

CHAPTER 3. MECHANISM BLOCKS

[1] General description

1. Document feed block and diagram

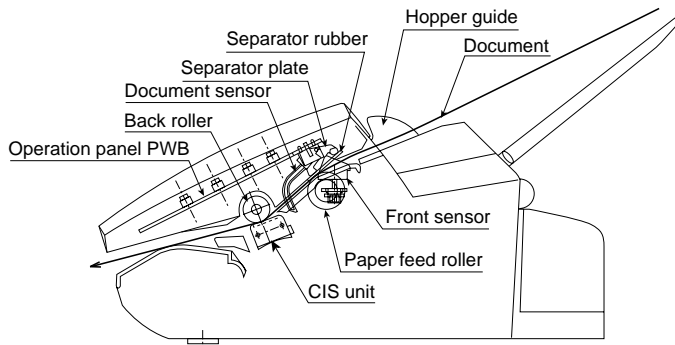


Fig. 1

2. Document feed operation

- 1) The original, which is set in the document hopper, feeds automatically when the front sensor is activated. This in turn activates the pulse motor which drives the document supply roller. The document stops when the lead edge is detected by the document sensor.
- 2) The lead edge of the original is fed a specified number of pulses after the lead edge of the document is detected for the reading process to begin.
- 3) The trailing edge of the original is fed a specific number of pulses after the trailing edge of the document deactivates the document sensor. The read process then stops and the original is discharged.
- 4) When the front sensor is in the OFF state (any document is not set up in the hopper guide), the drive will be stopped when the document is discharged.

3. Hopper mechanism

3-1. General view

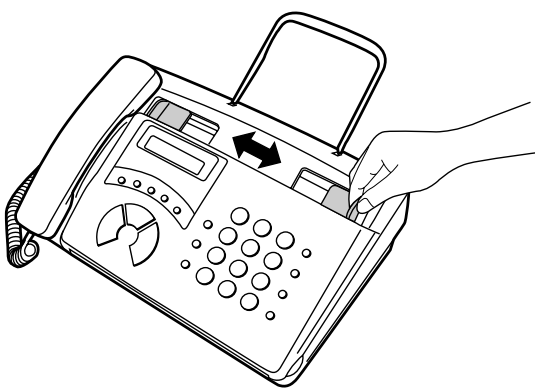


Fig. 2

The hopper section contains document guides that are used to adjust the hopper to the width of the original document. This ensures that the original feeds straight into the fax machine for scanning.

Document width: 148 mm to 216 mm (A5 longitudinal size to Letter longitudinal size)

NOTE: Adjust the document guide after setting up the document.

3-2. Automatic document feed

- 1) Use of the paper feed roller and separation rubber plate ensures error-free transport and separation of documents. The plate spring presses the document to the paper feed roller to assure smooth feeding of the document.
- 2) Document separation method: Separation rubber plate

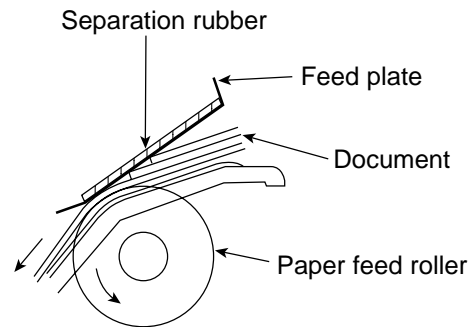


Fig. 3

3-3. Documents applicable for automatic feed

	4x6 series (788mm x 1091mm x 1000mm sheets)		Square meter series	
	Minimum	Maximum	Minimum	Maximum
Feeder capacity	5 sheets, max.			
Paper weight	45kg	69.2kg	52g/m ²	80g/m ²
Paper thickness (ref.)	0.06mm	0.09mm	0.06mm	0.09mm
Paper size	148mm x 140mm ~ A4 (210mm x 297mm), Letter (216mm x 279mm)			

NOTE: Double-side coated documents and documents on facsimile recording paper should be inserted manually. The document feed quantity may be changed according to the document thickness.

Documents corresponding to a paper weight heavier than 69.2kg (80g/m²) and lighter than 135kg (157g/m²) are acceptable for manual feed.

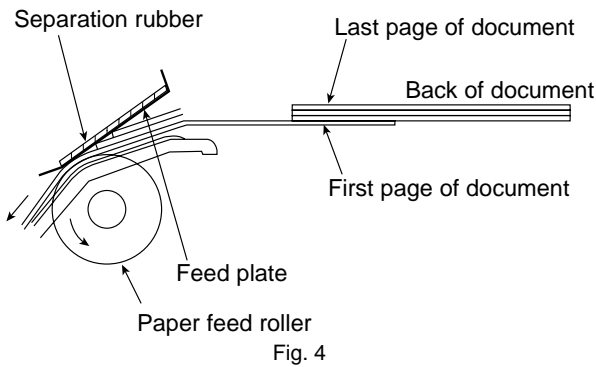
Documents heavier than 135kg in terms of the paper weight must be duplicated on a copier to make it operative in the facsimile.

3-4. Loading the documents

- 1) Make sure that the documents are of suitable size and thickness, and free from creases, folds, curls, wet glue, wet ink, clips, staples and pins.
- 2) Place documents face down in the hopper.
 - i) Adjust the document guides to the document size.
 - ii) Align the top edge of documents and gently place them into the hopper. The first page under the stack will be taken up by the feed roller to get ready for transmission.

NOTES: 1) Curled edge of documents, if any, must be straightened out.

2) Do not load the documents of different sizes and/or thicknesses together.



3-5. Documents requiring use of document carrier

- 1) Documents smaller than 148mm x 140mm.
- 2) Documents thinner than the thickness of 0.06mm.
- 3) Documents containing creases, folds, or curls, especially those whose surface is curled (maximum allowable curl is 5mm).
- 4) Documents containing tears.
- 5) Carbon-backed documents. (Insert a white sheet of paper between the carbon back and the document carrier to avoid transfer of carbon to the carrier.)
- 6) Documents containing an easily separable writing material (e.g., those written with a lead pencil).
- 7) Transparent documents.
- 8) Folded or glued documents.

Document in document carrier should be inserted manually into the feeder.

4. Document release

4-1. General

To correct a jammed document or to clean the document running surface, pull the insertion side of document center of the operation panel. To open the upper document guide, the operation panel must be opened first.

4-2. Cross section view

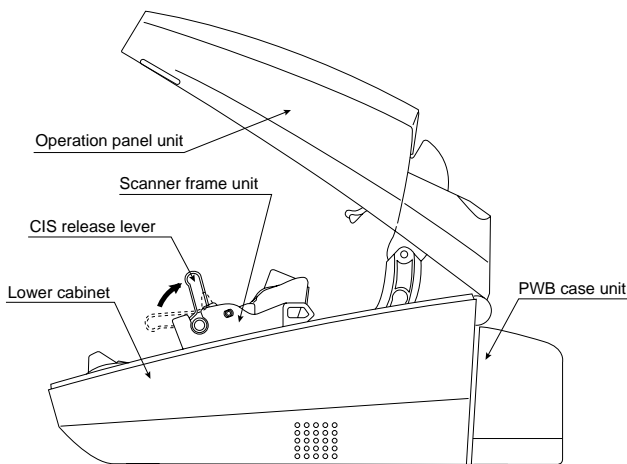


Fig. 5

5. Recording block

5-1. General view

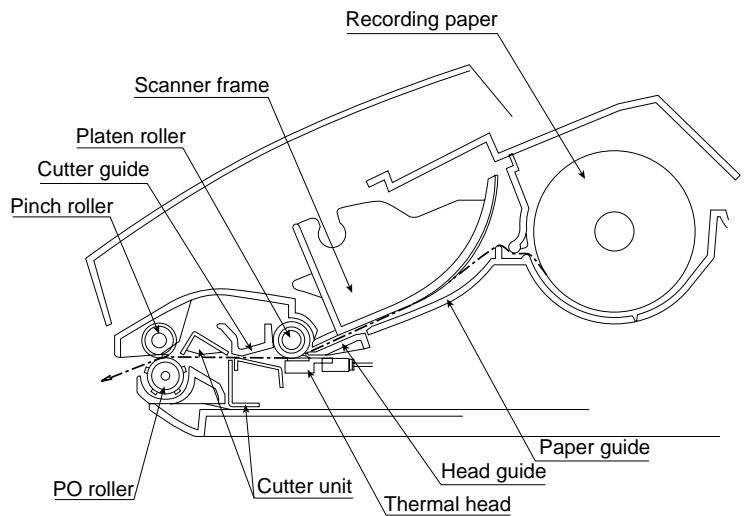


Fig. 6

5-2. Driving

Via the pulse motor gear shaft, the reduction gear, and the recording paper feed gear, rotation of the pulse motor is conveyed to the recording paper feed roller to feed the recording paper.

5-3. Recording

Use of a thermal head permits easier maintenance and low operating costs.

1) Thermal head

The thermal head consists of 1728-dot heat elements arranged in a single row and has the resolution of 8 dots/mm. The maximum recording speed is 10ms/line. The thermal head also incorporates a 1728-dot shift register latch and output control driver circuit. Low power consumption is achieved by dividing the head into nine segments.

2) Structure of the recording mechanism

Recording is accomplished by pressing the thermal head on the recording paper against the platen roller.

The main scan (horizontal) is electronically achieved, while the subscan (vertical) is achieved by moving the recording paper by the recording platen roller.

Usually, the cause for uneven print tone is caused by misalignment of the thermal head or uneven contact with the roller.

It can be checked in the following manner.

- 1) Check if the thermal head power and signal cables are properly routed.
- 2) Check that the thermal head pivot moves smoothly up and down.
- 3) Check that the thermal head support bracket is secured without any play.
- 4) Check to see that the recording platen roller has proper concentricity, in the case of a print tone variation evenly repeated down the page.
- 5) Replace the thermal head with a new one and check to see if the same trouble occurs.

[2] Disassembly and assembly procedures

- This chapter mainly describes the disassembly procedures. For the assembly procedures, reverse the disassembly procedures.
- Easy and simple disassembly/assembly procedures of some parts and units are omitted. For disassembly and assembly of such parts and units, refer to the Parts List.
- The numbers in the illustration, the parts list and the flowchart in a same section are common to each other.
- To assure reliability of the product, the disassembly and the assembly procedures should be performed carefully and deliberately.

1	Paper support guide, handset cover and scanner unit
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Parts list (Fig. 1)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Mechanism unit	1	7	Screw (3×8)	1
2	Screw (3×12)	2	8	Handset cover	1
3	Paper support guide	1	9	Hook switch lever	1
4	Paper sensor lever	1	10	Screw (3×12)	2
5	Paper sensor lever spring	1	11	Connector	2
6	Panel stopper	1	12	Scanner unit	1

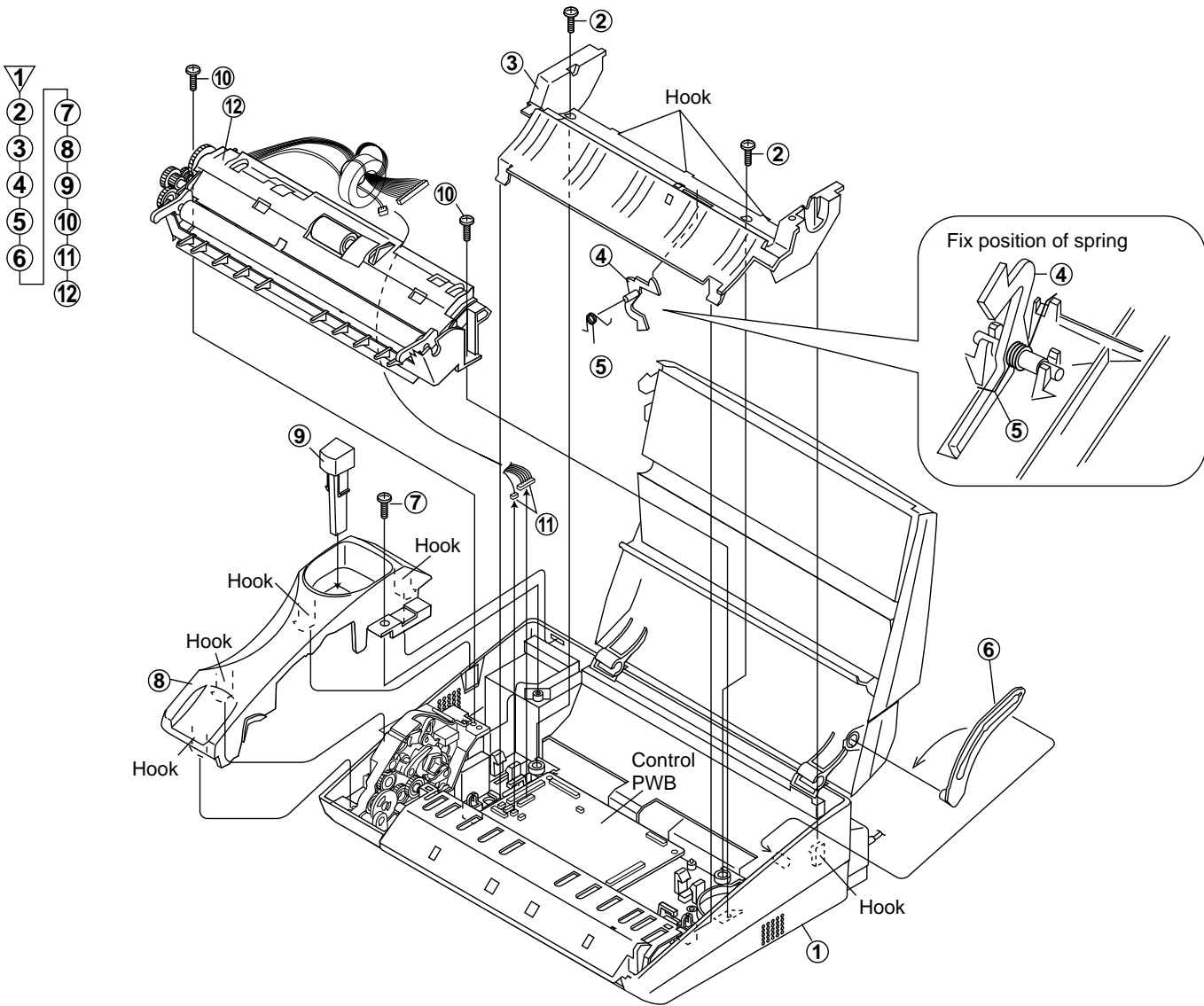


Fig. 1

2

CIS unit and scanner frame

Parts list (Fig. 2)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Document guide lower	1	11	Feed roller	1
2	Back roller gear	1	12	Connector	1
3	Back roller bearing, left	1	13	CIS support, left	1
4	CIS release lever, left	1	14	CIS support, right	1
5	Back roller	1	15	CIS unit	1
6	CIS release lever, right	1	16	CIS protect sheet	1
7	Back roller bearing, right	1	17	CIS spring	2
8	Reduction gear, 17/28z	1	18	Connector	1
9	Reduction gear, 17/23z	1	19	Front sensor	1
10	Feed roller shaft	1	20	Scanner frame	1

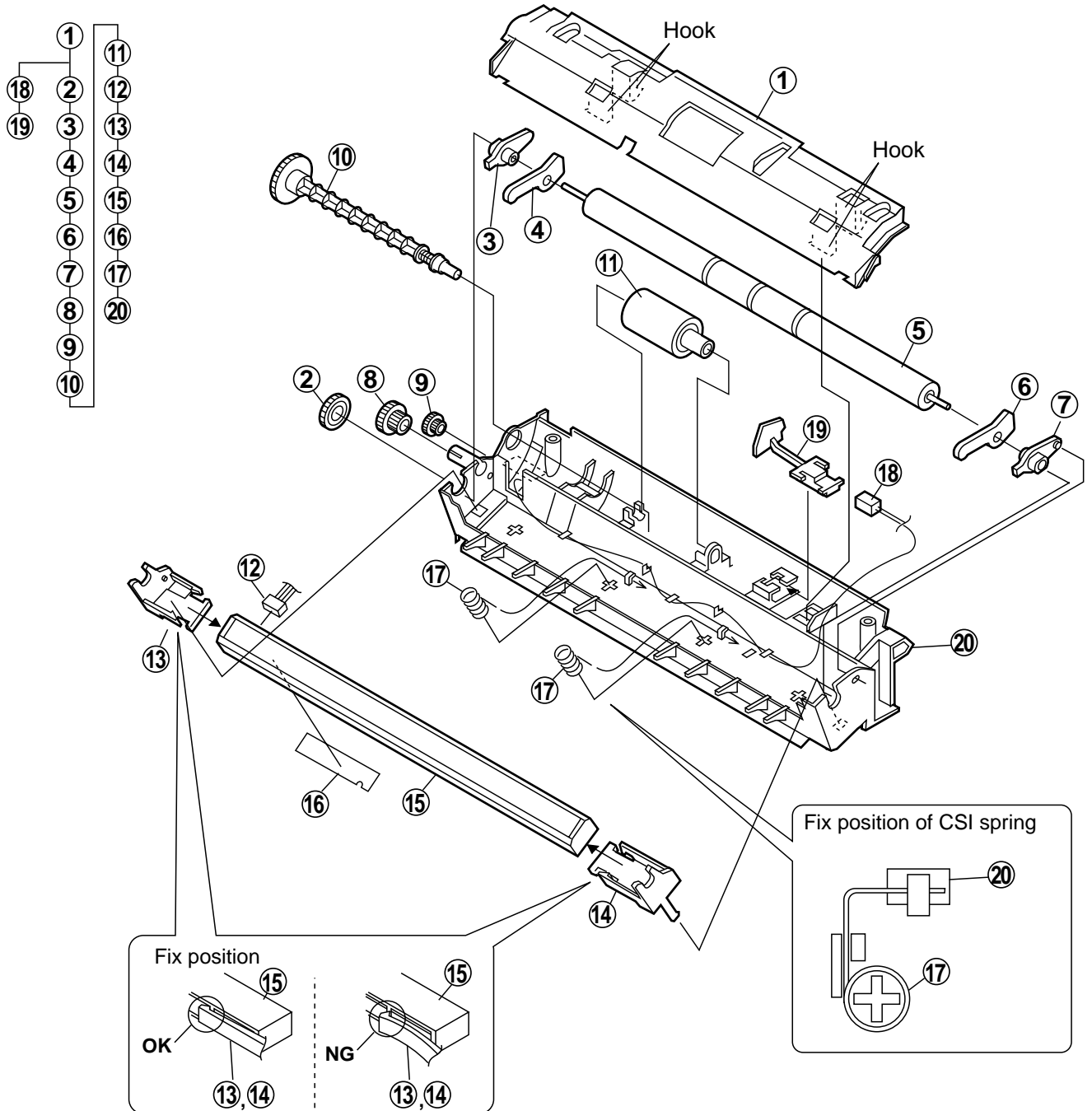


Fig. 2

3

Operation panel unit, drive unit, hopper guide

Parts list (Fig. 3)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Mechanism unit	1	10	Hopper guide unit	1
2	Connector	2	11	Operation panel unit/ document guide upper unit	1
3	Operation panel unit	1	12	Screw	1
4	Connector	3	13	Pinion gear	1
5	Screw (3×12)	2	14	Hopper spring	1
6	Cutter cam spring	1	15	Hopper guide, left	1
7	Drive unit	1	16	Hopper guide, right	1
8	Cutter arm	1	17	Hopper guide	1
9	Screw (3×8)	2			

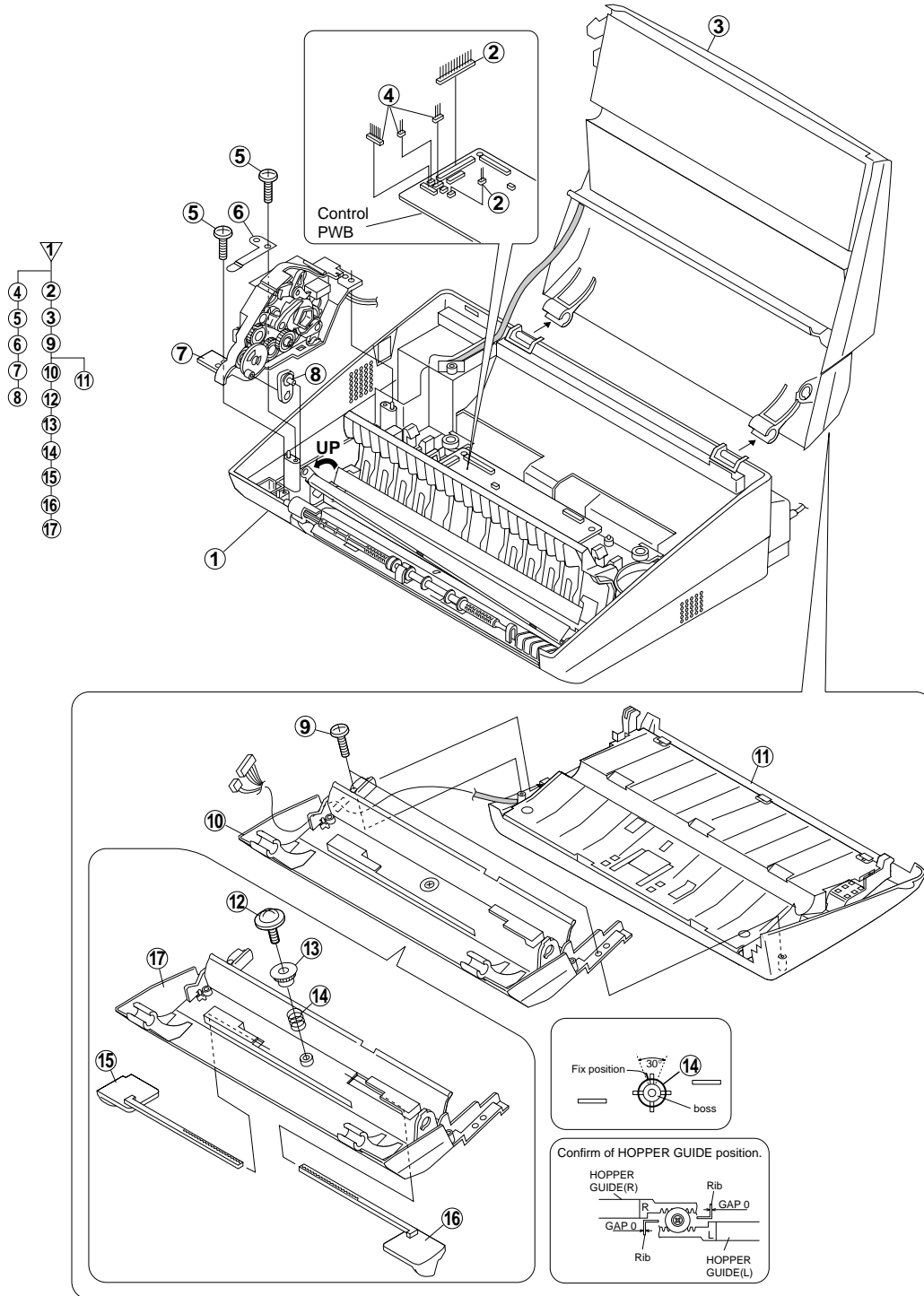


Fig. 3

4

Upper cabinet and document guide upper

Parts list (Fig. 4)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Screw (3×8)	2	10	Feed spring	1
2	Connector	1	11	Feed plate	1
3	Door sensor	1	12	Document guide upper	1
4	Blind sheet	1	13	Screw (2×6)	3
5	Document guide upper unit	1	14	Connector	1
6	Operation panel unit	1	15	Operation panel PWB unit	1
7	Separate spring	1	16	Direct key	1
8	Separator plate	1	17	Start key	1
9	Separator rubber	1	18	12 key	1
			19	Upper cabinet	1

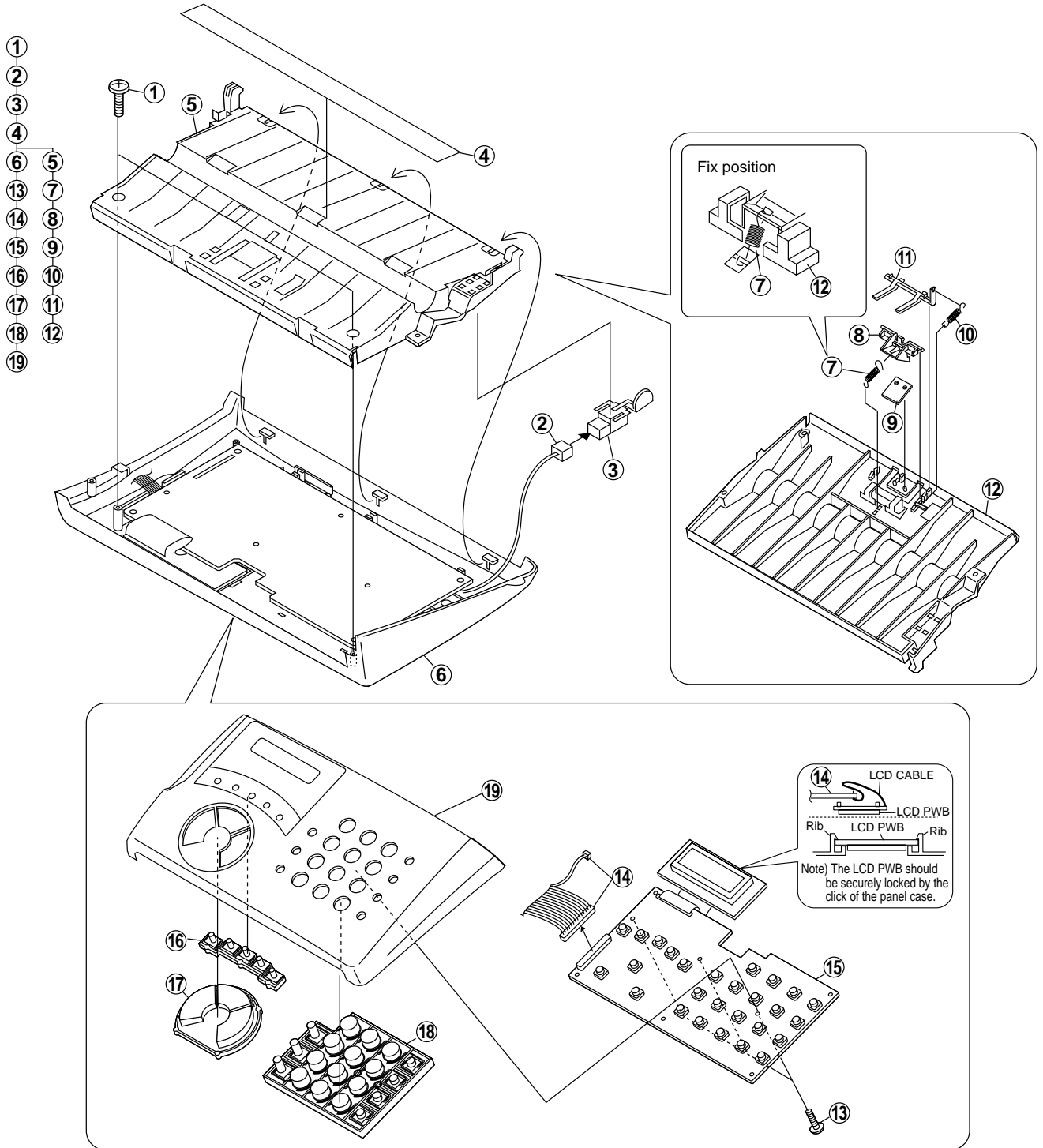


Fig. 4

5 Drive unit frame

Parts list (Fig. 5)

No.	Part name	Q'ty	No.	Part name	Q'ty	No.	Part name	Q'ty
1	Cutter switch	1	11	Idler gear, 25Z	1	21	Planet gear	1
2	Cutter gear	1	12	Planet lever C	1	22	Planet gear spring	1
3	Cutter gear spring	1	13	Planet gear	1	23	Planet lever B	1
4	Cutter plate	1	14	Planet gear spring	1	24	Planet gear	1
5	Cam spring	1	15	Reduction gear, 17/36Z	1	25	Planet gear spring	1
6	Cam switch	1	16	Mode lever	1	26	Reduction gear, 17/43Z	1
7	Cam gear	1	17	Planet gear	1	27	Idler gear, 25Z	1
8	Reduction gear, 17/30Z	1	18	Planet gear spring	1	28	Screw (3x8)	1
9	Idler gear, 30Z	1	19	Reduction gear, 17/30Z	1	29	Motor	1
10	Idler gear, 25Z	1	20	Planet lever A	1	30	Motor plate	1
						31	Drive unit frame	1

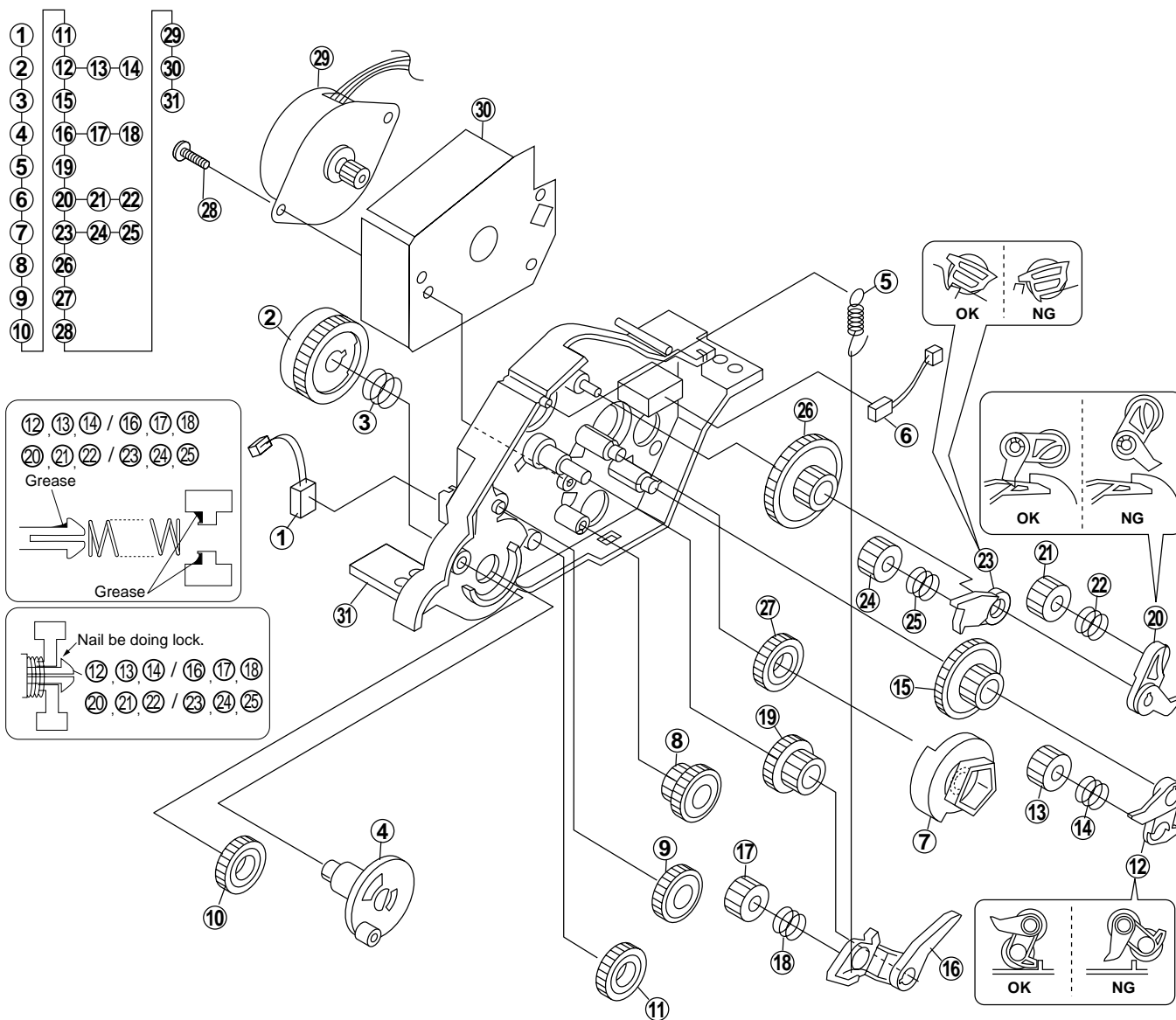


Fig. 5

6

Head guide, PO guide, cutter guide upper and cutter

Parts list (Fig. 6)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Mechanism unit	1	5	Pinch roller	2
2	Cutter guide upper	1	6	PO guide	1
3	PO guide unit	1	7	Head guide	1
4	Pinch roller spring	2	8	Screw (3×6)	1
			9	Cutter	1

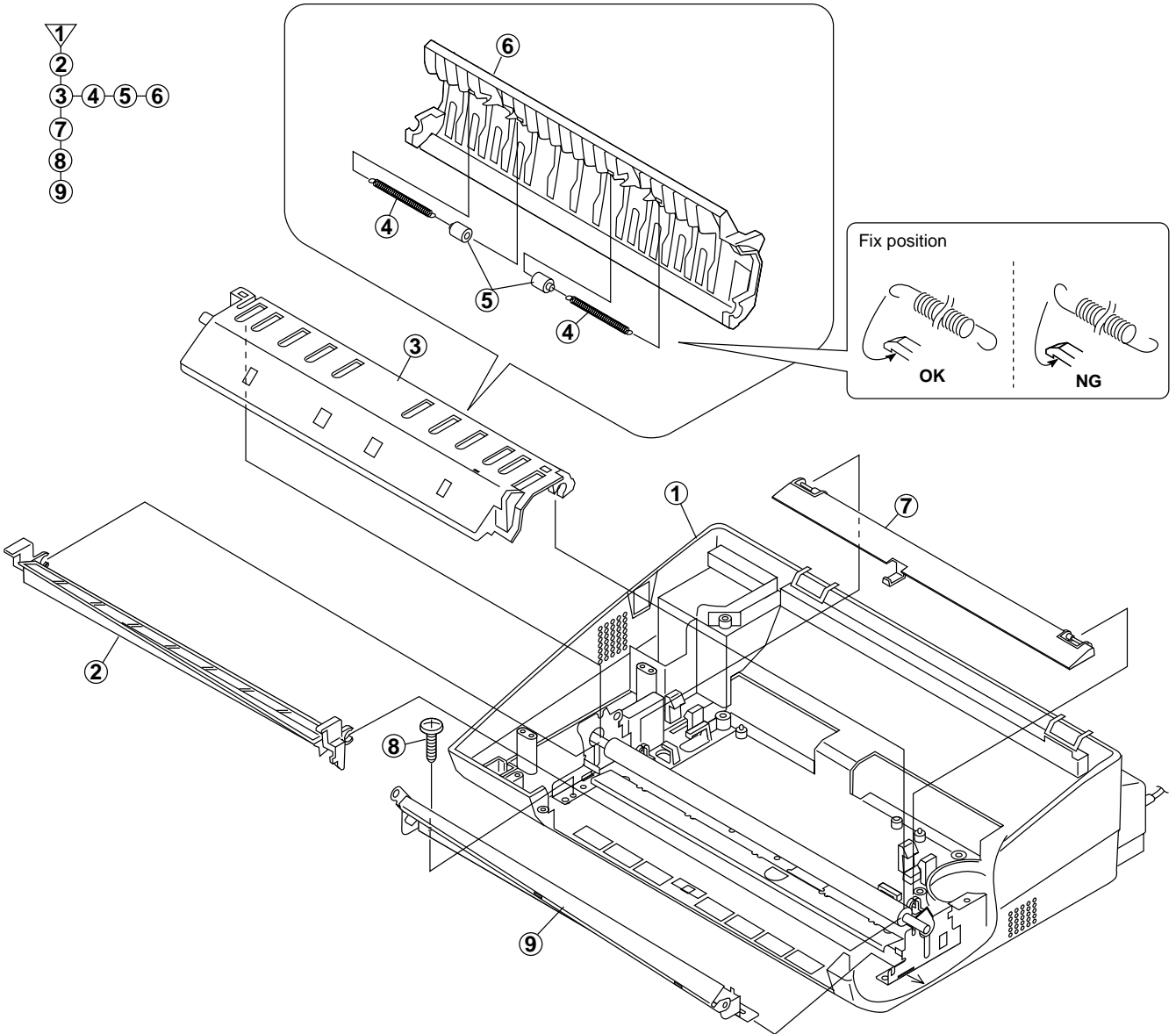


Fig. 6

7 PO roller guide and head frame unit

Parts list (Fig. 7)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Mechanism unit	1	7	PO roller rubber	2
2	Screw (3×6)	1	8	PO roller	1
3	Connector	1	9	PO roller guide	1
4	Screw (3×12)	1	10	Screw (3×12)	1
5	PO roller guide unit	1	11	Head frame unit	1
6	PO gear	1	12	Screw (3×8)	2
			13	Panel lock lever spring	2

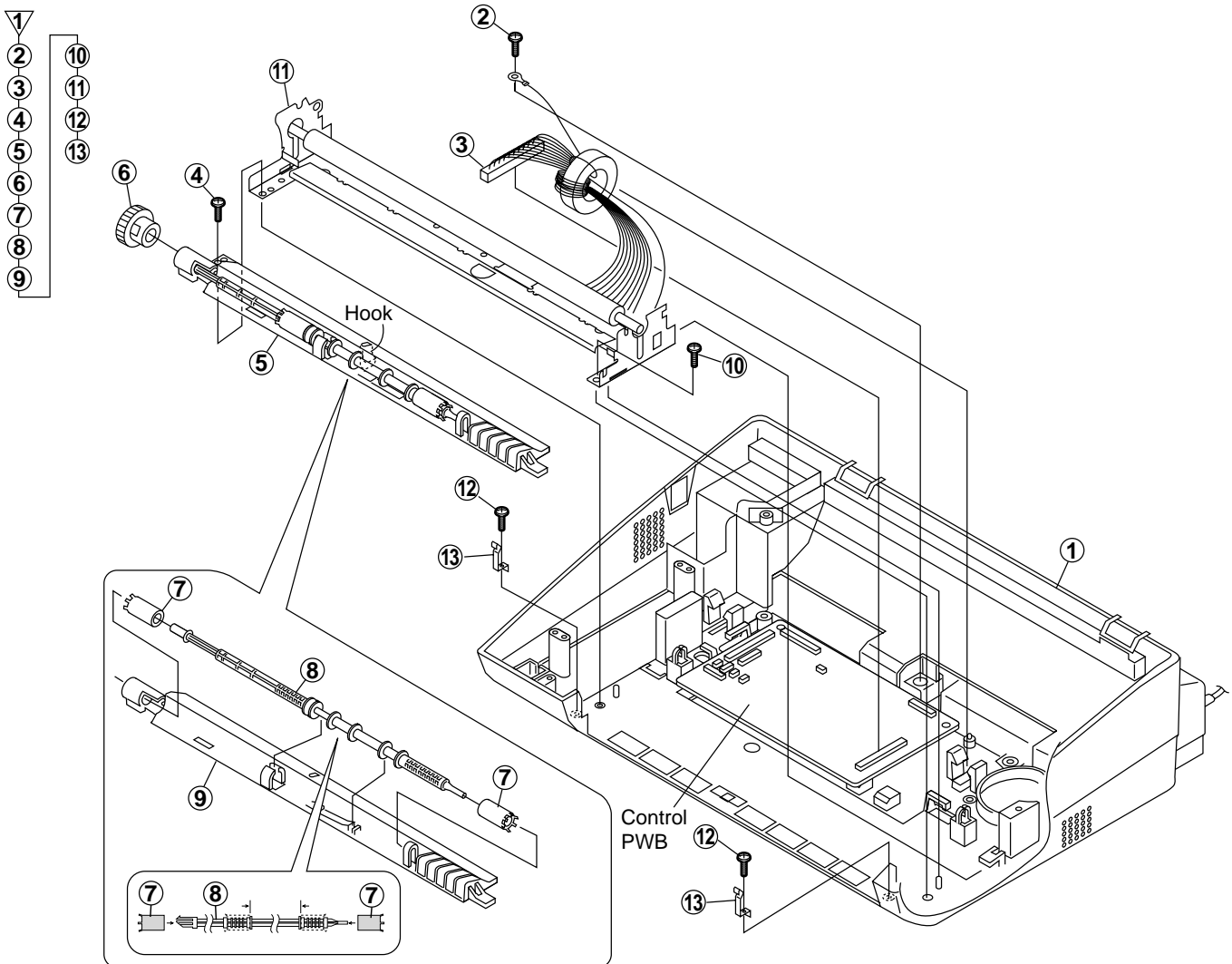


Fig. 7

8

Head frame and thermal head

Parts list (Fig. 8)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Platen gear	1	9	Screw (3×6)	1
2	Platen bearing	2	10	Head holder, right	1
3	Platen roller	1	11	Thermal head	1
4	Connector	1	12	Document sensor lever	1
5	Screw (3×6)	1	13	Document sensor lever spring	1
6	Head earth cable	1	14	Head spring 2	2
7	Screw (3×6)	1	15	Head spring 1	3
8	Head holder, left	1	16	Head frame	1

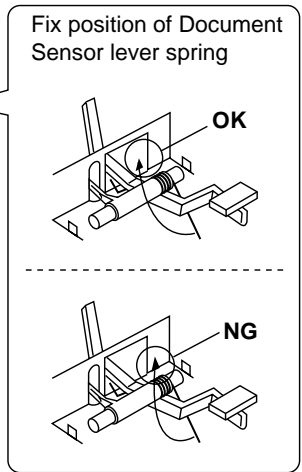
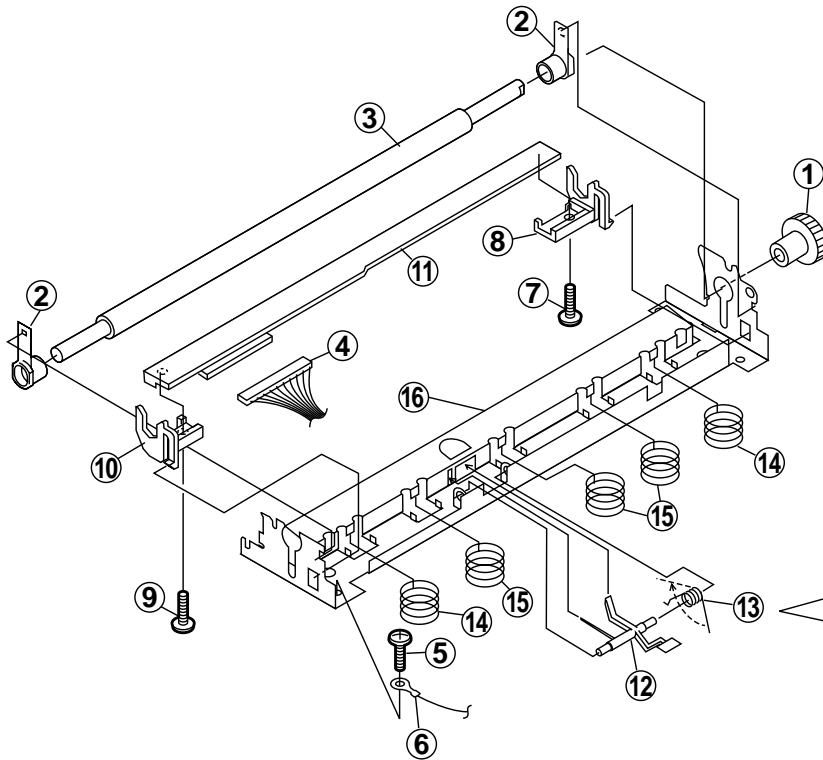
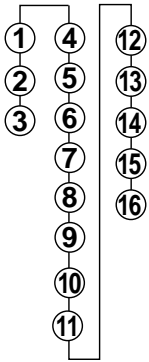


Fig. 8

9

PWB case top, bottom, PWB and speaker

Parts list (Fig. 9)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Mechanism unit	1	11	Screw (3×8)	2
2	Screw (3×8)	1	12	Hook switch joint lever	1
3	Connector	1	13	PWB case, top	1
4	Connector	2	14	PWB case, bottom unit	1
5	PWB case unit	1	15	Screw (3×6)	1
6	Screw (3×8)	1	16	TEL/LIU PWB unit	1
7	Control PWB unit	1	17	Screw (4×6)	1
8	Screw (3×8)	1	18	AC cord ass'y	1
9	Speaker holder lever spring	1	19	Power supply PWB unit	1
10	Speaker ass'y	1	20	PWB case, bottom	1

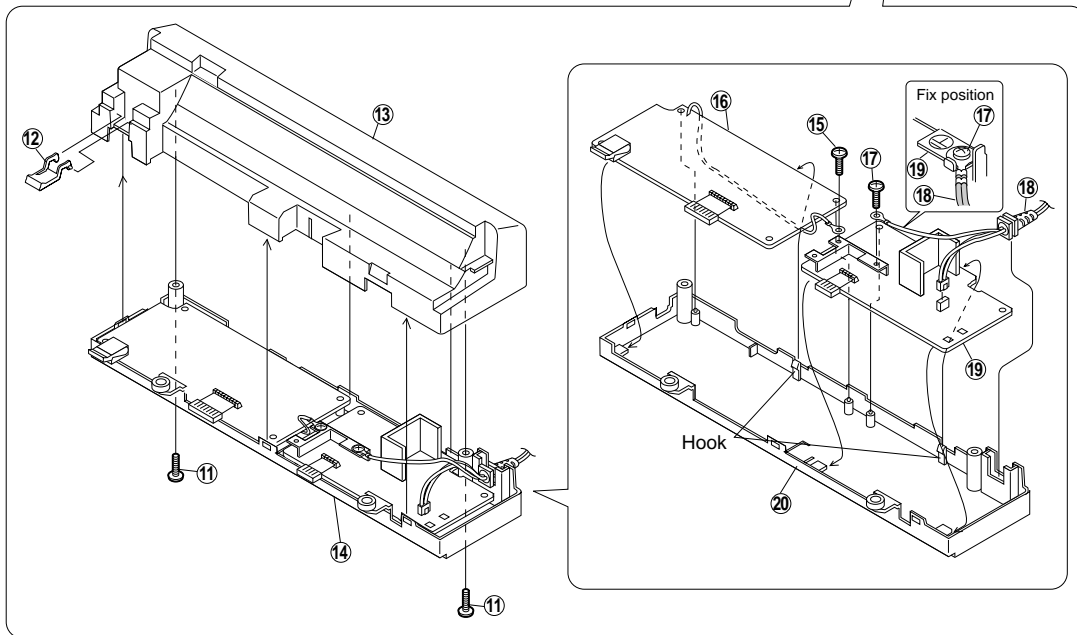
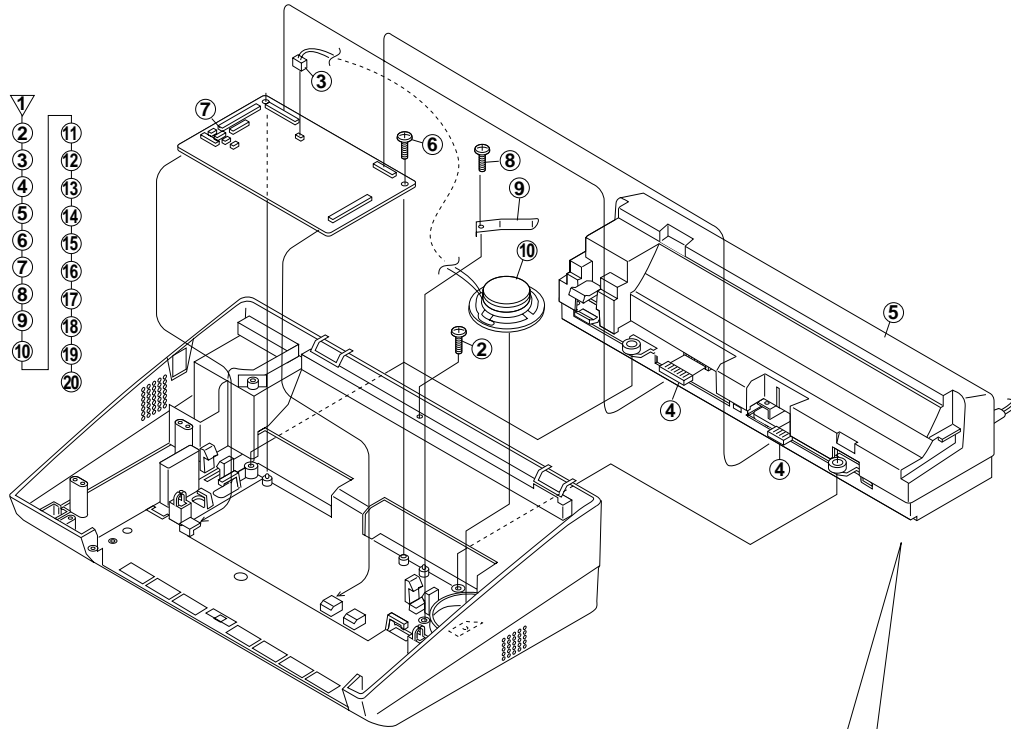


Fig. 9

10 Wire treatment

Parts list (Fig. 10)

No.	Part name	Q'ty
1	Core (F2125)	2
2	Screw (3x6)	2
3	Screw (4x6)	1
4	Screw (3x6)	1
5	Band (100mm)	3
6	Core (F2123)	1

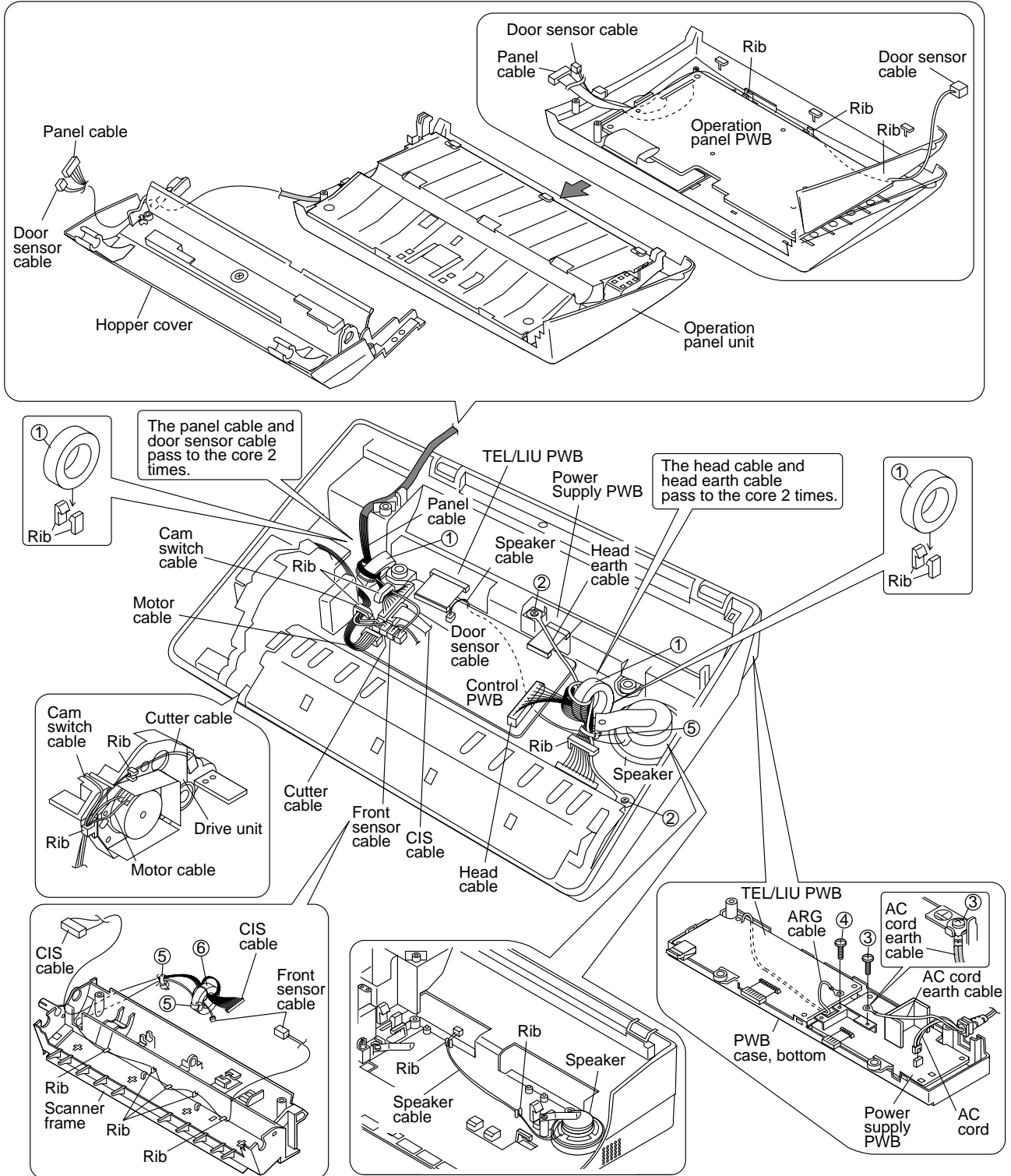


Fig. 10