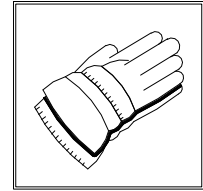
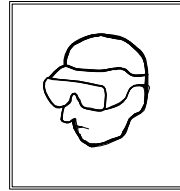


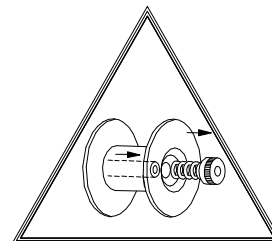
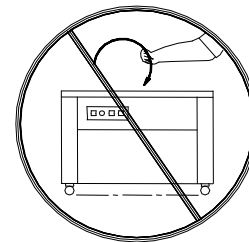
SAFETY INSTRUCTIONS

Read these safety instructions before operating or servicing your strapping machine.

- (1) Read the operating instructions and all of the signs on the machine carefully.
- (2) Wear eye or face, and hand protection. Do not wear loose clothing.
- (3) Keep hands or other parts of the body out of the strap chute area during operation.
- (4) The temperature of the heater plate is high up to 320 °C. Do not touch!
- (5) Do not insert strap in the guide while there is not a package on the operation table.
- (6) Do not replace any safety parts of different specifications.
- (7) Watch the springing force of spring when opening reels.
- (8) Shut off all electric power after machine operation or during machine servicing.
- (9) Do not use water or steam to clean the machine.
- (10) Keep this operation manual near your strapping machine. Refer to it often.



DO NOT TOUCH HEATER PLATE



WATCH THE SPRING WHEN OPENING



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Major components	2
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SP-1,TP-90,TP96

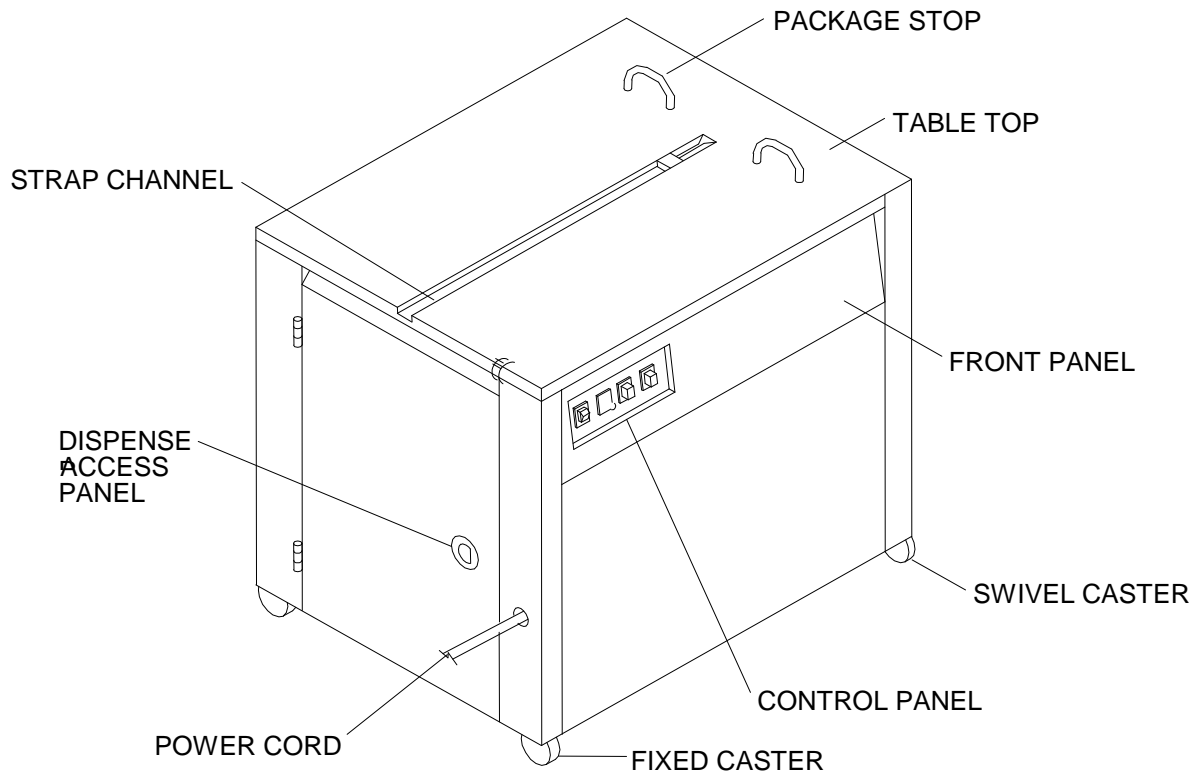


FIGURE 1. MAJOR COMPONENTS, EXTERIOR

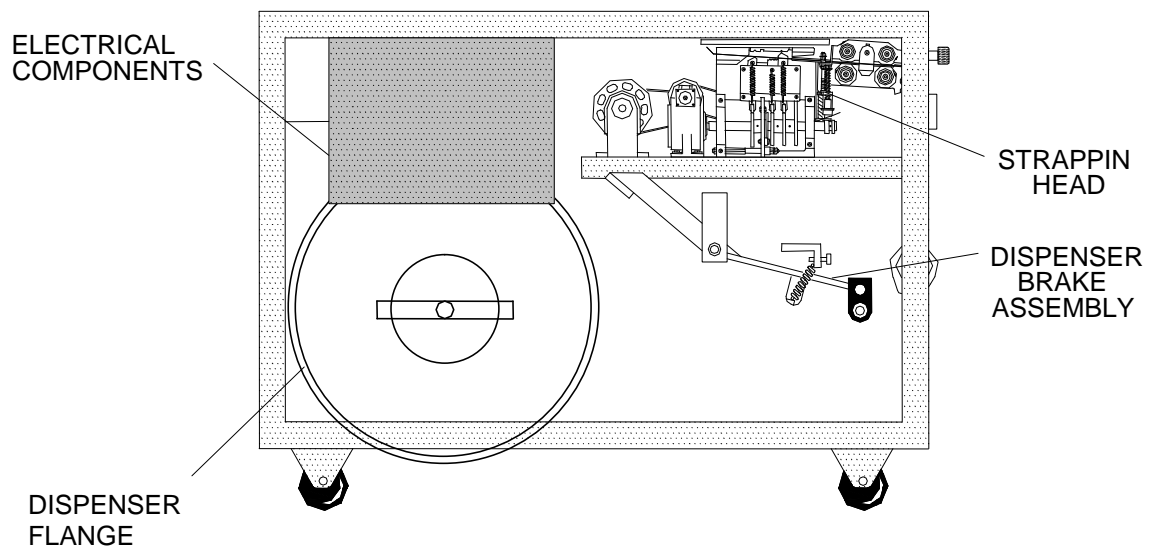


FIGURE 2. MAJOR COMPONENTS, FRONT VIEW

SP-4 , TP91 , TP98

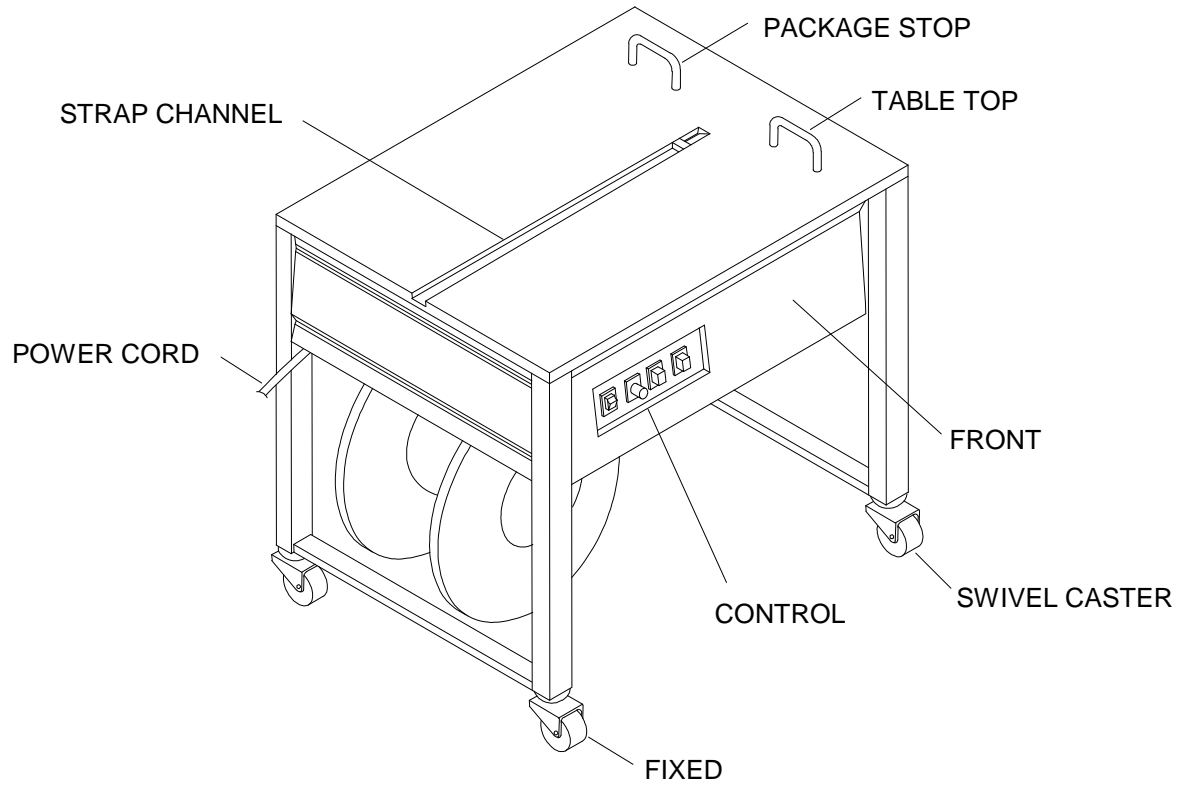


FIGURE 3 .MAJOR COMPONENTS,EXTERIOR

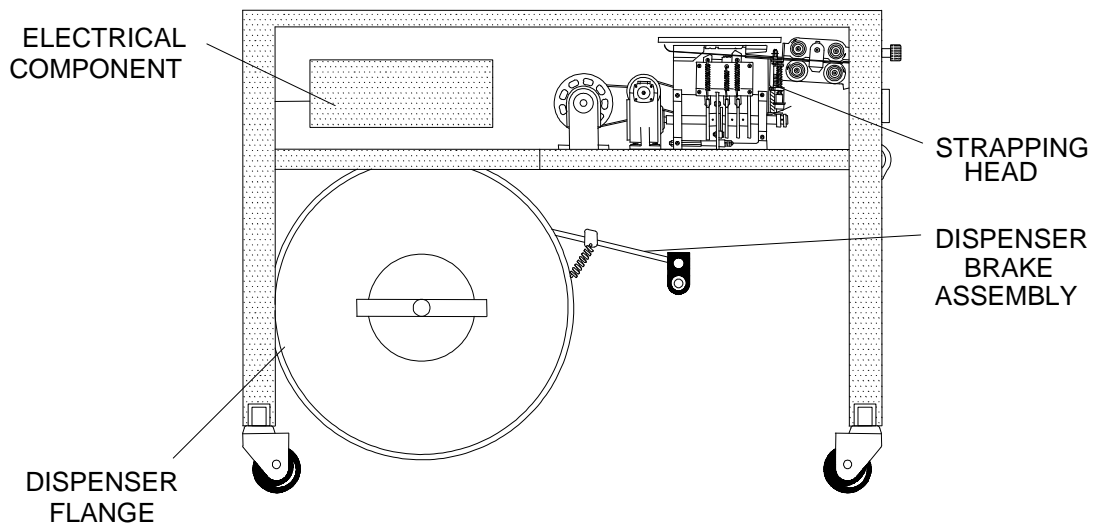


FIGURE 4 .MAJOR COMPONENTS,FRONT VIEW

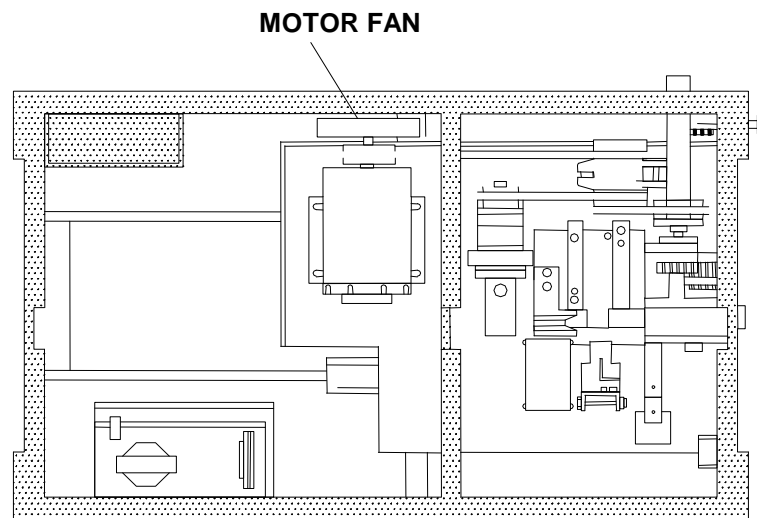


FIGURE 5 .MAJOR COMPONENTS,TOP VIEW

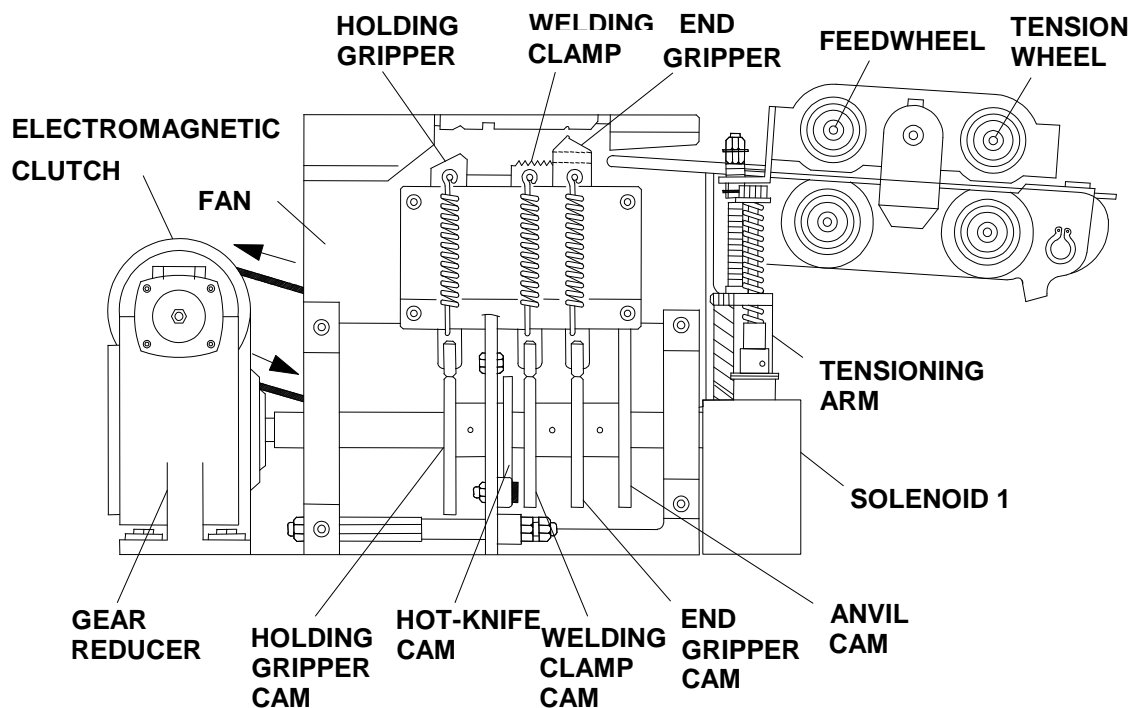


FIGURE 6 MAJOR COMPONENTS,STRAPPING HEAD

INSTALLATION

Installation of the SP-1 requires that the machine be uncrated, placed in its proper position and secured in place with the caster locks. Operation may begin once strap of the proper size is loaded and the power cord is plugged into the appropriate electrical outlet.

One set of tools and spare parts is packed with each machine for use in making adjustments and for replacement of parts as needed. Please compare your supplied tools with the following list:

Tools list

Phillips screwdriver

1 1/2" brush

8mm/10mm open end wrench

5mm Allen wrench

4mm Allen wrench

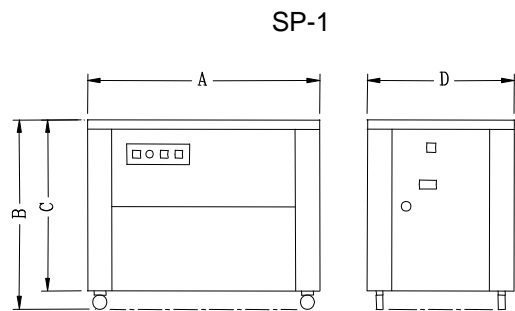
3mm Allen wrench

2.5mm Allen wrench

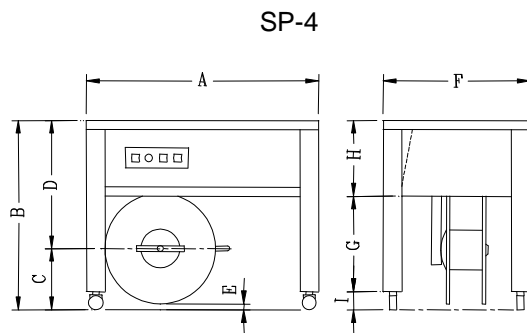
Lubricating oil

STRAP GUIDE (OPTIONAL)

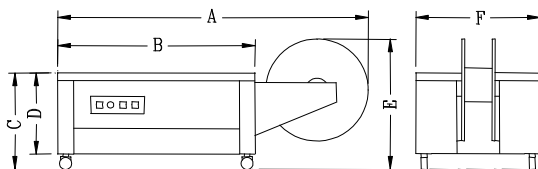
1	660076	1/4" (6mm) strap guide, entry
1	660080	1/4" (6mm) strap guide, exit
1	660077	3/8" (10mm) strap guide, entry
1	660081	3/8" (10mm) strap guide, exit
1	660078	1/2" (13mm) strap guide, entry
1	660082	1/2" (13mm) strap guide, exit
1	660079	5/8" (15.5mm) strap guide, entry
1	660083	5/8" (15.5mm) strap guide, exit



A---895mm C---655mm
B---735mm D---565mm

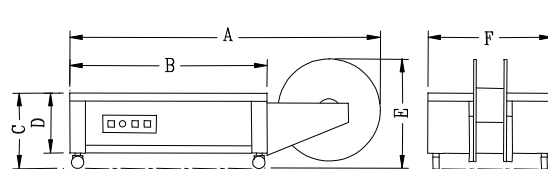


A---895mm D---465mm G---395mm
B---735mm E---20mm H---230mm
C---270mm F---565mm I---110mm



A---1510mm C---470mm E---655mm
B---895mm D---380mm F---565mm

SP-1L



A---1510mm C---330mm E---515mm
B---895mm D---220mm F---565mm

SP-1SL

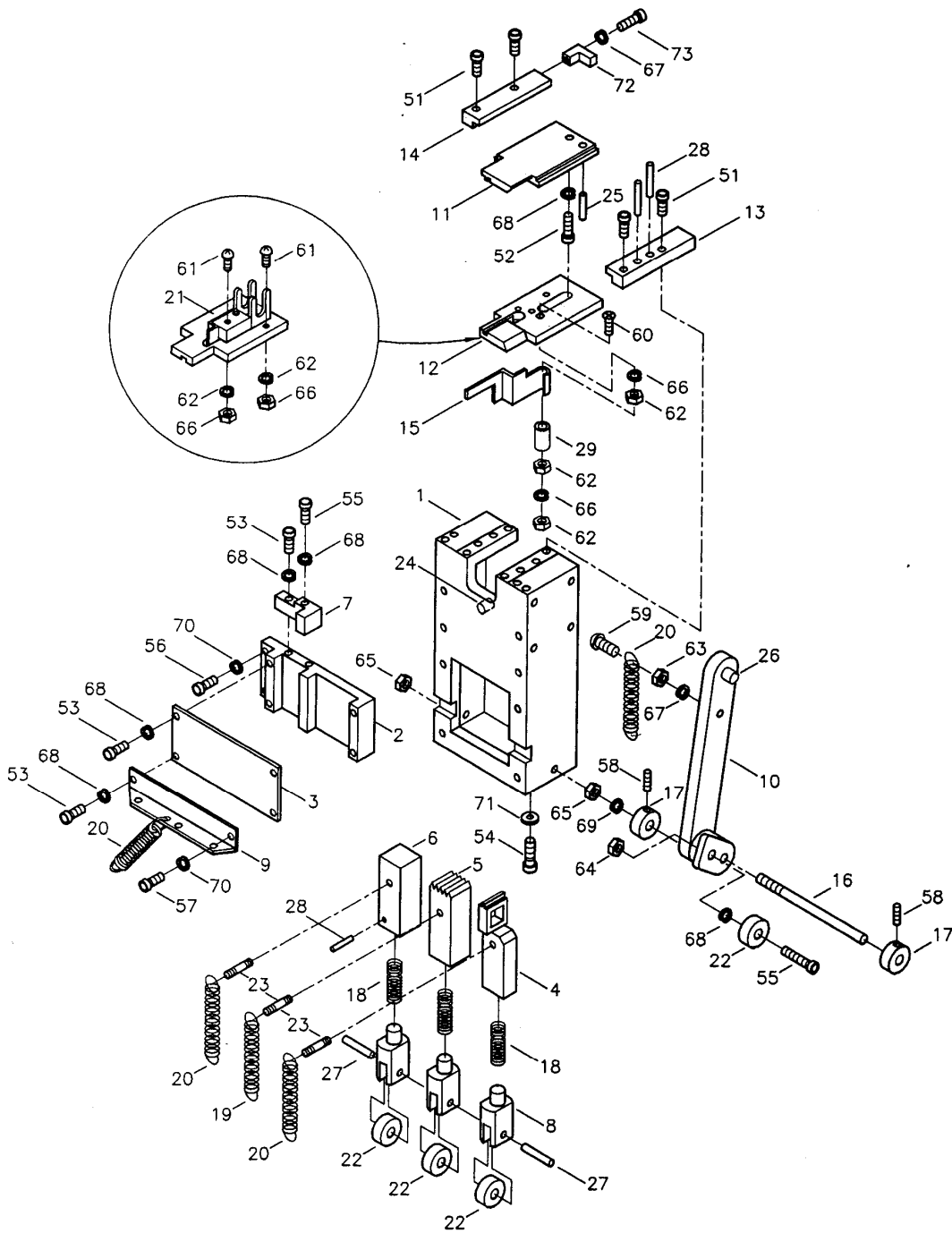
INSTALLATION DIMENSIONS AND CLEARANCES

PARTS LIST, FIGURE 1



KEY	QTY	PART NO	DESCRIPTION	KEY	PART NO	DESC
1	1	660124	Main body black	4,8,18,22,23,27,28	5U-WDXF-3538	End gripper assembly
2	1	660125	Guide slot	5,8,18,22,23,27,28	5U-WDXC-3548	Welding clamp assembly
3	1	660126	Guide plate	6,8,18,22,23,27,28	5U-WDXB-3550	Holding gripper assembly
4	1	5-WDXF-3538	End gripper			
5	1	5-WDXC-3548	Welding clamp			
6	1	660122	Holding gripper			
7	1	660123	L-type angle plate			
8	3	660119	Clevis			
9	1	660127	Spring hook plate			
10	1	660130	Separating arm			
11	1	660134	Top cover holder			
12	1	660135	Separating plate			
13	1	660136	Guide plate, left hand side			
14	1	660116	Guide plate, right hand side			
15	1	660115	Limit switch detector lever			
16	1	660117	Separating arm pin, M8 x 140			
17	2	660118	Sleeve, separating arm pin			
18	3	5-SPRX-231039	Compression spring, ϕ 2.3 x 10.2 x 39.7			
19	1	5-SPRX-121019	Tension spring, short, ϕ 1.2 x 10.2 x 19.6			
20	4	5-SPRX-101021	Tension spring, long, ϕ 1.0 x 10.8 x 21			
21	1	2-MSWX-4505	Limit switch, heavy, LS-1 (AH74505)			
22	4	2-BRZZ-6350	Ball bearing, 635ZZ			
23	3	660129	Spring hook			
24	1	660133	Spring hook			
25	1	2-SPNX-0414	Spring pin, 4din. x 14			
26	1	2-SPNX-0520	Spring pin, 5din. x 20			
27	3	2-SPNX-0514	Spring pin, 5din. x 14			
28	5	2-SPNX-0318	Spring pin, 3din. x 18			
29	1	5-CRXC-0408	Brass bushing, ϕ 4 x 5 x 8			
51	4	1-SCSX-0512	Socket head cap screw, M5 x 12			
52	1	1-SCSX-0506	Socket head cap screw, M5 x 6			
53	3	1-SCSX-0516	Socket head cap screw, M5 x 16			
54	4	1-SCSX-0616	Socket head cap screw, M6 x 16			
55	2	1-SCSX-0520	Socket head cap screw, M5 x 20			
56	2	1-SCSX-0625	Socket head cap screw, M6 x 25			
57	2	1-SCSX-0650	Socket head cap screw, M6 x 50			
58	2	1-SETX-0606	Socket head set screw, M6 x 6			
59	1	1-PMSX-0415	Phillips head machine screw, M4 x 15			
60	1	1-FMSX-0320	Flat head machine screw, M3 x 20			
61	3	1-PTSA-0315	Pan head self tap screw, M3 x 15			
62	4	1-HNXX-0003	Hex nut, M3			
63	1	1-HNXX-0004	Hex nut, M4			
64	1	1-HNXX-0005	Hex nut, M5			
65	2	1-HNXX-0008	Hex nut, M8			
66	6	1-SPWX-0003	Lock washer, M3			
67	2	1-SPWX-0004	Lock washer, M4			
68	7	1-SPWX-0005	Lock washer, M5			
69	1	1-SPWX-0008	Lock washer, M8			
70	8	1-SPWX-0006	Lock washer, M6			
71	4	1-PLWX-0616-2	Plain washer, M6 x 16 (2mm)			
72	1	660071	Retainer, top cover holder			
73	1	1-SCSX-0416	Socket head cap screw, M4 x 16			





⚠ WARNING
 All parts must be periodically inspected and replaced if worn or broken. Failure to do this can affect operation and present a safety hazard.

FIGURE 1 WELDING COMPONENTS

PARTS LIST, FIGURE 2



KEY	QTY	PART NO	DESCRIPTION
1	1	660137	Reduction gear
2	1	660138	Clutch
3	1	660139	Pulley
4	2	2-BRZZ-6201	Clutch ball bearing, 6201ZZ
5	1	660140	Motor fan
6	1	660141	Motor pulley
7	1	660165	Motor, AC110V & AC220V, 60HZ, 1 ϕ
		660165A	Motor, AC 220V, 50HZ, 1 ϕ
		660165B	Motor, AC 240V, 50HZ, 1 ϕ
8	1	660142	Bearing bracket
		5-BEBA-3850	Bearing bracket, (with Aluminum)
9	1	660143	Bearing bracket
		5-BEBA-3860	Bearing bracket, (with Aluminum)
10	1	660146	Spacer, ϕ 12 x 8
12	1	5-CMXX-3894	Cam
13	1	660152	Cam
14	2	2-BRZZ-6003	Ball bearing, 6003ZZ
16	2	660148	Microswitch seat
17	2	2-MSWX-5210	Microswitch, heavy, LS-3, LS-5 (V-5210D)
18	3	660149	Microswitch spring plate
19	1	2-MSWX-4505	Microswitch, heavy, LS-4
22	1	660145	Spacer, ϕ 12 x 4
23		660416	Shim, 0.2mm
23A		660416A	Shim, 0.5mm
25	1	5-CMXB-4124	Cam
27	1	5-CMXC-4104	Cam
29	1	660542	Cam shaft
30	2	2-KYXX-5014	Key, 5 x 5 x 14
31	1	2-KYXX-5080	Key, 5 x 5 x 80
32	1	2-KYXX-5015	Key, 5 x 5 x 15
33	1	660543	Shim, 2.0mm
34	2	660544	Shim, 3.0mm
51	7	1-PMSX-0408	Phillips head machine screw, M4 x 8
52	12	1-SPWX-0004	Lock washer, M4
53	2	1-HNXX-0010	Hex nut, M10
54	1	1-SPWX-0010	Lock washer, M10
55	4	1-HNXX-0003	Hex nut, M3
56	4	1-HBXX-0625	Hexagon bolt, M6 x 25
57	12	1-PLWX-0616-2	Plain washer, M6 x 16 (2mm)
58	12	1-SPWX-0006	Lock washer, M6
59	8	1-HNXX-0006	Hex nut, M6
61	4	1-PMSX-0410	Phillips head machine screw, M4 x 10
62	1	1-SETX-0608	Socket head set screw, M6 x 8
63	2	1-SCSX-0512	Socket head cap screw, M5 x 12
64	5	1-SCSX-0620	Socket head cap screw, M6 x 20
65	1	1-SCSX-0645	Socket head cap screw, M6 x 45
66	2	1-PMSX-0330	Phillips head machine screw, M3 x 30
67	2	1-PMSX-0320	Phillips head machine screw, M3 x 20
68	2	1-SPWX-0005	Lock washer, M5
69	8	1-SPWX-0003	Lock washer, M3
70	4	1-PLWX-0616-1	Plain washer, M6 x 16 (1mm)
71	3	2-RNXS-0017	Ring, S-17
72	1	1-PMSX-0406	Phillips head machine screw, M4 x 6
73	2	1-SCSX-0625	Socket head cap screw, M6 x 25



WARNING
 All parts must be periodically inspected and replaced if worn or broken. Failure to do this can affect operation and present a safety hazard.

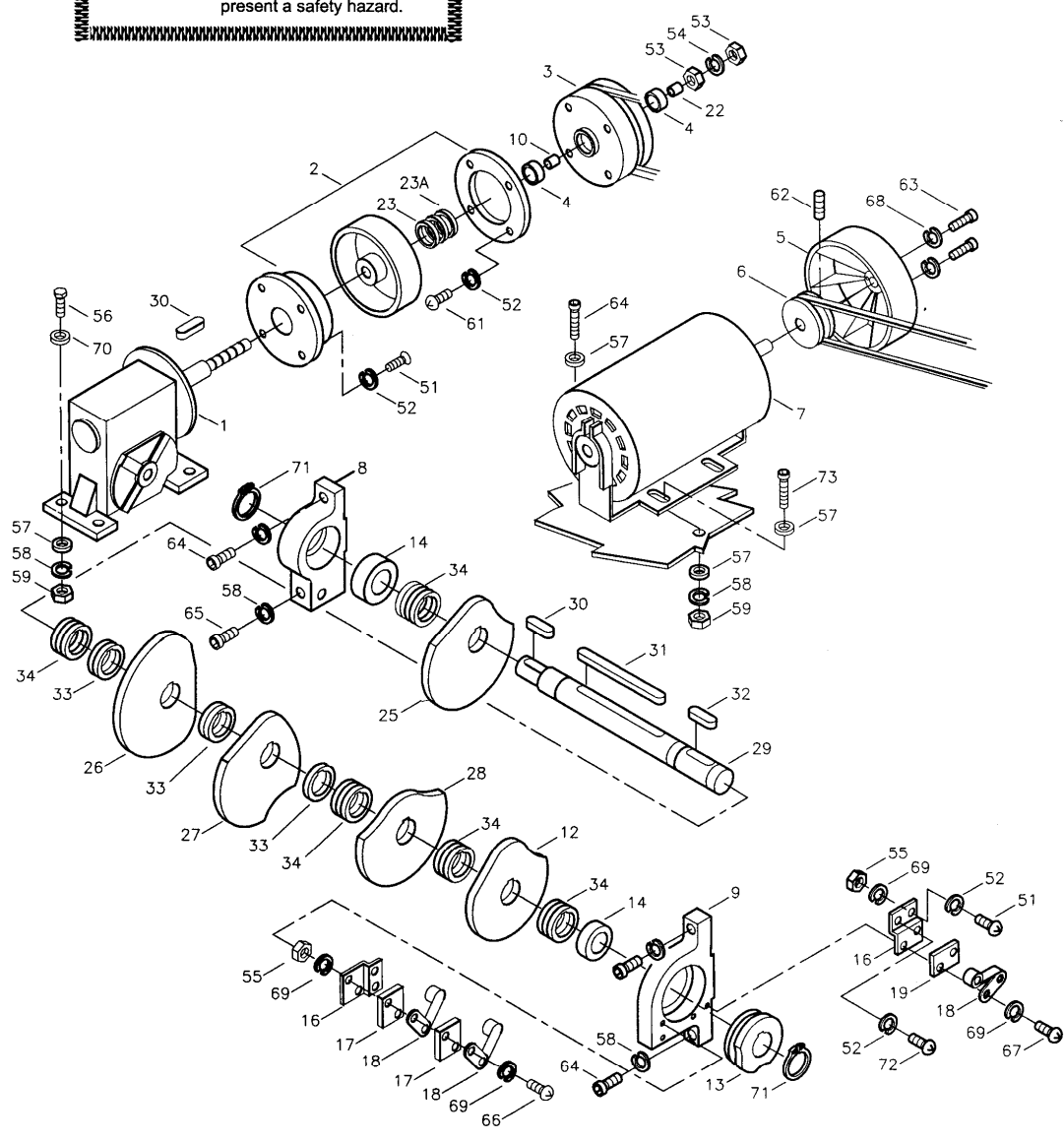
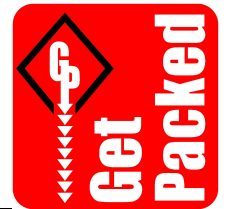


FIGURE 2 DRIVE AND CAM ASSEMBLIES

PARTS LIST, FIGURE 3

KEY	QTY	PART NO	DESCRIPTION
1	1	660012-1	Bearing housing, upper
2	1	660013-1	Bearing housing, lower
3	1	660014-1	Tightness adjustment shaft
4	1	660015-1	Roller shaft
5	1	660018-1	Roller shaft
6	1	660019-1	Pin
7	1	660016-1	Roller shaft
8	1	660017-1	Roller shaft
9	1	660020-1	Nylon gear, 40 teeth
10	2	660001-1	Nylon gear, 20 teeth
11	1	660002-1	Gear
12	1	660003-1	Gear
13	1	660004-1	Steel roller
13-1	1	660004-3	Steel roller, (for PET strap)
14	1	660005-1	Plastic roller
15	8	2-BRZZ-6002	Ball bearing, 6002ZZ
16	7	660006-1	Plastic circllet
17	6	660007-1	Circllet
18	10	660008-1	Circllet
19	1	660022-2	Strap guide
20	1	660021-2	Strap guide
21	2	660004A-1	Steel roller
24	1	660025-1	Strap guide
28	2	2-KYXX-5018	Key, 5 x 5 x 18
29	6	2-KYXX-5015	Key, 5 x 5 x 15
30	1	2-KYXX-5030	Key, 5 x 5 x 30
31	9	2-RNXS-0015	Ring, S-15
32	1	2-RNXS-0010	Ring, S-10
34	1	2-KYXX-5015	Key, 5 x 5 x 15
35	1	660556	Electron tension detector
36	1	660556i	Magnet
51	6	1-TMSN-0410	Truss head machine screw, M4 x 10
53	2	1-FMSX-0408	Flat head machine screw, M4 x 8
55	1	1-SCSX-0512	Socket head cap screw, M5 x 12
56	2	1-SETX-0508	Socket head set screw, M5 x 8
58	4	1-SPWX-0006	Lock washer, M6
60	4	1-SCSX-0620	Socket head cap screw, M6 x 20
64	1	1-SPWX-0005	Lock washer, M5
66	1	1-PLWX-0621	Plain washer, M6 x 21
67	1	1-SETX-0608	Socket head set screw, M6 x 8
70	3	1-TMSN-0412	Truss head machine screw, M4 x 12
71	9	1-TLWE-0004	Tooth lock washer external, M4



⚠ WARNING

All parts must be periodically inspected and replaced if worn or broken. Failure to do this can affect operation and present a safety hazard.

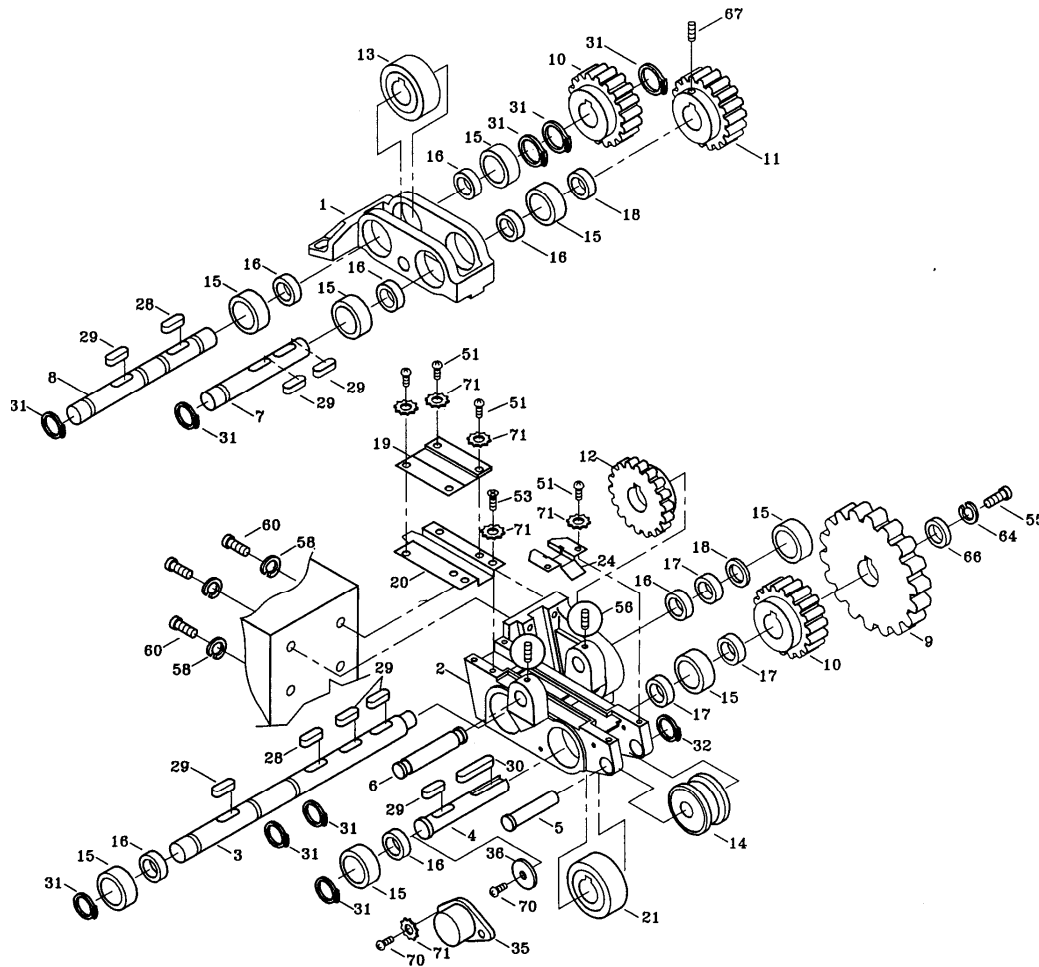


FIGURE 3 STRAP FEED/TENSION ASSEMBLY

PARTS LIST, FIGURE 3-1 (Adjustable guide)



KEY	QTY	PART NO	DESCRIPTION
1	1	660012-1	Bearing housing, upper
2	1	660013-1	Bearing housing, lower
3	1	660014-1	Tightness adjustment shaft
4	1	660015-1	Roller shaft
5	1	660018-1	Roller shaft
6	1	660019-1	Pin
7	1	660016-1	Roller shaft
8	1	660017-1	Roller shaft
9	1	660020-1	Nylon gear, 40 teeth
10	2	660001-1	Nylon gear, 20 teeth
11	1	660002-1	Gear
12	1	660003-1	Gear
13	1	660004-1	Steel roller
13-1	1	660004-3	Steel roller, (for PET strap)
14	1	660005-1	Plastic roller
15	8	2-BRZZ-6002	Ball bearing, 6002ZZ
16	7	660006-1	Plastic circllet
17	6	660007-1	Circllet
18	10	660008-1	Circllet
19	1	660022-1	Strap guide
20	1	660021-1	Strap guide
21	2	660004A-1	Steel roller
22	1	660054-1	Strap guide
24	1	660025-1	Strap guide
28	2	2-KYXX-5012	Key, 5 x 5 x 12
29	7	2-KYXX-5015	Key, 5 x 5 x 15
30	1	2-KYXX-5030	Key, 5 x 5 x 30
31	9	2-RNXS-0015	Ring, S-15
32	1	2-RNXS-0010	Ring, S-10
34	1	2-KYXX-5015	Key, 5 x 5 x 15
35	1	660556	Electron tension detector
36	1	660556i	Magnet
51	6	1-TMSN-0410	Truss head machine screw, M4 x 10
53	2	1-FMSX-0408	Flat head machine screw, M4 x 8
55	1	1-SCSX-0512	Socket head cap screw, M5 x 12
56	2	1-SETX-0508	Socket head set screw, M5 x 8
58	4	1-SPWX-0006	Lock washer, M6
60	4	1-SCSX-0620	Socket head cap screw, M6 x 20
64	1	1-SPWX-0005	Lock washer, M5
66	1	1-PLWX-0621	Plain washer, M6 x 21
67	1	1-SETX-0608	Socket head set screw, M6 x 8
70	3	1-TMSN-0412	Truss head machine screw, M4 x 12
71	9	1-TLWE-0004	Tooth lock washer external, M4



WARNING

All parts must be periodically inspected and replaced if worn or broken. Failure to do this can affect operation and present a safety hazard.

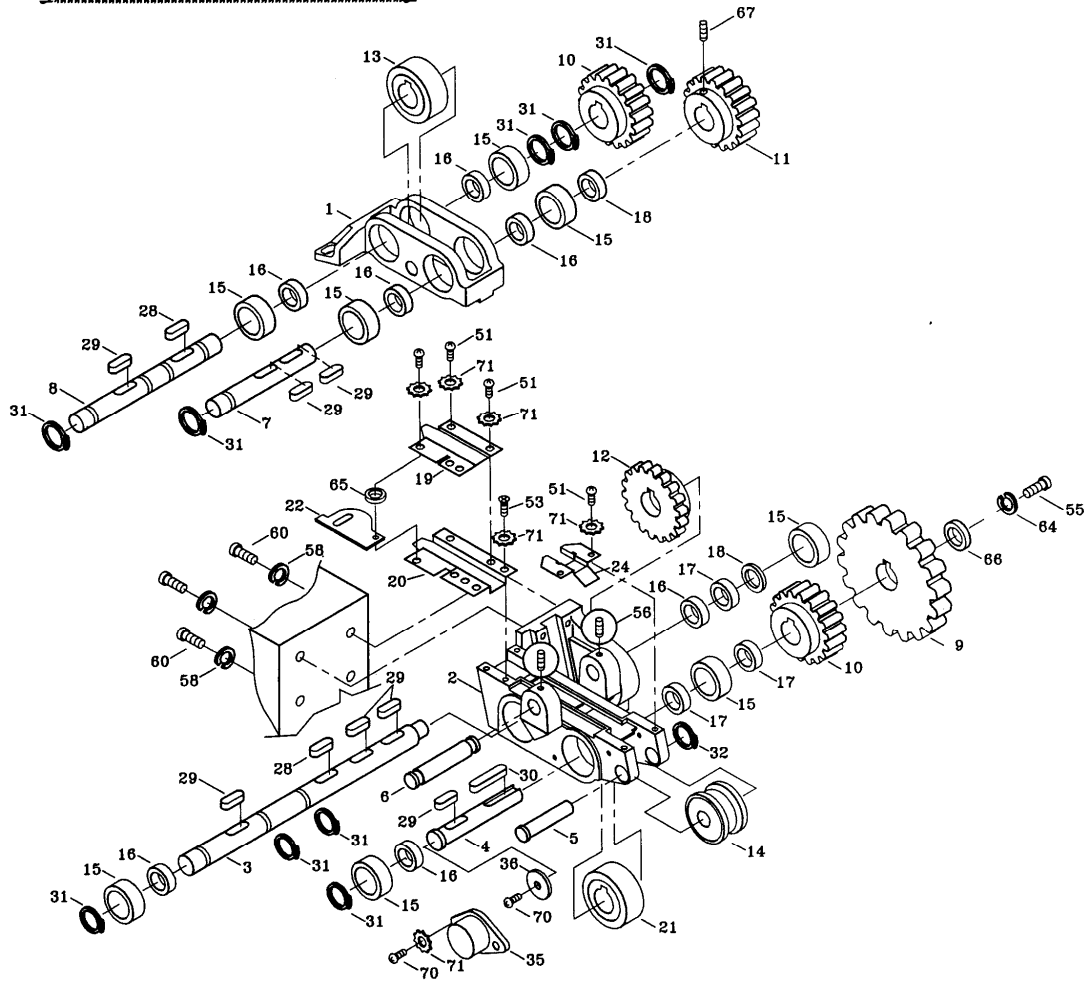
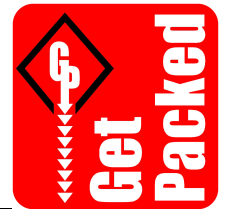


FIGURE 3-1 STRAP FEED/TENSION ASSEMBLY

PARTS LIST, FIGURE 4 (Tension outside)



KEY	QTY	PART NO	DESCRIPTION
1	1	660036	Tightening pulley
2	1	660035	Tightening pulley
3	1	660034	Tightening pulley
4	2	660033	Clutch disc
5	2	660032	Spring guide
6	1	5-SPRX-453846	Adjustable spring, ϕ 4.5 x 38.5 x 46.5
		5-SPRX-453859	Compression spring, ϕ 4.5 x 38.5 x 59
7	1	660030	Tightness Adjustment nut
19	2	2-BLKX-0019	Belt, K-19
20	1	2-BLMX-0030	Belt, M-30
21	1	660046	Transmission seat
22	1	660047	Transmission bracket
23	1	660048	Pulley
24	1	660049	Pulley
25	1	660050	Transmission bracket shaft
26	1	660051	Transmission bracket pin
27	4	2-BRZZ-6002	Ball bearing, 6002ZZ
28	2	2-KYXX-5020	Key, 5 x 5 x 20
29	2	660029	Tightness adjustment sleeve
30	1	660028	Tightness adjustment cover
33	1	660027	Tightness adjustment screw
34	1	2-BRZZ-6000	Ball bearing, 6000ZZ
35	2	2-RNXS-0015	Ring, S-15
36	1	5-CRXX-1616	Collar, 16 x 26 x 16
37	1	5-TABC-0505	Copper, ϕ 5 x 5
52	3	1-SCSX-0616	Socket head cap screw, M6 x 16
53	1	1-HBXX-0670	Hexagon bolt, M6 x 70
54	4	1-SETX-0608	Socket head set screw, M6 x 8
55	1	1-SETX-0606	Socket head set screw, M6 x 6
56	2	1-HNXX-0006	Hex nut, M6
61	4	1-SPWX-0006	Lock washer, M6
62	5	1-PLWX-0616-2	Plain washer, M6 x 16 (2mm)
64	1	1-SPWX-0005	Lock washer, M5
65	1	1-HNXX-0005	Hex nut, M5
67	1	660306	Terminal sleeve, 8
68	1	2-RNXR-0032	Ring, R-32



WARNING
 All parts must be periodically inspected and replaced if worn or broken. Failure to do this can affect operation and present a safety hazard.

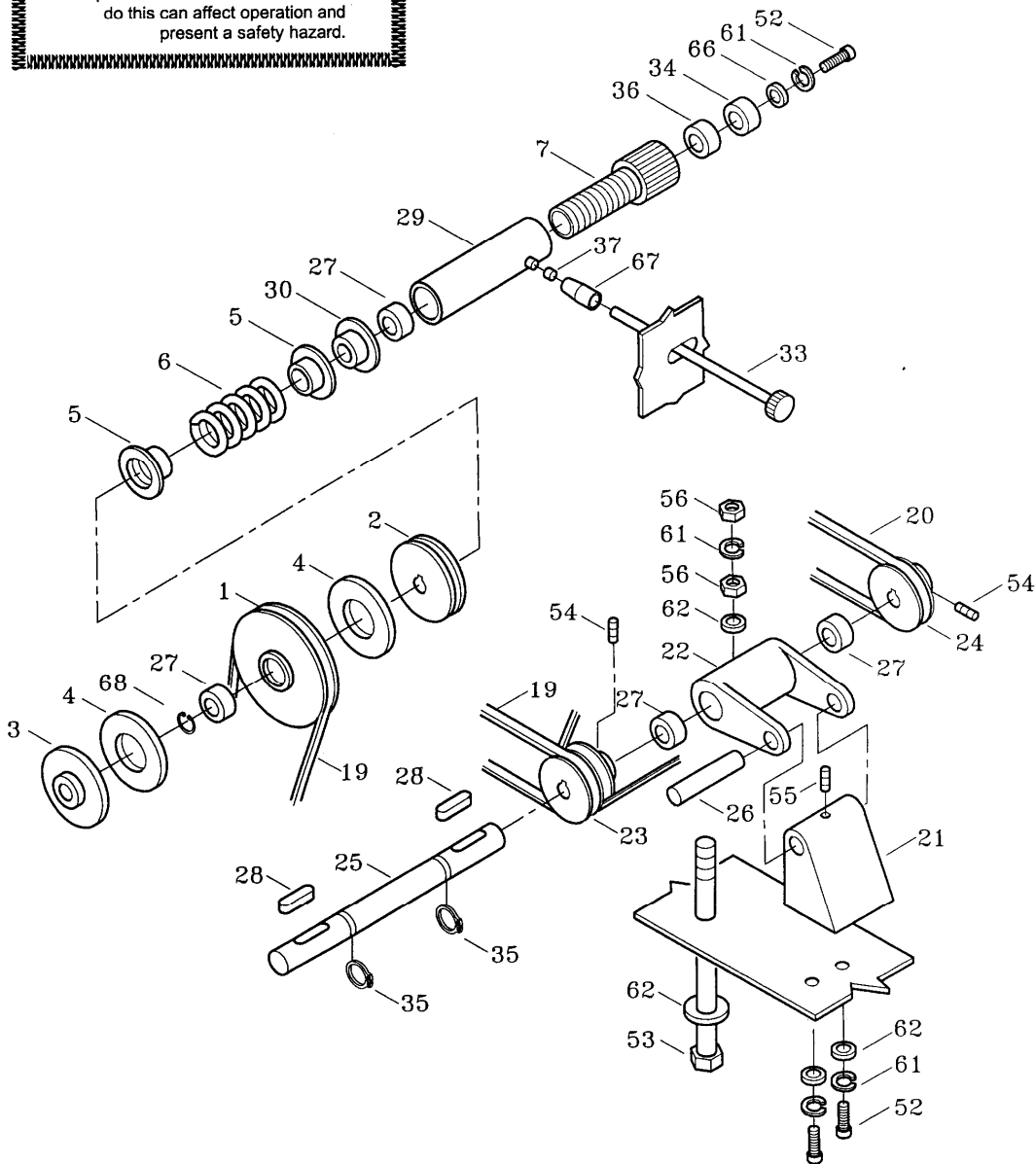


FIGURE 4 TENSION ADJUSTMENT AND SENSING ASSEMBLIES

PARTS LIST, FIGURE 4-1(TENSION INSIDE)

KEY	QTY	PART NO	DESCRIPTION
1	1	660036	Tightening pulley
2	1	660035	Tightening pulley
3	1	660034	Tightening pulley
4	2	660033	Clutch disc
5	1	660709	Magnet clutch
6	1	660702	Bracket
7	3	660008	Shim, 0.4mm
8	2	660704	Spring shim
9	2	660007	Shim, 1.4mm
10	1	5-SPRX-403846	Spring, ϕ 4.0 x 38.5 x 46.5
11	1	660708	Adjustment nut
12	1	2-RNXR-0032	Ring, R-32
13	1	2-BRZZ-6002	Ball bearing, 6002ZZ
14	1	660706	Attractive plate
15	1	660036A	Pulley (for ETA)
16	1	2-BLXX-0019	Belt, K-19
17	1	660028	Pulley
18	2	660032	Spring guide
19	1	2-BLXX-0019	Belt, K-19
20	1	2-BLMX-0030	Belt, M-30
21	1	660046	Transmission seat
22	1	660047	Transmission bracket
23	1	660048	Pulley
24	1	660049	Pulley
25	1	660050	Transmission bracket shaft
26	1	660051	Transmission bracket pin
27	3	2-BRZZ-6002	Ball bearing, 6002ZZ
28	2	2-KYXX-5020	Key, 5 x 5 x 20
35	2	2-RNXS-0015	Ring, S-15
53	1	1-HBXX-0670	Hexagon bolt, M6 x 70
54	4	1-SETX-0608	Socket head set screw, M6 x 8
55	1	1-SETX-0606	Socket head set screw, M6 x 6
56	2	1-HNXX-0006	Hex nut, M6
61	3	1-SPWX-0006	Lock washer, M6
62	4	1-PLWX-0616-2	Plain washer, M6 x16 (2mm)
64	1	1-SPWX-0005	Lock washer, M5
65	1	1-HNXX-0005	Hex nut, M5
68	1	2-RNXR-0032	Ring, R-32



WARNING

All parts must be periodically inspected and replaced if worn or broken. Failure to do this can affect operation and present a safety hazard.

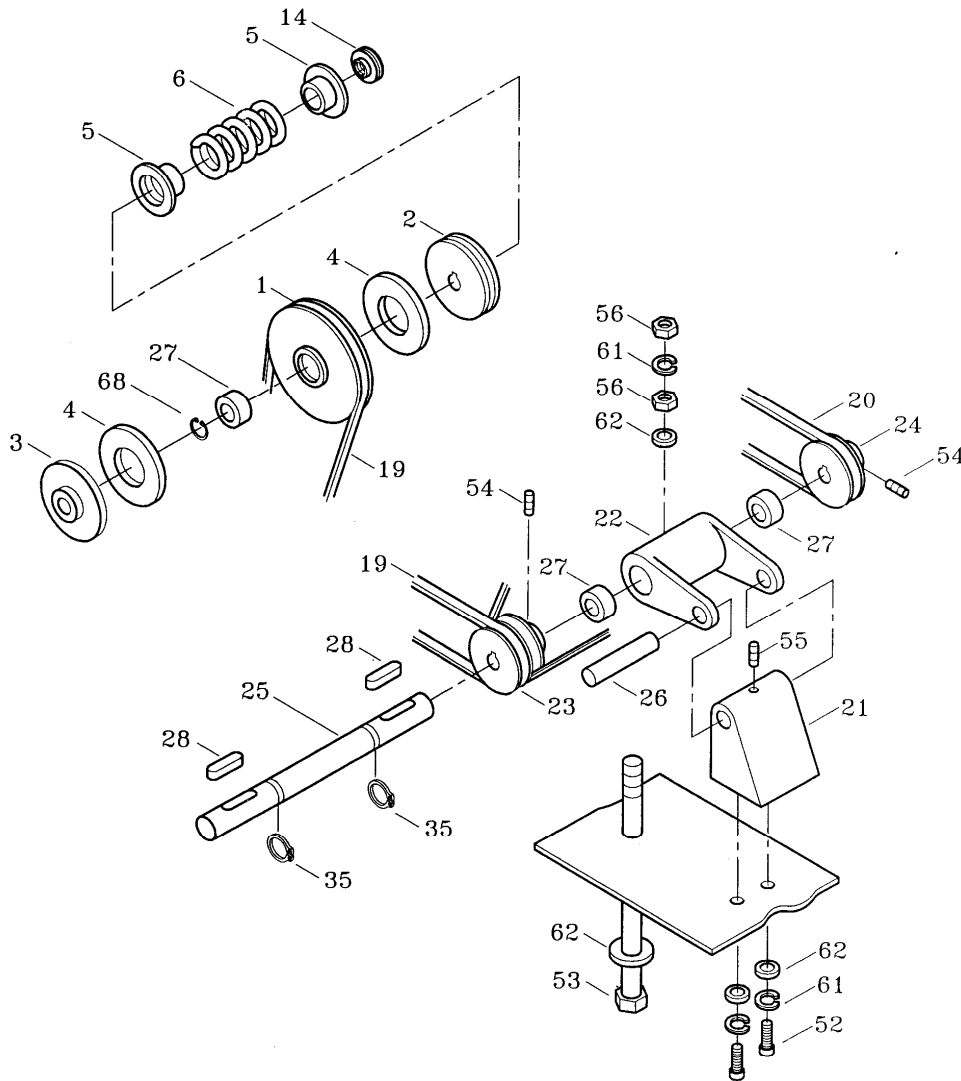


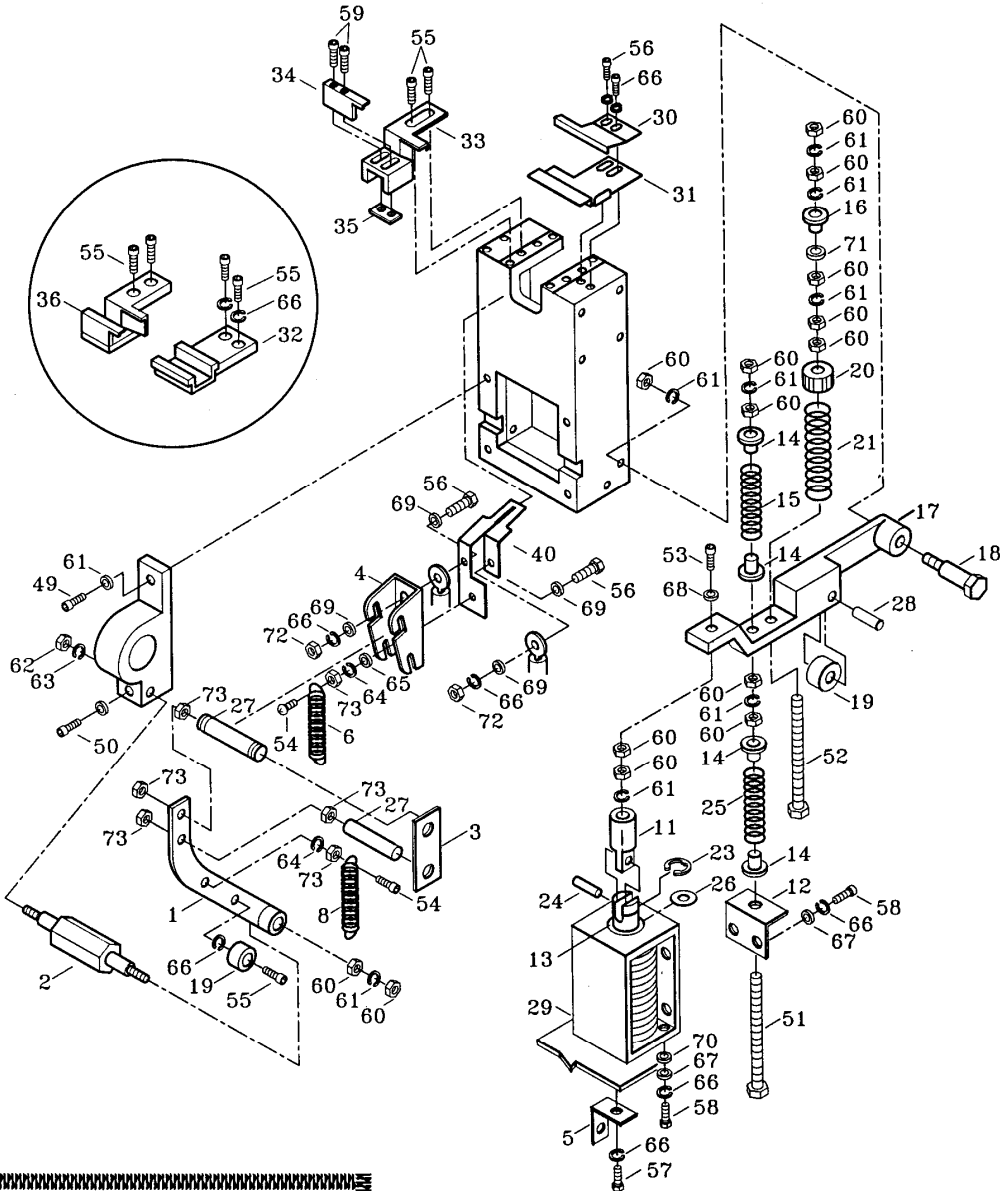
FIGURE 4-1 TENSION ADJUSTMENT AND SENSING ASSEMBLIES

PARTS LIST, FIGURE 5



KEY	QTY	PART NO	DESCRIPTION
1	1	660075	Heater arm
2	1	660073	Heater arm screw
3	1	660074	Heater arm side plate
4	1	660072	Heater blade holder
6	1	5-SPRH-040406	Heater spring, $\phi 0.4 \times 4.8 \times 6.7$
8	1	5-SPRX-101021	Tension spring, long, $\phi 1.0 \times 10.8 \times 21$
11	1	660062	Solenoid shaft head
12	1	660067	Bracket
13	1	660066	Solenoid shaft
14	4	660065	Spring cover
15	1	5-SPRX-101244	Compression spring, $\phi 1.0 \times 12 \times 44$
16	1	660065-1	Spring cover
17	1	660059	Tension lever
18	1	660058	Feed back arm screw
19	2	2-BRZZ-6350	Ball bearing, 635ZZ
20	1	660057	Adjustable nut
21	1	5-SPRX-402437	Compression spring, $\phi 4.0 \times 24.3 \times 37.3$
23	1	2-RNXE-0012	Ring, E-12
24	1	2-SPNX-0414	Spring pin, 4dia. x14
25	1	5-SPRX-101256	Compression spring, $\phi 1.0 \times 12 \times 56$
26	1	660061	Rubber washer
27	2	2-SPNX-0440	Spring pin, 4dia. x 40
28	1	2-SPNX-0520	Spring pin, 5dia. x 20
29	1	660053	Solenoid, AC 110V
		660053A	Solenoid, AC 220V
		660053B	Solenoid, AC 230V~240V
30		660085	Guide, stainless steel
31		660086	Guide, stainless steel
33	1	7-BGEP-0526	Strap guide, exit
34	1	7-BGEP-0527	Strap guide adjuster, exit
35	1	7-BGEN-0528	Guide nut, M4
40	1	660084	Instant heating heater plate
40A		5U-HTXX-3070	Heater plate assembly, (for KEY 4, 6, 40, 54, 56, 66, 69, 72, 73)
49	1	1-SCSX-0620	Socket head cap screw, M6 x 20
50	1	1-SCSX-0645	Socket head cap screw, M6 x 45
51	1	1-HBXX-0690	Hexagon bolt, M6 x 90
52	1	1-HBXX-06100	Hexagon bolt, M6 x 100
53	1	1-SCSX-0625	Socket head cap screw, M6 x 25
54	2	1-PMSX-0415	Phillips head machine screw, M4 x 15
55	2	1-SCSX-0512	Socket head cap screw, M5 x 12
56	2	1-HBXS-0510	Hexagon bolt, M5 x 10
58	6	1-HBXX-0512	Hexagon bolt, M5 x 12
59	2	1-SCSX-0425	Socket head cap screw, M5 x 25
60	14	1-HNXX-0006	Hex nut, M6
61	11	1-SPWX-0006	Lock washer, M6
62	1	1-HNXX-0008	Hex nut, M8
63	1	1-SPWX-0008	Lock washer, M8
64	2	1-SPWX-0004	Lock washer, M4
65	1	1-PLWX-0410	Plain washer, M4 x 10
66	6	1-SPWX-0005	Lock washer, M5
67	4	1-PLWX-0512	Plain washer, M5 x 12
68	3	1-PLWX-0613	Plain washer, M6 x 13
69	4	1-PLWC-0512	Plain washer, M5 x 12 (copper)
70	4	1-PLWX-0616-2	Plain washer, M6 x 16 (2mm)
71	1	1-PLWX-0621	Plain washer, M6 x 21
72	2	1-HNXU-0005	Lock Hex nut, M5
73	6	1-HNXX-0004	Hex nut, M4





⚠ WARNING
 All parts must be periodically inspected and replaced if worn or broken. Failure to do this can affect operation and present a safety hazard.

FIGURE 5 HOT-KNIFE AND TENSIONLEVER ASSEMBLIES

PARTS LIST, FIGURE 6 (SP-4)



KEY	QTY	PART NO	DESCRIPTION
1	1	5-CSXX-0910	Body
2	1	660601L	Metal sheet (right cover)
3	4	5-CSLX-9172	Inner leg
4	1	660094	Sustaining plate
5	1	5-CSTX-9150	Stainless steel top cover (with spring hinge)
6	2	660092	Package stop
7	1	660091	Plastic roller bracket
8	1	5-CSCX-9110	Front cover
10	1	660088	Guide plate
11	2	660620	Wheel swivel, 5/8"
12	2	5-CSAX-6220	Plastic bracket
13	2	5-CSAX-6230	Plastic bracket
14	2	660628	Wheel swivel, 5/8" (With lock)
15	1	5-CSPX-9115	Cover
18	1	2-SPNX-0504	Spring pin, 5dia. x 4
28	2	660637	Screw
30	2	5-SPRX-2013148	Spring, ϕ 2.0 x 13.7 x 148
32	4	2-RNXS-0012	Ring, S-12
33	2	660638	Screw
51	5	1-SCSX-0620	Socket head cap screw, M6 x 20
52	3	1-SCSX-0625	Socket head cap screw, M6 x 25
53	2	1-SCSX-0612	Socket head cap screw, M6 x 12
54	2	1-FMSX-0620	Flat head machine screw, M6 x 20
55	8	1-SCSX-0820	Socket head cap screw, M8 x 20
56	2	1-PMSX-0410	Phillips head machine screw, M4 x 10
57	2	1-SCSX-06160	Screw, M6 x 160
58	2	1-TMSN-0410	Truss head machine screw, M4 x 10
59	2	1-THBX-0612	Screw, M6 x 12
65	15	1-PLWX-0616-2	Plain washer, M6 x 16 (2mm)
66	2	1-PLWX-0410	Plain washer, M4 x 10
67	8	1-PLWX-0818-2	Plain washer, M8 x 18 (2mm)
71	18	1-SPWX-0006	Lock washer, M6
72	2	1-SPWX-0004	Lock washer, M4
73	8	1-SPWX-0008	Lock washer, M8
74	4	1-SPWX-0016	Lock washer, M16
75	2	1-HNXX-0004	Hex nut, M4
76	9	1-HNXX-0006	Hex nut, M6
77	14	1-HNXX-0008	Hex nut, M8
78	2	1-HNXN-0006	Hex nut, M6



WARNING
 All parts must be periodically inspected and replaced if worn or broken. Failure to do this can affect operation and present a safety hazard.

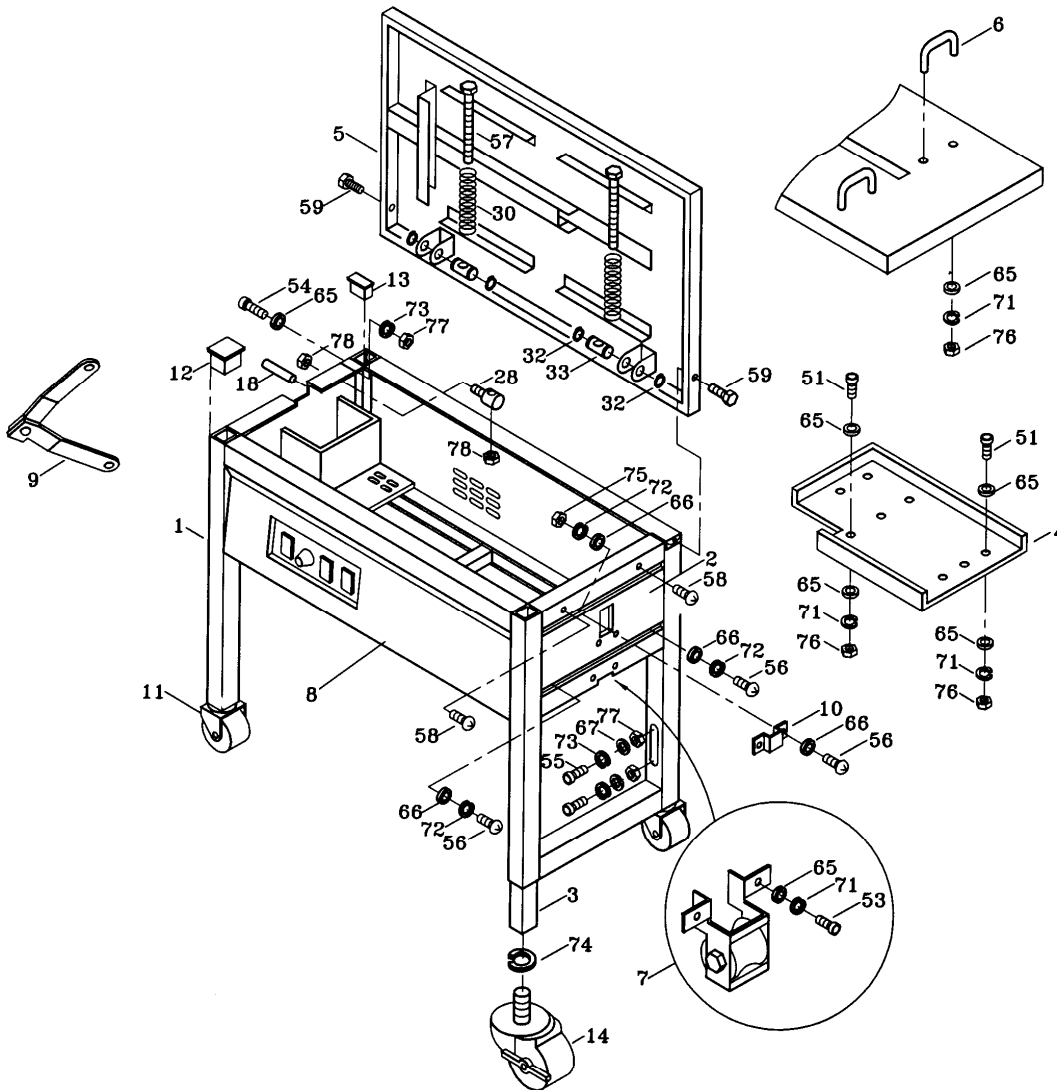


FIGURE 7 CABINET COMPONENTS (SP-4,TP-91,TP-98)

PARTS LIST, FIGURE 10 DISPENSER & BRAKE ASSEMBLY



KEY	QTY	PART NO	DESCRIPTION
5	1	660607	Reel nut handle
6	1	660201	Right flange
7	1	660502	Reel center drum
8	1	660501	Left flange
9	1	660606	Reel brake pullet
10	1	660612	Brake belt tightener
11	1	660614	Belt holder plate
12	1	660613	Brake tightener section
13	1	660619	Brake-V belt
14	1	660617A	Brake plate
15	1	660611	Shaft
16	1	660605	Reel shaft
17	2	2-BRZZ-6003	Ball bearing, 6003ZZ
18	1	1-PLWP-0632	Plain washer, M6 x 32
19	1	660608	Pin
20	1	3-SPRX-121548	Brake spring, ϕ 1.2 x 15 x 48
21	1	660610	Free slide roller bracket
22	1	660609	Reel brake arm
		5-BKAX-9200	Reel brake arm (for mini body)
23	1	660108	Roller frame
24	1	2-RNXS-0010	Ring, S-10
25	2	2-RNXS-0020	Ring, S-20
26	1	2-RNXS-0015	Ring, S-15
27	1	660603	Reel
		5-REBX-8070	Reel (for mini body)
28	1	660109	Plastic roller
29	1	660110	Pin
30	2	2-RNXE-0005	Ring, E-5
51	4	1-SCSX-0420	Socket head cap screw, M4 x 20
52	7	1-SCSX-0616	Socket head cap screw, M6 x 16
53	4	1-SCSX-0820	Socket head cap screw, M8 x 20
55	1	1-SCSX-0410	Socket head cap screw, M4 x 10
60	5	1-PLWX-0410	Plain washer, M4 x 10
61	2	1-PLWX-0616-2	Plain washer, M6 x 16 (2mm)
62	4	1-PLWX-0818-2	Plain washer, M8 x 18 (2mm)
64	5	1-SPWX-0004	Lock washer, M4
65	7	1-SPWX-0006	Lock washer, M6
66	5	1-SPWX-0008	Lock washer, M8
70	5	1-HNXX-0004	Hex nut, M4
71	2	1-HNXX-0006	Hex nut, M6



WARNING

All parts must be periodically inspected and replaced if worn or broken. Failure to do this can affect operation and present a safety hazard.

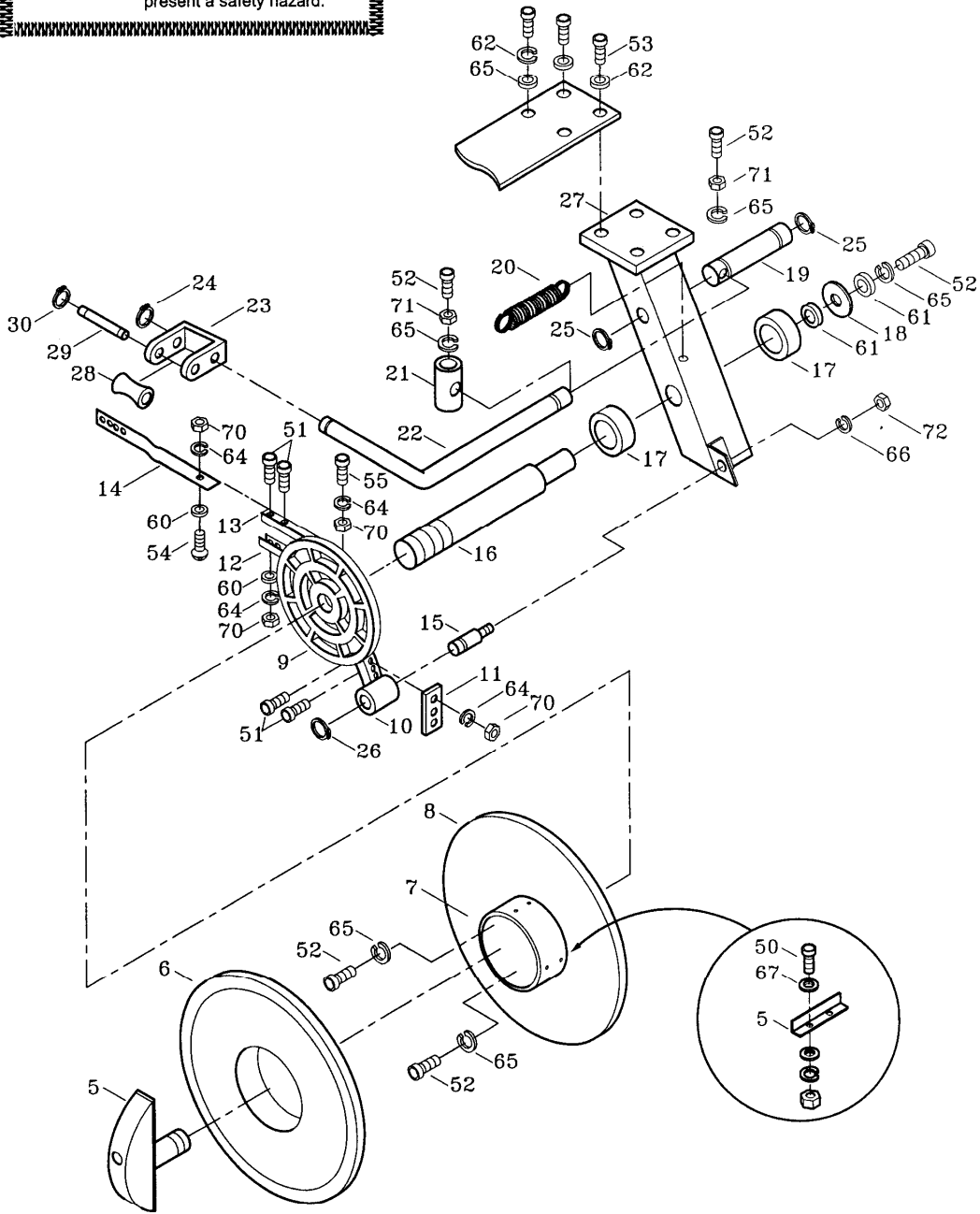


FIGURE 10 DISPENSER & BRAKE ASSEMBLY COMPONENTS

⚠ WARNING
 All parts must be periodically inspected and replaced if worn or broken. Failure to do this can affect operation and present a safety hazard.

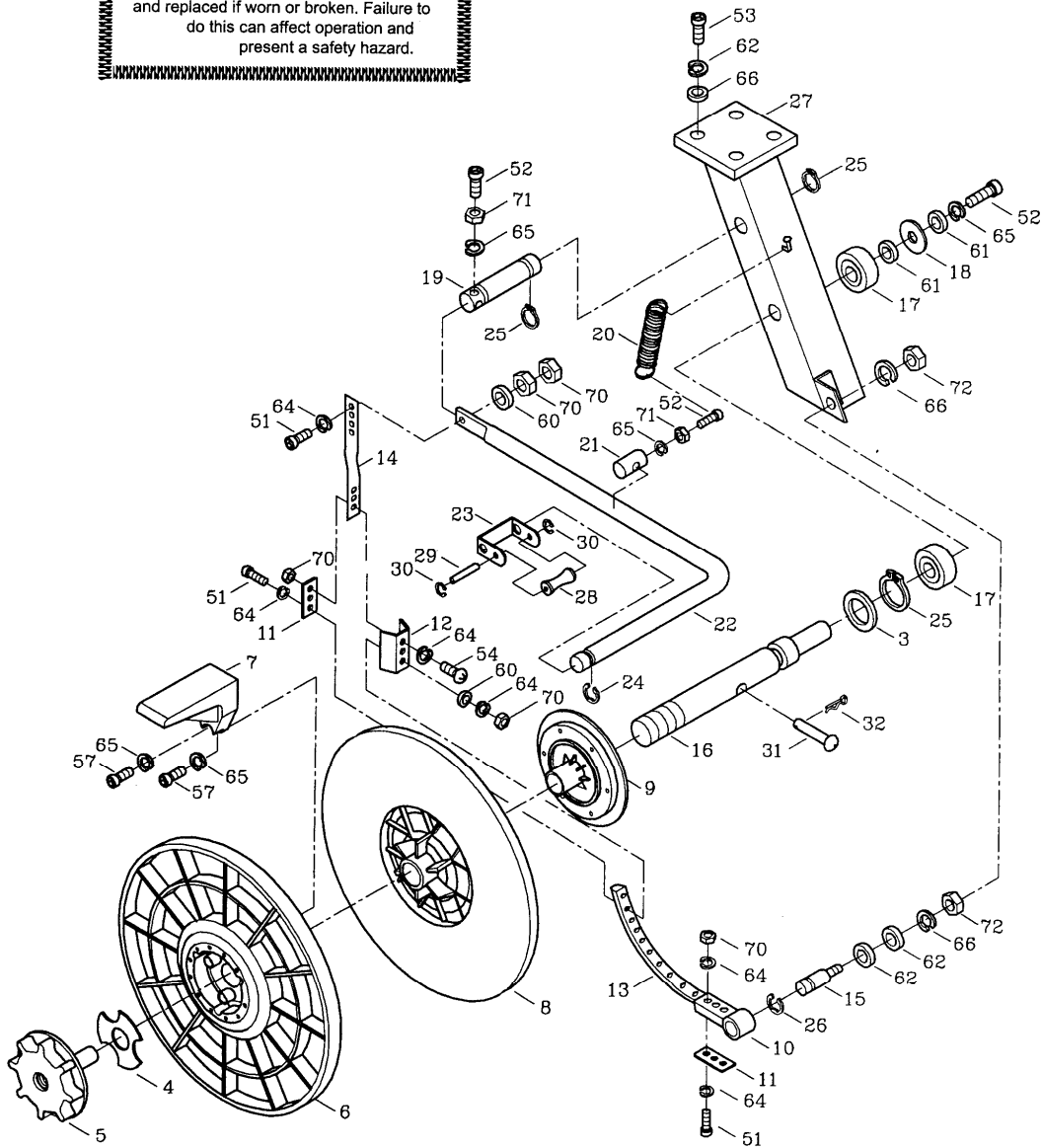


FIGURE 10-1 OPEN DISPENSER ASSEMBLY (PLASTIC FLANGE)

37.1

**PARTS LIST, FIGURE 10-1
(PLASTIC FLANGE)**

KIT NO : 7U-REXP-9100

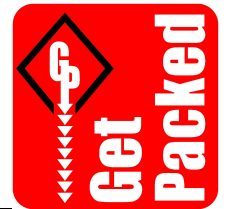
(For OPEN DISK)



KEY	QTY	PART NO	DESCRIPTION
1	1	7U-REFP-1000	Plastic flange unit(KEY 13, 19, 20, 21, 22, 23, 24, 25, 27, 51, 52, 61)
11	1	660603	Reel brake
12	1	660609	Reel brake arm
13	1	7-REPP-9160	Reel brake pulley
14	1	660619	Brake-V belt
15	1	660610	Spring pillar
16	1	660611	Belt pin
17	1	660612	Brake belt tightener
18	1	660614	Belt holder plate
19	1	7-RESP-9140	Reel shaft
20	1	7-REXP-9010	Left flange, plastic
21	1	7-REXP-9030	Right flange, plastic
22	3	7-REXP-9020	Reel center claw
23	1	7-REWP-9030	Y-type washer
24	1	1-PLWX-4003	Plain washer, M40 x 3
25	1	7-REPN-0817	Pin
27	1	7-RENP-9050	Reel nut handle
28	1	660110	Pin
29	1	660108	Roller frame
30	1	660109	Plastic roller
32	1	3-SPRX-121548	Brake spring, ϕ 1.2 x 15 x 48.5
50	1	1-SPWX-0006	Lock washer, M6
51	6	1-SCSX-0620	Socket head cap screw, M6 x 20
52	1	2-RNXS-0025	Ring, S-25
53	2	1-PMSX-0420	Phillips head machine screw, M4 x 20
54	2	1-HNXX-0004	Hex nut, M4
55	2	1-SPWX-0004	Lock washer, M4
56	2	2-RNXE-0005	Ring, E-5
57	1	2-RNXS-0010	Ring, S-10
58	2	2-BRZZ-6003	Ball bearing, 6003ZZ
59	1	2-RNXS-0015	Ring, S-15
60	3	1-PLWX-0410	Plain washer, M4 x 10
61	1	2-SPNR-0827	Spring pin-R



PARTS LIST, FIGURE 13 ELECTRICAL COMPONENTS



KEY	QTY	PART NO	DESCRIPTION
2	1	660225	Power switch
3	1	660260	Potentiometer, adjustable
4	1	660231	Reset switch
5	1	660232	Feed switch
6	1	2-MSWX-1703	Cut safety switch, TM1703
7	1	2-MSWC-6550	Insulator
8	1	660220	Smoke fan, AC100V/110V (D=38mm)
		660220A	Smoke fan, AC220V/240V (D=38mm)
9	1	660272	Fan bracket
10	1	660277	Fan cover
11	1	660276	Protect cover
12	1	660212	Instant heating transformer, AC110V
		660212A	Instant heating transformer, AC220V
		660212B	Instant heating transformer, AC240V
13	1	669001	Label
14	2	660271	Instant heating cable
15	2	660290	Insulation tube
21	1	660278	Cable, 1.25m/mx3C
		5-CABE-1253	Cable, 1.25m/mx3C (Without the Plug)
51	4	1-SCSX-0430	Socket head cap screw, M4 x 30
52	6	1-PMSX-0415	Phillips head machine screw, M4 x 15
53	2	1-PMSX-0445	Phillips head machine screw, M4 x 45
54	2	1-HBXX-0610	Hexagon bolt, M6 x 10
65	6	1-PLWX-0410	Plain washer, M4 x 10
66	4	1-PLWX-0412	Plain washer, M4 x 12
71	8	1-SPWX-0004	Lock washer, M4
72	2	1-SPWX-0006	Lock washer, M6
76	14	1-HNXX-0004	Hex nut, M4



WARNING
 All parts must be periodically inspected and replaced if worn or broken. Failure to do this can affect operation and present a safety hazard.

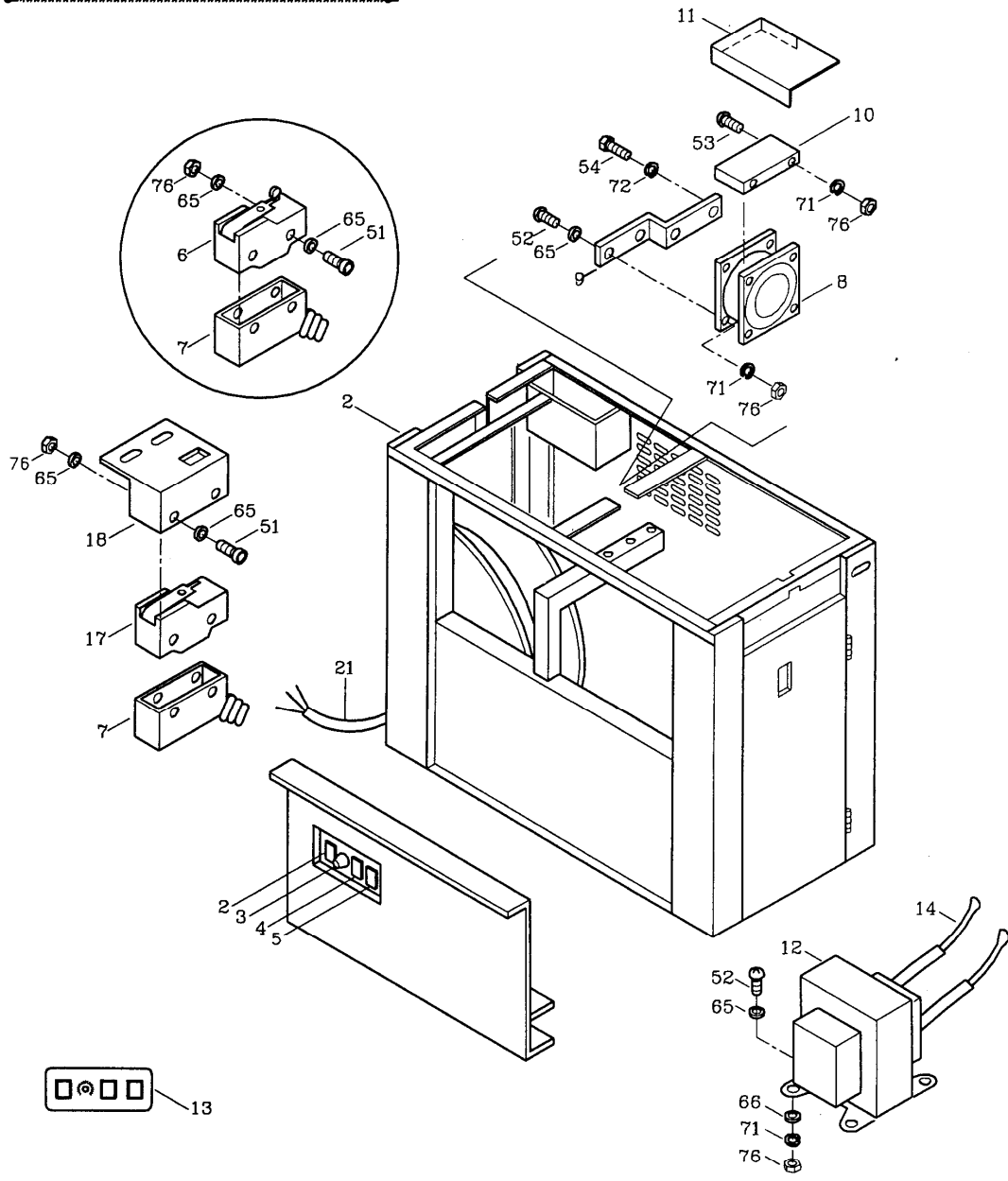
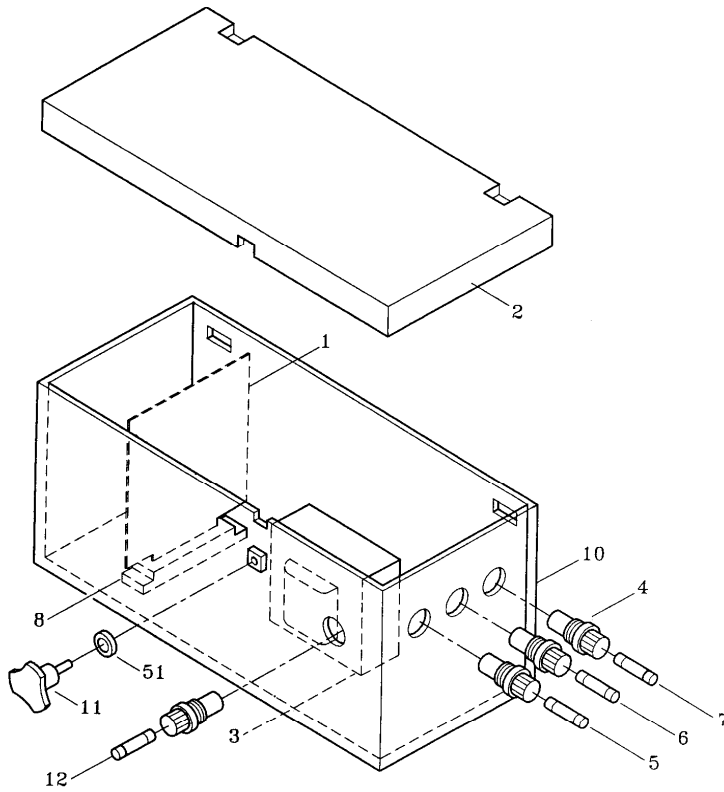


FIGURE 13 ELECTRICAL COMPONENTS (SP-1)

PARTS LIST, FIGURE 15 (Control box)

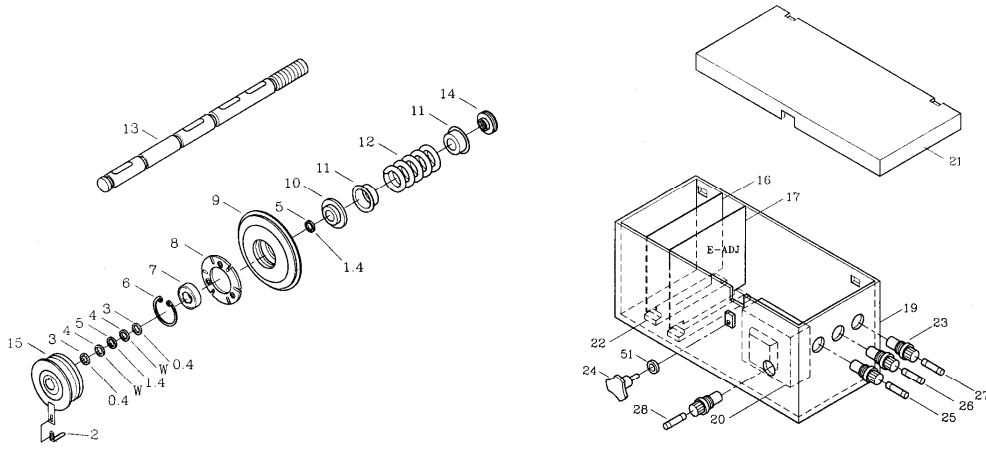
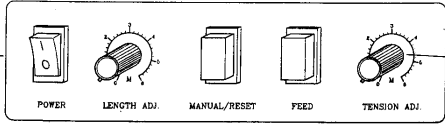
KEY	QTY	PART NO	DESCRIPTION
1	1	660519 660519A	PC board assembly, AC110V PC board assembly, AC220V~240V
2	1	660275A	Control box cover
3	1	660179 660179A	Transformer, AC110V : AC28V Transformer, AC220V : AC28V
4	4	660179B 660251	Transformer, AC230V~240V : AC28V Fuse box
5	1	660520	Fuse, 10A (for AC110V) FU-1
	1	660521A	Fuse, 8A (for AC220V, 240V) FU-1
6	1	660208	Fuse, 3A (for AC110V) FU-2
	1	660207	Fuse, 2A (for AC220V, 240V) FU-2
7	1	660522	Fuse, 1A (for AC110V, 220V, 240V) FU-3
8	1	660269	PC board holder
10	1	660274A	Box
11	1	660627	Lock
12	1	660207	Fuse, 2A (FU-4)
51	1	1-PLWX-0616-2	Plain washer, M6x16 (2mm)

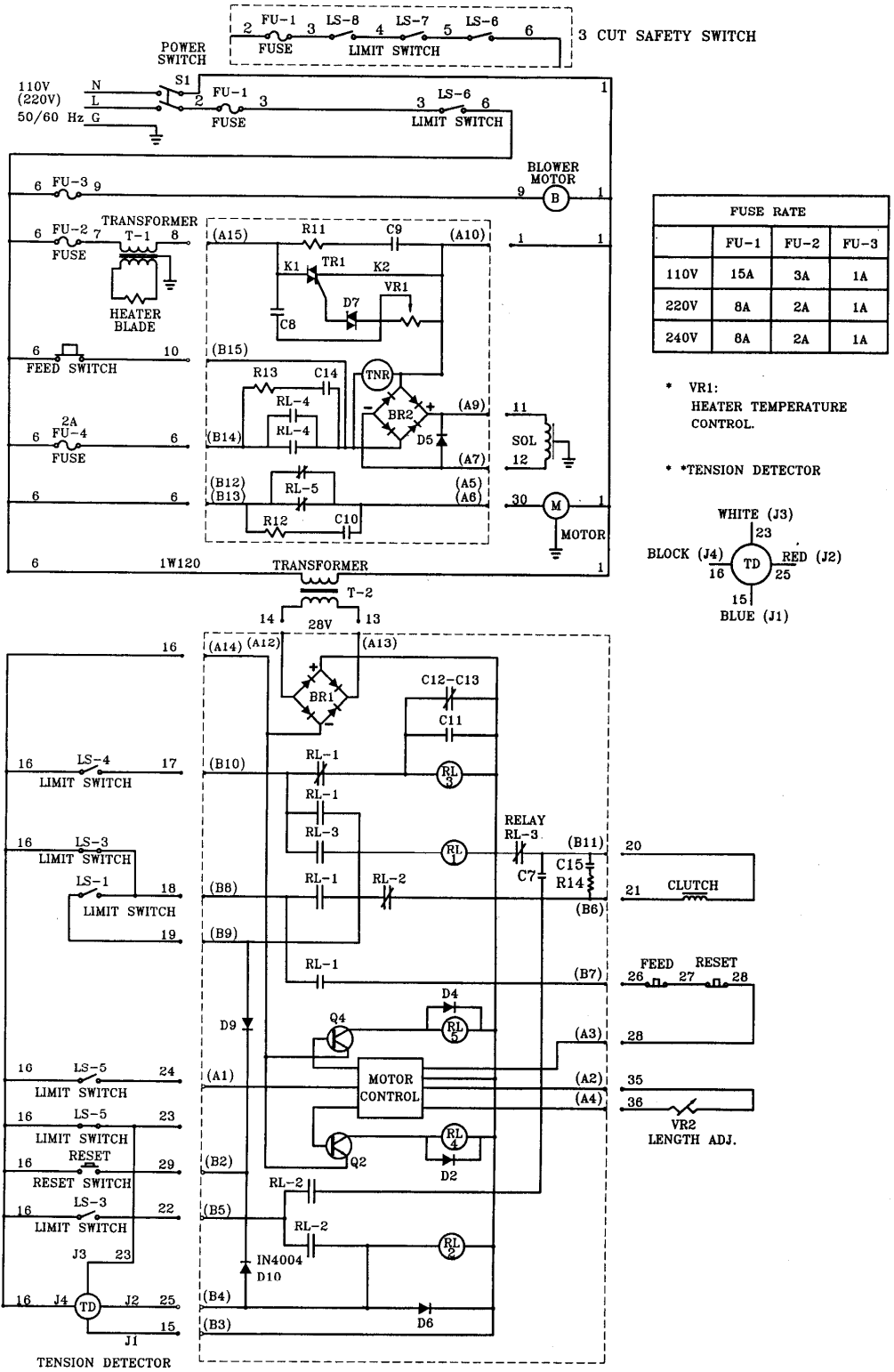


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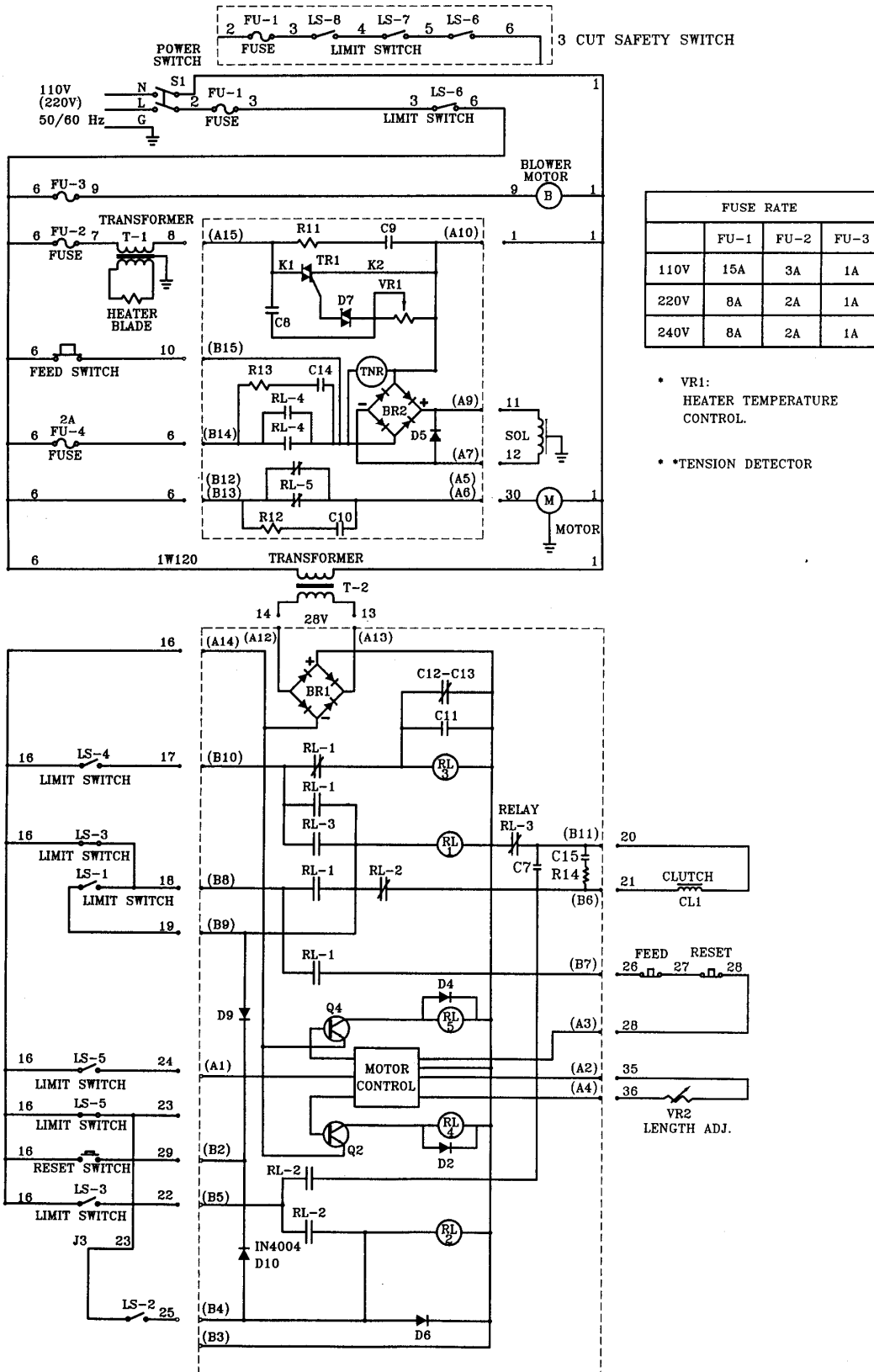
PARTS LIST, FIGURE 16 (Electron tension adjustment & control box)

KEY	QTY	PART NO	DESCRIPTION
1	1	660701	Tension potentiometer adjustable
2	1	660702	Bracket
3	3	660008	Shim, 0.4mm
4	2	660704	Spring shim
5	2	660007	Shim, 1.4mm
6	1	2-RNXR-0032	Ring, R-32
7	1	2-BRZZ-6002	Ball bearing, 6002ZZ
8	1	660706	Attractive plate
9	1	660036A	Pulley (for ETA)
10	1	660028	Pulley
11	2	660032	Spring guide
12	1	5-SPRX-403846	Spring, $\phi 4.0 \times 38.5 \times 46.5$
13	1	660707-1	Shaft
14	1	660708	Adjustment nut
15	1	660709	Magnet clutch
16	1	660519	PC board assembly, AC110V
		660519A	PC board assembly, AC220V~ 240V
17	1	660711	Electron tension PC Board (B) (E-ADJ)
		660711A	LED Screen PC Board (B) (TN-01A)
19	1	660274A	Box
20	1	660179	Transformer, AC110V : AC28V
		660179A	Transformer, AC220V : AC28V
		660179B	Transformer, AC230V~240V : AC28V
21	1	660275A	Control box cover
22	2	660269	PC board holder
23	4	660251	Fuse box
24	1	660627	Lock
25	1	660520	Fuse, 10A (for AC110V)
		660521A	Fuse, 8A (for AC220V, 240V)
26	1	660208	Fuse, 3A (for AC110V)
		660207	Fuse, 2A (for AC220V, 240V)
27	1	660522	Fuse, 1A (for AC110V, 220V, 240V)
28	1	660207	Fuse, 2A
51	1	1-PLWX-0616-2	Plain washer, M6 x 16 (2mm)





ELECTRICAL SCHEMATIC, AC 110V, 50/60 HZ. (AC 220V, 50/60 HZ.)



FUSE RATE			
	FU-1	FU-2	FU-3
110V	15A	3A	1A
220V	8A	2A	1A
240V	8A	2A	1A

* VR1: HEATER TEMPERATURE CONTROL.

* *TENSION DETECTOR

ELECTRICAL SCHEMATIC, (for round belt type)



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