Service Manual

Table of Content

1. Safety Precautions

Failure to comply any of the following safety procedures could result in serious injury. Please read the instructions carefully and keep for future reference.

1. Only a licensed electrician should install wiring and outlet for the laminator.

2. Ensure the unit is plugged into a properly grounded outlet with the correct voltage.

3. Keep hands and clothing(ie.Neckties)away from rollers. The rollers have pinch points that can trap body parts or clothing and cause serious injury.

4. Keep flammable and wet objects away from the machine.

5. Place machine on a level surface.

6. Avoid excessive sunlight, humidity and extreme temperatures.

7. Ensure the unit is turned off, cooled ,and unplugged from the outlet prior to moving and/or repairing.

8. Keep out of reach of children.

9. Only an authorized maintenance and service technician should make repairs.

10. Do not attempt to laminate items that exceed total recommended material thickness for the unit.

11. When cleaning the machine, don't use flammable sprays or materials.

12. Do not touch the rollers when they are hot or place foreign objects inside the machine.

13. Do not cover the surface of the machine until the machine has completely cooled.

2. Troubleshooting

Note: While repairing:

a. Make sure the power plug is unplugged from the power outlet.

b. Open both side covers and rear cover.

c. Be sure to follow the steps below in order.

2.1 Rollers Not Heating

CAUSES:

1. **Not in heating mode.**
2. **Heating wire is not connected to the main PCB.**
3. **Blown (burnt) wire fuse (T/Fuse).**
4. **Defective Bi-Metal.**
5. **Defective heater.**
6. **Defective Main PCB.**

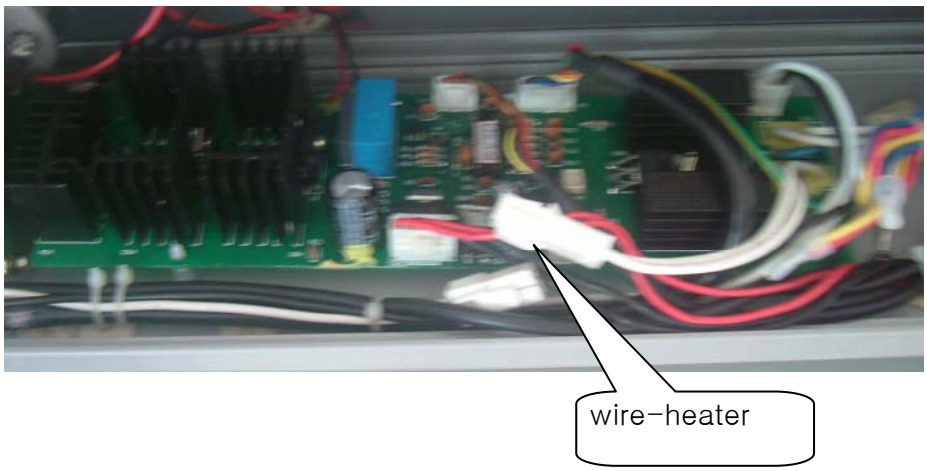
MEASURE

1. **Improper laminating mode.**

a. Ensure that the laminating mode is in the “Heating” mode.
Press “HEATING” button on the control panel to change the mode.

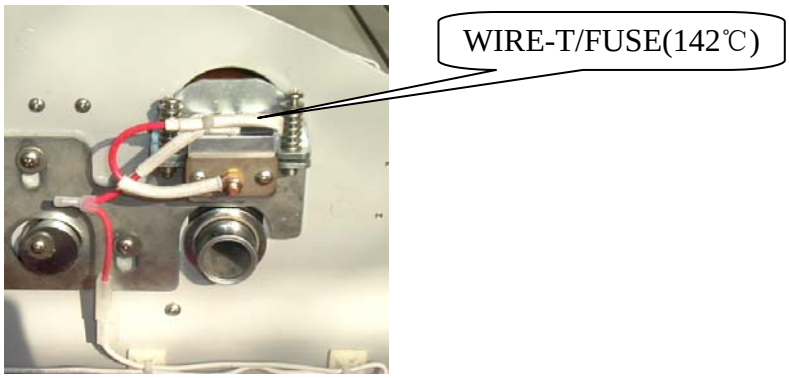
2. **Heating wire is not connected to the main PCB.**

a. Connect the heating wires to the main PCB.



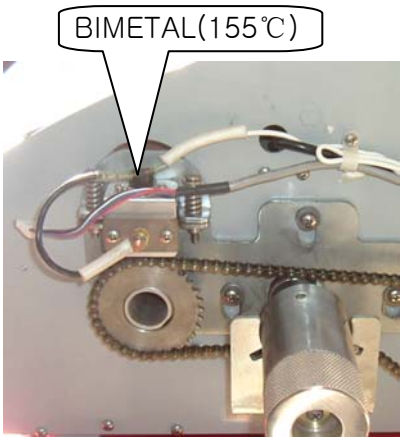
3. Blown (burnt) wire fuse (T/Fuse).

a. Replace the T/Fuse wire located on the left-hand side.



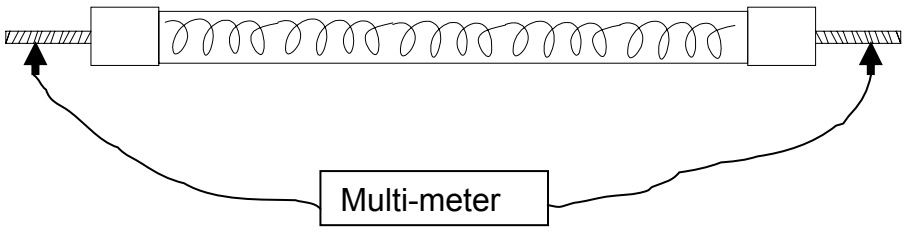
4. Defective Bi-Metal.

a. Replace the Bi-Metal

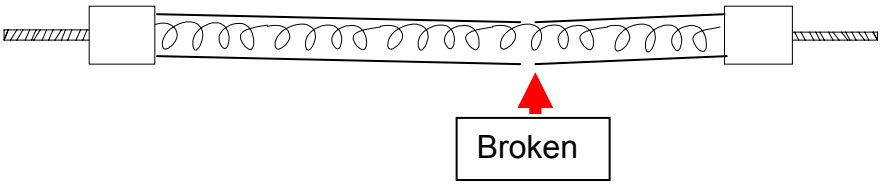


5. Defective heater.

a. Using the multi-meter, test the continuity of the heater. If it fails, replace the heater.



b. Physically examine the heater assembly for breakage.



6. Defective Main PCB.

a. Replace the PCB Main.

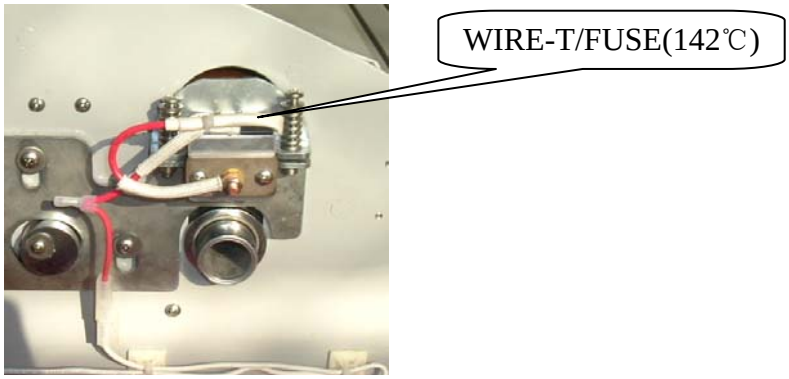
2.2) Rollers Over Heating

CAUSES

1. **Defective T/Fuse wire.**
2. **Defective heater.**
3. **Defective main PCB.**

MEASURES

1. **Defective T/Fuse wire.**
   a. Replace the T/Fuse wire located on the left-hand side.



2. **Defective heater.**
   a. Test continuity of the heater. If it fails, replace the heater.
   b. Glass tube that surrounds heating coil is broken – replace the heating element.

3. **Defective Main PCB.**
   a. Replace the PCB Main.

2.3) Rollers Not Running

CAUSES

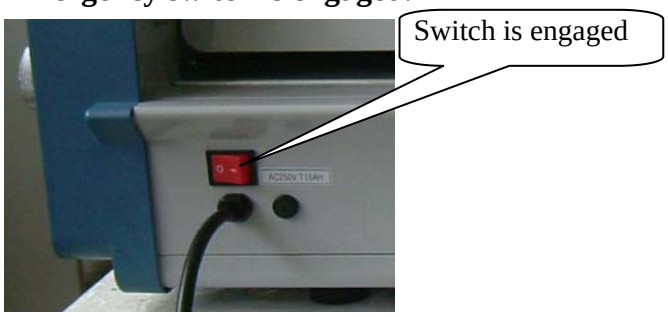
1. **No power to the unit.**
2. **Emergency switch is engaged.**
3. **Foam board is jammed on the rollers.**
4. **Disconnected motor wire.**
5. **Defective main motor.**
6. **Defective main PCB.**

MEASURES

1. No power to the unit.

a. Make sure the power plug is connected to the proper source of outlet (120V, 15Amp, & single phase).

2. Emergency switch is engaged.

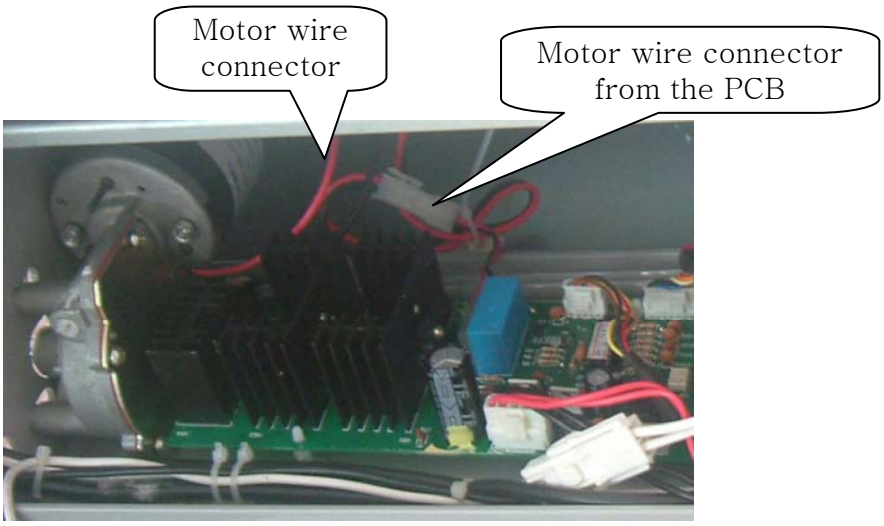


3. Film is jammed on the rollers.

a. Un-jam the foam board using a combination of the pressure Control Knob and reverse button.

4. Disconnected motor wire.

a. Check the motor wire connection in both locations.



5. Defective main motor.

a. Replace the main motor.

6. Defective main PCB.

a. Replace the main PCB.

2.4) No Main Power

CAUSES

1. **No electricity.**
2. **Blown main fuse.**
3. **Defective transformer.**

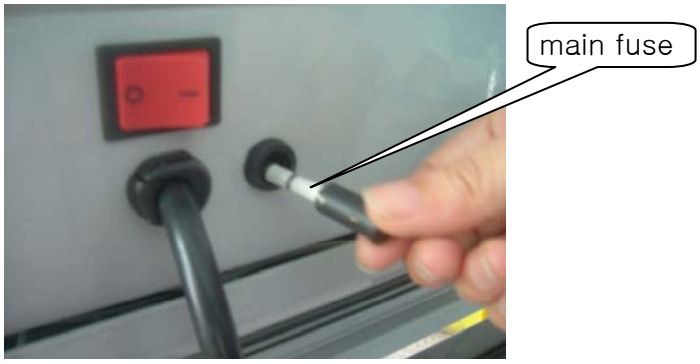
MEASURES

1. No Electricity.

a. Double check to insure that you have electricity from your outlet.
b. Check the circuit breaker.
c. Double check that source of power is 120V, 15Amp, and single phase.

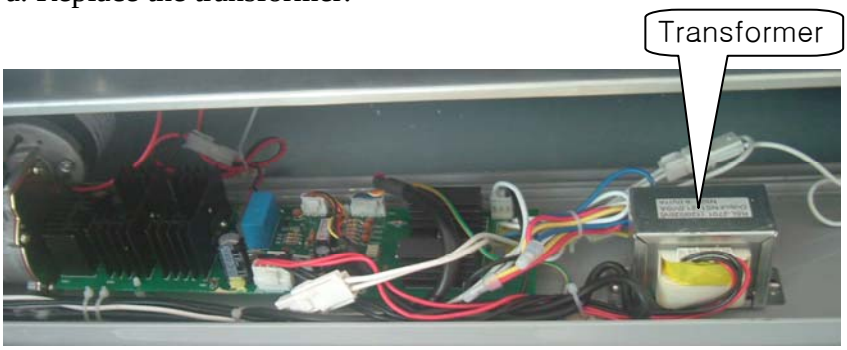
2. Blown main fuse.

a. Replace the main fuse located beside the main power switch.

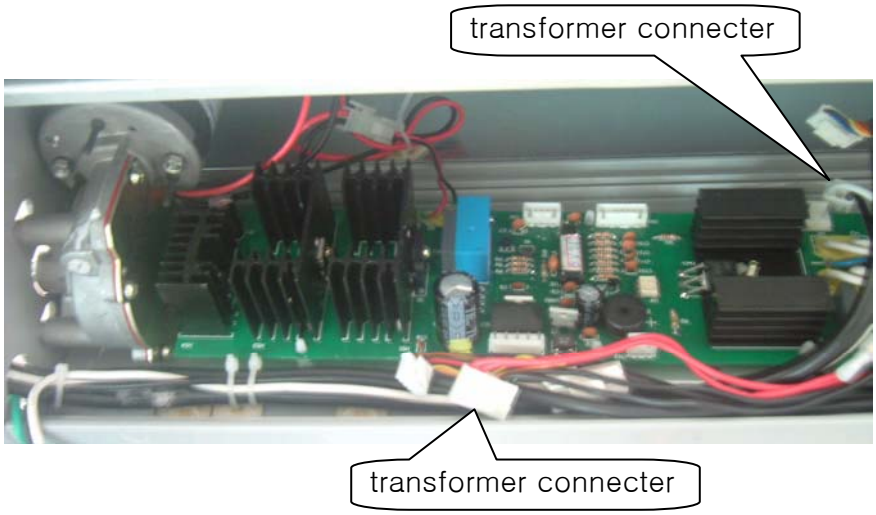


3. Transformer is defective

a. Replace the transformer.



b. Connect the transformer wires to the main PCB.



3. Replacing Parts

Note: While replacing parts:

a. Make sure the power plug is unplugged from the power outlet.

b. Open both side covers and rear cover.

3.1 Replacing the Right Cover.

a. Take out the three cover screws using Phillips screw driver. (Figure 1)

Figure 1

b. Pull out the male control panel connector from the Sub-PCB. (Figure 2)

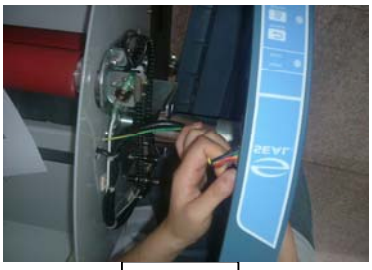


Figure 2

c. Remove the two screws from the Sub-PCB and install the Sub-PCB onto the new Right cover. (Figure 3)

Figure 3

d. Reverse the instructions to reassemble the right cover.

3.2 Replacing the Left Cover

a. Remove the left cover screws and replace the old left cover with a new left cove

3.3 Replacing Rear Cover

a. Take off the left and right covers.
b. Take out the four screws from frames,two screws of each side(Figure 4,Figure 5

Figure 4

Figure 5

3.4 Replacing the Main PCB

a. Remove the rear cover and label all the wires before unplugging from the Main PCB.
b. Detach the Main PCB from 6 white plastic holders (Figure 6).
c. Replace the board with new PCB and connect all the wires.

Figure 6

3.5 Replacing the Sub-PCB

a. Refer to “Replacing Right Cover”.

3.6 Replacing the Heaters

Note: Cotton or surgical gloves are recommended while handling the heater assembly.
a. Disassemble Right and Left Covers (Refer to “**Replacing Right Cover**” and “**Replacing Left Cover**”).
b. Take out the heater brackets on each side by loosening screws (Figure 7, Figure 8).

Figure7

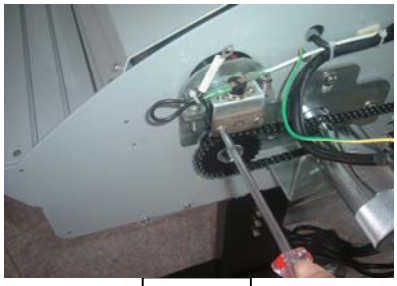


Figure8

c. Take out the broken heater (Figure 9)

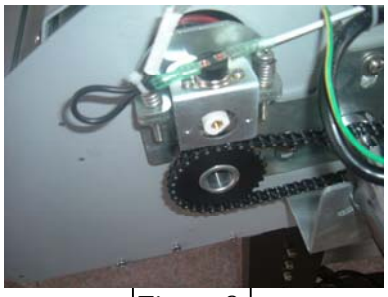


Figure 9

Note:

a. When inserting the heater into the roller, rotate the heater slightly and push the rod in gently.

b. Use an air blower to blow out the broken pieces of heating rod.

(Please ensure that no one is standing on the other side.)

3.7 Replacing the Main Fuse

a. Press the fuse block and turn counter clockwise with a screwdriver (Figure 10)

b. Remove the fuse and replace it with a new one. (Figure 11)

c. Reverse the instructions to reassemble the fuse.

Figure 10

Figure 11

4.Adjustments

Adjusting roller pressure:
Using a screwdriver turn Clockwise to increase pressure and counter clockwise to decrease pressure.
(Figure A)

Figure A

1.Using Push-Pull Scale,measure 5 spots as shown on Figure C & D: roller should be 4~5
(the red "Label- Indication" point at"closed" position.Figure B)

Figure B

2.Checking for over all tension-
when the machine is running,check that the Foam Board is fed in
without any wrinkles.

3.Pressure mark checking(heat line)-
stop the machine for 30 seconds to creat a heat line.Then check to see if you have two even parallel lines from one end to other.
Note:A narrow parallel lines indicate that it has less pressure at that point.

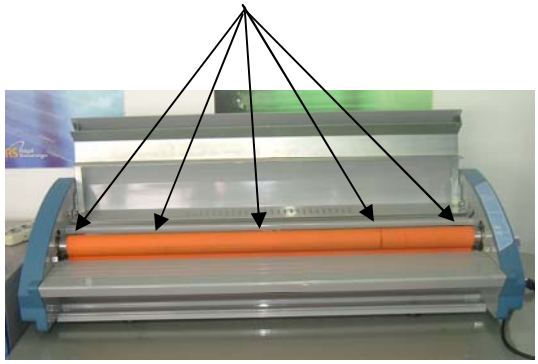


Figure C

4.Laminating Test-Laminating samples with different thickness of Foam Board, in different Gaps.

Figure D

Parts List

MODEL : ProSEAL 44 2006年 07月 18日

REF NO.	PART NO.	DESCRIPTION	MATERIAL	Q'TY
1	013LR3043A	BASE-FRONT	AL6063	1
2	026004005A	FOOT	RUBBER	4
3	013LR3044A	BASE-REAR	AL6063	1
4	350LR3029A	PCB-MAIN ASS'Y	FR-4	1
5	34000S009B	POWER TRANSFORMER	120V 50/60 HZ	1
6	23200X001A	SUPPORT-PCB	NYLON 66	6
7	013LR3045A	FRAME-REAR	AL6063	1
8	36400X002B	SWITCH-MAIN 8216 B/R 1/10 SIGNAL-LUX SPA		1
9	380CR4008A	POWER-CORD;AC120V 15A 1.8M		1
10	23300X001A	BUSHING-CORD		1
11	36600X002A	MAIN FUSE-BLOCK		1
12	011LR3001B	TOP-COVER	SPCC 1.6T	1
13	011LR4001A	BRACKET-COVER1,R	SPCC 2.2T	1
14	011LR4002A	BRACKET-COVER1,L	SPCC 2.2T	1
15	011LR4003A	BRACKET-COVER2	SPCC 2.2T	2
16	141LR3015A	ROLLER-COVER	SPCC 1.6T	1
17	033LR4003A	INSULATION	MICA PLATER 0.5	1
18	12200X032A	DU-BUSHΦ12X10,FLANGE		4
19	013LR3046A	FRAME-L	SPCC 3T	1
20	141LR3013A	PLATE-PRESSURE,L	SPCC 3T	1
21	141LR4060A	PLATE-PRESSURE,LAMI	SPCC 3T	2
22	141LR3010A	BASE-MIDDLE	AL	1
23	013LR3038A	PLATE-MIDDLE	SPCC 1.6T	1
24	138LR4015A	SPRING-PRESSURE	SWP ϕ2.0	4
25	141LR4064A	BRACKET-TABLE	SPCC 2.2T	6
26	013LR2054A	FRAME-R	SPCC 3T	1
27	141LR3014A	PLATE-PRESSURE,R	SPCC 3T	1
28	134LR4003A	BUSH-PULLEY	S45C ϕ10	2
29	134LR4001A	PULLEY-CHAIN	S45C	2
30	BHE06045D2	HEXA BOLT	M6*45 SUS27	2
31	WPB06012D2	WASHER-PLAIN	ϕ6.2*1.2T SUS27	2
32	141LR4063A	BRACKET-HANDLE	SPCC 3.0T	1
33	013LR2012E	FRAME-SENSOR	AL6063	1
34	021LR3003A	CASE-SENSOR,UP	ABS WHITE	1
35	021LR3004A	CASE-SENSOR,LO	ABS WHITE	1
36	313LR3001A	SENSOR-ASS,Y	TPML 1	1

37	124LR4005A	CAM	S45C	2
38	120LR3017A	SHAFT-CAM	S45C	1
39	140LR4019A	HOLDER	S45C	1
40	120LR3019A	SHAFT-ROTATION	S45C	1
41	032LR4015A	SHEET-INDICATION	PC LEXAN T=0.25	1
42	SKE05006D2	SET SCREW	M5*6 SUS27	5
43	RC001200C8	SNAP-RING	STW-12 WON IL	1
44	KPS05012D2	KEY-PLAIN	5*5*12 SUS27	3
45	133LR3003A	ROLLER-LAMI,UP	STPG, ORG	1
46	122LRX4028A	BUSH-ROLLER LAMI, UP	S45C	2
47	12200X037A	DU-BUSHΦ30X20,FLANGE		2
48	133LR3003B	ROLLER-LAMI,LO	STPG, ORG	1
49	122LRX4029A	BUSH-ROLLER LAMI, LO	S45C	2
50	12200X038A	DU-BUSHΦ30X10,FLANGE		2
51	210004002A	MOTOR-MAIN DC24V		1
52	131LR4021A	SPROCKET-MOTOR Z=12	S45C	1
53	BHE06020D2	HEXA BOLT	M6*20 SUS27	3
54	WPB06015D2	WASHER-PLAIN	ϕ6.2*1.5T SUS27	3
55	223LR3002B	HEATER ASS'Y 9.6Ω	FCHW 1	1
56	141LR4019A	BRACKET-HEATER UP	SPCC 1.6T	2
57	141LR4027A	STOPPER-HEATER UP	PPS	2
58	363LP30010	BI-METAL 155℃		1
59	131LR4026A	SPROCKET-LAMI Z=28	S45C	1
60	136LR4009A	CHAIN #25 P=6.35		1
61	014LR3002A	TABLE-FRONT	AL6063	1
62	381LR4074A	WIRE-HEATER; EU,UL1015 AWG#16, WHT		1
63	381LR4061B	WIRE-AC IN; UL 1015 AWG#16,WHT/BLK		1
64	381LR4075A	WIRE-BIMETAL; UL 1015 AWG#14,BLK		1
65	381LR4076A	WIRE-TEMP FUSE; UL 1015 AWG#14,142℃,15A		1
66	381LR4088A	WIRE-FUSE; UL 1015 AWG#18,BLK		1
67	381LR4085A	WIRE-MAIN ;UL2464 AWG#24, BLK		1
68	36000X001A	CROSS&CONNECTOR		2
69	381LR4027A	WIRE-SENSOR		1
70	021LR3015A	COVER-R	ABS PA-765 431C	1
71	350LR3030A	PCB-CONTROL ASS'Y	FR-4	1
72	021LR2006A	KNOB-CONTROL	ABS PA-765 431C	1
73	TPH03008D2	SCREW-PH	ST 3*8 SUS27	4
74	032LR3013B	INLAY-CONTROL LEXAN T=0.25	PC	1
75	032LR4017A	SHEET-PRESSURE	PC	1
76	021LR3016A	COVER-L	ABS PA-765 431C	1
77	032LR3014A	SIDE-INLAY	PC LEXAN T=0.1	1
78	032LR3015B	INLAY-HOLE	AL T=0.5	1

6. ProSEAL 44 Explode View

ProSEAL 44 Explode View

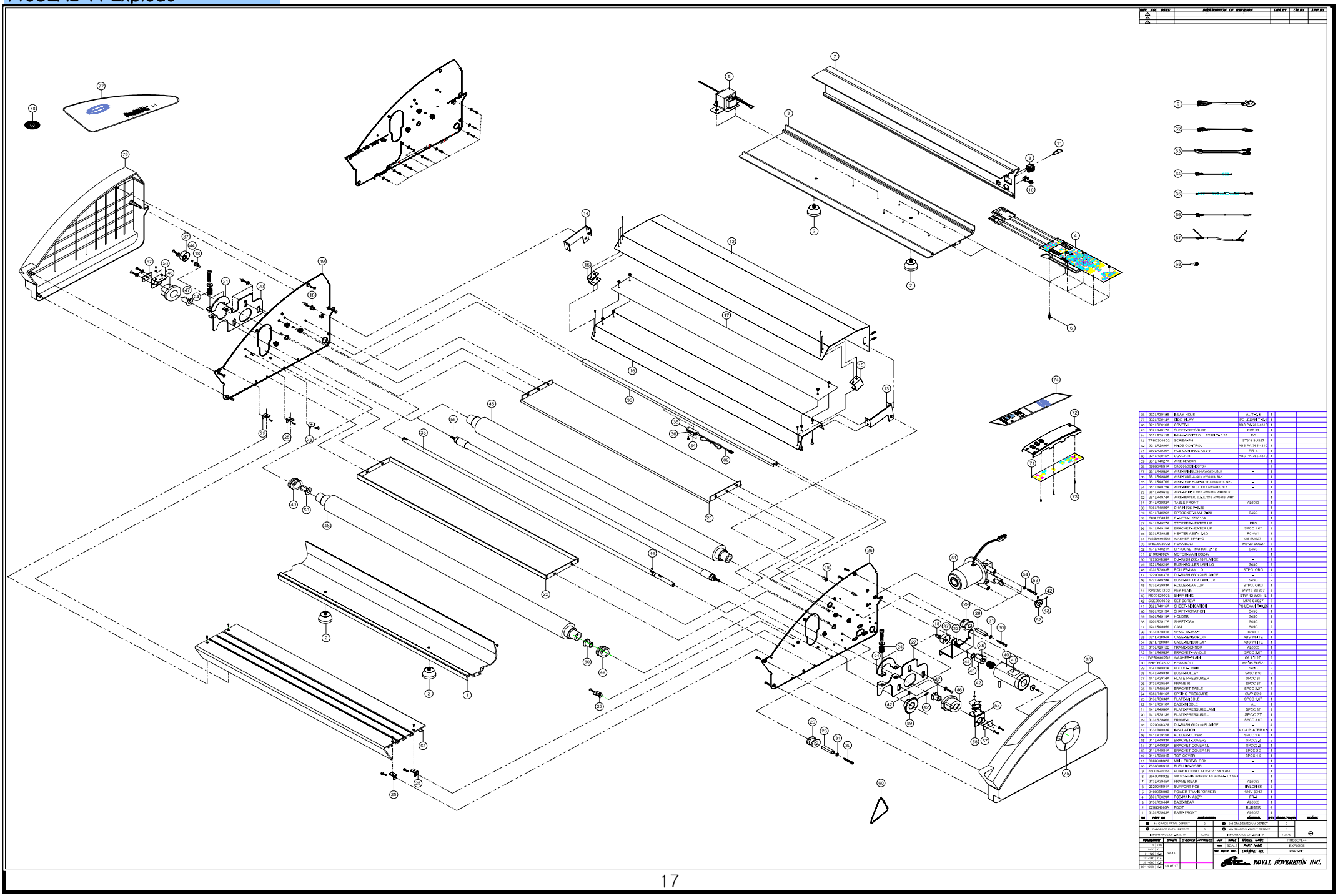
Frame L

Frame R

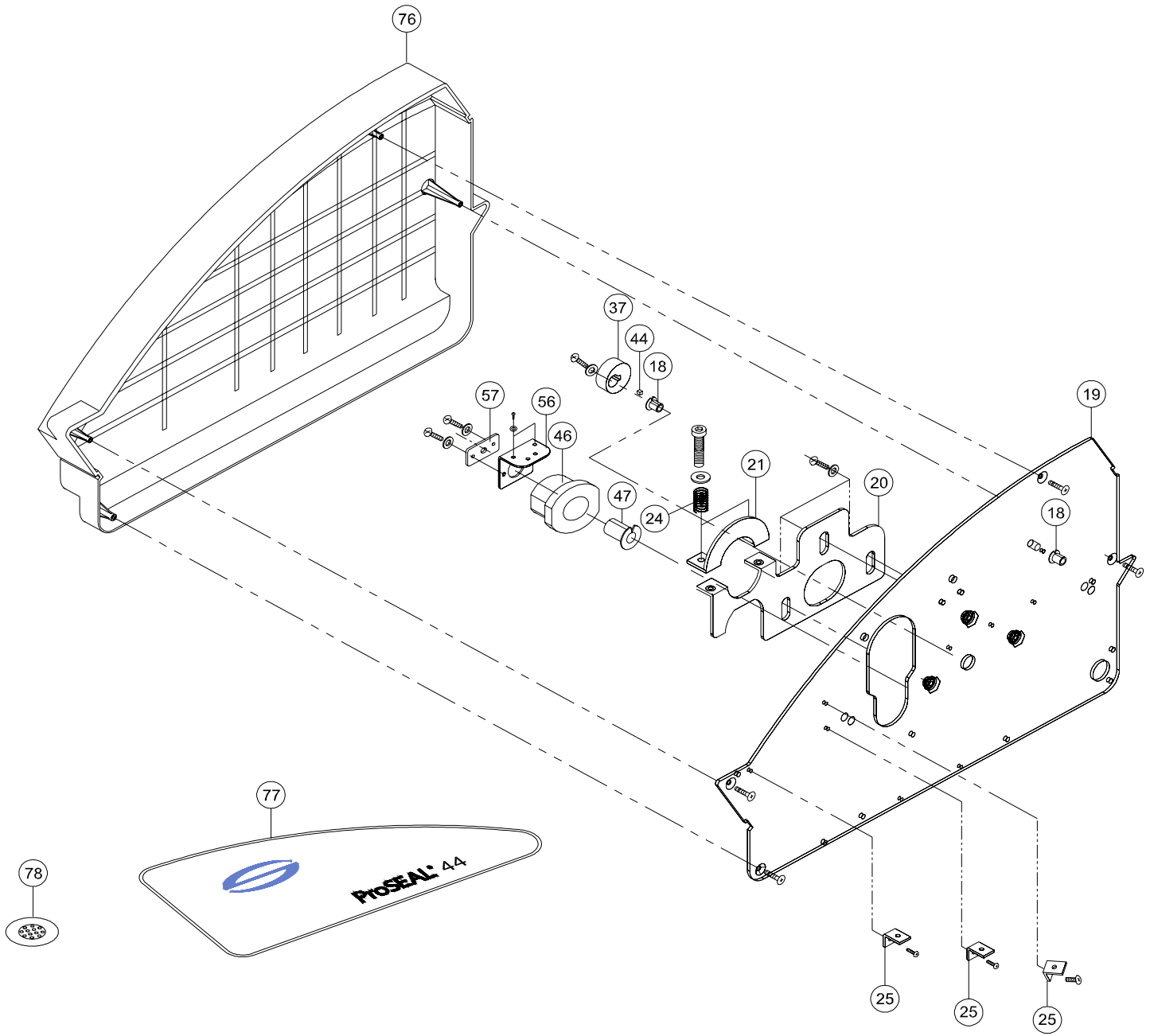
Frame, Roller and Other View

Wire, Front Table and Sensor

ProSEAL 44 Explode

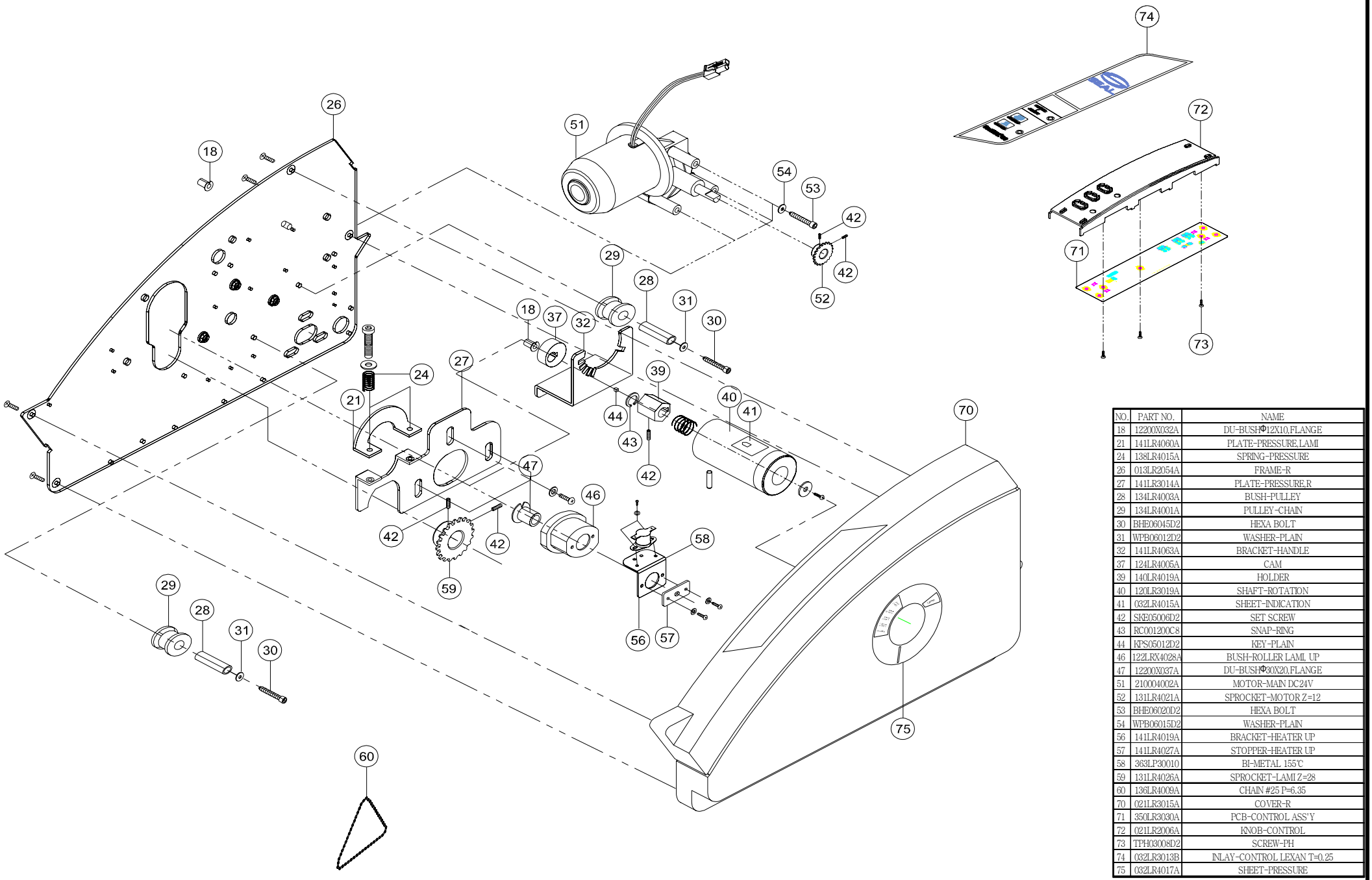


Frame-L



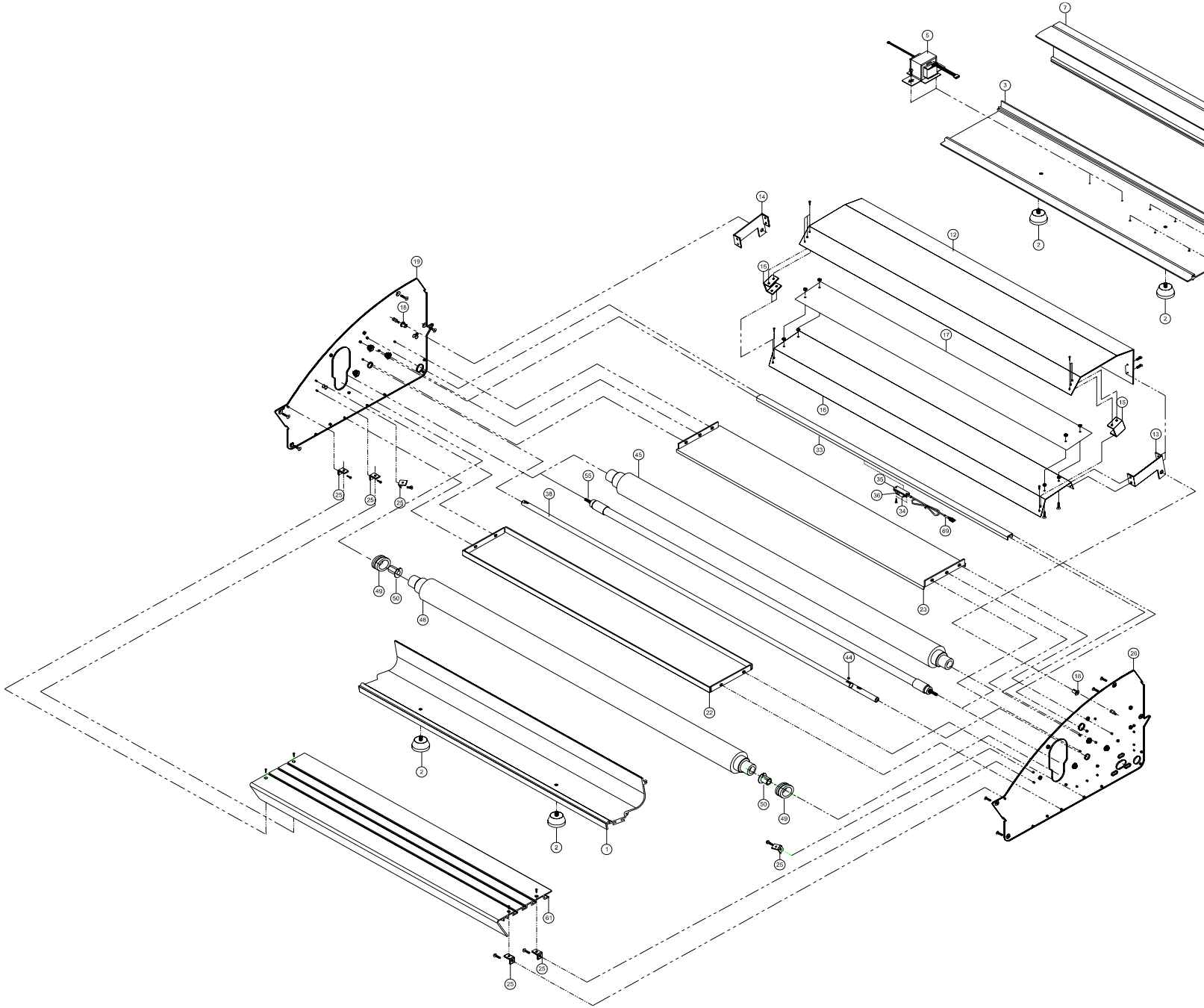
NO.	PART NO.	NAME
18	12200X032A	DU-BUSHΦ12X10,FLANGE
19	013LR3046A	FRAME-L
20	141LR3013A	PLATE-PRESSURE,L
21	141LR4060A	PLATE-PRESSURE,LAMI
24	138LR4015A	SPRING-PRESSURE
25	141LR4064A	BRACKET-TABLE
37	124LR4005A	CAM
44	KPS05012D2	KEY-PLAIN
46	122LR4028A	BUSH-ROLLER LAMI, UP
47	12200X037A	DU-BUSHΦ30X20,FLANGE
56	141LR4019A	BRACKET-HEATER UP
57	141LR4027A	STOPPER-HEATER UP
76	021LR3016A	COVER-L
77	032LR3014A	SIDE-INLAY
78	032LR3015B	INLAY-HOLE

Frame-R



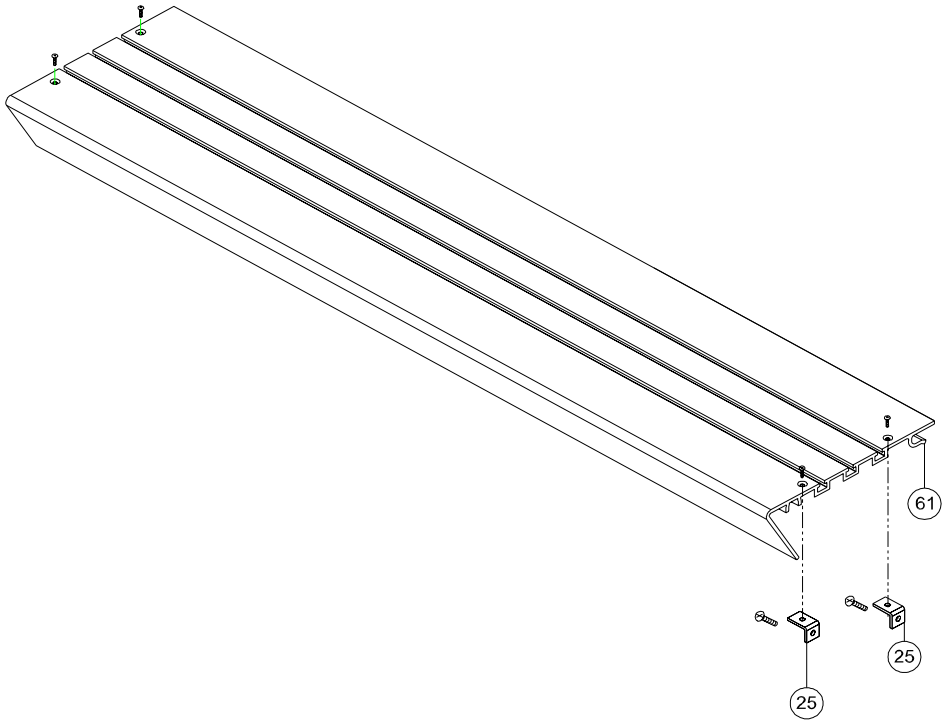
NO.	PART NO.	NAME
18	12200X032A	DU-BUSHΦ12X10,FLANGE
21	141LR4060A	PLATE-PRESSURE,LAMI
24	138LR4015A	SPRING-PRESSURE
26	013LR2054A	FRAME-R
27	141LR3014A	PLATE-PRESSURE,R
28	134LR4003A	BUSH-PULLEY
29	134LR4001A	PULLEY-CHAIN
30	BHE06045D2	HEXA BOLT
31	WPB06012D2	WASHER-PLAIN
32	141LR4063A	BRACKET-HANDLE
37	124LR4005A	CAM
39	140LR4019A	HOLDER
40	120LR3019A	SHAFT-ROTATION
41	032LR4015A	SHEET-INDICATION
42	SKE05006D2	SET SCREW
43	RC001200C8	SNAP-RING
44	KPS05012D2	KEY-PLAIN
46	122LRX4028A	BUSH-ROLLER LAMI, UP
47	12200X037A	DU-BUSHΦ30X20,FLANGE
51	210004002A	MOTOR-MAIN DC24V
52	131LR4021A	SPROCKET-MOTOR Z=12
53	BHE06020D2	HEXA BOLT
54	WPB06015D2	WASHER-PLAIN
56	141LR4019A	BRACKET-HEATER UP
57	141LR4027A	STOPPER-HEATER UP
58	363LP30010	BI-METAL 155℃
59	131LR4026A	SPROCKET-LAMI Z=28
60	136LR4009A	CHAIN #25 P=6.35
70	021LR3015A	COVER-R
71	350LR3030A	PCB-CONTROL ASS'Y
72	021LR2006A	KNOB-CONTROL
73	TPH03008D2	SCREW-PH
74	032LR3013B	INLAY-CONTROL LEXAN T=0.25
75	032LR4017A	SHEET-PRESSURE

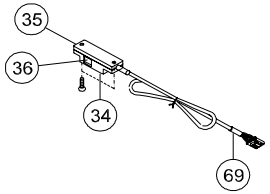
Frame,Roller and Other View

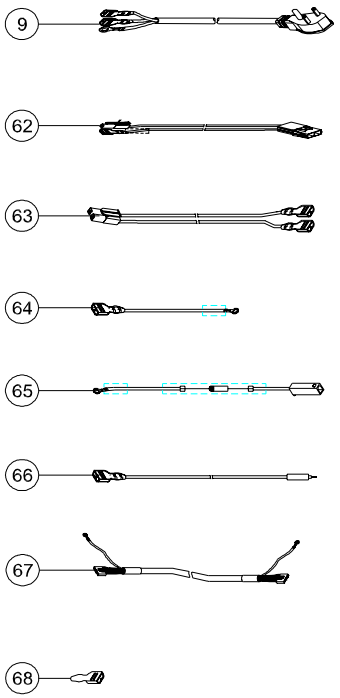


NO.	PART NO.	NAME
1	013LR3043A	BASE-FRONT
2	026004005A	FOOT
3	013LR3044A	BASE-REAR
4	350LR3029A	PCB-MAIN ASS'Y
5	34000S009B	POWER TRANSFORMER
6	23200X001A	SUPPORT-PCB
7	013LR3045A	FRAME-REAR
8	36400X002B	SWITCH-MAIN 8216 B/R 1/10 SIGNAL-LUX SPA
10	23300X001A	BUSHING-CORD
11	36600X002A	MAIN FUSE-BLOCK
12	011LR3001B	TOP-COVER
13	011LR4001A	BRACKET-COVER1,R
14	011LR4002A	BRACKET-COVER1,L
15	011LR4003A	BRACKET-COVER2
16	141LR3015A	ROLLER-COVER
17	033LR4003A	INSULATION
18	12200X032A	DU-BUSHΦ12X10,FLANGE
19	013LR3046A	FRAME-L
22	141LR3010A	BASE-MIDDLE
23	013LR3038A	PLATE-MIDDLE
25	141LR4064A	BRACKET-TABLE
26	013LR2054A	FRAME-R
33	013LR2012E	FRAME-SENSOR
34	021LR3003A	CASE-SENSOR,UP
35	021LR3004A	CASE-SENSOR,LO
36	313LR3001A	SENSOR-ASS,Y
38	120LR3017A	SHAFT-CAM
44	KPS05012D2	KEY-PLAIN
45	133LR3003A	ROLLER-LAMI,UP
48	133LR3003B	ROLLER-LAMI,LO
49	122LRX4029A	BUSH-ROLLER LAMI, LO
50	12200X038A	DU-BUSHΦ30X10,FLANGE
55	223LR3002B	HEATER ASS'Y 9.6Ω
61	014LR3002A	TABLE-FRONT
69	381LR4027A	WIRE-SENSOR

Wire,Front Table,and Sensor

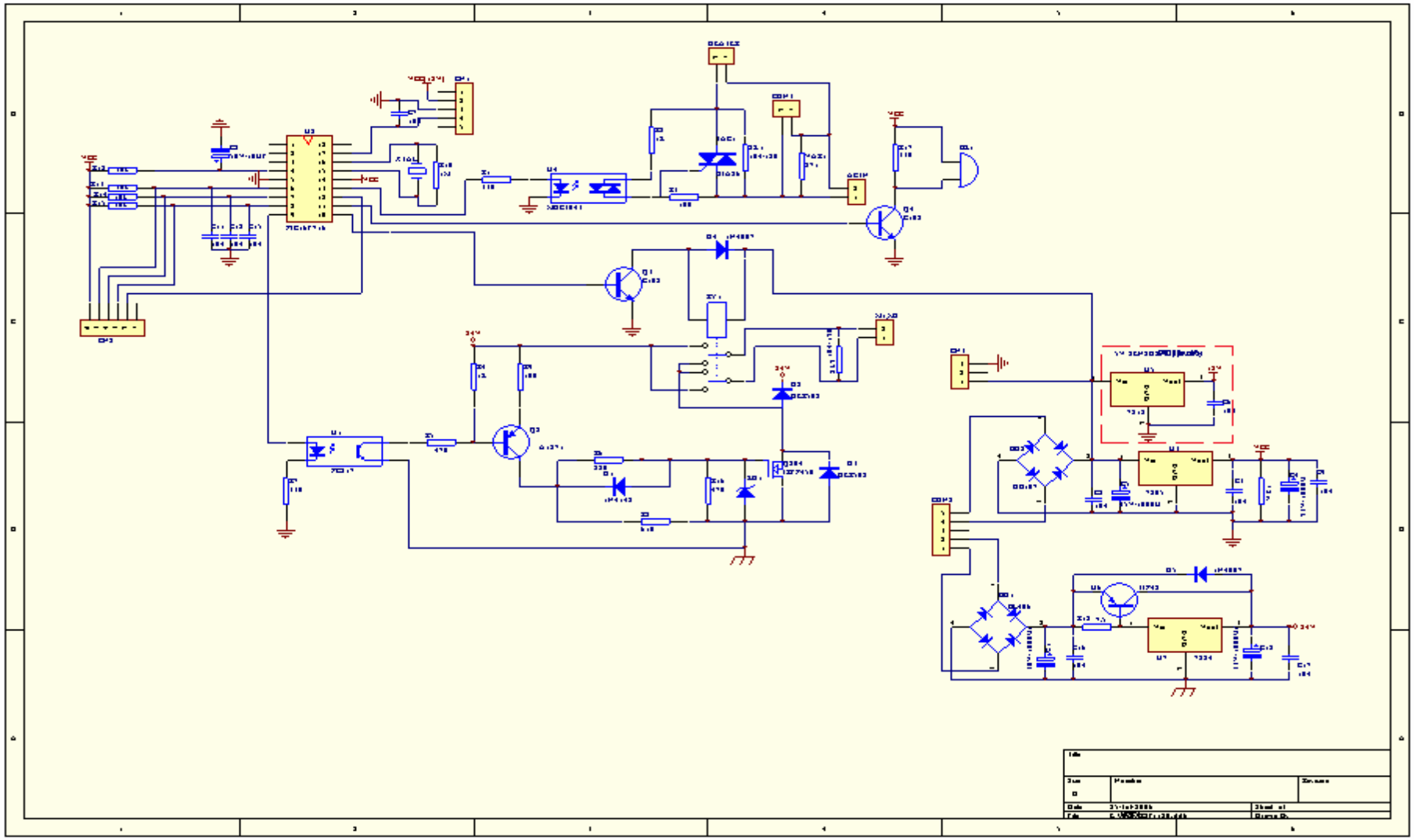




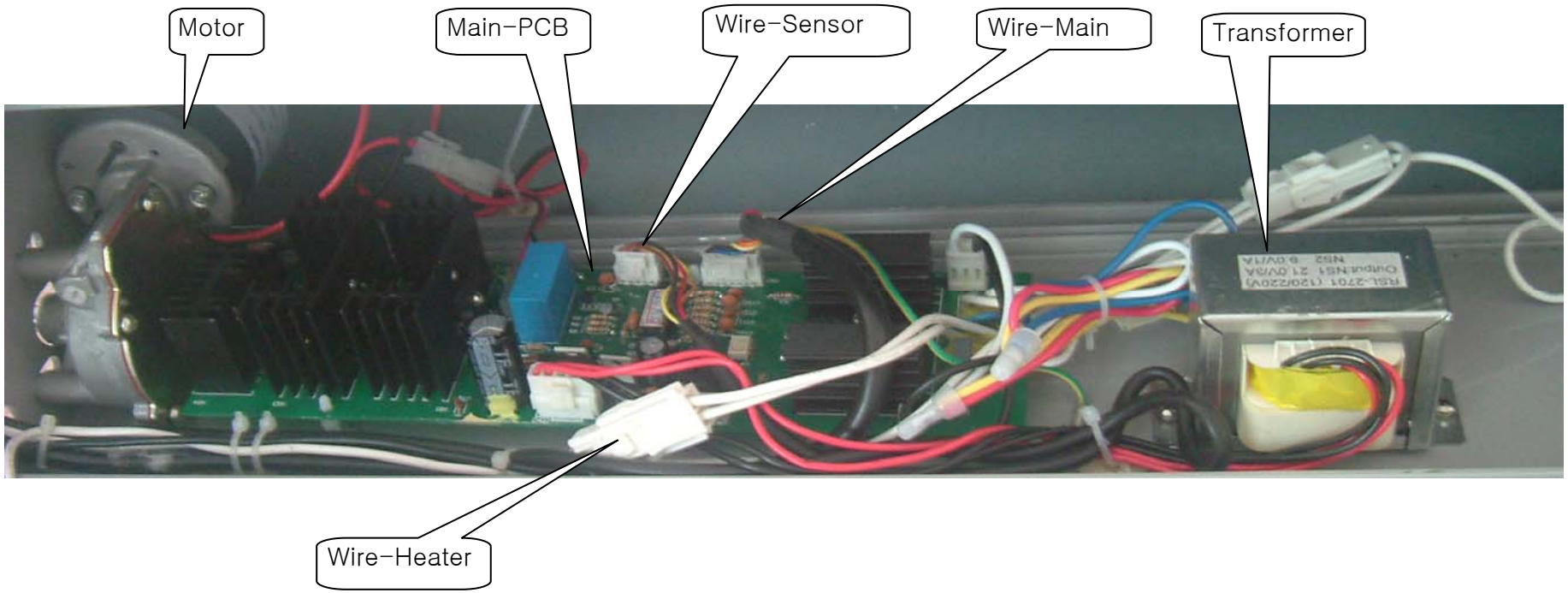


NO.	PART NO.	NAME
9	380CR4008A	POWER-CORD;AC120V 15A 1.8M
25	141LR4064A	BRACKET-TABLE
34	021LR3003A	CASE-SENSOR,UP
35	021LR3004A	CASE-SENSOR,LO
36	313LR3001A	SENSOR-ASS,Y
61	014LR3002A	TABLE-FRONT
62	381LR4074A	WIRE-HEATER; EU,UL1015 AWG#16, WHT
63	381LR4061B	WIRE-AC IN; UL 1015 AWG#16,WHT/BLK
64	381LR4075A	WIRE-BIMETAL; UL 1015 AWG#14,BLK
65	381LR4076A	WIRE-TEMP FUSE; UL 1015 AWG#14,142℃,15A
66	381LR4088A	WIRE-FUSE; UL 1015 AWG#18,BLK
67	381LR4085A	WIRE-MAIN ;UL2464 AWG#24, BLK
68	36000X001A	CROSS&CONNECTOR
69	381LR4027A	WIRE-SENSOR

<ProSEAL 44 Wire Diagram>



<MAIN PCB LAYOUT>



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