

Portable Box Sealer

L-Seal "Softouch"

Operator's Manual



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1. Introduction

- Be sure to read this manual carefully before use. Unless you may comprehend the contents, please do not operate the machine. Especially, please pay attention to "Safety Instructions".
- Please keep this manual at predetermined place so that you can refer it when the need arises. In case, you may lose the manual and need another copy, please contact us.
- This machine is manufactured in compliance with Japanese safety standard.
- Intellectual properties such as copyright which are included in this product will not be transferred.
- Specifications of this product or contents of this manual are subject to change without prior notice.
- Pictures/drawings of the product in this manual might be modified for some cases for better understanding.



2. Safety Instructions

Be sure to read this "Safety Instructions" carefully before use, and then operate the machine properly. The followings are important contents to keep operators away from danger and to prevent damages of machine.
Before reading main body of this manual, read the below carefully to become familiar with words and symbols which are used in the manual.

Meaning of Signal Words

Signal Word	Meaning
 WARNING	IMPROPER USE CAN RESULT IN SERIOUS BODILY INJURY.
 CAUTION	IMPROPER USE CAN RESULT IN MINOR/MODERATE INJURY OR PROPERTY DAMAGE.

Meaning of Symbols

Symbol	Meaning
	PROHIBITION This type of symbol conveys actions that should not be taken. Prohibited action(s) will be described around this mark.
	MANDATORY ACTION This type of symbol conveys actions that should be taken to avoid hazards.



WARNING



CAUTION



- When you handle power cable or signal cable, follow the instructions of below.
 - Do not step on nor damage cables.
 - Do not put heavy load onto cables.
 - Do not bend cables by force.
 - Do not pull cables.
 - Do not wire cables near source of noise such as high-voltage wires.
 - Before you unplug cables, be sure to turn off power switch.
- Damaged cable may cause fire, electric shock, breakdown/malfunction of the machine.
- When the machine overheats, smokes, or makes abnormal noise, stop using it immediately, and switch off and unplug the machine.
- When the above-mentioned situation arises, please inform us.
If you keep using the machine, it might cause fire or electric shock.
- Before you maintain the machine or replace parts or tape reel, unplug the power cable.
- You may be in the danger of getting pinched, caught by the machine, or shocked if you do not unplug the cable beforehand.
- When you replace cutter knife or tape, wear gloves to protect your hands.
- Since cutter knife is sharp at the end, your finger(s)/hand(s) will be cut when touch the end.



- Do not touch rotating rollers or feed belt while machine is running.
- There is a danger of injury by being caught by a machine.
- Do not insert your fingers/hands into apertured (opening) part of the machine
- There is a danger of being cut.
- Do not shock the machine nor put heavy load/liquid holding container onto the machine.
- This may damage the machine or cause fire, electric shock.
- When you unplug cables, hold the plug after turning off power switch.
Do not hold the cable to unplug.
- Flaw of cable or arc generation may cause breakdown of machine, fire, or electric shock.
- Do not install the machine at humid, dusty, high-temperature, or oscillatory place to avoid danger of machine's breakdown, fire, and electric shock.
- Do not touch the machine or hold the plug with wet hand to avoid danger of electric shock.
- Do not remodel or dismantle a machine to avoid danger of machine's breakdown, fire, and electric shock.

Instructions for installation

- Do not operate in explosive atmospheres such as corrosive gas environment or near chemicals.
- Do not operate the machine at location which temperature is lower than 0°C, or higher than 40°C.
Do not place the machine at location which humidity is more than 85% as condensing is caused.
- Do not operate the machine near heating appliance such as heater, stove, etc.
- Keep heating appliance away from power cord.
When you unplug the cord, hold the plug after turning off power switch at the front.
- Do not shock the machine as precision mechanics are installed inside.
Machine will not work properly if you may bang or drop the machine.
- In order to prevent fire and machine accident, use only fuse of specified type and rating.
- In order to prevent fire and machine accidents, confirm that power supply and voltage are within acceptable range.
- Do not pour water on the machine as it may cause fire or breakdown.
Do not put metals or liquid except for lubricants into the machine.

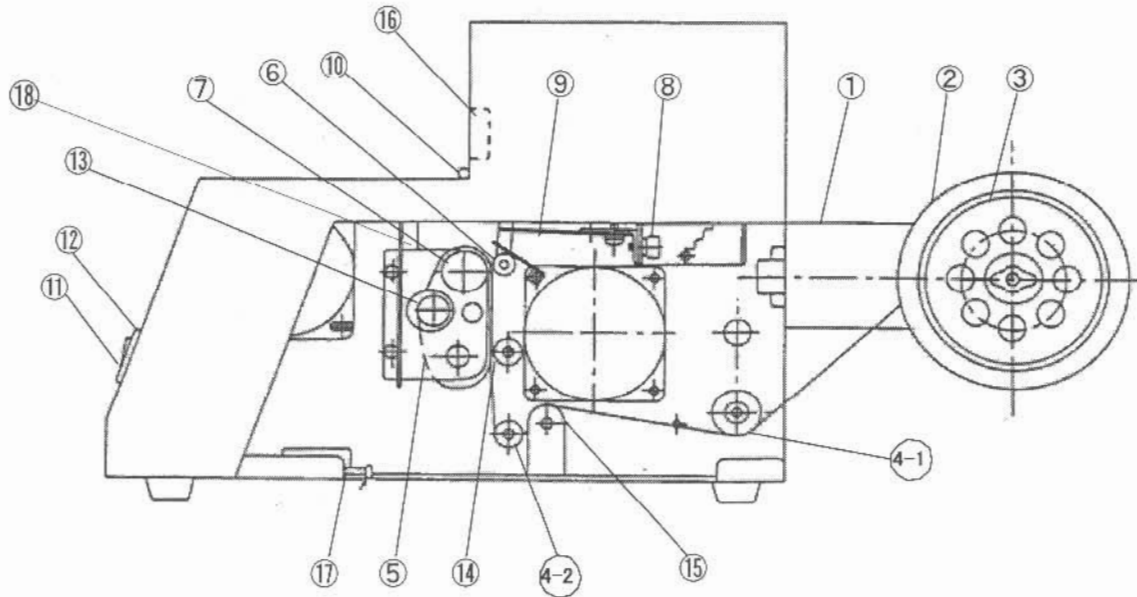
Instructions for use

- Do not run the machine when disassembled or when cover is removed.
- Do not touch movable parts or electric parts while machine is running.
- In order to prevent fire, unplug the machine when you do not use the machine.
- If you keep tape set to machine for a long time, tape might be curled or deformed and may not be well fed.
- Use only specified types of tapes.
When tape is thicker than standard, hard to peel off, or telescoped, machine cannot feed the tape.

Instructions for maintenance

- To avoid electric shock, be sure to switch off and unplug the machine before opening the cover.
- Do not hurt electric cable. Otherwise, fire or electric shock will be caused.
When the cable is hurt, stop using the machine and inform the company who sold the machine.
- When you do not operate the machine for a long time, cover the machine with plastic cover to prevent invasion of dusts and keep the machine away from humidity and high temperature.
- Do not remove the parts except for the parts which is instructed to be maintained in this manual.
Be sure to put every part to original position after cleaning or maintenance.

4. Drawing and Main Parts Names



Part #	Name	Part #	Name
1	Tape Holder Arm	10	Box Detection Limit Switch
2	Tape Reel	11	Power Switch
3	Tape Holder	12	Timer Gauge
4-1	Guide Roller #1	13	Tension Roller
4-2	Guide Roller #2	14	Pinch Roller
5	Tape Feed Belt	15	Drive Roller
6	Tape Erecting Ball	16	Pusher Rubber
7	Manual Feed Knob	17	Interlock Switch
8	Set Screw of Cutter Knife	18	Felt
9	Cutter Knife		

5. Set Up

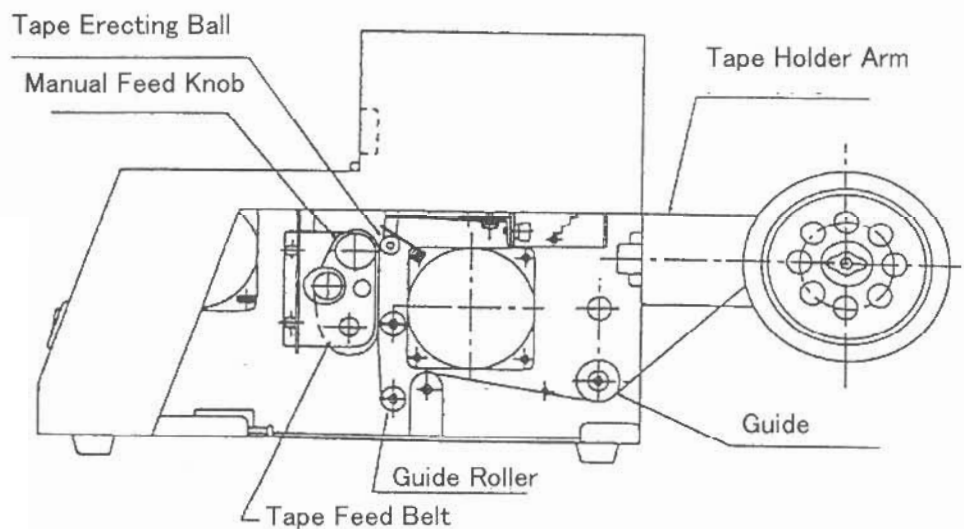
a) Threading Tape

Be sure to switch off the power before you thread the tape

- 1) Install Tape Holder Arm to main body of L-Seal and Adjust the position of Tape Holder Arm.
* Refer to b) Adjustment of Tape Holder Arm Position.
- 2) Set Tape Reel on Tape Holder and thread tape as diagram of below.
Adhesive side of tape should face downward.
- 3) Let adhesive side of tape face to Tape Feed Belt.
Supporting tape with your finger, rotate Manual Feed Knob counter clockwise until tape comes up ahead of Tape Erecting Ball.
- 4) Tape goes up along with Tape Feed Belt and stands alone at last.
Conditions of erecting tape is adjustable by Tape Erecting Ball.
- 5) Adjust Guide Rollers in accordance with position of tape.
- 6) Tape threading is completed. Close the cover.

* Remarks

When you splice or replace tapes, adhere 2 tape-ends and rotate Manual Feed Knob until joint portion of tapes shall comes out of the machine to avoid joint portion to be applied on box.



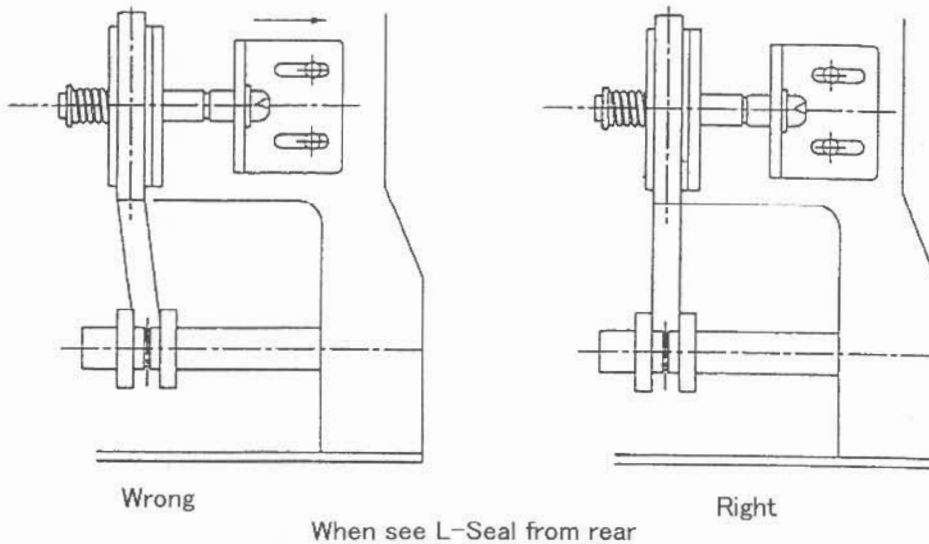
b) Adjustment of Tape Holder Arm Position

When you install Tape Holder Arm for the first time, or when width of applying tape varies, adjust the position of Tape Holder Arm so that tape may run center position on Guide Rollers and Tape Feed Belt.

Loosen 2 set screws of Tape Holder Arm and slide the arm to left/right as diagram of below. Fix the screws when arm is at right position.

*Remarks

If tape is not centered, tape may snake and cause mal-application.

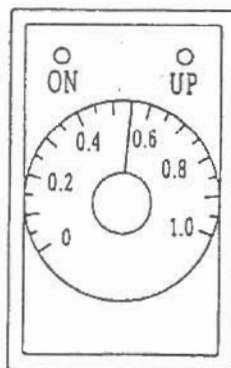


c) Adjustment of Tape Cut Length

Timer Gauge at front panel defines approximate tape cut length.
Tape cut length is adjustable in 20 mm - 40 mm by Timer Gauge.

*Remarks

Even at same gauge, cut length varies depending on frequency, tape material, etc.
Therefore, please measure actual tape length after tuning the gauge.



Timer Gauge

Tape Cut Length and Timer Gauge (Test Data)

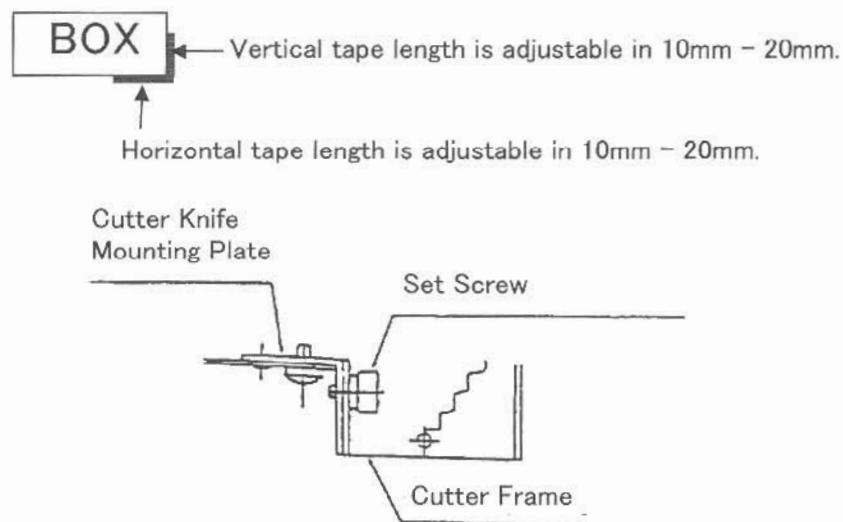
Tape Length	50 Hz	60 Hz
approx. 20 mm	0.44	0.35
approx. 30 mm	0.66	0.55
approx. 40 mm	0.9	0.75

*This is our test data for your reference purpose only

d) Adjustment of Tape Applying Position

Tape applying position on box (vertical length and horizontal length of tape) can be adjusted by changing position of Cutter Knife.

- 1) Loosen Set Screw and move position of Cutter Knife up/down.
- 2) When move the knife upward, vertical tape length becomes longer than horizontal tape length.
When move the knife downward, vertical tape length becomes shorter than horizontal tape length.
Total tape cut length cannot be changed by moving knife upward/downward.
- 3) There are 3 slits on Cutter Frame. These slits are helpful references of Cutter Knife position to make vertical tape length equal to horizontal tape length in case tape cut length is 20mm, 30mm, or 40mm.
- 4) When desired position is gained, tighten Set Screw firmly with pliers.



e) Adjustment of Tape-End's Erection

When tape is too soft, tape-end may tend not to erect but to fall down at applying area. In such case, you can control its erection by adjusting position of Tape Erecting Ball. (You can change the Ball's pressure on tape by changing Ball's position)

- 1) If tape-end tends to fall toward box side, loosen set screw of Tape Erecting Ball, and move the Ball to left and/or up little by little. When the best position is gained, fasten set screw firmly.

*Remarks

If you move the ball too left, the Ball presses tape too strongly to make pressure mark on tape or to disturb tape feeding.

- 2) If tape-end falls toward Cutter Knife side, loosen set screw and move the Ball to right and/or down little by little. When the best position is gained, fasten set screw firmly.

6. How to Operate

a) Preparation

* Prior to operation, prepare dummy box for experimental tests to see applied tape status.

- 1) Thread adhesive tape.
- 2) Close door cover.
- 3) Put electrical plug into outlet which power source is suitable for the machine.
- 4) Check Timer Gauge.
- 5) Put Power Switch on. Inner light of switch will be turned on.
- 6) Hold dummy box and slide it toward Box Detection Limit Switch to push the switch lightly with box's corner. Tape shall be cut in preset length and be applied on box in L-shape.
- 7) Check status of sealed dummy box. If tape is well applied on box, preparation is completed.

* Remarks

When release sealed box from Limit Switch, tape shall be fed in set length and wait for next cycle.
This sequence is one cycle of application.

b) Operation Procedure

- 1) Hold the box and slide it toward Box Detection Limit Switch.
- 2) Do not move the box until 1 cycle of machine's movement is completed.
- 3) Tape will be applied on box in L-shape.
- 4) When you finish whole operation, put power switch off and unplug power cable from outlet.

7. Maintenance

Be sure to power off the machine prior to maintenance.

a) Residual Adhesive Cleaning

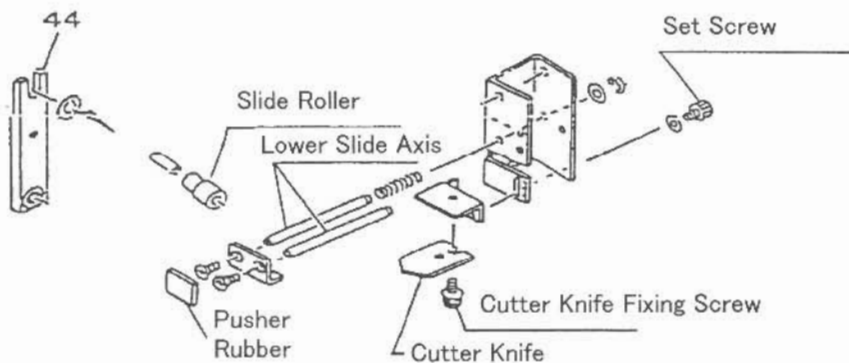
Cutter Knife may not cut tapes well when contaminated with adhesive residue.
Therefore, clean up knife blade regularly with soft material such as cloth, cotton-tipped swab, etc.

Cleaning Point	Frequency	How to Clean-up
Blade of Cutter Knife	Once a day	Remove residual adhesive by cloth/cotton-tipped swab which is soaked with silicon oil or alcoholic solvent.

b) Lubrication

Sliding part may not move smoothly when lubricant is not well applied.
Therefore, please lubricate the parts with grease spray which is available in the market.

Lubrication Points	Frequency	How to Lubricate
Lower Slide Axis	Once a year	Apply grease oil
Slide Roller	Once a year	Apply grease oil



c) Replacement of Cutter Knife

Wear gloves and be careful not to touch blade of Cutter Knife.
Referring to the above figure, replace the Cutter Knife as follows.

- 1) Open Door Cover.
- 2) Loosen Set Screw.
- 3) Loosen Cutter Knife Fixing Screw, and then remove old Cutter Knife from mounting fixture.
- 4) Place a new Cutter Knife at the same position on mounting fixture.
- 5) Tighten Cutter Knife Fixing Screw, and then fix Set Screw.
- 6) Close Door Cover.
- 7) Replacement is completed. Wrap old Cutter Knife with aluminum foil not to cut hands and then throw it away.

* Cutter Knife is sold separately. We recommend you to keep Cutter Knife in stock for just in case

d) Replacement of Pusher Rubber

Be careful not to touch blade of Cutter Knife.

Referring to the figure in previous page, replace Pusher Rubber as below.

- 1) Remove housing (blue cover) out of the machine.
- 2) Take Pusher Rubber off.
- 3) Remove residual adhesive on the machine with solvent such as alcohol.
- 4) Attach Pusher Rubber with two-sided adhesive tape.
- 5) Mount housing (blue cover) onto the machine.

e) Replacement of Felt

Be careful not to touch blade of Cutter Knife.

Referring to the figure of below, replace Felt as follows.

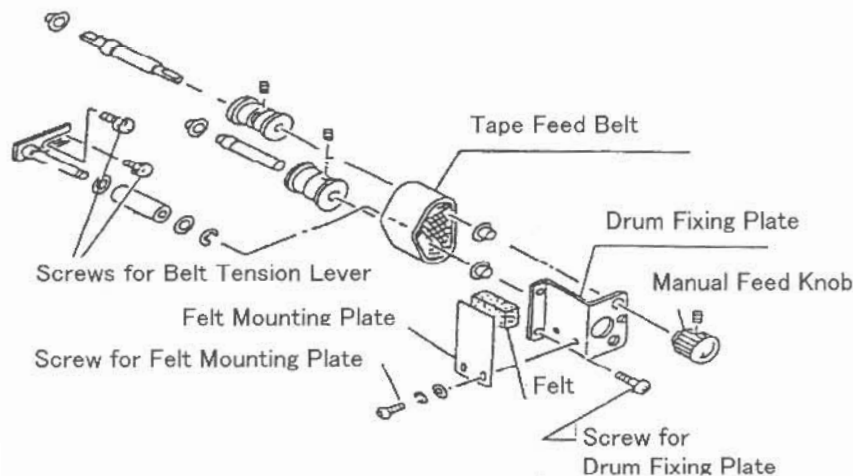
- 1) Remove housing (blue cover) out of the machine.
- 2) Loosen Screw for Felt Mounting Plate and then take out Felt Mounting Plate.
- 3) Take Felt off.
- 4) Remove residual adhesive on the plate with solvent such as thinner.
- 5) Attach Felt to the plate with adhesive.
- 6) Fix Felt Mounting Plate with screw.
- 7) Mount housing (blue cover) onto the machine.

f) Replacement of Tape Feed Belt

Be careful not to touch blade of Cutter Knife.

Referring to the figure of below, replace Tape Feed Belt as follows.

- 1) Remove housing (blue cover) out of the machine.
- 2) Loosen Screws for Belt Tension Lever to loosen tension of the belt.
- 3) Loosen bolt and remove Manual Feed Knob.
- 4) Remove Screw for Drum Fixing Plate and take off Drum Fixing Plate.
- 5) Replace old belt with new Tap Feed Belt.
- 6) Attach Drum Fixing Plate with Screw for Drum Fixing Plate.
- 7) Keep tension of Tape Feed Belt at adequate status and fix Screws for Belt Tension Lever.
- 8) Insert Manual Feed Knob and then fix it with bolt.
- 9) Mount housing (blue cover) onto the machine.



8. Troubleshooting

Be sure to power off the machine prior to troubleshooting.

When machine does not run properly, read the following list and check status of machine to solve the problems.

a) Motor does not run.

Cause	Solution
Plug is not inserted into outlet rightly.	Insert plug into outlet firmly.
Blowout of fuse	Unplug cord and take out fuse to check whether or not fuse blows. If so, replace a fuse with 1A glass fuse.
Power switch is not on.	Check whether or not green light at switch is on. If not, turn on the switch.
Setting of tape cut-length is not appropriate.	Refer to page 11, 5-d) Adjustment of Tape Applying Position, and set tape cut-length again.
Power cord is disconnecting (breaking).	Replace with new power cord. Otherwise, return the machine to us for repairs.
Box's corner is not pushing Box Detection Limit Switch	Machine does not move unless its limit switch is turned on by being pushed by box's corner. Check whether or not box is broken or distorted.
Door Cover at lateral side is open	Close the cover.
Other cases	Consult us and return the machine for repairs.

b) Machine does not cut adhesive tape though it is running

Cause	Solution
Residual adhesive on blade of Cutter Knife	Take out Cutter Knife and wipe off adhesive with cloth which is soaked with solvent like alcohol.
Tape Erecting Ball does not touch centerline of adhesive tape	Read page 8 : 5. Set Up and adjust positions of parts such as Guide Roller.
Blade wear of Cutter Knife	Replace Cutter Knife with new one. Refer to page 12: c) Replacement of Cutter Knife.
Machine does not feed tape normally	Refer to section of below: c) Machine does not feed adhesive tape though it is running.

c) Machine does not feed adhesive tape though it is running.

Cause	Solution
Tape Feed Roller is not rotating	Open the cover to check whether or not the Roller get tangled.
Tape Erecting Ball does not touch Tape Feed Belt	Open the cover to adjust position of Tape Erecting Ball to touch Tape Feed Belt.
Tape Feed Belt winds up adhesive tape.	Open the cover and move Tape Erecting Ball to left and/or up. Refer to page 10: 5-e) Adjustment of Tape-End's Erection.
Tape cut length is not well adjusted.	Adjust Timer Gauge referring to page 9: 5-c) Adjustment of Tape Cut Length
Adhesive tape does not meet specifications of this machine.	Thick/thin tape, hardly peeled-off tape, telescoped tape cannot be used for this machine. Please confirm specifications at page 6.

d) Adhesive tape does not stick on lateral side of box

Cause	Solution
Pusher Rubber is taken off or is not adhered to right position	Check whether or not Pusher Rubber is at right position. If taken off or not at right position, adhere it rightly.
Tape Retainer Plate (35) is not sliding.	Open door cover and check movement of Tape Retainer Plate.
Box does not meet specifications of machine.	Please consult us.

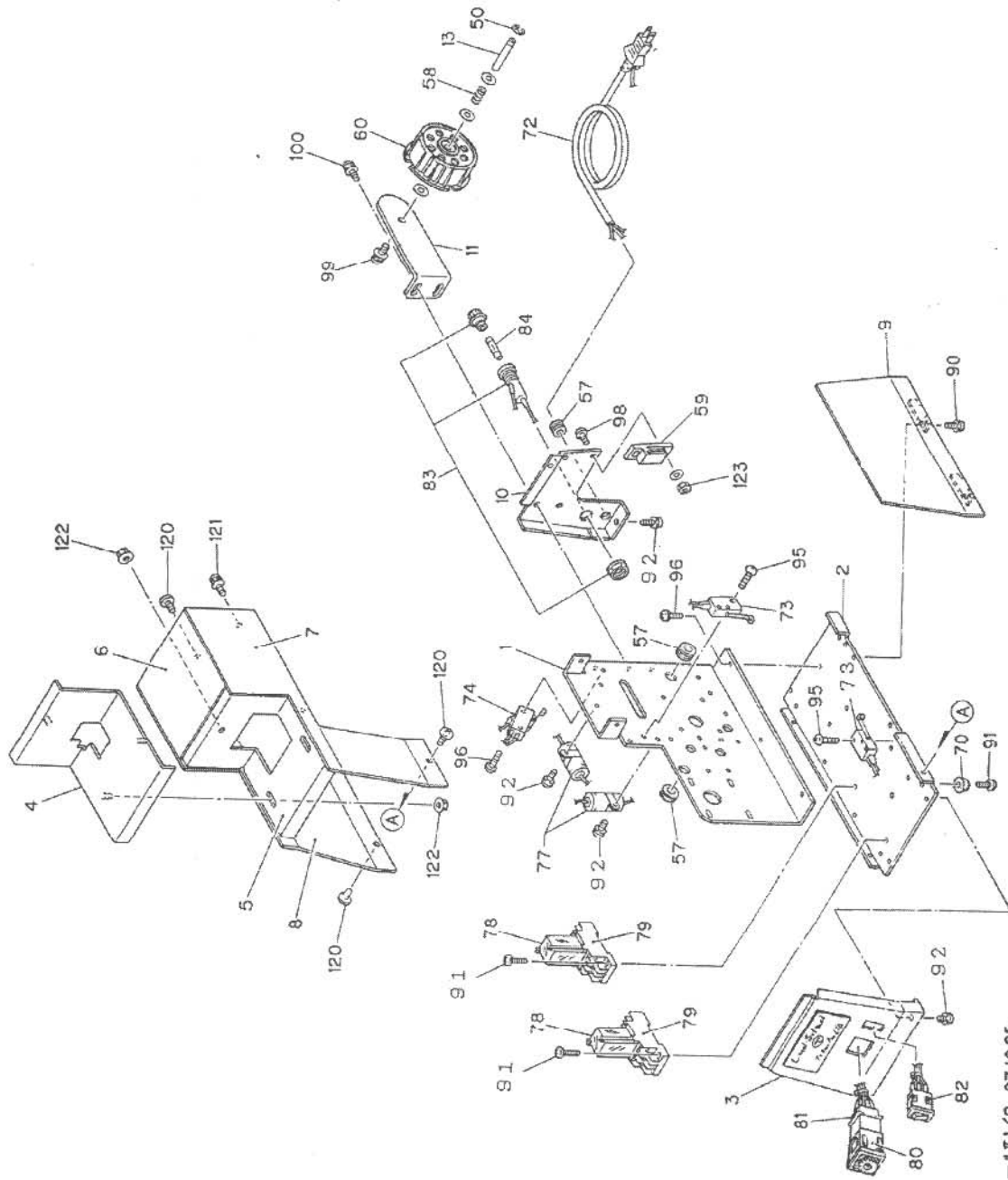
e) Adhesive tape does not stick on bottom surface of box

Cause	Solution
Spring (54) is taken out of Tape Retainer Plate (35)	Open door cover to see whether or not spring is mounted to Tape Retainer Plate. If it is taken off, mount it to Tape Retainer Plate.
Spring (54) at Tape Retainer Plate (35) is cut.	Open door cover to check whether or not spring is cut. If so, replace it with new spring.
Box does not meet specifications of machine.	Please consult us.

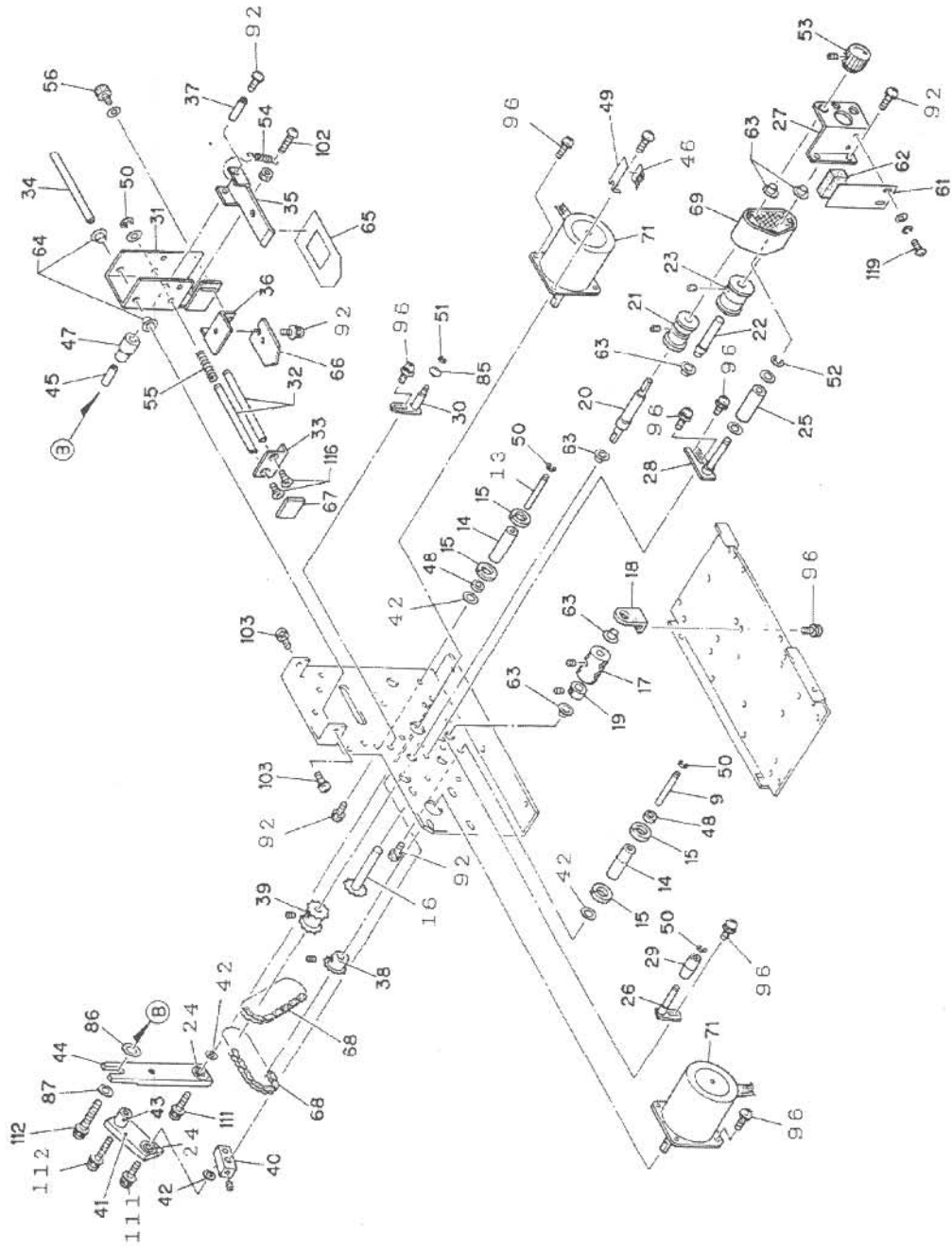
9. Parts List

* When you inquire part of this machine, please use the following part number and name.

Part #	Part Name	Q'ty	Part #	Part Name	Q'ty
1	Chassis	1	54	Spring 1136	1
2	Base	1	55	Tape Pressing Spring	1
3	Anterior Cover	1	56	Set Screw M4x6	1
4	Operation Table	1	57	Grommet	3
5	Front Cover	1	58	Spring 1123	1
6	Upper Cover	1	59	Magnetic Catch	1
7	Right Lateral	1	60	Tape Holder	1
8	Left Lateral	1	61	Felt Mounting Plate	1
9	Door Cover	1	62	Felt	1
10	Lower Back Cover	1	63	Oilless Bush 80F0803	6
11	Tape Holder Arm	1	64	Oilless Bush 80F0605	2
13	Tape Holder Axis	3	65	Cutter Safety Cover	1
14	Guide Roller	2	66	Cutter Knife	1
15	Spacer Collar	4	67	Pusher Rubber	1
16	Tape Feed Roller Axis	1	68	Chain	2
17	Tape Feed Roller	1	69	Tape Feed Belt	1
18	Tape Feed Roller Holder	1	70	Rubber Foot	4
19	Collar	1	71	Motor SR6G 40rpm	1
20	Drive Drum Axis	1	71	Motor SR6G 99rpm	1
21	Drive Drum	1	72	Cable VCTF 0.75 x 3	1
22	Tail Drum Axis	1	73	Limit Switch V56-1A4	2
23	Tail Drum	1	74	Limit Switch V54-1A4	1
24	Belt Tension Lever	1	77	Condenser	2
25	Belt Tension Roller	1	78	Relay MY4N	2
26	Tape Pressing Roller Axis	1	79	Socket PYF14A	2
27	Drum Fixing Plate	1	80	Timer	1
29	Tape Pressing Roller	1	81	Socket	1
30	Tape Retainer	1	82	Switch SW61W	1
31	Cutter Frame	1	83	Fuse Holder ASSY F50	1
32	Lower Slide Axis	2	84	Fuse	1
33	Tape Retainer Axis	1	85	Tape Erecting Ball	1
34	Upper Slide Axis	1	86	Collar	1
35	Tape Retainer Plate	1	87	Washer	1
36	Cutter Knife Mounting Plate	1	90	Chromate Screw M3x6	1
37	Shaft for Tape Retainer Plate	1	91	Chromate Screw M4x12	3
38	Sprocket RS25-12B	1	92	Chromate Screw M4x5	9
39	Sprocket RS25-12W	1	95	Chromate Screw M3x15	2
40	Link Holder 12 x 30	1	96	Chromate Screw M4x6	8
41	Crank Lever 1 66L	1	98	Screw M3x8	1
42	Bearing	1	99	Nickel Screw M4x8	1
43	Collar 2 12 x 24.2	1	100	Nickel Bind Screw M4x8	1
44	Crank Lever 1 125L	1	102	Chromate Screw M3 x 15N	1
45	Slide Axis 2 6 x 20L	1	103	Chromate Screw M3 x 6	2
46	Anti Static Brush	1	111	Chromate Screw M4 x 15N	2
47	Slide Roller 12 x 19	1	112	Chromate Screw M4 x 30	2
48	Collar	2	116	Countersunk Screw M3 x 6	2
49	Plate for Anti Static Brush	1	119	Screw for Felt Mounting Plate	1
50	E-ring E5	5	120	Nickel Bind Screw M4x6	3
51	E-ring E2	1	121	Nickel Screw M3 x 6	1
52	E-ring E7	1	122	Chromate Flange Nut M4	2
53	Manual Feed Knob K8015	1	123	Nut M3	1



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