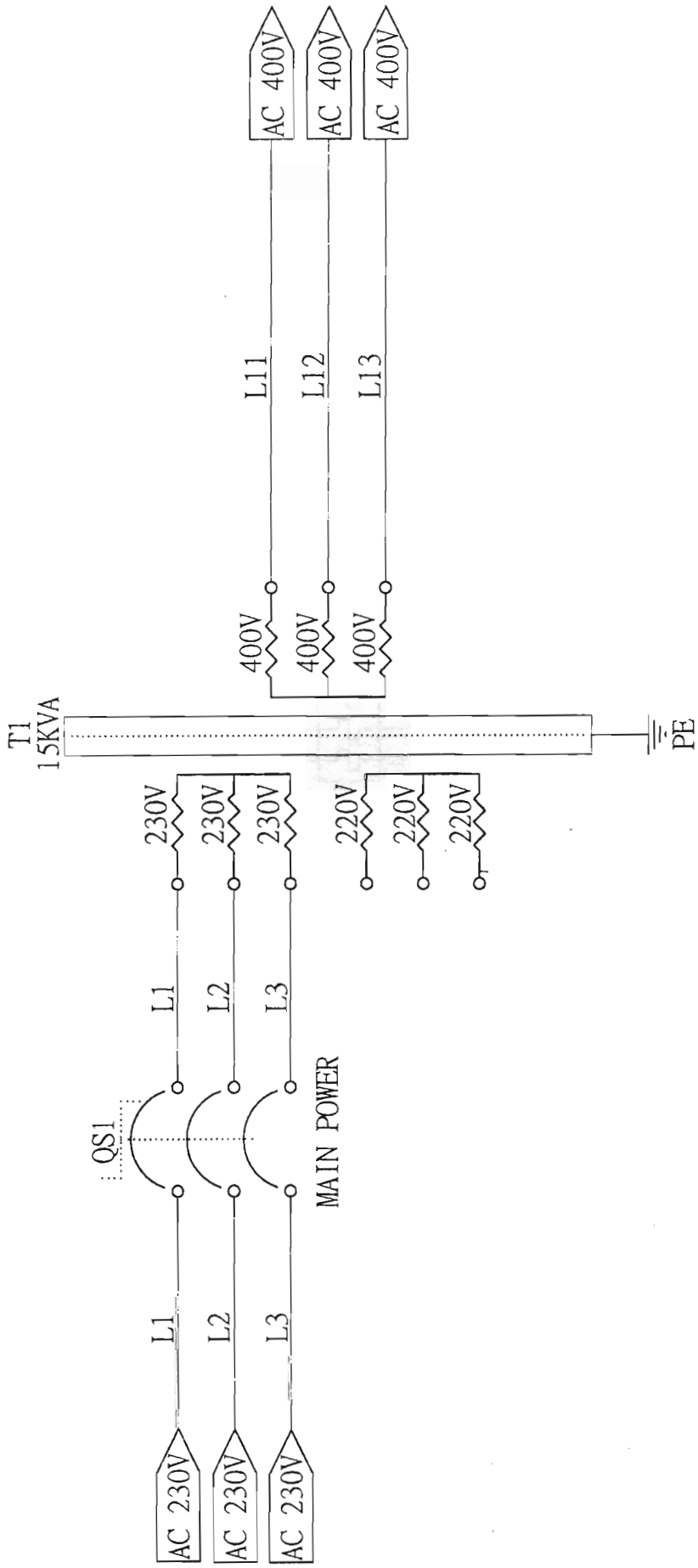
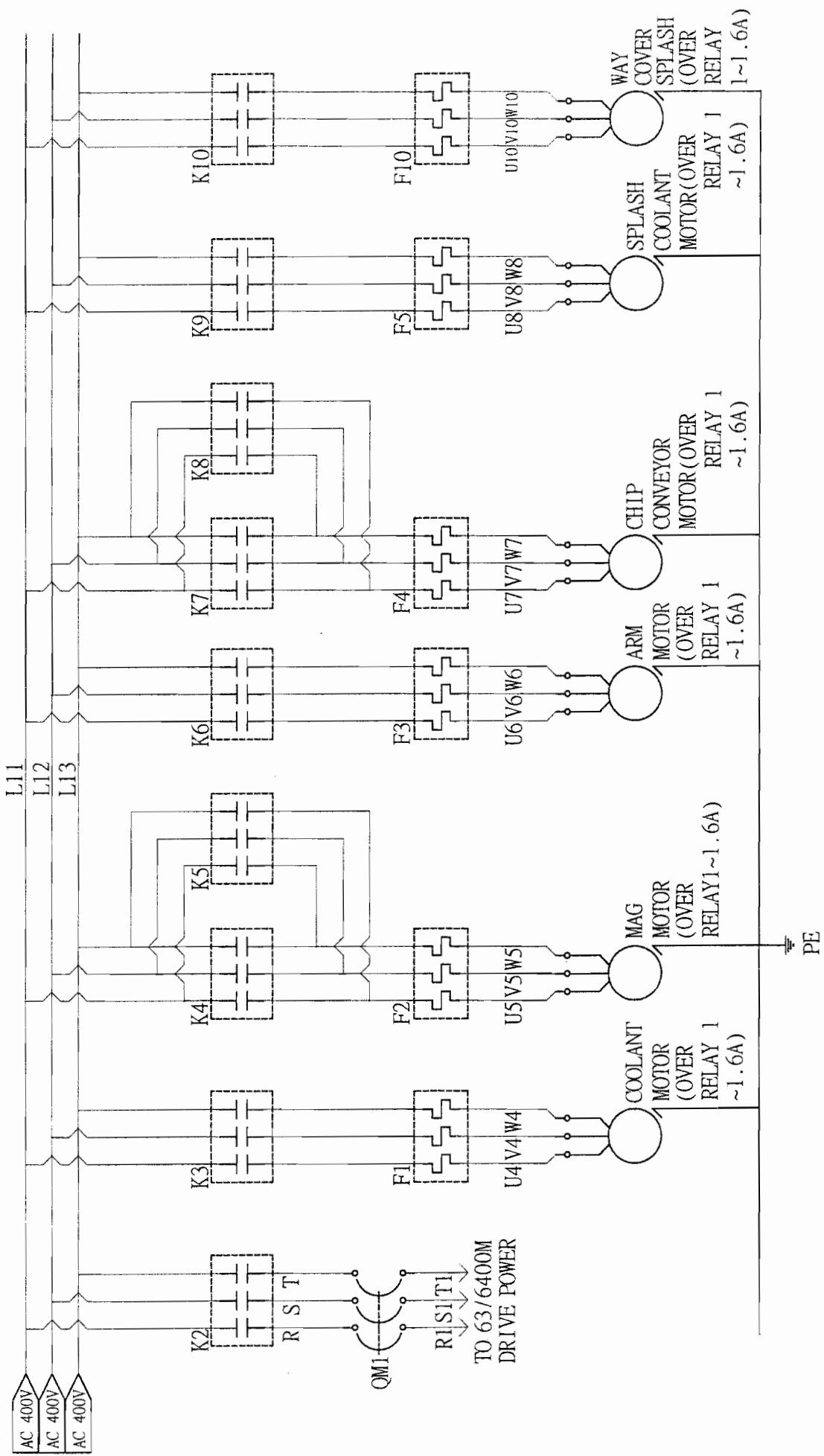
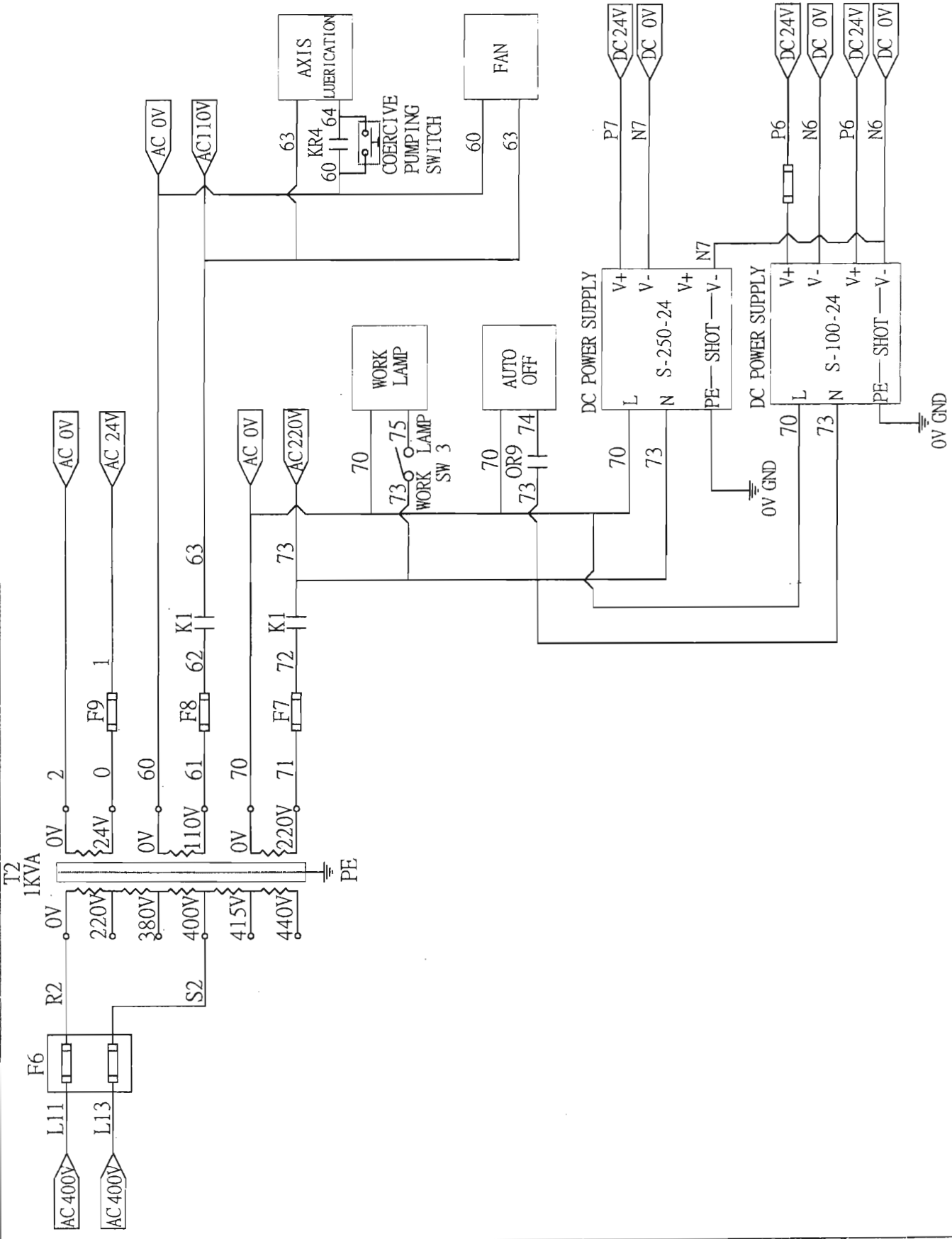


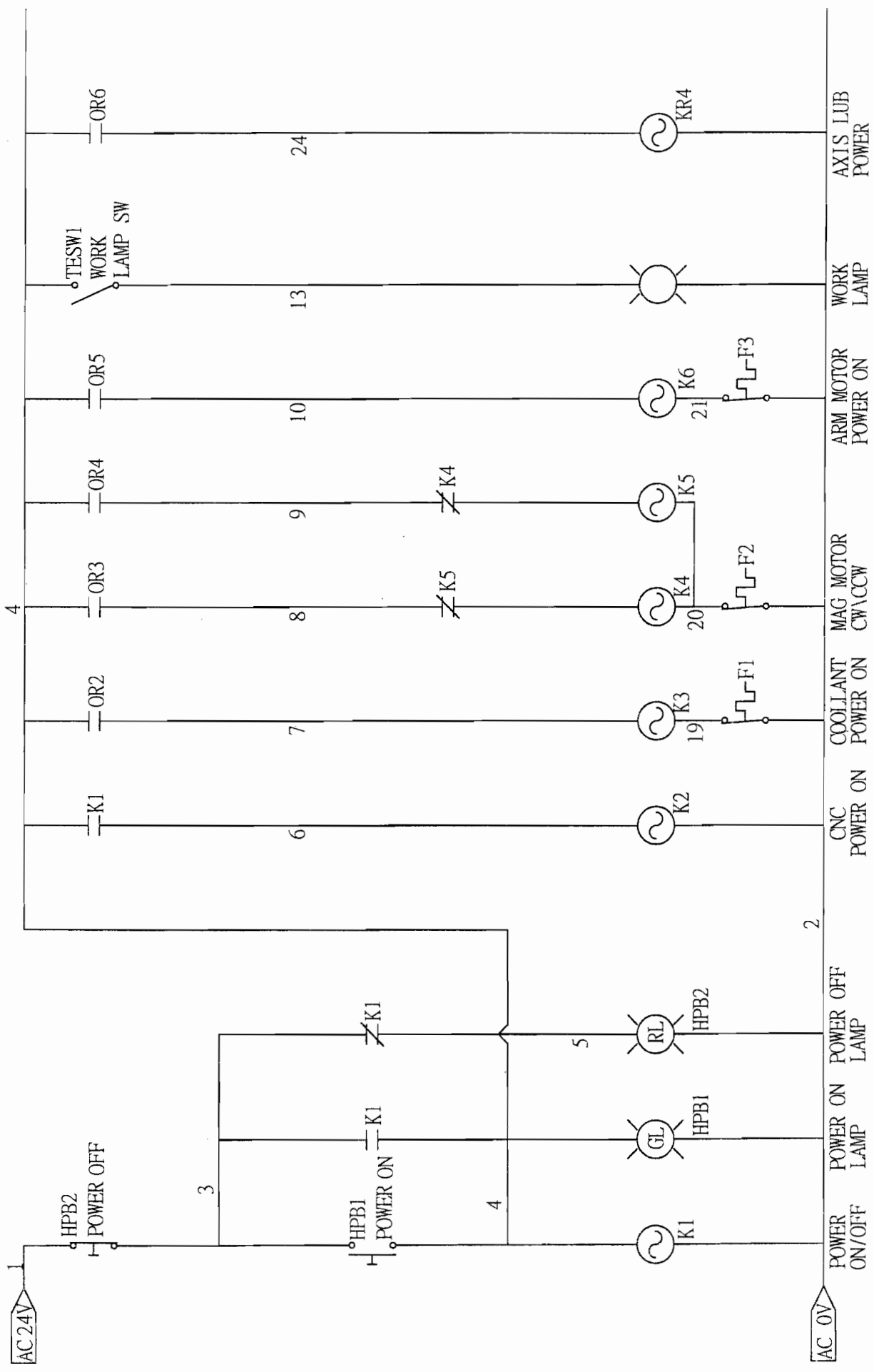
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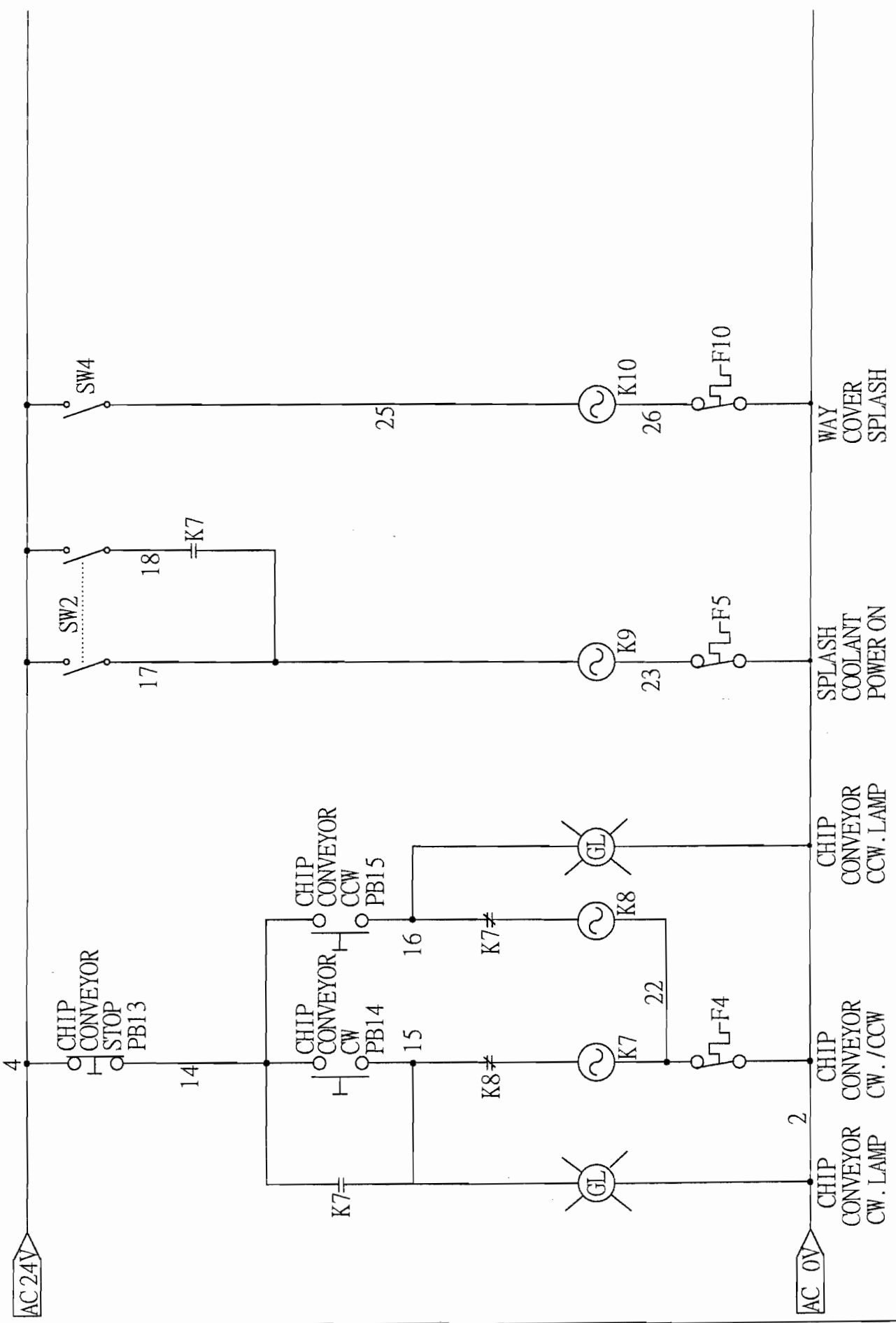
DESCRIPTION	PAGE NO.
1. ELECTRICAL DIAGRAM	1
2. MECHANICAL PART LISTS	20
3.ATC OPERATION MANUAL &ITS PARTS LIST	42

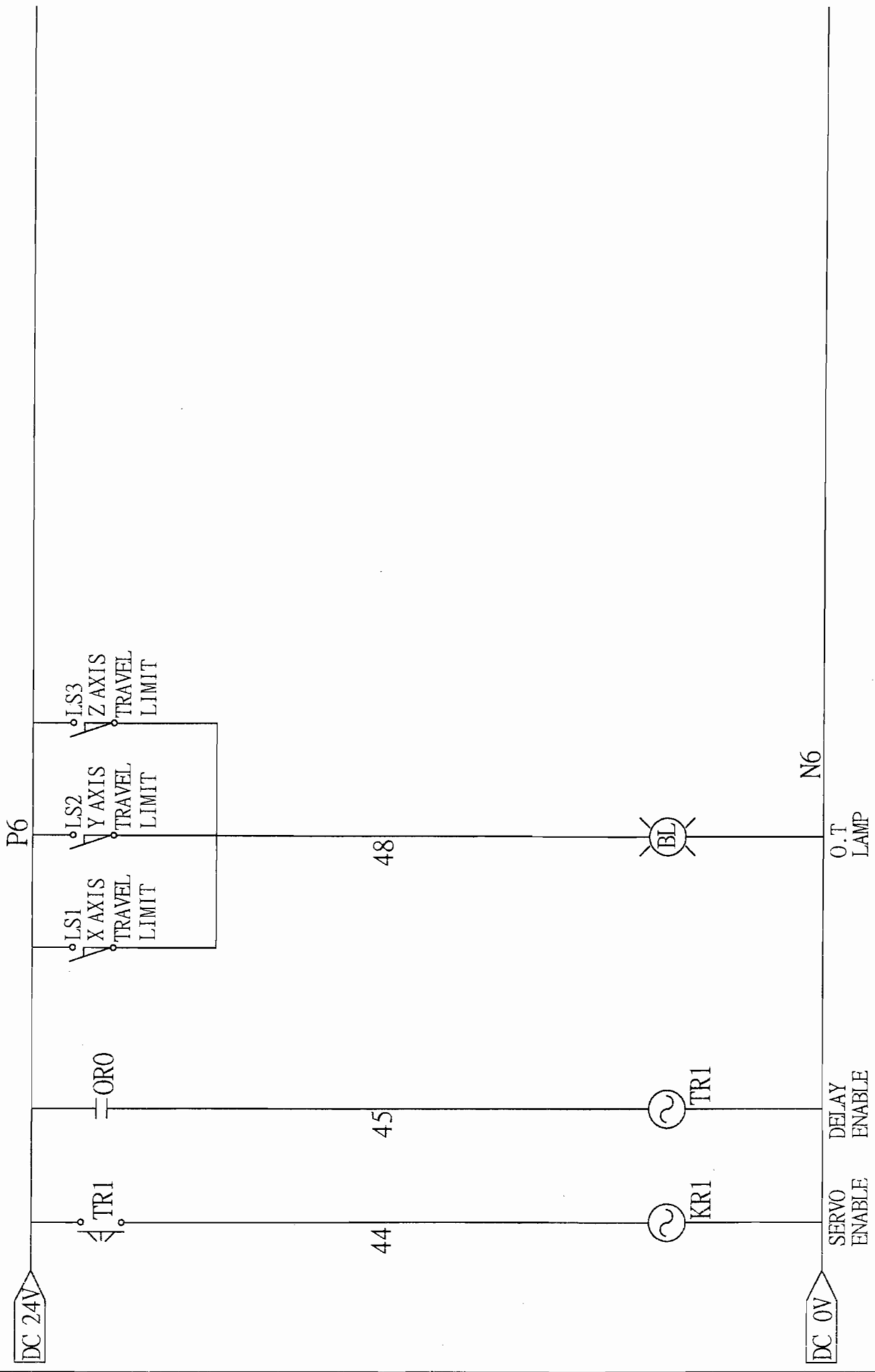


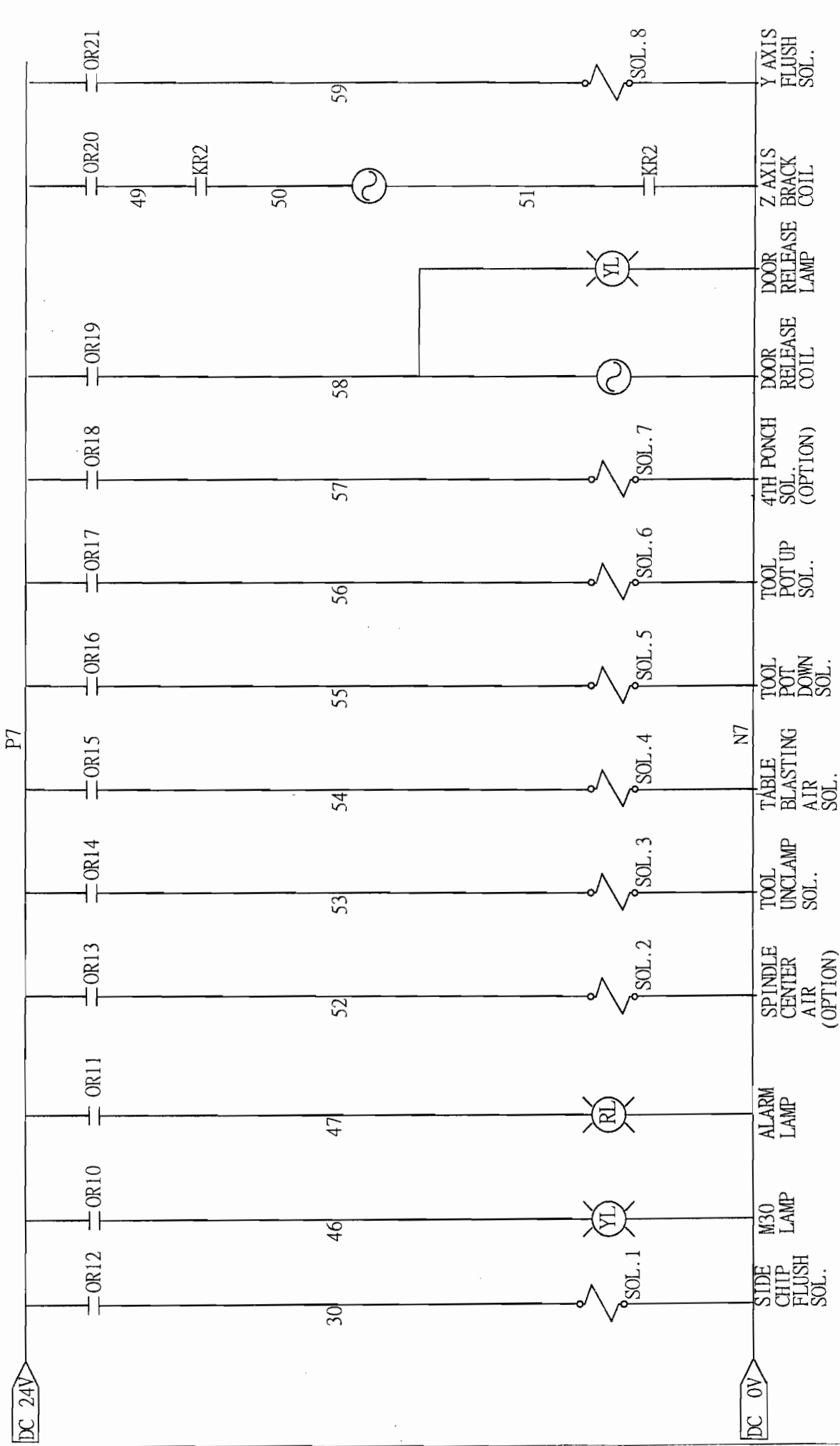




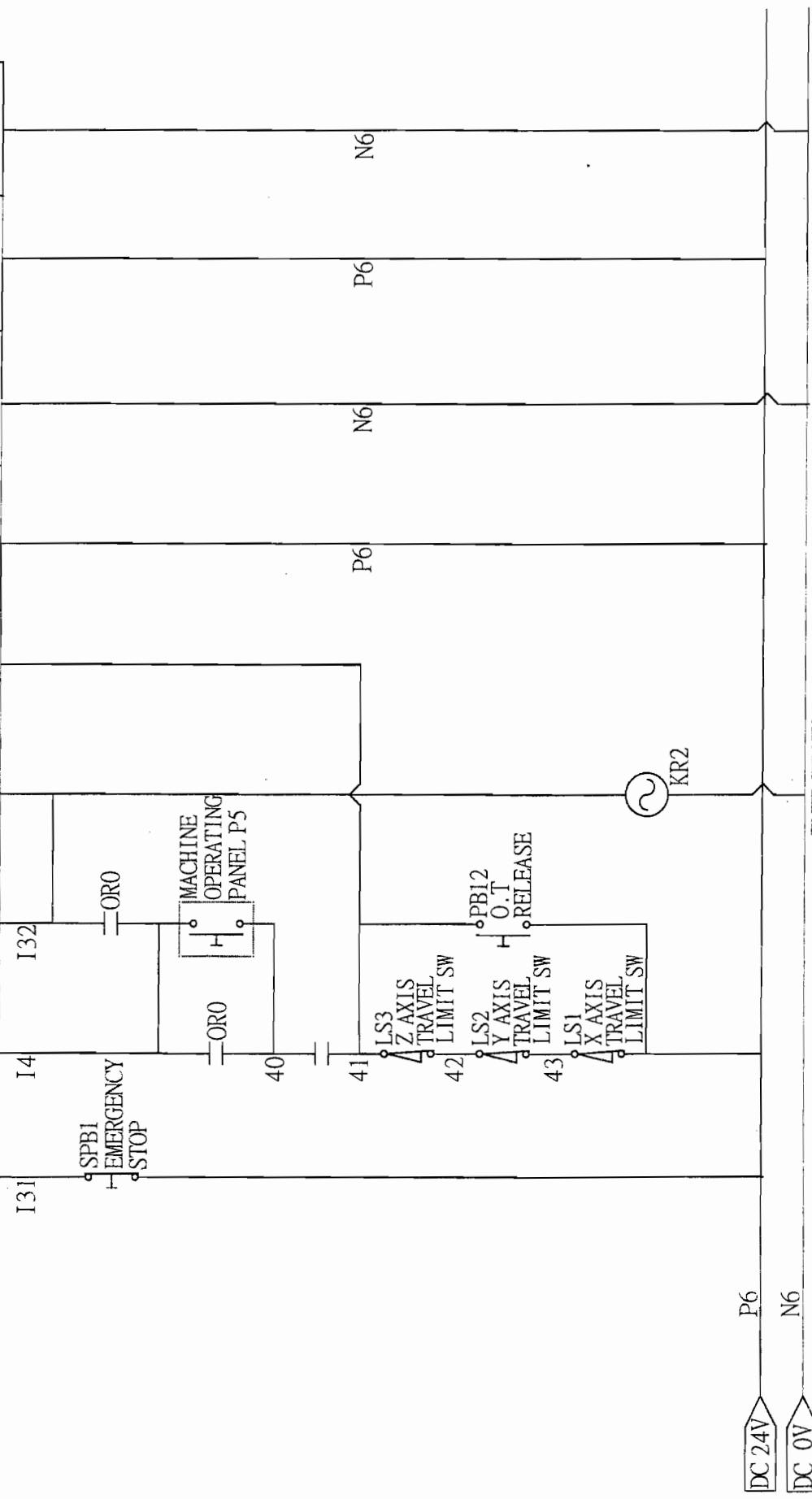




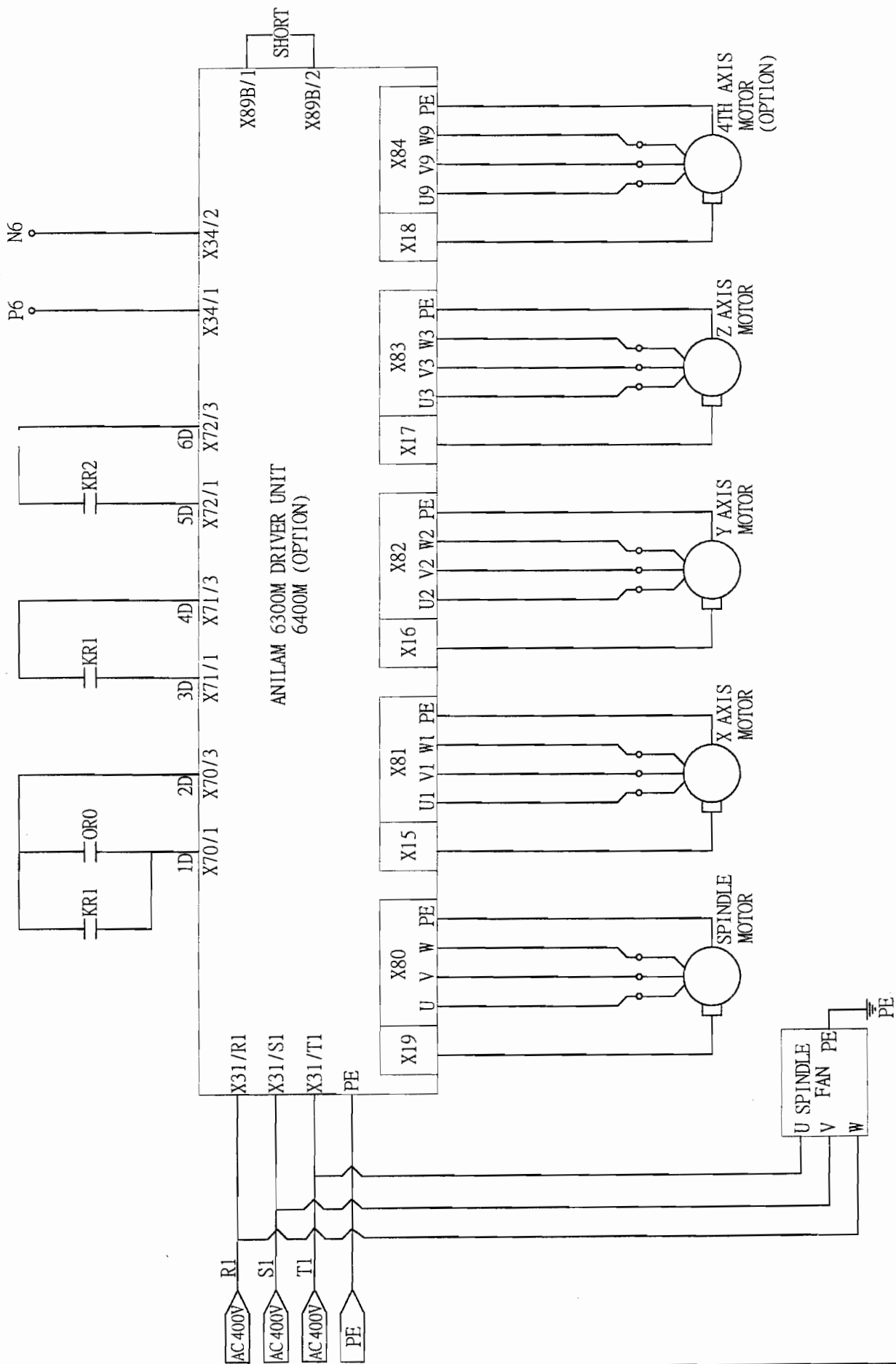




PROT INTERFACE	X42 (INPUT PORT)			X44 - CONNECTOR	X34 - CONNECTOR
ADDRESS	X0.29	X0.3	X0.30		
CNC PIN NO.	X42-31	X42-5	X42-32	X44-1	X44-3
	I31	I4	I32	X44-2	X34-1
				X44-3	X34-2



EMERGENCY
ENABLE



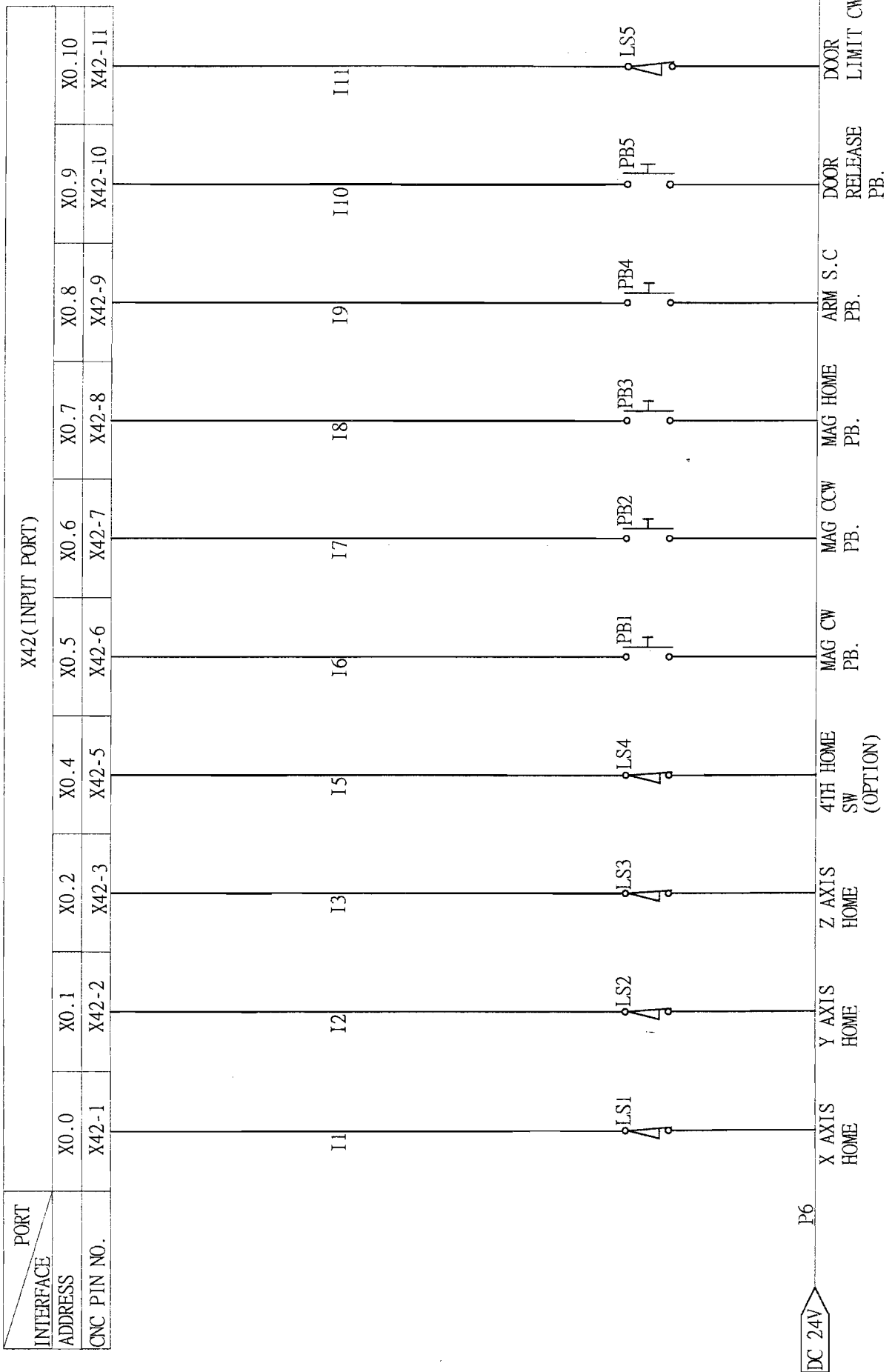
ANILAM 4TH DRIVER 25 PIN	(1)	(2)	(3)	(4)	(6)	(7)	(8)	(13)	(14)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(25)	(SHELL)
--------------------------------	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	---------

BROWN/GREEN	WHITE/GREEN	GREEN/BLACK	YELLOW/BLACK	BLUE/BLACK	RED/BLACK	INTERNAL SHIELD	YELLOW	BLUE	WHITE	RED	BLACK	GREEN	BROWN	GRAY	PINK	PURPLE	CHASSIS
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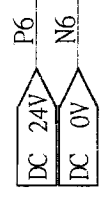
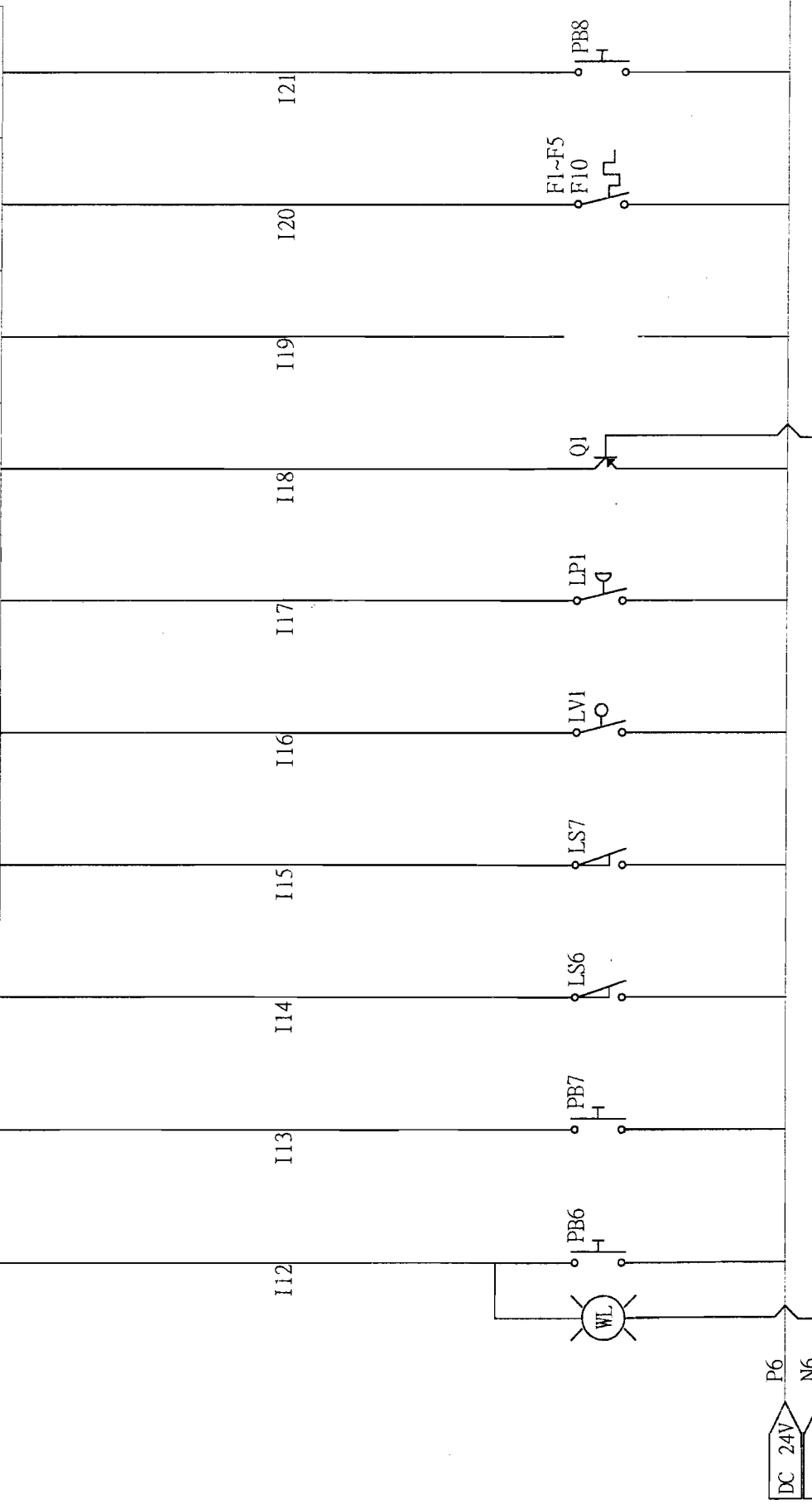
MAS-3102A 22-145	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(J)	(K)	(L)	(M)	(N)	(U)	(P)	(V)	(T)	(R)
---------------------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

MAS-3102A 28-115	(G)	(H)	(J)	(K)	(L)	(M)	(A)	(B)	(C)	(R)	(S)	(N)	(P)
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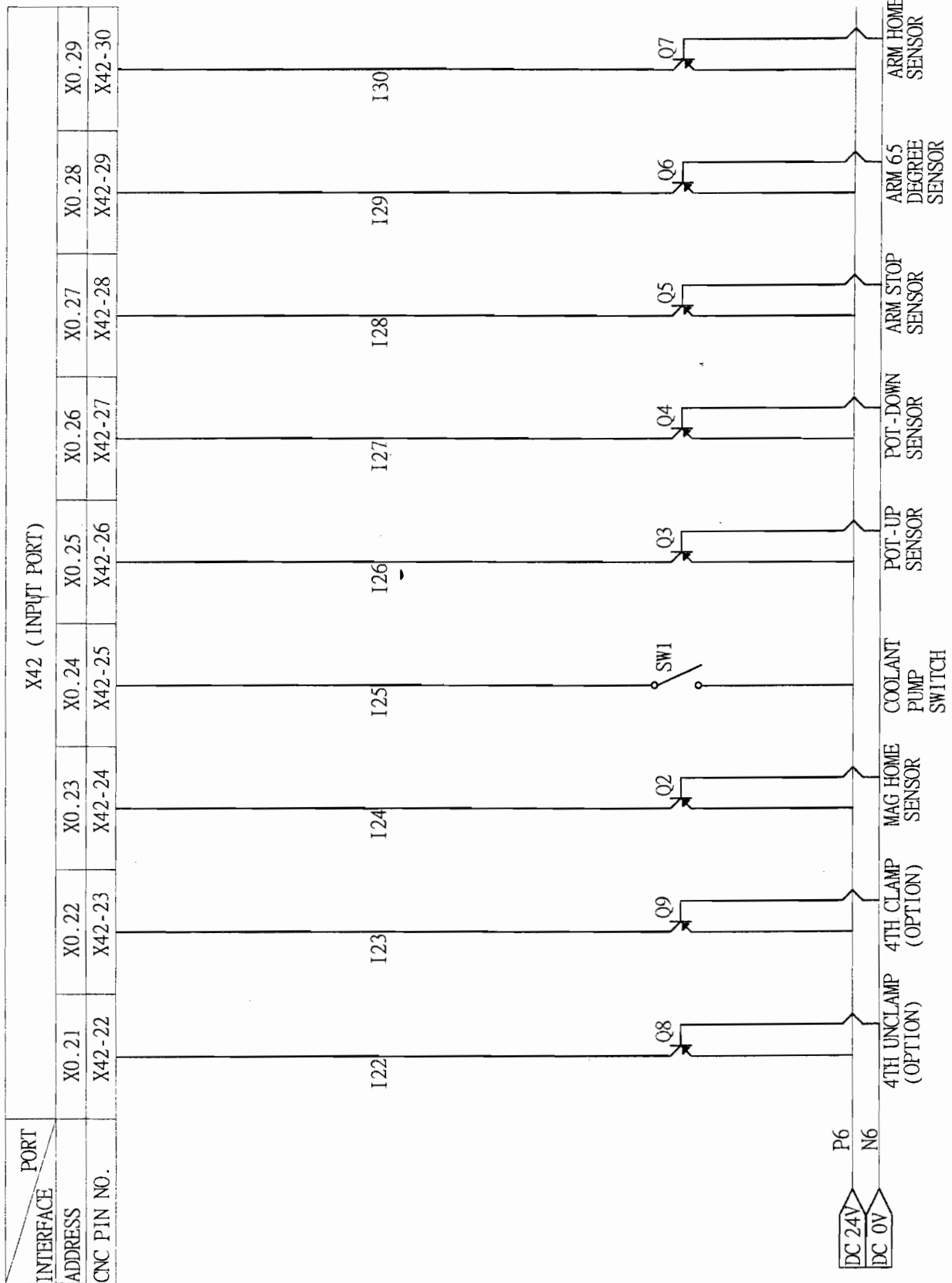
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			U9	V9	W9		GED	P6	I22	I23	P6	I5	N7	57					
			MOTOR DRIVE						4TH CLAMP	4TH UNCLAMP	4TH HOME		4TH BARKE SOL.						

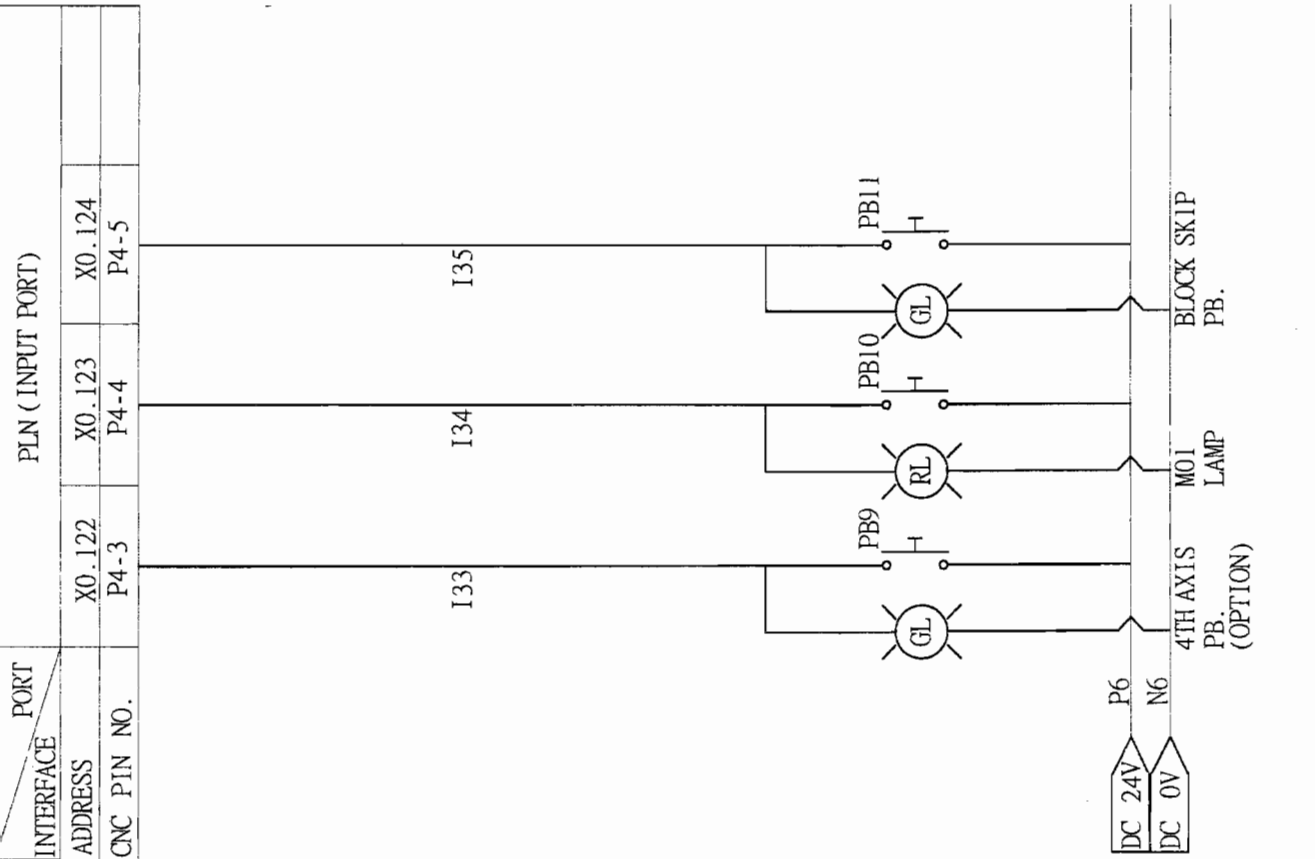


PORT		X42 (INPUT PORT)									
INTERFACE	ADDRESS	X0.11	X0.12	X0.13	X0.14	X0.15	X0.16	X0.17	X0.18	X0.19	X0.20
	CNC PIN NO.	X42-12	X42-13	X42-14	X42-15	X42-16	X42-17	X42-18	X42-19	X42-20	X42-21

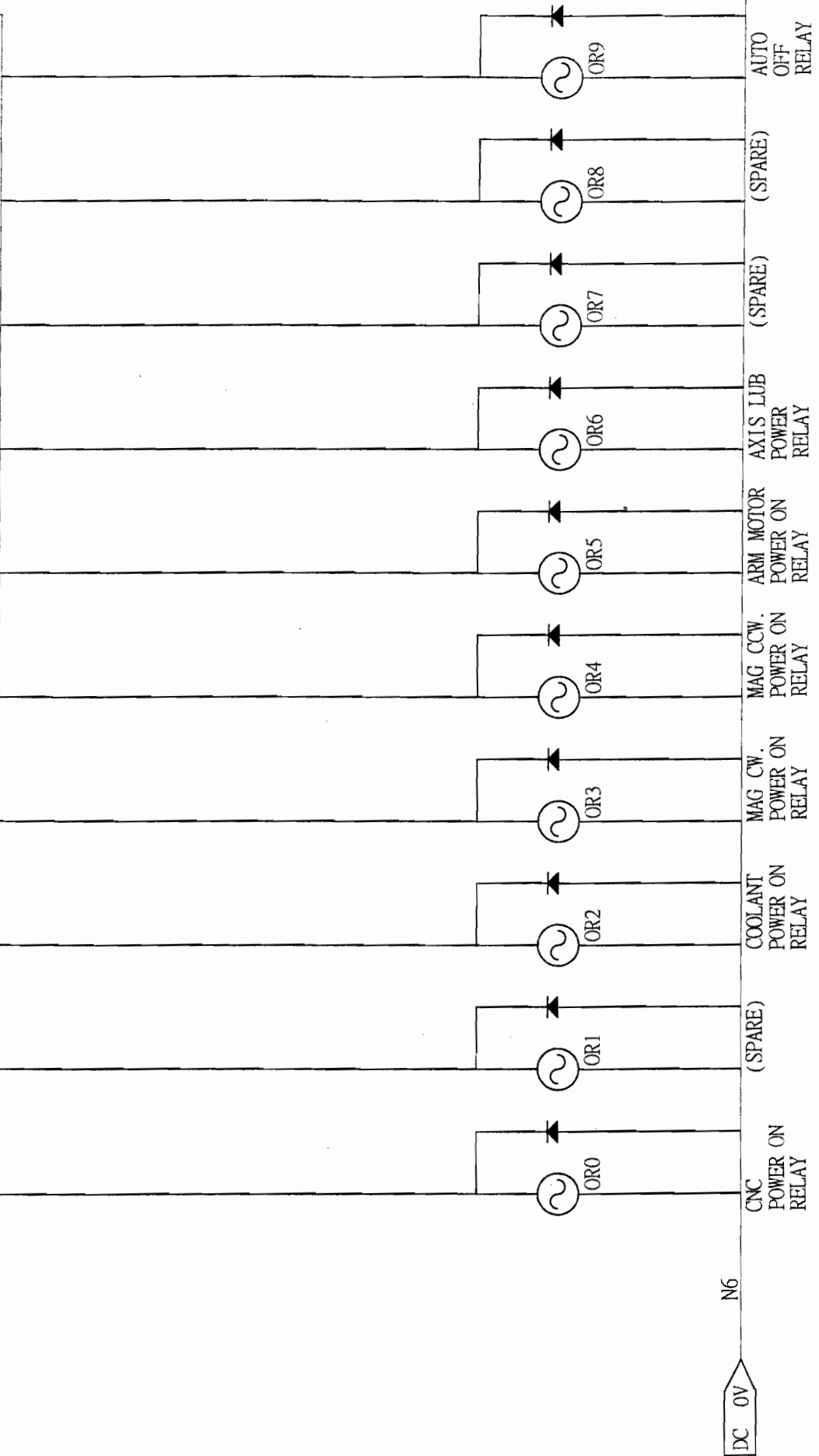


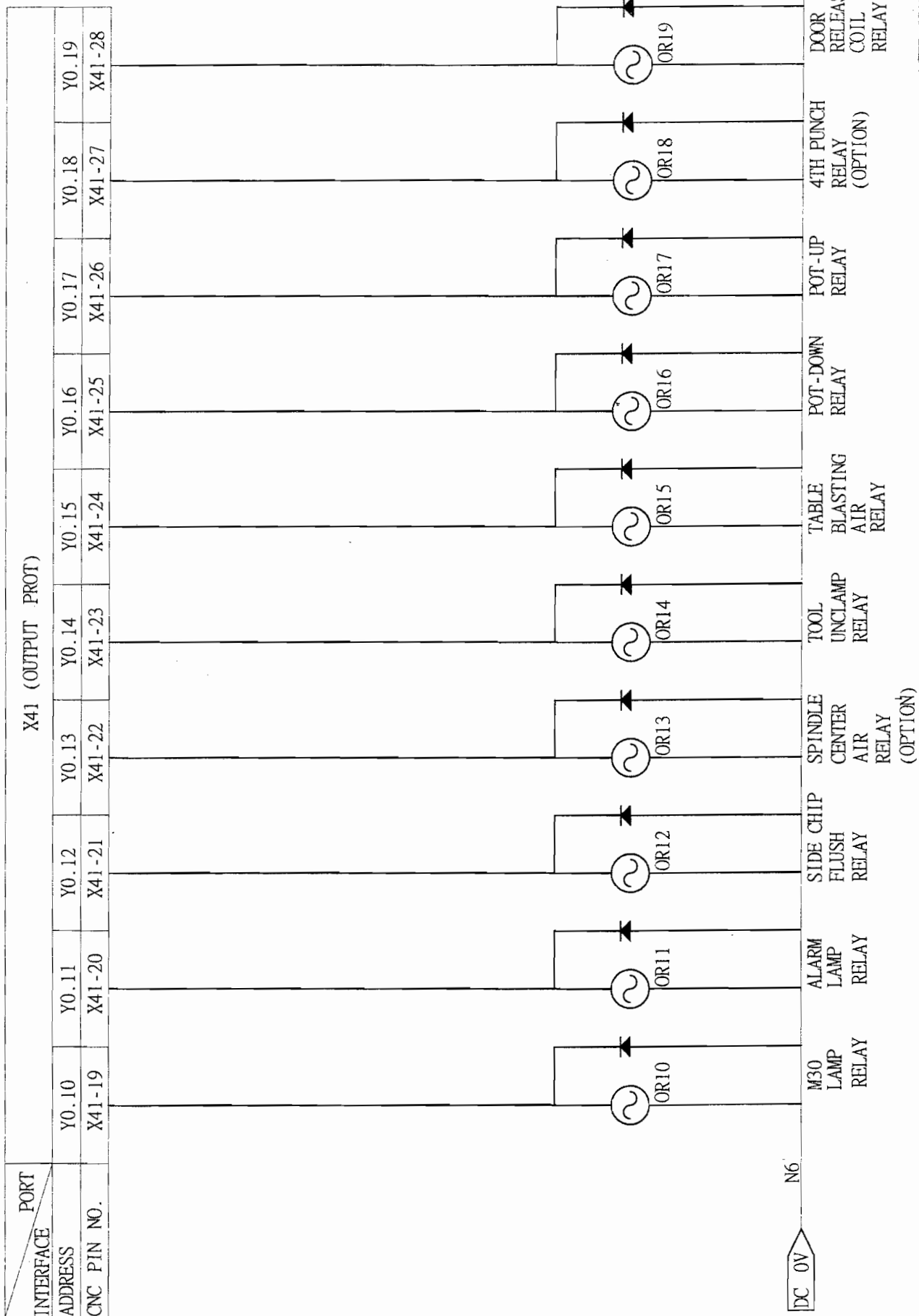
- AUTO POWER OFF PB.
- TOOL UNCLAMP PB.
- TOOL UNCLAMP LIMIT SW
- TOOL UNCLAMP LIMIT SW
- TOOL CLAMP LIMIT SW
- LUBRICATION LOW OIL ALARM
- AIR PRESSURE
- MAG COUNTER SENSOR
- (OPTION)
- MOTOR OVERLOAD
- TABLE BLAST AIR PB.





PORT		X41 (OUTPUT PORT)									
INTERFACE ADDRESS		Y0.0	Y0.1	Y0.2	Y0.3	Y0.4	Y0.5	Y0.6	Y0.7	Y0.8	Y0.9
CNC PIN NO.		X41-9	X41-10	X41-11	X41-12	X41-13	X41-14	X41-15	X41-16	X41-17	X41-18

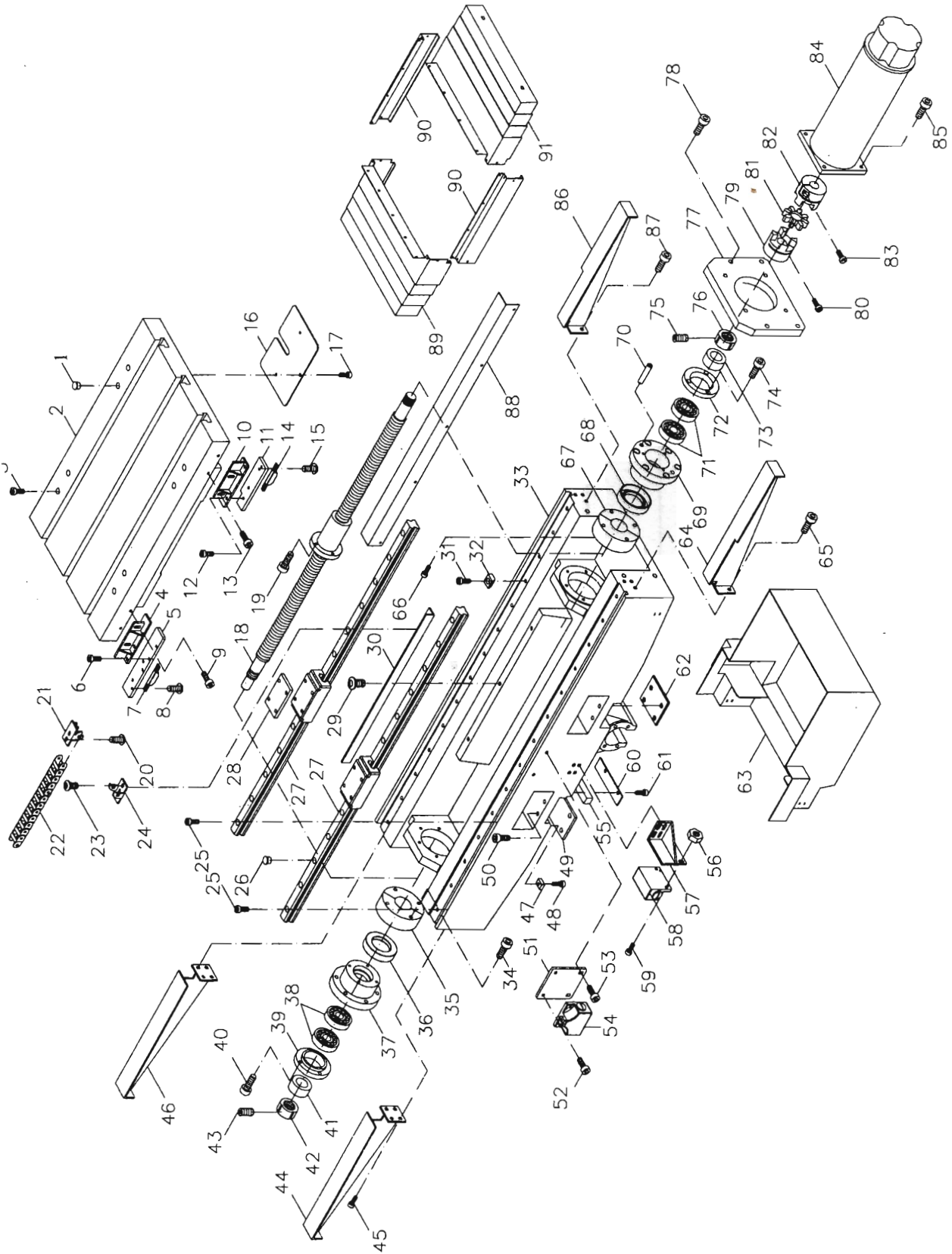




ANILAM
6300M\6400M

X27 (CNC SIDE) 9-PIN	RS-232 25-PIN
(2)	(2)
(3)	(3)
(4)	(6)
(5)	(7)
(6)	(20)

VMC-1724 X AXIS SECTION



VMC 1724 X AXIS SECTION

Itm #	Part #	Description	Quan'ty
1.	V6XY-001	Plastic Table Plug	16
2.	V6X-001	Table	1
3.	04022-YFC870	Socket HD Cap Screw- M8x45L	16
4.	V6X-001	Supporting Bracket	1
5.	V6X-002	Limit Block Locating Plate	1
6.	V6X-003	Socket HD Cap Screw-M6x12L	2
7.	V6XY-D25H15	Limit Block D25H15	2
8.	04022-FLB610	Round Socket Cap Screw-M6x10L	4
9.	04022-YFC616	Socket HD Cap Screw-M6x16L	2
10.	V6X-010	Supporting Bracket	1
11.	V6X-011	Limit Block Locating Plate	1
12.	04022-FLB610	Socket HD Cap Screw-M6x12L	2
13.	04022-YFC616	Socket HD Cap Screw-M6x16L	2
14.	V6XY-D25H15	Limit Block D25H15	1
15.	04022-FLB610	Round Socket Cap Screw-M6x10	2
16.	V6X-016	Oil Distributor Locating Plate	1
17.	04022-YFC612	Socket HD Cap Screw-M6x12L	3
18.	V6X-018	Ball Screw-X axis	1
19.	04022-YFC820	Socket HD Cap Screw-M8x20L	5
20.	04022-FLF48	Round Cap + Screw-M4x8L	1
21.	MBSQ604-L	Cable Protector End Plate	1
22.	MBSQ604-R20	Cable Protector	1
23.	04022-FLF48	Round Cap + Screw-M4x8L	1
24.	MBSQ604-U	Cable Protector End Plate	1
25.	04022-YFC830	Socket HD Cap Screw-M8x30L	28
26.	V6XY-001	Plastic Plug	28
27.	V6X-027	Linear Guide Way-X Axis	2
28.	V6X-028	Linear Block Adaptor Plate	4
29.	04022-FLB612	Socket HD Cap Screw-M6x12L	3
30.	V6X-030	Cable Protector Locating Rail	1
31.	04022-YFC830	Socket HD Cap Screw-M8x30L	28
32.	V6XY-T1	Adj. Block for Linear Guide Way	28
33.	V6X-033	Saddle	1
34.	04022-YFC620	Socket HD Cap Screw-M6x20L	4
35.	04284-U3090	Cushion Sleeve	1
36.	04297-TC32X52X11	Oil Seal-TC32x52	1
37.	V6X-037	Bearing Seat	1
38.	MBBST2562	Bearing-BST2562	2
39.	MBTSX-007	Bearing Retainer	1

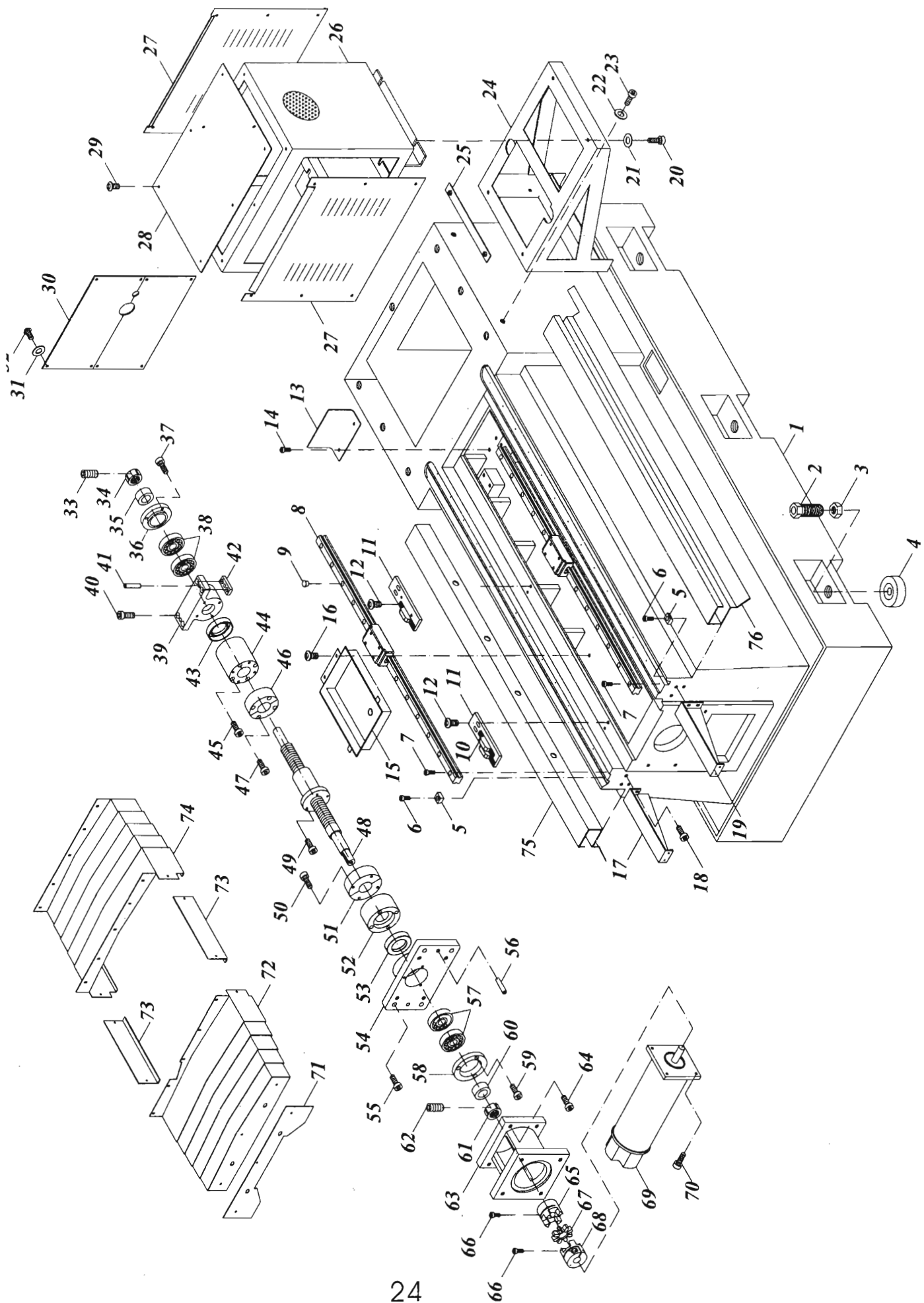
VMC 1724 X AXIS SECTION

Itm #	Part #	Description	Quan'ty
40.	04022-YFC616	Socket HD Cap Screw-M6x16L	4
41.	MBXY5017	Spacer-50x25x17	1
42.	MBYSF-M25X1.5P	Lock Nut-YSF M25x1.5P	1
43.	04022-FLS55	Set Screw-M5x5L	3
44.	V6X-044	Supporting Bracket for Way Cover-X	1
45.	04022-YFC616	Socket HD Cap Screw-M6x16L	8
46.	V6X-046	Supporting Bracket for Way Cover-X	1
47.	V6X-047	Adj. Block for Linear Guide Way	4
48.	04022-YFC516	Socket HD Cap Screw-M5x16L	4
49.	V6X-049	Linear Block Adaptor Plate	2
50.	04022-YFC835	Socket HD Cap Screw-M8x35L	8
51.	V6X-051	Limit Switch Adaptor Plate	1
52.	04022-YFC616	Socket HD Cap Screw-M6x16L	2
53.	04022-YFC616	Socket HD Cap Screw-M6x16L	2
54.	V6X-054	Limit Switch	1
55.	V6X-055	Square Key	2
56.	04022-	Hex Nut-M6	2
57.	V6X-057	Limit Switch Adaptor Bracket	1
58.	V6X-058	Limit Switch	1
59.	04022-YFC616	Socket HD Cap Screw-M6x16L	2
60.	V6X-060	Square Key Plate	2
61.	04022-YFC612	Socket HD Cap Screw-M6x12L	4
62.	V6X-062	Linear Block Adaptor Plate	2
63.	V6X-063	Motor Cover-X Axis	1
64.	V6X-064	Supporting Bracket for Way Cover-X	1
65.	04022-YFC616	Socket HD Cap Screw-M6x16L	3
66.	04022-YFC620	Socket HD Cap Screw-M6x20L	4
67.	04284-U3090	Cushion Sleeve	1
68.	04297-TC32X52X11	Oil Seal	1
69.	V6X-069	Bearing Seat-X axis	1
70.	04022-TJ745E	Taper Pin 7#45	2
71.	MBBST2562	Bearing-BST2562	1
72.	MBTSX-007	Bearing Retainer	1
73.	MBXY5017	Spacer-50x25x17	1
74.	04022-YFC616	Socket HD Cap Screw-M6x16L	3
75.	04022-FLS55	Set Screw-M5x5L	3
76.	MBSYF-M25X1.5P	Lock Nut-YSF M25x1.5P	1
77.	V6X-077	Motor Adaptor Plate-X axis	1
78.	04022-YFC1035	Socket HD Cap Screw-M10x35L	4

VMC 1724 X AXIS SECTION

Itm #	Part #	Description	Quan'ty
79.	48005-G98L	Ball Screw Metal Coupling	1
80.	04022-YFC616	Socket HD Cap Screw-M6x16L	2
81.	48005-G98L	Rubber Coupling	1
82.	V6X-082	Motor Metal Coupling	1
83.	48005-G98L	Socket HD Cap Screw-M	1
84.	AM1400A	Servo Motor	1
85.	04022-YFC1030	Socket HD Cap Screw-M10x30L	4
86.	V6X-086	Support Bracket for Way Cover-X	1
87.	04022-YFC616	Socket HD Cap Screw-M6x16L	3
88.	V6X-088	Saddle Cover Plate	1
89.	V6X-089	Retract. Way Cover-Left	1
90.	V6X-090	Cover Plate on Way Cover-Front	1
91.	V6X-091	Retract. Way Cover-Right	1
92.	V6X-092	Cover Plate on Way Cover-Rear	1

VMC-1724 Y AXIS SECTION



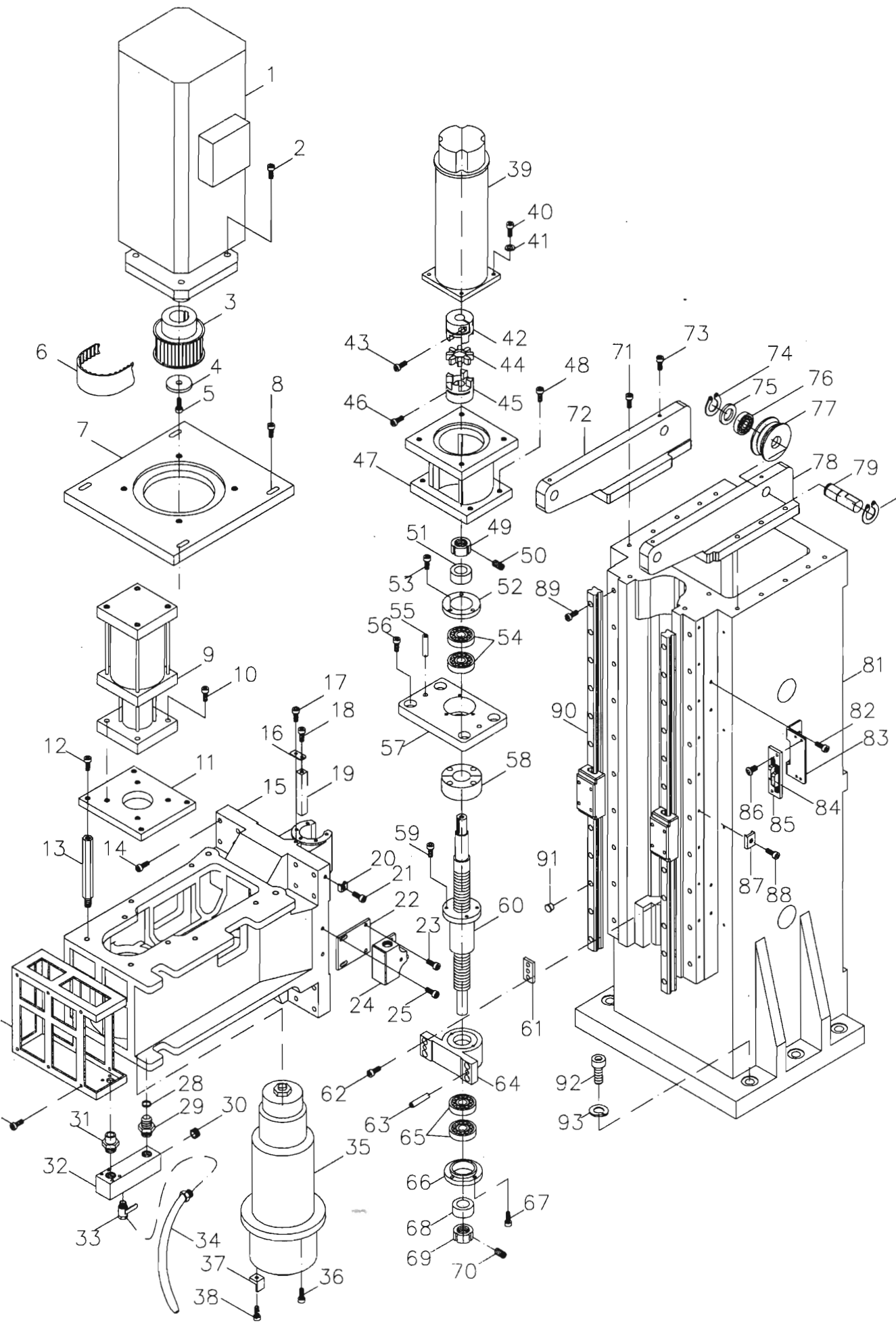
VMC 1724 Y AXIS SECTION

Itm #	Part #	Description	Quan'ty
1.	V6Y-001	Machine Base	1
2.	MBBY-002	Leveling Screw-30x70	6
3.	MBBY-003	Nut-M30	6
4.	MBBY-004	Leveling Pad	6
5.	V6XY-T1	Adj. Block for Linear Guide Way-T1	28
6.	04022-YFC516	Socket HD Cap Screw-M5x16L	28
7.	04022-YFC516	Socket HD Cap Screw-M8x30L	28
8.	V6Y-008	Linear Guide Way-Y Axis	2
9.	V6XYZ-001	Plastic Plug	28
10.	V6XY-D25H15	Limit Block D25H15	3
11.	V6Y-011	Limit Block Locating Plate	2
12.	04022-FLB610	Round Socket Cap Screw-M6x10L	4
13.	V6Y-013	Oil Cover Plate	1
14.	04022-YFC612	Socket HD Cap Screw-M6x12L	2
15.	V6Y-015	Oil Collecting Pan	1
16.	04022-YFC612	Round Socket Cap Screw-M6x12L	2
17.	V6Y-017	Supporting Bracket for Way Cover-Y	1
18.	04022-YFC616	Socket HD Cap Screw-M6x16L	6
19.	V6Y-019	Socket HD Cap Screw-M6x12L	1
20.	04022-YFC031	Socket HD Cap Screw-3/8"x1"	4
21.	04022-WX0308252	Flat Washer-3/8"	4
22.	04022-WX0308252	Flat Washer-3/8"	4
23.	04022-YFC031	Socket HD Cap Screw-3/8"x1"	4
24.	MCCB-0011	Transformer Bracket	1
25.	MCCB-0011	Transformer Locking Plate	1
26.	V6Y-026	Transformer Casing	1
27.	V6Y-027	Transformer Side Cover	2
28.	V6Y-028	Transformer Top Cover	1
29.	V6Y-029	Socket HD Cap Screw-M6x10L	6
30.	V6Y-030	Machine Base Rear Cover	1
31.	04022-WX0104162	Washer, Flat-M6	8
32.	04022-FLB612	Socket HD Cap Screw-M6x12L	8
33.	04022-FLS55	Set Screw-M5x5L	1
34.	MBYSR-M25X1.5P	Lock Nut-BRM25x1.5P	1
35.	MBXYZ4217	Spacer 41X25X17	1
36.	MBXYZ7542	Bearing Retainer 78X42X17.5	1
37.	V6Y-037	Socket HD Cap Screw-M	3
38.	MBTVP7205B	Bearing Ball-7025	2
39.	MBBY-005	Bearing Seat-Y axis	1

VMC 1724 Y AXIS SECTION

Itm #	Part #	Description	Quan'ty
40.	04022-YFC830	Socket HD Cap Screw-M8x30L	4
41.	04022-TJ745E	Taper Pin 7#45	2
42.	MBCZ-015	Square Spacer 24X47	2
43.	04297-TC32X52X11	Oil Seal 5CX32C52X11T	1
44.	V6Y-044	Cushion Ring Locating Seat ϕ 78	1
45.	04022-YFC625	Socket HD Cap Screw-M6x25L	4
46.	04284-U3080	Cushion Sleeve	1
47.	04022-YFC620	Socket HD Cap Screw-M6x20L	4
48.	V6Y-048	Ball Screw-Y axis	1
49.	04022-YFC825	Socket HD Cap Screw-M8x25L	5
50.	04022-YFC620	Socket HD Cap Screw-M6x20L	4
51.	04284-U3090	Cushion Sleeve	1
52.	V6Y-052	Cushion Ring Locating Seat	1
53.	04297TC32X52X11	Oil Seal-TC2552	1
54.	MBCZ-009	Bearing Seat-Y axis	1
55.	04022-YFC1035	Socket HD Cap Screw-M10x35L	4
56.	04025-TJ745E	Taper Pin 7#45	2
57.	MBBST2562	Bearing Ball-BST2562	2
58.	MBTSX-007	Bearing Retainer	1
59.	04022-YFC616	Socket HD Cap Screw-M6x16L	3
60.	MBXY5017	Spacer 50X25X17L	1
61.	MBYSF-M25X1.5P	Lock Nut-YSF M25x1.5P	1
62.	04022-FLS55	Set Screw-M5x5L	2
63.	V6Y-063	Servo Motor Locating Bracket-Y axis	1
64.	04022-YFC1040	Socket HD Cap Screw-M10x40L	4
65.	48005-G98L25202524	Ball Screw Metal Coupling-Y axis	1
66.	4022-YFC620	Socket HD Cap Screw-M6x20L	1
67.	48005-G98L25202424	Rubber Coupling	1
68.	48005-G98L25202424	Motor Metal Coupling	1
69.	AM1160C	Servo Motor- Y axis	1
70.	04022-YFC1030	Socket HD Cap Screw-M10x30L	4
71.	V6Y-071	Splash Plate, Front	1
72.	V6Y-072	Retract. Way Cover, Front	1
73.	V6Y-073	Splash Plate, Side	2
74.	V6Y-074	Retract. Way Cover, Rear	1
75.	V6Y-075	Splash Guard, Left	1
76.	V6Y-076	Splash Guard, Right	1

VMC-1724 Z AXIS SECTION



VMC 1724 Z AXIS SECTION

Itm #	Part #	Description	Quan'ty
1.	MCCZ-001	Spindle Motor	1
2.	04022-YFC1235	Socket HD Cap Screw-M12x35L	4
3.	MCCZ-010	Motor Pulley	1
4.	MCCZ-011	End Washer	1
5.	04022-YFC1240	Socket HD Cap Screw-M12x40L	1
6.	V6Z-006	Timing Belt-8YU-728Lx50W	1
7.	V6Z-007	Spindle Motor Plate	1
8.	04022-YFC1040	Socket HD Cap Screw-M10x40L	4
9.	MCCZ-13	Tool Grab/Releasing Cylinder Ass'y	1
10.	04022-YFC1050	Socket HD Cap Screw-M10x50L	4
11.	MCCZ-014	Cylinder Attaching Plate	1
12.	04022-YFC1025	Socket HD Cap Screw-M10x25L	4
13.	V6Z-013	Attaching Plate Spacer	4
14.	04022-YFC1060	Socket HD Cap Screw-M10x60L	16
15.	V6Z-015	Spindle Housing	1
16.	V6Z-016	Square Key Locating Plate	2
17.	04022-YFC612	Socket HD Cap Screw-M6x12L	2
18.	04022-YFC612	Socket HD Cap Screw-M6x12L	2
19.	04022-FK151596F	Square Key	2
20.	V6Z-020	Locating Block for Linear Guide Way	4
21.	04022-YFC616	Socket HD Cap Screw-M6x16L	4
22.	V6Z-022	Limit Switch Adaptor Plate	1
23.	04022-YFC616	Socket HD Cap Screw-M6x16L	2
24.	V6Z-023	Limit Switch	1
25.	04022-YFC616	Socket HD Cap Screw-M6x16L	2
26.	V6Z-026	Spindle Housing Bracket	1
27.	04022-YFC616	Socket HD Cap Screw-M6x16L	6
28.	V6Z-028	Coolant Adj. Strap	1
29.	V6Z-029	Coolant Nibble	1
30.	V6Z-030	Pipe Plug	1
31.	V6Z-031	Rapid Adaptor Plug	1
32.	MCSMS-004	Coolant Distributing Block	1
33.	MCSMS-003	Ball Valve	4
34.	MCSMS-002	Coolant Nozzle	4
35.	MCCZ-016	Spindle Assembly	1
36.	04022-YFC825	Socket HD Cap Screw-M8x25L	6
37.	V6Z-037	Tool Alignment Key	2
38.	04022-YFC512	Socket HD Cap Screw-M5x12L	4
39.	V6Z-039	Servo Motor-Z axis	1

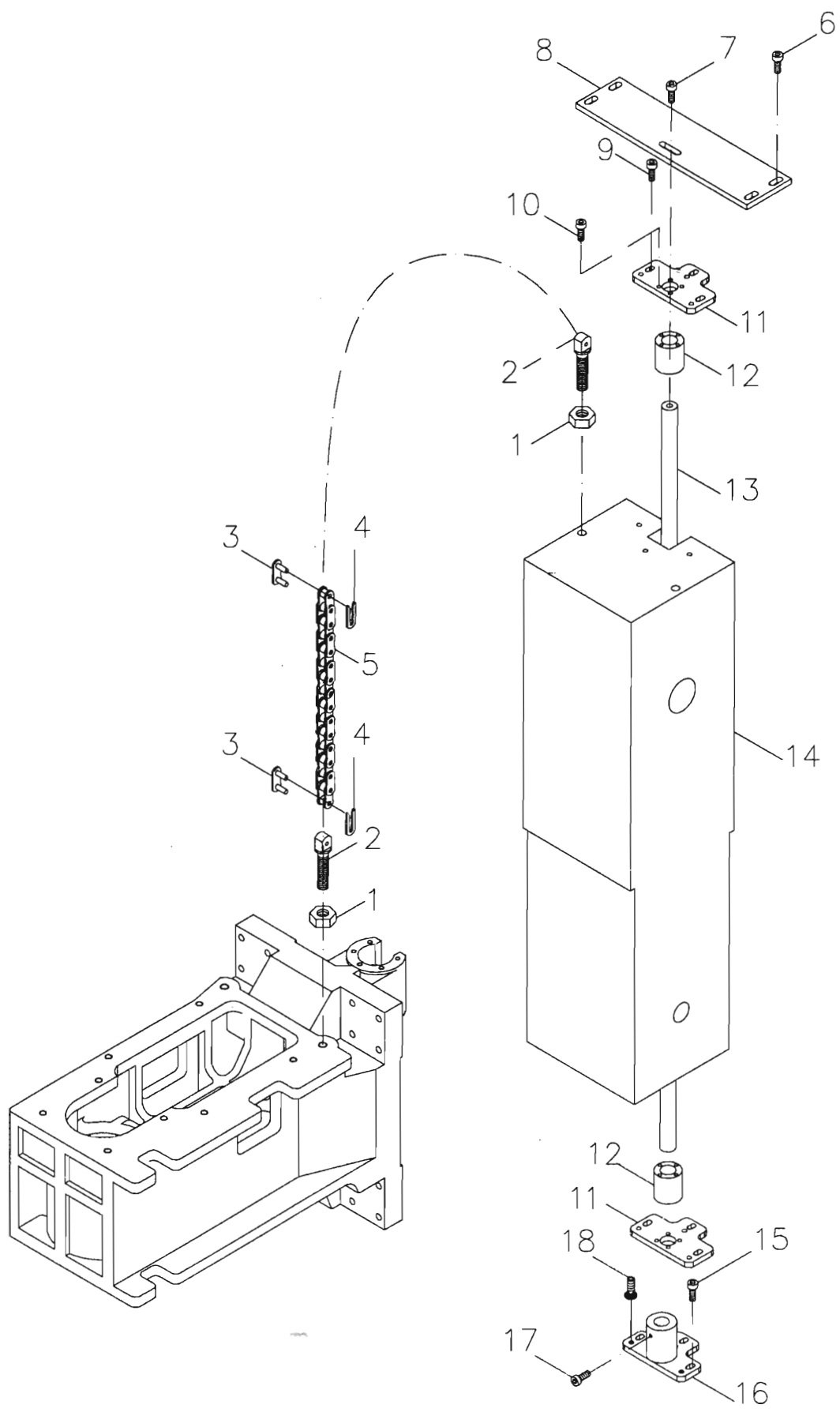
VMC 1724 Z AXIS SECTION

Itm #	Part #	Description	Quan'ty
40.	04022-YFC1030	Socket HD Cap Screw-M10x30L	4
41.	V6Z-041	Spring Washer	4
42.	V6Z-042	Motor Metal Coupling	1
43.	04022-YFC616	Socket HD Cap Screw-M6x16L	1
44.	V6Z-044	Rubber Coupling	1
45.	V6Z-045	Ball Screw Metal Coupling-Z axis	1
46.	04022-YFC616	Socket HD Cap Screw-M6x16L	1
47.	V6Z-047	Servo Motor Adaptor Base-Z axis	1
48.	04022-YFC1040	Socket HD Cap Screw-M10x40L	4
49.	MBYSF-M25X1.5P	Lock Nut-YSF M25x1.5P	1
50.	04022-FLS55	Set Screw-M5x5L	3
51.	MBXY5017	Spacer	1
52.	MBTSX-007	Bearing Retainer	1
53.	04022-YFC620	Socket HD Cap Screw-M6x20L	3
54.	MBBST2562	Ball Bearing	2
55.	MBTP4#	Taper Pin	2
56.	04022-YFC1035	Socket HD Cap Screw-M10x35L	4
57.	MBCZ-009	Bearing Seat-Z Axis	1
58.	V6Z-058	Cushion Sleeve	1
59.	04022-YFC825	Socket HD Cap Screw-M8x25L	5
60.	V6Z-060	Ball Screw-Z Axis	1
61.	MBCZ-015	Square Spacer	2
62.	04022-YFC820	Socket HD Cap Screw-M8x20L	4
63.	MBTP4#	Taper Pin	2
64.	MBBY-005	Bearing Seat	1
65.	MBTVP7205B	Bearing-7025	2
66.	MBXYZ7842	Bearing Retainer	1
67.	04022-YFC616	Socket HD Cap Screw-M6x16L	3
68.	MBXYZ4217	Spacer	1
69.	MBYSR-M25X1.5P	Lock Nut-YSR M25x1.5P	1
70.	04022-FLS55	Set Screw-M5x5L	3
71.	04022-YFC1040	Socket HD Cap Screw-M10x40L	6
72.	V6Z-072	Chain Roller Adaptor Seat-Left	1
73.	04022-YFC830	Socket HD Cap Screw-M8x30L	4
74.	04022-S25	Snap Ring	4
75.	MBCZ-005	Spacer	4
76.	MBNA4905	Ball Bearing	4
77.	MBCZ-004	Roller	4
78.	V6Z-078	Chain Roller Adaptor Seat-Right	1

VMC 1724 Z AXIS SECTION

Itm #	Part #	Description	Quan'ty
79.	MBCZ-003	Roller Shaft	4
80.	04022-S25	Snap Ring	4
81.	V6Z-081	Column	1
82.	04022-YFC616	Socket HD Cap Screw-M6x16L	2
83.	V6Z-083	Travel Adaptor Bracket	2
84.	V6Z-084	Limit Block	3
85.	V6Z-085	Travel Block Rail	2
86.	04022-FLB610	Round Socket Cap Screw-M6x10L	4
87.	V6Z-087	Adj. Block for Linear Guide Way	20
88.	04022-YFC520	Socket HD Cap Screw-M5x20L	20
89.	04022-YFC1055	Socket HD Cap Screw-M10x55L	20
90.	V6Z-090	Linear Guide Way-Z axis	2
91.	V6Z-091	Plastic Plug	20
92.	04022-YFC2090	Socket HD Cap Screw-M20x90L	7
93.	04022-SX20	Spring Washer	7

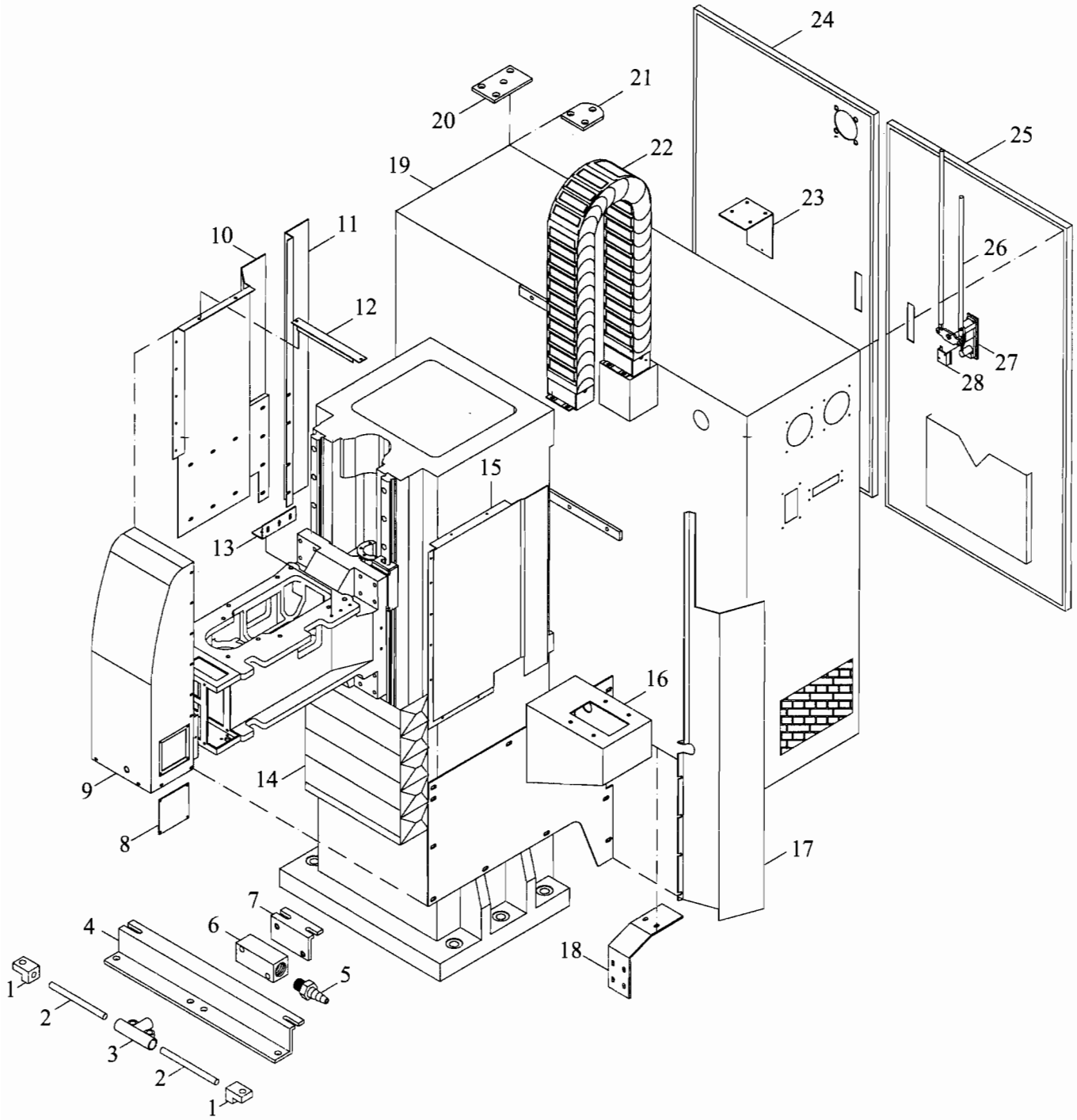
VMC-1724 Z AXIS SECTION I



VMC 1724 Z AXIS SECTION I

Itm #	Part #	Description	Quan'ty
1.	04022-NXM14	Nut	4
2.	MBCZ-017	Chain Locking Screw	4
3.	V6A-003	Chain Lock, Removable	4
4.	V6A-004	Chain Lock Clip	4
5.	V6A-005	Chain	5
6.	04022-YFC1030	Socket HD Cap Screw-M10x30	4
7.	04022-YFC830	Socket HD Cap Screw-M8x30	7
8.	V6A-008	Plate for Block Alignment Rod	2
9.		Socket HD Cap Screw-M	3
10.	04022-YFC620	Socket HD Cap Screw-M6x20	4
11.	V6A-011	Plate for Alignment Bushing	2
12.	V6A-012	Alignment Bushing	2
13.	V6A-013	Block Alignment Rod	1
14.	V6A-014	Balancing Block	1
15.	04022-YFC825	Socket HD Cap Screw-M8x25	3
16.	V6A-016	Seat for Block Alignment Rod	1
17.	04022-YFC616	Socket HD Cap Screw-M6x16	1
18.	04022-YFC830	Socket HD Cap Screw-M8x30	3

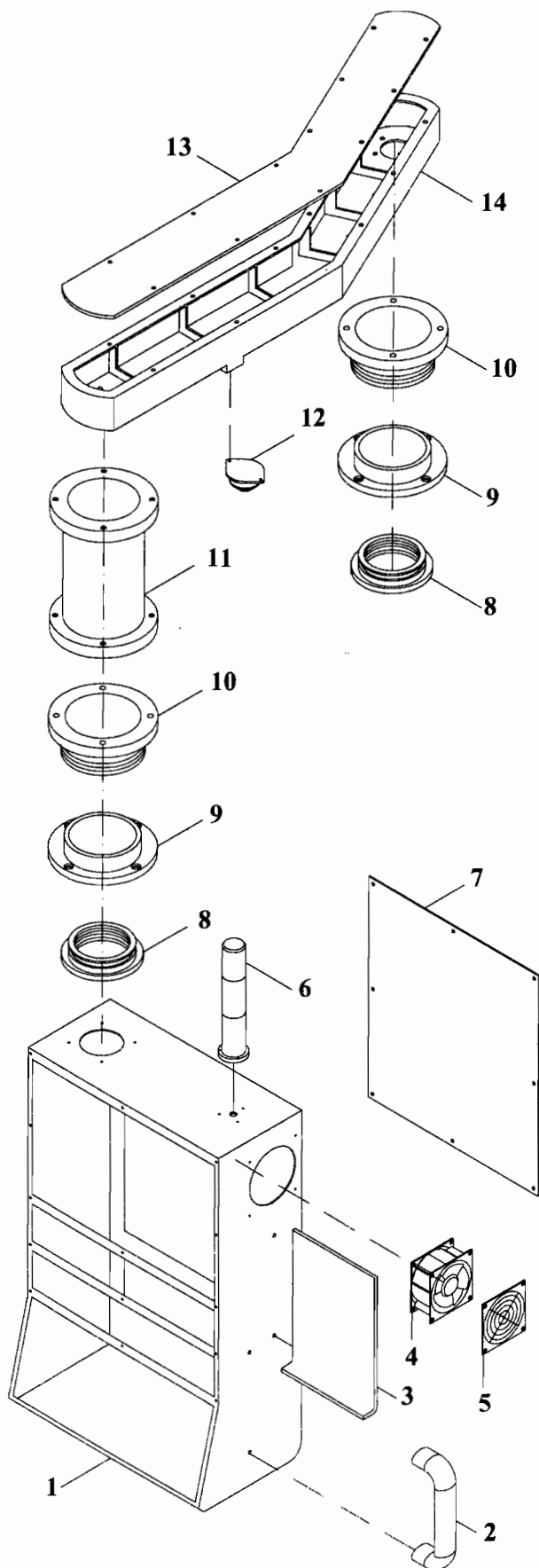
VMC-1724 COLUMN ENCLOSURE



VMC 1724 COLUMN ENCLOSURE

Itm #	Part #	Description	Quan'ty
1.	V6D-001	Locating Block	2
2.	V6D-002	Copper Tubing	2
3.	V6D-003	3 Way Adaptor Joint	1
4.	V6D-004	Lower Cover Bracket	1
5.	V6D-005	Coolant Fitting	1
6.	V6D-006	Coolant Distribution Block	1
7.	V6D-007	Distribution Block Bracket	1
8.	V6D-008	Side Cover	1
9.	V6D-009	Spindle Housing Front Cover	1
10.	V6D-010	Spindle Housing Side Cover- Left	1
11.	V6D-011	Linear Guide Way Cover-Left	1
12.	V6D-012	Supporting Bracket-Top	1
13.	V6D-013	Supporting Bracket-Low	1
14.	V6D-014	Way Cover, Z Axis Retractable	1
15.	V6D-015	Spindle Housing Side Cover-Right Top	1
16.	V6D-016	Spindle Housing Side Cover-Right Low	1
17.	V6D-017	Linear Guide Way Cover-Right	1
18.	V6D-018	Electric Cabinet Supporting Bracket	8
19.	V6D-019	Electric Cabinet	1
20.	V6D-020	Cabinet Door Locating Plate	2
21.	V6D-021	Locating Plate	2
22.	MBSQ-302	Cable Protector-Retractable	1
23.	V6D-023	Power Disconnect Switch Bracket	1
24.	V6D-024	Electric Cabinet Door-Left	1
25.	V6D-025	Electric Cabinet Door-Right	1
26.	V6D-026	Door Lock Extension Rod	1
27.	V6D-027	Door Lock	2
28.	V6D-028	Door Lock Locating Plate	2

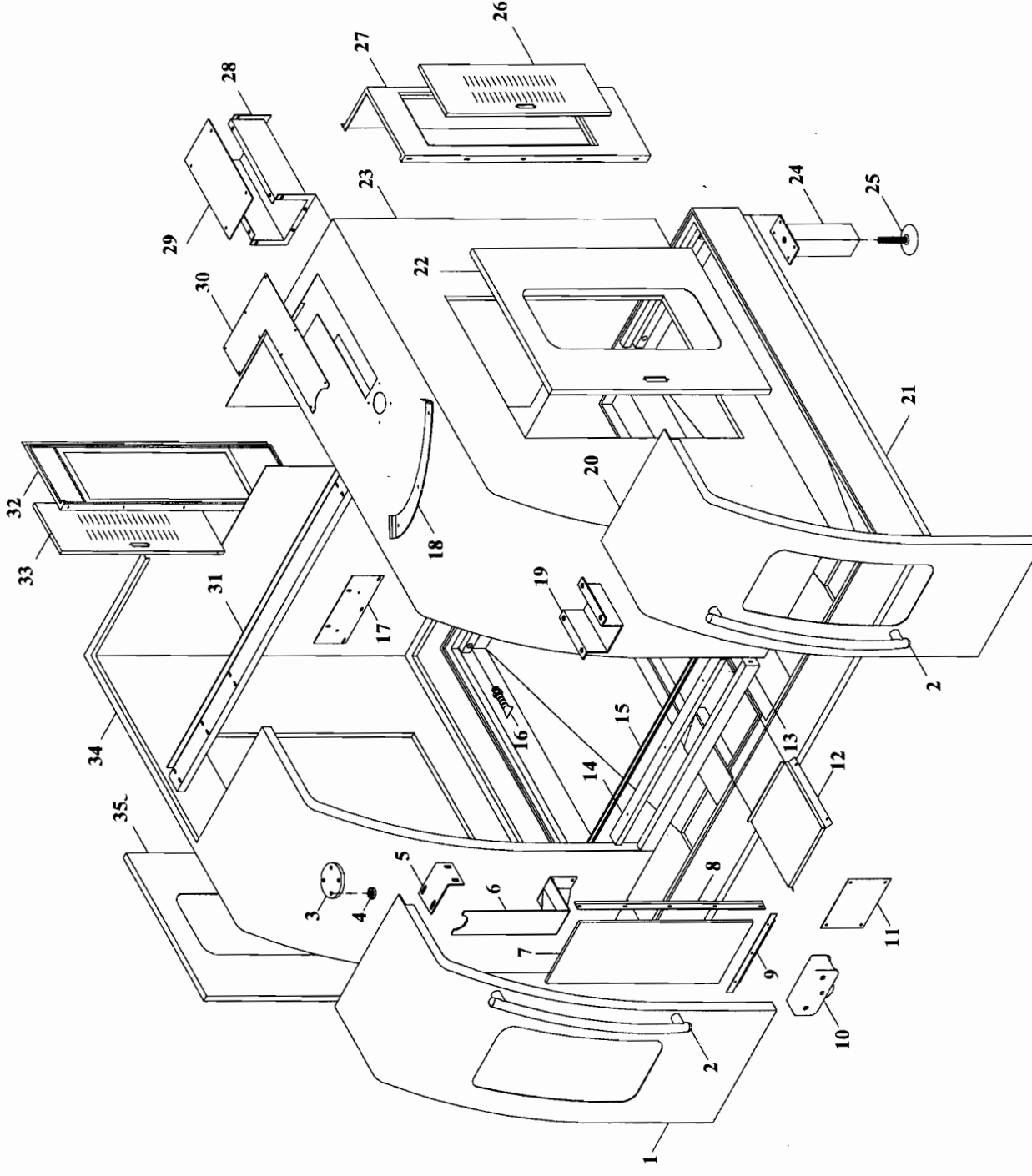
VMC-1724 CONTROL BOX & ITS ARM ASSEMBLY



VMC 1724 CONTROL BOX & ITS ARM ASS'Y

Itm #	Part #	Description	Quan'ty
1.	V6B-001	Control Box	1
2.	V6B-002	Handle	1
3.	V6B-003	Clip Board	1
4.	V6B-004	Cooling Fan	1
5.	V6B-005	Fan Filter	1
6.	V6B-006	Warning Light-Two Stages	1
7.	V6B-007	Control Box Back Cover	1
8.	MBVCB12A	Bracket Ring Cover	2
9.	MBVCB02A	Box Ring Adaptor	2
10.	MBVCB03A	Control Arm Ring Adaptor	2
11.	V6B-011	Control Arm Ring	1
12.	V6B-012	Steel Roller Wheel	2
13.	V6B-013	Arm Top Cover	1
14.	V6B-014	Control Arm	1

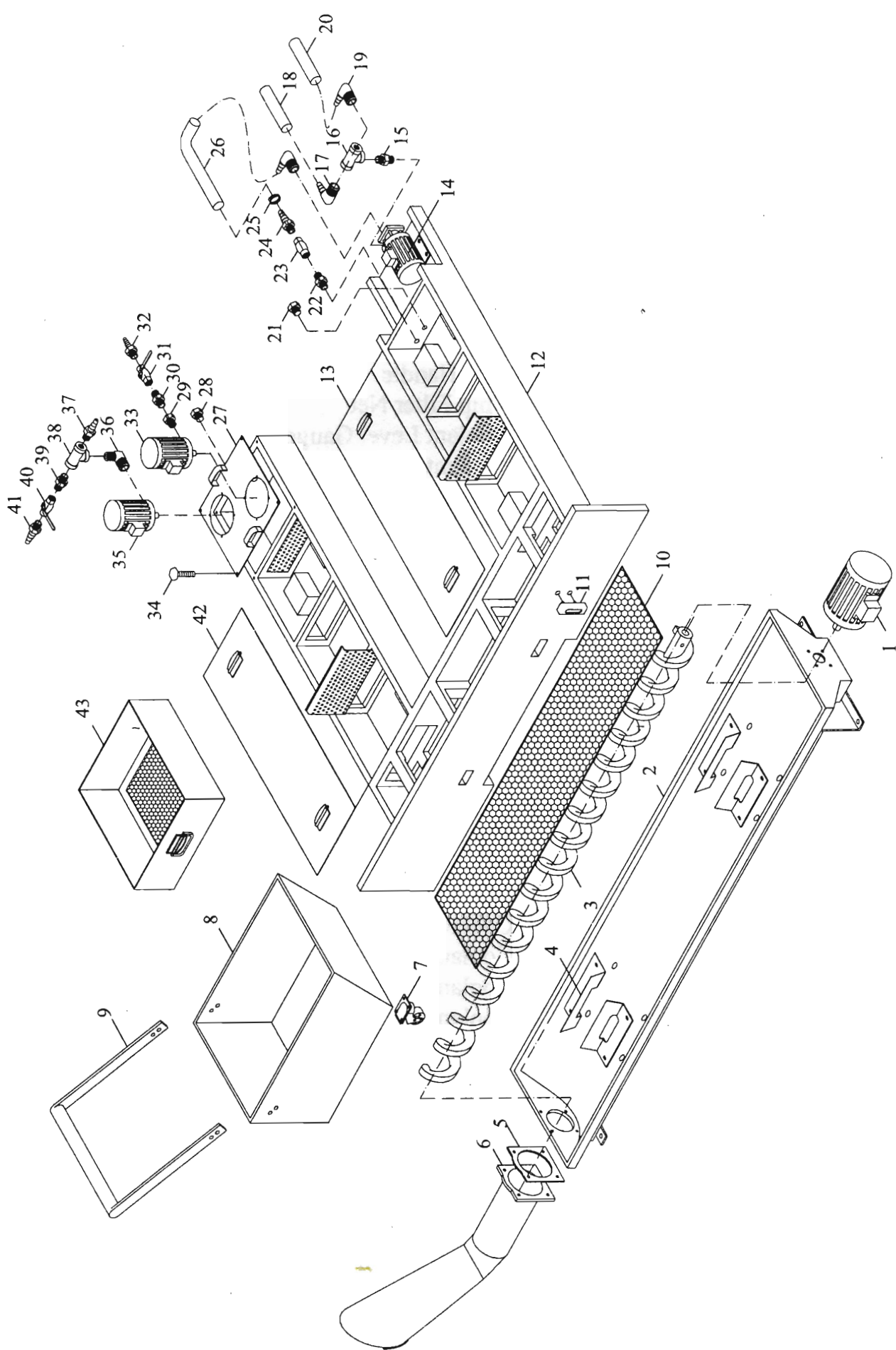
VMC-1724 SHEET METAL ENCLOSURE



VMC 1724 SHEET METAL ENCLOSURE

Itm #	Part #	Description	Quan'ty
1.	V6C-001	Left Front Door	1
2.	V6C-002	Chromed Door Handle	2
3.	V6C-003	Bearing	4
4.	V6C-004	Bearing Locating Plate	4
5.	V6C-005	Bracket for Door Disconnect Switch	1
6.	V6C-006	Coolant Gun Locating Bracket	1
7.	V6C-007	Acrylic Board	4
8.	V6C-008	Locating Bracket-Long	8
9.	V6C-009	Locating Bracket-Short	8
10.	V6C-010	Roller Wheel	4
11.	V6C-011	Coolant Tank Front Cover	1
12.	V6C-012	Coolant Tank Top Cover	1
13.	V6C-013	L/R Door Enclosure Connecting Plate	1
14.	V6C-014	Top Protecting Plate	1
15.	V6C-015	Roller Wheel Rail	1
16.	V6C-016	Coolant Nozzle	6
17.	V6C-017	Column Front Cover	1
18.	V6C-018	Arm Supporting Plate	1
19.	V6C-019	Seat for Door Disconnect Switch	1
20.	V6C-020	Right Front Door	1
21.	V6C-021	Coolant Tray	1
22.	V6C-022	Right Door Panel	1
23.	V6C-023	Right Door Enclosure	1
24.	V6C-024	Coolant Tray Supporting bracket	4
25.	V6C-025	Adjustment Screw	4
26.	V6C-026	Column Right Cover Panel	1
27.	V6C-027	Column Right Cover	1
28.	V6C-028	Cable Joint Bracket	1
29.	V6C-029	Top Cover	1
30.	V6C-030	Top L Shape Cover	1
31.	V6C-031	Top Door Rail	1
32.	V6C-032	Column Left Cover	1
33.	V6C-033	Column Left Cover Panel	1
34.	V6C-034	Left Door Enclosure	1
35.	V6C-035	Left Door Panel	1

VMC-1724 COOLANT TANK ASSEMBLY



VMC 1724 COOLANT TANK ASS'Y

Itm #	Part #	Description	Quan'ty
1.	V6E-001	Auger Motor	1
2.	V6E-002	Chip Collection Tray	1
3.	V6E-003	Auger	1
4.	V6E-004	Auger Supporting Bracket	4
5.	V6E-005	Chip Shoot Adaptor Spacer	1
6.	V6E-006	Chip Shoot	1
7.	V6E-007	Roller Wheel	4
8.	V6E-008	Chip Collection Cart	1
9.	V6E-009	Cart Handle	1
10.	V6E-010	Chip Filter Net	1
11.	V6E-011	Coolant Level Gauge	1
12.	V6E-012	Coolant Tank	1
13.	V6E-013	Coolant Tank Top Cover-Right	1
14.	V6E-014	Coolant Pump-Horizontal	1
15.	V6E-015	Coolant Double End Fitting	1
16.	V6E-016	3 Way Pipe Fitting	1
17.	V6E-017	90 Degree Coolant Adaptor	1
18.	V6E-018	Coolant Hose	1
19.	V6E-019	90 Degree Coolant Adaptor	1
20.	V6E-020	Coolant Hose	1
21.	V6E-021	Coolant Plug	1
22.	V6E-022	Coolant Double End Fitting	1
23.	V6E-023	Check Valve	1
24.	V6E-024	Coolant Adaptor Fitting	1
25.	V6E-025	Coolant Hose Adjustable Strap	6
26.	V6E-026	Coolant Hose	1
27.	V6E-027	Coolant Pump Adaptor Plate	1
28.	V6E-028	Coolant Plug	1
29.	V6E-029	Coolant Fitting	1
30.	V6E-030	Coolant Double End Fitting	1
31.	V6E-031	Ball Valve	1
32.	V6E-032	Coolant Adaptor Fitting	1
33.	V6E-033	Coolant Pump-Vertical	1
34.	V6E-034	Hex HD Cap Screw-	4
35.	V6E-035	Coolant Pump-Vertical	1
36.	V6E-036	90 Degree Coolant Adaptor	1
37.	V6E-037	Coolant Adaptor Fitting	1
38.	V6E-038	3 Way Pipe Fitting	1
39.	V6E-039	Coolant Double End Fitting	1

VMC 1724 COOLANT TANK ASS'Y

Itm #	Part #	Description	Quan'ty
40.	V6E-040	Ball Valve	1
41.	V6E-041	Coolant Adaptor Fitting	1
42.	V6E-042	Coolant Tank Top Cover-Left	1
43.	V6E-043	Chip Collecting Tray	2

ATC Operation Manual & Parts List

CAT-40 & BT-40 ARM-TYPE AUTOMATIC TOOL CHANGING SYSTEM INSTRUCTION

1. This system uses gear-box and cylindrical cam reel to reduce the speed. The stepping motor with an automatic brake drives the cylindrical cam reel to produce the index angle, thus repositioning the tool pot. While the tool pot is on position, the pneumatic cylinder will push the ratchet cam to make the clamping jaws to go up and down. The motion of the clamping jaws, then drive the tool pot to rotate horizontally and vertically. This in turn will make the tool change quickly and smoothly.
2. Every rotation of the cylindrical cam will drive the magazine for one tool movement. On each 360° rotation of the cylindrical cam, the cam only moves 270°. And the remaining 90° angle, the cam will have no motion. This design will ensure the motor brakes and stops on position. (The rotation angle of the braking motor will be 45°±20°)
3. The effective rotation angle for the clamping cam is approximately 100°±10°.
4. The motor is 3Phase/ 200V/200W. The gear reducing ratio is 1 : 20.

The attached automatic motor brake can rotate either clockwise (CW) or counter clockwise (CCW). For every indexing, the moving time, in theory, is 0.7 second, and the complete indexing cycle (20/24 index) will take 14/16.8 seconds.

5. The dimension of the clamping cylinder is 50mm×100mm. Its travel distance is detected by a magnetic ring.
6. The solenoid valve is 2 phases, 24V, 1/4"PT. (For pneumatic ATC).
7. The proximity sensors: BALLUFF(ISO-9001) REG NO: 19279-01

Specification : M12×1, detecting distance 2mm, Voltage:10-30V DC ≤

130mA ≤ 800HZ PNP 3 cords.

8. The distribution diagram of the pneumatic cylinder and electro magnetic valve & cam-type connecting diagram of circuit are in showed fig (1). (For pneumatic ATC).
9. Tool capacity: 20/24 tool magazine with tool holders; Max. Tool size: 80mm.
10. Max. Tool length: 300mm.
11. Max. Tool Weight: 80kg.
12. The material of the tool pot is nylon mixes with 33% of fiberglass. It is one piece injection molded, with a weight tolerance of up to 100kg, and its thermo tolerance is 120°C to -20°C.

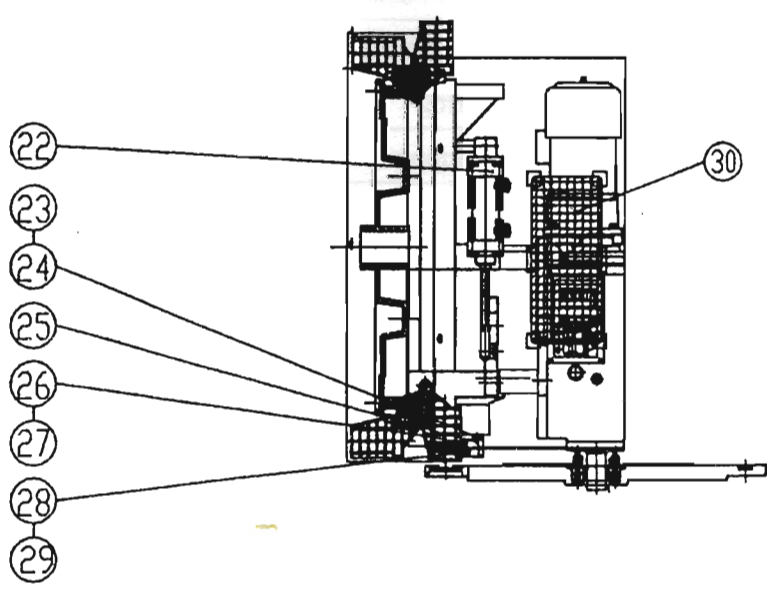
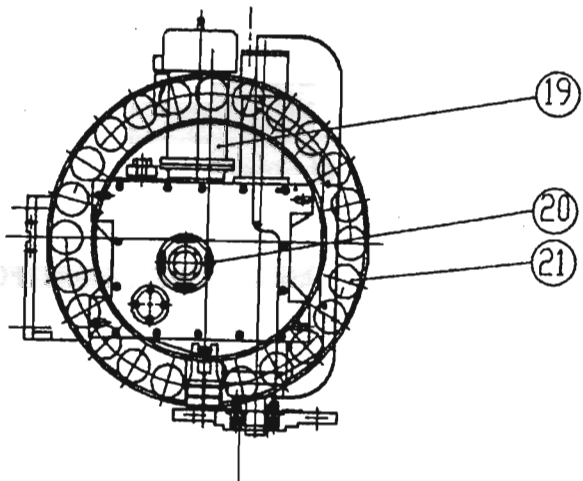
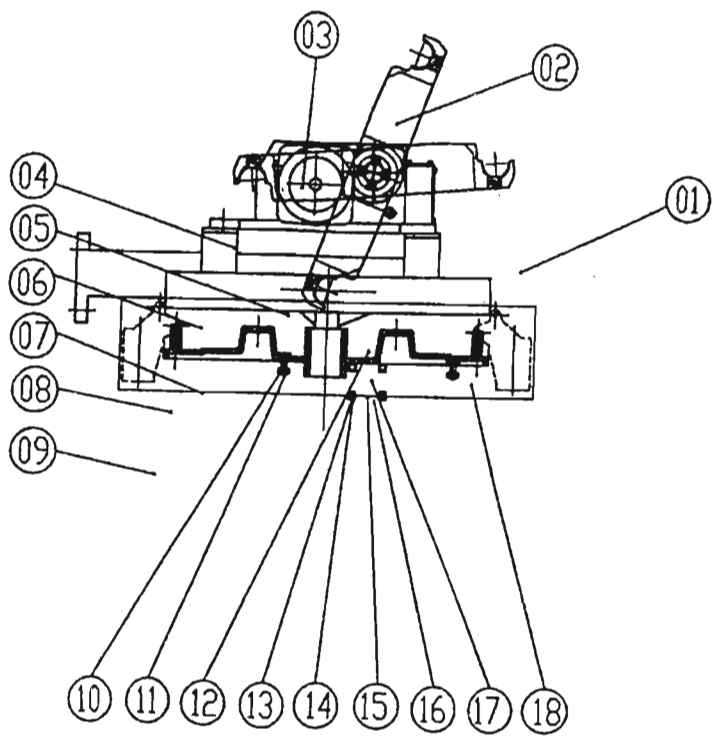
13. The counting and positioning of the rotation is controlled by a PLC. It

uses proximity switches to detect, and execute tool indexing by selecting the nearest path. This tool change design can rotate clockwise (CW) or counterclockwise (CCW) depending on selection.

14. The total weight of the automatic tool changing system is approximately 140kg with exclusion of the clamping arm and cover. Note: the weight of the tool body and plate is light, but they still have high rigidity. The cylinder and drive motor are located on the back-side of the tool magazine. This will allow for convenient maintenance and repair.

15. For the drawing and the size of the tool magazine, please refer to fig (2).

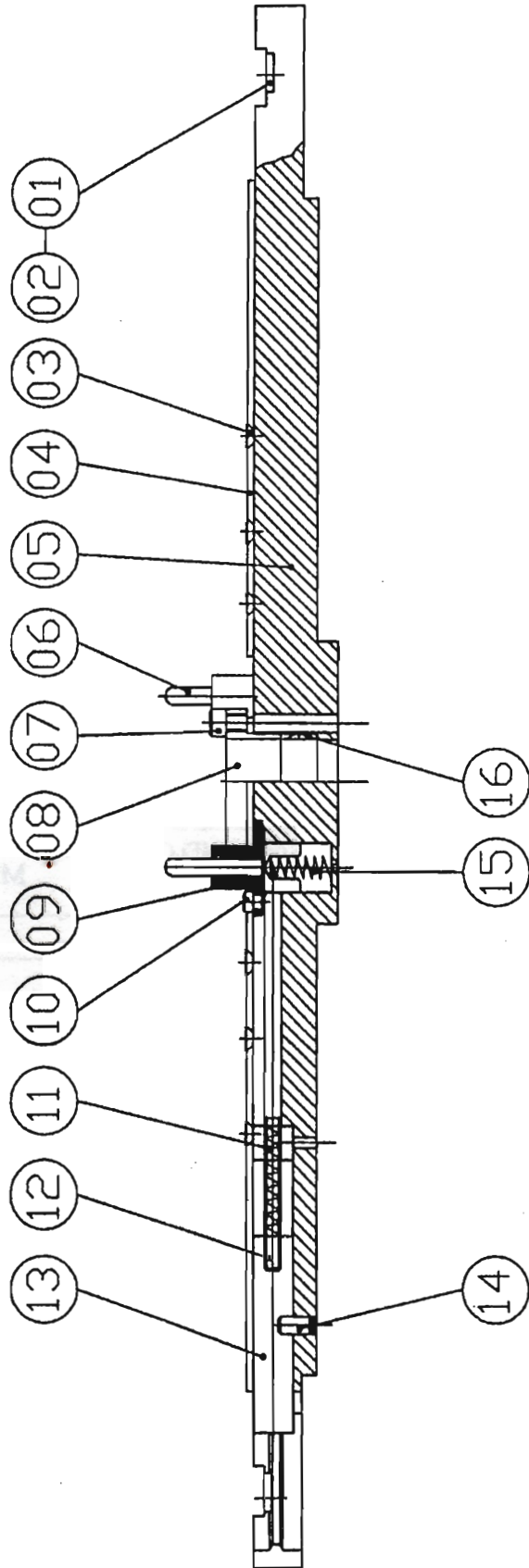
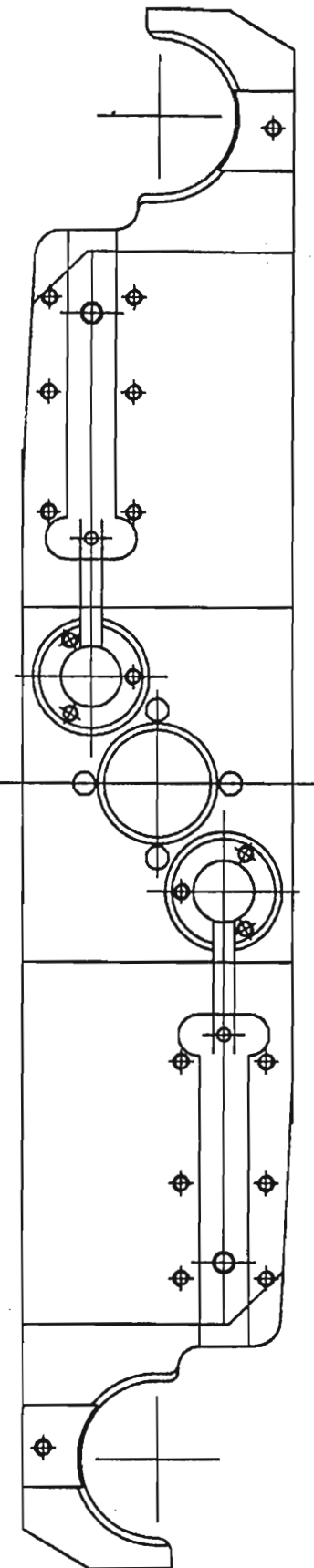
Body & Magazine Plate Assembly Parts Diagram



BODY & MAGAZINE PLATE ASSEMBLY PARTS DIAGRAM

Item	Part no.	Description	Material/Specification	Quantity	Remark
1	MB-4049-2	ATC Cover	SPHC	1	
2	MB-403	Arm Assembly		1	
3	MB-405	DEX II Assembly		1	
4	MB-4064-5	Plate	S45C	1	
5	MB-401	MOTOR/CAM Assembly		1	
6	MB-4001	Pot Body	FC-25	1	
7	MB-404	Tool Pot Assembly		1	
8					
9	MB-4037	Body Cover	SPHC	1	
10	Commercial Products	Bearing	CF-10	24	
11	Commercial Products	Hex Nut	M10*p1.5	24	
12	Commercial Products	Socket HD Cap Screw	M10*p1.5*35L	1	
13	Commercial Products	Bearing	6008ZZ	2	
14	Commercial Products	Set Screw	M6*1.0P*6L	4	
15	Commercial Products	Socket HD Cap Screw	M8*1.25P*20L	1	
16	MB-4004	Shaft Cover	S45C	1	
17	MB-4003-1	Shaft	S45C	1	
18	MB-4002	Disk	FC-25	1	
19					
20	MB-4067	Number Plate	Acrylic	1	
21	Commercial Products	Number Mark		1	
22	MB-402	Pot Up-Down Assembly		1	
23	Commercial Products	Socket HD Cap Screw	M8*1.25P*25L	2	
24	Commercial Products	Spring	φ 8	2	
25	MB-4007-1	Tool Support	FC-25	1	
26	Commercial Products	Socket HD Cap Screw	M8*1.25P*25L	2	
27	Commercial Products	Spring	φ 8	2	
28	Commercial Products	Set Screw	M8*1.25P*35L	2	
29	Commercial Products	Nut	M8*1.25P	2	
30	MB-5304	Cover	Acrylic	1	

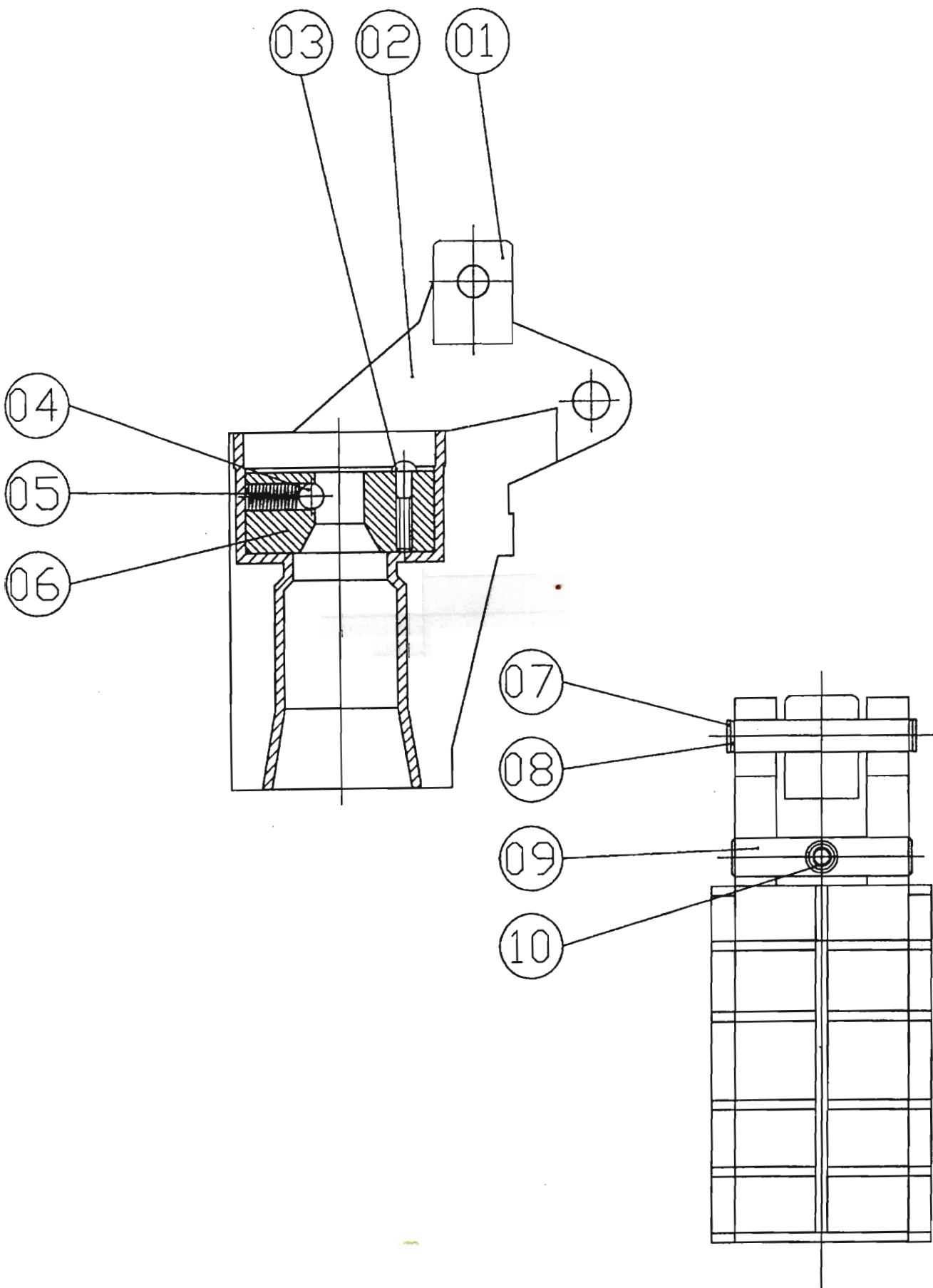
Arm Assembly Parts



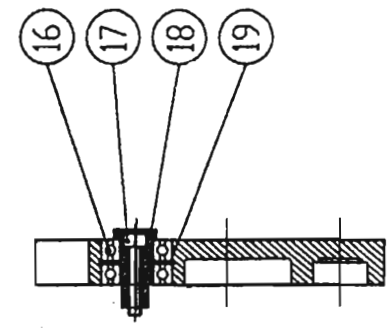
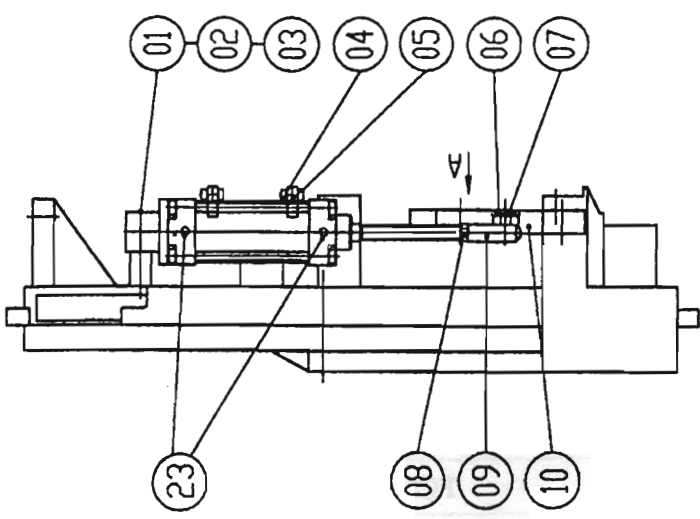
ARM ASSEMBLY PARTS

No.	Part no.	Description	Specification	Dimension	Quantity
1	MB-4034	Home key	60°		2
			65°		2
			70°		2
2	Commercial Products	Socket Flat Cap Screw	M6*1.0p*15L		2
3	Commercial Products	Socket Flat Cap Screw	M6*1.0p*15L		12
4	MB-4028	Case	430mm	114mm	2
			460mm	129mm	2
			500mm	149mm	2
			530mm	164mm	2
			600mm	199mm	2
5	MB-4025	Arm	BT · CAT · HSK	430mm	1
				460mm	1
				500mm	1
				530mm	1
				600mm	1
6	MB-4030	Pin	BT	64mm	2
			460mm	129mm	2
			500mm	149mm	2
			530mm	164mm	2
			600mm	199mm	2
7	Commercial Products	Socket HD Cap Screw	M8*1.25p*50L		4
8	MB-4035	Case			1
9	MB-4033	Pin Plate	Standard	24mm	2
			Dex2	21mm	2
10	Commercial Products	Socket HD Cap Screw	M6*1.0p*15L		6
11		Spring 1	φ 1.1 × φ 9 × 14T × 41L		2
12	MB-4029	Motion pin	430mm	65mm	2
			460mm	80mm	2
			500mm	100mm	2
			530mm	115mm	2
			600mm	150mm	2
13	MB-4032	Stop Movement			2
14	MB-4031	Pin		φ 8 × 16L	2
15		Spring 2	φ 1.2 × φ 11 × 20T × 78.5L		2
16	Commercial Products	Taper Sleeve Set	φ 40 × φ 45		1

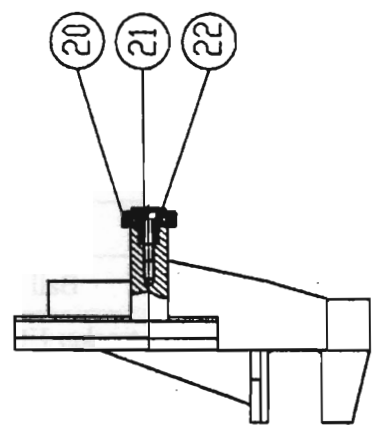
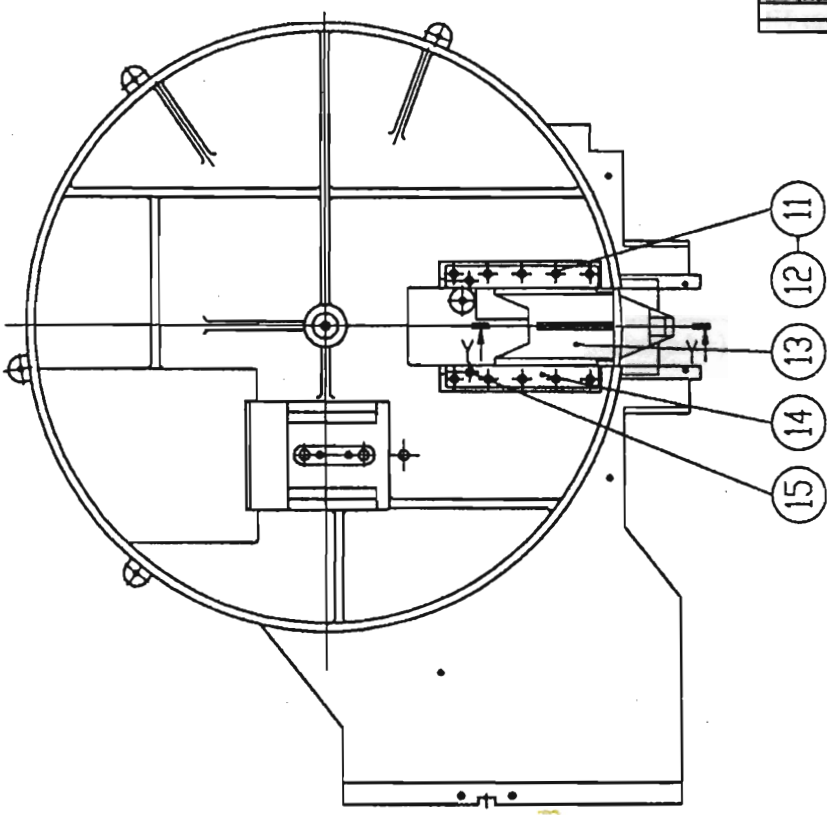
Tool Pot Assembly Part Diagram



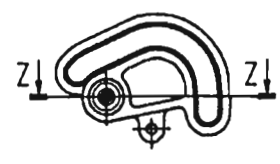
Tool Pot up-down Mechanism Assembly Part Diagram



Z-Z 剖视图, S=2/1



Y-Y 剖视图, S=2/1

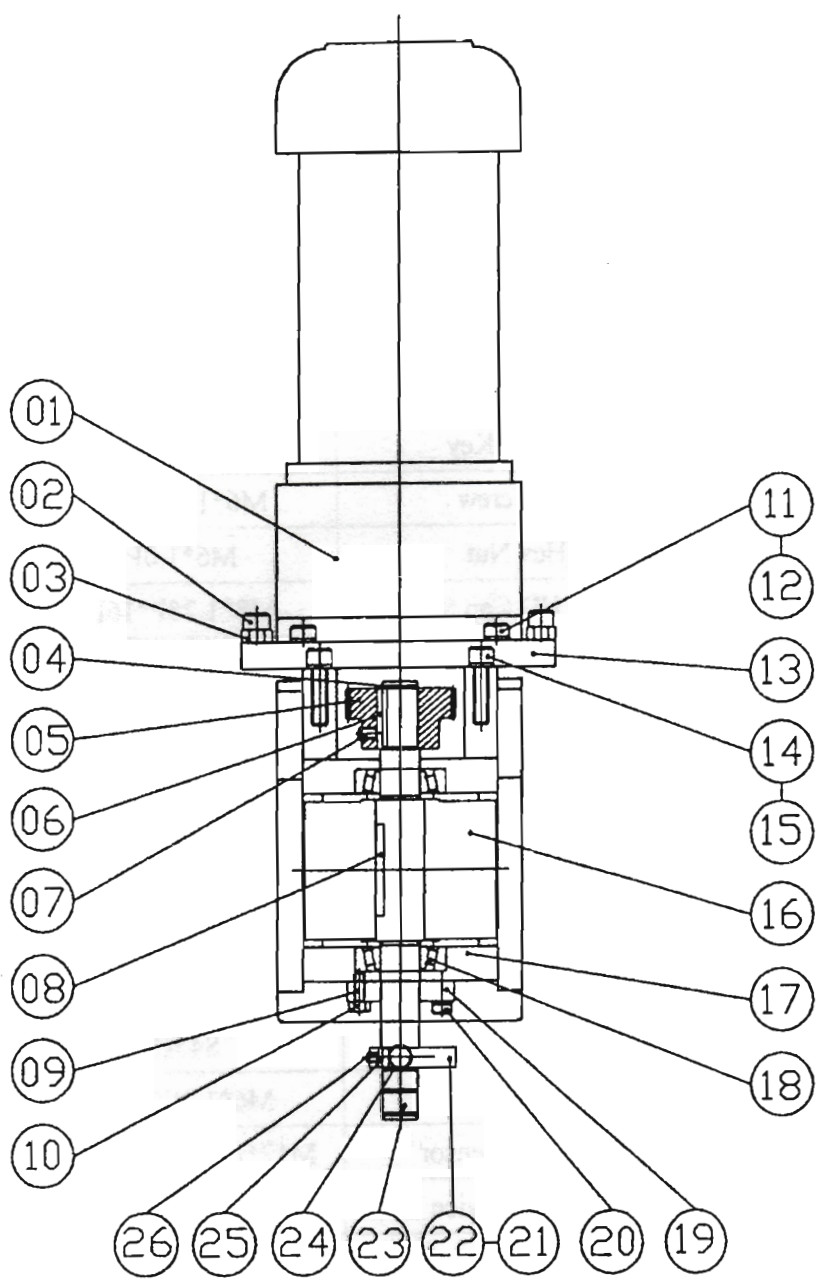


A 视图, S=1/1

TOOL POT UP-DOWN MECHANISM ASSEMBLY PART DIAGRAM

Item	Part no.	Description	Material/Specification	Quantity	Remark
1	MB-4011	Shaft	S45C	1	
2	Commercial Products	Socket HD Cap Screw	M8*1.25P*55L	1	
3	Commercial Products	Spring	φ 8	1	
4	Commercial Products	Sensor	SD-LB	2	
5	Commercial Products	Sensor Housing		2	
6	Commercial Products	Snap Ring-C	S18	2	
7	MB-4012	Adaptor	S45C	1	
8	Commercial Products	Hex Nut	M6*p1.0	1	
9	MB-4066	I Joint	S45C	1	
10	MB-4009	Cam	FCD60	1	
11	Commercial Products	Socket HD Cap Screw	M6*1.0P*20L	10	
12	Commercial Products	Spring	M6	10	
13	MB-4104	Sprawl	FCD55	1	
14	MB-4008	Plate	S45C	1	
15	Commercial Products	Oil Joint	1/8 PT	2	
16	Commercial Products	Ball Bearing	6004ZZ	2	
17	Commercial Products	Socket HD Cap Screw	M8*1.25P*40L	1	
18	MB-4010	Shaft	S45C	1	
19	Commercial Products	Snap Ring-R	R42	1	
20	MB-4039	Collar	S45C	1	
21	Commercial Products	Socket HD Cap Screw	M6*1.0P*25L	1	
22	MB-4006	Sleeve	S45C	1	
23	Commercial Products	CA- φ 63×100L(+Adjusting Valve)	CA- φ 63× 100L(1/4PT× φ 8*2)	1	

Motor & Cam Assembly Part Diagram



MOTOR & CAM ASSEMBLY PART DIAGRAM

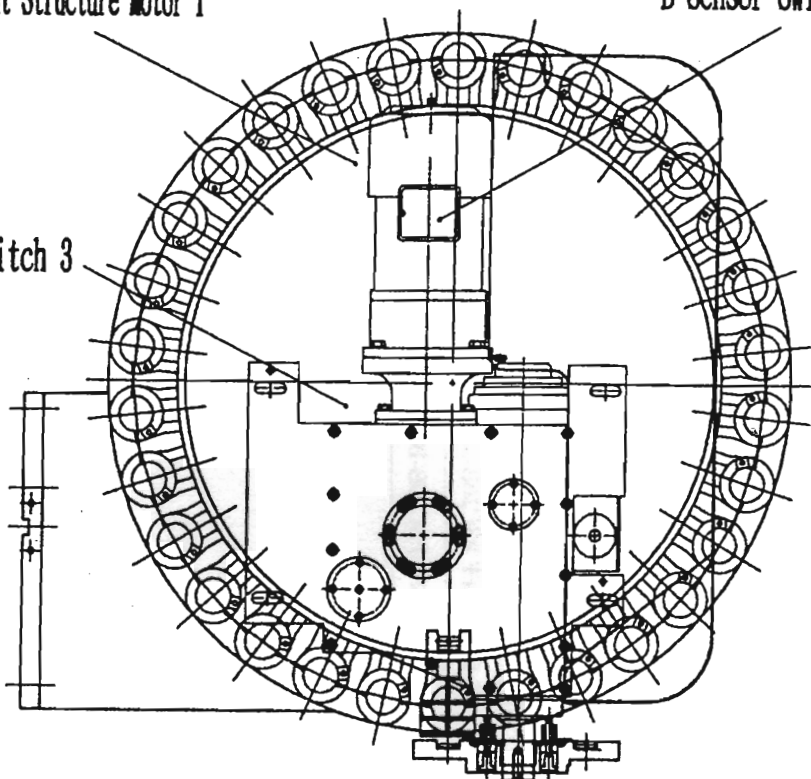
Item	Part no.	Description	Material/Specification	Quantity	Remark
1	Commercial Products	Motor	4P/380V/4HP/1:20	1	
2	Commercial Products	Socket HD Cap Screw	M8*1.25P*25L	2	
3	Commercial Products	Hex Nut	M8*1.25P	2	
4	Commercial Products	SnapRing-C	S18	1	
5	MB-4013	Gear 36T	S45C	2	
6	Commercial Products	Square Key	5×5×30L	1	
7	Commercial Products	Set Screw	M6*1.0P*6L	2	
8	Commercial Products	Square Key	8×8×45L	1	
9	Commercial Products	Set Screw	M6*1.0P*20L	4	
10	Commercial Products	Hex Nut	M6*1.0P	4	
11	Commercial Products	Socket HD Cap Screw	M8*1.25P*16L	4	
12	Commercial Products	Spring	φ 8	4	
13	MB-4014	Motor Support	SS41	1	
14	Commercial Products	Socket HD Cap Screw	M8*1.25P*16L	4	
15	Commercial Products	Spring	φ 8	4	
16	MB-4017	Cam	SCM435	1	
17	MB-4015	Cam Housing	FCD55	1	
18	Commercial Products	Bearing	30204JR	2	
19	MB-4018	Adjusting Plate	S45C	1	
20	Commercial Products	Set Screw	M6*1.0P*20L	4	
21	Commercial Products	Proximity Sensor	M12*p1.0/PNP/4mm	1	
22	MB-4019	Sensing Device	Powder Metallurgy	1	
23	MB-4016	Shaft	S45C	1	
24	Commercial Products	Snap Ring-C	S18	1	
25	Commercial Products	Square Key	5×5×6L	1	
26	Commercial Products	Set Screw	M5*0.8p*5L	1	

Control Element Position Explanatory Drawing

A Gradient Structure Motor 1

B Sensor Switch 2

C Sensor Switch 3



F Tool Change Structure Motor 6

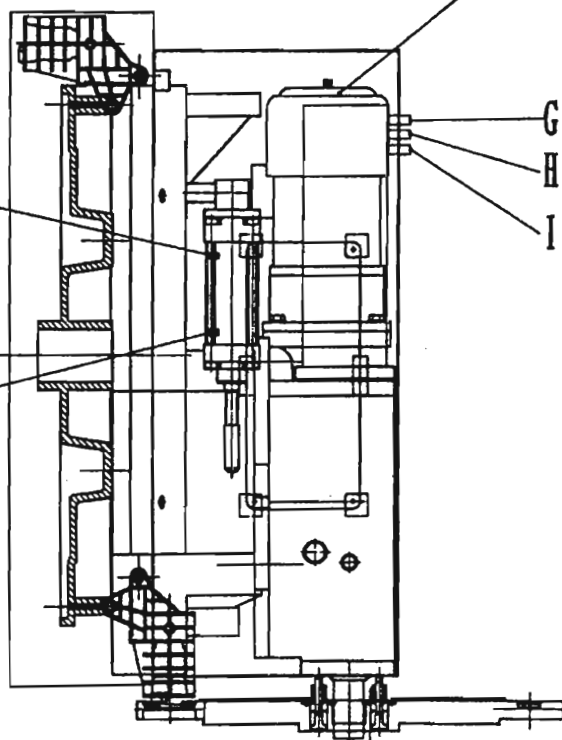
G Sensor Switch 7

H Sensor Switch 8

I Sensor Switch 9

D Induction Switch 4

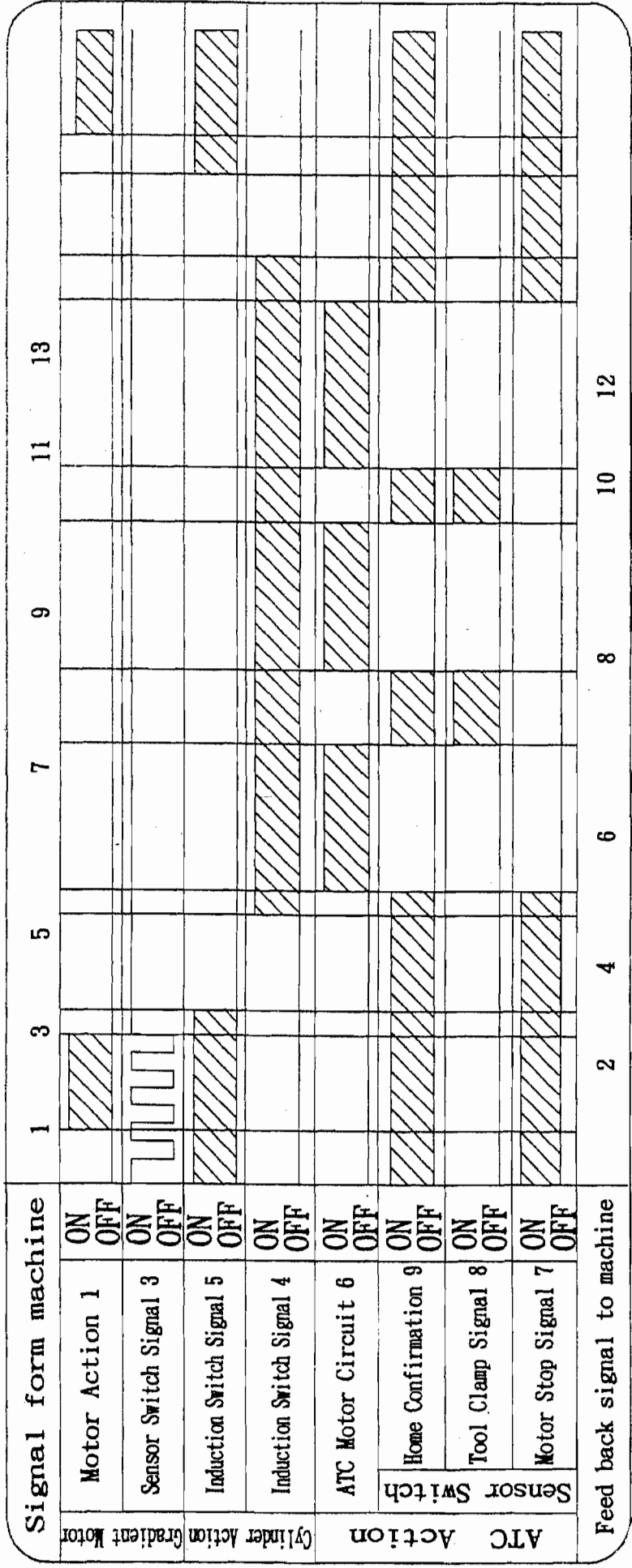
E Induction Switch 5



CONTROL ELEMENT POSITION EXPLANATORY DRAWING

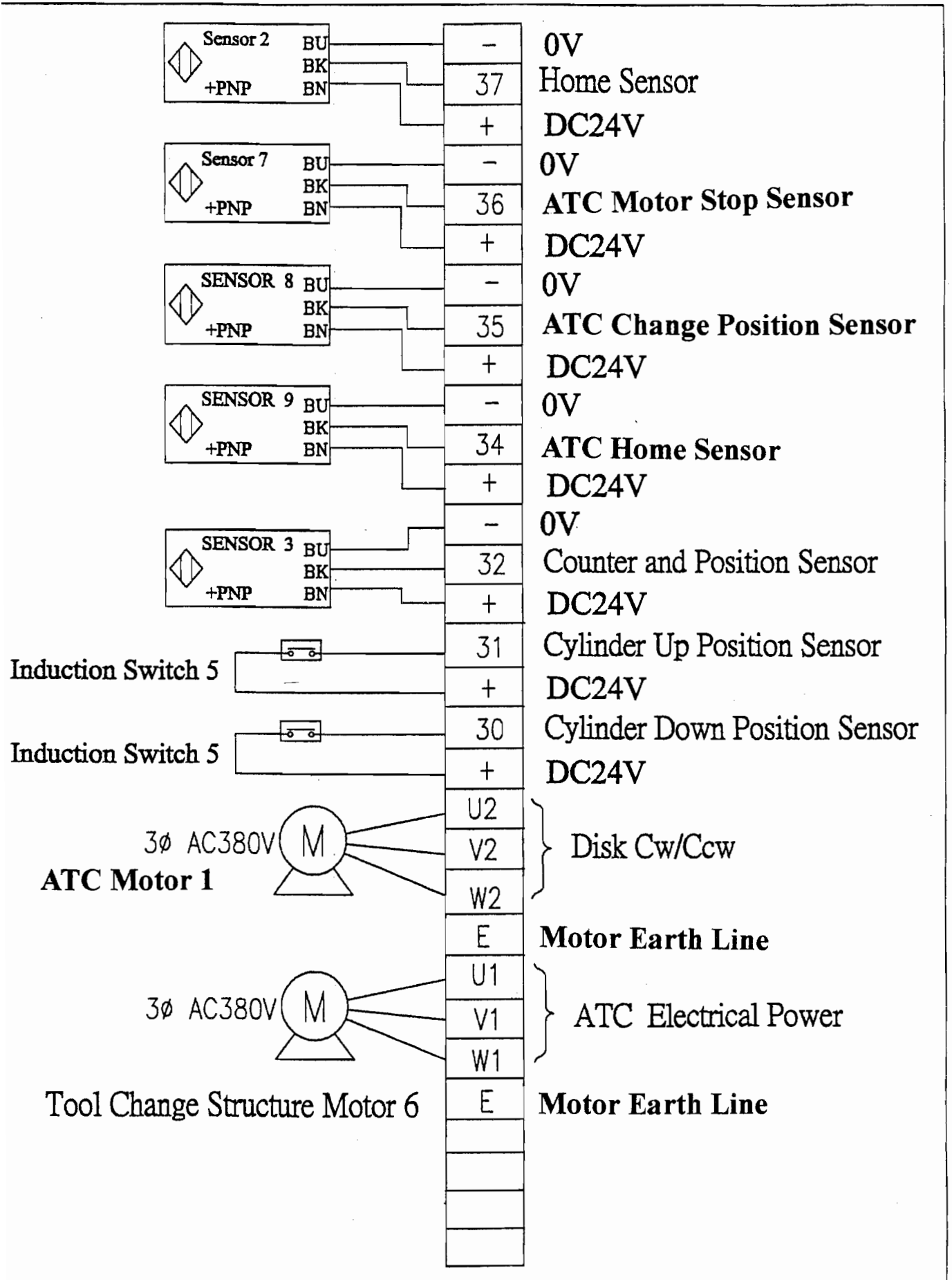
No.	Control Element	Function	Specification Affirmed		Q'ty	Remark
			DISK TYPE IS050-24DV			
A	Gradient Structure Motor 1	Control tool disk position reverse turn	1/2HP*4P		1	3 ϕ 220V 60HZ
B	Sensor Switch 2	Tool change original point number one tool signal	BALLUFF PSC40F-BV00-002		1	ϕ 12 DC24V(PNP)
C	Sensor Switch 3	Positioning signal of tool falling(contracting of cylinder)	BALLUFF PSC40F-BV00-002		1	ϕ 12 DC24V(PNP)
D	Induction Switch 4	Positioning signal of tool falling(protruding of cylinder)	ADSENS CS2050-4AD		1	DC24V
E	Induction Switch 5	Positioning signal of tool falling(protruding of cylinder)	ADSENS CS2050-4AD		1	DC24V
F	Tool Change Structure Motor 6	Tool change structure power source	1 HP*4P		1	3 ϕ 220V 60HZ
G	Sensor Switch 7	Stop signal of motor (tool change)	BALLUFF PSC20B-BV00-002		1	ϕ 12 DC24V(PNP)
H	Sensor Switch 8	Tool clamp signal (tool change)	BALLUFF PSC20B-BV00-002		1	ϕ 12 DC24V(PNP)
I	Sensor Switch 9	Origin point confirmation signal (tool change)	BALLUFF PSC20B-BV00-002		1	ϕ 12 DC24V(PNP)

Sequence diagram of electric action



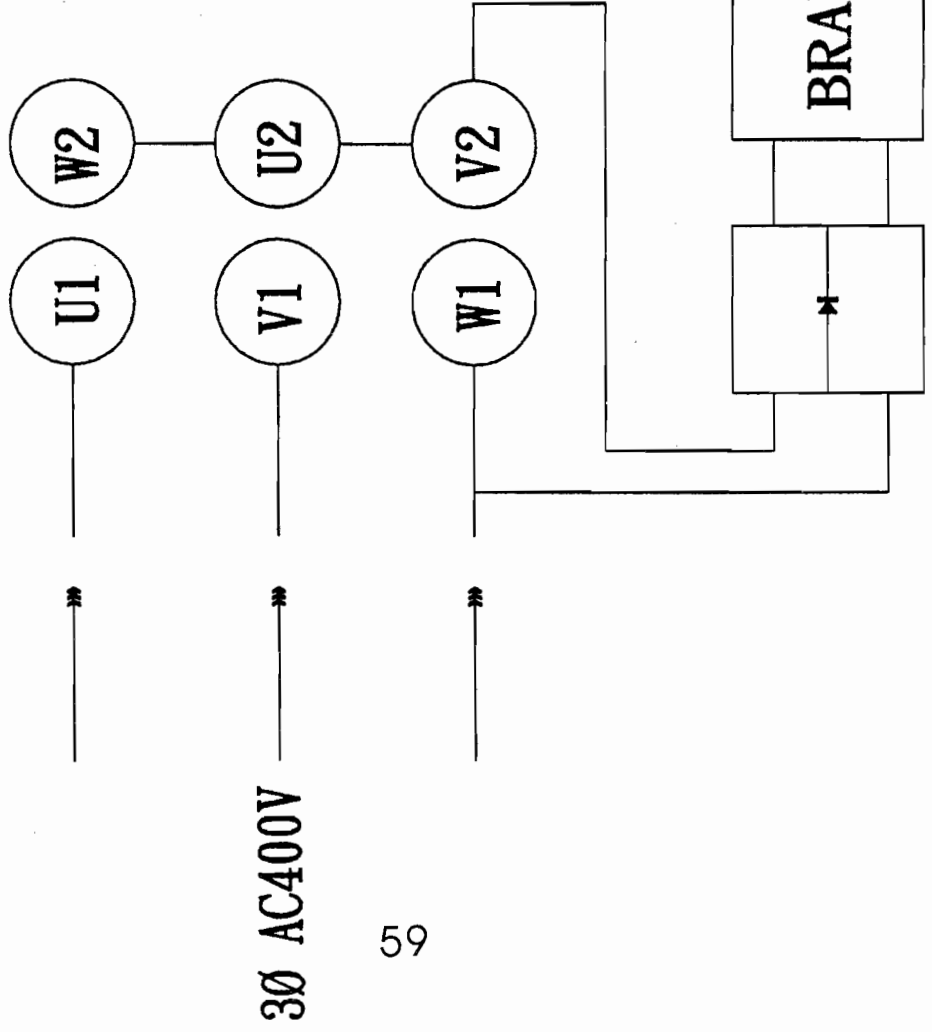
- 1. Tool selection (Tool selection power for C.W or C.C.V. -tool to tool)
- 2. Tool counter & positioning signal (to stop indexing motor)
- 3. Power on for tool clamping cylinder
- 4. Positioning signal of tool falling (contracting of cylinder)
- 5. Tool change motor start (from home)
- 6. Tool clamping confirmation, tool release signal, motor stop
- 7. Tool release finish, motor power on
- 8. Tool change confirmation, tool clamping signal
- 9. Arm power on & home position
- 10. Motor stop & home confirmation
- 11. Protruding of cylinder starts, tool pot home position
- 12. Protruding of cylinder positioning signal (Tool change finish)
- 13. Indexing motor rotating to next order-pot

Wire Junction Box

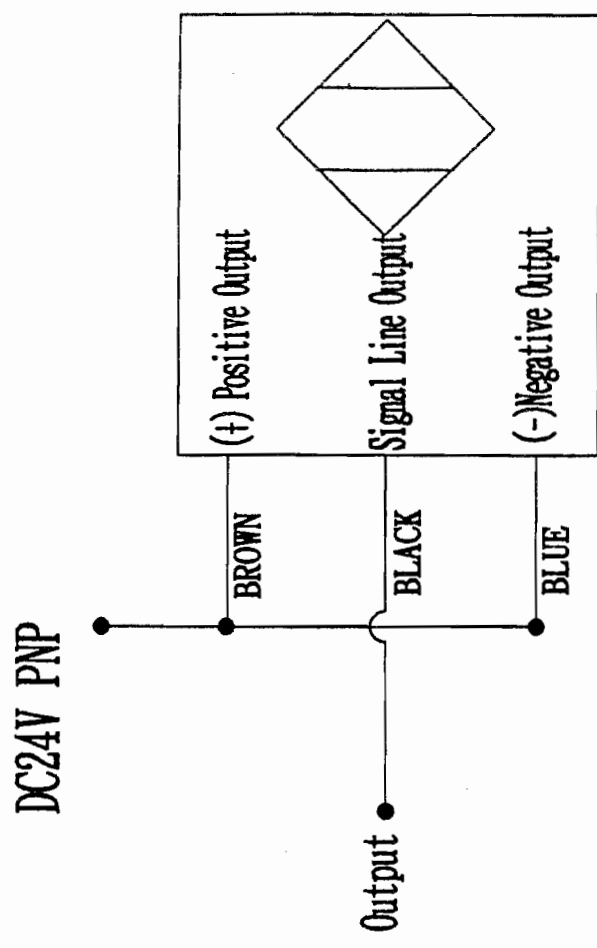


Motor & Limits Switch Wiring Diagram

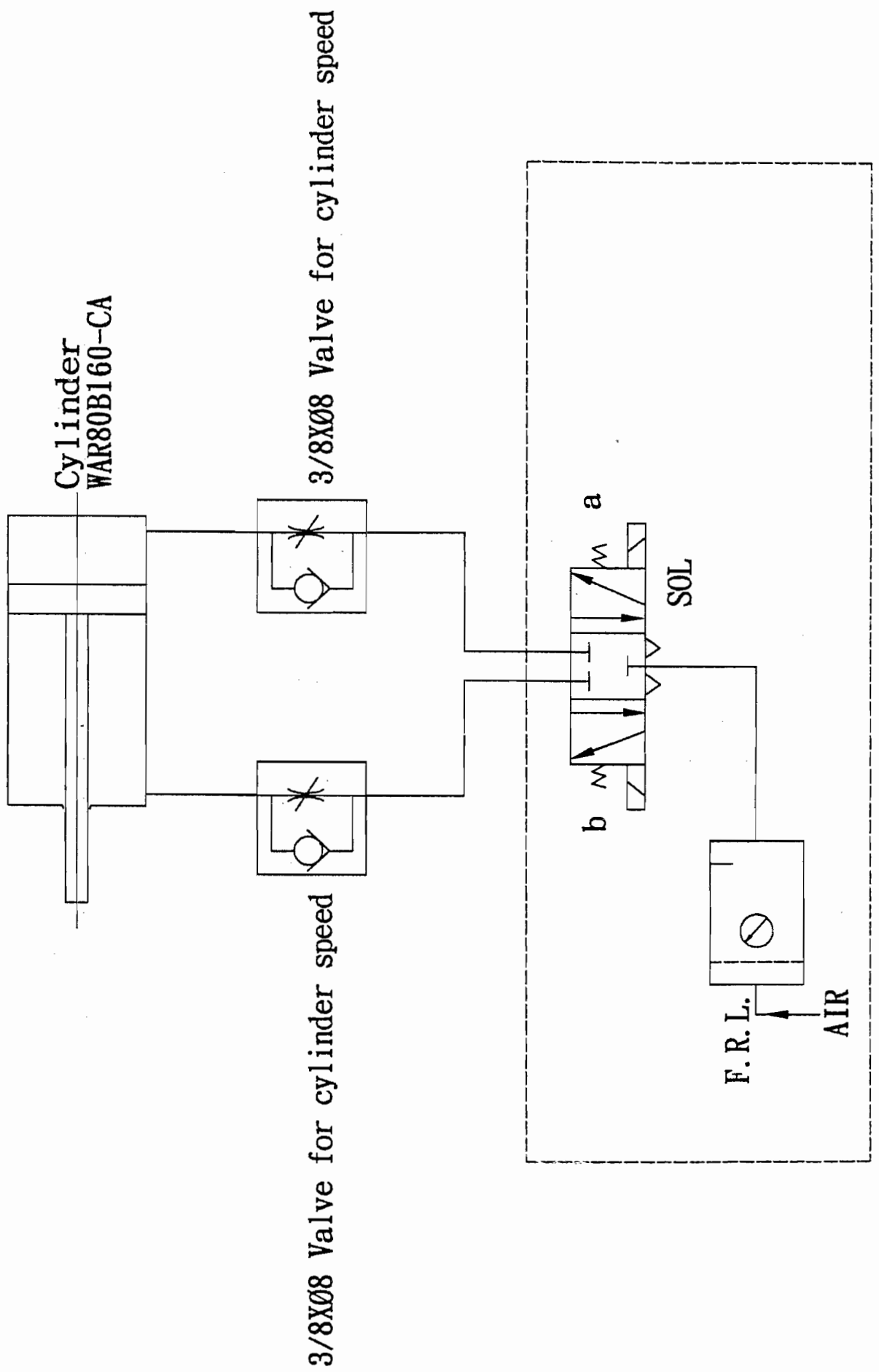
3Ø Motor Wiring Diagram



Sensor Switch



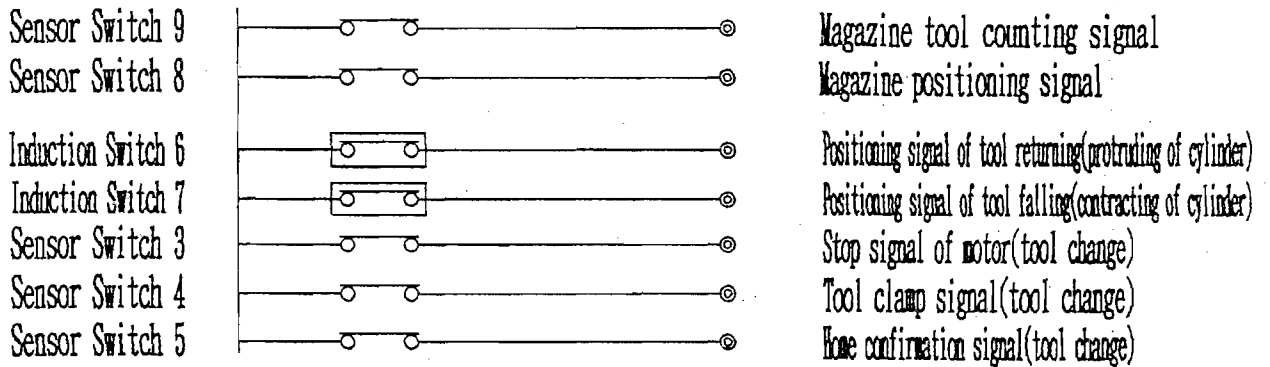
Air Pressure Wiring Diagram



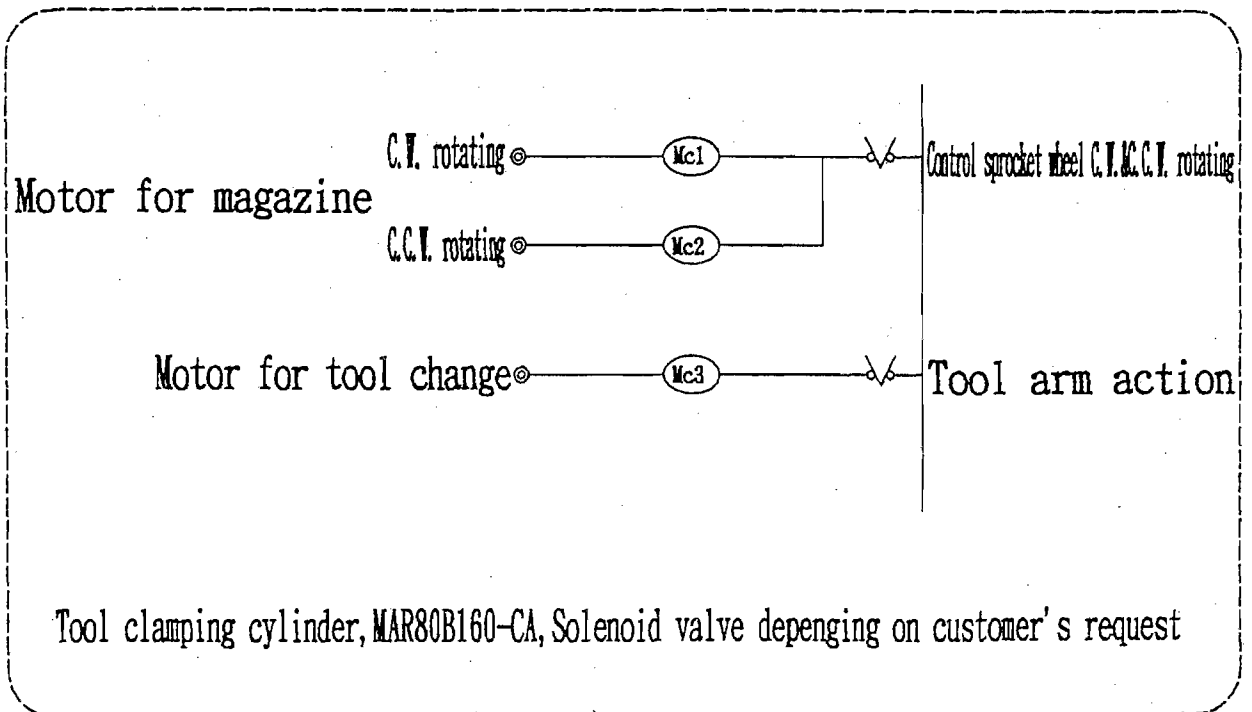
Note: The solenoid valve in the framed dotted line is for your reference only.

Control Circuit Reference Diagram

Voltage DC24V(Please choose positive or negative output voltage by PNP or NPN)



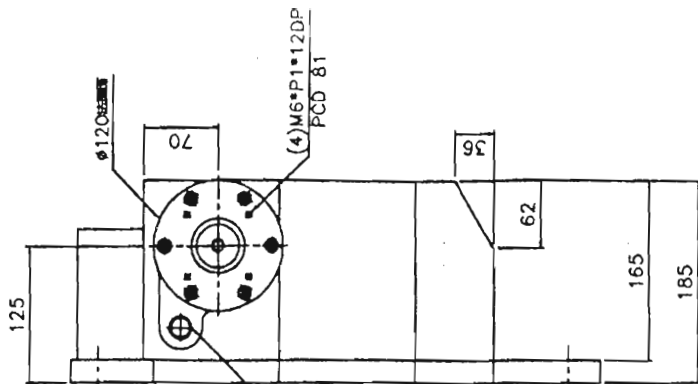
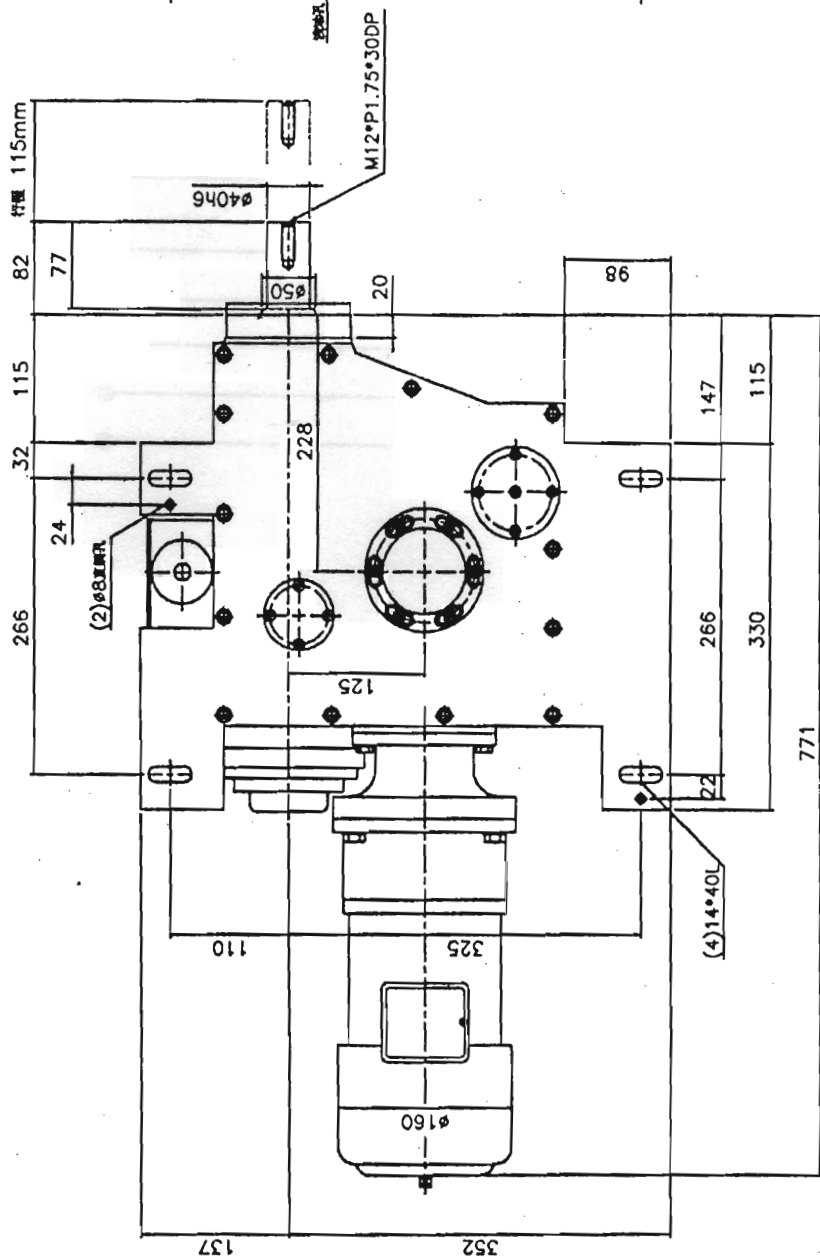
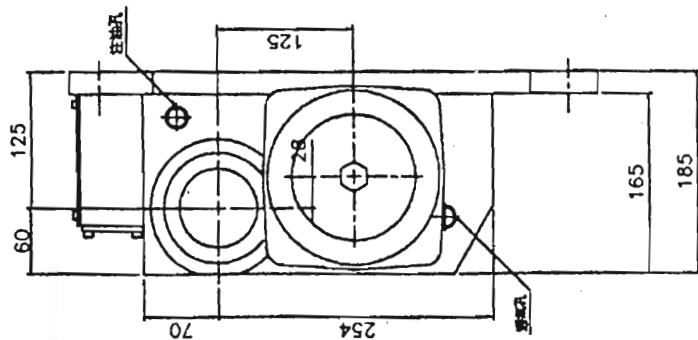
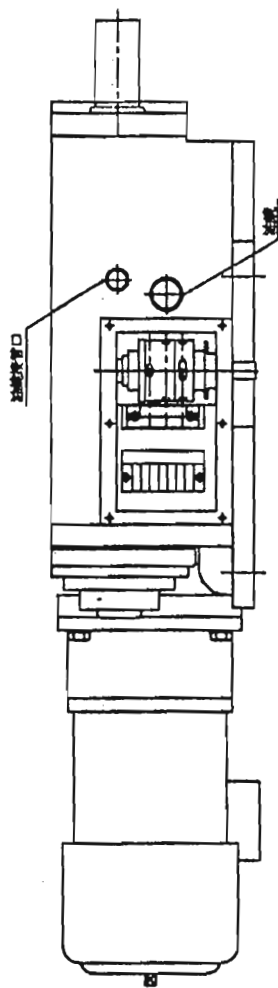
Voltage 220V 60HZ DC24V



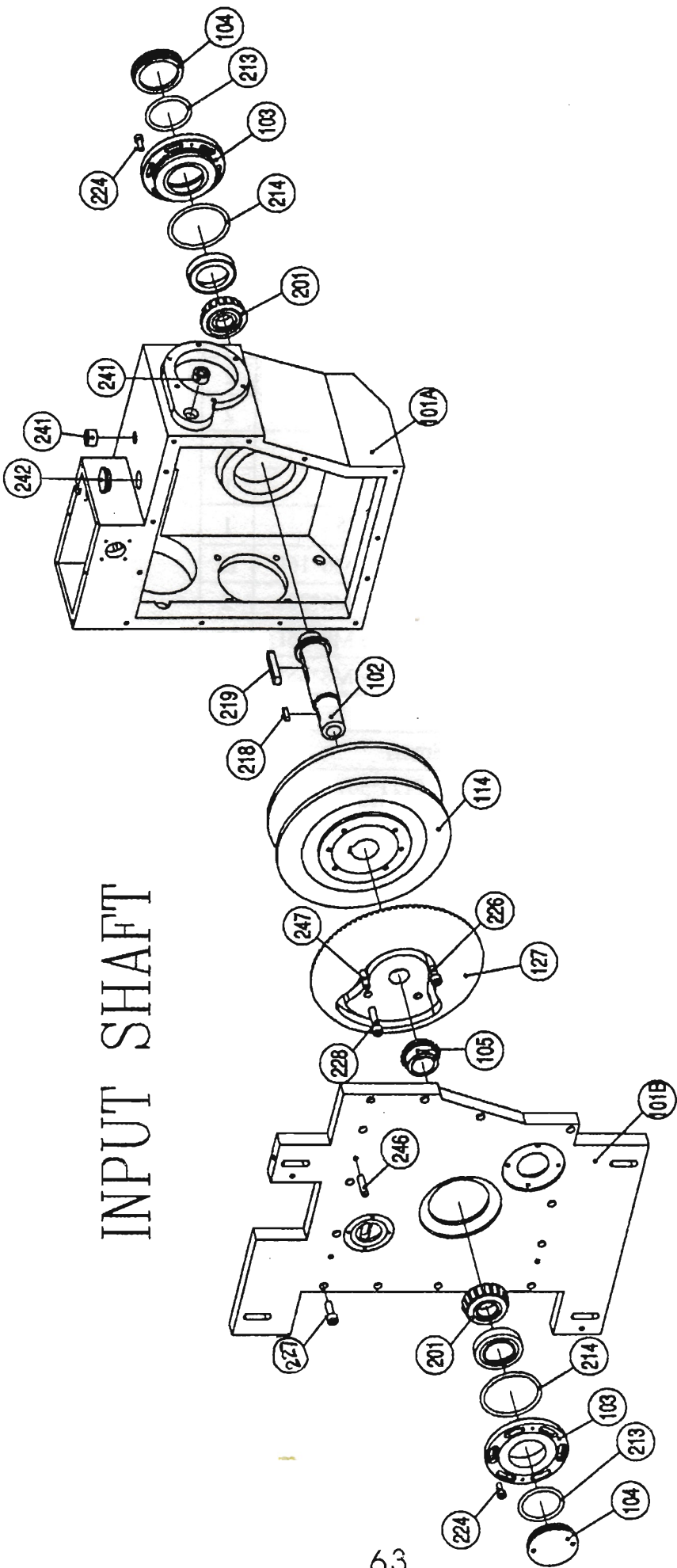
Tool clamping cylinder, MAR80B160-CA, Solenoid valve depending on customer's request

Explanatory of ATC Assembly

使用機型	A402
夾刀角度	65°
上下行程	115mm
訊號規格	PNP-3線-φ4
換刀時間	50Hz=2.0sec
	60Hz=1.8sec
馬達規格	1/2HP 煞車 DC-90V 速比 1:12



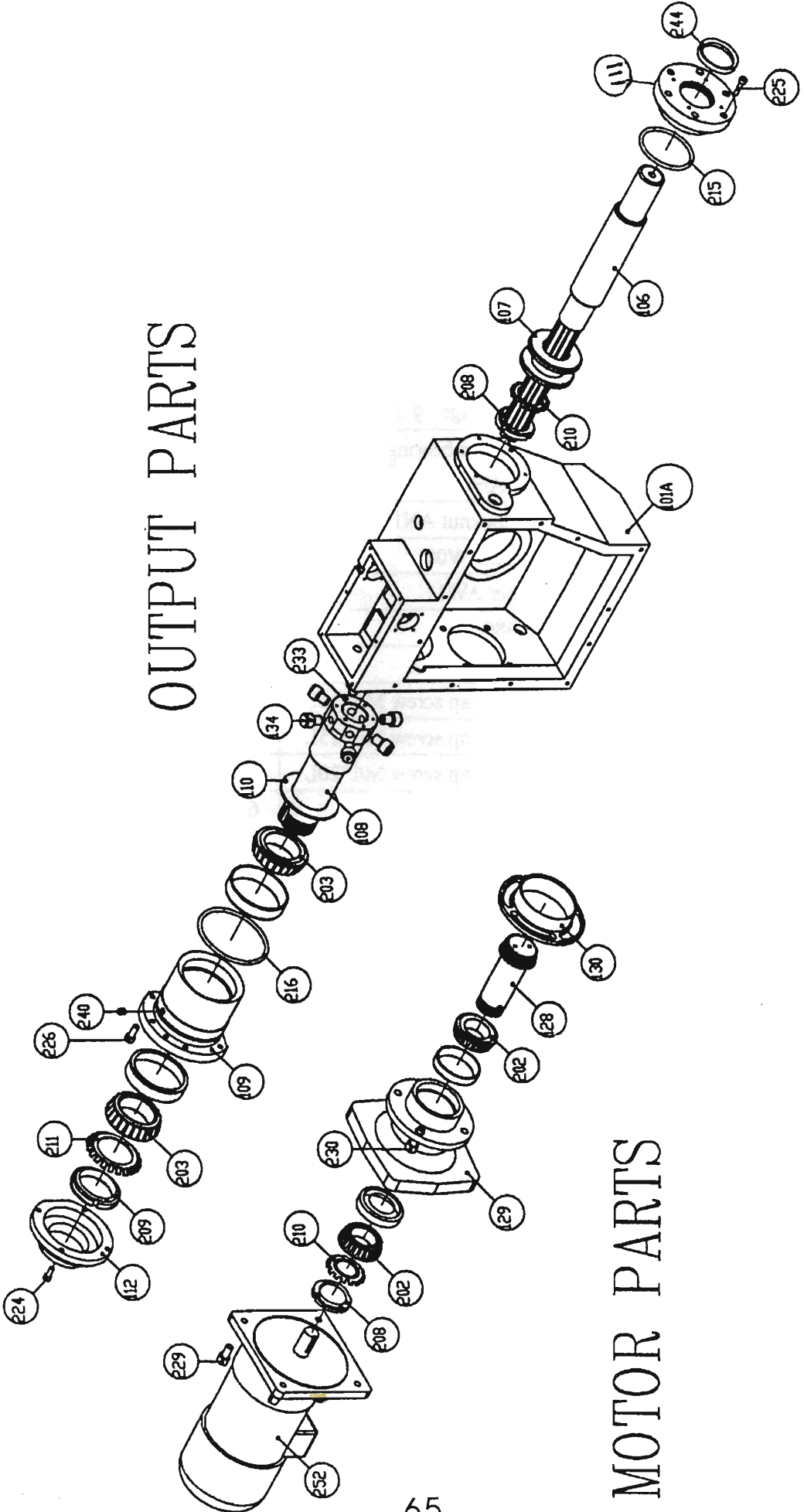
INPUT SHAFT



INPUT SHAFT

	Parts No.	Specification	Q'ty
101A	A4020SC000A1	Case	1
101B	A4020SC000B1	Case cap	1
102	A402A0100001	Cam shaft	1
103	A402A0200001	Side cover	2
104	A402A0300001	Side cover cap	2
105	A402A0400001	Cam shaft sprocket	1
114	A402C0100070	Cam (70 degree)	1
127	A402F0100001	Big umbrella gear	1
201	HR30206	Tapered roller bearings 30206	2
213	O-55*2	O ring ϕ 55*2	2
214	G75	O ring G75	2
218	DFK5*5*20	Round edge keys 5*5*20	1
219	DFK10*8*55	Round edge keys 10*8*55	1
224	HI-M6*16L	Socket hexagonal screw M6*16L	12
226	HI-M8*20L	Socket hexagonal screw M8*20L	2
227	HI-M8*25L	Socket hexagonal screw M8*25L	13
228	HI-M8*35L	Socket hexagonal screw M8*35L	2
241	PT1/2"	Oil plug PT1/2:	4
242	OI-28	Oil gauge (ϕ 28mm)	1
246	PIN-T-8*32L	Taper pin ϕ 8*32L(1:50)	3
247	PIN-T-8*30L	Roll pin ϕ 8*30L	2

OUTPUT PARTS



MOTOR PARTS

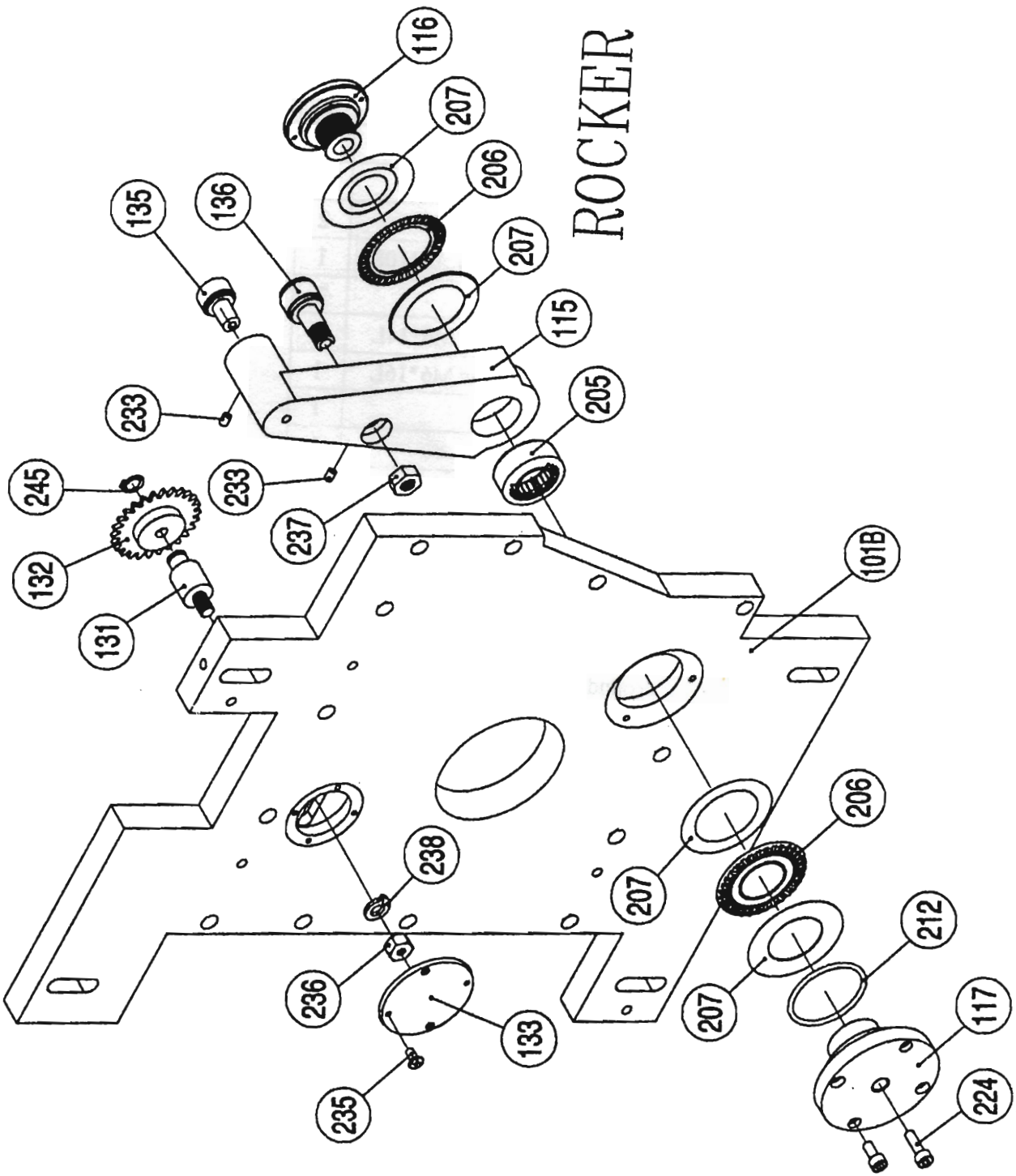
OUTPUT PARTS

No.	Parts No.	Specification	Q'ty
101A	A4020SC000A1	Case	1
106	A402B0100001	Spline shaft (output)	1
107	A402B0200001	Transmit wheel	1
108	A402B0300001	Bearings tube	1
109	A402B0400001	Bearings tube fixture	1
110	A402B0500001	Bearings tube gasket	1
111	A402B0600001	Front fix cap	1
112	A402B0900001	Back fix cap	1
134	RB00020000A1	Needle bearings ϕ 20	6
203	HR32011	Tapered roller bearings 32011	2
208	AN08	Locknut AN08	1
209	AN11	Bearing locknut AN11	1
210	AW08	Set washer AW08	1
211	AW11	Set washer AW11	1
215	G80	O ring G80	1
216	G100	O ring G100	1
224	HI-M6*16L	Socket HD cap screw M6*16L	4
225	HI-M6*25L	Socket HD cap screw M6*25L	6
226	HI-M6*20L	Socket HD cap screw M6*20L	5
233	HS-M6*8L	Set screw M6*8	6
240	PT 1/8"	Oil plug PT1/8"	1
244	USH 50*60*6	USH type oil seals 50*60*6	1

MOTOR PARTS

128	A402F0200001	Small umbrella gear	1
129	A402F0300001	Motor locating plate	2
130	A402F0900001	Adjustment sleeve	1
202	HR32008	Tapered roller bearings 32008	2
208	AN08	Locknut AN08	1
210	AW08	Set washer AN08	1
229	HI-M10*20L	Socket HD cap screw M10*20L	4
230	HI-M10*30L	Socket HD cap screw M10*30L	4
252	MR1/2HP-DC9-1 2	Motor 1/2HP-4 poles	1

IDLER SPROCKET



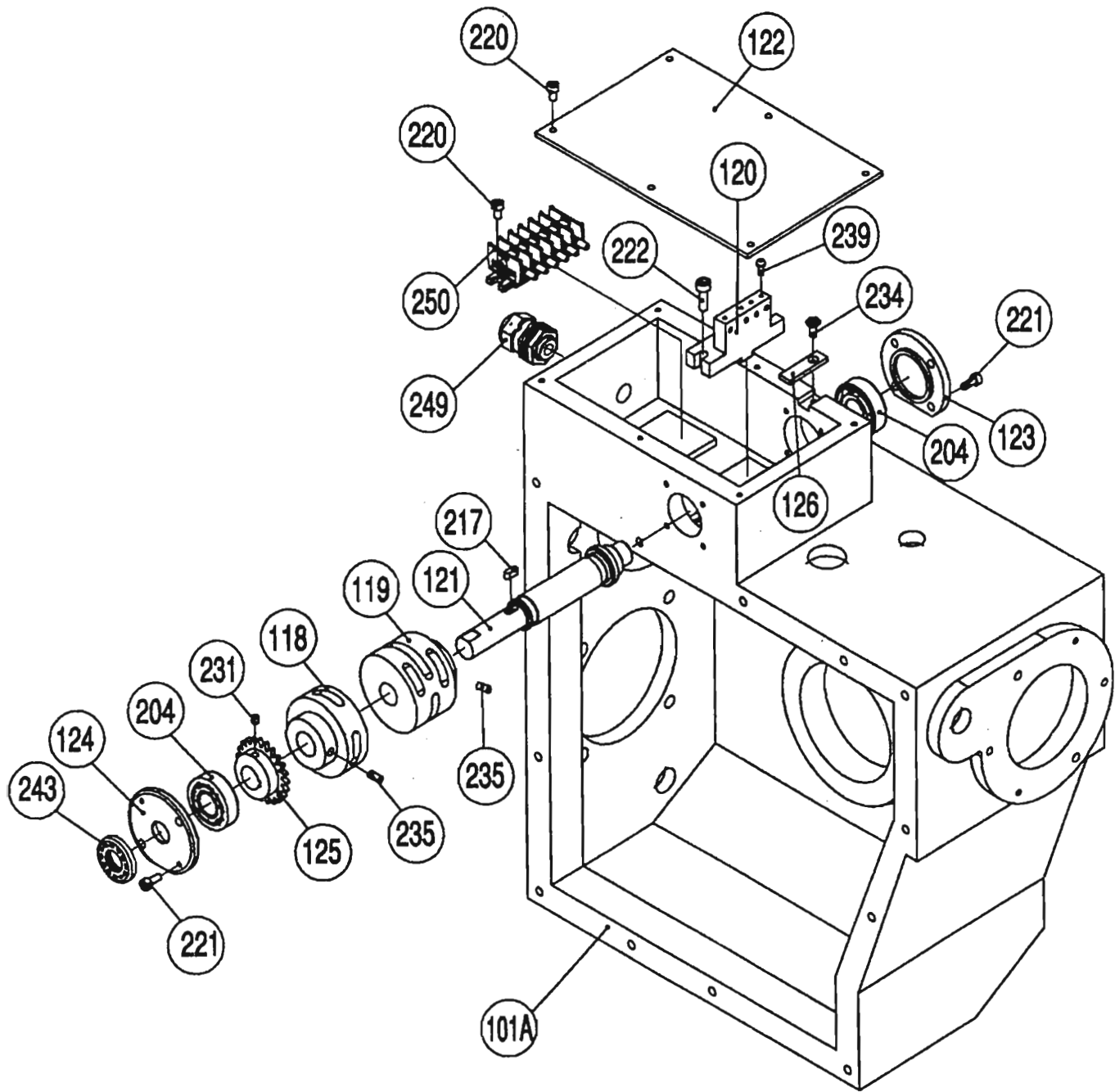
ROCKER PART

No.	Parts No.	Specification	Q'ty
101B	A402D01000B1	Case cap	1
115	A402D0100001	Rocker	1
116	A402D0200001	Rocker shaft	1
117	A402D0300001	Rocker stand packing cap	1
135	RB00022000A1	Needle bearings ϕ 22	1
136	RB00024000A2	Needle bearings ϕ 24	1
205	HK3516	Needle bearings HK3516	8
206	AXK1108	Thrust bearings AXK1108	2
207	AS1108	Thrust bearings parcel AS1108	1
212	G50	O ring G50	2
223	HI-M6*14L	Socket HD cap screw M6*14L	4
224	HI-M6*16L	Socket HD cap screw M6*16L	1
233	HS-M6*8L	Set Screw M6*8L	1
237	SC-M12	Hex nut M12	1

IDLER SPROCKET

131	A402J0100001	Idler Shaft	1
132	A402J0200001	Idler sprocket	1
133	A402J0300001	Idler outside cap	1
235	CO-M5*8L	Round cap Screw M5*8L	4
236	SC-M10	Hex nut, M10	1
238	WS-M10	Washer, M10	1
245	C12S	Snap Ring- C12	1

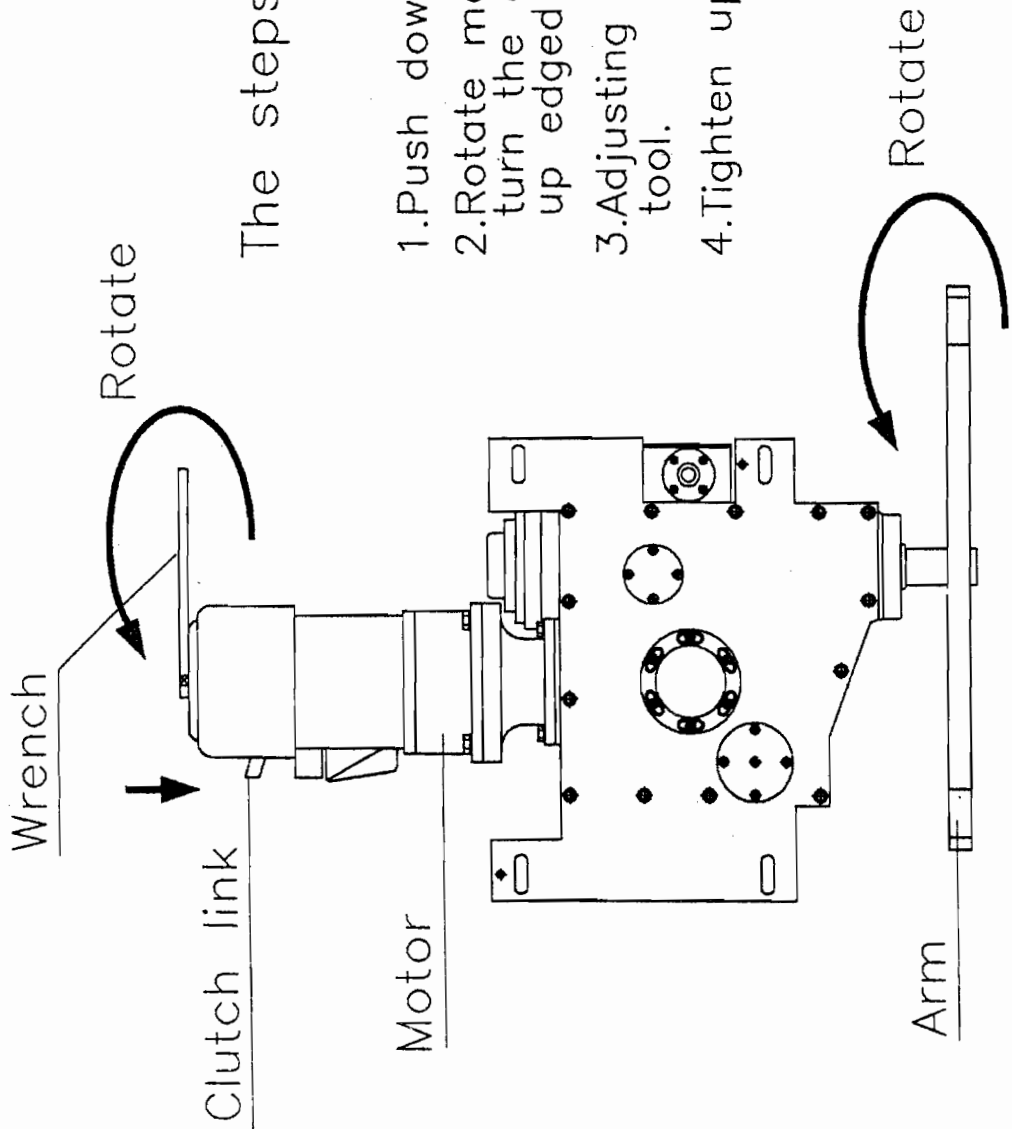
SIGNAL PARTS



SIGNAL PARTS

No.	Parts No.	Specification	Q'ty
101A	A4020SC000A1	Case	1
118	A402E01000A1	Brake signal wheel	1
119	A402E01000B1	Cam signal wheel	1
120	A402E0200001	Signal fixture	1
121	A402E0300001	Signal shaft	1
122	A402E0400001	Dust proof cap	1
123	A402E0500001	Signal cap	1
124	A402E0600001	Signal cap (have hole)	1
125	A402E0700001	Signal sprocket	1
126	A402E0800001	Signal parcel	1
204	BR6202	Ball gearings 6202	4
217	DFK4*4*10	Round edge keys 4*4*10	4
220	HI-M4*8L	Socket HD cap screw M4*8L	8
221	HI-M4*10L	Socket HD screw M4*10L	8
222	HI-M5*16L	Socket HD cap screw M5*16L	2
231	HS-M5*5L	Set screw M5*5L	1
232	HS-M5*10L	Set screw M5*10L	2
239	PF-308	Plastics screw M3*8L(KSS)	4
243	TC15*24*5	TC type oil seals 15*24*5	1
249	AG-16	Wire connectors (KSS)	1
250	TM-10A600V	Connection terminal	1

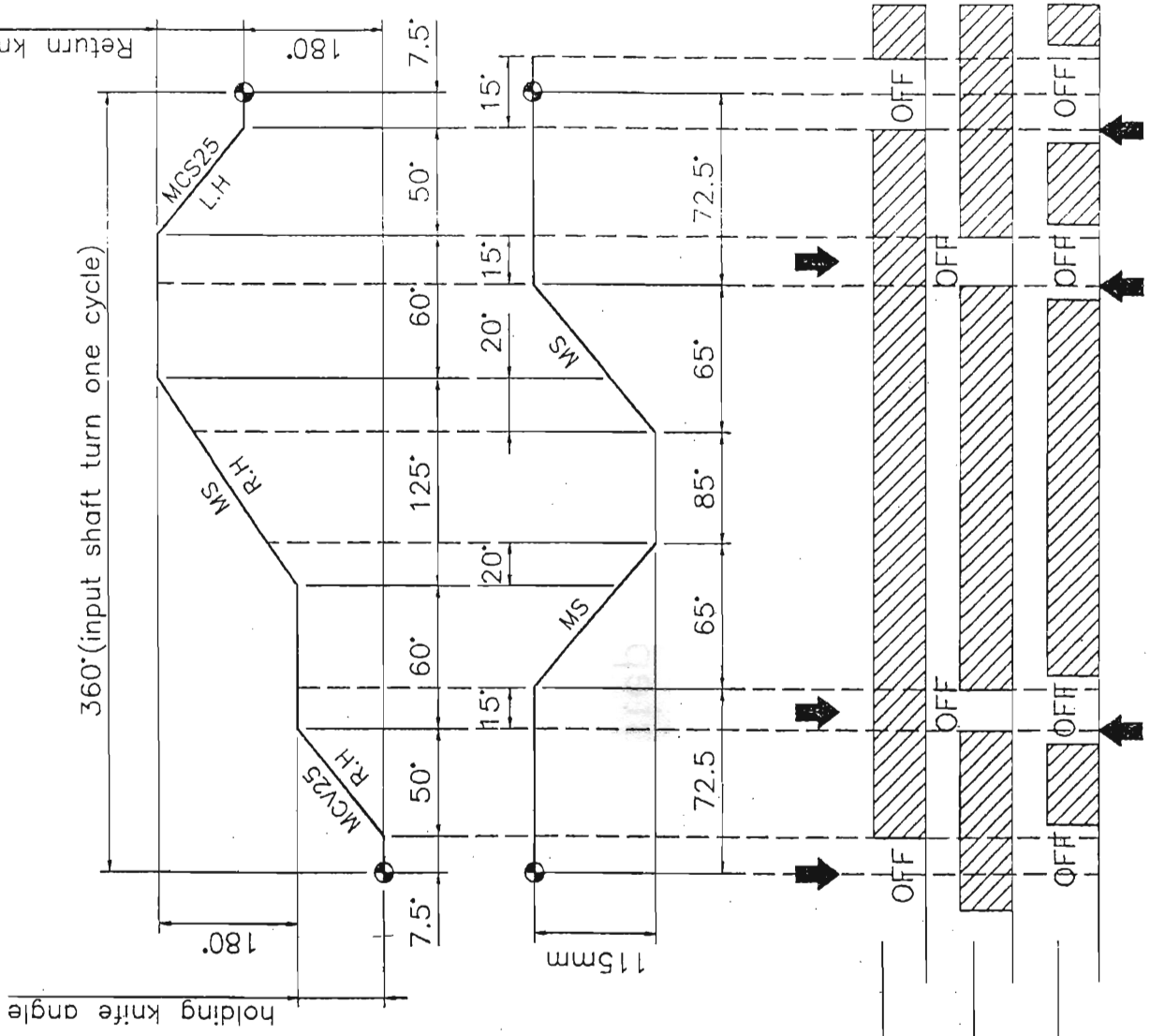
Adjustment of Arm



The steps of arm adjustment

1. Push down clutch link.
2. Rotate motor by using the wrench and turn the arm to the angle of setting up edged tool.
3. Adjusting the arm to hold the edged tool.
4. Tighten up the setup screws.

DEX-2 TIME CHART



*ATC time chart

*raising stroke

*original position confirmation

*holding knife angle confirmation

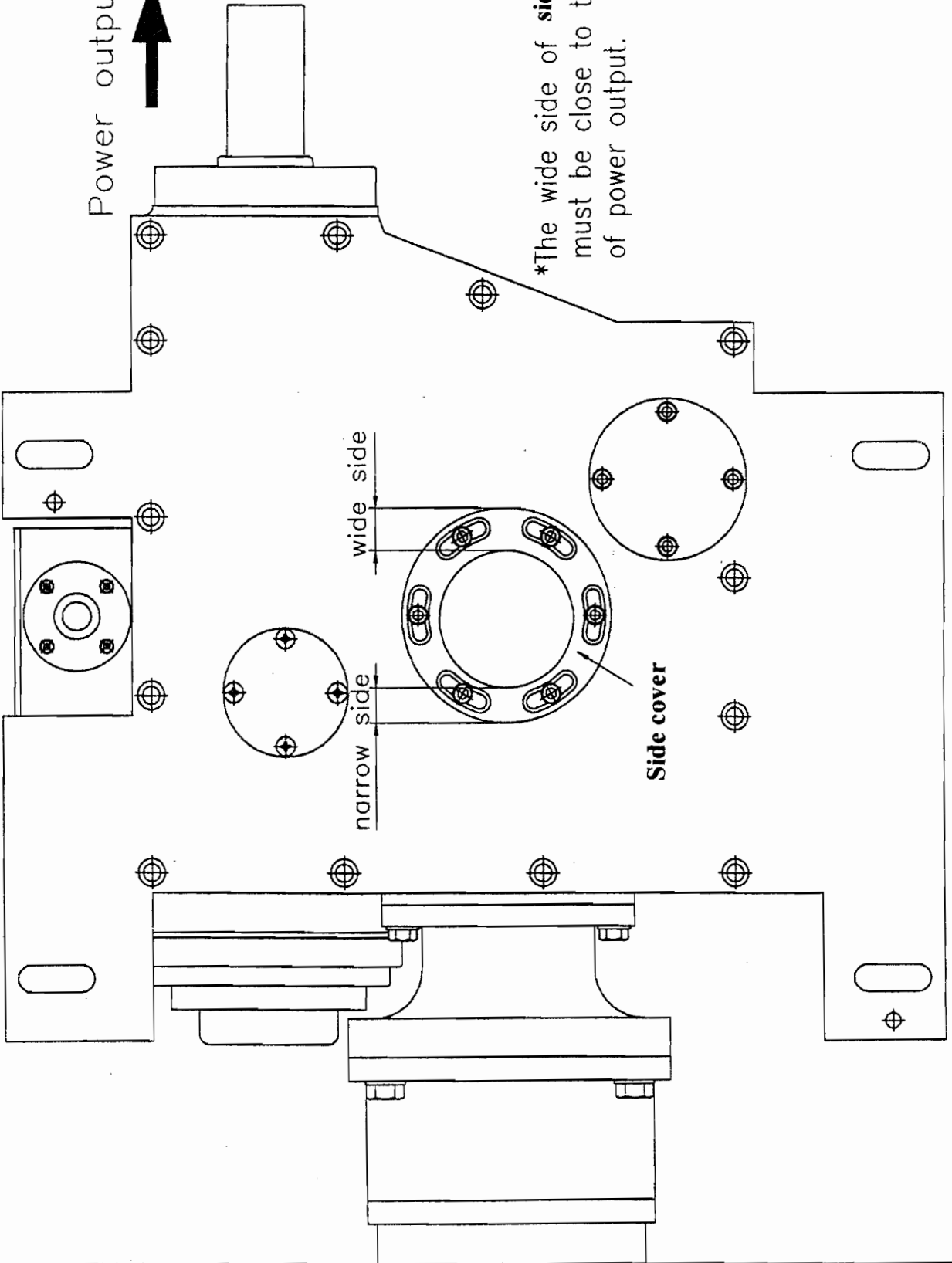
*for brake

Adjustment of Side Cover

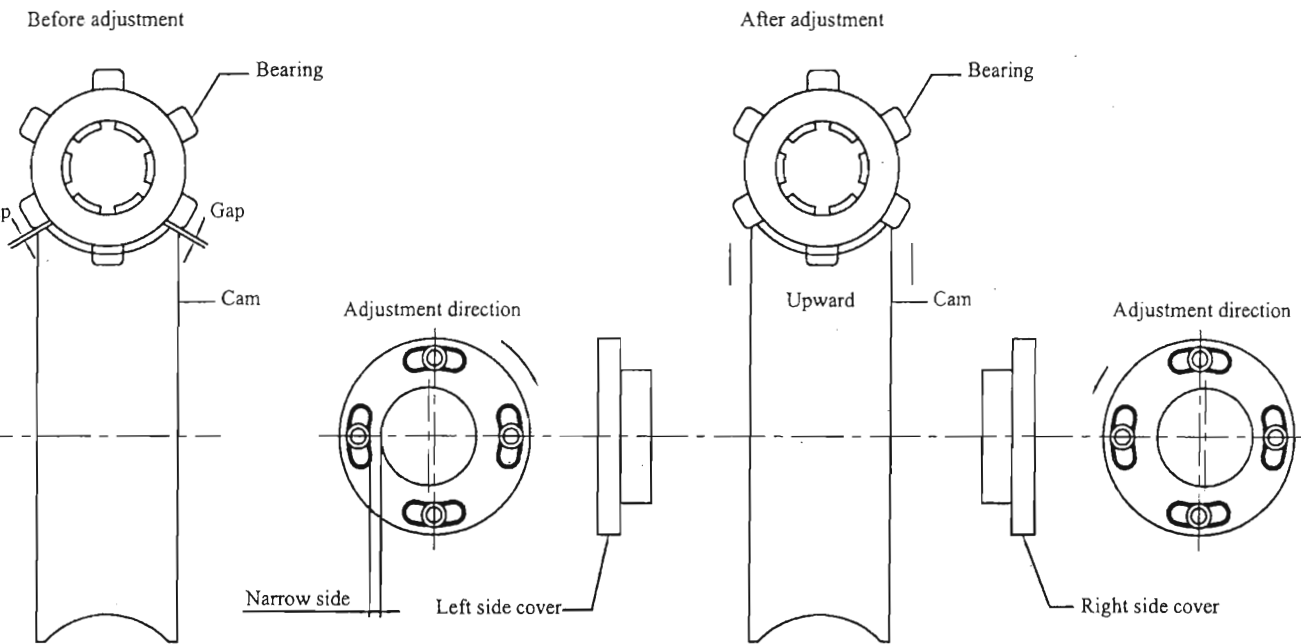
Power output direction



*The wide side of **side cover** must be close to the direction of power output.



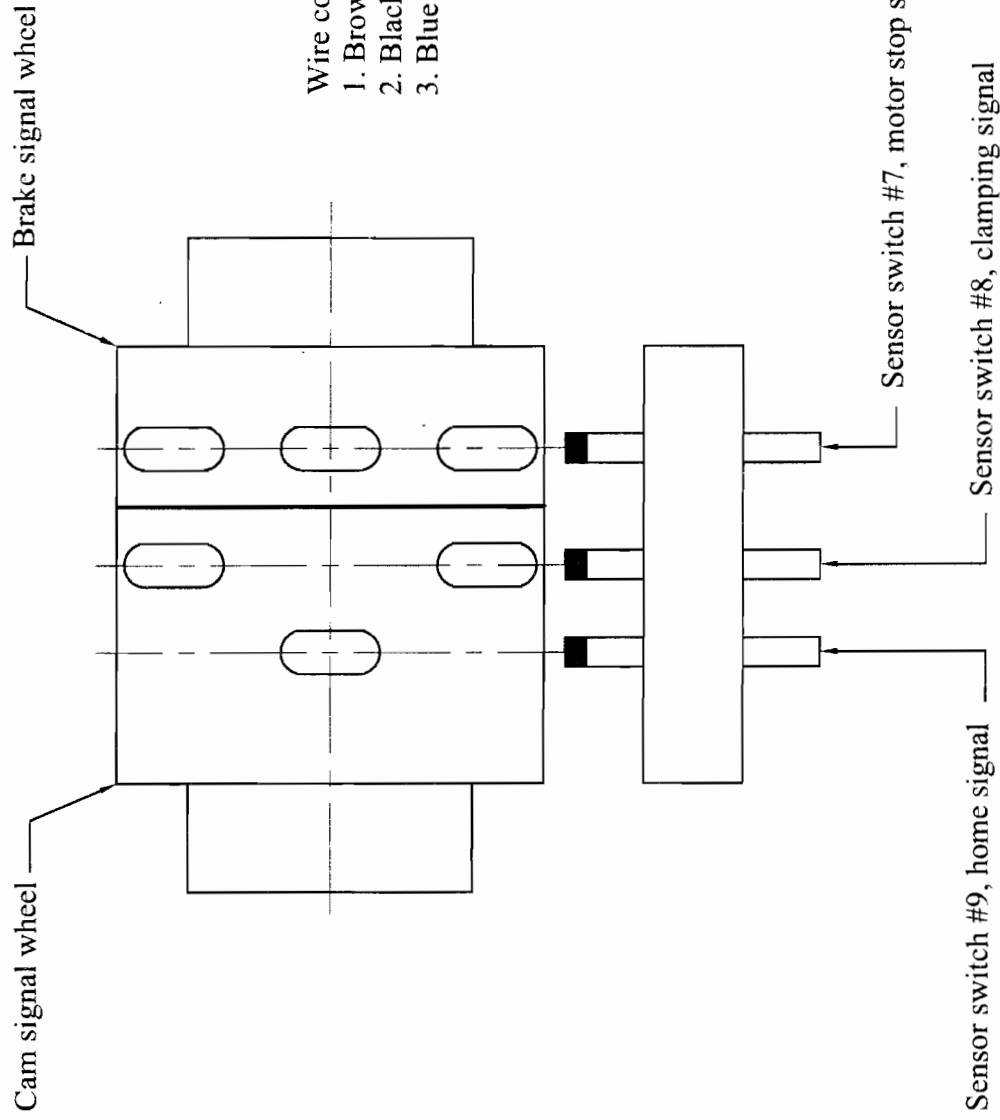
* Adjustment between Cam & Bearings *



Method for adjustment

1. Release the locking screws on the side covers.
2. Move the side covers up and down to adjust the gaps between the bearings and the cam. Make sure the cam is evenly in contact with the bearings! (shown in the drawing: adjustment may move cam upward or downward)
3. Move the side cover cap left and right to adjust the gaps between the bearings and the cam. Make sure the cam is evenly in contact with the bearings!

Signal of Sensor Switch on cam



- Wire code:
1. Brown wire is +24V
 2. Black wire is PNP
 3. Blue wire is -

Dismantling procedure :

How to take the spline (output) shaft :

1. Turn to the start position, remove the pins (246) and screws (227) of the case cap (101B).
2. Remove the case cap.
3. Loose Socket HD cap screws (225); remove the front fix cap (111).
4. Remove the spline (output) shaft (106), and transmit wheel (107), locknut (208), set washer (210), and get the new shaft.
5. Assemble this section back in reverse order. And make sure all parts are installed!

Change the bearings on bearing tube :

1. Turn to start position, remove the pins (246) and screws (227) of the case cap (101B).
2. Remove the case cap.
3. Rotate the bearings tube (108).
4. Remove the side set screws (233).
5. Use special tool to remove the bearings (134). Take the new bearings, and use Loctite to fix the set screws (223) in position.
6. Reassemble this section in reverse order. And make sure all parts are installed.

Take rocker apart in many steps :

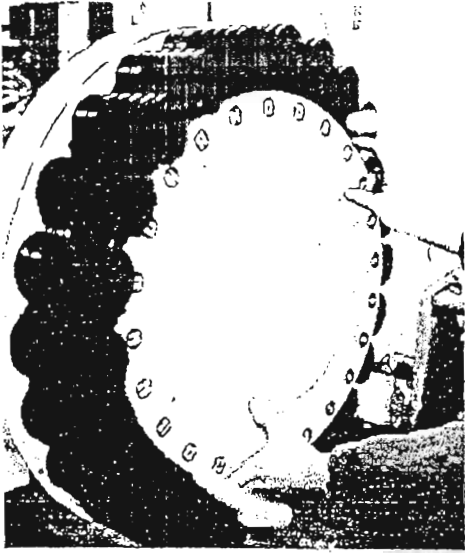
1. Turn to start position, remove the pins (246) and screws (227) of the case cap (101B).
2. Remove the case cap.
3. Then remove the set screws (233) of the rocker.
4. Use the tear down tool to remove the rocker shaft (116).
5. Remove the thrust bearing AXK1108 (206) (207), and needle bearings HK3516 (205).
6. Remove two bearings (135) and (136). Now the rocker is taken apart, and it is replaceable.
7. Reassemble the rocker section in reverse order, and make sure all parts are installed!

TROUBLE SHOOTING

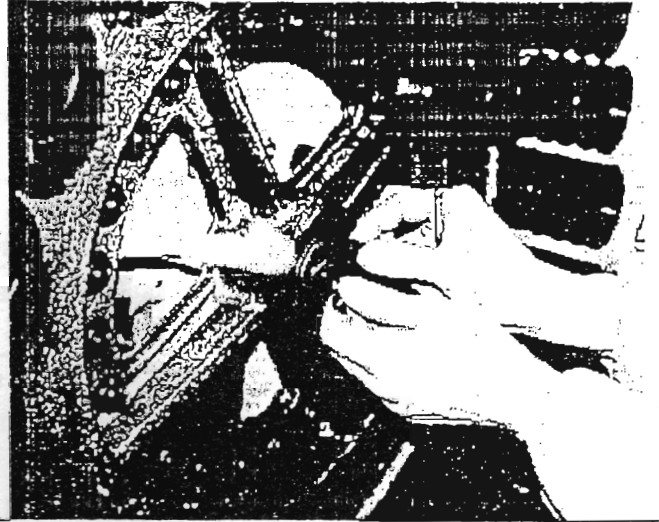
Condition	Reason	Trouble Shooting
Tool disk stops at wrong Position.	<ol style="list-style-type: none"> 1. Brake fails to work or stops over braking range 2. Sensor switch is too far. 	<ol style="list-style-type: none"> 1. Please check brake wiring for connection problem, or electric brake fails to work 2. Move sensor switch closer to sensor
Tool disk rotates continuously.	<ol style="list-style-type: none"> 1. Sensor switch failed 2. Sensor switch is too far. 	<ol style="list-style-type: none"> 1. Replace sensor switch 2. Move sensor switch closer to sensor
Tool pot breaks	Tool disk rotates while tool pot is clamping	Replace new tool pot & adjust clamping arm position again
Shaking during tool clamping & returning	<ol style="list-style-type: none"> 1. Cam lacks lubrication 2. Cylinder is not at constant speed 	<ol style="list-style-type: none"> 1. Grease the cam 2. Adjust cylinder pressure & speed valve
Tool pot is not at position when clamping & returning	Positioning bolts or locating bolts for tool pot are loose.	Adjust the tool pot to normal position & tighten
Tool disk does not work during tool selection	<ol style="list-style-type: none"> 1. Induction switch does not sense 2. Induction switch failed 3. Motor failed 4. Electronic brake failed 	<ol style="list-style-type: none"> 1. Adjust induction switch to normal position 2. Replace induction switch 3. Repair or replace motor 4. Check wiring & replace parts 5. Check sensor switch
Cylinder does not work during tool change	<ol style="list-style-type: none"> 1. Proximity switch for tool counter positioning has failed. 2. Tool disk is not positioning 3. Cylinder has no pneumatic pressure 4. ATC arm is not at home position. 	<ol style="list-style-type: none"> 1. Replace proximity switch 2. Make sure tool disk has positioned. 3. Check input air source, and solenoid valve see if they are functional. 4. Rotate motor shaft manually to get ATC arm to home position 5. Check induction switch
ATC fails to work during tool change	<ol style="list-style-type: none"> 1. Tool clamp positioning induction switch fails to work 2. Induction switch break down 	<ol style="list-style-type: none"> 1. Adjust induction switch to proper position 2. Replace new induction switch
ATC motor over-heat	<ol style="list-style-type: none"> 1. Brake is not released 2. Brake has failed 3. Current regulator has failed 	<ol style="list-style-type: none"> 1. Check current regulator had power or not? 2. Replace brake 3. Replace current regulator
ATC failed to work after tool clamping; ATC failed to work after 180° degrees tool change; ATC stops at home, but sensor switch does not work	<ol style="list-style-type: none"> 1. Sensor is in wrong position 2. Sensor switch has failed 	<ol style="list-style-type: none"> 1. Adjust sensor to proper position 2. Replace sensor switch
ATC stops out of position	<ol style="list-style-type: none"> 1. Sensors are at wrong position 2. Sensing ring for sensor switches is at wrong angle 	<ol style="list-style-type: none"> 1. Adjust all 3 sensors to proper angle & position 2. Rotate sensing ring, adjust all 3 sensor switches to proper angle & position
ATC tool clamping is clamping at wrong position	ATC's clamping arm & spindle are not aligned properly	Loosen taper ring sleeve & re-align it again

A. POT CHANGE SEQUENCE

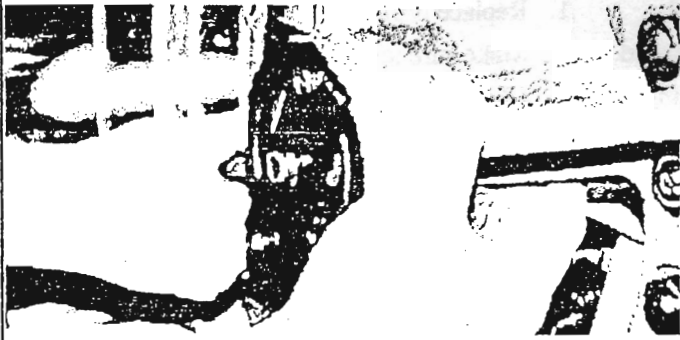
1. Take down the peripheral metal sheet and numeral acrylic cover.



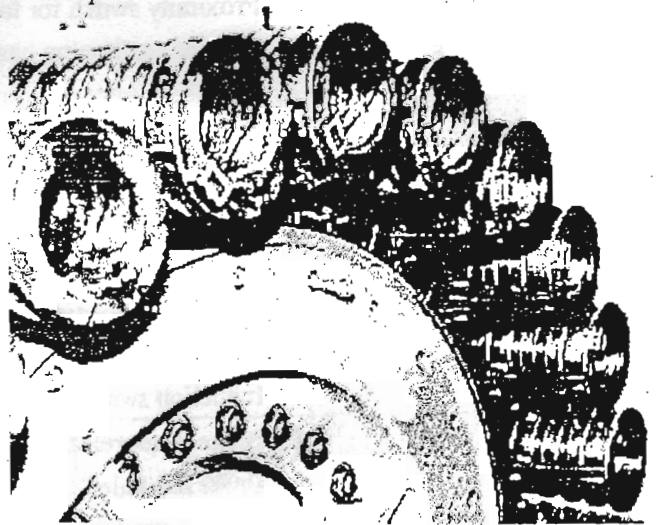
2. Unlock the hexagonal screw bolt M10 and recede 10mm on the shaft cover. (remark: do not move the 4 pieces fixing bolt)



3. Pull out the plate to the M10 screw bolt position.



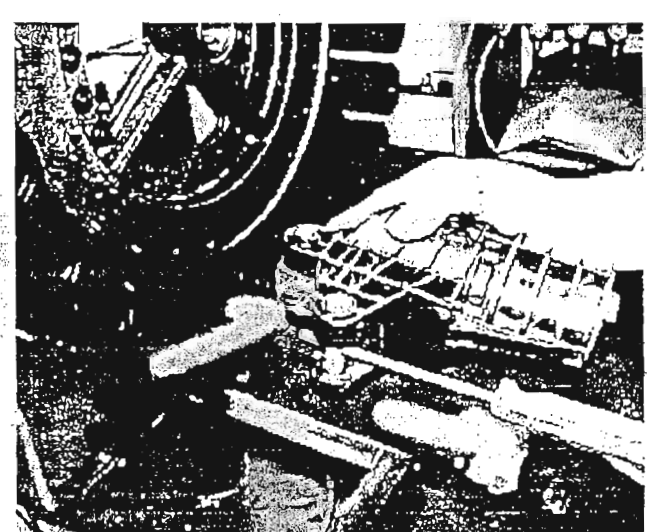
4. Strip down the hexagonal screw bolt M6 which is instead pot.



5. Take down the broken pot (push the pot forward inner side and take the pot upward, then extract it).

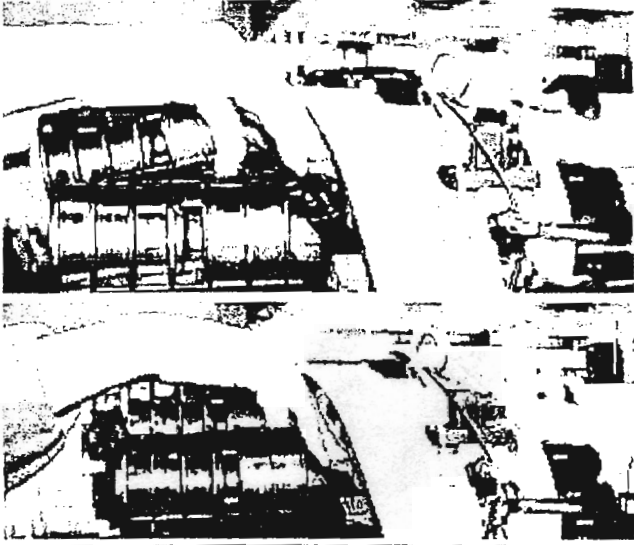


6. Confirm the fixing bolt and knob the correct position for the new pot.

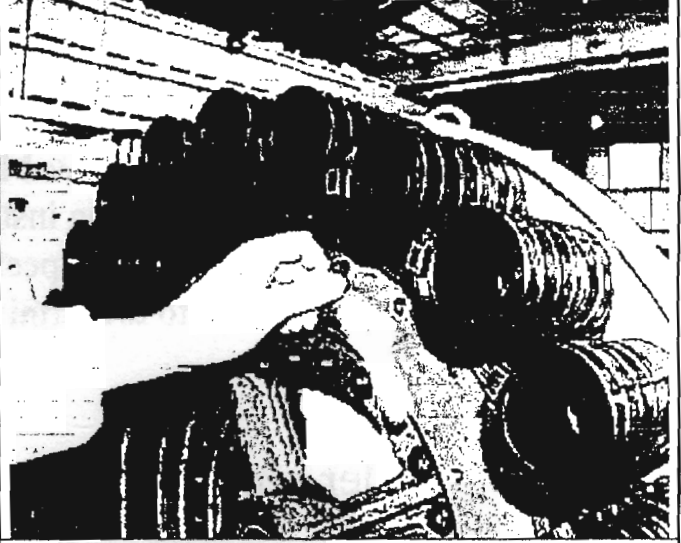


POT CHANGE SEQUENCE

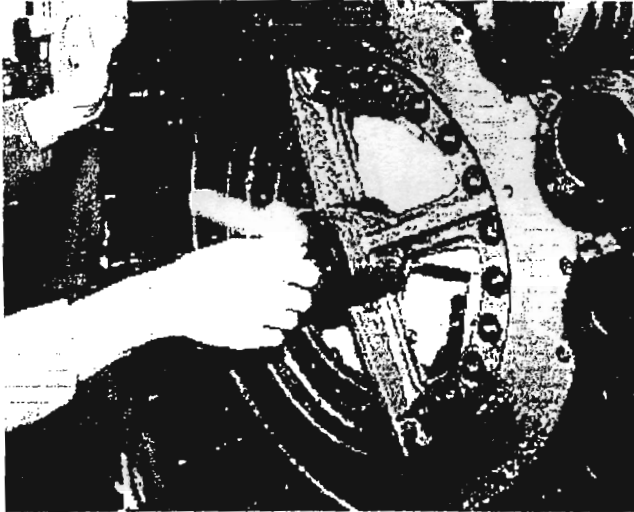
7 Stow down the new pot(the surface of knob recline the pot body and push forward into the plate.



8 Lock the hexangular screw bolt M6 which the new pot.



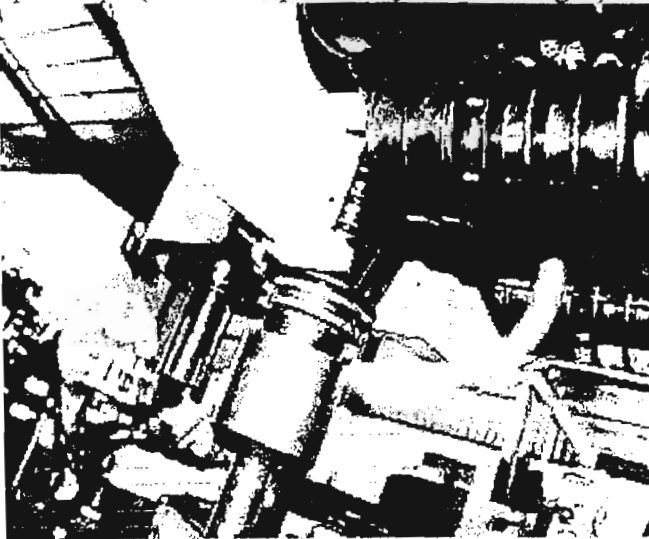
9 Push the plate to the original position and lock it.



10 Check the fixed clearance of the plate.(can not have clearance).



11 Check the correct angled 90 degree which the replaced pot(test on the practically tool exchanged).



B. Procedure of magazine motor replacement

1. Power off.
2. Take out motor wires from the wiring terminal box.
3. Unscrew four M8 bolts from motor seat, and then disassemble the motor.
4. Release the (S18) snap ring & M6 set screw from the worm gear. Take the worm gear and snap ring install onto the new motor.
5. Please make sure the motor specification is correct before you replace it.
6. Reconnect the wires to the terminal box.

C. Cylinder replacement

1. Turn off the power to the compressor & release air from the cylinder.
2. Take out cover sheet metal and ϕ 8mm air hose.
3. Before removing the induction switches, please mark the original positions of the induction switches.
4. Unscrew cylinder locating bolts (M8) & snap ring (S12) on the cylinder shaft.
5. Please replace the cylinder with the same specifications. Then locate the induction switches to original positions.

D. Induction switches replacement

1. Turn power off from machine.
2. Remove wires of induction switches from the terminal box.
3. Please loosen the locating plate of induction switches & take the whole assembly out.
4. Replace new switches & make sure the position of the switches is correct by push them up & down until they are located to the end of their edges.
5. Re-attach the wires to the terminal box

E. Sensor switch of tool magazine replacement method

1. Turn off power.

2. Release the wires of sensor switch from the terminal box.
3. Take out the front cover & outer sheet metal cover.
4. Unscrew the M12 hex nut from the proximity switch.
5. Replace switch & make sure the sensing distance is 4mm.
6. Re-attach the wires to the terminal box.

F. Procedure of ATC motor replacement

1. Turn off power
2. Disconnect motor wires from the terminal connection box.
3. Unscrew the four M10 socket HD cap screws from the motor flange
4. Replace motor with the same specifications and make sure the keyed shaft direction is matched.
5. Re-attach the motor wires to the terminal box.

G. Replacement of sensor switches in the ATC

1. Turn off power.
2. Disconnect wires of the sensor switches from the terminal box.
3. Take out the brown acrylic cover from the front ATC section
4. Replace the new sensor switches & make sure the sensing distance is about 4mm.
5. Re-connect the sensor wires to terminal box.

Magazine maintenance

Item	Description	Method	Tool	Routine	Remark
1 Lubrication	A Disk	Take off number plate & fill in grease manually	Grease Gun	Six months	Grease
	B Pot body slideway	Take off outer sheet metal cover & fill in grease manually	Grease Gun		Grease
	C Arm sliding block & position pin	Take off sheet metal cover, clean & fill in grease manually			Grease
	D Cam Slide	Take off ATC cover, fill in grease manually	Grease Gun		Grease
	E Motor Gear	Take off front cover & outer sheet metal	Grease Gun		Grease
2 Cleaning	A Inner taper of tool pot	Clean tool pot with solvent		Once a month	
	B Replace inner lubrication oil of ATC	Drain the used oil, and fill in the new lube oil			SHELL TELLUS32
3 Loose	A Sensor switch of magazine is loose or not?	Check manually		Half year	
	B Sensor switch of ATC is loose or not?	Check manually			
	C Induction switch of cylinder is loose or not?	Check manually			
	D Bolts on cylinder are loose or not?	Check manually & optically			
	E Bolts on arm assembly are loose or not?	Check manually			
	F Shake the clamping arm to see if the backlash is too big	Check manually, backlash value within 2mm.			
	G Check to see if magazine is loose or not?	Check manually			
4 Other check	A Steel balls on tool pot are intact?	Check optically		Half year	
	B Noise or heat on gear motor?	Check manually			
	C Solenoid valve of cylinder is out of air?	Check manually			
	D ATC up-down shaft has oil leak?	Check optically			
	E V edges of the Clamping arm have worm?	Check optically			
	F Oil level of ATC's oil reservoir is too low?	Check optically			Before power on

Note!

1. Please use proper tools during maintenance & repair procedure.
2. We suggest you replace the parts from the original manufacturer.
3. Please read and make sure the part's specifications before replacement.

The specifications are shown in the part lists.

4. Please check and make sure the sensing distance during proximity switch & induction switches replacement.
5. Please mark down the wire numbers & location in case you have to replace the wiring connection.
6. In any case of abnormal or malfunction on the ATC, please call for authorized personnel to check the product. We strongly suggest the serviceman has to be well trained technician or qualified engineer to check or repair the problem. This is to ensure the safety of the operator & the serviceman.
7. Before disassemble the ATC, please make sure there are enough people to support the load. If there are not enough people, please prepare and use overhead crane or forklift or any other mean to support the weight.