



# Operating Instructions and Parts Manual Step Pulley Turret Mill

Model JTM-1, JTM-2

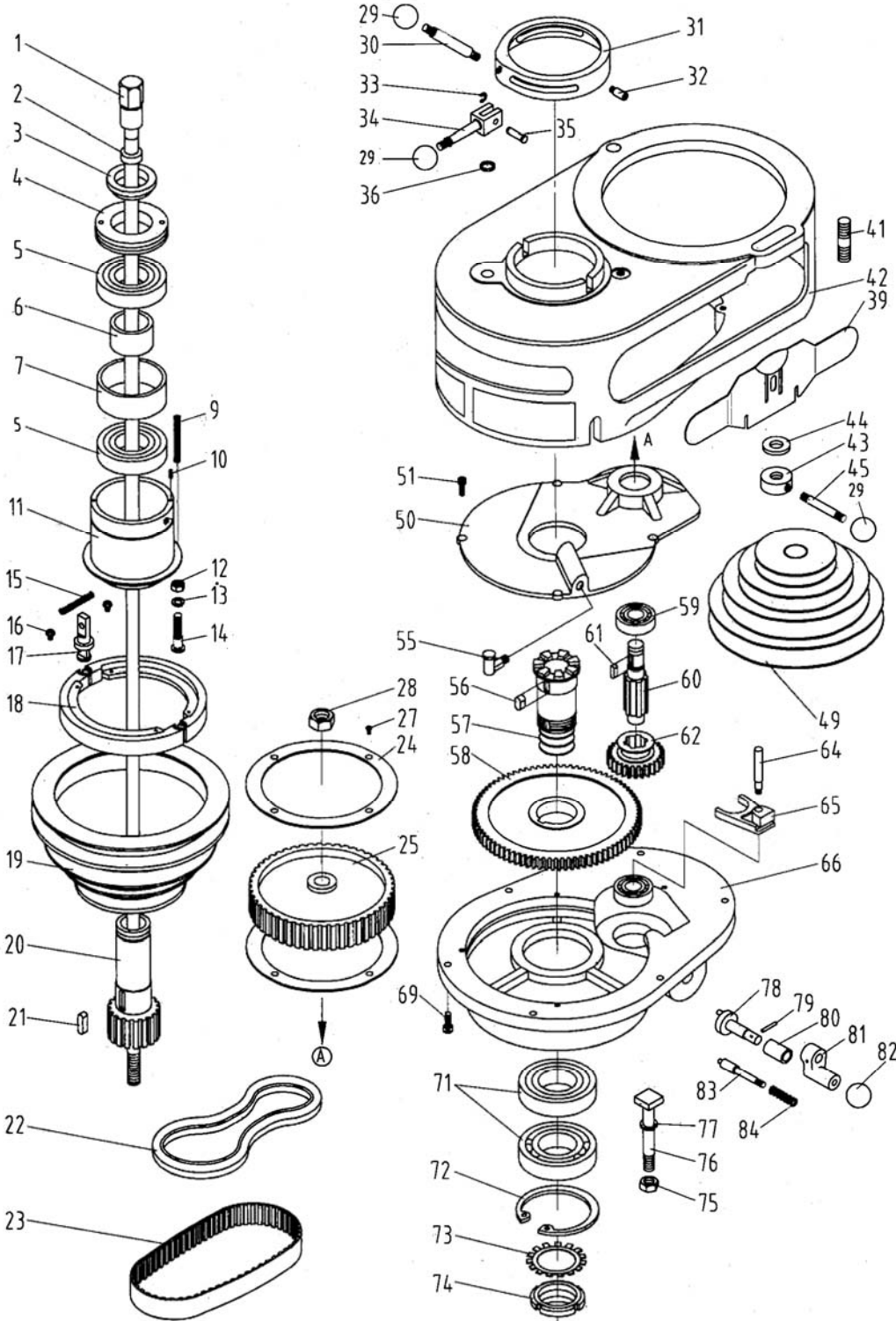


*Model JTM-1 shown*

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### 15.1.1 Upper Head Assembly – Exploded View

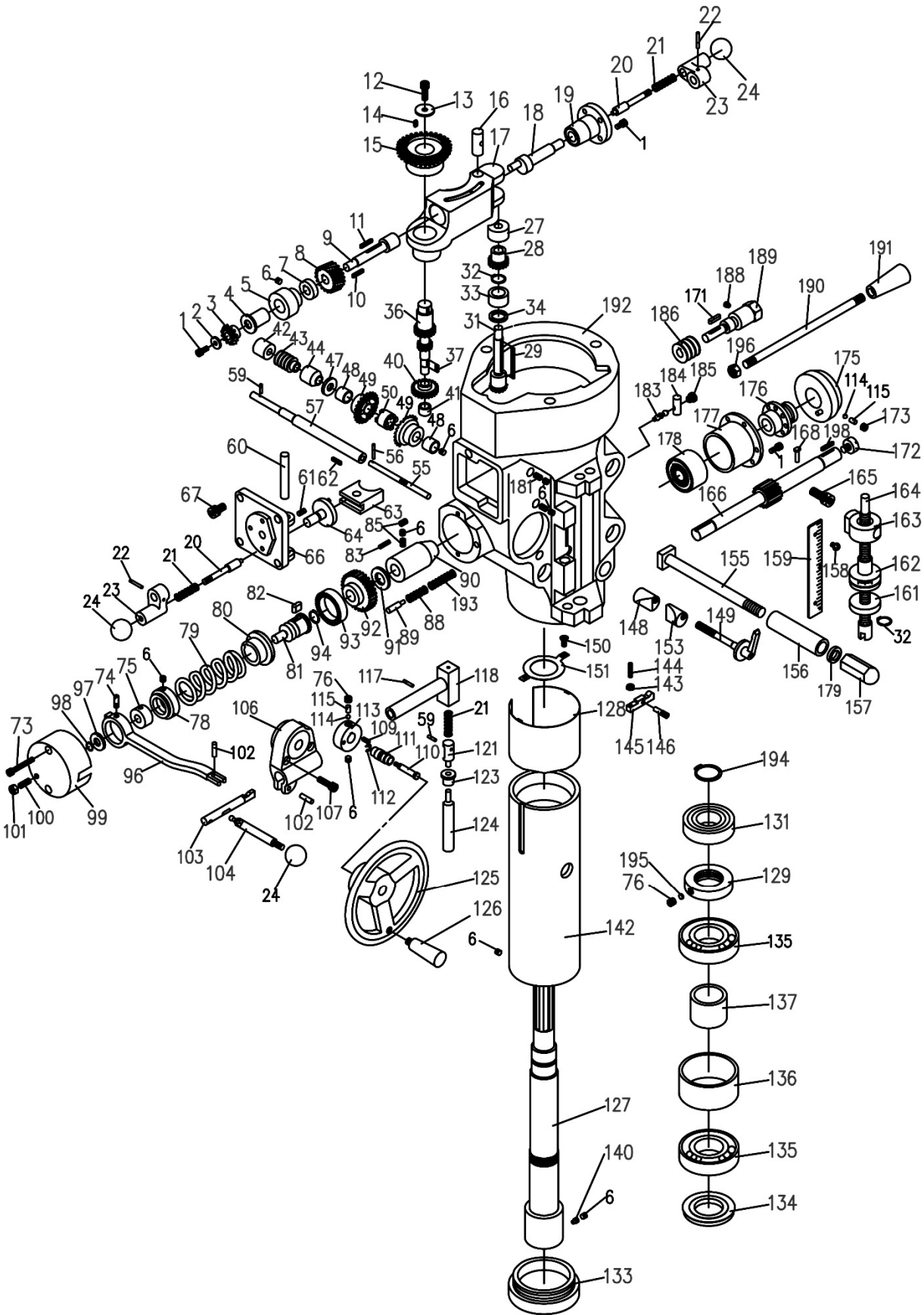


## 15.1.2 Upper Head Assembly – Parts List

Index No	Part No	Description	Size	Qty
1	LA-072	Draw Bar	R8	1
2	JTM4VS-A002B	Draw Bar Washer		1
3	LA-071	Upper Bearing Lock Nut		1
4	LA-070	Bearing Sleeve Lock Nut		1
5	BB-6207ZZ	Ball Bearing	6207-ZZ	2
6	LA-068	Upper Bearing Spacer (small)		1
7	LA-069	Upper Bearing Spacer (large)		1
9	LA-169	Compression Spring		4
10	TS-1520041	Set Screw	M3x10	4
11	LA-066	Spindle Pulley Bearing Sleeve		1
12	TS-0571021	Hex Jam Nut	5/16"	1
13	TS-0720081	Lock Washer	5/16"	1
14	LA-034	Brake Ring Screw		1
15	LA-036	Spring		2
16	BUTW31612	Screw	3/16"x1/2"	4
17	LA-037	Brake Lock Stud		1
18	LA-035	Brake Assembly		1
19	LA-065	Spindle Pulley (four-step)		1
20	LA-064	Spindle Pulley Hub		1
21	JTM1-021	Key	6x6x25mm	1
22	VB-A33	V-belt	A33	1
23	VB225L100	Timing Belt	225L	1
24	LA-027	Timing Belt Flange		2
25	LA-028	Timing Belt Pulley		1
27	JTM1-C27	Flat Head Screw		8
28	TS-0571072	Hex Jam Nut	5/8"-18NF	1
29	LA-006	Plastic Ball		3
30	LA-074	Spindle Clutch Lever		1
31	LA-073	Cam Ring		1
32	JTM1-032	Cam Ring Pin		2
33	JTM1-C33	E-Ring		1
34	LA-039	Brake Lock Handle		1
35	LA-038	Brake Lock Pin		1
36	TS-0680061	Washer	1/2"	1
37	JTM1-037	Spindle Speed Plate (JTM-1)		1
	JTM1-037A	Spindle Speed Plate (JTM-2)		1
39	JTM1-039A	Belt Guard		2
41	LA-012	Motor Mount Studs		2
42	LA-015G	Belt Housing		1
43	LA-007	Motor Lock Nut		2
44	LA-008	Washer		1
45	LA-009	Motor Lock Nut Handle		4
49	LA-011	Motor Pulley (four-step)		1
50	LA-013G	Gear Housing Cover		1
51	JTM1-C51	Hex Socket Cap Screw	M5x14	4
55	JTM1-055	Oil Cup		1
56	JTM1-C56	Key		1
57	LA-062	Spindle Gear Hub		1
58	LA-061	Spindle Bull Gear Assembly		1
59	BB-6203ZZ	Ball Bearing		1
60	LA-026	Shaft		1
61	JTM1-061	Key	5x5x15mm	1
62	LA-025	Gear		1
63	BB-6203ZZ	Ball Bearing		1
64	LA-032	Dowel Pin		1
65	LA-031	Back Gear Shifter Fork		1
66	LA-014G	Gear Housing		1
69	TS-1503041	Hex Socket Cap Screw	M6x16	6
71	BB-6208ZZ	Ball Bearing		2
72	JTM1-C72	Snap Ring		1

Index No	Part No	Description	Size	Qty
73	JTM1-C73	Lock Washer		1
74	LA-059	Bearing Lock Nut		1
75	JTM1-C75	Hardened Nut	7/16"	1
76	LA-045	T-Bolt		3
77	JTM1-C77	Bolt Washer		3
78	LA-001	Shift Crank		1
79	JTM-C79	Spring Pin		1
80	LA-044	Back Gear Shift Bushing		1
81	LA-003	Shaft Crank Handle		1
82	LA-006	Plastic Ball		1
83	LA-004	Gearshift Plunger		1
84	LA-005	Compression Spring		1
	JTM1-M2	Motor (not shown)	2HP 3PH 220V	1
	JTM1-598	Fwd/Rev Switch (not shown)	for 3PH, 2/4P	1
	JTM1-598A	Switch Speed Plate (not shown)		1
	JTM1-598B	Switch Knob (not shown)		1
	JTM1-598C	Switch Bracket (not shown)		1
	JTM1-598D	Metal Switch Box (not shown)		1
	JTM2-M1	Motor (not shown)	2HP 1PH 115/230V	1
	JTM2-SC	Start Capacitor	500MFD, 125AC	1
	JTM2-598CP	Switch Assembly CP (not shown)		1
	JTM2-599	Fwd/Rev Switch (not shown)	for 1PH	1
	JTM2-599A	Switch Plate (not shown)		1
	JTM2-599B	Switch Plate Mounting Screw (not shown)		1
	JTM2-599C	Motor – Switch Wiring Harness (not shown)		1
	BD1325R-X02	Centrifugal Switch (not shown)		1

15.2.1 Head Assembly – Exploded View



## 15.2.2 Head Assembly – Parts List

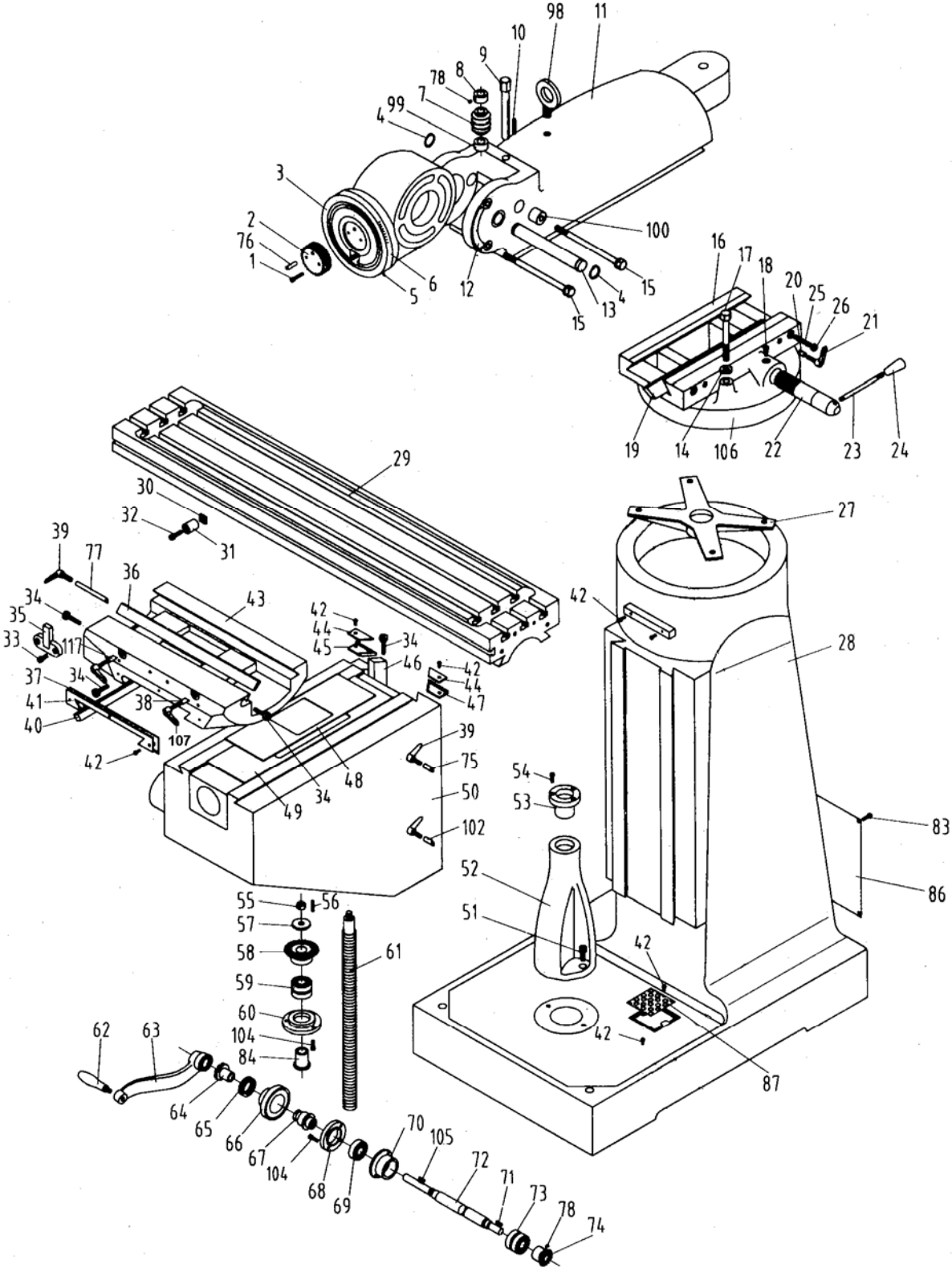
Index No	Part No	Description	Size	Qty
	LA-166A	Worm Gear Cradle Assembly (includes #1-17,36,37,40)		1
1	TS-1533042	Screw	M5x10	6
2	HA-002	Bevel Pinion Washer		1
3	HA-003	Feed Gear		1
4	LA-161	Shaft Sleeve		1
5	LA-162	Worm Cradle Bushing		1
6	TS-1523011	Set Screw	M6x6	9
7	LA-163	Worm Gear Spacer		1
8	LA-164	Feed Drive Worm Gear		1
9	LA-165	Worm Gear Shaft		1
10	HA-010	Worm Shaft Key	3x3x8mm	1
11	HA-011	Key	3x3x20mm	1
12	HA-012	Lock Nut	M6x16	1
13	HA-013	Washer		1
14	HA-014	Cluster Gear key	3x3x8.5	1
15	LA-154	Feed Reverse Bevel Gear		1
16	LA-167	Feed Engage Pin		1
17	LA-166	Worm Gear Cradle		1
18	LA-033	Worm Gear Throw-out		1
19	LA-002	Shift Sleeve		1
20	LA-004	Plunger		2
21	LA-005	Spring		3
22	HA-022	Spring Pin	3x22mm	2
23	LA-003	Cam Rod		2
24	LA-006	Plastic Ball		3
27	LA-147	Upper Bushing		1
28	LA-144	Cluster Gear Assembly		1
29	HA-029	Cluster Gear Key	3x3x45mm	1
31	LA-143	Cluster Gear Shaft		1
32	HA-032	Snap Ring		2
33	LA-142	Bevel Gear Bushing		1
34	LA-141	Thrust Spacer		1
36	LA-156	Feed Drive Gear		1
37	HA-037	Key	3x3x10mm	1
40	LA-157	Feed Drive Gear		1
41	HA-041	Needle Bearing		1
42	LA-168	Bushing		1
43	LA-139	Worm		1
44	LA-138	Feed Worm Shaft Bushing		1
47	LA-137	Bevel Gear Thrust Spacer		1
48	LA-134	Bushing		2
49	LA-135	Feed Reverse Bevel Gear		2
50	LA-136	Feed Reverse Clutch		1
55	LA-132	Reverse Clutch Rod		1
56	HA-056	Spring Pin	3x20mm	1
57	LA-133	Feed Worm Shaft		1
59	HA-059	Spring Pin	3x12mm	2
60	LA-150	Feed Shift Rod		1
61	TS-1522031	Set Screw	M5x10	1
62	HA-062	Key	3x3x15mm	1
63	LA-149	Feed Gear Shift Fork		1
64	LA-151	Cluster Gear Shift Crank		1
66	LA-148	Cluster Gear Cover		1
67	TS-1504011	Hex Socket Cap Screw	M8x10	4
73	TS-1502081	Hex Socket Cap Screw	M5x35	2
74	LA-081	Clutch Ring Pin		2
75	LA-080	Clutch Ring		1
76	TS-1524011	Set Screw	M8x8	1
78	LA-082	Overload Clutch Lookout		1
79	LA-083	Safety Clutch Spring		1

Index No	Part No	Description	Size	Qty
80	LA-084	Overload Clutch		1
81	LA-085	Overload Clutch Sleeve		1
82	LA-090	Key		1
83	TS-1532052	Pan Head Machine Screw	M4x16	3
85	TS-1523031	Set Screw	M6x10	2
88	LA-169	Spring		1
89	LA-089	Spring Plunger		1
90	LA-123	Pinion Shaft Bushing		1
91	LA-122	Spacer		1
92	LA-087	Overload Clutch Worm Gear (Brass)		1
93	LA-086	Overload Clutch Ring		1
94	HA-094	Snap Ring		1
96	LA-079	Trip Lever		1
97	LA-078	Washer		1
98	HA-098	Snap Ring		1
99	LA-076	Clutch Arm Cover		1
100	TS-1523051	Set Screw	M6x10	1
101	HA-101	Lock Nut		1
102	LA-077	Pin		3
103	LA-091	Cam Rod		1
104	LA-100	Trip Handle		1
106	LA-092	Feed trip Bracket		1
107	TS-1503051	Hex Socket Cap Screw	M6x20	2
109	HA-109	Key	3x3x10mm	1
110	LA-130	Feed Reverse Knob Stud		1
111	LA-131	Reverse Knob		1
112	HA-112	Snap Ring		1
113	LA-129	Handwheel Clutch		1
114	SB-3/16	Steel Ball	3/16"	2
115	HA-115	Spring		2
117	HA-117	Spring Pin		1
118	LA-093	Cam Rod Sleeve Assembly		1
121	LA-095	Trip Plunger		1
123	LA-121A	Bushing		1
124	LA-097	Feed Trip Plunger		1
125	LA-126	Handwheel (chrome)		1
	LA-126-BR	Handwheel (brushed finish)		1
126	LA-125	Handle (chrome)		1
	LA-125-BR	Handle (brushed finish)		1
127	LA-050A	Spindle		1
128	LA-060	Quill Skirt		1
129	LA-048	Lock Nut		1
131	BB-6206ZZ	Ball Bearing	6206-ZZ	1
133	LA-051	Nose Piece		1
134	LA-052	Spindle Shield		1
135	BB-7207C	Ball Bearing		2
136	LA-054	Bearing Spacer (large)		1
137	LA-053	Bearing Spacer (small)		1
140	LA-172	Set Screw		1
142	LA-058	Quill		1
143	TS-154021	Hex Nut	M4	1
144	TS-1521071	Set Screw	M4x20	1
145	LA-098	Feed Trip Lever		1
146	LA-099	Trip Lever Pin		1
148	LA-111	Quill Lock Sleeve		1
149	LA-109	Lock Handle (chrome)		1
	LA-109-BR	Lock Handle (brushed finish)		1
150	HA-150	Screw	M5x10	2
151	LA-057	Felt Washer		1
153	LA-110	Quill Lock Sleeve		1
155	LA-043	T-Bolt Assembly		4
156	LA-046	Spacer		4

Index No	Part No	Description	Size	Qty
157	LA-040	Lock Nut		4
158	HA-158	Screw	M4x5	2
159	LA-118	Micrometer Scale		1
161	LA-115	Quill Micro-Stop Nut		1
162	LA-116	Micrometer Nut		1
163	LA-117	Quill Stop Knob		1
164	LA-112	Quill Micro-Screw		1
165	LA-165A	Screw	3/8-24UNF x 3/4	1
166	LA-101	Quill Pinion Shaft		1
168	LA-101A	Pin		1
171	HA-171	Key	4x4x18 mm	1
172	LA-107	Pinion Shaft Hub		1
173	TS-0270021	Set Screw	5/16"x1/4"	1
175	LA-106	Hub		1
176	LA-104	Hub Sleeve		1
	LA-102/3	Clock Spring Assembly (includes #177,178)		1
177	LA-103	Spring Cover		1
178	LA-102	Clock Spring		1
179	TS-0680061	Washer	1/2"	1
181	TS-1523011	Set Screw	M6x6	2
183	LA-113	Lever		1
184	LA-114	Plunger		1
185	LA-124	Screw		1
186	LA-018	Worm Gear		1
188	LA-173	Set Screw		1
189	LA-019	Worm Shaft		1
190	LA-105	Handle		1
191	LB-017	Plastic Ball		1
192	LA-016G	Quill Housing		1
193	HA-193	Spring	10x20mm	1
194	RINS30	Snap Ring		1
195	BH1291	Lock Washer		1
196	TS-1524011	Set Screw	M8x8	1
197	TS-0561031	Hex Nut	3/8"	1
198	KF2R3320	Key	3x3x20mm	1



15.3.1 Base Assembly – Exploded View

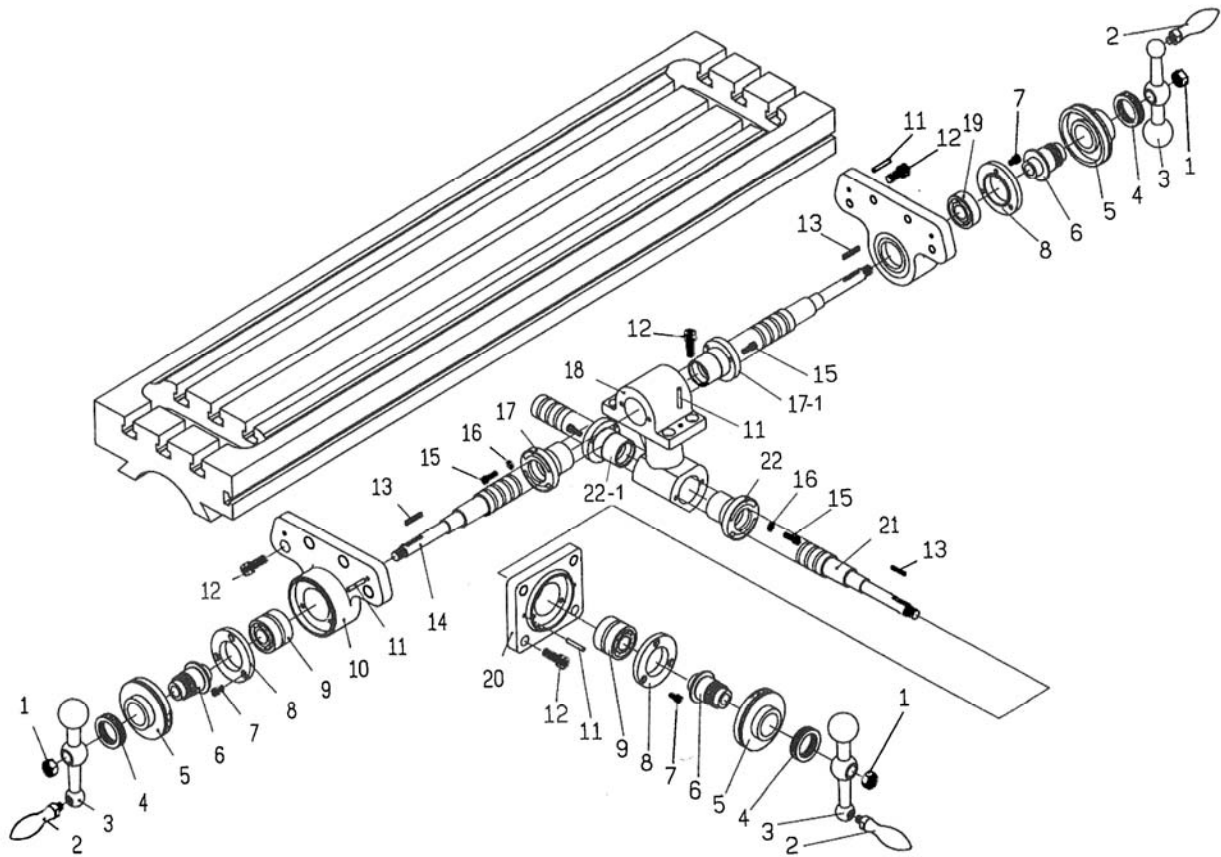


### 15.3.2 Base Assembly – Parts List

Index No	Part No	Description	Size	Qty
1	LB-001	Hex Socket Cap Screw	M6 x30	2
2	LB-023	Gear		1
3	LB-020G	Ram Adapter		1
4	LB-004	Snap Ring	S-28	2
5	LB-005	Rivet		15
6	LB-027	Adapter Scale		1
7	LB-035	Worm		1
8	LB-036	Worm Thrust Washer		1
9	LB-034	Shaft		1
10	LB-100	Key	5 x 5 x 40	1
11	MB-026G	Ram		1
12	LB-032	Angle Plate		1
13	LB-028	Adapter Pivot Stud		1
14	LB-031	Washer		4
15	LB-030	Adapter Locking Bolt		3
16	MB-009	Turret		1
17	LB-030	Lock Bolt		4
18	LB-041	Ram Pinion Screw		1
19	LB-011	Ram/Turret Gib		1
20	LS-005E	Lock Plunger		2
21	LB-014	Ram Lock Bolt Handle		2
22	LB-015	Ram Pinion		1
23	LB-016	Handle		1
24	LB-017	Black Plastic Ball		1
25	TS-0211131	Set Screw	3/8 x 2	2
26	TS-0561031	Hex Nut	3/8	2
27	MB-008	Spider		1
28	MB-000AG	Column		1
29	JTM1-330A	Table		1
30	LT-027	Stop Nut		2
31	LT-028	Table Stop		2
32	TS-1504071	Hex Socket Cap Screw	M8 x 35	2
33	TS-1504031	Hex Socket Cap Screw	M8 x 16	2
34	LK-002	Gib Adjusting Screw		6
35	LS-003	Table Stop Bracket		1
36	LS-008	Saddle/Table Gib		1
37	LS-013	Felt Wiper		2
38	LS-005B	Table Lock Plunger	16mm	2
39	LS-011	Saddle Lock Handle		5
40	LS-001	Saddle/Knee Gib		1
41	LS-014	Wiper Plate		2
42	LS-042	Screw		16
43	MS-000G	Saddle		1
44	LS-017A	Wiper Felt		2
45	LS-016A	Felt (left)		1
46	LK-001	Knee/Column Gib		1
47	LS-016	Knee/Wiper Felt (right)		1
48	LK-007	Upper Chip Guard		1
49	LK-006	Lower Chip Guard		1
50	MK-000G	Knee		1
51	TS-1505031	Hex Socket Cap Screw	M10 x 25	2
52	MK-012G	Elevating Screw Housing		1
53	MK-014	Elevating Screw Nut		1
54	TS-1503041	Hex Socket Cap Screw	M6 x 16	8
55	TS-0561052	Hex Nut	1/2-20UNF	1
56	LK-058	Key	4 x 4 x 30	1
57	LK-022	Washer		1
58	MK-021	Bevel Gear		1
59	BB-6306ZZ	Ball Bearing		2

Index No	Part No	Description	Size	Qty
60	MK-019	Bearing Retainer Ring		1
61	MK-016	Elevating Screw		1
62	LK-037	Handle (chrome)		1
	LK-037-BR	Handle (brushed finish)		1
63	LK-036	Elevating Crank		1
64	LK-035	Clutch Insert		1
65	LK-034	Dial Lock Nut		1
66	LK-033	Dial		1
67	LK-032	Dial Holder		1
68	LK-030	Bearing Retainer Ring		1
69	BB-6204ZZ	Ball Bearing		1
70	LK-029	Bearing Cap		1
71	LK-075	Key	4 x 4 x 18	2
72	MK-028	Elevating Shaft		1
73	BB-6204ZZ	Ball Bearing		2
74	MK-024	Bevel Pinion		1
75	LK-003	Plunger		1
76	LK-081	Spring Pin	8 x 30	1
77	LS-010	Saddle Lock Plunger		1
83	MB-090	Screw	1/4 x 3/8	4
84	MK-038	Bushing		1
86	MB-004	Cover		1
87	MB-041	Strainer Screen		2
98	RIBW34	Hoisting Ring		1
99	LB-036	Worm Thrust Washer		1
100	LB-033	Thrust Washer		1
102	LK-003	Lock Plunger		1
104	TS-1503051	Hex Socket Cap Screw	M6 x 20	6
105	KEY3320	Key	3x3x20mm	1
106	MB-00BG	Turret Scale		1
107	LS-006B	Saddle Ratcheting Lever (chrome)		3
	LS-006B-BR	Saddle Ratcheting Lever (brushed finish)		3
117	LS-005A	Table Lock Plunger – L		3
	JTM1-WCF	Flat Way Cover (not shown)		1
	JTM1-WCA	Pleated Way Cover (not shown)		1
	JTM4VS-TB	Tool Box Kit Complete (not shown)		1
	STRIPE-1-3/4	JET Stripe	1-3/4"W	per ft.

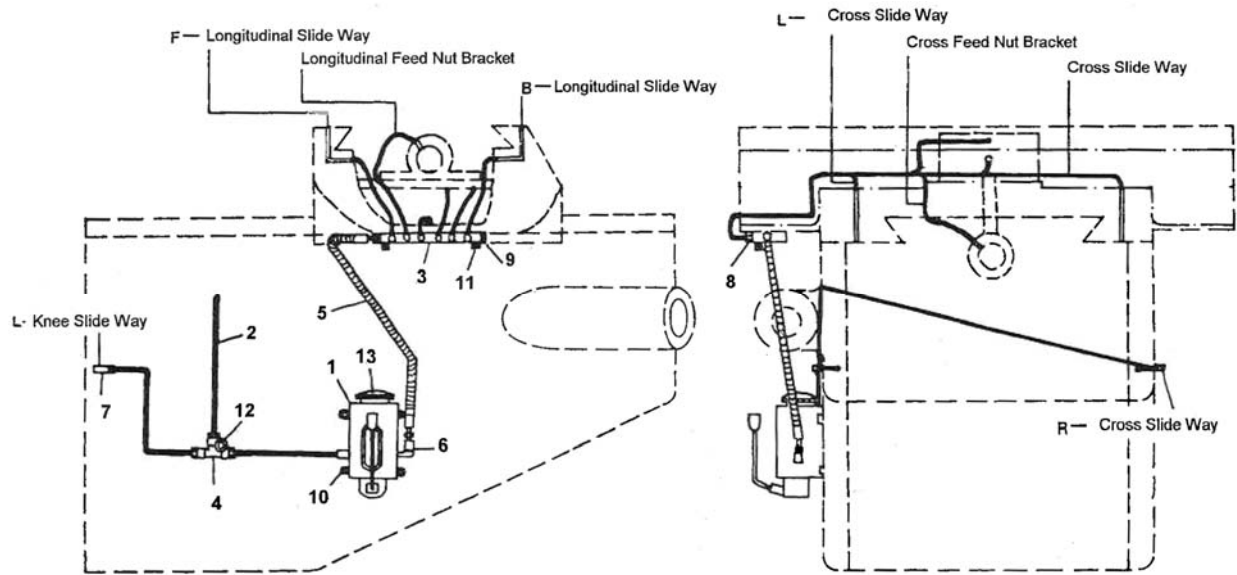
### 15.4.1 Table Leadscrew Assembly – Exploded View



### 15.4.2 Table Leadscrew Assembly – Parts List

Index No	Part No	Description	Size	Qty
1	TS-0571052	Jam Nut	1/2-20UNF	3
2	LT-010C	Handle		3
	LT-010C-CHR	Chrome Surface Handle		3
3	LT-010B	Ball Crank		3
	LT-010B-CHR	Chrome Surface Ball Crank		3
4	LT-009	Dial Lock Nut		3
5	LT-008	Dial		3
6	LT-007	Dial Holder		3
7	TS-1503021	Hex Socket Cap Screw	M6 x 12	3
8	LT-005	Bearing Retainer Ring		3
9	BB-6204ZZ	Ball Bearing		3
10	LT-002	Bearing Bracket		2
11	LS-009	Spring Pin	5 x 30	8
12	TS-1505031	Hex Socket Cap Screw	M10 x 25	16
13	BD920-A04	Key	3 x 3 x 25	3
14	MT-015B	Longitudinal Feed Screw		1
15	TS-1503041	Hex Socket Cap Screw	M6 x 16	10
16	TS-1550051	Washer	M7	4
17	MT-019B	Feed Screw Nut Set (includes #17-1)		1
18	MT-017	Feed Nut Bracket		2
19	BB-6204ZZ	Ball Bearing		1
20	MT-025	Cross Feed Bearing Bracket		1
21	MT-024	Cross Feed Screw		1
22	MT-022	Cross Feed Nut Set (includes #22-1)		2

## 15.5.1 One-Shot Lubrication System – Exploded View



## 15.5.2 One-Shot Lubrication System – Parts List

Index No	Part No	Description	Size	Qty
.....	LT-8-A	Hand Oiler Assembly (includes #1,1A,4,5,9)		1
1	LT-8	Hand Oiler		1
1A	LT-8-SG	Hand Oiler Sight Glass (with gasket)		1
2	ALMP-04	Aluminum Pipe	3.5M	1
.....	ALMP-04-VS	Oil Line Set w/ Fittings		1
3	DB-4	Oil Regulating Distributor		1
4	PKD-4	T-Joint		1
5	FHC-404	Flexible Steel Tube		1
6	PH-1-1/PB-4	Check Joint		2
7	PH-4	Elbow Joint		2
8	PA-4/PB-4	Straight Joint		14
9	PG-004	Union		1
10	JTM4VS-BUTW1458	Screw		4
11	TS-1503061	Hex Socket Cap Screw	M6 x 25	2
12	TS-1502061	Hex Socket Cap Screw	M5 x 25	1
13	LT-8-C	Oil Cap		1