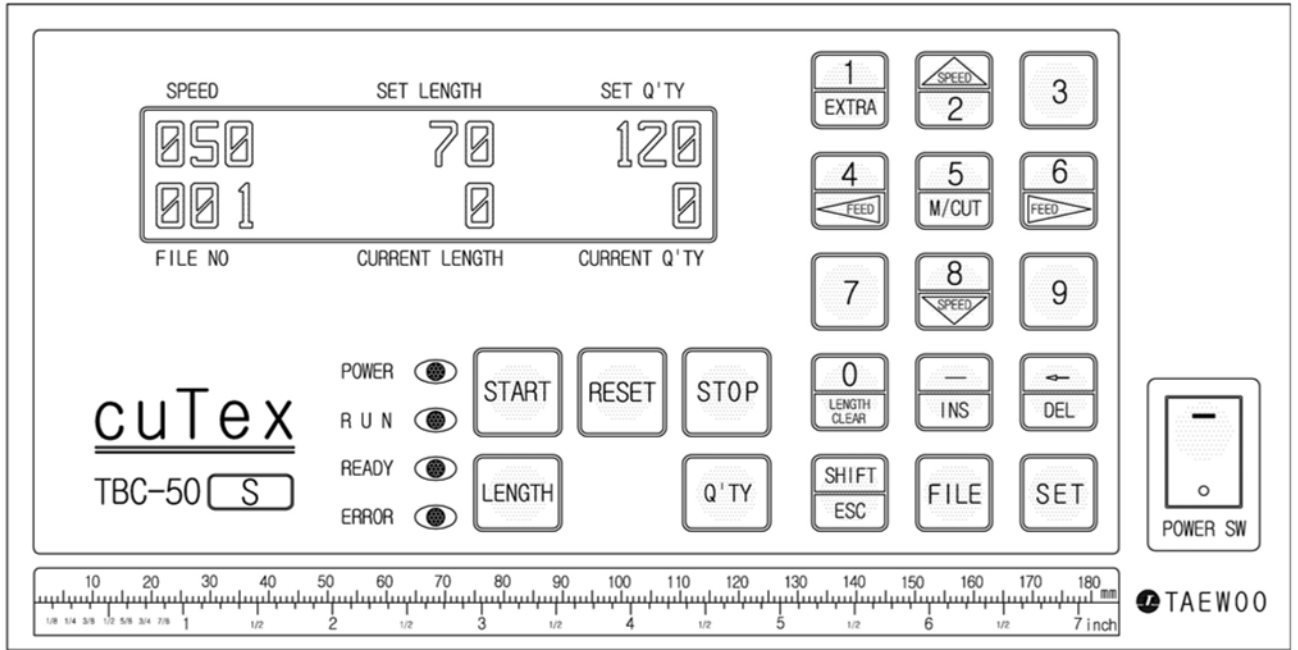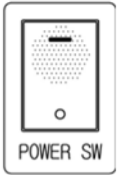# AUTOMATIC
PRINTED LABEL CUTTER
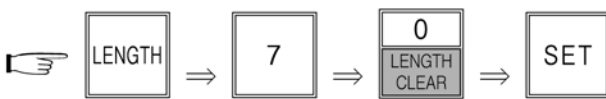
TBC-50S

How to operate TBC-50S

1. An example (Cutting length : 70mm, Cutting quantity : 120 pcs)

▷ Turn on the POWER SW.

▷ Set cutting length 70mm. (Press the following buttons in order.)

☞ LENGTH ⇒ 7 ⇒ 0 LENGTH CLEAR ⇒ SET   ※ Button "0" has a double fuctions of "0" and eraising current length.

▷ Set cutting quantity 120 pcs.

☞ Q'TY ⇒ 1 EXTRA ⇒ SPEED 2 ⇒ 0 LENGTH CLEAR ⇒ SET

▷ Set function.(Sensor cutting: "1", Normal cutting : "0")

☞ Sensor cutting : FILE ⇒ [1 EXTRA] ⇒ SET

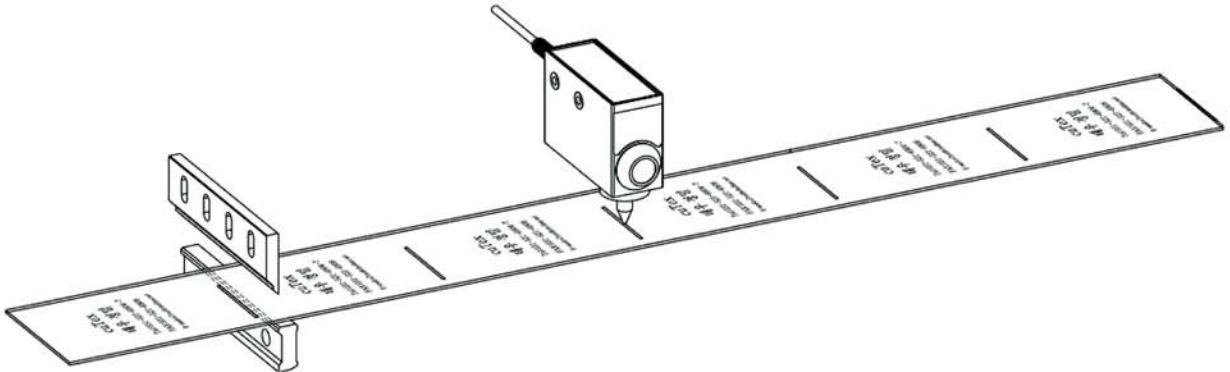☞ Normal cutting : FILE ⇒ [0 LENGTH CLEAR] ⇒ SET

▷ Locate the cutting line of label on the lower knife blade.
   (This step must go ahead of sensor adjustment.)
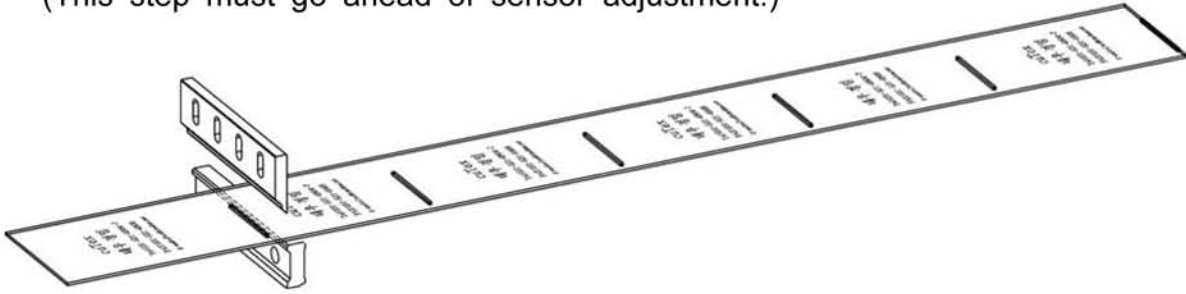
▷ Sensor Adjustment
   Light sensor-beam on sensing point of label.
   (Refer to "How to use BANNER sensor of next page.)


▷ Press START button.

☞ START

※ **Check Points for cutting trouble**
   - **Check if you adjust sensor after locating cutting line of label on the knife blade.**
   - **Move the sensor forwards or backwards.**
   - **Check sensitivity & height of the sensor.**
   - **Check if the switch is upside for elastic, downside for non-elastic including label.**

How to use BANNER sensor

① Mount the sensor on the guide-rail

and connect the jack of sensor into

the connector of machine downside.
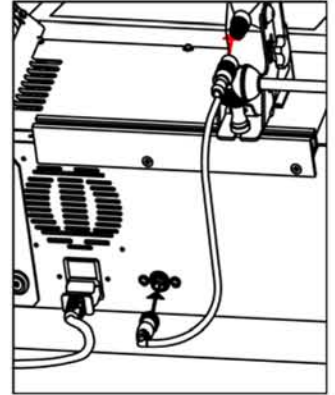
★② Locate the cutting line of label

on the lower knife blade precisely

& move the sensor close to the knife.

(This step is essential just before fix

the location of sensor.)
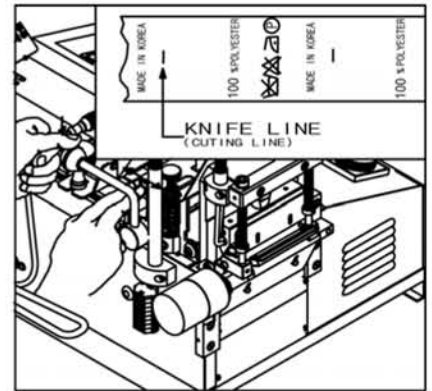
③ Adjust the sensor with guide-control bolt

for lightening the beam on the center

of marking point.
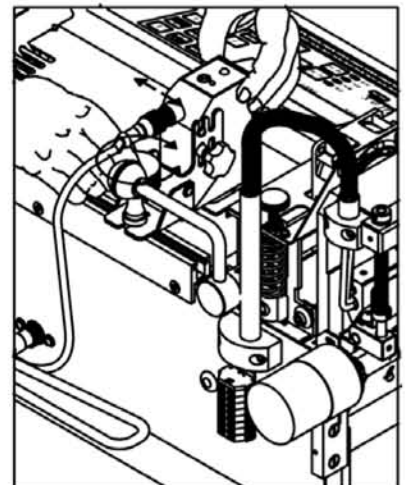
★④ Position the light spot to the mark(cutting line or figure, letters).
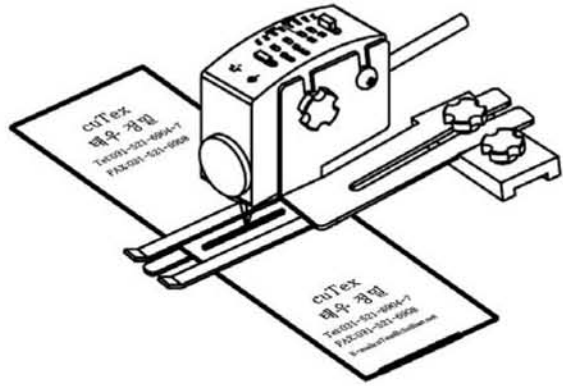
⑤ Move the light spot on the background.
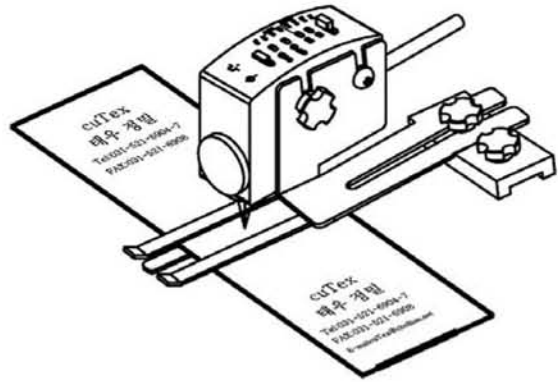
⑥ If it sets well, you can see the LED blinks as follow image.

(Caution)

※ Whatever the background is darker or lighter than the mark,
the mark first and the background second.

※ In the case of objects with reflective or shiny surface, tilt sensor by 10° to 15° relative
to surface.

2. Key functions

FILE : Function for label cutting

0 LENGTH CLEAR : Current length on display will be back to "0" at a stop.

RESET : All of current length and current q'ty on display will be back to "0".

5 M/CUT : Moving knife only.
① to cut the material for test.
② to take out the material jammed between knife blades.
③ for balancing of knife blades in exchange.

1 EXTRA : Cutting additional one.

SHIFT ESC : Restoring to normal condition in ERROR(red LED) and inputting parameter or program.

4 FEED **6 FEED** : to move the roller manually for mounting the material on the machine or for feeding it forwards or backwards.

SPEED 2 — Speed up (The current speed appears on the left-upside of LCD display with "%". Normal speed : 50%, Maximum speed : 100%)

8 SPEED — Speed up (The current speed appears on the left-upside of LCD display with "%". Normal speed : 50%, Maximum speed : 0%)
 * **Speed up & down is possible in any time(operation or stop) and set-speed will not be changed even though you press RESET button or power off & on.**

− INS : to insert new program between programs inputted already in time of program-input.

← DEL : to delete the wrong program in time of program-input. (All things of the STEP will be deleted.)

3. Specification

Model Name	Main Cutting Materials	Cutting Knife	Power Supply	Max. Cutting Width	Range of Cutting Length	Cutting Q'ty/min. (Length: 50mm)	Machine Size (Net weight)	Packing Size (Gross weight)
TBC-50S (Label cutter)	Label	Cold	AC110/220V 50/60Hz	110mm	1mm~ 300M	120~140 cuts	850×320×380 (19.5kgs)	535×430×340 (22.7kgs)

4. Caution for use

- Before use, please confirm the voltage and make ground(earth) connection.
  (Static-electricity will be reduced to a half.)
- Do not access hands or any object close to the working knife. (for safety)
- When the knife blade becomes dull, please use it after grinding with the grinding machine.
  (Please do not let the unskilled person grind manually or install the knife blade.)

EXCHANGE OF KNIFE

① First of all, unscrew 4 bolts on safety cap and take off the cap.
② Remove stopper.
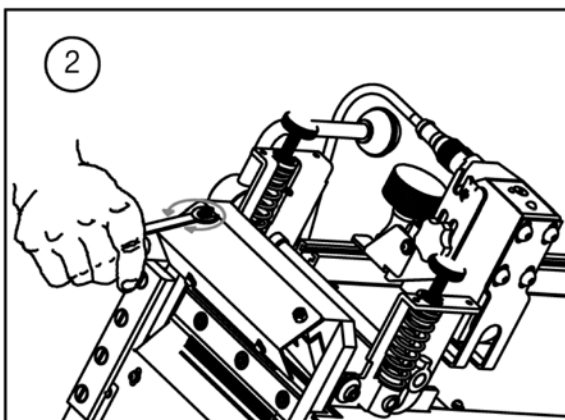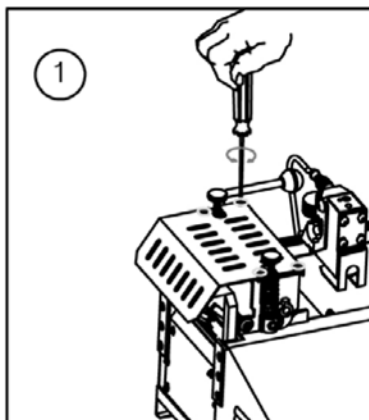
③ Unscrew 2 control bolts of upper knife by 2.5mm-wrench.(Don't take off.)
④ Unscrew 4 fixing bolts by 4mm-wrench and take off upper knife.
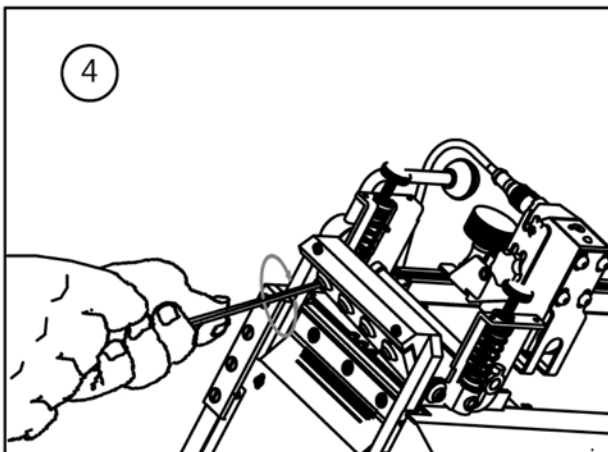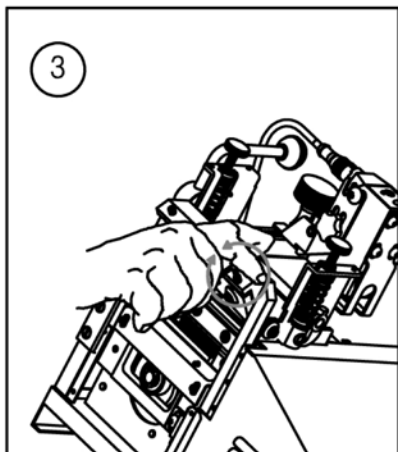
⑤ Unscrew 3 fixing bolts of lower knife by 4mm-wrench and take off lower knife.
⑥ Vice versa, install new lower knife and fasten it firmly.
⑦ Move up upper knife frame and install new upper knife and fix it but don't fasten it firmly.
⑧ By soft touch of M/CUT button, if right bottom of upper knife contacts top of lower knife, screw the control bolt of upper knife slightly.
⑨ Make a cutting test with paper or tissue by M/CUT button(right, middle, left of knife in order and adjust control bolt of upper knife finally.
⑩ If cutting is normal, fasten the control bolts of upper knife firmly.
⑪ Attach removed stopper again.
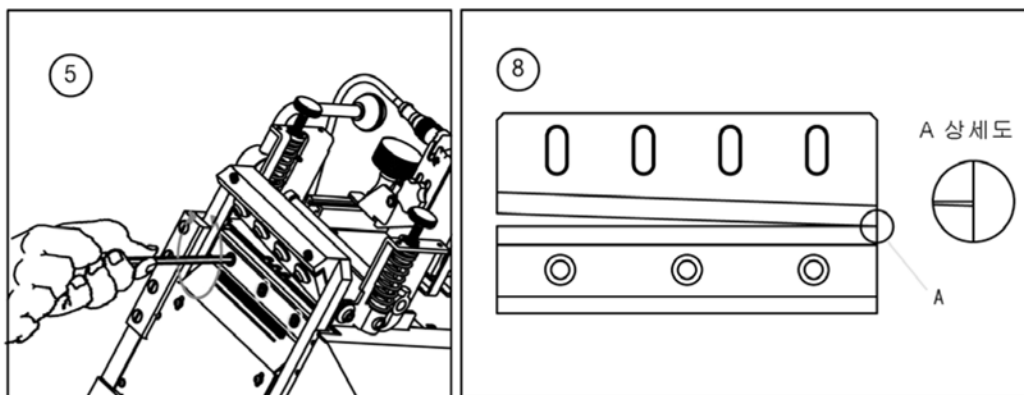
Mount of roll
 Fix the roll triangle by 4mm-wrench.

Exchange of fuse
 Take off the power plug and exchange as picture.

Cleaning of anti-static brush
 If anti-static function becomes weak, clean the anti-static brush by other brush.

TBC-50S Part List A (Feeding part)

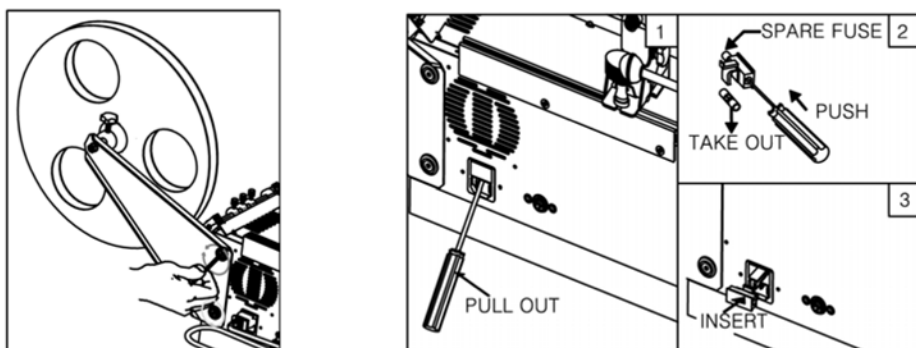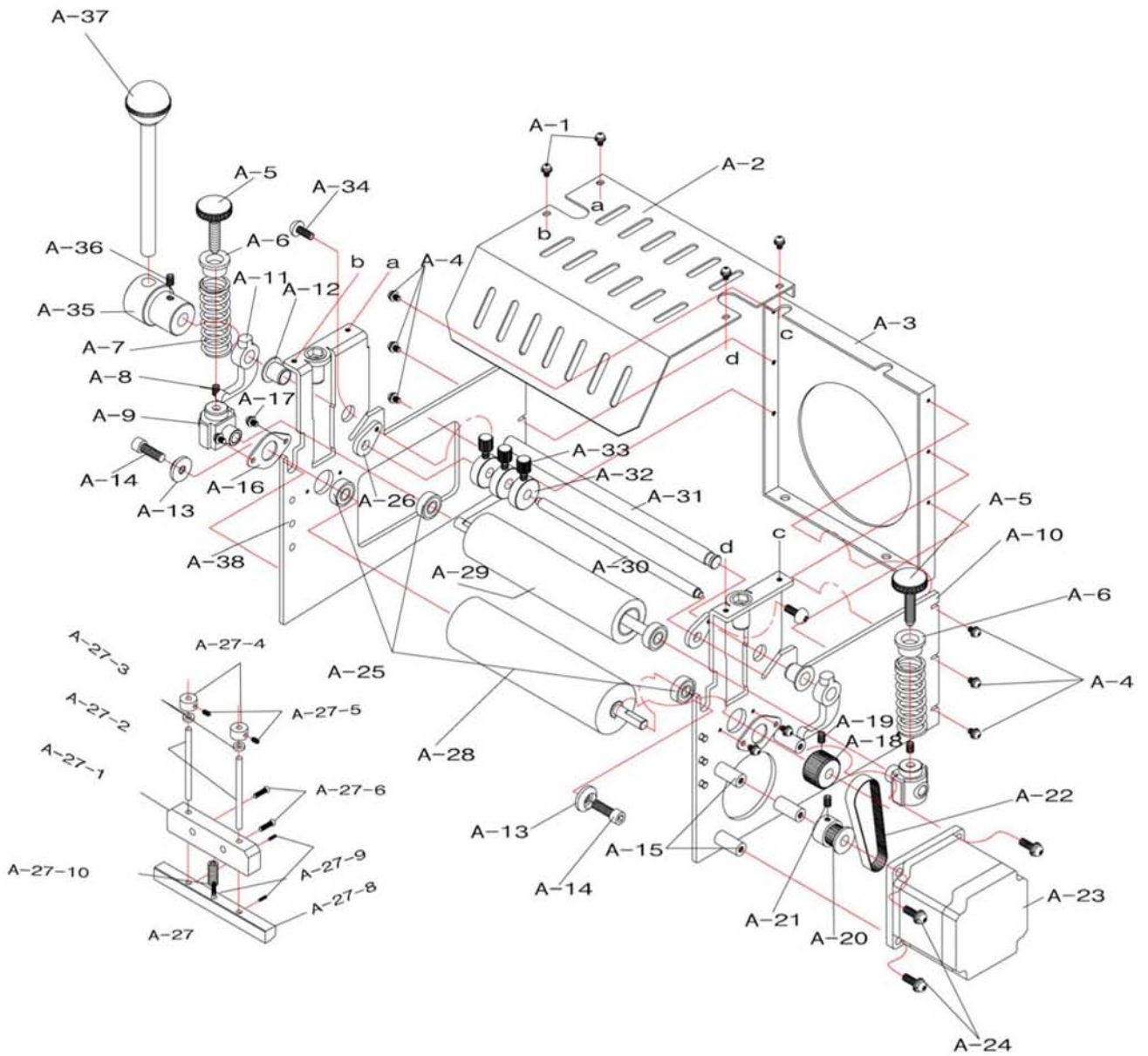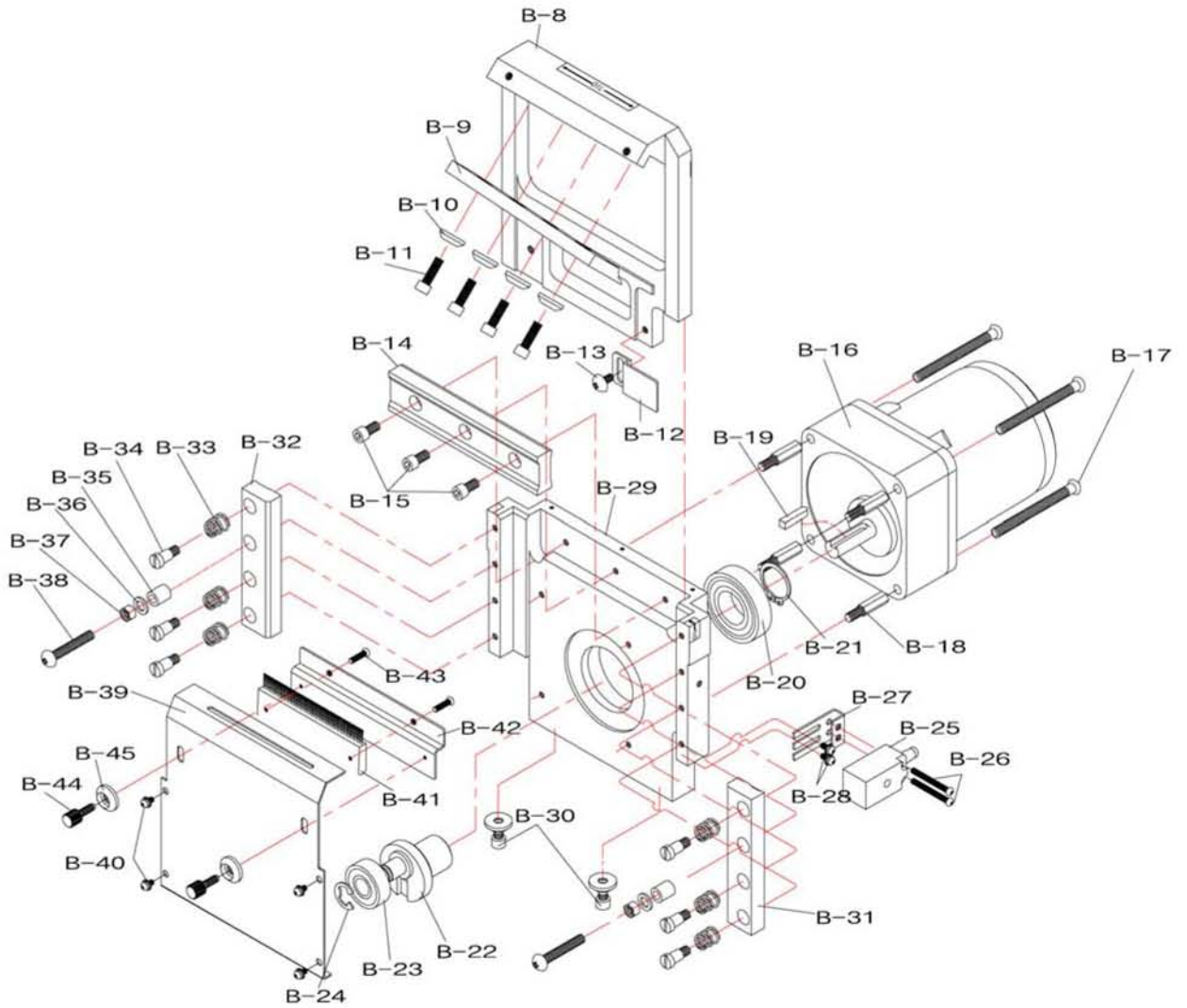| Part No.	Description	Part No.	Description
A-1	Clamping Bolt(M3×5L)	A-26	Guide Clamping Bracket
A-2	Knife Safety Cover	A-27	Stopper
A-3	Space Plate of Roller Bracket	A-27-1	Stopper Bracket
A-4	Clamping Bolt(M3×5L)	A-27-2	Pressure Stopper Shaft
A-5	Pressure-control Bolt	A-27-3	Rubber Ring
A-6	Pressure-control Spring Cover	A-27-4	Clamping Ring
A-7	Pressure-control Spring	A-27-5	Clamping Bolt (M3×4)
A-8	Detent Screw(M4×6L)	A-27-6	Clamping Bolt (M5×12)
A-9	Slide Block of Upper Roller	A-27-7	Clamping Bolt (M4×4)
A-10	Right Roller Bracket	A-27-8	Stopper
A-11	Slide Lever	A-27-9	Spring Clamping Bolt
A-12	Oilless	A-27-10	Spring (M4×15)
A-13	Clamping Washer	A-28	Lower Roller
A-14	Wrench Bolt(M×14L)	A-29	Upper Roller
A-15	Tie Bar of Stepping Motor	A-30	Front-guide Pin
A-16	Bearing Cover	A-31	Lever Shaft
A-17	Clamping Bolt(M3×5L)	A-32	Guide Ring
A-18	Feed-timing Gear(MXL30T)	A-33	Knob Bolt of Guide Ring
A-19	Detent Screw(M4×6L)	A-34	Round Screw(M4×5L)
A-20	Drive-timing Gear(MXL20T)	A-35	Lever Bracket
A-21	Detent Screw(M3×6L)	A-36	Detent Screw(M5×5L)
A-22	Timing Belt(MXL75)	A-37	Lever
A-23	Stepping Motor	A-38	Left Roller Bracket
A-24	Clamping Bolt(M4×13L)		
A-25	Ball Bearing(#696)		

TBC-50S Part Drawing B (Cutting part)

Part labels in the drawing: B-8, B-9, B-10, B-11, B-14, B-13, B-12, B-16, B-17, B-34, B-33, B-32, B-35, B-36, B-37, B-38, B-15, B-29, B-19, B-21, B-18, B-20, B-39, B-43, B-27, B-25, B-26, B-45, B-42, B-28, B-44, B-41, B-30, B-31, B-40, B-22, B-23, B-24

TBC-50S Part List B (Cutting part)

Part No.	Description	Part No.	Description
B-8	Upper Knife Case	B-27	Clamping Bracket
B-9	Upper Knife	B-28	Clamping Bolt (M3×5L)
B-10	Neck Washer	B-29	Lower Knife Case
B-11	Wrench Bolt (M5×15L)	B-30	Wrench Bolt (M5×15L)
B-12	Counting Sensor Bracket	B-31	Pressure Plate (Right)
B-13	Clamping Bolt(M4×6L)	B-32	Pressure Plate (Left)
B-14	Lower Knife	B-33	Pressure Spring
B-15	Wrench Bolt (M5×15L)	B-34	Clamping Bolt of Pressure Plate
B-16	Motor+Reduction Gear	B-35	Urethane Bush
B-17	Clamping Bolt (M5×42L)	B-36	Tension-control Washer
B-18	Motor Supporter	B-37	Tension-control Nut
B-19	Motor Key	B-38	Tension-control Bolt
B-20	Ball Bearing (#6004)	B-39	Front Cover
B-21	Snap Ring	B-40	Clamping Bolt
B-22	Crank Bundle	B-41	Anti-static Brush
B-23	Ball Bearing (#6000)	B-42	Front Bracket
B-24	E Ring	B-43	Clamping Bolt
B-25	Counting Sensor	B-44	Height-control Bolt
B-26	Clamping Bolt (M3×18L)	B-45	Height-control Nut
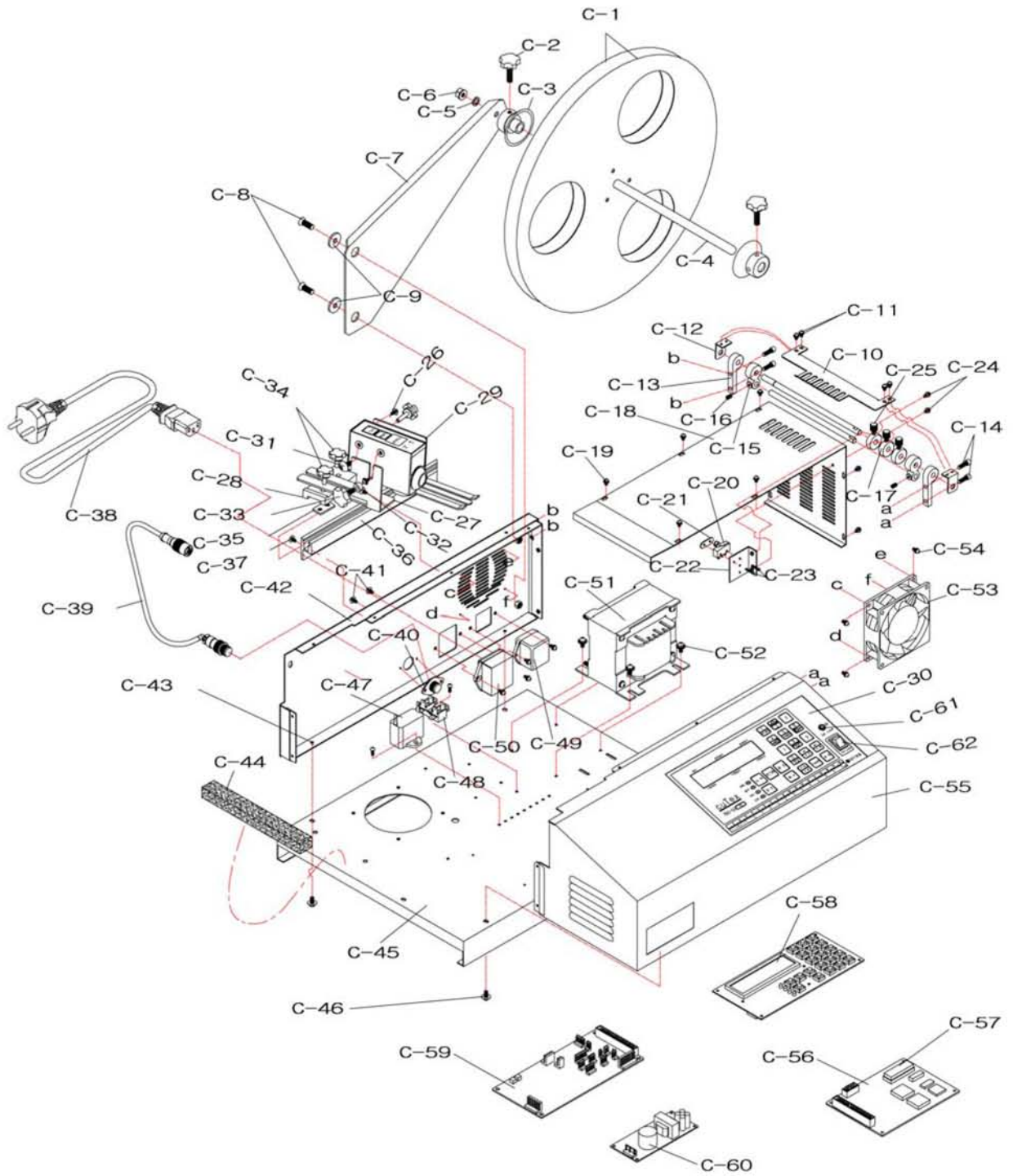
TBC-50S Part List C (Other part)

Part No.	Description	Part No.	Description
C-1	Roll-hanger Wheel	C-32	Liner
C-2	Clamping Bolt of Holder	C-33	Height-control Bolt of Sensor
C-3	Holder	C-34	Position-control Bolt of Sensor
C-4	Roll-hanger Shaft	C-35	Plate-nut of Sensor Guide
C-5	Roll-hanger Shaft Washer	C-36	Sensor Guide
C-6	Check Nut(M6)	C-37	Flat-head Bolt(M4×10L)
C-7	Roll-hanger	C-38	Power Cord
C-8	Flat-head Bolt(M6×16L)	C-39	Sensor-connector
C-9	Neck Washer of Roll-hanger	C-40	Sensor-connector Bracket
C-10	Existence Detector	C-41	Clamping Bolt(M3×5L)
C-11	Clamping Bolt(M3×5L)	C-42	Left Cover
C-12	Clamping Bracket	C-43	Clamping Bolt(M4×8L)
C-13	Rear Guide-pin Bracket	C-44	Sponge
C-14	Wrench Bolt(M4×15L)	C-45	Base
C-15	Rear Tension-guide Block	C-46	Clamping Bolt(M4×8L)
C-16	Detent Screw(M4×6L)	C-47	Condenser
C-17	Guide Ring	C-48	Terminal
C-18	Upper Guide Plate	C-49	AC Connector(OUT-PUT)
C-19	Clamping Bolt(M3×5L)	C-50	AC Connector(IN-PUT)
C-20	Micro Limit Switch	C-51	Transformer
C-21	Plate-nut	C-52	Clamping Bolt(M4×6L)
C-22	Limit Switch Bracket	C-53	Cooling Fan
C-23	Clamping Bolt(M2×10L)	C-54	Clamping Bolt(M3×6L)
C-24	Clamping Bolt(M3×5L)	C-55	Control Cover
C-25	Knob Bolt	C-56	Control Circuit Board(MB)
C-26	Sensor	C-57	ROM
C-27	Sensor Bracket	C-58	Operation Circuit Board(OP)
C-28	Angle-control Bracket	C-59	Drive Circuit Board(DR)
C-29	Front Bracket of Sensor	C-60	SMPS(Power Supply)
C-30	Urethane Panel	C-61	Toggle Switch
C-31	Height-control Bolt	C-62	Power Switch

Trouble-shooting of TBC-50 series

No	Troubles			Appicable model	Causes & Measures
1	No power supply			All models	- Check if electric cord is connected well. - Check if the fuse blows out or not.
2	Power is on, but no work	Feeding roller doesn't work.		All models	- Check if there is inserted any alien substance in roller. - If current length on display is changed, exchange drive board. - If current length on display is not changed, exchange Control board(MB).
		Knife doesn't work.		All models	- Check if pressure plates of upper knife are too much fastened or not.
		LCD display doesn't work.		All models	- After opening the cover, check the connetion. (especially between Operation & MB board)
		All functions don't work		Al models	- Check if auto-stop device lies down. If any, raise it up.
3	Material is not cut.			Hot cutter (H, LH, SH, HX)	- Check if temperature goes up to set-degree. - Check if knife blades are even(parallel).
4	Material is cut onesidedly.			All models	- Check if blades are damaged or weared. - After making both knives close each other by M/CUT button and check if they are even or not. (If they are not even, adjust them by bolts)
5	Cut-length is different from set-length.			All models	- Test cutting after loosening material from the reel by hand or attaching feeding device.
6	It cuts before the cutting line of labels.			Label cutter (S, SH)	- Move the sensor towards knife side as long as the difference by pushing.
7	It cuts after the cutting line of labels.			Label cutter (S, SH)	- Move the sensor towards counter-knife side as long as the difference by pushing.
8	ERROR on LCD & LED	ERROR CODE [064] >Sensor check Er		Label cutter (S, SH)	- Trouble in Mark sensor → · Check if the sensor is connected well or not. · Check if the sensor is adjusted well or not. (FILE NO 001) · Check if it is label problem or not.
		ERROR CODE [065] >CUT I/O Error!		All models	- Trouble in cutting motor or cutting sensor → · Upper knife moves 1~3 sec. and ERROR on display. Check the connection of cutting sensor. If not, exchange the cutting sensor. · Upper knife doesn't move and ERROR on display. Exchange the cutting motor or drive board.
		STOP INPUT !! CHECK STOP INP!		All models	- Auto stop device is pressed down or shortage. → raise up the device and check shortage.
		(C)ACORD CTRL-OP AMC-T3KA VER1.7D		All models	- Bad connected ROM → Press ROM by hand or connect it again. (If not, change MB board)
		ERROR CODE[065] >CHECK CODE[003]		All models	- Change of FILE 003 in program by noise or mis-operation → Initialize the controller. ※ **How to Initialize**(programs to be initial) : press **SET**+**SHIFT/ESC** buttons and **RESET** button at the same time. (Press **RESET** later than other two keys.)
9	Operator feels electric current in touch of machine.			All models	- Connect the earth cord(green) to any bolt of backside of machine.
10	After exchange ROM, you should do initialize the controller, due to error message, if you cannot do initialization, please press "SHIFT/ESC' button to escape error message screen and then initialize the controller.				