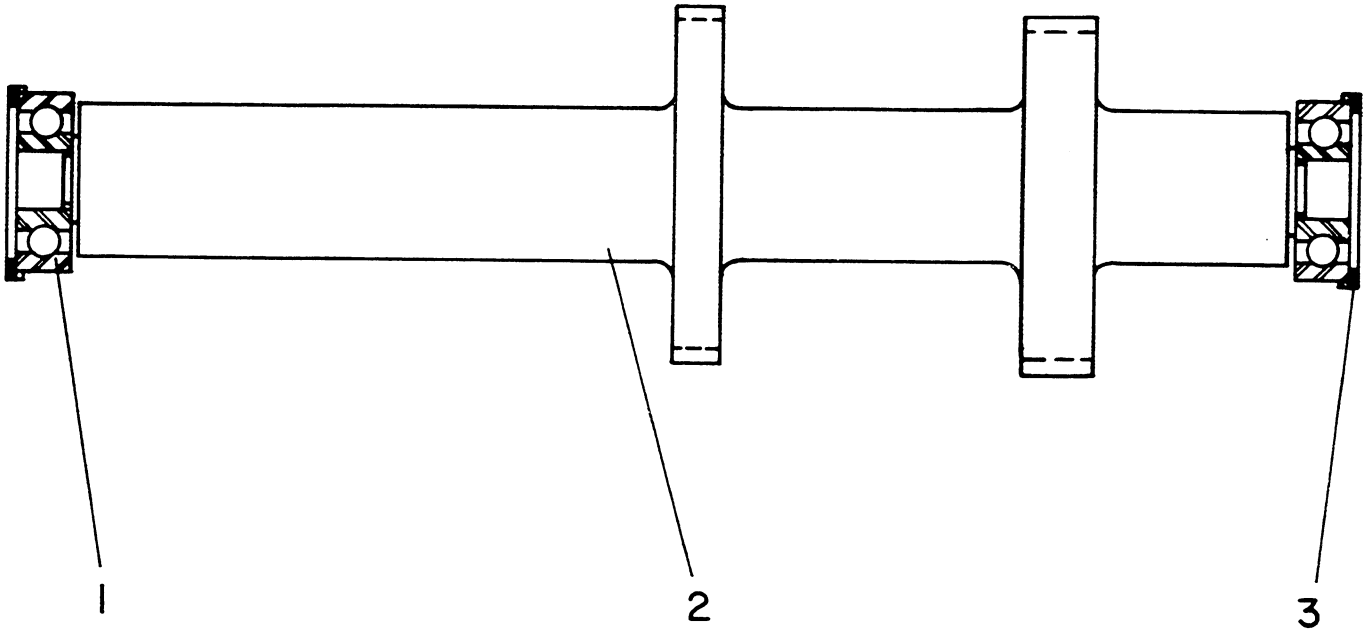
KEY	PART NUMBER										PCS	NAME	
1	M	A	0	0	0	0	0	0	0	0	0	1	Tumbler
2	E		0	5	0	3	0	3	0	3	0	1	Screw
3		L	0	5	0	3	1	2	0	0	0	1	Screw
4	T	L	0	0	0	6	2	8	0	0	0	1	Bolt
5	T	L	0	0	0	6	2	7	5	0	0	1	Key
6	T	L	0	0	0	6	2	5	7	0	0	1	22 Tooth Gear
7	M	E	0	0	0	9	4	9	6	0	1	1	Spacer
8	T	L	0	0	0	6	6	2	1	0	0	1	Bearing
9	M	E	0	0	0	9	4	9	0	0	0	1	Interlock
10		E	0	5	0	3	0	3	0	3	0	1	Screw
11	M	E	0	0	0	6	7	6	7	0	0	1	Shaft
12	M	E	0	0	0	6	2	2	1	0	1	1	48 Tooth Gear
13	C	D	0	0	0	9	8	7	3	0	0	1	Dowel
14	1	1	8	0	0	8	2	3	1	0	1	1	Retaining Ring
15	T	L	0	0	0	6	6	1	7	0	0	1	Bearing
16	R	A	0	0	0	7	9	0	9	0	0	2	Bearing
17	H	L	0	0	0	6	2	3	2	0	0	1	Shaft
18	H	L	0	0	0	6	2	2	5	0	0	1	40 Tooth Gear
19	1	5	6	0	0	8	2	3	1	0	1	1	Retaining Ring
20	H	L	0	0	0	8	4	4	9	0	0	1	Plunger Handle Assembly (Consists of Key Nos. 20-24)
21	H	L	0	0	0	6	2	4	1	0	0	1	Plunger
22	T	L	0	0	0	6	2	4	0	0	0	1	Bearing
23	H	L	0	0	0	6	2	4	2	0	0	1	Spring
24	T	L	0	0	0	9	6	2	0	0	0	1	Nut
			0	0	0	6	1	2	6	0	0	1	Ball

CLUSTER SHAFT (VIEW F)



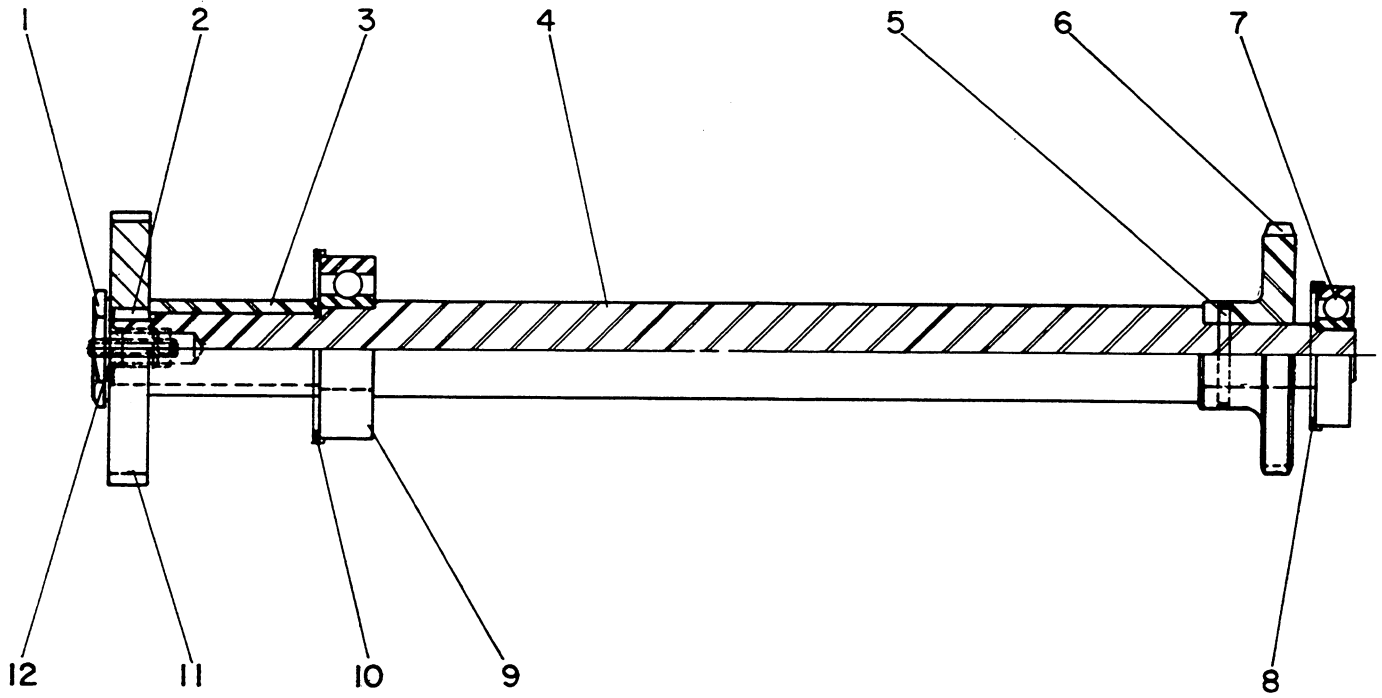
KEY	PART NUMBER										PCS	NAME	
1	T	L										1	Cap Screw
2	T	L										1	Set-Screw
3	T	L										1	127 Tooth Gear
4	1	5	6								0	1	Spacer
5	T	L										1	Retaining Ring
6	H	L	A									1	Bearing
7	H	L	A									1	23 Tooth Gear
8	M	E										1	26 Tooth Gear
9	M	E										1	30 Tooth Gear
10	H	L	A									1	35 Tooth Gear
11	M	E	A								1	9	40 Tooth Gear (Standard Machines Only)
12	H	L	A									1	38 Tooth Gear (British Machines Only)
13	M	E										1	54 Tooth Gear (Standard Machines Only)
14	M	E										1	50 Tooth Gear (British Machines Only)
15	M	E										1	Shaft
16	M	E										1	Bearing
17	M	E										1	Shaft Extension Assembly (Consists of Key Numbers 14-16)
18	T	L										1	Nut
19	M	E										1	Shaft
20	H	L	A									1	Spacer
21	H	L	A									1	Needle Bearing
22	H	L	A									1	50 Tooth Gear (Standard Machines Only)
23	H	L	A									1	40 Tooth Gear (British Machines Only)
24	H	L	A									1	36 Tooth Gear
25	M	E										1	32 Tooth Gear
26	M	E										1	28 Tooth Gear
27	T	L										1	24 Tooth Gear
												1	22 Tooth Gear
												1	Key
												1	Nut
												1	Key

REVERSE SHAFT (VIEW G) (DUAL)



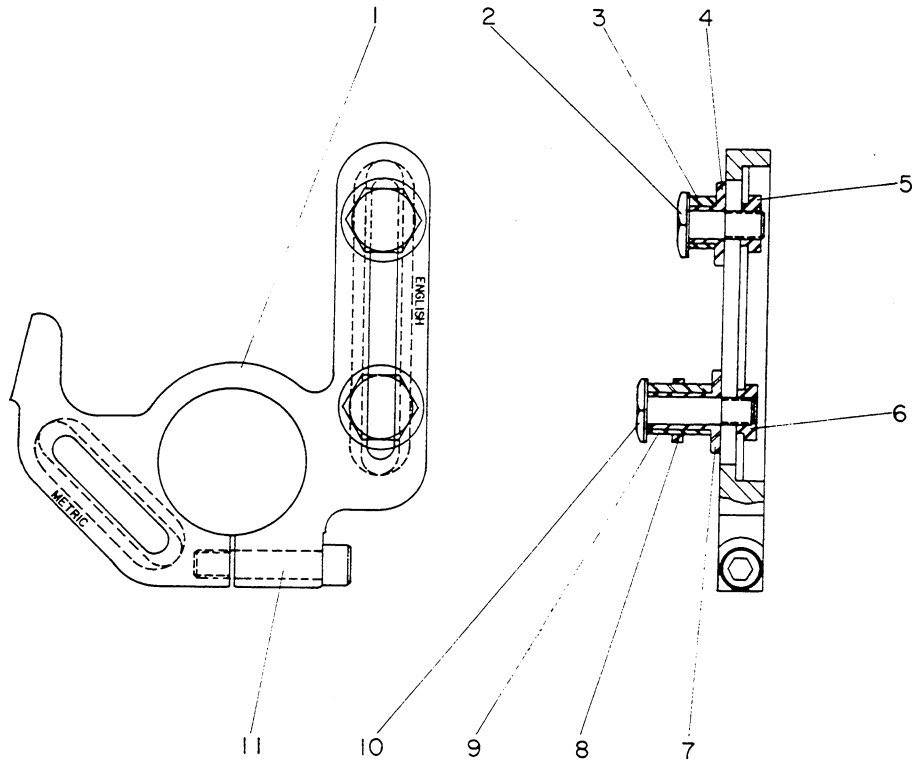
KEY	PART NUMBER											PCS	NAME	
1	T	L		0	0	0	6	6	1	7			2	Bearing
2	M	E		0	0	0	9	4	8	9			1	Reverse Shaft
3	1	1	8	0	0	0	8	2	3	1	0	1	2	Retaining Ring

METRIC CONVERSION SHAFT (VIEW H)



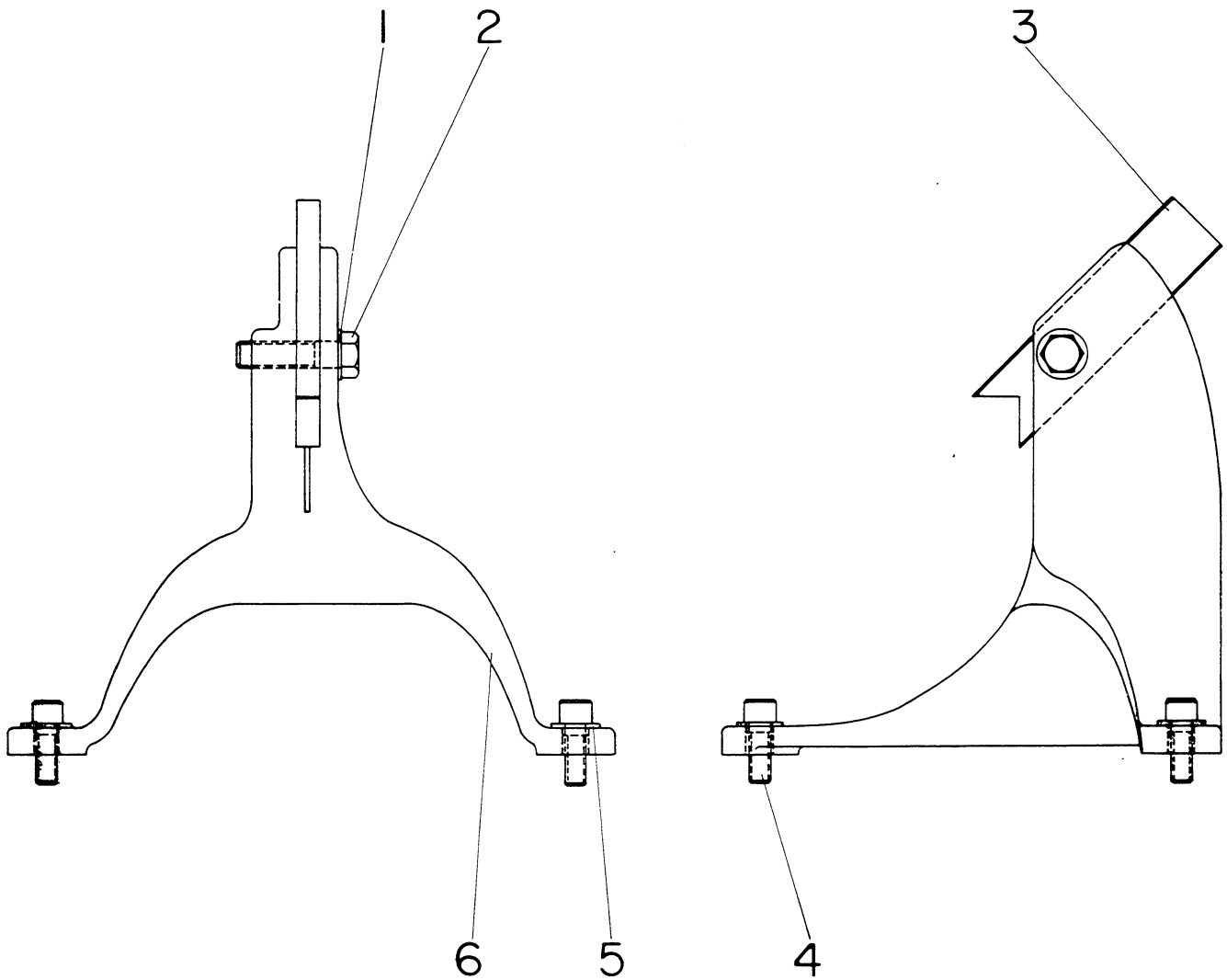
KEY	PART NUMBER										PCS	NAME	
1	T	L		0	0	0	6	2	8	0		1	Cap Screw
2	T	L		0	0	0	6	2	7	5		1	Key
3	M	E		0	0	0	9	4	9	6		1	Spacer
4	M	E		0	0	0	6	2	1	5	0	1	Shaft
5	C	D		0	0	0	9	8	7	3		1	Dowel
6	M	E		0	0	0	6	2	2	1	0	1	48 Tooth Gear
7	T	L		0	0	0	6	6	1	7		1	Bearing
8	1	5	6	0	0	0	8	2	3	1	0	1	Retaining Ring
9	T	L		0	0	0	6	6	2	1		1	Bearing
10	1	1	8	0	0	0	8	2	3	1	0	1	Retaining Ring
11	T	L		0	0	0	6	2	6	4		1	50 Tooth Gear
12				0	5	5	0	3	1	2		1	Screw

GEAR BRACKET ASSEMBLY



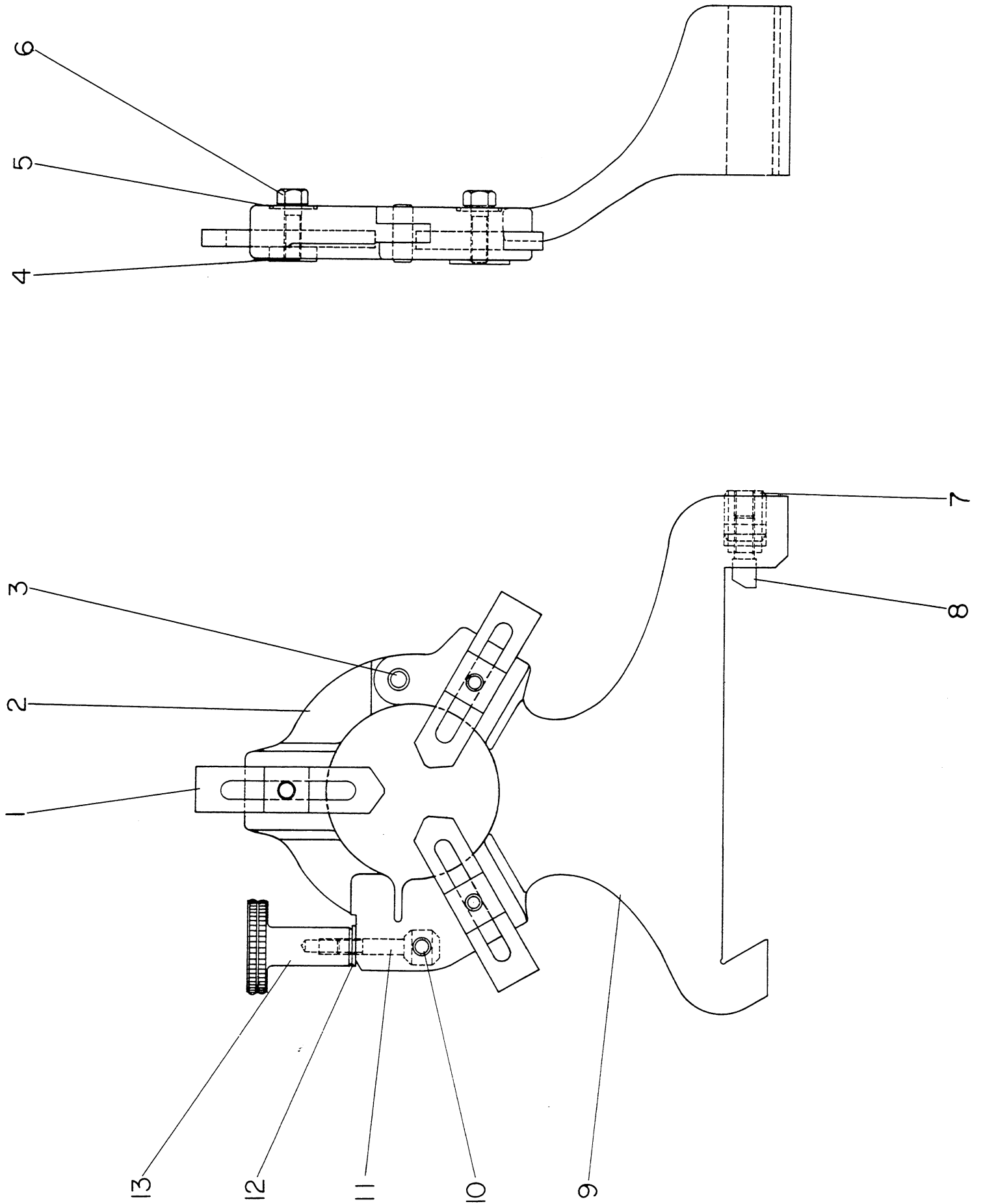
KEY	PART NUMBER										PCS	NAME
1	M	E	0	0	0	6	6	0	6		1	Bracket
2	T	L	0	0	0	6	2	5	3		1	Bolt
3	T	L	0	0	0	6	2	5	6		1	Bushing
4	T	L	0	0	0	6	2	6	5		1	55 Tooth Gear
5	T	L	0	0	0	6	2	5	5		1	Bushing
6	T	L	0	0	0	6	2	5	1		1	Nut
7	T	L	0	0	0	6	2	5	1		1	Nut
8	T	L	0	0	0	6	2	5	4		1	Bushing
9	T	L	0	0	0	6	2	4	9		1	Spacer
	T	L	0	0	0	6	2	4	8		1	Bushing
	T	L	0	0	0	6	2	5	8		1	30 Tooth Gear
	T	L	0	0	0	6	2	6	6		1	60 Tooth Gear
10	T	L	0	0	0	6	2	5	2		1	Bolt
11			0	1	0	1	0	2	8		1	Screw

FOLLOW REST ASSEMBLY



KEY	PART NUMBER										PCS	NAME	
1	M	D		0	0	0	6	8	2	6	B	1	Washer
2				0	1	5	1	0	2	4		1	Clamp Screw
3	T	A		0	0	0	6	5	5	9		1	Jaw
4				0	1	0	0	8	1	4		3	Mounting Screw
5	3	7		0	0	0	0	6	7	2		3	Washer
6	H	L	A	0	0	0	6	5	6	0		1	Frame

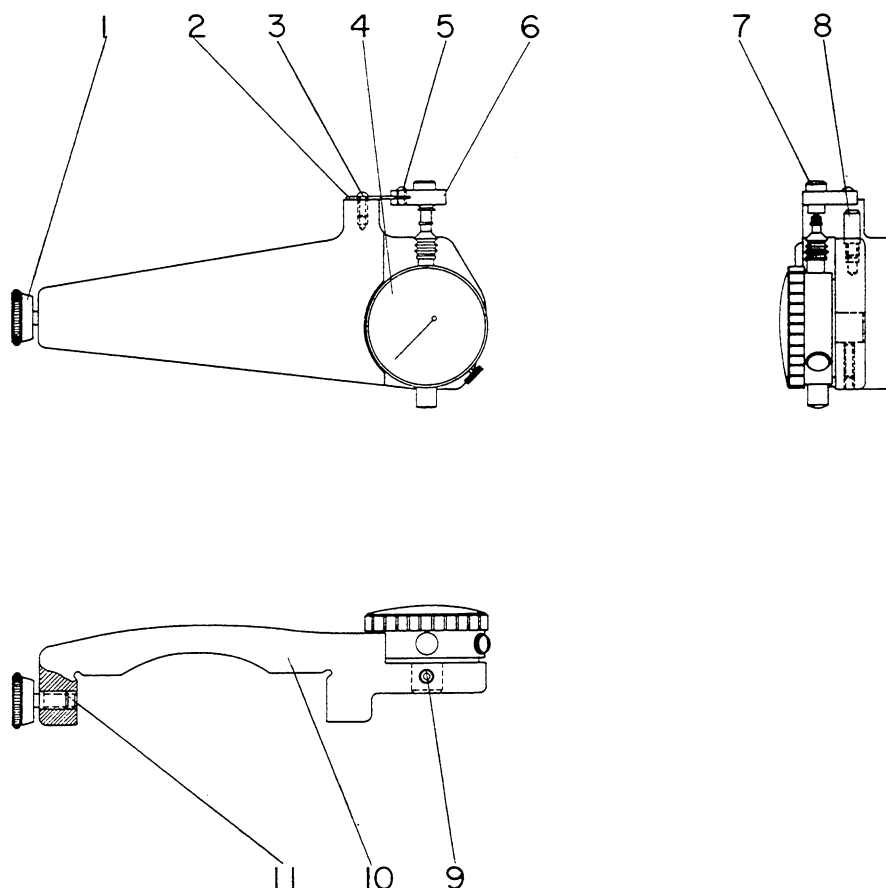
HINGED STEADY REST



HINGED STEADY REST

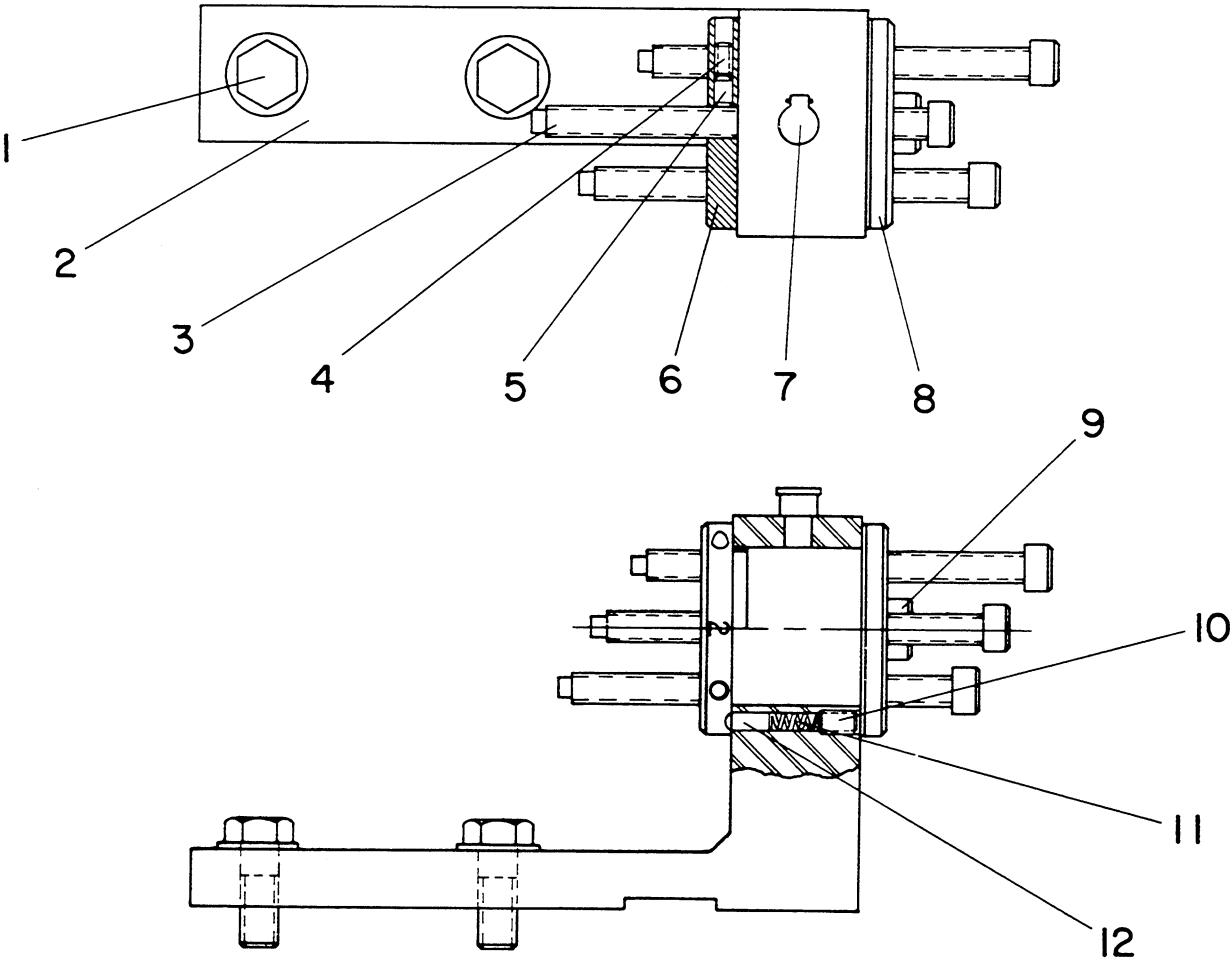
KEY	PART NUMBER										PCS	NAME	
1	3	7	A	0	0	0	0	0	6	7	0	3	Jaw
2	6	L	0	0	0	8	7	4	7	4	4	1	Hinged Section of Frame
3	T	4	0	0	0	6	5	3	7	7	6	1	Hinge Pin
4	4	9	0	0	0	7	9	4	6	6	6	3	Nut
5	3	7	0	0	0	0	6	7	2	2	3	3	Washer
6	V	D	0	0	1	1	9	0	3	3	3	3	Hex Head Screw
7	6		0	0	0	9	0	9	5	5	1	1	Locking Screw
8	6		0	0	0	9	0	9	4	4	1	1	Locking Plug
9	L	H	0	0	0	0	6	6	6	6	1	1	Frame
10	T	L	0	0	0	6	7	0	9	1	1	1	Hinge Pin
11	6		0	0	0	8	7	7	1	1	1	1	Lock Bolt
12	3	7	0	0	0	0	6	7	2	2	1	1	Washer
13	D	V	0	0	1	0	4	6	8	8	1	1	Hinge Lock Handle

INDICATOR HOLDER ASSEMBLY



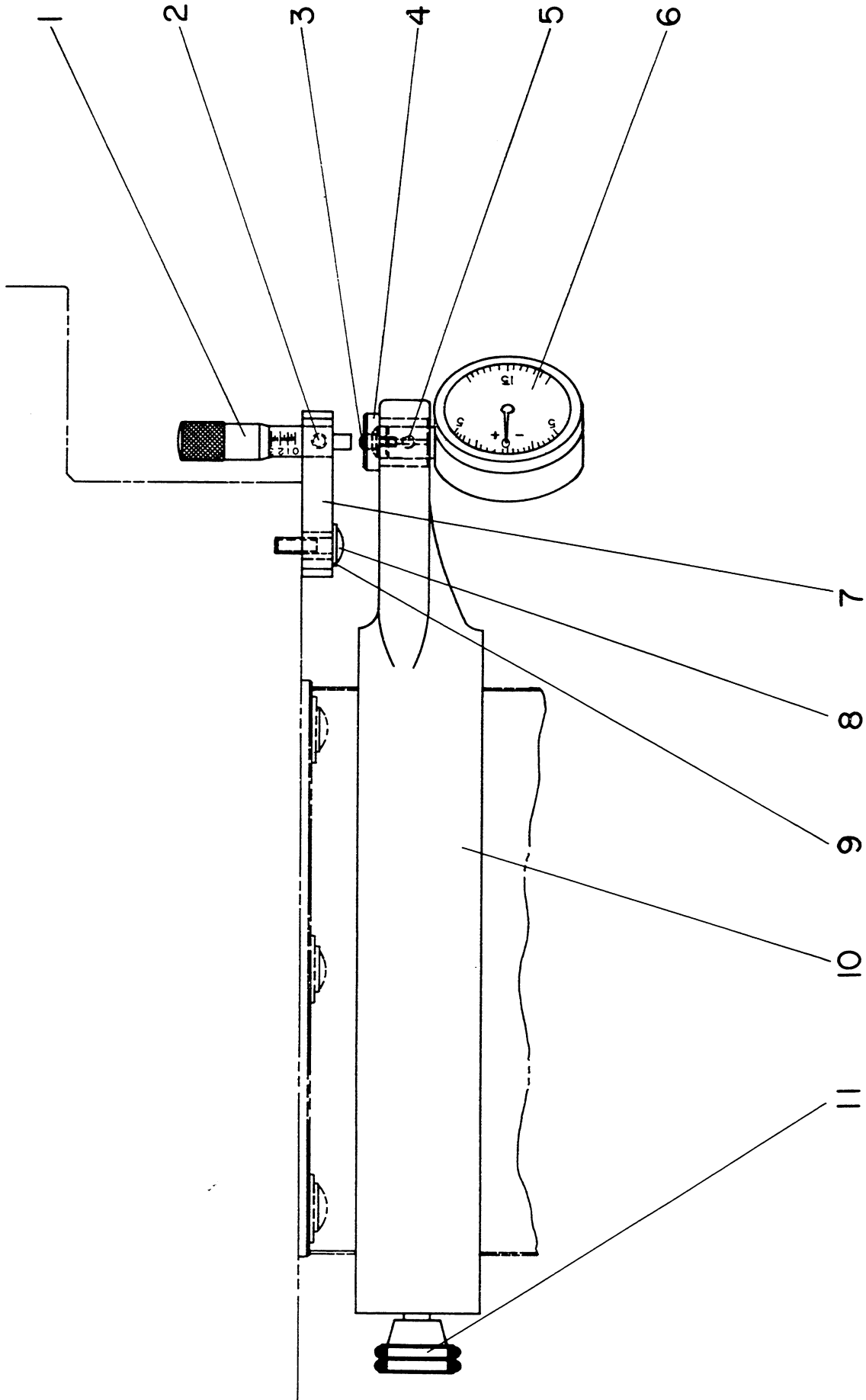
KEY	PART NUMBER										PCS	NAME	
1	L	H	0	0	0	8	7	1	0			1	Thumb Screw
2	L	H	0	0	1	0	6	1	5			1	Spring
3			0	3	0	0	2	0	6			2	Screw
4	L	H	0	0	1	0	0	3	7	0	1	1	Dial Indicator (Standard Machines)
	L	H	0	0	1	0	0	3	7	1	M	1	Dial Indicator (Metric Machines)
5			0	3	0	0	2	0	4			2	Screw
6	L	H	0	0	1	1	3	3	7			1	Push Block
7	L	H	0	0	1	0	4	0	8			1	Push Block Pin
8	L	H	0	0	0	7	9	8	9			1	Stop Pin
9			0	5	7	0	5	1	0			1	Screw
10	L	H	0	0	0	8	3	3	7			1	Indicator Holder
11	L	H	0	0	0	7	4	9	5			1	Nylon® Plug

FOUR-POSITION STOP DRUM

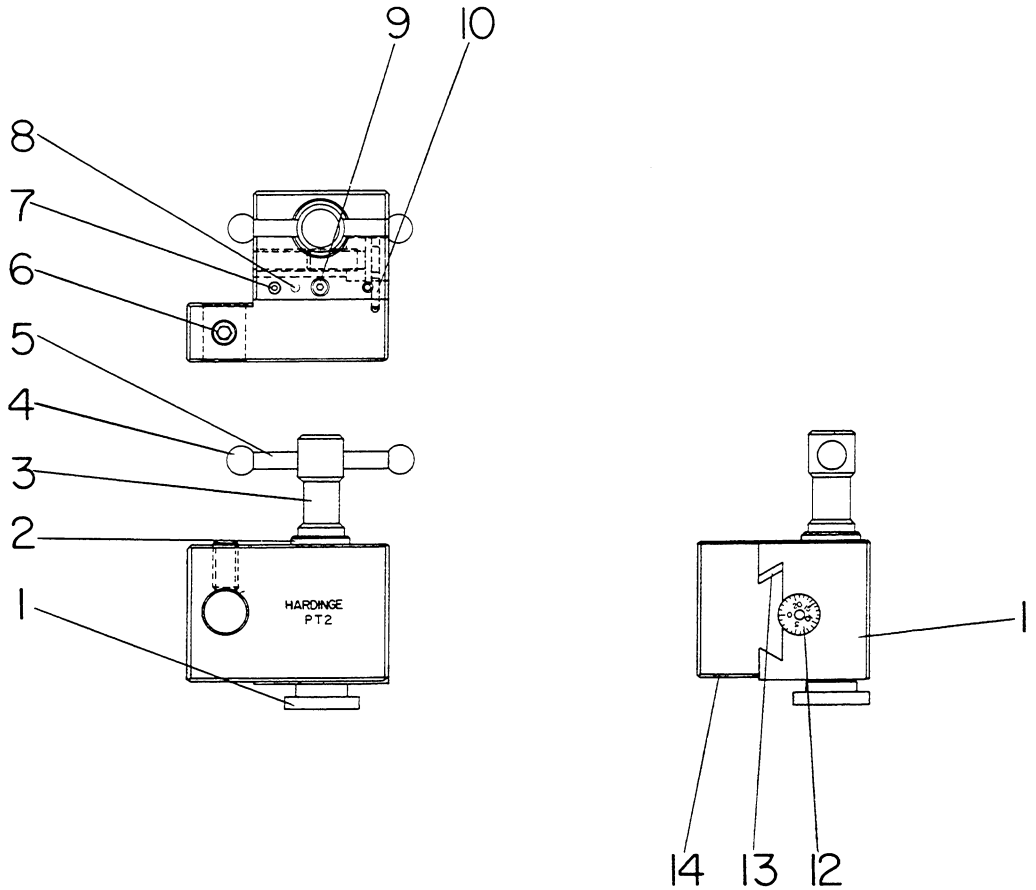


KEY	PART NUMBER										PCS	NAME	
1												2	Screw
	3	7										2	Washer
2	L	H										1	Housing
3	7	9										4	Screw
4												4	Set Screw
5	4	7										4	Brass Plug
6	L	H										1	Hub for Index Drum
7	T	M										1	Oil Cup
8	L	H										1	Index Drum
9												1	Screw
10												1	Screw
11	T	L										1	Spring
12	L	H										1	Pin for Index Drum

MICROMETER STOP

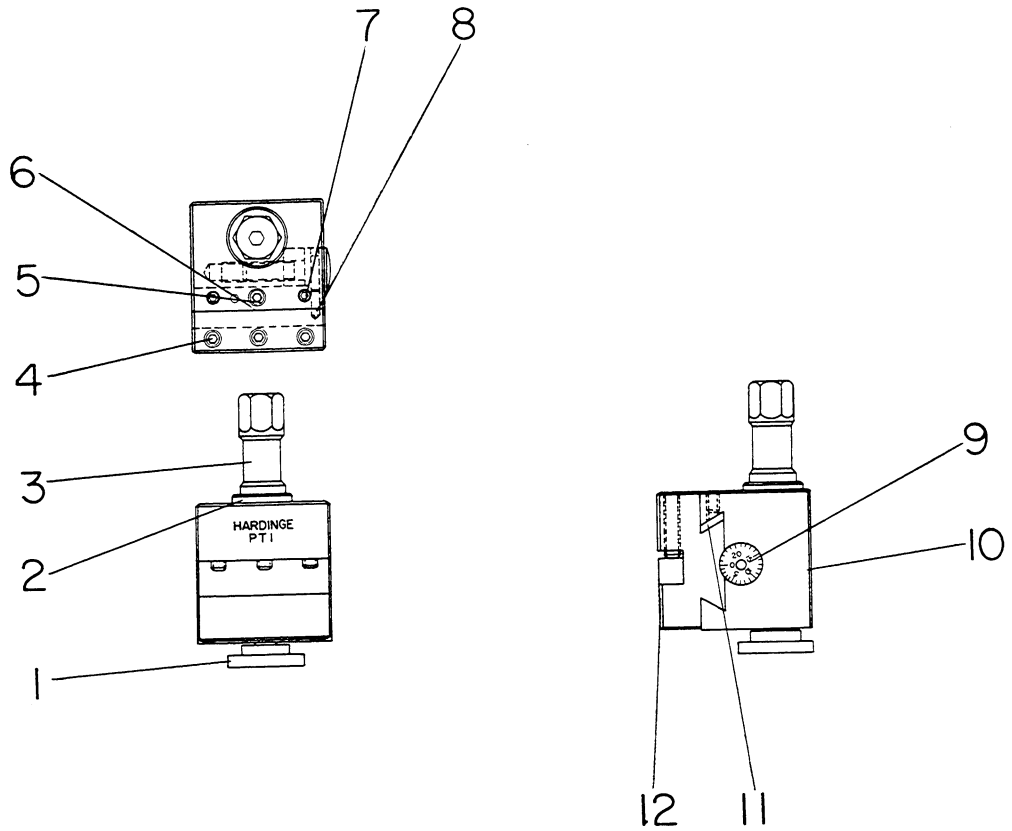


ADJUSTABLE BORING TOOL HOLDER



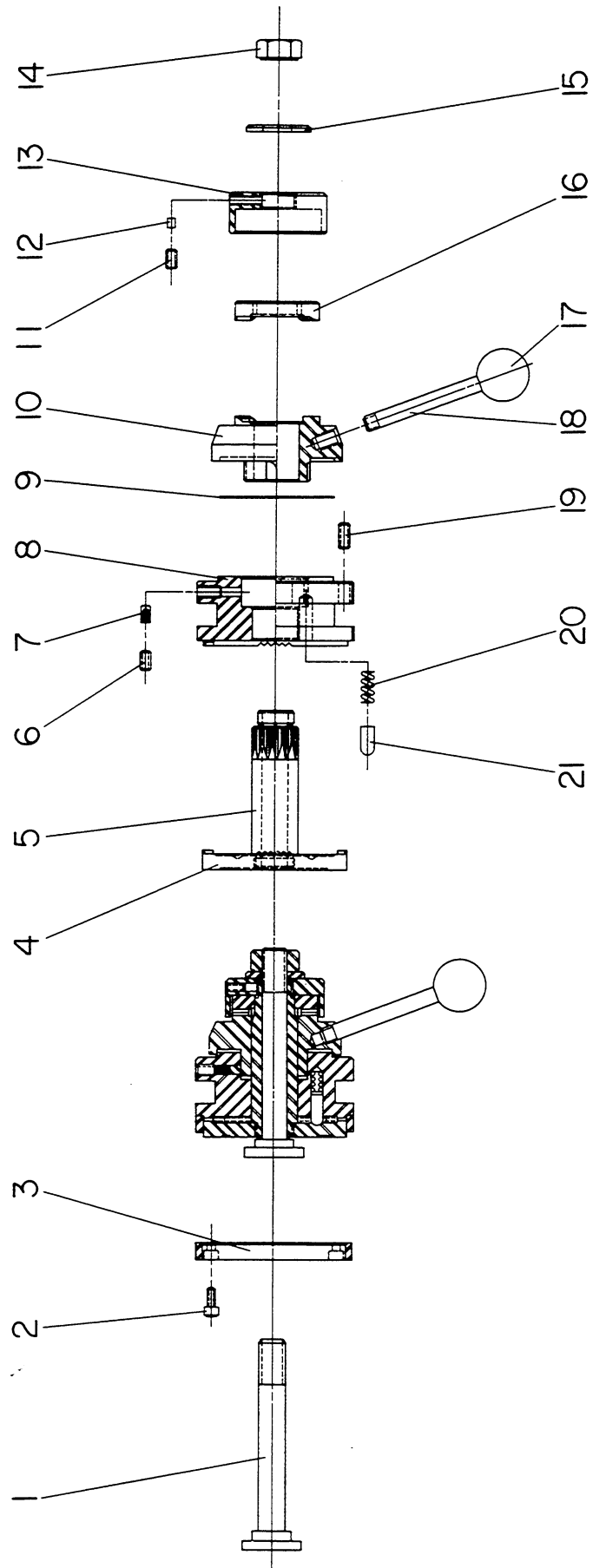
KEY	PART NUMBER										PCS	NAME
1	D	S	0	0	1	0	5	9	4		1	Tee Bolt
2	3	7	0	0	0	0	6	4	1		1	Washer
	D	S	0	0	0	0	3	4	7		1	Tool Post Handle Assembly (Consists of Key Nos. 3-5)
3	D	S	0	0	1	0	5	9	5		1	Cap
4	4	9	0	0	0	0	3	5	1		2	Stop Ball
5	4	9	0	0	0	0	3	5	0		1	Handle
6			0	5	5	0	9	1	0		1	Screw
7	N		0	5	6	0	3	0	6	L	2	Screw
8	3	7	0	0	0	0	3	4	5		1	Dowel Pin
9	P	T	0	0	0	8	9	3	0		1	Lock Screw
10	3	7	0	0	0	0	3	4	5		1	Dowel Pin
11	P	T	0	0	1	1	2	3	7		1	Body
12	S	T	0	0	1	1	2	3	9	0 1	1	Dial Screw
13	P	T	0	0	0	0	3	5	8		1	Gib
14	P	T	0	0	1	1	2	3	8	0 1	1	Boring Tool Holder

ADJUSTABLE TOOL BLOCK



KEY	PART NUMBER										PCS	NAME
1	D	S		0	0	1	0	5	9	4	1	Tee Bolt
2	3	7		0	0	0	0	6	4	1	1	Washer
3	D	S	A	0	0	1	0	5	9	5	1	Cap
4				0	5	5	0	5	1	6	3	Screw
5	P	T		0	0	0	8	9	3	0	1	Lock Screw
6	3	7		0	0	0	0	3	4	5	1	Dowel Pin
7	N			0	5	6	0	3	0	6	2	Screw
8	3	7		0	0	0	0	3	4	5	1	Dowel Pin
9	S	T		0	0	1	1	2	3	9	1	Dial Screw
10	P	T		0	0	1	1	2	3	7	1	Body
11	P	T		0	0	0	0	3	5	8	1	Gib
12	P	T		0	0	1	1	2	3	8	1	Tool Holder

SQUARE TURRET (MODEL HTL)



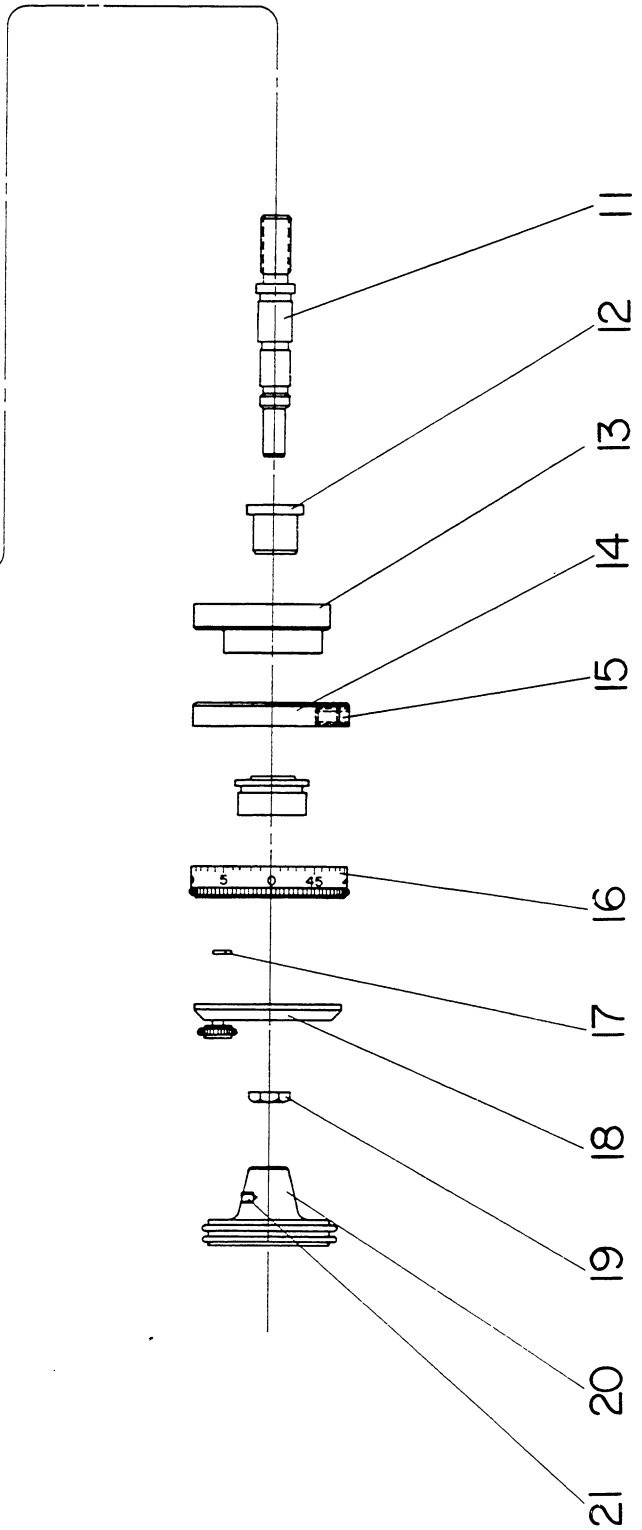
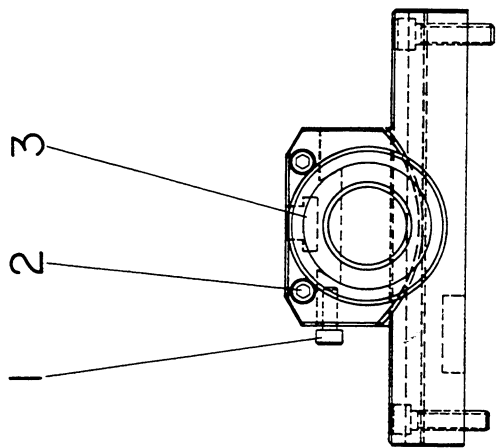
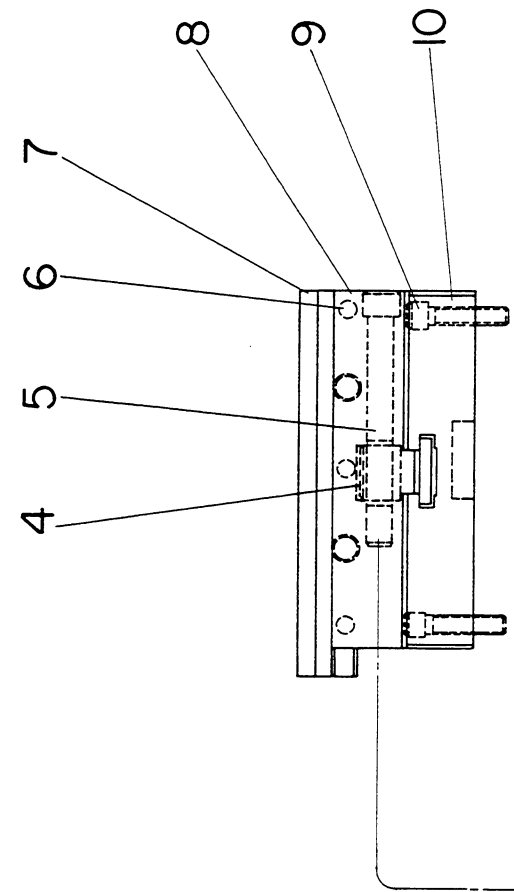
SQUARE TURRET

KEY	PART NUMBER										PCS	NAME	
1	A	T										1	Draw Bolt
2	A	T										4	Screw
3	A	T	A									1	Cover
4	A	T	A									1	Turret Post and Base Assembly (Consists of Key # 4 & 5)
5	A	T	A								A	1	Turret Base
6	N	T									L	1	Post for Turret
7	A	T										1	Screw
8	A	T	6									1	Plunger
9	A	T										1	Spring
10	A	T										1	Turret Body
11	A	T										1	Ring
12	A	T										1	Handle Support
13	A	T	7									1	Screw
14	A	T										1	Brass Plug
15	M	P										1	Cover
16	A	T										1	Nut
17	A	T										1	Washer
18	A	T										1	Face Cam for Turret
19	H	C										1	Knob
20	H	C										12	Handle
21	A	T										4	Screw
												4	Spring
												4	Plunger

FOUR POSITION TURRET (Optional)

KEY	PART NUMBER										PCS	NAME		
1	L	H										1	Nut	
2	L	H										2	Spacer	
3	L	H										1	Index Lock Shaft	
4	L	H										1	Index Lock	
5	L	H										2	Bearing	
6	L	H										1	Handle	
7	T	L										1	Knob	
8	L	H	B									1	Turret Body	
9												2	Screw	
10	O	R										1	O-Ring	
11	L	H	A									1	Clamp Nut	
12	N	3	7									1	Nylon® Plug	
13	L	H	A									1	Screw	
14	L	H	A									1	Knob	
15												12	Screw	
16	L	H	A									2	Screw	
17												2	Bearing	
18	L	H										4	Screw	
19	L	H										1	Spring	
20	L	H										4	Adjusting Screw	
21												1	Ring	
22	L	H										2	Screw	
23	L	H	A									2	Adjusting Screw	
24	L	H	A									1	Shield	
25												1	Turret Base	
26	L	H										1	Screw	
27	C	W										1	Spring	
28	L	H										1	Spring	
29	L	H										1	Ball	
30	3											1	Plunger	
31	L	H	A									1	Key	
													1	Adjusting Plate

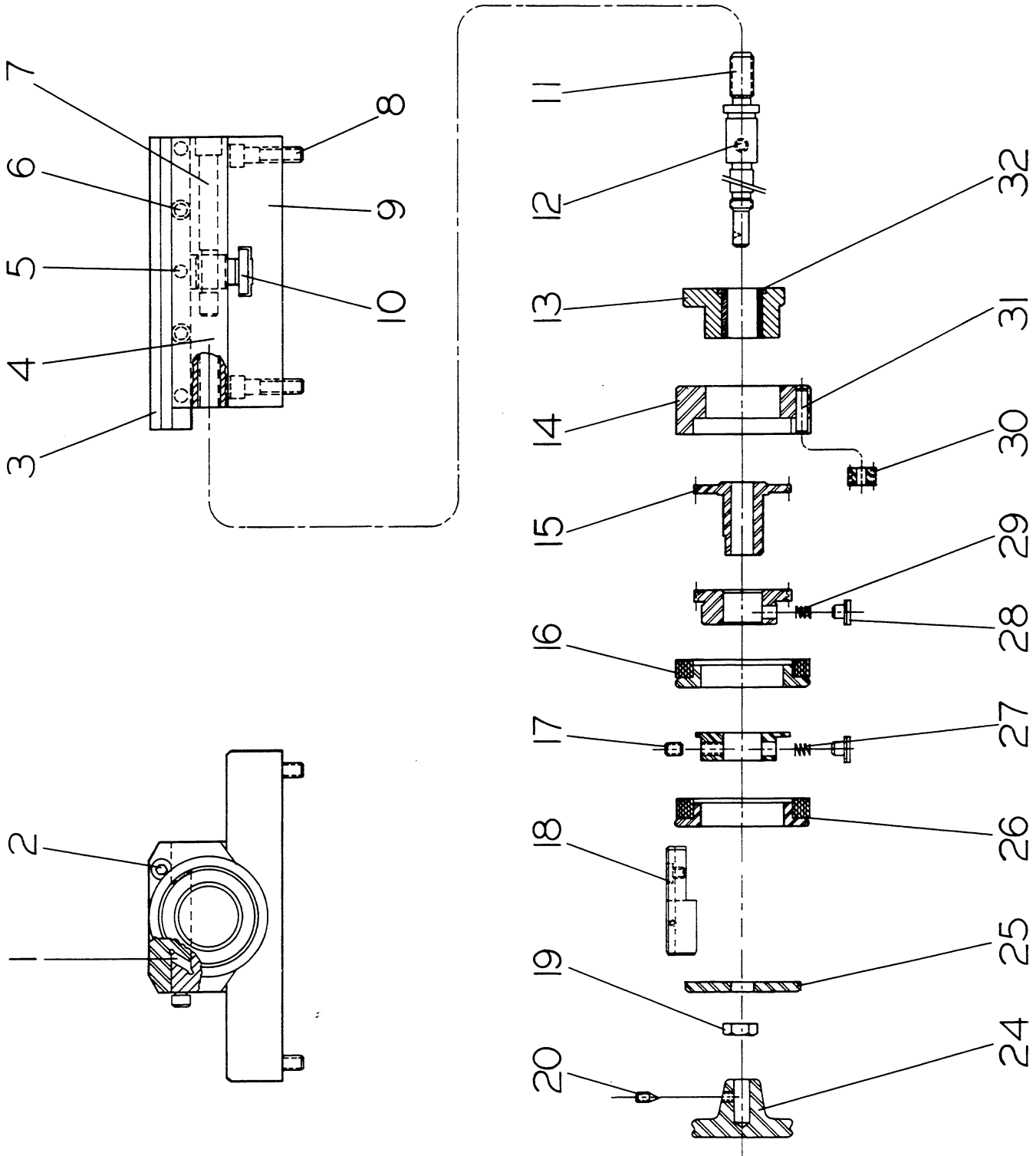
REAR TOOL HOLDER SLIDE (SINGLE DIAL)



REAR TOOL HOLDER SLIDE (SINGLE DIAL)

KEY	PART NUMBER										PCS	NAME	
1	0	1	0	0	3	0	8					2	Screw
2	0	1	0	0	3	0	8					2	Screw
3	0	0	0	0	4	5	3					1	Gib
4	0	0	0	0	4	6	5					2	Clamp Bolt
5	0	0	0	0	4	6	6					2	Lock Bolt
6	0	5	6	0	3	0	6			L		3	Screw
7	0	0	0	9	1	0	6					1	Tool Holder Slide
8	0	0	0	0	4	5	5			M		1	Tool Slide Base (Standard)
9	0	0	0	0	4	5	5					1	Tool Slide Base (Metric)
10	0	1	0	0	6	1	6					4	Screw
11	0	0	0	0	4	6	3					1	Base
	0	0	0	9	1	0	3					1	Feed Screw (Standard)
	0	0	0	9	1	0	3			M		1	Feed Screw (Metric)
	0	0	0	0	3	4	3			A		1	End Cap and Bearing Assembly (Consists Of Key Nos. 12-13)
12	0	0	0	4	1	4	4					1	Bushing
13	0	0	0	0	3	4	3					1	End Cap
14	0	0	0	0	4	0	7			2	A	1	Ring and Zero Plug Assembly (Consists Of)
	0	0	0	0	4	0	7			0	2	1	Ring
15	0	0	0	9	7	2	7					1	Zero Plug
	0	5	7	0	3	0	6					1	Screw
16	0	0	1	0	3	3	5					1	Mount and Dial Assembly (Standard)
	0	0	1	0	3	3	5			M		1	Mount and Dial Assembly (Metric)
	0	0	0	0	3	2	9					1	Dial
	0	0	0	0	3	3	4			0	1	1	Bushing
	0	0	1	0	2	4	7					1	Mount
17	0	0	1	0	2	4	5					2	Nylon® Plug
18	0	0	1	0	2	4	6					1	Washer and Dial Assembly (Consists Of)
	0	0	0	8	4	7	3			A		1	Washer
	0	0	0	9	4	7	1					1	Dial Lock Screw
19	0	0	0	0	3	3	1					1	Nut
20	0	0	0	9	1	0	4			T		1	Handle
21	0	0	0	9	1	1	3			A		1	Lock Screw

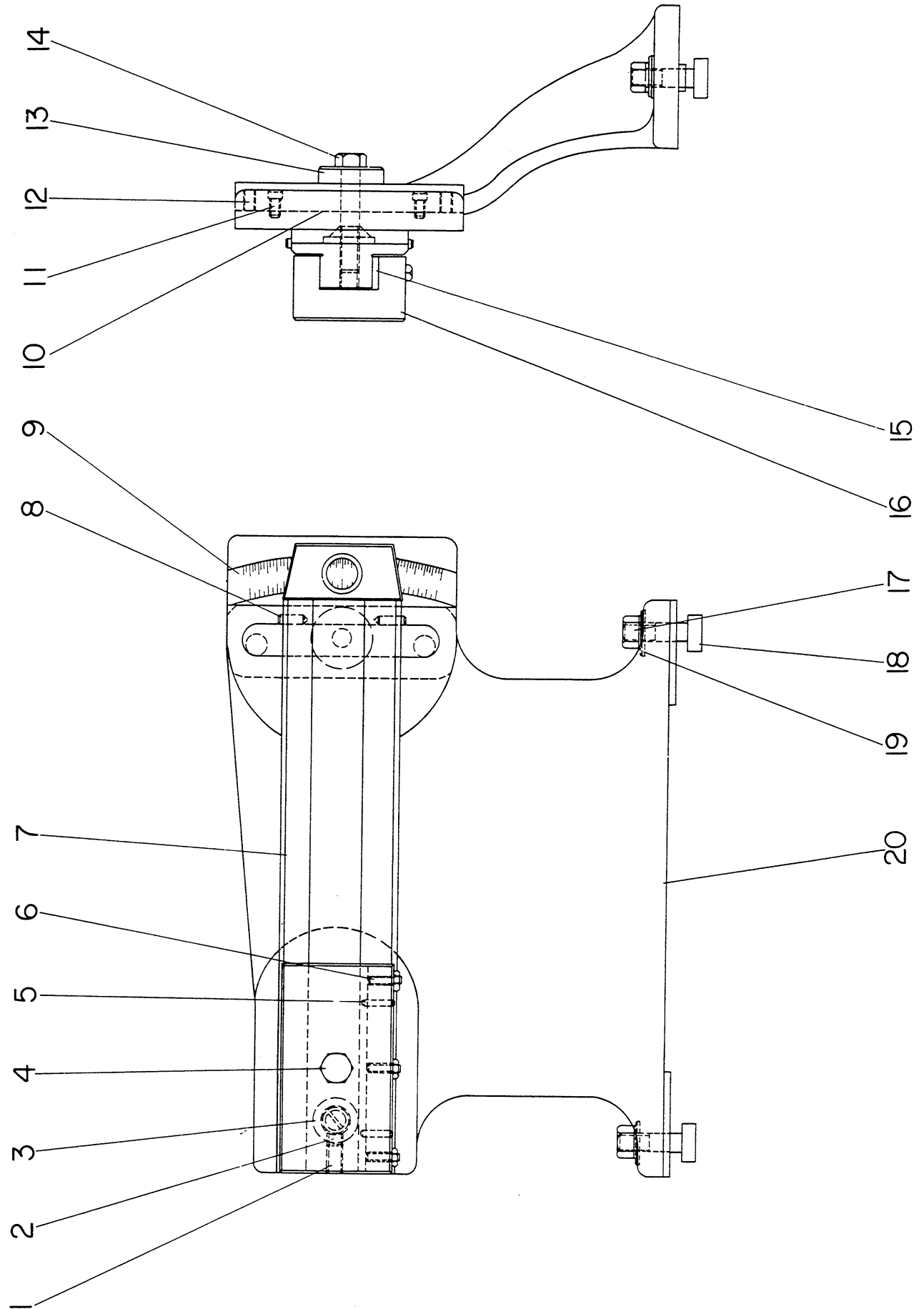
REAR TOOL HOLDER SLIDE ASSEMBLY (DUAL DIAL)



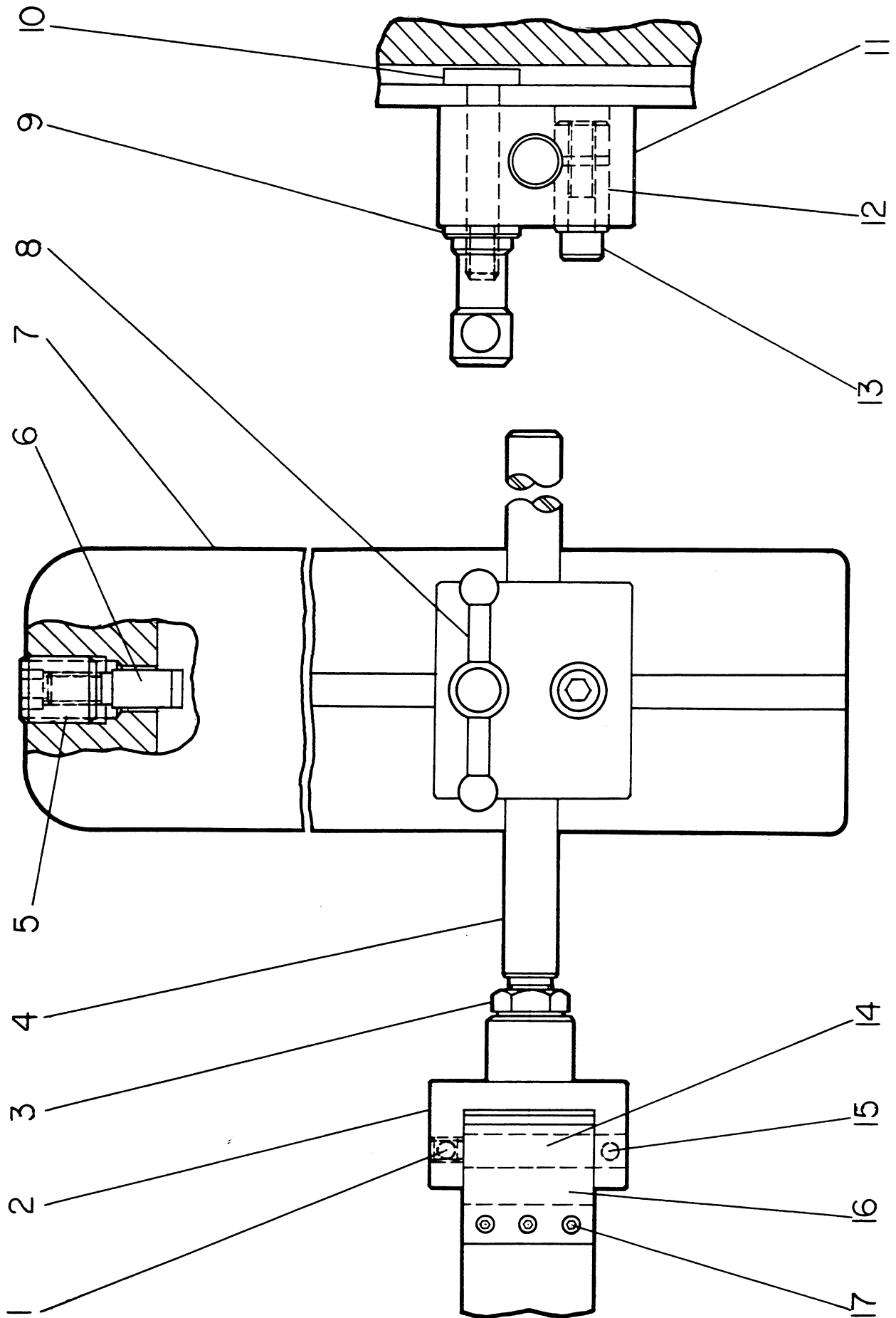
REAR TOOL HOLDER SLIDE ASSEMBLY (Dual Dial)

KEY	PART NUMBER										PCS	NAME	
1	L	H										1	Gib
2	L	H										2	Screw
3	L	H										1	Tool Holder Slide
4	L	N										1	Tool Holder Base
5												3	Set-Screw
6												2	Screw
7	L	H										2	Lock Bolt
8	L	H										4	Screw
9												1	Base
10	3	7										2	Draw Bolt
11	D	D										1	Feed Screw
12	D	D										1	Set-Screw
13	D	D										1	End Cap
14	D	D	A									1	Sleeve
15	D	D										1	127 Tooth Gear
16	D	D										1	Dial and Mount Assembly (Metric) (Consists Of)
												1	Dial
												1	Rear Dial Bushing
												1	Mount For Dial
17	D	D										1	Set-Screw
18	D	D										1	Window Frame
												1	Window
												1	Set Screw
19	R	T										2	Buttonhead Screw
20	R	T										1	Nut
24	R	T										1	Lock Screw
25	D	D										1	Handle
26	D	D										1	Washer
												1	Dial and Mount Assembly (English) (Consists Of)
												1	Dial
												1	Front Bushing
												1	Mount For Dial
												1	Spring
27	D	D										2	Brake Shoe
28	D	D										1	Spring
29	D	D										1	Nylon® Plug
30	D	D										1	32 Tooth Idler Gear
31	D	D										1	Dowel Pin
32	D	D										1	Bushing

TAPER TURNING ATTACHMENT



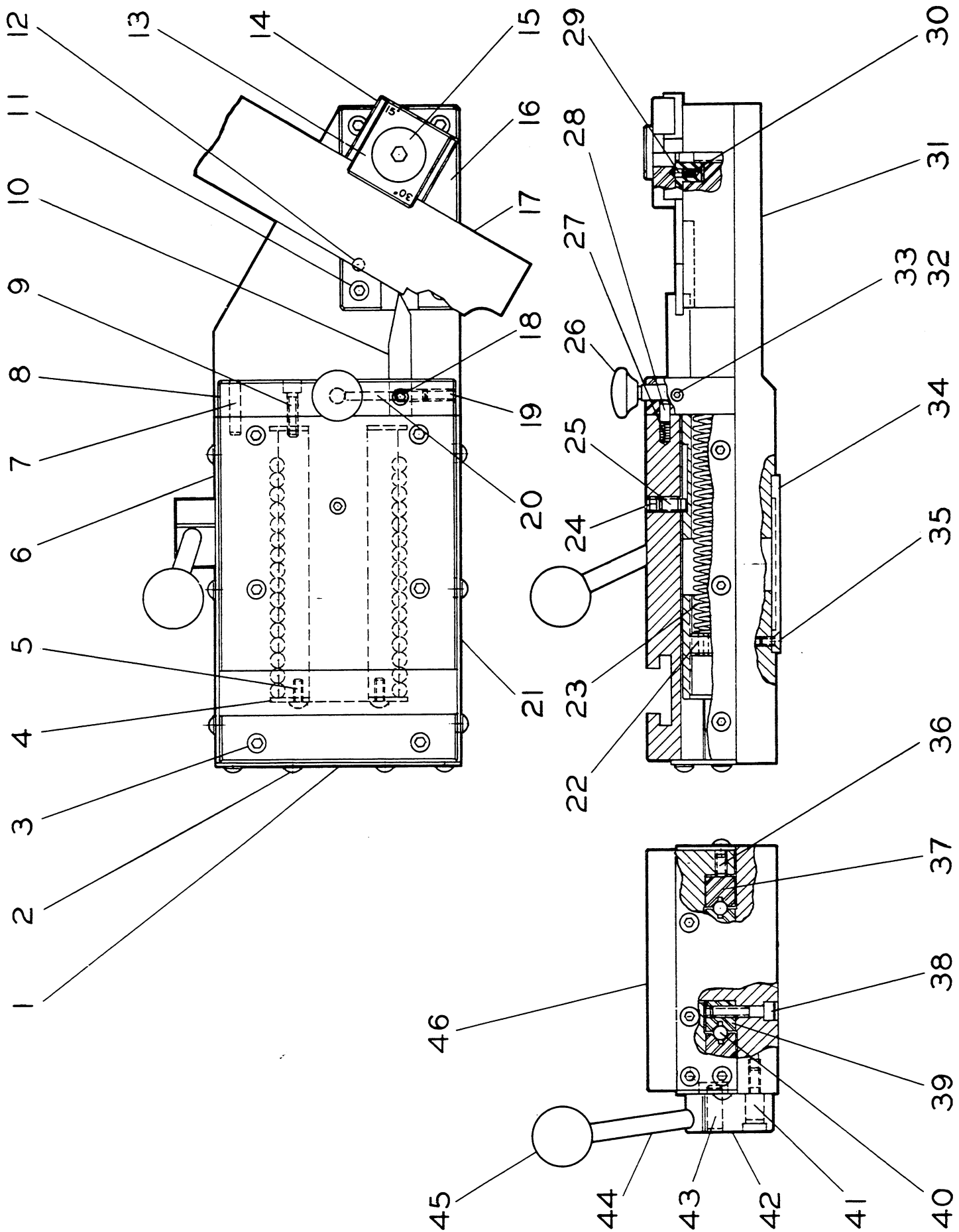
CONTOUR TRACING ATTACHMENT (View 1)



CONTOUR TRACING ATTACHMENT (View 1)

KEY	PART NUMBER										PCS	NAME	
1	3	7		0	0	0	0	0	4	8	3	1	Brass Plug
2	P	T	A	0	0	0	0	0	0	3	0	1	Screw
3	5	T		0	0	0	0	0	1	4	6	1	Body
4	P	T		0	0	0	0	0	9	6	6	1	Nut
5	6	T		0	0	0	0	0	9	0	9	1	Extension Shaft
6	D	T		0	0	0	0	0	9	0	9	1	Locking Screw
7	P	T		0	0	0	0	0	1	0	5	1	Locking Plug
8	D	S		0	0	0	0	0	3	4	7	1	Bed Adapter
9	3	7		0	0	0	0	0	6	4	1	1	Tool Post Handle
10	P	T		0	0	0	0	0	4	6	1	1	Washer
11	P	T	A	0	0	0	0	0	4	6	3	1	Hold Down Bolt
12	P	T	A	0	0	0	0	0	6	3	5	1	Block
13				0	1	0	0	0	8	2	0	1	Binding Nut
14	P	T		0	0	0	0	0	9	1	2	1	Screw
15				0	5	5	0	3	0	5		1	Shaft For Template Holder
16	P	T	A	0	0	0	1	1	2	1	7	1	Screw
17				0	5	5	0	3	0	6		3	Template Holder

CONTOUR TRACING ATTACHMENT (View 2)



CONTOUR TRACING ASSEMBLY (View 2)

KEY	PART NUMBER										PCS	NAME	
24	U	T										1	Screw
25	P	T										1	Key
26	3	H										1	Stop Pin
27	L	T										1	Spring
28	P	T										1	Detent
29	H	T										2	Detent
30	P	T										2	Spring
31												1	Base
32												1	Screw
33												1	Screw
34	6	A										1	Pilot Ring
35												2	Screw
36	N	T										2	Screw
37	P	T										2	Outer Track
38												4	Screw
39	P	T										2	Inner Track
40	C	T										32	Steel Ball
41	P	T										1	Shoulder Screw
42	P	T										1	Pivot Block
43	R	H										1	Dowel Pin
44	L	T										1	Handle
45	T	L										1	Knob
46	P	A										1	Top Slide

KEY	PART NUMBER										PCS	NAME	
1	P											1	Wiper
2	L	H										12	Screw
3	P	T										6	Screw
4												4	Ball Retainer
5												4	Screw
6	P	T										1	Wiper
7	5	A										2	Dowel
8	P	T										1	End Cap
9												4	Screw
10	P	T										1	Stylus
11												4	Screw
12	C	D										2	Dowel Pin
13	P	T										1	Top for Swivel
14	P	T										1	Swivel for Template
15	P	T										1	Screw for Template
16	P	T										1	Support Block
17	P	T										1	Template Blank
18												1	Screw
19												1	Screw
20	U	T										1	Set Screw
21	P	H										1	Wiper
22	H	M										1	Adjusting Screw
23	P	T										1	Spring



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