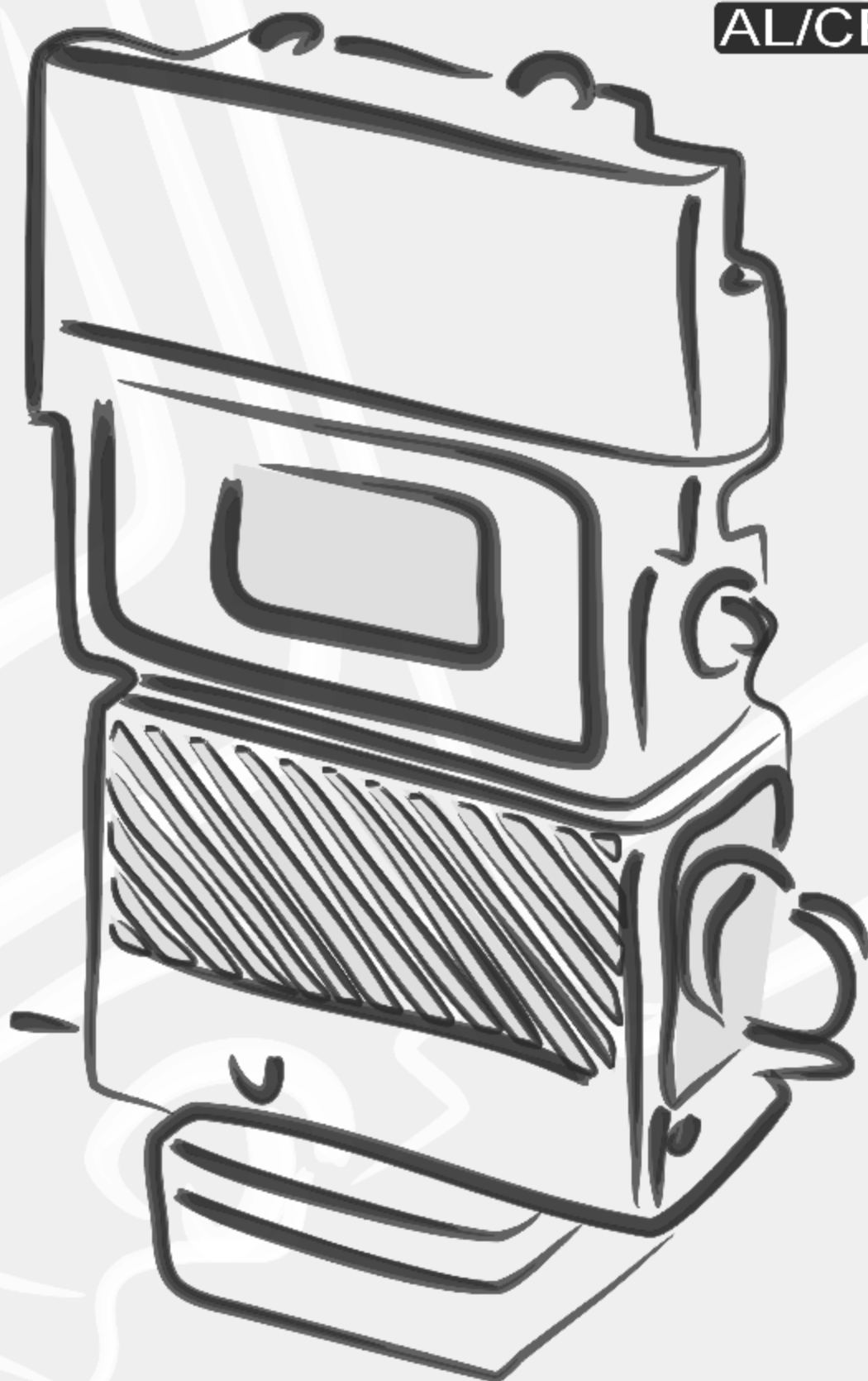


ALIGN

POWER TABLE FEED OPERATION MANUAL

AL/CE-200S



CONTENT

PAGE	INDEX
1	SPECIFICATION
2	WARNING
3	LONGITUDINAL FEED ASSEMBLY INSTRUCTION & FUNCTION DESCRIPTION
4	ASSY-LIMIT ASSEMBLY INSTRUCTION & PROBLEM SOLUTION
5	CAUTION
5,6	PARTS LIST
7,8	SCHEMATIC DIAGRAM OF PARTS
9,10,11	PARTS LIST
12	CIRCUIT DIAGRAM AL-200S
13	HOW TO INSTALL TRANSMITTER OF TR-1(ONE OUTPUT)
14	TROUBLE SHOOTING

CONGRATULATIONS ON YOUR NEW PURCHASE OF OUR POWER FEED

Please read this manual carefully before installation and using it. It will also help you to solve some easy problems by yourselves. Hope our product will bring you more effective and joyful working.

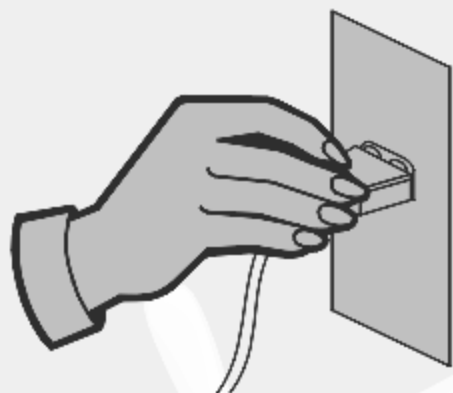
SPECIFICATION

Model	R.P.M.	Max R.P.M.	Bevel Drive Gear Rate	Max Torque	Rated Voltage	Rated Current
AL-200S	0~140	200	2.8:1	440 in-lb	110V 60Hz	0.5~0.6Amp

VOLTAGE AS 220V-440V HAVE TO ADOPT TRANSFORMER

WARNING

Please make sure if power supply be turned off before assembly, and avoid from accident caused during procedure of assembly.



Please don't disassemble for fixing or refitment and free from accident or break down caused by unhealth assembly.



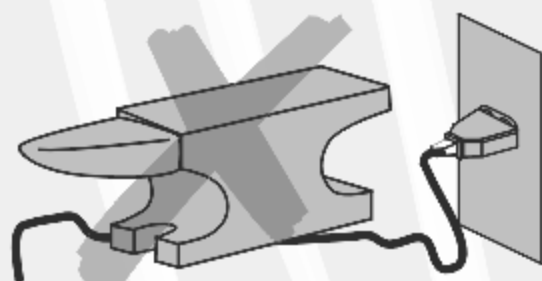
Please take apart the drill and remove worked item before assembly.



Please make sure input voltage for power feed as A.C.110 V and avoid wrong power then burn down circuit board, except A.C.110 V, please adopt the transformer.



Please adjust suitable length of cord and watch out the wiring, never pressure power cord by clog then ambroin broken cause short or spark.



Please don't set the power feed in excessive wetish working zone and don't wash down the power feed by water or water shipped then cause short or spark.



LONGITUDINAL FEED ASSEMBLY INSTRUCTION & FUNCTION DESCRIPTION

A0102 CIRCUIT BREAKER

To protect the circuit from current overload. When the current passing the switch is over 3A for about 10 Seconds, the protective device will slip off automatically to break the circuit. Press down the red pusher of the protective device and the indicator will glow so as to continue the function.

P01816 DIRECTION HANDLE

To control the driving direction of the POWER FEED. Move the handle to the right, TABLE will move to the left, TABLE will move to the left. C.

A01115 RAPID SWITCH ASSY

Press down the orange button, Power Feed will drive its max. speed. The speed goes back to its previous velocity after a release of such button.

A011399
BIG ADAPTOR

G0101A T20003-1 5/16X1"

A011399A
SMALL ADAPTOR

A0100-03x
DRIVE GEAR

T20003
SCREW 5/16X1"

A0110 INDICATOR

To show if the power is on. Indicator glows to show the power is on and if it doesn't light up, that means no power is supplied.

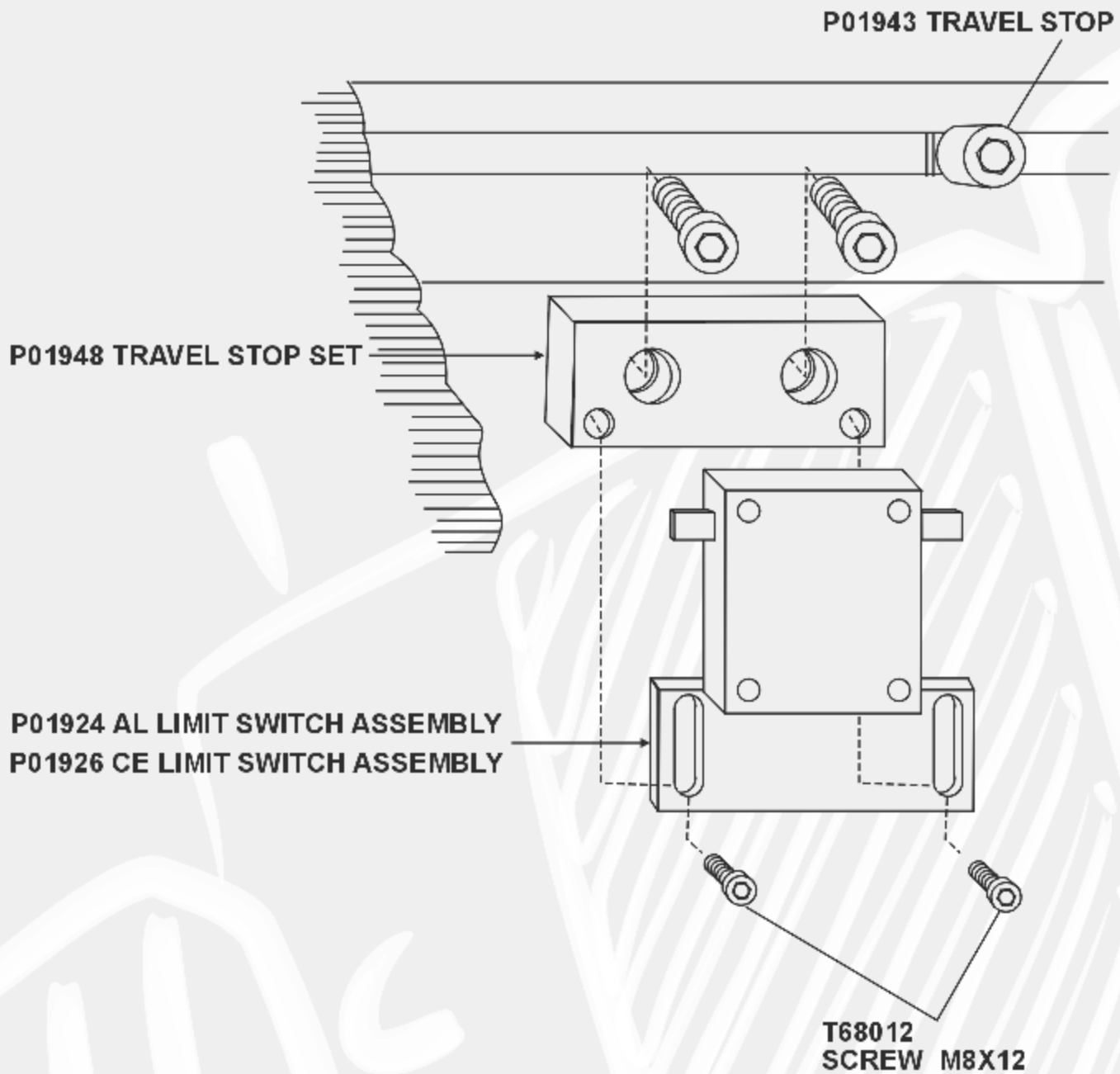
P01811-03 SPEED CONTROL KNOB.
control the rotating speed of POWER FEED

E0907 ON-OFF SWITCH

down A power service controller. Push the crank to the position ON to serve power and to the position OFF to stop power supply.

P01927
GEAR COVER

ASSY-LIMIT ASSEMBLY INSTRUCTION & PROBLEM SOLUTION



TROUBLE SOLUTION

1. When the **POWER FEED** doesn't work and the indicator doesn't glow:
 - 1) Check : If it is pluggd in.
 - 2) Check : If on-off switch is on.
 - 3) Check : If breaker is off the position.
2. **POWER FEED** doesn't work and the indicator lights up:
Check : If the brush is normal.
3. **POWER FEED** can only move to one direction:(Fig.1)
Check : If assy-limit switch is normal.
4. Touch assy-limit switch **POWER FEED** in-between the table and unable to stop it.(fig.2)
Check : If assy-limit switch is normal.

CAUTION

1. It will damage the gear of power feed if you suddenly change the direction of power feed by pushing the direction control handle while the machine is under high-speed operation. If you intend to change the direction, please push the handle to the "off" position. Waiting until the machine is completely stopped, then push the handle to your intended direction.
2. Please make sure the position of the stop screw for your milling machine is keeping on "loose" status.
3. While the power feed is under operation, please don't change to use manual control the direction suddenly.

PARTS LIST

NO.	PART NAME	PART NO.	SPECIFICATION	REMARK
1	TOP HOUSING	P01825		
3	WASHER	A0100-02A	0.4x ϕ 34x ϕ 45mm	
4	WASHER	A0100-02B	0.6x ϕ 34x ϕ 45mm	
5	WASHER	A0100-02C	0.1x ϕ 34x ϕ 45mm	
6	WASHER	A0100-02D	0.2x ϕ 16x ϕ 23.5mm	
7	WASHER	A0100-04A	0.4x ϕ 16x ϕ 23.5mm	
8	WASHER	A0100-04B	0.6x ϕ 6x ϕ 23.5mm	
9	WASHER	A0100-04C	0.1x ϕ 16x ϕ 23.5mm	
10	WASHER	A0100-04E	2x ϕ 16x ϕ 25.4mm	
11	WASHER	A0100-07A		
12	CIRCUIT STRAIN	A0100-08C		
13	WIRE BAND	VCM-99		
14	CIRCUIT CONNECTOR	A0113-99F		
15	CIRCUIT BREAKER	A0102		
16	CAP OF CIRCUIT BREAKER	A0102-01		
17	BUSHING BEARING	A0103	ϕ 6x ϕ 12x 11.5mm	
18	DRIVE GEAR SHAFT	A0106		
19	DRIVE GEAR	A0106V		
20	BEARING	B00006	608ZZ	
21	LIGHT TRANSMITTER	A0110		

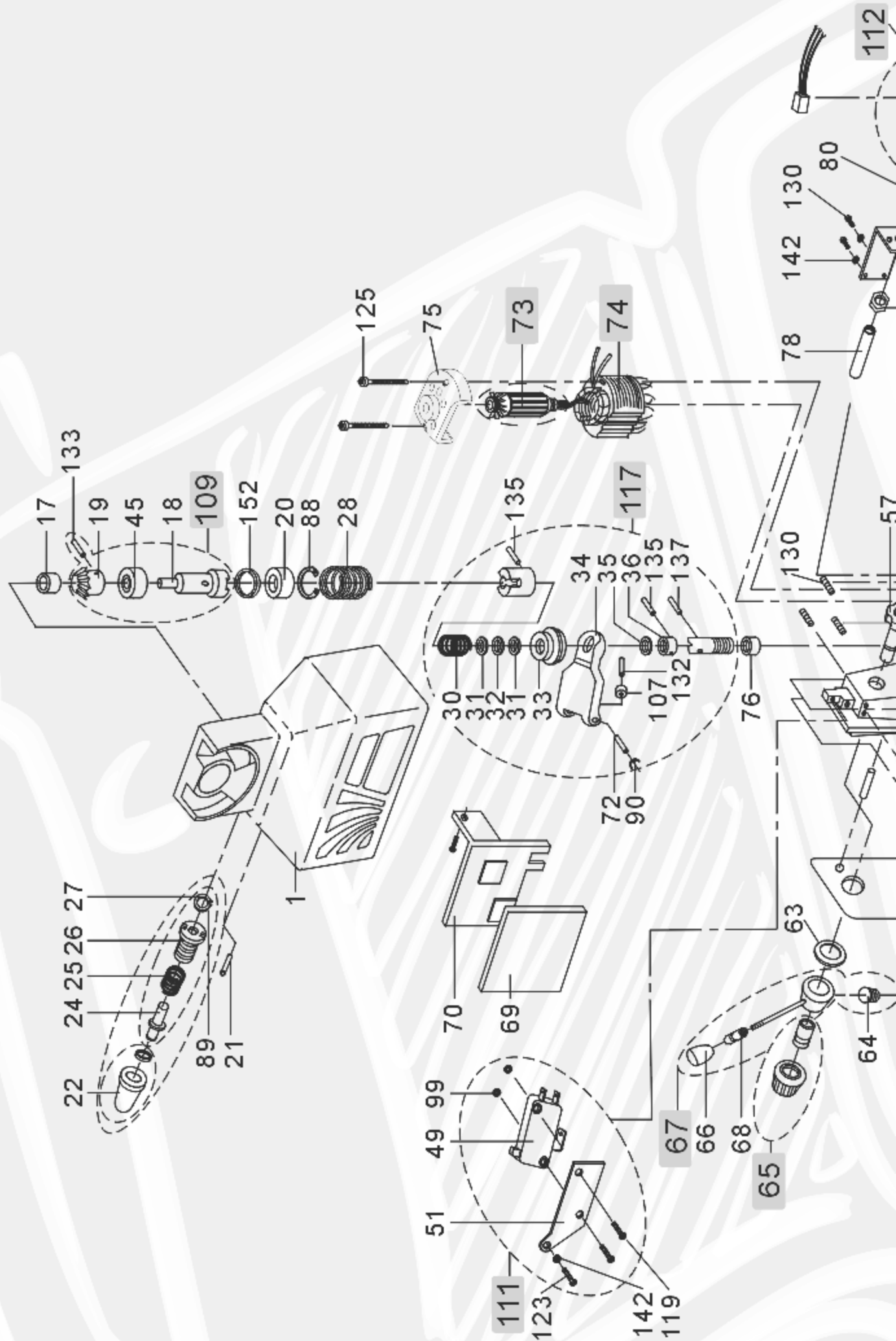
PARTS LIST

NO.	PART NAME	PART NO.	SPECIFICATION	REMARK
22	HEX. SEAL BOOT	P01817		
23	NUT FOR RAPID SWITCH	A0111-01A		
24	RAPID SWITCH PLUNGER	A0111-02		
25	SPRING FOR RAPID SWITCH	A0111-03		
26	RAPID SWITCH HOUSING	A0111-04		
27	RAPID SWITCH ASSY	A011115		
28	SPRING FOR TOP HOUSING	A0112		
30	SPRING FOR CLUTCH	A0301-05		
31	WASHER TRA	A0301-06	512	
32	WASHER BEARING NTA	A0301-07	512	
33	BEARING CUP	A0301-08		
34	LIFTFORK	A0301-09		
35	WASHER	A0301-10	1 × $\phi 8 \times \phi 18$ mm	
36	SHAFT MOUNT	A0301-12A		
37	WIRE	ALW-25-1	24AWGx L59mm	
38	WIRE	ALW-26	18AWGx L50mm	
39	WIRE	ALW-3	22AWG	
40	WIRE	ALW-6	22AWGx L116mm	
41	WIRE	ALW-7	22AWGx L160mm	
42	WIRE	ALW-8	22AWGx L100mm	
43	WIRE	ALW-9	22AWGx L100mm	
44	BEARING	B00001	627ZZ	
45	SPACER	A0109		
46	MICRO SWITCH HOLDER	C0501		
47	MICRO SWITCH ASSEMBLY	C0501-6P		
48	SWITCH ACTURATOR	C0502		
49	MICRO SWITCH	C0504-1		
50	CAPACITOR	C0506		
51	MICRO SWITCH HOLDER	C0507		
52	MICRO SWITCH ASSEMBLY	C0508		
53	MOUNTING PLATE	C0508-01		
54	MICRO SWITCH	C0508-02		
55	BOTTOM COVER	P01809-03		
56	BOTTOM HOUSING	P01806		
57	235 CAM ASSEMBLY	E0902P		

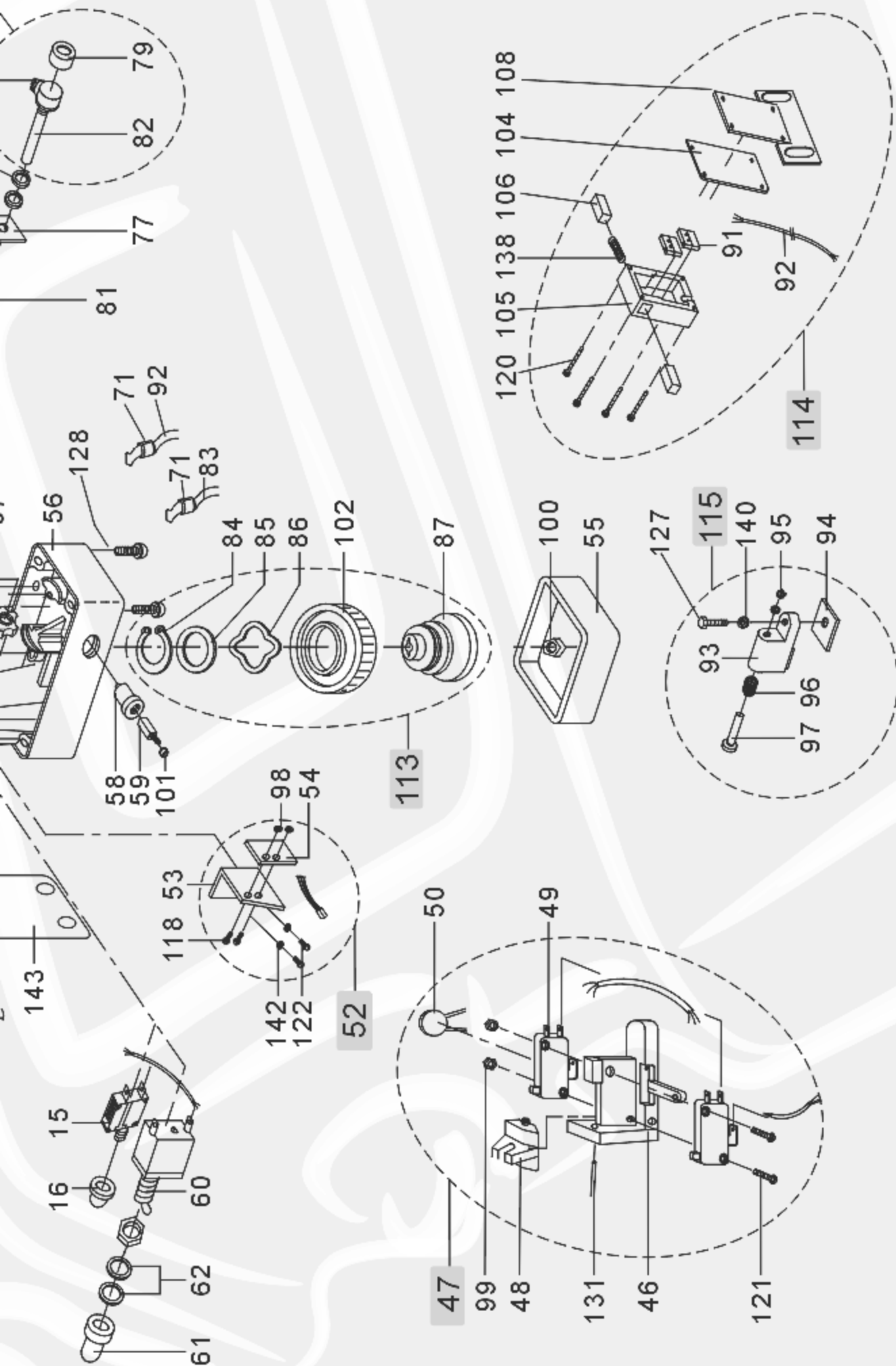
PARTS LIST

NO.	PART NAME	PART NO.	SPECIFICATION	REMARK
58	CARBON BRUSH HOLDER	P01004		
59	BRUSH	E0905		
60	ON-OFF SWITCH	E0907		
61	CAP OF ON-OFF SWITCH	E0907-01		
62	WASHER	E0907-02		
63	SPRING WASHER	E0910	627	
64	SET SCREW	E0911	1/4"x 1/4"	
65	SPEED CONTROL KNOB	P01811		
66	HANDLE KNOB	P01812-03		
67	90° CONTROL HANDLE	P01816-1		
68	INNER RING	E0913A		
69	CIRCUIT BOARD INSULATOR	E0915V		
70	200S CIRCUIT BOARD ASSEMBLY	JC2HS		
	CE CIRCUIT BOARD ASSEMBLY	JC2HS		
71	STRAIN RELIEF	E0917		
72	LIFTFORK SHAFT	E0922		
73	AL ARMATURE ASSEMBLY	E0925V-0		
	SP ARMATURE ASSEMBLY	P01907		
74	200S MOTOR FIELD	E0926P		
75	BEARING MOUNT	E0927A		
76	BUSHING	E0928	$\phi 8 \times \phi 14.8 \times 20$	
77	STRAIN OF POTENTIOMETER	E0929-01		
78	RING OF POTENTIOMETER	E0929-02		
79	CAP OF POTENTIOMETER	E0929-03		
80	WASHER OF POTENTIOMETER	E0929-04		
81	NUT OF POTENTIOMETER	E0929-05		
82	200S POTENTIOMETER	E0929P	500 Ω	
83	POWER CORD	E23017	0.75x 3Cx 2.7M	
84	CRESCENT RING	E0934-01	S38	
85	WASHER	E0934-02	1.5x $\phi 38 \times \phi 54$	
86	SPRING WASHER	E0934-03	6205	
87	HUB OF ZYTEL GEAR	E0934-04		
88	CRESCENT RING	F01001	IR24	
89	E-RING	F10040	E4	

SCHEMATIC DIAGRAM OF PARTS



SCHEMATIC DIAGRAM OF PARTS



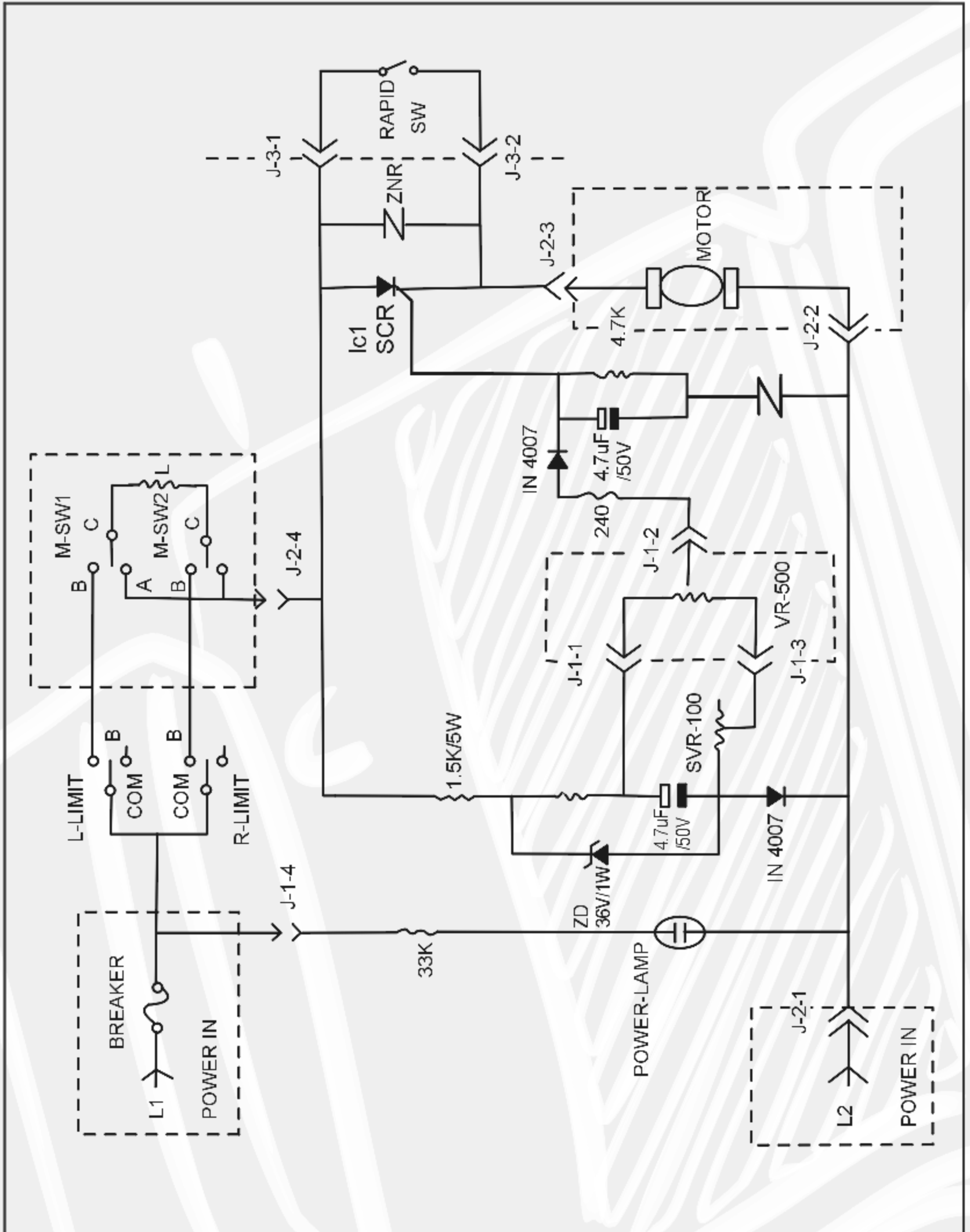
PARTS LIST

NO.	PART NAME	PART NO.	SPECIFICATION	REMARK
90	E-RING	F10050	E5	
91	MICRO SWITCH	F1104		
92	CONTROL CORD	E23015	0.75x 2Cx 1.7M	
93	TRAVEL STOP	G0100-011		
94	NUT	G0103		
95	CRESCENT RING	G0106		
96	SPRING	G0107		
97	TRAVEL STOP SHAFT	G0108		
98	NUT	N10020	M 2	
99	NUT	N10030	M 3	
100	NUT	N22001	5/16"	
101	CARBON BRUSH CAP	E0906		
102	PLASTIC GEAR	P01007		
104	LIMIT SWITCH COVER	P01015		
105	LIMIT SWITCH HOLDER	P01018		
106	ACTUATOR	P01019		
107	LIFTFORK RING	P01028		
108	HOLD PLATE	P01040	30°	
109	DRIVE GEAR ASSEMBLY	P01901		
110	LIFTFORK ASSEMBLY	P01903		
111	MICRO SWITCH ASSEMBLY	P01904		
	235/99 POTENTIOMETER ASSEMBLY	P01908		
113	ZYTEL GEAR ASSEMBLY	P01909		
114	LIMIT SWITCH ASSEMBLY	P01924		
	LIMIT SWITCH ASSEMBLY	P01926		
115	TRAVEL STOP SET	P01916		
117	LIFTFORK ASSEMBLY	P01923		
118	SCREW	T12010	2x 10 mm	
119	SCREW	T13015	3x 15 mm	
120	SCREW	T13020	3x 20 mm	
121	SCREW	T13030	3x 30 mm	
122	SCREW	T14006	4x 6 mm	
123	SCREW	T14010	4x 10 mm	
124	SCREW	T15010-1	M5X10	
125	SCREW	T14070	4x 70 mm	

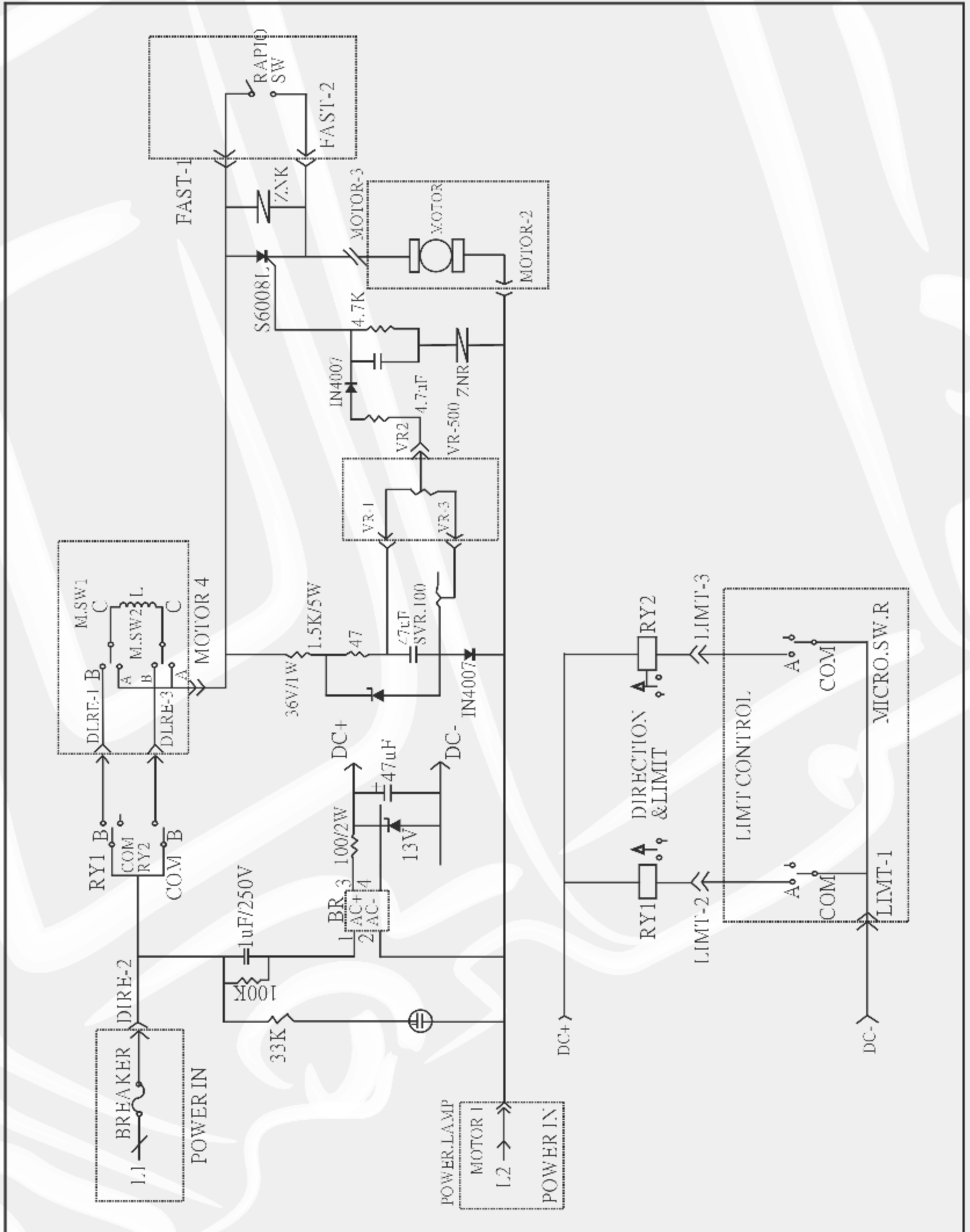
PARTS LIST

NO.	PART NAME	PART NO.	SPECIFICATION	REMARK
126	SET SCREW	T20001	3/16" x 3/8"	
127	SET SCREW	T20003	5/16" x 1"	
128	SET SCREW	T55035	5x 35 mm	
129	SET SCREW	T60001	1/4"x1"	
130	SET SCREW	T74004	4x 4 mm	
131	PIN	U32025	φ 2x 24.8 mm	
132	PIN	U35016	φ 2.5x 16 mm	
133	PIN	U33015	φ 3x 15 mm	
134	PIN	U35014	φ 5x 14 mm	
135	PIN	U42515	φ 2.5x 15 mm	
136	PIN	U43014	φ 3x 13.7 mm	
137	PIN	U43017	φ 3x 17.5 mm	
138	SPRING	W04001		
139	WASHER	W10050	1x φ 5x φ 12 mm	
140	WASHER	W10080	1x φ 8x φ 18 mm	
141	WASHER	W10080-1	0.6x φ 8x φ 12 mm	
142	SPRING WASHER	W20040	φ 4 mm	
143	NAME PLATE	D20323		

CIRCUIT DIAGRAM AL-200S



CIRCUIT DIAGRAM CE-200S

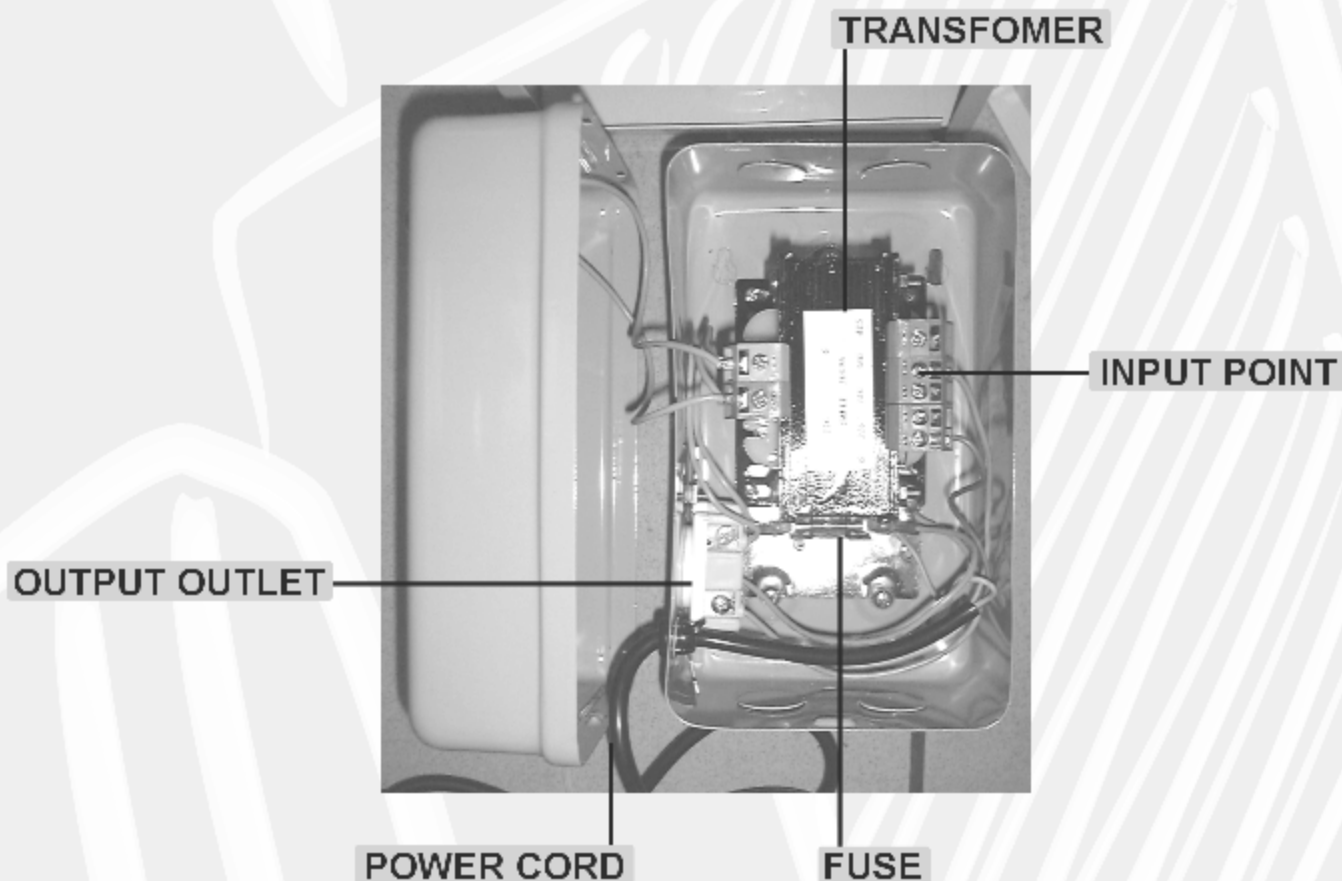


HOW TO INSTALL TRANSFORMER OF TR-1(ONE OUTPUT)

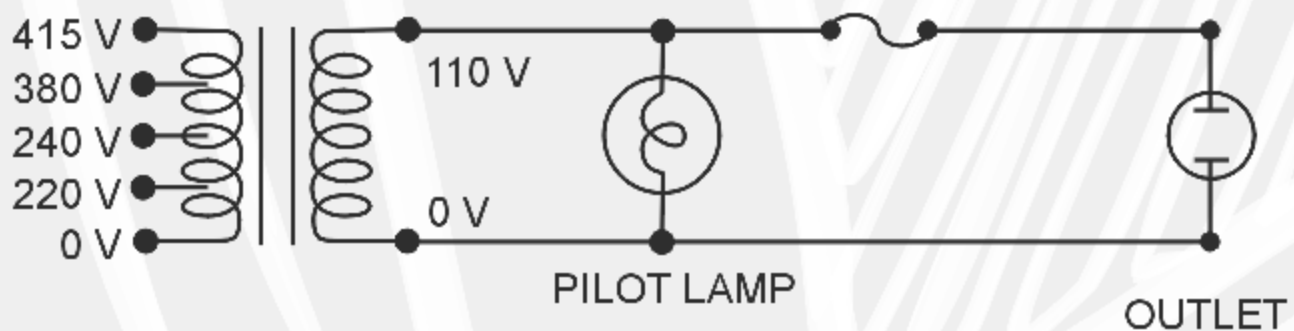
TRANSFORMER OF TR-1 IS USED FOR 220V, 240V, 380V AND 415V THEN TRANSFER TO 110V. ATTACHING POWER PILOT LAMP AND ONE OUTPUT OUTLET.

ASSEMBLING GUIDE:

1. Make sure the voltage of working environment.
2. Choose the exact input point and well fix up.
3. Make sure whole screws of transformer are well locked.
4. Setting transformer on stable and dry wall.
5. Collecting cable and wire on the wire box of working place.
6. Keep from accident caused, don't disassemble and refit locked parts or wiring of transformer when assembly proceeding.



CIRCUIT



TROUBLE SHOOTING

THE POWER FEED DOES NOT WORK AND THE POWER INDICATOR DOES NOT GLOW :

- 1.Ensure there is no problem with power supply.
- 2.Check if the circuit breaker on the power feed unit kicked out.
- 3.Check for proper contact at the ON-OFF switch.

THE MOTOR DOES NOT WORK WHEN PUSH DIRECTION LEVER TO EITHER LEFT OR RIGHT :

- 1.Open power feed unit by loosening bottom 4 hex screws.
- 2.Check if the carbon brush is making proper contact with the armature or if carbon brush is all used up already.
- 3.Check that internal wiring to the printed circuit board are all connected.
- 4.Check that the potentiometer connections are intact and that it is functioning properly.

SPEED CONTROL ERRATIC OR ALWAYS AT HIGH SPEED ONLY :

- 1.Check rapid micro switch. Make sure it is not stuck. If its position is too high up, lightly tap on it to lower.
- 2.Check V.R. is in good connection and proper function.

BREAKER ALWAYS KICKS OUT ON POWER FEED UNIT UNDER NORMAL USAGE :

Short circuit in the armature, need to be replaced new armature.

CURRENT LEAKAGE :

- 1.Check limits switch assembly for possible short.
- 2.Check armature by first removing the brush cap.
- 3.Measure for short with an ohmmeter across the carbon brush and the outer cover of the power feed unit.



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