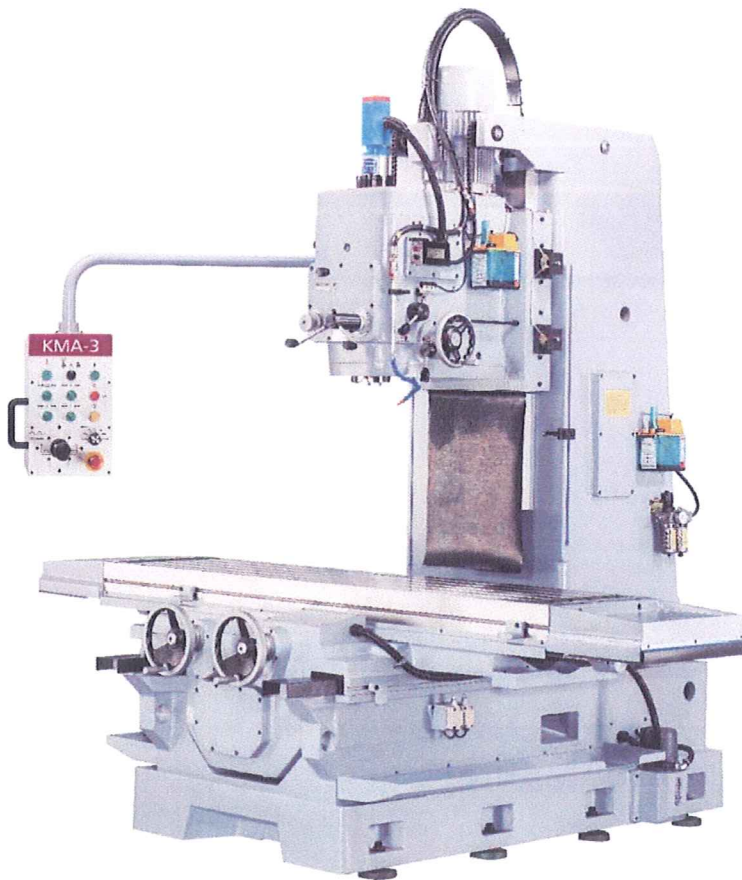


SHARP

VERTICAL BED TYPE MILLING & BORING MACHINE

KMA-1, KMA-2, KMA-3, KMA-3H
PARTS LIST



Model KMA-3

AUG 08 2019

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SPINDLE HEAD (1)

Item	Parts No.	Parts Name	Q'ty	Remark
1	C-514	Oil Filter	1	
2		Joint	3	PD802
3		Thimble nut	3	PA8
4		Thimble	3	PB8
5		Plug	2	PT3/4
6		Aluminium Pipe	1	φ 8
7		Hex. Socket Bolt	3	M6x1Px50L
8		Oil Pump	1	AM2A
9	H-3049	Pump Seat	1	
10		Hex. Socket Bolt	3	M6x1Px25L
11		Hex. Socket Bolt	1	M5x0.8Px16L
12	H5-1006	Oil Pump Joint	1	
13		Hex. Socket Bolt	1	M8x1.25Px20L
14	H5-1005	Adapter	1	
15	H5-1002	Motor Seat	1	
16		Spring Washer	4	M14
17		Hex. Bolt	4	M14x2Px35L
18		Key	1	10x8x65L
19		Motor	1	AC 15HP-4P
20	H5-1003	Spur Gear	1	(1980rpm)
21	H5-1004	Spur Gear	1	(1500rpm)
22	H-2977	Spur Gear	1	(1980rpm)
23	H5-1007	Spur Gear	1	(1500rpm)
24		Ball Bearing	1	6307
25	H-3012	Shaft	1	
26		Bearing Washer	1	AW07
27	C-35	Bearing Nut	1	AN07
28		Key	1	8x8x45L

SPINDLE HEAD (1)

Item	Parts No.	Parts Name	Q'ty	Remark
29	H-2985	Gear	1	
30	H-2984	Gear	1	
31	H-3348	Spacer	1	
32		Key	1	10x8x80L
33		Hex. Nut	2	M12x1.75P
34		Hex. Socket Set Screw	2	M12x1.75Px25L
35	H5-1019	Bearing Cover	1	
36	H-2174	Spacer	1	
37	H-377	Bearing Nut	1	AN08
38		Bearing Washer	1	AW08
39		Taper Roller Bearing	1	30307
40		Hex. Socket Bolt	5	M10x1.5Px40L
41		Hex. Socket Bolt	4	M6x1Px16L
42	H-3349	Spacer	1	
43		Taper Roller Bearing	1	30308
44		C Snap Ring	1	S70
45	H5-1008	Bearing Cover	1	
46		V-Belt	1	A25
47	H-3081	Bearing Cover	1	
48	H-445	Nut	1	
49		Spring Pin	1	ϕ 5x30L
50	H-2992	Draw Bar	1	INCH
51	H-3337	Draw Bar	1	MM
52	H-444	Nut	1	
53	H-780	Nut	1	
54	C-56	Bearing Nut	1	AN09
55		Bearing Washer	1	AW09
56	H-3036	Pulley	1	

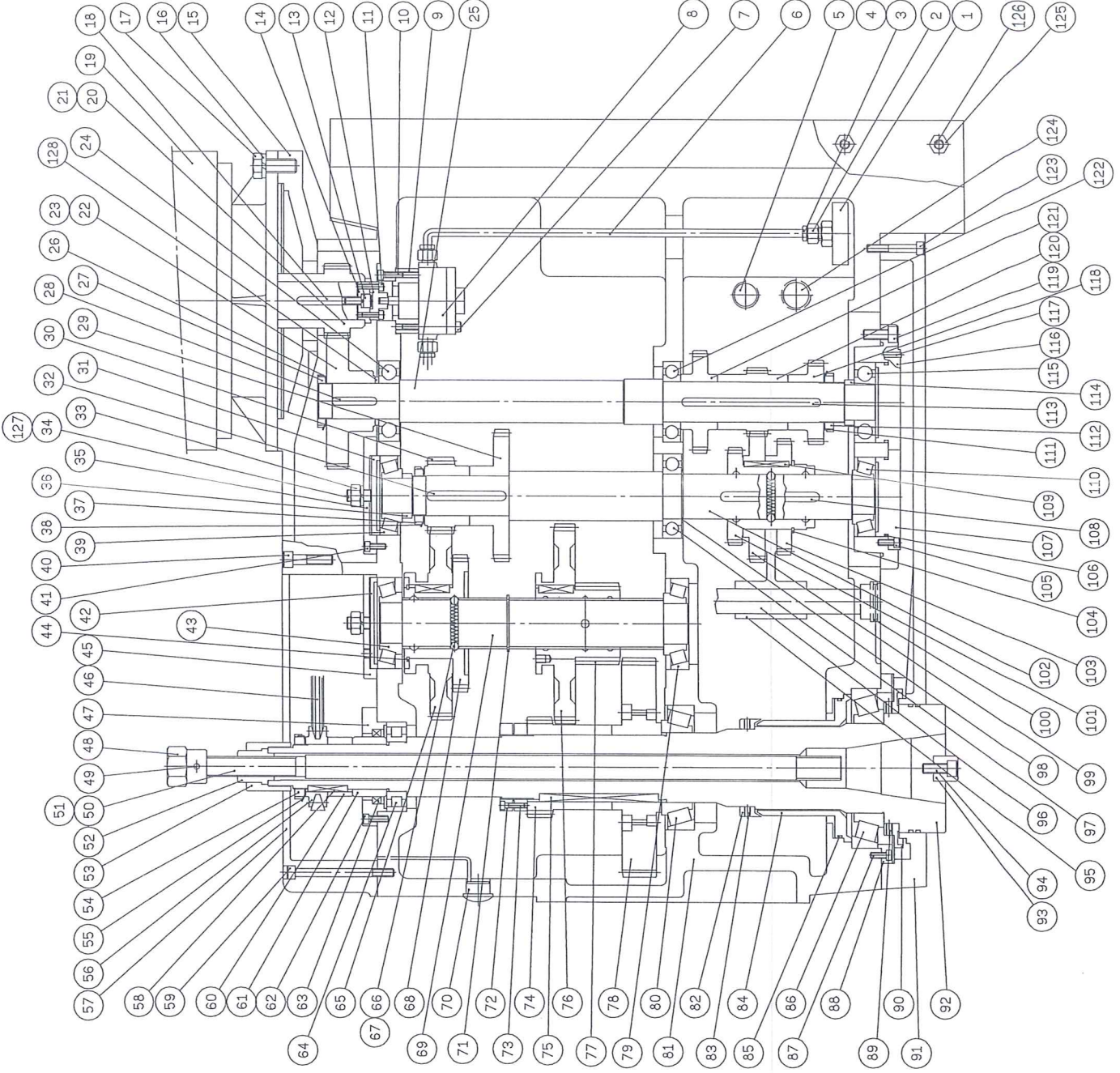
SPINDLE HEAD (1)

Model: KMA-3

Item	Parts No.	Parts Name	Q'ty	Remark
57	H5-1009	Cover	1	
58		Key	1	7x7x40L
59		Hex. Socket Bolt	4	M8x1.25Px35L
60	H-3080	Spacer	1	
61	H-2994	Collar	1	
62		Hex. Socket Bolt	4	M6x1Px16L
63		Oil Seal	1	TC60759
64		Roller Bearing	1	N210
65	H-3624	Spur Gear	1	
66		Steel Ball	6	$\phi 8$
67	H-2103	Spring	3	
68	H-3625	Spur Gear	1	
69	H-3014	Shaft	1	
70		Oil Level Gage	1	$\phi 26 \times \phi 30$
71		C Snap Ring	1	S50
72	H-2993	Nut	1	
73		Hex. Socket Bolt	6	M5x0.8Px25L
74	H-2989	Spur Gear	1	
75		Key	2	12x7x120L
76	H-3626	Spur Gear	1	
77	H-3627	Spur Gear	1	
78	H-2988	Spur Gear	1	
79		Taper Roller Bearing	1	30308
80		Taper Roller Bearing	1	32214
81	H5-1001	Spindle Head	1	
82	H-3047	Oil Ring	1	
83		Hex. Head Set Screw	2	M6x1Px10L
84	H-3048	Oil Sleeve	1	

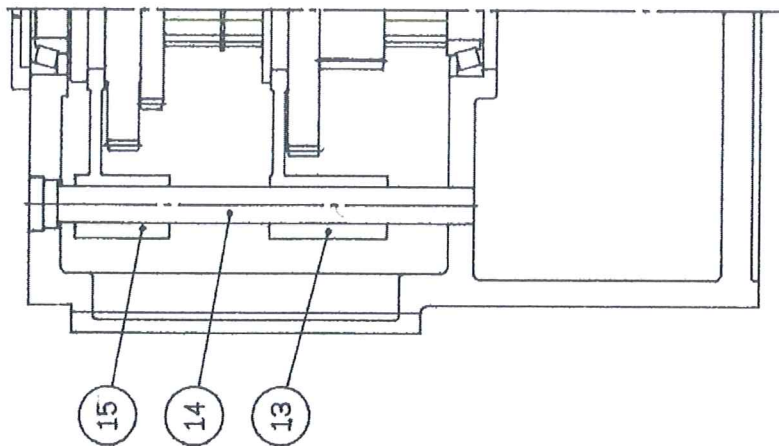
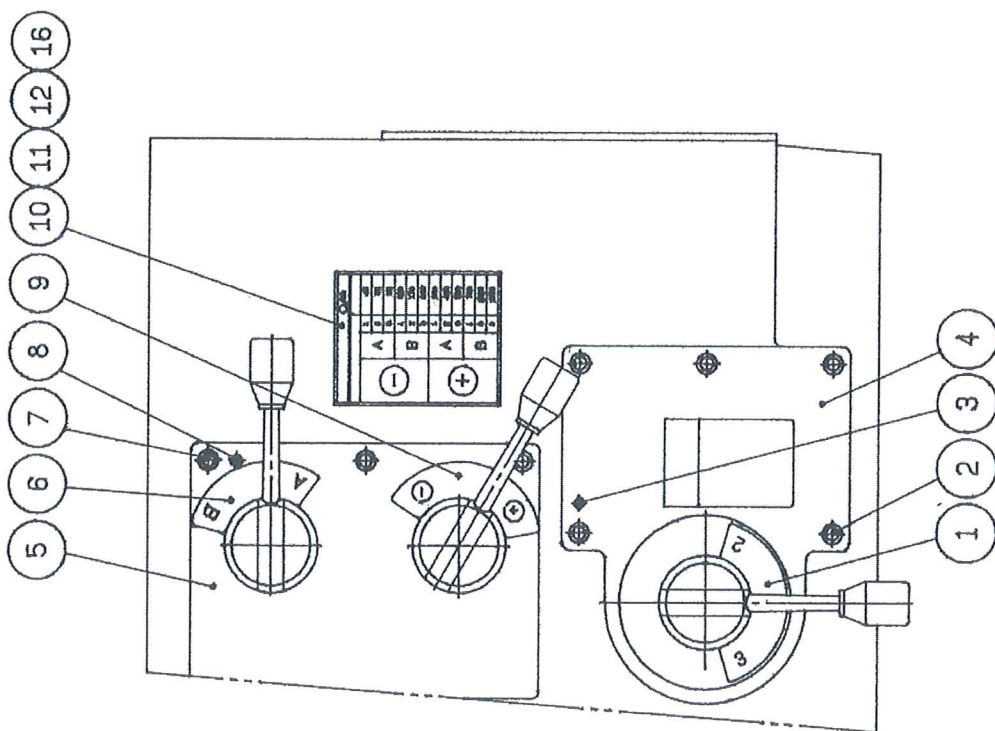
SPINDLE HEAD (1)

Item	Parts No.	Parts Name	Q'ty	Remark
85		O ring	1	G125
86		Taper roller bearing	1	30218
87		Hex. socket bolt	6	M6x1Px16L
88	H-2990	Bearing cover	1	
89		Hex. head set screw	2	M6x1Px10L
90	H-2991	Bearing cover	1	
91	H5-1017	Spindle cover	1	
92	H-3011	Spindle	1	
93	H-432	Key	2	
94		Hex. socket screw	2	M10x1.5Px25L
95	H-3018	Swing arm	1	
96	H-2999	Support lever	1	
97		Bearing	1	6209
98		C snap ring	1	S45
99	H-2982	Spur gear	1	
100		O ring	1	P30
101	H-2983	Spur gear	1	
102	H-3013	Shaft	1	
103	H-2981	Spur gear	1	
104		C snap ring	1	S65
105		Hex. socket screw	6	M6x1Px16L
106		O ring	1	G75
107	H-3511	Bearing cover	2	
108		Key	2	10x8x150L
109		Key	1	10x8x45L
110		Taper roller bearing	1	30307
111		Bearing washer	1	AW08
112	H-377	Bearing nut	1	AN08



SPINDLE HEAD (1)

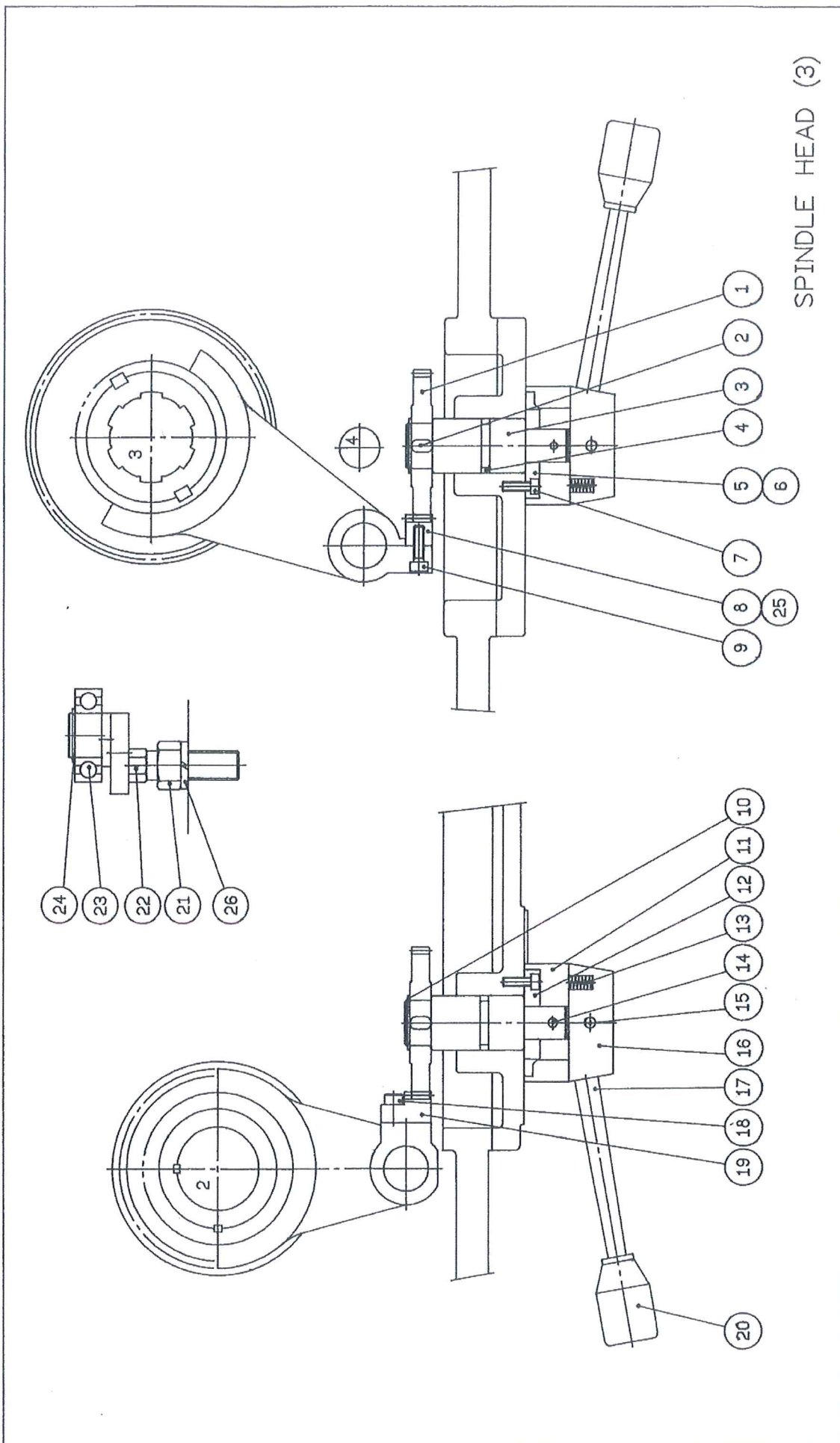
SPINDLE HEAD (2)



SPINDLE HEAD (3)

Model: KMA-3

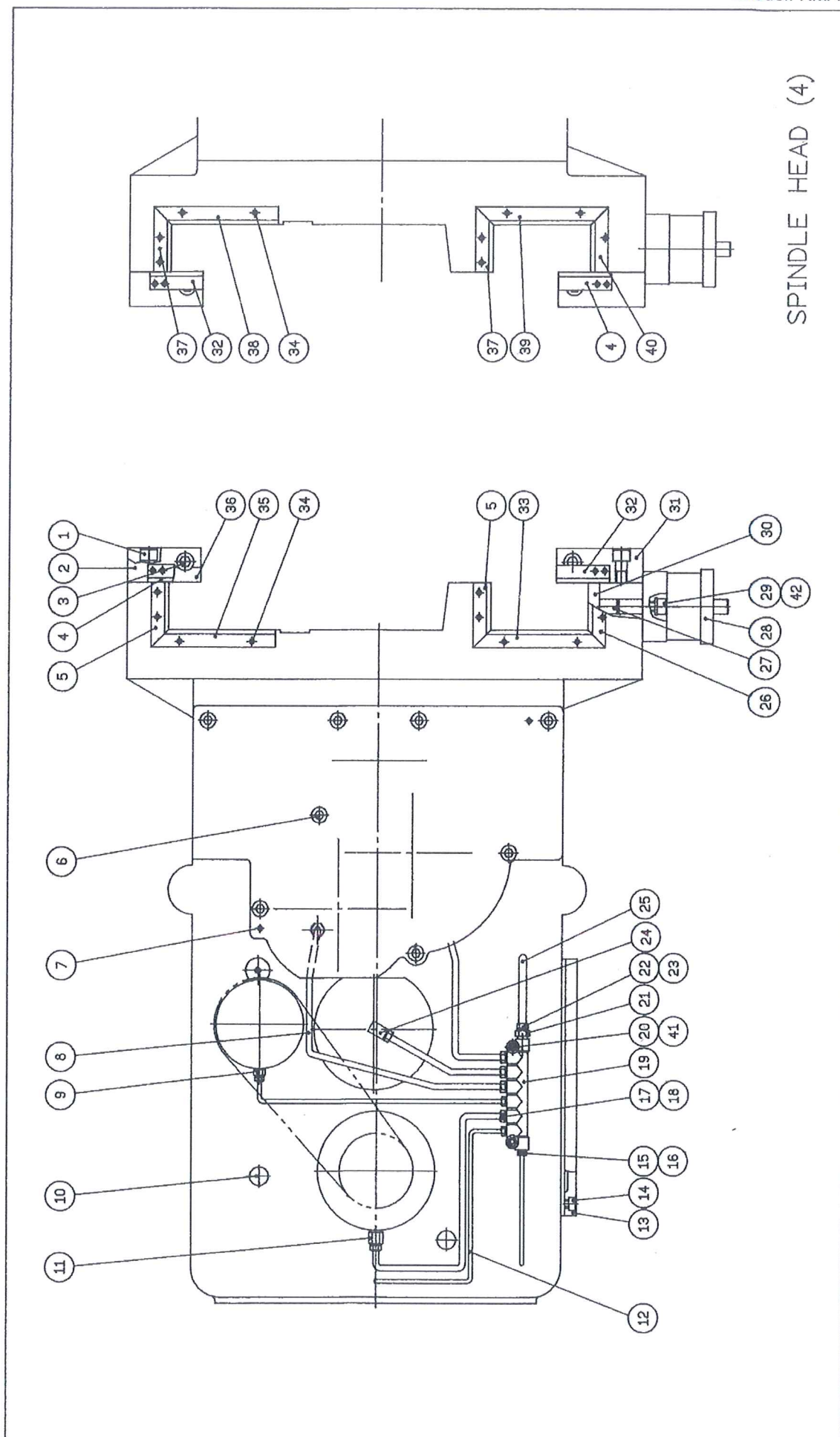
Item	Parts No.	Parts Name	Q'ty	Remark
1	H-505	Spur Gear	3	
2		Key	3	7x6x12L
3	H-3006	Gear Shaft	3	
4		O-Ring	3	P24
5	H-3003	Fixed Plate	1	
6	H-3004	Fixed Plate	1	
7		Hex. Socket Bolt	9	M5x0.8Px10L
8	H-3001	Rack	1	
9		Hex. Socket Bolt	4	M6x1Px16L
10		C-Snap Ring	3	S25
11	H-2160	Handle Seat	3	
12	H-3005	Fixed Plate	1	
13	H-459	Spring	3	
14		Spring Pin	3	ϕ 5x60L
15		Straight Pin	3	6x55L
16	H-2159	Handle Seat	3	
17	C-287	Handle Lever	3	
18		Hex. Socket Bolt	2	M6x1Px20L
19	H-3000	Rack	1	
20	H-149	Handle	3	
21		Nut	1	M16
22	H-654	Eccentric Shaft	1	
23		Bearing	1	6205ZZ
24		C-Snap Ring	1	S25
25	H-3002	Rack	1	
26		Spring Washer	1	M16



SPINDLE HEAD (4)

Model: KMA-3

Item	Parts No.	Parts Name	Q'ty	Remark
1		Hex. Socket Bolt	12	M12x1.75Px40L
2	H5-1010	Back Plate	1	
3	S-198	Adjusting Bolt	4	
4	H-4247	Wiper	2	
5	H-4281	Wiper	2	
6		Hex. Socket Bolt	3	M10x1.5Px25L
7		Spring Pin	2	φ 5x30L
8		Aluminium Pipe	4	φ 6
9		Straight Joint	1	PD401
10		Radiator	2	PT1/4
11		Straight Joint	1	PD601
12		Aluminium Pipe	3	φ 4
13	H-3007	Cover	1	
14		Hex. Socket Bolt	6	M8x1.25Px20L
15		Thimble	4	PB4
16		Thimble Nut	4	PA4
17		Thimble	7	PB6
18		Thimble Nut	7	PA6
19		A Type Distributor	1	DB8
20		Hex. Socket Bolt	2	M6x1Px25L
21		Straight Joint	1	PD801
22		Tube	1	PA8
23		Pipe Sleeve	1	PB8
24		Elbow Joint	1	PH601
25		Oil Pipe	1	φ 8
26	H-4279	Wiper	1	
27	H5-1028	Fixed shaft	2	φ 15x18L
28		Air Cylinder	2	



SPINDLE HEAD (5)

Model: KMA-3

Item	Parts No.	Parts Name	Q' ty	Remark
1		Rivet	7	ϕ 2x5L
2	H-620	Name Plate	1	
3	H-3022	Cover	1	
4	H-2348	Name Plate	1	MM
5	H-801	Name Plate	1	INCH
6	H-619	Name Plate	1	MM
7	H-483	Name Plate	1	
8		Key	1	5x5x12L
9		Hex. Socket Bolt	1	M6x1Px20L
10	H-616	Handle Seat	1	
11	H-480	Handle Lever	1	
12	H-149	Handle	4	
13		Hex. Socket Bolt	4	M6x1Px16L
14	H-789	Name Plate	1	
15	H-614	Control Lever Sleeve	1	
16	H-613	Control Lever	1	
17	H-571	Spring	1	
18		Steel Ball	2	ϕ 8
19	H-570	Clutch	1	
20	H-615	Spur Gear	1	
21		C-Snap Ring	1	S15
22		Key	1	5x5x20L
23	H-3336	Name Plate	1	
24		Hex. Socket Bolt	9	M8x1.25Px35L
25	C5-1007	Rack	1	MM
26	C5-1007-1	Rack	1	INCH
27		Hex. Socket Bolt	7	M8x1.25Px30L
28	H-594	Locking Screw	1	

SPINDLE HEAD (5)

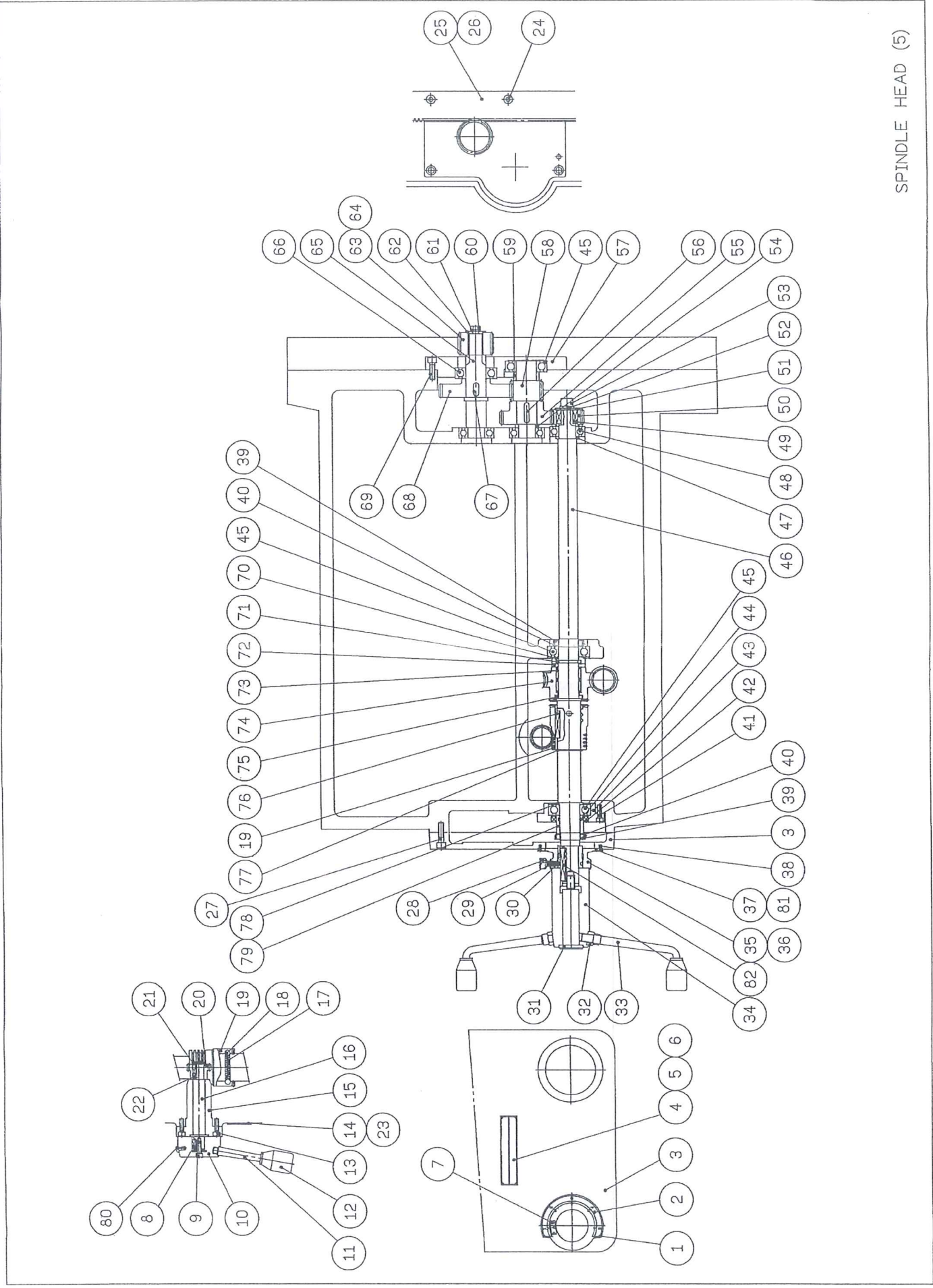
Model: KMA-3

Item	Parts No.	Parts Name	Q'ty	Remark
29	H-593	Spring	1	
30		Steel Ball	1	$\phi 6$
31	H5-1021	Locking Bolt	1	
32	H-598	Hex. Head Nut	3	
33	H-597	Handle Lever	3	
34	H5-1020	Handle Seat	1	
35	H-592	Graduated Ring	1	MM
36	H-798	Graduated Ring	1	INCH
37	H-591	Indicating Ring	1	MM
38		Flat Head Screw	4	M3x0.5Px8L
39	K-144	Bearing Nut	2	AN06
40		Bearing Washer	2	AW06
41		Hex. Socket Bolt	4	M6x1Px16L
42		Oil Seal	1	TC40x55x8
43	H-581	Bearing Seat	1	
44		O-Ring	1	G30
45		Bearing	3	6206
46	H5-1015	Transmission Shaft	1	
47	H-572	Washer	1	
48		Bearing	3	6205
49		Key	2	8x7x20L
50	H-1312	Spur Gear	1	
51	H-1334	Washer	1	
52		Spring Washer	1	M12
53		Hex. Socket Bolt	1	M12x1.75Px25L
54	H-1468	Spacer Ring	1	
55	H-1314	Spur Gear	1	
56		Key	1	7x7x30L

SPINDLE HEAD (5)

Model: KMA-3

Item	Parts No.	Parts Name	Q'ty	Remark
57	H-3024	Bearing Seat	1	
58	H-1469	Gear Shaft	1	
59	G-372	Washer	1	
60		Hex. Head Bolt	1	M8x1.25Px20L
61		Spring Washer	1	M8
62	H-574	Washer	1	
63	H-578	Spur Gear	1	
64	H-797	Spur Gear	1	
65	H-1471	Gear Shaft	1	
66		Bearing	1	6206LLB
67		Key	1	8x7x20L
68	H-1470	Spur Gear	1	
69		Hex. Socket Bolt	5	M8x1.25Px25L
70	H-569	Washer	1	
71	H-568	Washer	2	
72	H-567	Washer	1	
73		Needle Bearing	1	TLAW3038Z
74	H-565	Clutch	2	
75	H-566	Washer	1	
76		Key	1	7x7x40L
77		C-Snap Ring	1	S34
78	H-580	Washer	1	
79	H-582	Spacing Ring	1	
80		Round Head Screw	1	M5x0.8Px10L
81	H-4277	Indicating Ring	1	INCH
82		Parallel key	1	7x5x48L



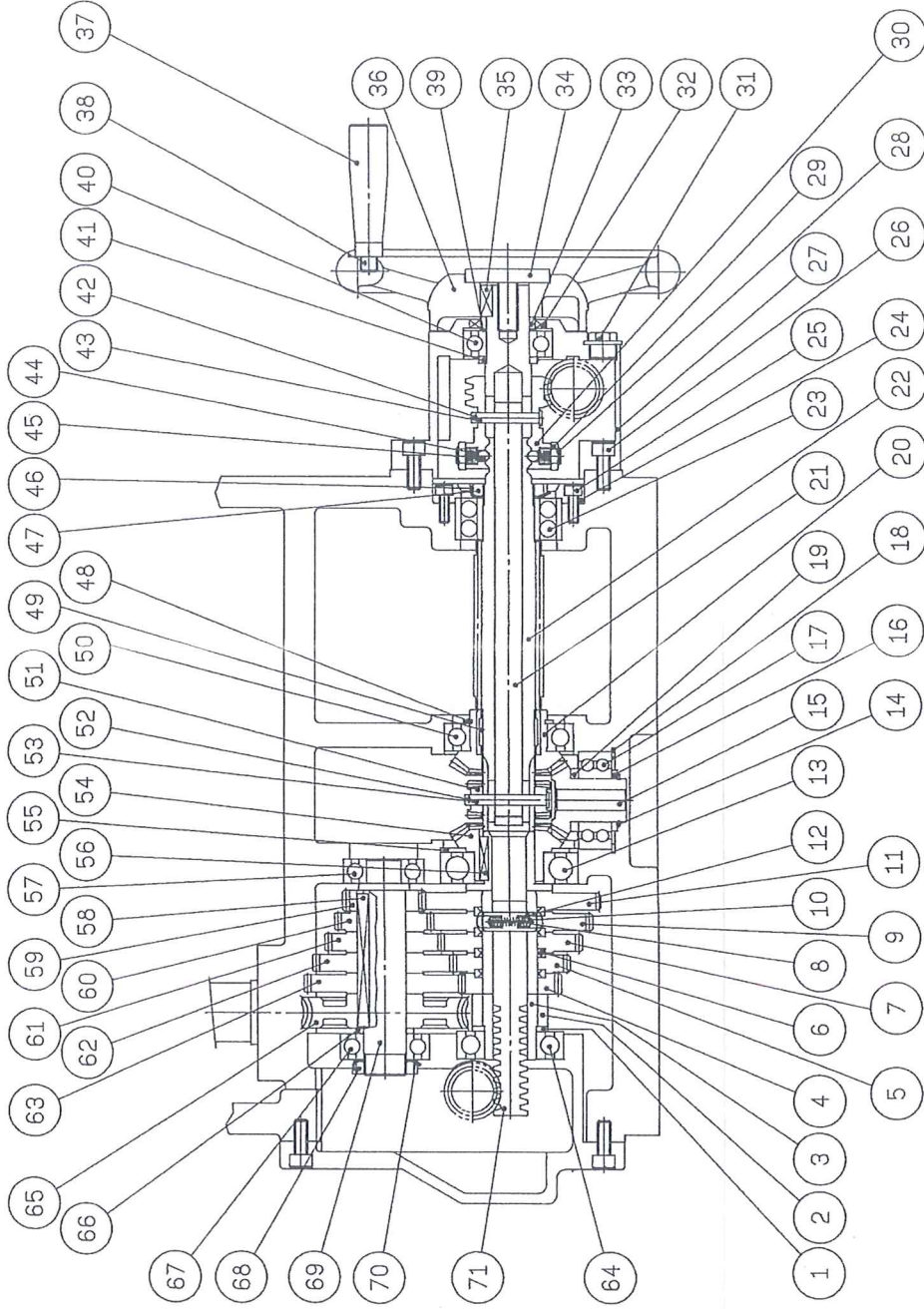
SPINDLE HEAD (5)

SPINDLE HEAD (6)

Item	Parts No.	Parts Name	Q'ty	Remark
1	H-519	Washer	1	
2	H-518	Washer	1	
3	H-509	6th Shaft	1	
4	H-517	Spur Gear	1	
5	H-516	Spur Gear	1	
6	H-513	Washer	4	
7	H-515	Spur Gear	1	
8	H-523	Spring	1	
9	H-514	Spur Gear	1	
10	H-522	Fork Pin	2	
11	H-512	Spur Gear	1	
12	H-521	Fork Sleeve	1	
13		Bearing	1	6208
14		C-Snap Ring	1	S25
15	H-532	Bevel Gear	1	
16	H-533	Washer	1	
17		Bearing	1	5205
18		C-Snap Ring	1	R50
19	H-533	Washer	1	
20	H-535	Bevel Gear	1	
21	H-3010	Variable Speed Lever	1	
22	H-3025	Shaft	1	
23		Bearing	1	5206
24	H-539	Bearing Cover	1	
25		Hex. Socket Bolt	4	M6x1Px16L
26		Hex. Socket Bolt	4	M8x1.25Px20L
27	H-546	Seat	1	
28	H-543	Bolt	2	

SPINDLE HEAD (6)

Item	Parts No.	Parts Name	Q' ty	Remark
29	H-544	Hex. Head Nut	2	M10x1.5P
30	H-540	Sleeve	1	
31	H-548	Hex. Head Bolt	2	
32		Oil Seal	1	VC32458
33	H-549	Washer	1	
34	H-551	Fixing Bolt	1	
35		Key	1	7x7x16L
36	H-550	Handle Wheel	1	
37	T-14	Handle	1	
38	T-15	Handle Bolt	1	
39		O-Ring	1	P20
40		Bearing	1	6205LLU
41	H-545	Washer	1	
42		Cotter Pin	1	1/16"x3/4"
43	H-541	Dowel Pin	1	
44	H-609	Spring	2	
45		Steel Ball	2	ϕ 6
46		Bearing Washer	1	AW06
47	K-144	Bearing Nut	1	AN06
48		C-Snap Ring	1	S45
49		Needle Bearing	1	TLA3026Z
50		Ball Bearing	1	6009
51	H-537	Clutch	1	
52		Cotter Pin	1	1/16"x3/4"
53	H-538	Dowel Pin	1	
54	H-510	Bevel Gear	1	
55	H-511	Washer	1	
56		Key	1	7x5x25L



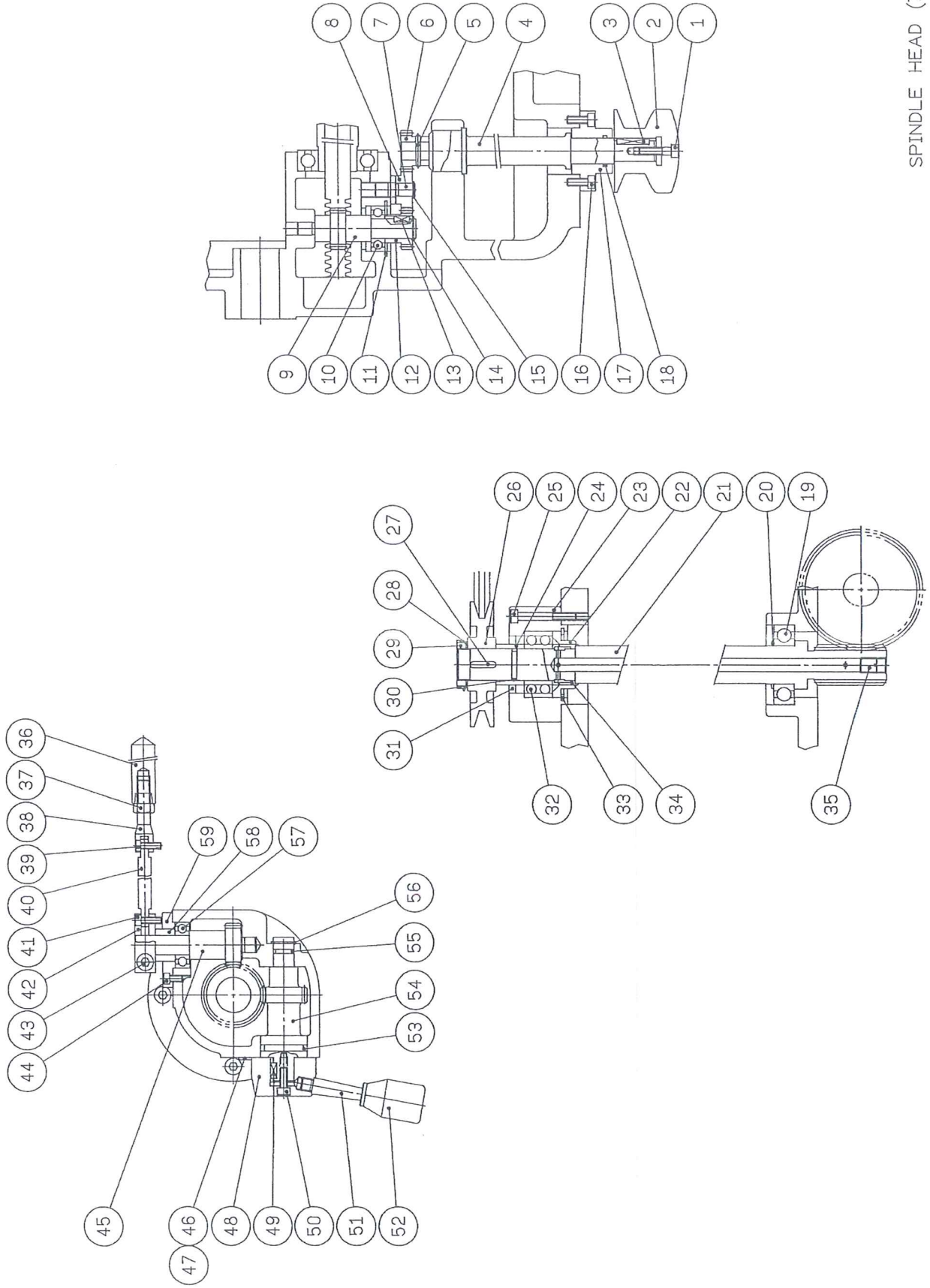
SPINDLE HEAD (6)

SPINDLE HEAD (7)

Item	Parts No.	Parts Name	Q'ty	Remark
1		Hex. Socket Bolt	1	M6x1Px20L
2	H-531	Handle	1	
3		Key	1	5x5x25L
4	H-3023	Control Lever	1	
5		Spring Pin	1	φ 5x25L
6	H-529	Spur Gear	1	
7	H-526	Gear Shaft	1	
8	H-527	Spur Gear	1	
9	H-524	Gear Shaft	1	
10		Bearing	1	6202Z
11		C-Snap Ring	1	R35
12	H-525	Spur Gear	1	
13		Key	1	5x5x12L
14		C-Snap Ring	1	S15
15		E-Snap Ring	1	E8
16		Hex. Socket Bolt	3	M6x1Px16L
17	H-530	Control Lever Cover	1	
18		O-Ring	1	P20
19		Bearing	1	6206
20		C-Snap Ring	1	S30
21	H-3027	Worm	1	
22	H-3009	Shaft Sleeve	1	
23	H-3008	Bearing Seat	1	
24	H-3034	Shaft Sleeve	1	
25		Hex. Socket Bolt	4	M6x1Px45L
26	H-3035	Belt Pulley	1	
27		Key	1	5x5x20L
28		Bearing Washer	1	AW05

SPINDLE HEAD (7)

Item	Parts No.	Parts Name	Q'ty	Remark
29	K-105	Bearing Nut	1	AN05
30		O-Ring	1	P20
31		Oil Seal	1	VC32458
32		Bearing	1	5205
33		C-Snap Ring	1	R52
34	H-496	Spacing Ring	1	
35		Hex. Socket Set Screw	1	M12x1.75Px12L
36	H-562	Control	1	
37	H-561	Hex. Head Nut	1	
38	H-560	Link Seat	1	
39		Hex. Socket Bolt	1	M5x0.8Px16L
40	H5-1014	Link	1	
41		Hex. Socket Bolt	1	M5x0.8Px16L
42	H-558	Link Seat	1	
43		Hex. Socket Bolt	1	M8x1.25Px20L
44		Hex. Socket Bolt	4	M5x0.8Px10L
45	H-555	Gear Shaft	1	
46	H-563	Name Plate	1	English
47	H-3354	Name Plate	1	Chinese
48	H-553	Handle Seat	1	
49		Key	1	5x5x12L
50		Hex. Socket Bolt	1	M6x1Px16L
51	H-554	Handle Lever	1	
52	H-149	Handle	1	
53		O-Ring	1	P30
54	H-552	Gear Lever	1	
55		O-Ring	1	P12
56		C-Snap Ring	1	S16



SPINDLE HEAD (7)

TABLE UNITS (Ball Screw)

Item	Parts No.	Parts Name	Q'ty	Remark
1	T-83a	Bearing Cover	2	
2	T-1047	Bearing Housing	1	
3		Hex. Socket Bolt	4	M10x1.5Px25L
4	T-1044	Nut Seat	1	
5		Needle Bearing	1	TA6525
6		Thrust Bearing	1	51113
7		Thrust Bearing	1	51112
8		Needle Bearing	1	TA6025
9	T-1045	Bearing Cover	1	
10		Hex. Socket Bolt	4	M6x1Px16L
11	T-1046	Bearing Housing	1	
12	K-144	Bearing Nut	1	AN06
13		Bearing Washer	1	AW06
14		Hex. Socket Bolt	3	M6x1Px16L
15	T5-1011d	Spring	4	
16	T5-1011b	Cover	2	
17	T5-1011e	Wiper	2	
18		Round Head Screw	6	M5x0.8Px8L
19		Hex. Socket Screw	4	M5x08Px16L
20	T5-1011c	Stopper	4	
21		Hex. Head Nut	4	M8
22		Hex. Socket Bolt	4	M12x1.75Px40L
23		Hex. Socket Bolt	4	M10x1.5Px50L
24		Hex. Socket Bolt	2	M5x0.8Px8L
25		Hex. Socket Bolt	4	M6x1Px10L
26		Hex. Socket Bolt	2	M8x1.25Px20L
27	T5-1013	Adjusting Block	1	
28	T5-1001	Table	1	

TABLE UNITS

(Ball Screw)

Item	Parts No.	Parts Name	Q'ty	Remark
29	T5-1012	Adjusting Block	1	
30		Hex. Socket Bolt	4	M10x1.5Px35L
31	T5-1011a	Table Side Cover	2	
32	T-1041	Ball Screw	1	
33		Hex. Socket Bolt	2	M6x1Px16L
34	T5-1014	Cover	1	
35		Hex. Socket Bolt	1	M10x1.5Px30L
36		Air Cylinder	2	
37	S-2084	Washer	2	
38	S-2085	Fixed Shaft	2	
39		Washer	4	
40		Hex. Socket Bolt	4	M10x1.5Px30L
41	T-1043	Gear Bracket	1	
42	T-78	Taper Pin	2	
43		Hex. Head Nut	2	M6
44		Hex. Socket Bolt	4	M6x1Px60L
45	T-1059	Cover	1	
46		Round Head Screw	6	M5x0.8Px8L
47	T-91	T-Block	2	
48	T-109	Oil Filter	1	
49		Hex. Nut	6	M8
50	T5-1020	Fixed Plate	2	
51		Hex. Socket Set Screw	2	M8x1.25Px80L
52	T5-1002	Gib	1	
53	T5-1003	Gib	1	
54	T-89	Taper Pin	2	
55		Hex. Head Nut	4	M6
56	T-82	Taper Pin	2	

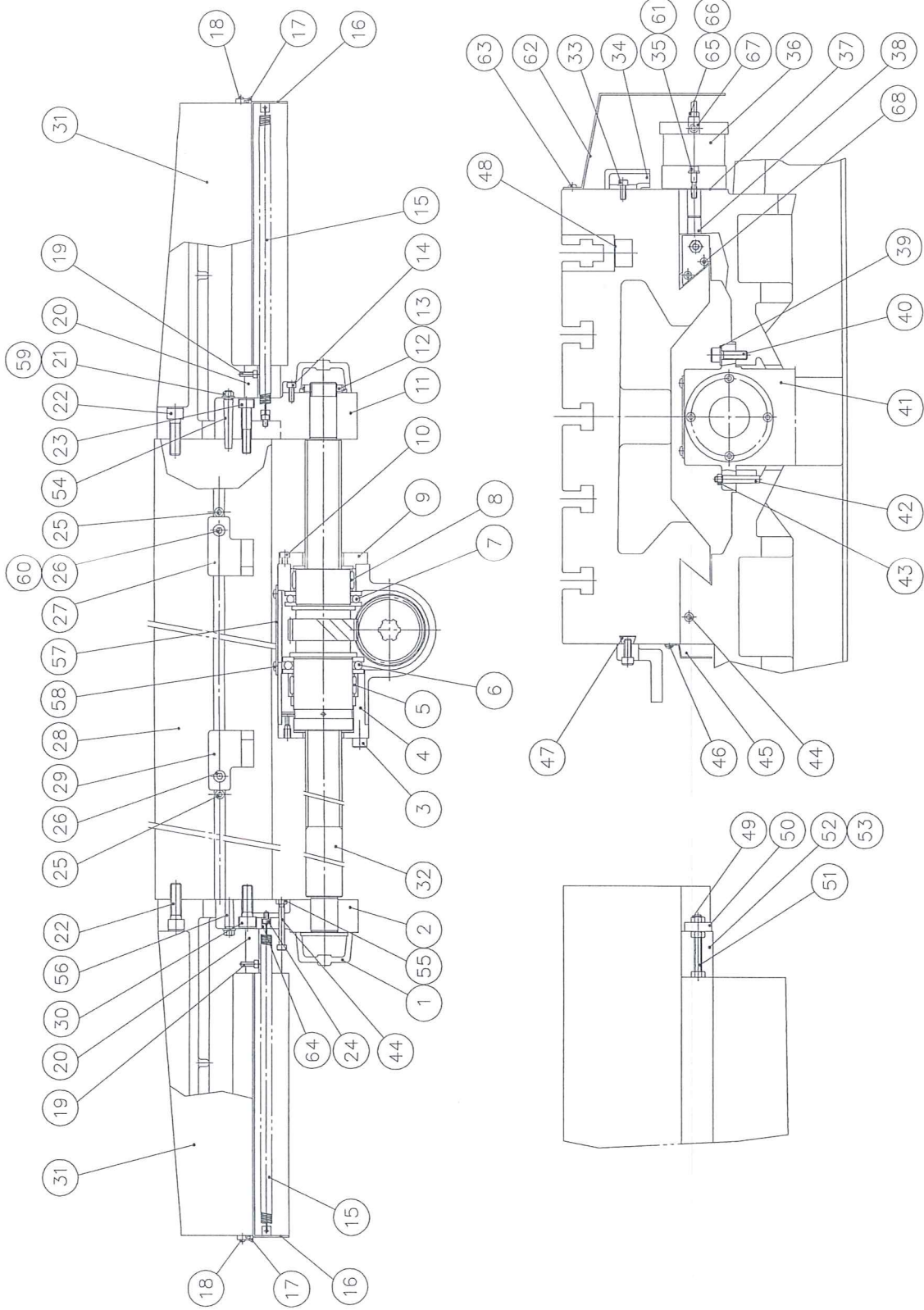


TABLE UNIT
(BALL SCREW)

TABLE UNITS

(Lead Screw)

Item	Parts No.	Parts Name	Q'ty	Remark
1	T-83a	Bearing Cover	2	
2		Hex. Socket Bolt	2	M6x1Px16L
3		Taper Roller Bearing	2	30206
4	T-350a	Bearing Housing	1	
5	T-754a	Spacing Ring	1	
6		Hex. Nut	4	M6
7	T5-1007	Feed Screw	1	MM
8	T-339a	Feed Nut	1	
9		Hex. Socket Bolt	4	M10x1.5Px30L
10		Spring Washer	4	M10
11		Needle Bearing	2	TA5525Z
12		Thrust Bearing	2	51111
13	T-74a	Helical Gear	1	
14		Key	1	7x7x60L
15		Hex. Socket Bolt	3	M8x1.25Px25L
16		Washer	3	
17	T-349a	Adjusting Nut	1	
18	T-85a	Cover	1	
19	G-374	Washer	1	
20		Hex. Socket Bolt	4	M6x1Px16L
21		Bearing	1	6206ZZ
22	T-340a	Bearing Housing	1	
23	T-82	Taper Pin	2	
24	K-144	Bearing Nut	2	AN06
25		Bearing Washer	2	AW06
26		Grease Cap	2	PT1/8
27	T5-1011d	Spring	4	
28	T5-1011b	Cover	2	

TABLE UNITS

(Lead Screw)

Item	Parts No.	Parts Name	Q'ty	Remark
29	T5-1011e	Wiper	2	
30		Round Head Screw	6	M5x0.8Px8L
31	T5-1011a	Table Side Bolt	4	
32		Hex. Socket Bolt	4	M5x0.8Px16L
33	T5-1011c	Stopper	4	
34		Hex. Head Nut	4	M8
35		Hex. Socket Bolt	4	M12x1.75Px40L
36		Hex. Socket Bolt	4	M10x1.5Px50L
37	T-89	Taper Pin	2	
38		Hex. Socket Bolt	4	M6x1Px10L
39		Hex. Socket Bolt	2	M8x1.25Px20L
40	T5-1013	Adjusting Block	1	
41	T-77	Cover	1	
42		Flat Head Screw	4	M6x1Px10L
43	T5-1001	Table	1	
44	T5-1012	Adjusting Block	1	
45		Hex. Socket Bolt	4	M10x1.5Px35L
46		Hex. Socket Bolt	2	M5x0.8Px8L
47		Hex. Socket Bolt	4	M6x1Px60L
48	T5-1003	Adjusting Wedge	1	
49	T5-1002	Adjusting Wedge	1	
50		Hex. Socket Set Screw	2	M8x1.25Px80L
51	T5-1020	Fixed Plate	2	
52		Hex. Nut	6	M8
53	T-91	T-Block	2	
54		Round Head Screw	6	M5x0.8Px8L
55	T-1059	Cover	1	
56		Hex. Head Nut	2	M6

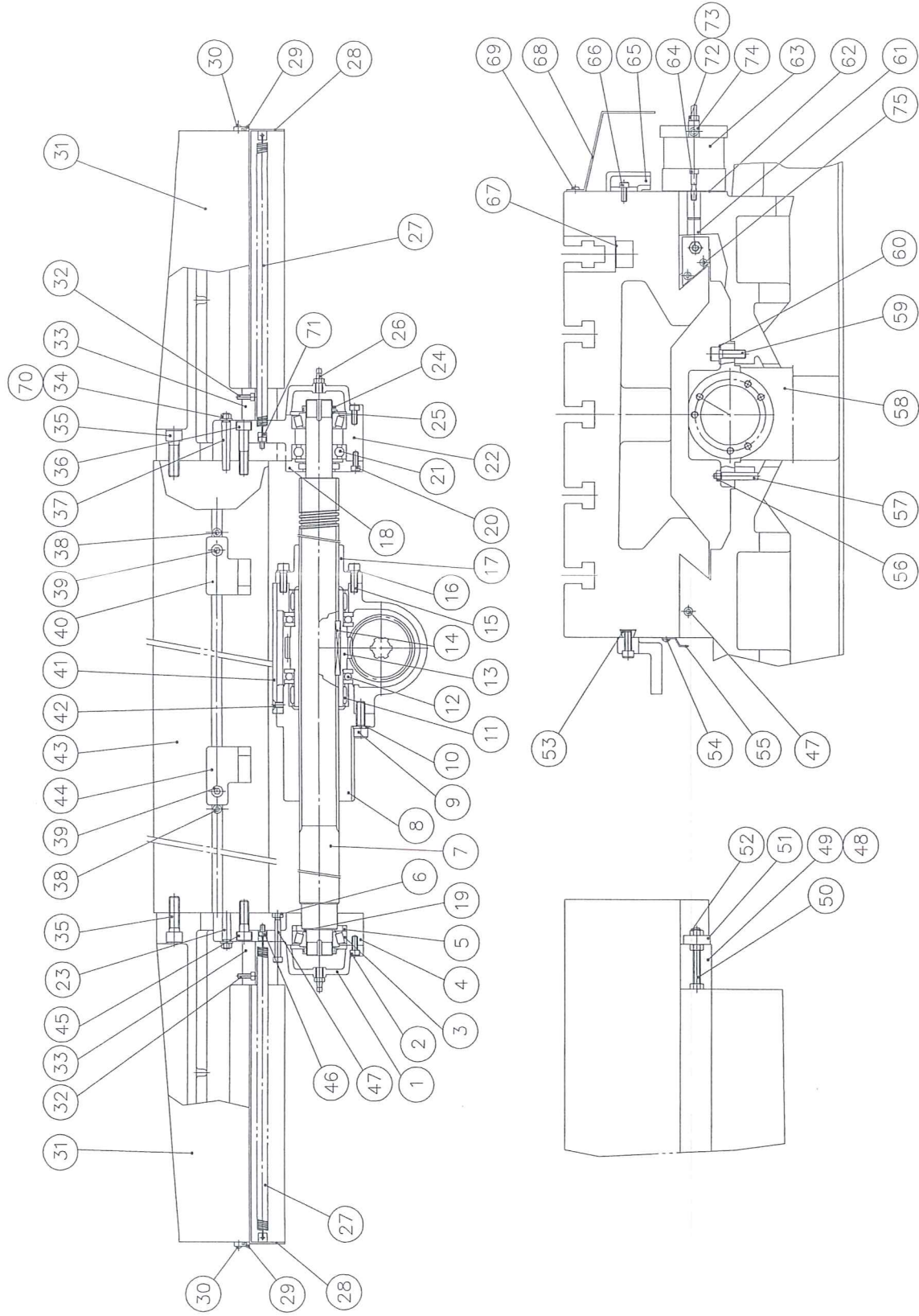
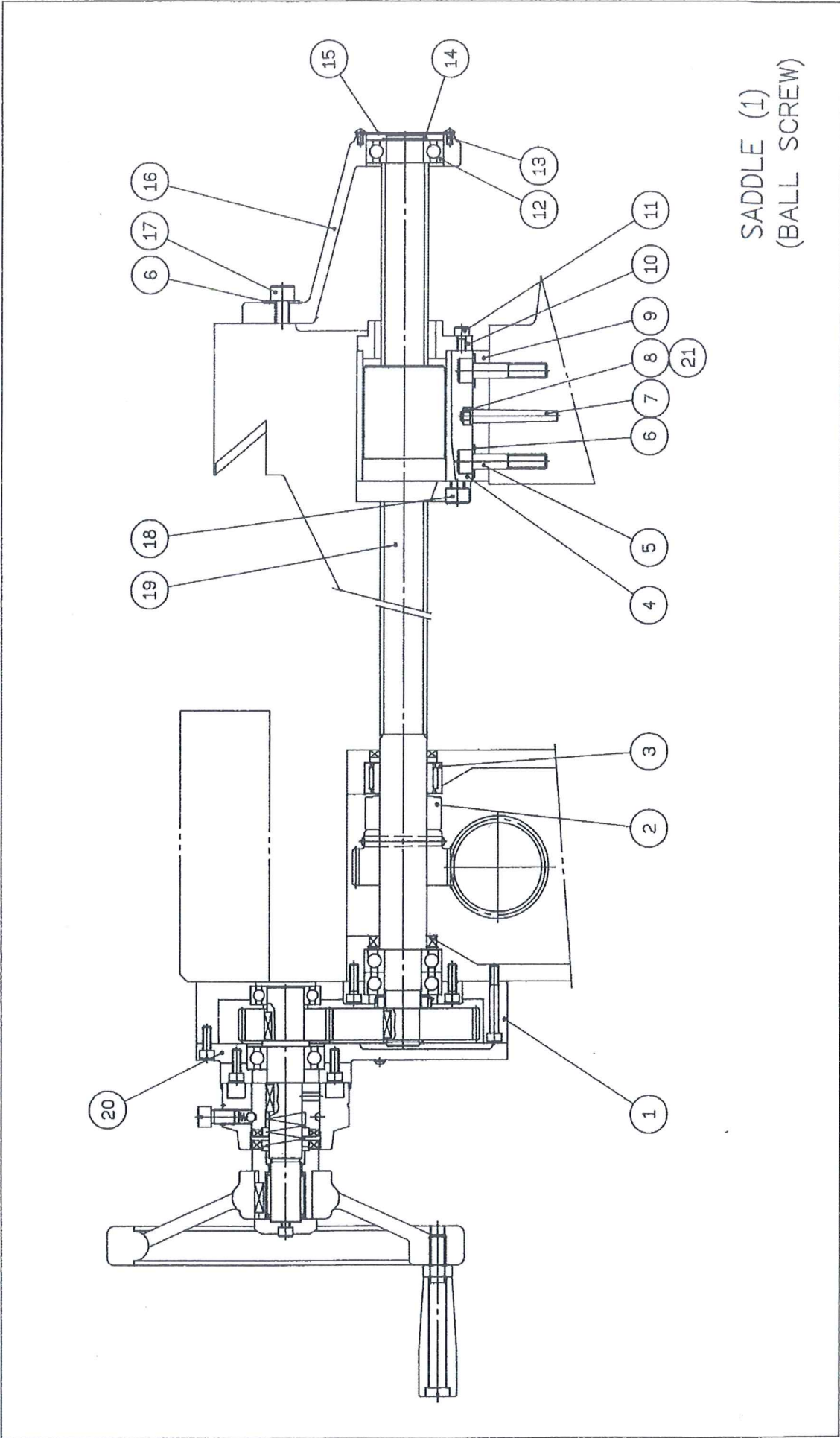


TABLE UNIT
(LEAD SCREW)

SADDLE UNITS (1)

(Ball Screw) Model: KMA-3

Item	Parts No.	Parts Name	Q'ty	Remark
1	S-321	Bearing Housing	1	
2	S-107	Washer	1	
3		Needle Bearing	1	NA49/32
4	S-2075	Lead Screw Nut Seat	1	
5		Hex. Socket Bolt	4	M10x1.5Px50L
6		Spring Washer	6	M10
7	S-114	Taper Pin	2	
8		Hex. Head Nut	2	M6
9	S-2080	Foundation Washer	1	
10	S-2076	Washer	1	
11		Hex. Socket Bolt	2	M6x1Px20L
12		Bearing	1	6205ZZ
13		Round Head Screw	3	M4x0.7Px8L
14		C-Snap	1	S25
15	S-116a	Bearing Cover	1	
16	S-115a	Bearing Housing	1	
17		Hex. Socket Bolt	2	M10x1.5Px30L
18		Hex. Socket Bolt	5	M8x1.25Px25L
19	S-2072	Ball Screw	1	
20	S-317	Bearing Cover	1	
21		Spring Washer	2	M6



SADDLE (1)
(BALL SCREW)

SADDLE UNITS (1)

(Lead Screw)

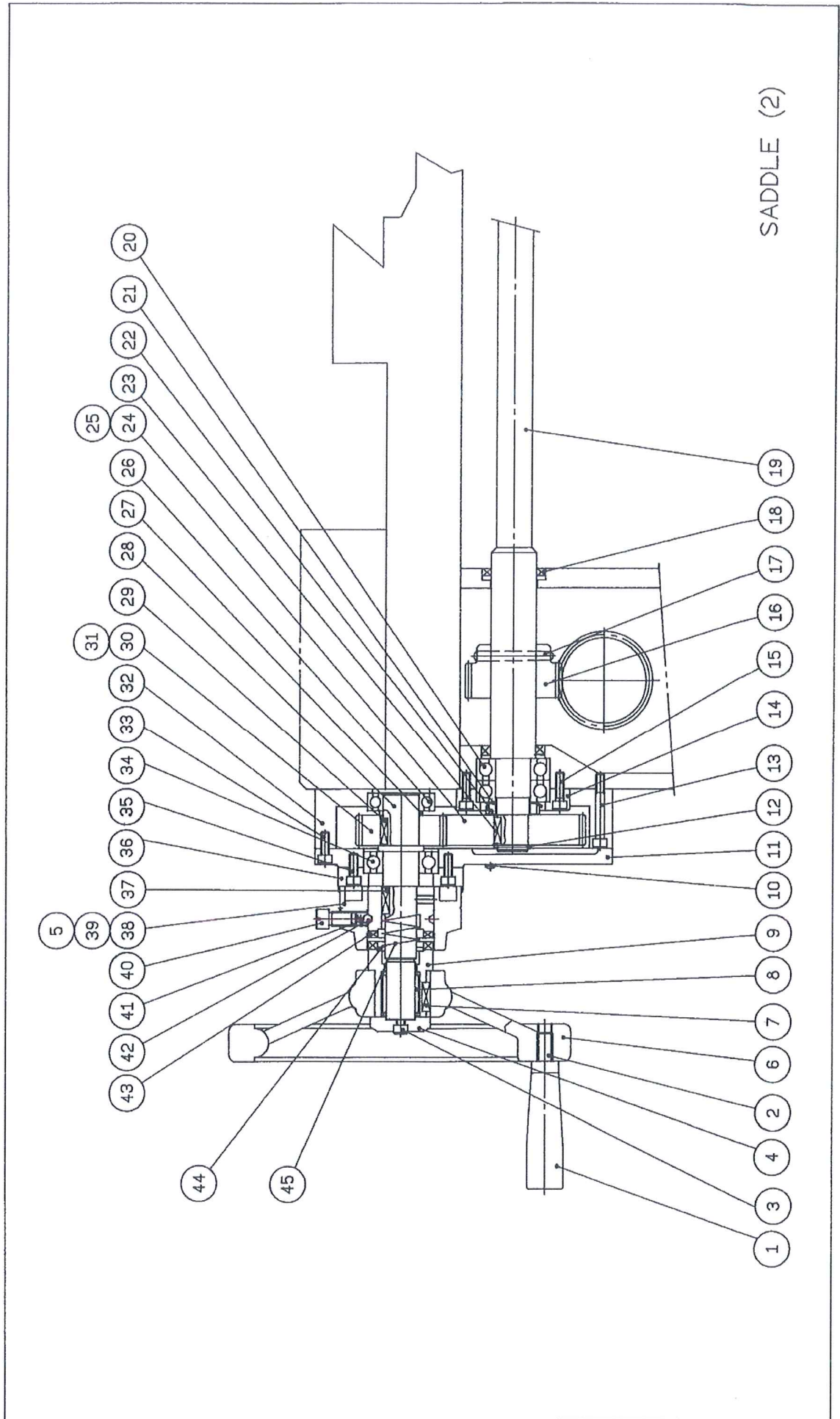
Model: KMA-3

Item	Parts No.	Parts Name	Q'ty	Remark
1	S-321	Bearing Housing	1	
2	S-107	Washer	1	
3		Needle Bearing	1	NA49/32
4	S-608a	Lead Screw Nut Seat	1	
5		Hex. Socket Bolt	4	M10x1.5Px50L
6		Spring Washer	6	M10
7	S-114	Taper Pin	2	
8		Nut	2	M6
9	S-319a	Foundation Washer	1	
10		Bearing	1	6205ZZ
11		Round Head Screw	3	M4x0.7Px8L
12		C-Snap	1	S25
13	S-116a	Bearing Cover	1	
14	S-115a	Bearing Housing	1	
15		Hex. Socket Bolt	2	M10x1.5Px30L
16		Hex. Socket Bolt	5	M8x1.25Px25L
17	T5-1008	Cross Feed Lead Screw	1	
18	S-317	Bearing Cover	1	
19	S-607a	Adjust Nut	1	METRIC
20	S-644a	Adjust Nut	1	INCH
21	S-109a	Adjust Nut	1	METRIC
22	S-492a	Adjust Nut	1	INCH
23	S-110	Fixed block	2	
24		Washer	2	M8
25		Hex. Socket Bolt	2	M8x1.25Px25L

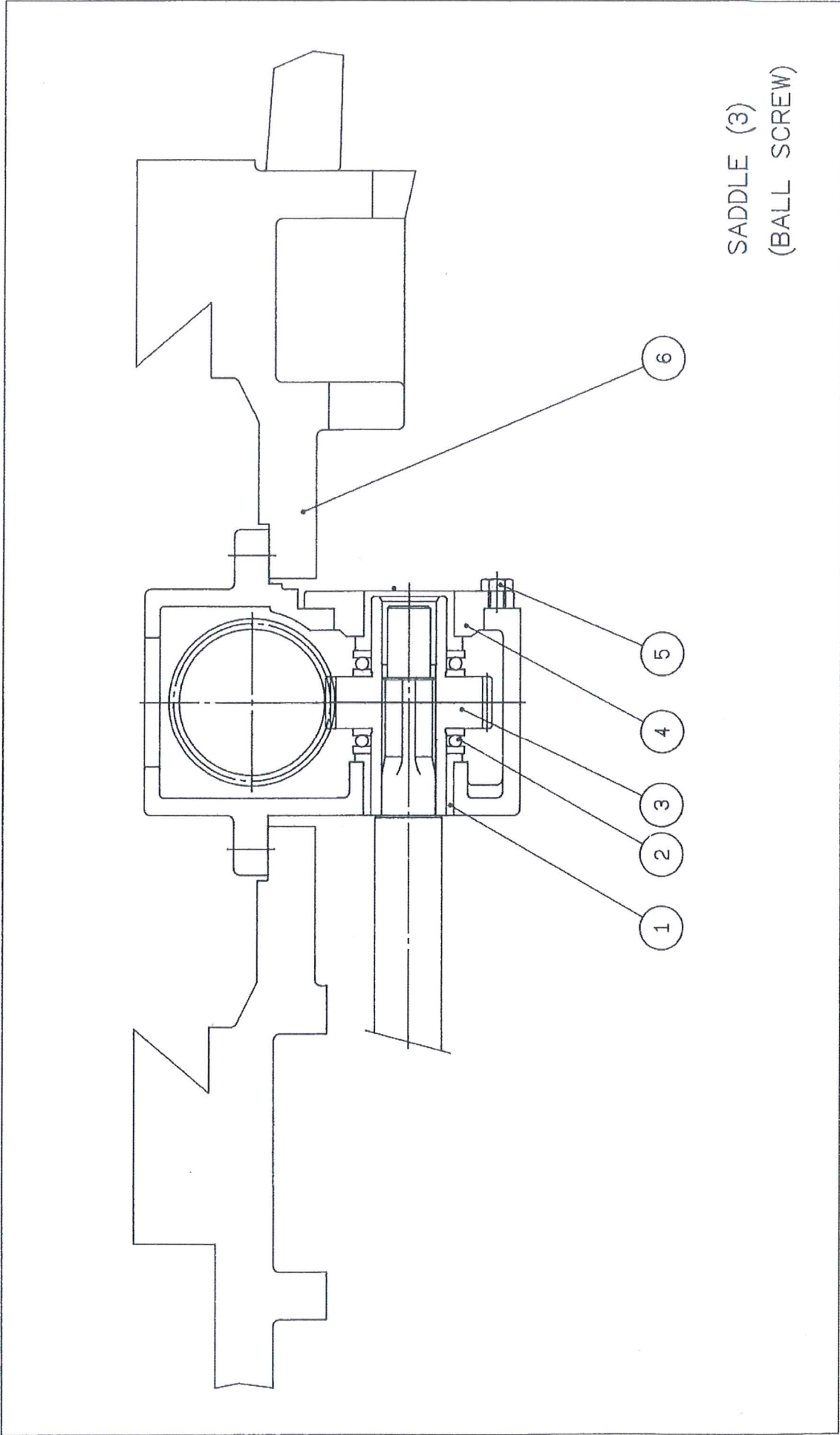
SADDLE UNITS (2)

Model: KMA-3

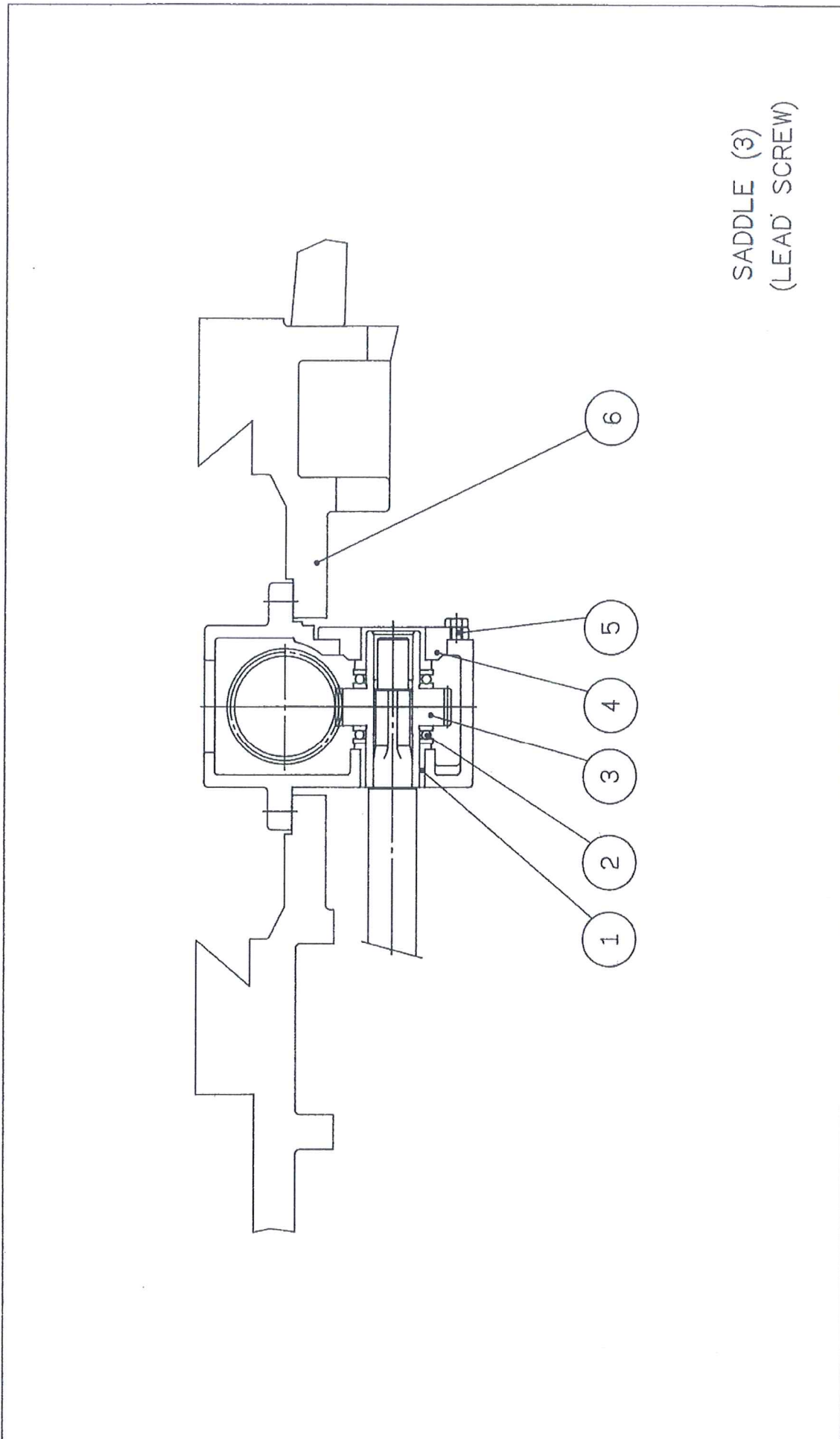
Item	Parts No.	Parts Name	Q'ty	Remark
1	S-105	Handle	2	
2	S-104	Handle Bolt	2	
3		Hex. Socket Bolt	2	M6x1Px16L
4	S-103	Washer	2	
5	S-97	Graduation Ring	2	
6	S-288	Handle Wheel	2	
7		Key	2	7x5x20L
8		Needle Bearing	2	TA2030
9	S-101	Handle Wheel Clutch	2	
10		Spring Pin	4	φ 5x30L
11	S-315	Bearing Cover	1	
12		C-Snap	2	S22
13		Hex. Socket Bolt	8	M6x1Px45L
14	S-318	Bearing Cover	2	
15		Hex. Socket Bolt	8	M6x1Px20L
16	S-92	Helical Gear	2	
17	S-499	Taper Pin	2	6x50L
18		Oil Seal	4	VC32458
19	S5-1017	Shaft	1	
20		Bearing	4	7205B
21		Bearing Washer	2	AW05
22	K-105	Bearing Nut	2	AN05
23		Key	2	5x5x18L
24	S-314	Spur Gear	2	
25	S-494	Spur Gear	2	
26		Bearing	2	6005ZZ
27	S-313	Spacing Ring	2	
28	S-316	Transmission Shaft	2	



SADDLE (2)



SADDLE (3)
(BALL SCREW)



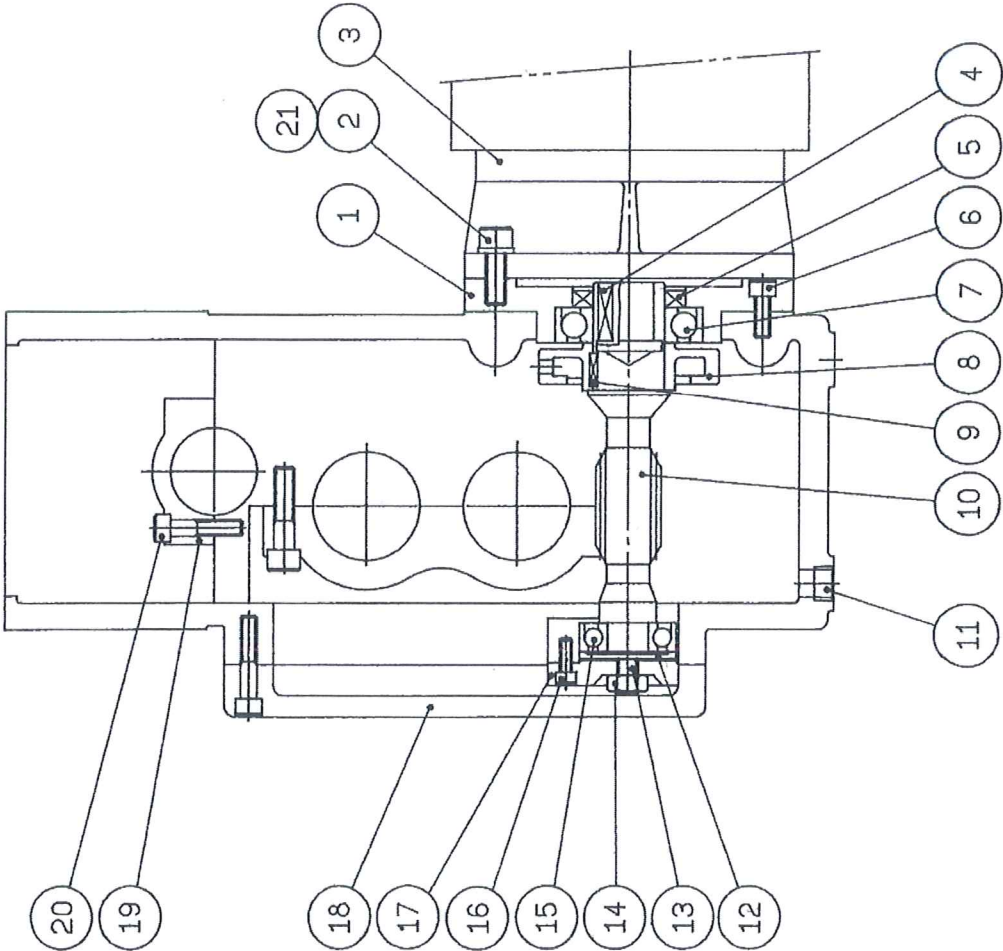
SADDLE (3)
(LEAD SCREW)

GEAR BOX (1)

Model: KMA-3

Item	Parts No.	Parts Name	Q'ty	Remark
1	G-396	Back Bearing Cover	1	
2		Hex. Socket Bolt	4	M10x1.5Px25L
3		Motor	1	2HP-6P
4		Key	1	7x7x22L
5		Oil Seal	1	TC35558
6		Hex. Socket Bolt	4	M8x1.25Px20L
7		Bearing	1	7207B
8	G-394	Oil Splasher	1	
9		Key	1	4x4x16L
10	G-393	Motor Shaft	1	
11		Plug	1	PT3/8
12	G-111	Washer	1	
13		Hex. Socket Set Screw	1	M10x1.5Px16L
14		Hex. Head Nut	1	M10x1.5P
15		Bearing	1	7204B
16		Hex. Socket Bolt	4	M6x1Px16L
17	G-112	Front Bearing Cover	1	
18	G5-1019	Front Cover	1	
19	G5-1018	Bearing Cover	1	
20		Hex. Socket Bolt	2	M8x1.25Px30L
21		Spring Washer	4	M10

GEAR BOX (1)



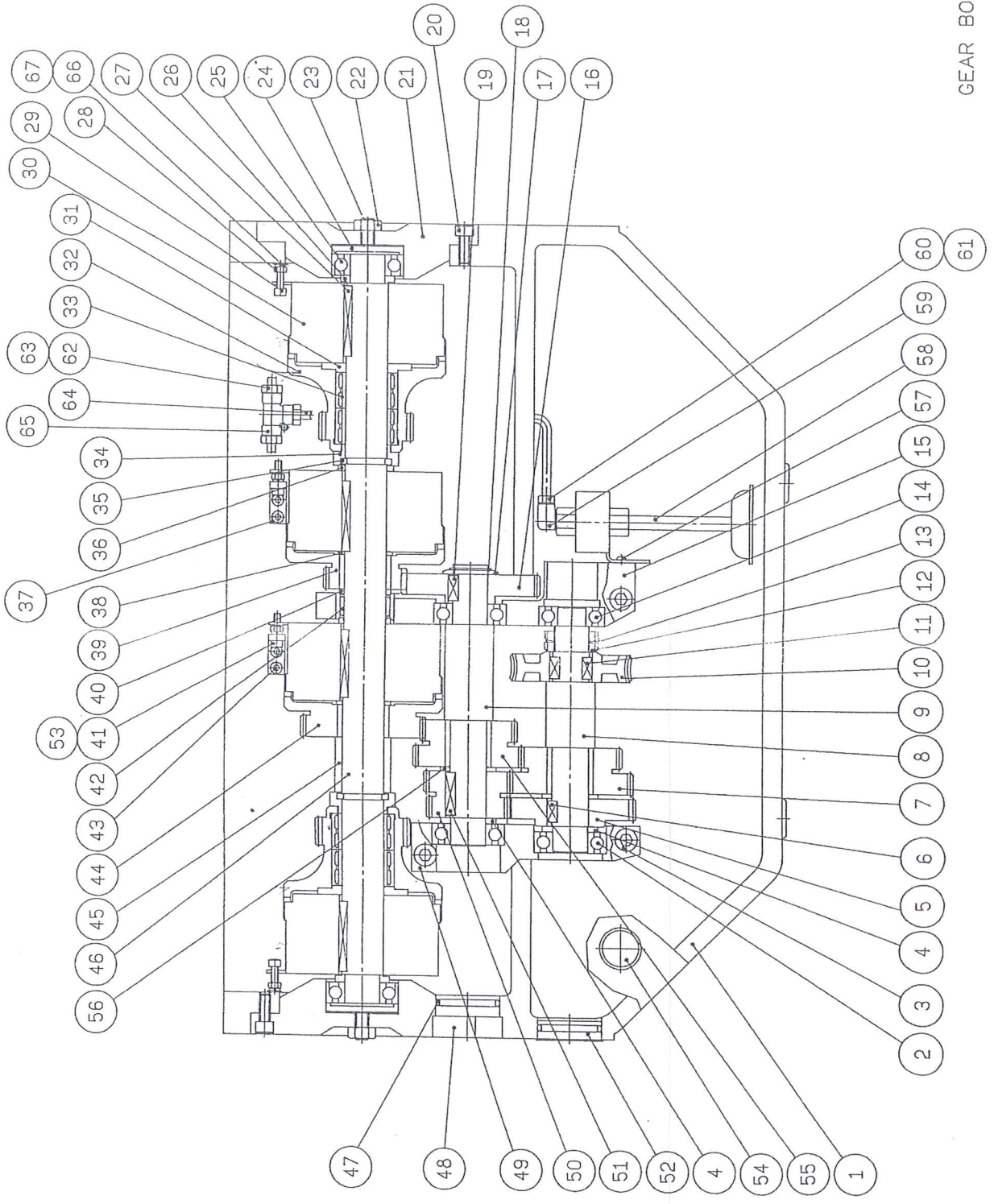
GEAR BOX (2)

Model: KMA-3

Item	Parts No.	Parts Name	Q' ty	Remark
1	G5-1001	Gear Box	1	
2		Bearing	3	6205
3		Hex. Socket Bolt	6	M10x1.5Px40L
4	G5-1023	Washer	2	4t
5	G5-1004	Spur Gear	1	
6		Key	1	7x7x15L
7	G5-1005	Spur Gear	1	
8	G5-1003	Shaft	1	
9	G5-1010	Shaft	1	
10	G-121	Worm Gear	1	
11		Key	2	7x7x16L
12	K-105	Bearing Nut	2	
13		Bearing Washer	1	AW05
14		Bearing	1	6204
15	G5-1012	Bearing Cover	1	
16	G5-1009	Spur Gear	1	
17	G-135	Washer	1	3t
18		C-Snap	1	S25
19		Key	1	7x7x18L
20		Hex. Socket Bolt	8	M8x1.25Px20L
21	G-382	Bearing Housing	2	
22		Hex. Head Nut	2	M10x1.5P
23		Hex. Socket Set Screw	2	M10x1.5Px25L
24	G-168	Bearing Adjust Shim	2	
25		Bearing	2	7205B
26	G-369	Spacing Ring	2	
27		Key	4	8x7x50L
28		Hex. Head Nut	2	M5x0.8P

GEAR BOX (2)

Item	Parts No.	Parts Name	Q' ty	Remark
29		Hex. Socket Bolt	2	M5x0.8Px30L
30		Clutch	4	MWC-5
31	G-370	Washer	2	
32	G-371	Helical Gear	2	
33		Neddle Bearing	4	NAFW304526
34	G-373	Spacing Ring	2	
35	H-568	Washer	4	
36	G5-1021	Washer	1	7t
37	G5-1017	Set Block	2	
38	G5-1002	Washer	2	2t
39	G5-1015	Spur Gear	1	
40	G5-1020	Washer	2	4t
41		Hex. Socket Screw	2	M5x0.8Px25L
42		Neddle Bearing	1	RNA4905
43		Hex. Socket Bolt	4	M5x0.8Px20L
44	G5-1014	Spur Gear	1	
45	G5-1016	Spacing Ring	1	
46	G5-1013	Shaft	1	
47		O-Ring	2	P40
48	G-391	Plug	1	
49	G5-1011	Bearing Cover	1	
50	G5-1007	Spur Gear	1	
51		Key	1	7x7x30L
52	G-155	Plug	1	
53		Nut	2	M5
54		Oil Gage	1	φ 26x φ 30
55	G5-1008	Spur Gear	1	
56	G5-1022	Washer	2	3t

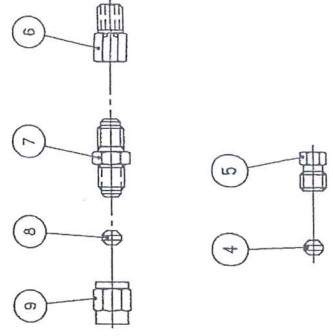
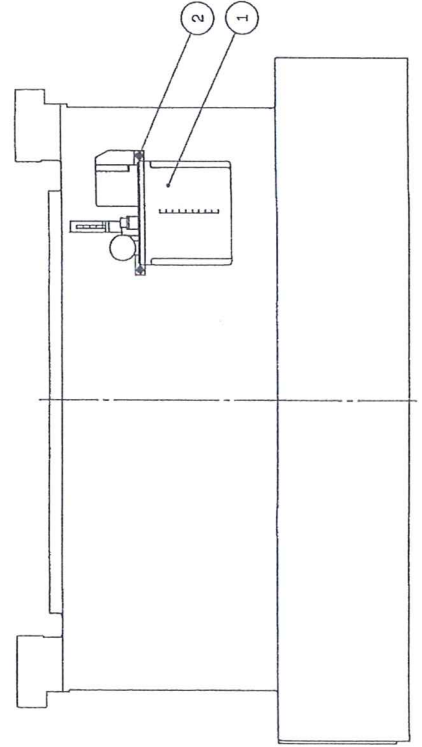
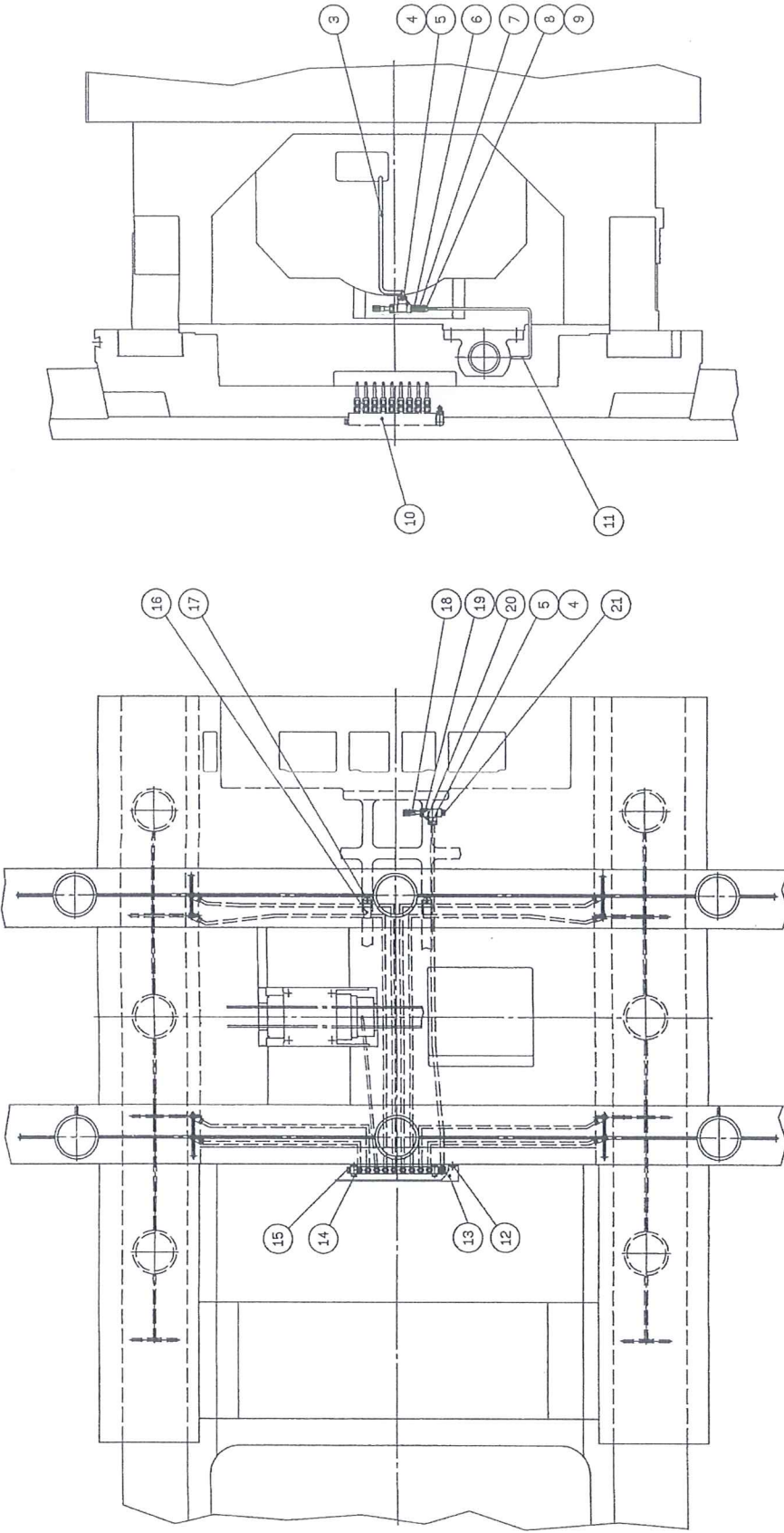


GEAR BOX (2)

SADDLE LUBBRICATION

Model: KMA-3

Item	Parts No.	Parts Name	Q'ty	Remark
1		Lubrication Pump	1	CESA10
2		Hex. Socket Bolt	2	M6x1Px6L
3		Aluminium Pipe	1	φ 6
4		Thimble	2	PB6
5		Thimble Nut	2	PA6
6		Straight Joint	1	PD401
7		Joint	1	CPB3
8		Thimble	1	PB4
9		Screw Nut	1	PAN4
10		A Type Distributor	1	A10
11		Aluminium Pipe	1	φ 4
12		Hex. Socket Bolt	3	M6x1Px16L
13	S-1226	Cover	1	
14		Hex. Socket Bolt	2	M5x0.8Px20L
15		Hex. Nut	2	M5
16		Tube Clips	2	φ 4
17		Round Head Screw	2	M5x0.8Px8L
18		Wire Soft Tube	1	φ 6x950L
19		T-Joint	2	PKD6
20		Hex. Socket Bolt	2	M6x1Px16L
21		Union	1	PG006



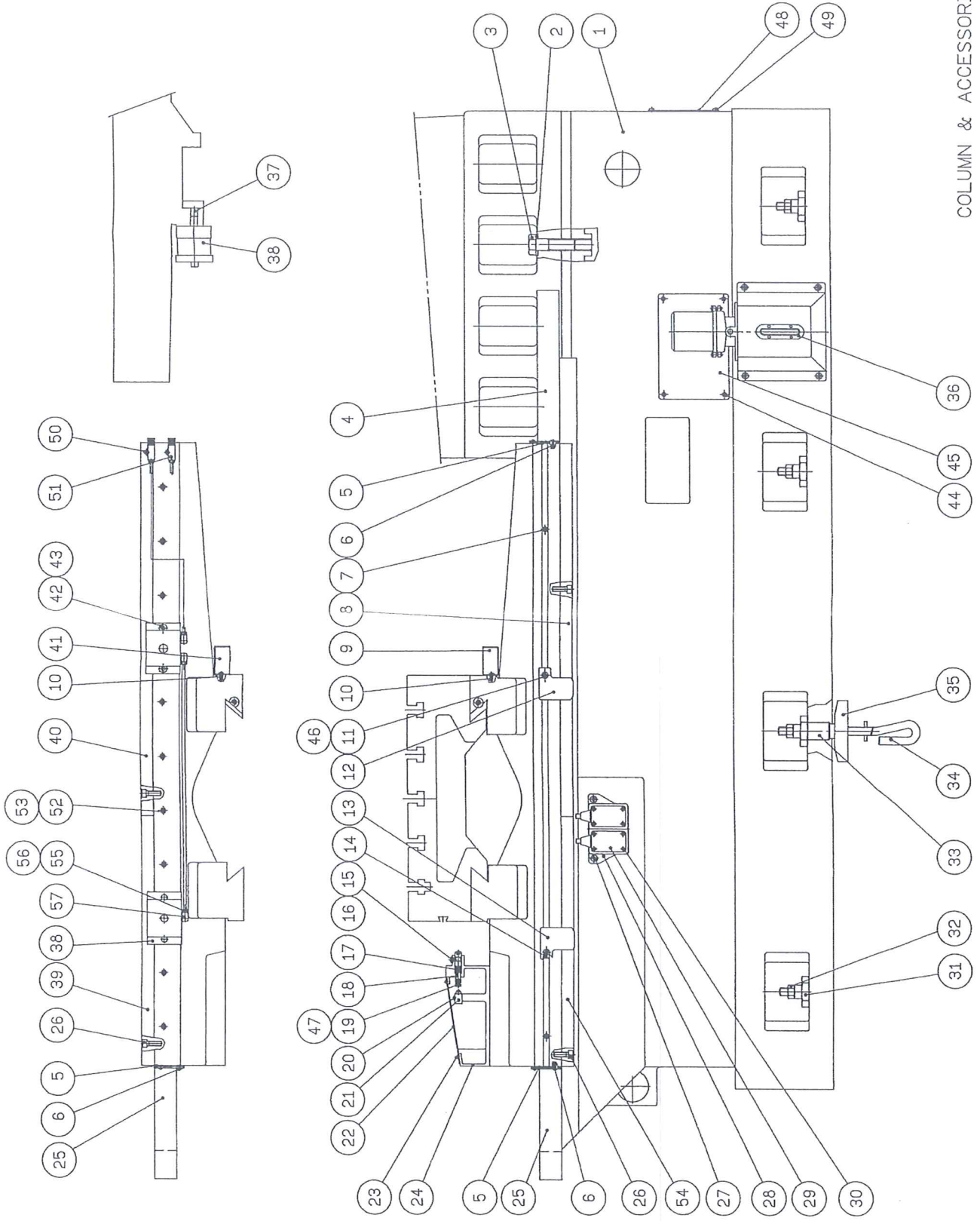
SADDLE LUBRICATION

COLUMN & ACCESSORIES (1)

Model: KMA-3

Item	Parts No.	Parts Name	Q' ty	Remark
1	B5-1001	Base	1	
2		Washer	11	M24
3		Hex. Head Bolt	11	M24x3Px90L
4	S-1222a	Cover	2	
5	S5-1012	Wiper	4	
6		Round Head Screw	16	M4x0.7Px12L
7		Hex. Socket Bolt	2	M5x0.8Px8L
8	S5-1003	Saddle Fixing Block	1	
9	S5-1014a	Cooling Guide Plate	1	
10		Round Head Screw	4	M6x1Px8L
11		Hex. Socket Bolt	2	M8x1.25Px25L
12	S-1230	Leader Adjustable Seat	1	
13	S-1231	Leader Adjustable seat	1	
14	T-91	T Block	2	
15		Hex. Head Nut	2	M6x1P
16		Hex. Socket Set Screw	2	M6x1Px12L
17	S-150	Spring	2	
18	S-149	Switch Touch Lever	2	
19		Hex. Head Bolt	2	M6x1Px25L
20		Round Head Screw	4	M4x0.7Px25L
21		Micro Switch	2	Z-15GD-B
22	S5-1008	Cover	1	
23		Round Socket Bolt	4	M4x0.7Px8L
24	S5-1007	Electric Switch Seat	1	
25	S-405a	Cover	2	
26		Hex. Socket Bolt	24	M10x1.5Px30L
27		Hex. Socket Bolt	2	M8x1.25Px16L
28	B-14	Switch Seat	1	

Item	Parts No.	Parts Name	Q' ty	Remark
29		Micro Switch	2	2LS1-J
30		Round Head Screw	8	M5x0.8Px40L
31	B-230	Adjusting Nut	8	
32		Hex. Nut	8	M16x2P
33	B-11	Adjust Bolt	8	
34	B-10	Foundation Bolt	8	
35	B-16	Foundation Washer	8	
36		Oil Level Gage	1	
37	S5-1018	Locating Pin	2	
38		Air Cylinder	2	
39	S5-1004	Saddle Fixing Block	1	
40	S5-1005	Saddle Fixing Block	1	
41	S5-1013a	Cooling Guide Plate	1	
42		Hex. Socket Bolt	4	M10x1.5Px40L
43		Spring Washer	4	M10
44		Round Socket Bolt	8	M6x1Px8L
45	B5-1006	Cover	1	
46		Spring Washer	2	M8
47		Nut	2	M6
48	B5-1007	Cover	1	
49		Round Head Screw	4	M6x1Px8L
50		Hex. Socket Screw	2	M5x0.8Px25L
51		Joint	2	JD601
52	H-641	Adjustable Bolt	9	M10x1.5Px50L
53		Hex. Nut	9	M10x1.5P
54	S5-1002	Saddle Fixed Block	1	
55		Thimble Nut	5	PA6
56		Thimble	5	PB6
57		Elbow Joint	4	PH601



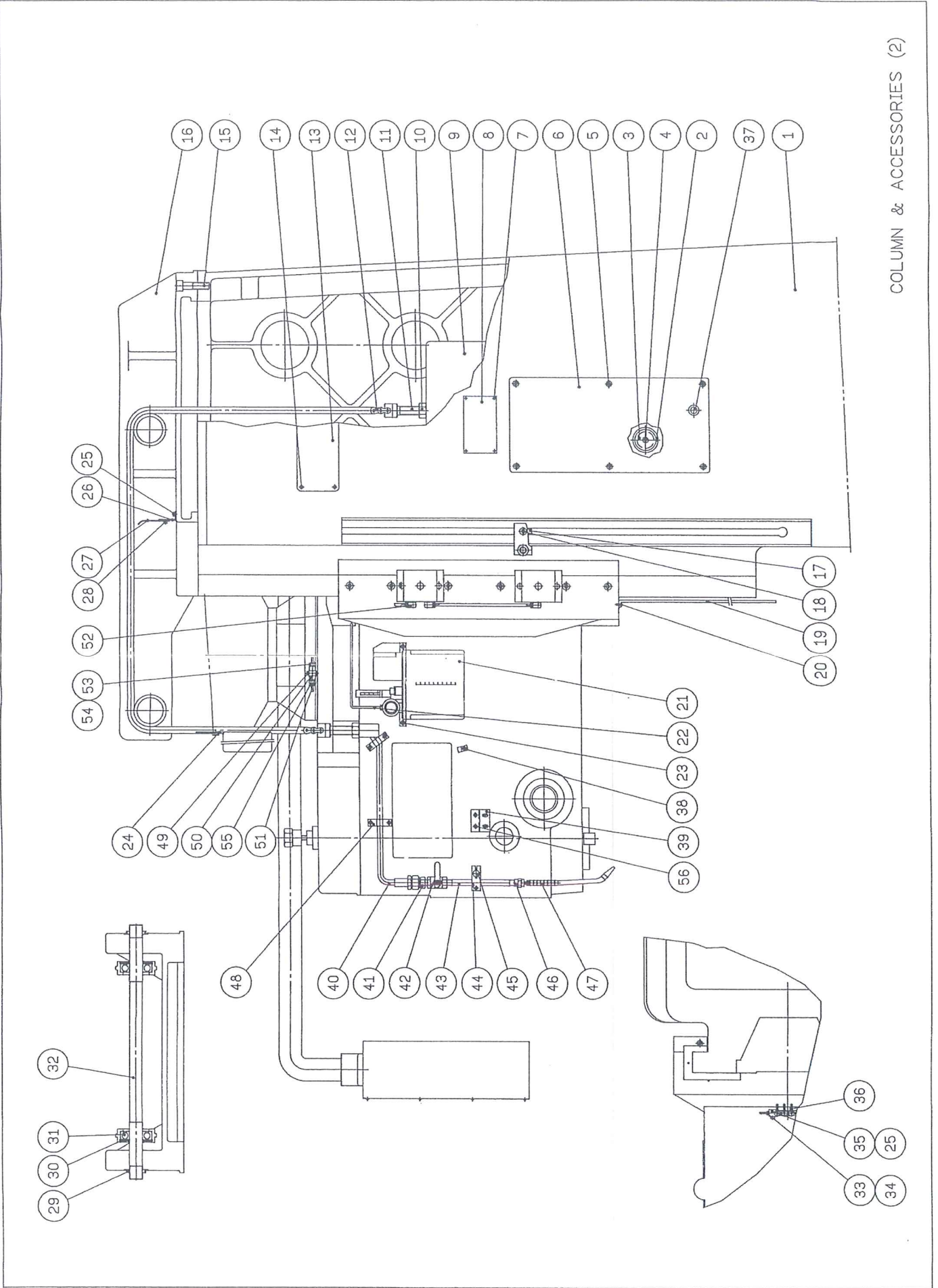
COLUMN & ACCESSORIES (1)

COLUMN & ACCESSORIES (2)

Model: KMA-3

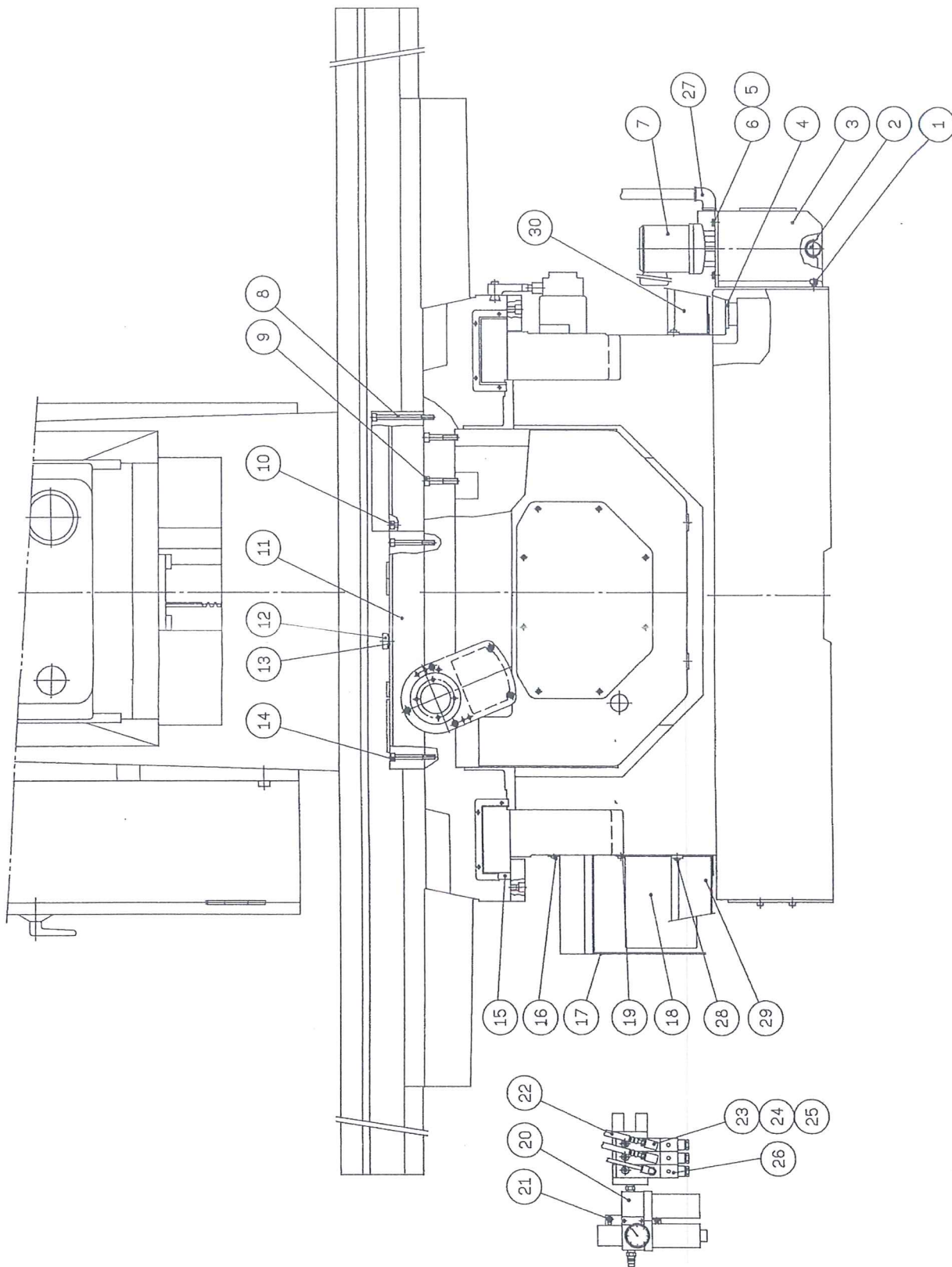
Item	Parts No.	Parts Name	Q' ty	Remark
1	C5-1001	Column	1	
2	C-385	Washer	2	
3	C5-1002	Fixed Shaft	2	
4		Hex. Socket Screw	2	M12x1.75Px20L
5		Hex. Socket Bolt	6	M8x1.25Px25L
6	C-85	Cover	1	
7		Rivet	4	2x5L
8		Name Plate	1	
9	C5-1003	Blance Weight	1	
10		Hex. Head Nut	4	M20x2.5P
11	C-403	Bolt	4	
12		Chain	2	RS50x127P
13	C-1197	Name Plate	2	
14		Round Head Screw	8	M4x0.7Px10L
15		Hex. Socket Bolt	5	M16x2Px65L
16	C5-1004	Top Cover	1	
17	C-87	Lock Block	1	
18		Hex. Socket Screw	1	M10x1.5Px30L
19	C5-1010	Dust Guard	1	
20		Round Head Screw	2	M6x1Px12L
21		Oil Pump	1	CESMA-15
22		Aluminium Pipe		$\varphi 6$
23		Hex. Socket Bolt	2	M6x1Px20L
24	C-429	Spring Fixed Plate	1	
25		Hex. Socket Bolt	4	M5x0.8Px16L
26	C-431	Fixed Seat	1	
27	C5-1006	Spring Steel Belt	1	
28		Round Head Screw	4	M5x0.8Px8L

Item	Parts No.	Parts Name	Q'ty	Remark
29	K-144	Lock nut	2	
30		C Snap ring	2	R72
31		Bearing	2	6306ZZ
32	C-406a	Sprocket Shaft	1	
33		Thimble	6	PB4
34		Thimble Nut	6	PA4
35		A Type Distributor	1	DB6
36		Aluminium Pipe		ϕ 4
37		Hex. Socket Screw	1	M16x2Px130L
38		Round Head Screw	7	M4x0.7Px8L
39	E-1039	Switch Seat	1	
40		Oil Hose	1	1/2"x5300m/mL
41		Hose Connector	1	PS1/2"xPT1/4"
42		Cock	1	PT1/4"
43	C-11	Pipe	1	
44	H-2805	Fixing Block	1	
45	H-315	Shaft	1	
46		Joint	1	PT1/4"
47		Nozzle Pipe	1	PT1/4"x10"L
48		Pipe Clip	2	PT1/2"
49		Hex. Socket Screw	1	M5x0.8Px25L
50		Joint	1	JD601
51		Hex. Nut	1	M5
52		Elbow joint	3	PH601
53		Thimble nut	4	PA6
54		Thimble	4	PB6
55		Connector	1	SPC601
56		Round head screw	2	M4x0.7Px25L



COLUMN & ACCESSORIES (2)

Item	Parts No.	Parts Name	Q' ty	Remark
1		Hex. Socket Bolt	4	M8x1.25Px25L
2		Tube Plug	1	PT3/4
3	B-289	Deluged Motor Frame	1	
4	B-284a	Fuel Filter Screen	2	
5		Spring washer	4	M6
6		Hex. Socket Bolt	4	M6x1Px20L
7		Pump	1	1/6HPx150L
8		Hex. Socket Bolt	2	M8x1.25Px90L
9		Hex. Socket Bolt	12	M10x1.5Px55L
10		Hex. Socket Bolt	2	M8x1.25Px60L
11	S5-1009	Control seat	1	
12	S-143	Bolt	1	
13		O-Ring	1	P18
14		Hex. Socket Bolt	10	M8x1.25Px60L
15	S5-1006	Saddle Adjusting Wedge	1	
16		Round Head Screw	2	M6x1Px8L
17	B-637	Cover	1	
18	B-288	Connection Box	1	
19		Round Head Screw	4	M6x1Px8L
20		Air Unit	1set	MACP300-8A
21		Hex. Socket Screw	2	M6x1Px20L
22		Wire Soft Tube	2	φ 6x700L
23		Elbow Joint	2	PH601
24		Thimble Nut	2	PA6
25		Thimble	2	PB6
26		Solenoid Valve	3	MVSD-220-4EI
27		Elbow Joint	1	PT1/2"×90°
28		Round Head Screw	12	M6x1Px12L

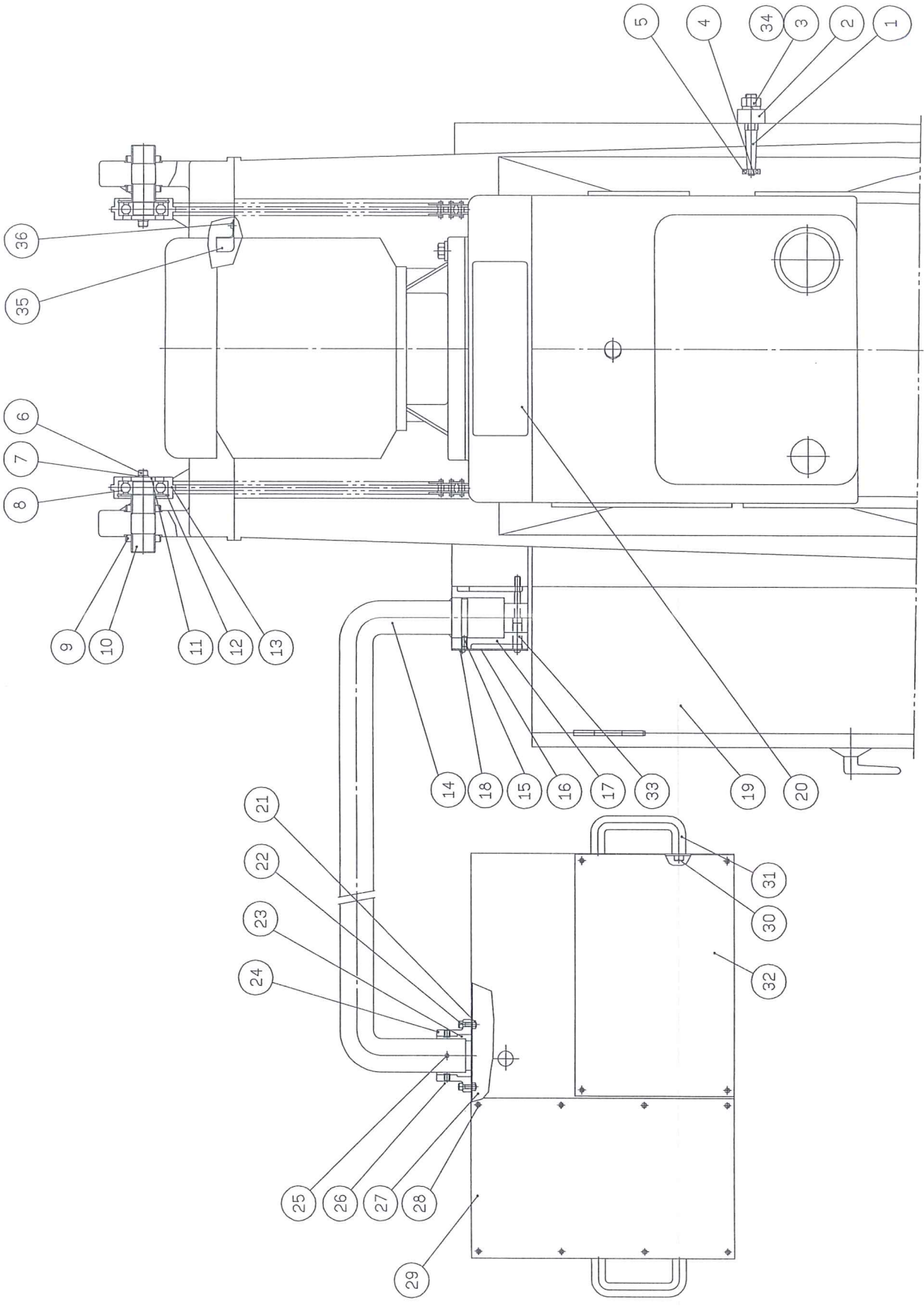


COLUMN & ACCESSORIES (3)

COLUMN & ACCESSORIES (4)

Model: KMA-3

Item	Parts No.	Parts Name	Q'ty	Remark
1	C5-1005	Bearing Axle	1	
2	C-412	Adjusting Plate	1	
3		Hex. Head Nut	1	M16x2P
4		E-Snap	1	E6
5		Bearing	1	608zz
6		Hex. Socket Bolt	2	M8x1.25Px16L
7		Spring Washer	2	M8
8		Bearing	2	6306zz
9	C-410	Adjusting Nut	4	
10	C-411	Guard Rubber	2	
11	C-408	Washer	2	
12		C-Snap	2	R72
13	C-409	Sprocket	4	
14	E5-1009	Link	1	
15		Hex. Socket Set Screw	1	M8x1.25Px12L
16	E-515	Cover	1	
17	E-514	Bracket	1	
18		Round Head Screw	2	M6x1Px8L
19	E5-1001	Electric Box	1	
20	C-1196	Name Plate	1	
21		Hex. Head Nut	2	M6x1P
22		Hex. Socket Screw	2	M6x1Px20L
23	E-10	Sleeve	1	
24	E-11	Sleeve	1	
25		Straight Pin	1	φ 5x55L
26		Hex. Socket Set Screw	2	M8x1.25Px12L
27	E5-1005	Switch Case	1	
28		Round Head Screw	8	M4x0.7Px8L





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