



Technical Bulletin No. IXO-001

SUBJECT: Service Manual Correction	DATE: June 14th, 1993
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PREPARED BY: H. Someya CHECKED BY:	FROM: FAX T.S. Section
CLASSIFICATION: <input type="checkbox"/> Action Required <input type="checkbox"/> Troubleshooting <input type="checkbox"/> Retrofit Information	<input checked="" type="checkbox"/> Revision of service manual <input type="checkbox"/> Information only <input type="checkbox"/> Other
MODEL: IXO	

This information includes corrections to the IXO service manual.

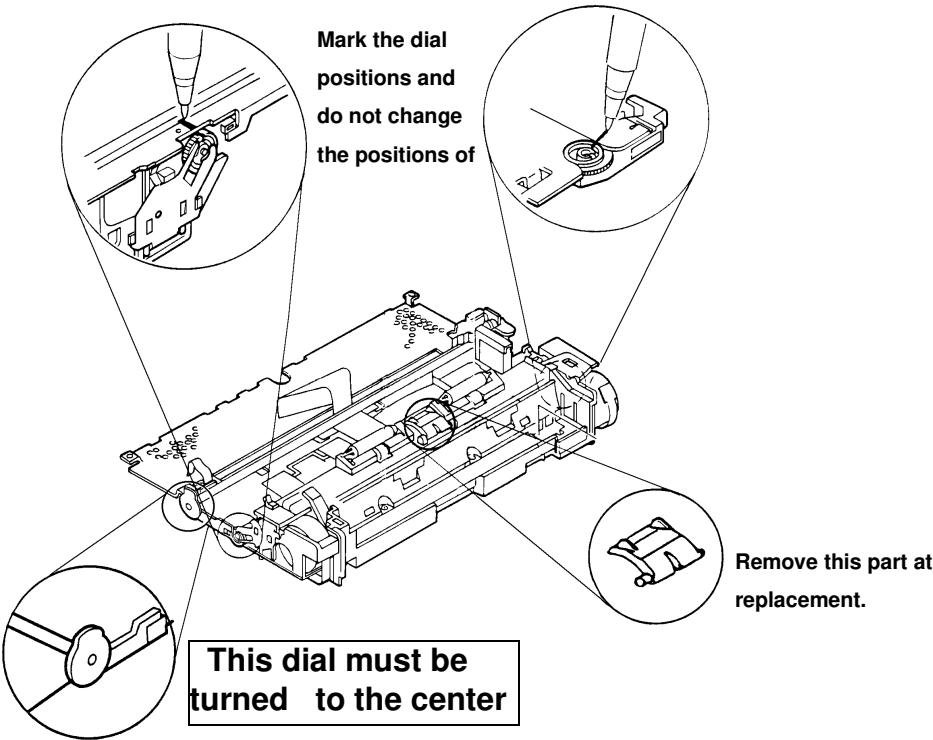
1. Section 4.4.1. (Page 4-27)

The following addresses have been changed from mass production.

5278 - 5376	Modem rates used in the last five communications to the terminals programmed in the Quick/Speed dials and to the forwarding terminal. (5 bytes x 51 destinations) [0: No history, 1: 2400 bps, 2: 4800 bps, 3: 7200 bps, 4: 9600 bps]
5377	Number of characters in the RTI - 14(H)
5378 - 538B	RTI (ASCII)
538C	Number of characters in the CSI - 14 (H)
538D - 53A0	CSI (ASCII)
53A1	Number of characters in the TTI - 20(H)
53A2 - 53C1	TTI (ASCII)
53C2	Number of digits in the forwarding terminal's telephone number
53C3 - 53E2	Forwarding terminal's telephone number (ASCII)

2. Section 5.3.2. (Page 5-5-a)

As from mass production the head gap adjustment dial will be changed to the center.



RICOH**Technical Bulletin No. IXO-002****SUBJECT:** The printer cover may not be closed.**DATE:**
July 14th, 1993

PREPARED BY: H. Someya

CHECKED BY:

FROM: FAX T.S. Section

CLASSIFICATION:

☐ Action Required☐ Troubleshooting☐ Retrofit Information☐ Revision of service manual☒ Information only☐ Other

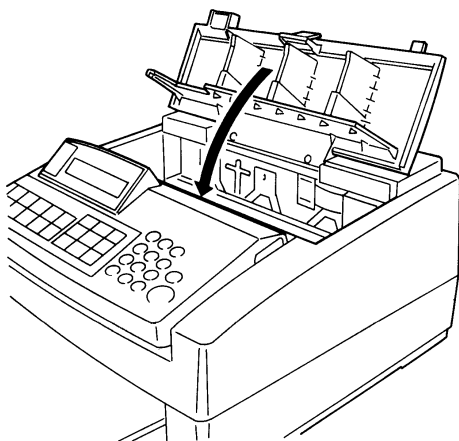
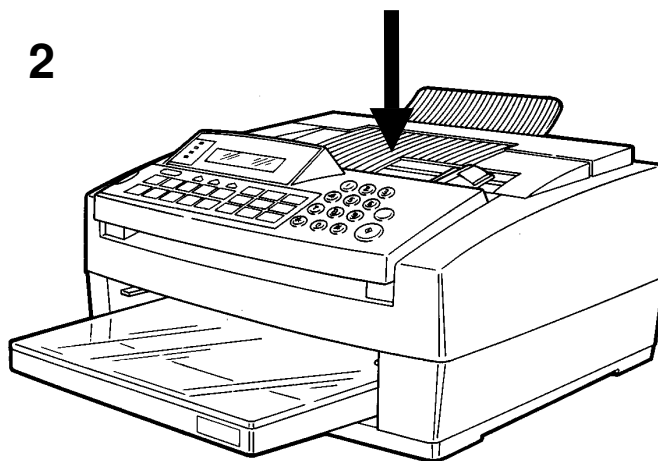
MODEL: IXO

Symptom

The printer cover may not be closed by pushing both eadges of the cover.
"CLOSE COVER" is displayed on the LCD continuously.

Action

If you receive a complaint concerning this matter, please advise your customers to push the center when closing the cover.

1**2**

**Technical Bulletin****No. IXO-003****SUBJECT:** Adjusting the clock after disconnecting the FCE**DATE:**

July 14th, 1993

PREPARED BY: H. Someya

CHECKED BY:

FROM: FAX T.S. Section

CLASSIFICATION:

☒ Action Required☐ Troubleshooting☐ Retrofit Information☐ Revision of service manual☐ Information only☐ Other

MODEL: IXO

Symptom

The machine executes the head cleaning of ink cartridge frequently.

Cause

SRAM on the FCE is backed-up by the battery on the FDU when power is turned off. Information stored in the memory will be cleared and clock will be initialized if servicemen disconnects the FCE from the FDU.

The initialized clock moves very fast without adjusting. As a result, the condition for cleaning comes frequently.

Action

Adjust the clock by Function 34 after disconnecting the FCE from the FDU such as changing the ROM.



Technical Bulletin No. IXO-004

SUBJECT: Ink End Detection

DATE:

July 14th, 1993

PREPARED BY: H. Someya

FROM: FAX T.S. Section

CHECKED BY:

CLASSIFICATION:
☒ Action Required

☐ Revision of service manual

☐ Troubleshooting

☐ Information only

☐ Retrofit Information

☐ Other

MODEL: IXO

Symptom

The machine may not detect ink end even if ink has run out.

Cause

The machine detects ink end depending on monitoring the ink end mark. The ink end sensor reads the black level and the white level around the ink end mark, and it detects ink end if the interval is less than threshold value. The threshold value is determined by the max. and min. white level which the sensor reads by Function 87. However, since the threshold value is low, it may detect that ink is present even if ink has run out.

Countermeasure

(Temporary)

Threshold value is programmed manually on the product line according to the table on the next page.

(Permanent)

The software has been changed to program the correct threshold value automatically by Function 87 beginning from July.



Technical Bulletin No. IXO-004

SUBJECT: Ink End Detection

DATE:
July 14th, 1993

Action in the field

If servicemen disconnect the FCE from the FDU or reset the ink end sensor (Function 87) for the machine which the ROM (H5047110B) is installed on, please program the threshold value manually as follows.

1. Enter the service mode
2. Print the system report
3. Add the INK SENSOR MAX (A) and INK SENSOR MIN (B) on the report, and then divide the value by 2. (C)

Note: 1. Cut the number less than a decimal point.
2. If A or B is 127, convert them to 63.

4. Enter the threshold value to RAM address 00F0 by the HEX code according to the table.

$C=(A+B)/2$	Threshold Value
$13 \leq C \leq 15$	4
$16 \leq C \leq 19$	5
$20 \leq C \leq 24$	6
$25 \leq C \leq 28$	7
$29 \leq C \leq 32$	8
$33 \leq C \leq 37$	9
$38 \leq C \leq 41$	10
$42 \leq C \leq 46$	11
$47 \leq C \leq 50$	12
$51 \leq C \leq 54$	13
$55 \leq C \leq 59$	14
$60 \leq C \leq 63$	15



Technical Bulletin

No. IXO-005

SUBJECT: Paper Jam

DATE:

July 15th, 1993

PREPARED BY: H. Someya

CHECKED BY:

FROM: FAX T.S. Section

CLASSIFICATION:
☒ Action Required

☐ Troubleshooting

☐ Retrofit Information

☐ Revision of service manual

☐ Information only

☐ Other

MODEL: IXO

Symptom

The next page may not be passed to the feed roller and may be jammed when the received page is split up into two pages.

Cause

Software Problem

Countermeasure

(Temporary)

Auto Reduction will be switched on in the production line.

The following machines do not contain a countermeasure.

R7930600001 ~ R7930600300

R7930600761 ~ R7930601145

6453060007 ~ 6453060086

JT303060005 ~ JT303060149

(Permanent)

The software will be changed from September production.

Action

Switch on Auto Reduction with Function 20 so that received pages will not be printed on two separate pages for the above machines.



Technical Bulletin

No. IXO-006

SUBJECT: Notice for operation panel removal

DATE: Oct. 14th, 1993.

PREPARED BY: H. Someya

FROM: TS 2G

CHECKED BY:

CLASSIFICATION:
☐ Action Required

☐ Revision of service manual

☐ Troubleshooting

☒ Information only

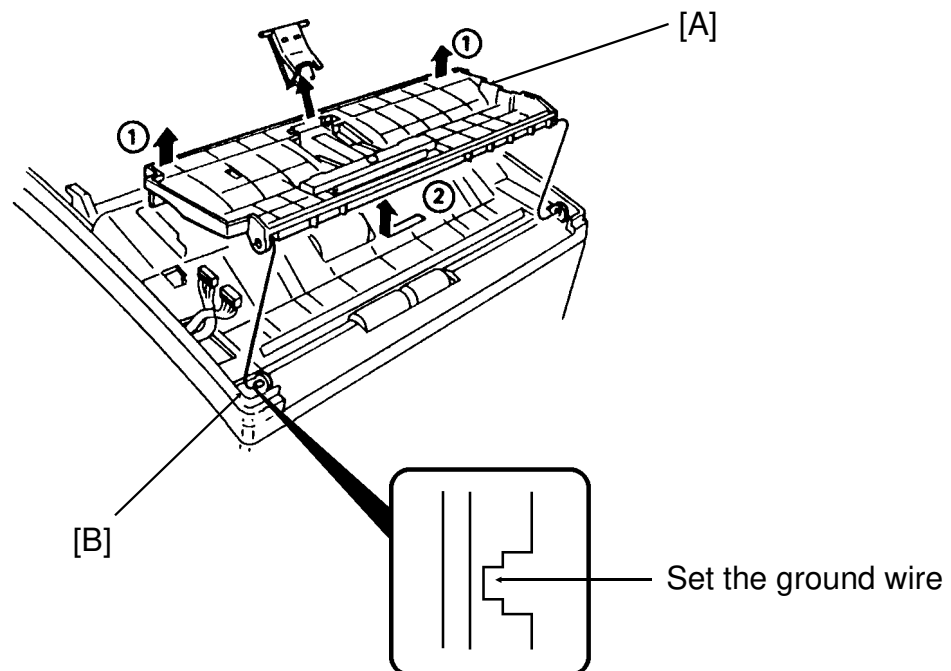
☐ Retrofit Information

☐ Other

MODEL: IXO

The following notice is missing from the service manual.

When removing the white pressure plate [A] of the operation panel assembly, set the ground wire into the recess in the upper cover and then slide out the white pressure plate. Otherwise, the scanner base pin [B] may be broken.





Technical Bulletin No. IXO-007

SUBJECT: Scanning Timing	DATE: Oct. 14th, 1993.
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PREPARED BY: H. Someya		FROM: TS 2G
CHECKED BY:		
CLASSIFICATION:		MODEL: IXO
<input type="checkbox"/> Action Required	<input type="checkbox"/> Revision of service manual	
<input type="checkbox"/> Troubleshooting	<input checked="" type="checkbox"/> Information only	
<input type="checkbox"/> Retrofit Information	<input type="checkbox"/> Other	

From the ROM version E, scanning timing is delayed 2.2 mm compared with the ROM version C so that there is a leading edge margin when scanning a document.

Also, it is possible to change the timing by changing RAM address 025BH to 025DH.

Address	Function
025B-025D	Stepping length of the ADF feed roller between SB2 (sean line sensor) on and scanning start 025B(H) High: Hundred thousands Low: Ten thousands 025C(H) High: Thousands digit Low: Hundreds digit 025D(H) High: Tens digit Low: Units digit $N \times \frac{0.9}{15.4} (mm)$

c.f.

ROM version C (H5047110C): $L_c = 255(FFH) \times \frac{0.9}{15.4} = 14.9(mm)$

ROM version E (H5047157): $L_e = 293(125H) \times \frac{0.9}{15.4} = 17.1(mm)$

$L_e - L_c = 2.2(mm)$

**Technical Bulletin****No. IXO-008****SUBJECT:** HANDSET Display**DATE:** Oct.14th,1993.

PREPARED BY: H. Someya

CHECKED BY:

FROM: TS 2G

CLASSIFICATION:

☐ Action Required☒ Troubleshooting☐ Retrofit Information☐ Revision of service manual☐ Information only☐ Other

MODEL: IXO for USA

Symptom

HANDSET is displayed on the LCD even if the external telephone is not picked up.

Cause

On the NCU, CN3-2 and CN4-3 are connected, and CN3-5 and CN4-4 are connected. If users use the 4-wire modular cord packed with the machine and CN3-2 and CN3-5 are shorted on the line, CN4-3 and CN4-4 are shorted and the machine detects that the external telephone is picked up.

Countermeasure

The wire patterns of CN3-2 and CN3-5 have been cut through from September production.

Action in the field

Change the modular cord to a 2 -wire cord when this problem occurs in the field.



Technical Bulletin No. IXO-009

SUBJECT: Service Manual Revision

DATE: Oct. 14th, 1993.

PREPARED BY: H. Someya

FROM: TS 2G

CHECKED BY:

CLASSIFICATION:
☐ Action Required

☒ Revision of service manual

☐ Troubleshooting

☐ Information only

☐ Retrofit Information

☐ Other

MODEL: IXO

These are additional information and corrections for the service manual.

1. NCU Jumper settings (section 2.3.6.)

Country	TB1	TB2	TB3	TB4	TB5	TB6
Finland	Open	Open	Fig1	Shorted	Open	Open

2. NCU Parameters(Section 4.3.)

Address (Hex)	Function
0388	NCU parameter 13: DTMF tone transmission level DTMF tone low frequency transmission level = $-(N + 8)$ dBm DTMF tone high frequency transmission level = $-(N + 6)$ dBm



Technical Bulletin

No. IXO-010

SUBJECT: How to put the spacers on the scanner.

DATE: Oct. 25th 1993

PREPARED BY: H.Someya

FROM: 2nd T.S. Section

CHECKED BY:

CLASSIFICATION:

☐ Action Required

☐ Troubleshooting

☐ Retrofit Information

☐ Revision of service manual

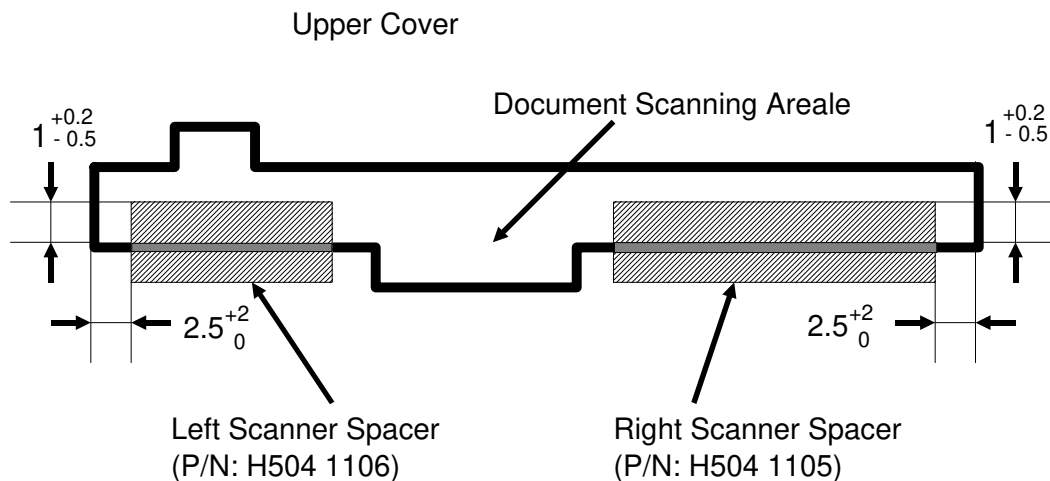
☒ Information only

☐ Other

MODEL: IXO

Attach the scanner spacers to the upper cover according to the following procedure when replacing the cover.

1. Attach the two scanner spacers to the upper cover as shown below.



2. Ensure that the distance between the spacers and the pressure plate is more than 0.2mm by using a thickness gauge.

**Technical Bulletin No. IXO-011****SUBJECT:** Threshold Level**DATE:** Oct. 25th 1993

PREPARED BY: H.Someya

CHECKED BY:

FROM: 2nd T.S. Section

CLASSIFICATION:

☐ Action Required☒ Troubleshooting☐ Retrofit Information☐ Revision of service manual☐ Information only☐ Other

MODEL: IXO

The threshold level for the VPU has been reduced starting from the ROM version E (P/N: H504 7157) to include a countermeasure of the black dots on the copy. Change RAM address 3E2E from 87H to 98H if you receive any complaints of light printing quality.

Note : The value of the ROM version C (P/N: H504 7110C) is fixed at 98H.



Technical Bulletin No. IXO-012

SUBJECT: IXO ROM modification

DATE: Oct. 25th 1993

PREPARED BY: H.Someya

FROM: 2nd T.S. Section

CHECKED BY:
CLASSIFICATION:
☐ Action Required

☐ Revision of service manual

☐ Troubleshooting

☒ Information only

☐ Retrofit Information

☐ Other

MODEL: IXO

The modification history of the ROMs is as follows.

P/N(New)	I.C.A.	Reason for Modification	Effective Date
H504 7110D (Version D)	X/O	<ol style="list-style-type: none"> To change the default setting of the line type to DTMF for USA country code. To prevent vertical black lines on the copy, the machine scans a sample of data for auto shading 50 ms after the LED array is lit so that it scans the sample after the LED array stabilizes. To make the cassette size change (Function 36) available only for technicians, except USA country code. (bit switch 4-2) To include a permanent countermeasure for the paper jam problem mentioned in RTB No.IXO-005. To prevent the following problem in printer mode. The machine locks-up if the user uses Line Feed to pick up and feed out the paper. To include an adjustment for the waiting time for the next page from the computer after feeding out the paper in printer mode. (RAM address: 3AOF)
H504 7157 (Version E)	X/O	<ol style="list-style-type: none"> To include an adjustment for the aging interval for the tx motor. (bit switch 4-7) To include an adjustment for the VPU threshold levels. (RAM address: 3E2E) To delay the scanning start position and to allow adjustment of the timing. (RAM address: 025B to 025D) 	September, 1993

**Technical Bulletin No. IXO-012****SUBJECT:** IXO ROM modification**DATE:** Oct. 25th 1993

P/N(New)	I.C.A.	Reason for Modification	Effective Date
		<p>4. To introduce the following Austrian PTT requirement. When using speed dial in on hook dial mode, the interval between line closure and dialing will be 3 seconds.</p> <p>5. To change the default setting of the VPU threshold level RAM address from 98H to 87H.</p> <p>6. To allow adjustment of the MTF threshold level and the halftone threshold level.</p> <p>7. To change the default setting of the horizontal ratio to 100%.</p> <p>8. To introduce the following Norwegian PTT requirement. Pulse dial / tone dial selection will be a service mode.</p> <p>9. To include a countermeasure for variation of break time and make time in pulse dial.</p>	

**Technical Bulletin No. IXO-013****SUBJECT:** Head Cleaning**DATE:** Nov. 9th 1993

PREPARED BY:H.Someya

FROM: 2nd T.S. Section

CHECKED BY:

CLASSIFICATION:

☐ Action Required☐ Revision of service manual☐ Troubleshooting☒ Information only☐ Retrofit Information☐ Other

MODEL: IXO

It is necessary to execute the head cleaning procedure when installing a new ink cartridge in the machine. Otherwise, the machine may not print the image completely because there is not enough ink supplied to the head of the ink cartridge.

Advise users to execute the head cleaning with Function 30 if you receive any complaints of blank printouts.



Technical Bulletin No. IXO-014

SUBJECT: Holding time of printer mode.

DATE:

November 11th, 1993

PREPARED BY: K.Moriizumi

FROM: 2nd T.S. Section

CHECKED BY:

CLASSIFICATION:

☐ Action Required

☐ Revision of service manual

☐ Troubleshooting

☒ Information only

☐ Retrofit Information

☐ Other

MODEL: IXO

This RTB is for the model IXO and Printer Interface Type50.

IXO changes mode from fax mode to printer mode when it receives a signal from the PC through the Printer Interface. IXO does not return to fax mode even after the last page is fed out. IXO waits for 30 seconds for another page because the PC may take time to make data for printing.

However, while IXO holds the printer mode, IXO can receive fax messages but cannot print out any fax message or report.

This holding time can be changed when changing the following RAM address.

RAM address : 3AOF [H]

Units : 160 [msec]

Default value : BC [H] = 30 [sec]

Note: The above RAM address is available from the part number H504 7157 (known as version E)



Technical Bulletin No. IXO-015

SUBJECT: Auto Mode		DATE: November 30th, 1993
PREPARED BY: H.Someya CHECKED BY:		FROM: 2nd T.S. Section
CLASSIFICATION: <input type="checkbox"/> Action Required <input type="checkbox"/> Revision of service manual <input checked="" type="checkbox"/> Troubleshooting <input type="checkbox"/> Information only <input type="checkbox"/> Retrofit Information <input type="checkbox"/> Other		MODEL: IXO for USA

Symptom:
 If the user picks up the handset during quasi-ringing in Auto mode, the beeper sounds for 20 seconds. The following is displayed on the LCD during this period.
 The beeper stops sounding when the user presses the stop key or hangs up.



Cause:
 Software Problem

- Applicable Machines:**
1. All machines produced in Oct. and Nov. '93 except the following.

R7931100901~1800
 2. The machines that ROM (P/N: H504 7157A/B) is installed in.

Countermeasure:
 The software has been changed from the Dec. '93 production.
 FCE New P/N: H504 6007D
 ROM New P/N: H504 7157C

Action in the field:
 Modify the machines by changing the ROM if you receive any complaints from the customers.



Technical Bulletin No. IXO-016

SUBJECT: Additional RAM Addresses

DATE: Dec. 17, 1993
 Reissued: Feb. 28, 1994

 PREPARED BY: H.Someya
 CHECKED BY:

FROM: 2nd T.S. Section

CLASSIFICATION:
☐ Action Required

☐ Troubleshooting

☐ Retrofit Information

☒ Revision of service manual

☐ Information only

☐ Other

MODEL: IXO

This information includes additional RAM addresses for the IXO service manual.

Address (Hex)	Function	Effective ROM version
003B	Bit 0: PSTN access method through PBX 0: Flash Start 1: Ground Start Bit 1: Exchanger type connected to the machine 0: PSTN 1: PBX Bit 2: Not used	Mass production
0040	Bit 2: Line type selection 0: PD 1: DTMF	Mass production
3D00	Bit 2 : Default setting of line type 0 : PD 1 : DTMF	Mass production
3E2D	Training error threshold 0: Depends on bit 5 of bit switch Other than 0 : Input value	D

**Technical Bulletin No.IXO-017****SUBJECT:** IXO ROM modification**DATE:**

PREPARED BY:

CHECKED BY:

FROM: 2nd T.S. Section

CLASSIFICATION:

☐ Action Required☐ Troubleshooting☐ Retrofit Information☐ Revision of service manual☒ Information only☐ Other

MODEL: IXO

The modification history of the ROMs is as follows.

1. To correct the spelling on the French Telephone List as follows.
NUMEROS ABREGES (1 CHIFFRE)

**Technical Bulletin No.IXO-017****SUBJECT:** IXO ROM modification**DATE:**

2. To change the default setting of CNG hysteresis to 10H for European country codes.
3. To include a horizontal slippage adjustment (1 dot to the right) between alternate lines. (bit switch 4-6)
4. To introduce the Swiss PTT requirement that the ds relay must be switched off during dirling.
5. To disable the ringback tone detection according to the change in the Austrian approval.
6. To introduce the following Norwegian PTT requirement.
The interval between detecting ringing and sending an AVM should 2.5 seconds.
7. To introduce the following spanish PTT approval requirement.
Polarity change should be detected.
8. To prevent the following problems
 - a) Copied images are reduced or enlarged if the user changes the resolution immediately after pressing the start key in copy mode.
 - b) Bit switches 0 to 4 are all set to 0 if the machine starts to receive while "NUMBER OF PAGES SENT" is displayed on the LCD.
 - c) The machine cannot initialize the printer and print anything if the user connects the power cord while picking up the handset.
 - d) "Receive File" is still lit after the machine prints the received message if it receives the message and then receive a turn around request while it is in the polling transmission standby.
 - e) The transmission level cannot be adjusted with NCU parameter 14 of function 95.
 - f) The printed paper may be jammed if send later is programmed by holding the + or - key while printing a received message.



Technical Bulletin No. IXO-018

SUBJECT: Additional Bit Switches

DATE:
Dec. 17, 1993

PREPARED BY: H.Someya
CHECKED BY:

FROM: 2nd T.S. Section

CLASSIFICATION:

☐ Action Required

☐ Troubleshooting

☐ Retrofit Information

☒ Revision of service manual

☐ Information only

☐ Other

MODEL: IXO

This information includes additional bit switches for the IXO service manual.

Additional Bit Switch Definitions

Bit Switch 4				
	FUNCTION	SETTINGS	COMMENTS	EFFECTIVE ROM VERSION
2	Cassette Size selection	0 : Service node only 1 : User function	If this bit is at 0, the user cannot change the cassette size.	D
6	Horizontal slippage between alternate lines	0 : None 1 : 1 bit to right	The printer prints the first line from left to right and the next from right to left across the paper. If slippage develops between alternate lines, try using this bit switch to cure the problem.	H504 7157B
7	Aging interval for the tx motor	0 : 45 minutes 1 : 15 minutes	If this bit is at 0, the machine drives the Tx motor for 45 minutes. It is only used for the factory.	E



Technical Bulletin No. IXO-019

SUBJECT: Service Manual Correction		DATE: Jan. 14th, 1994
PREPARED BY: H.Someya CHECKED BY:		FROM: 2nd T.S. Section
CLASSIFICATION: <input type="checkbox"/> Action Required <input checked="" type="checkbox"/> Revision of service manual <input type="checkbox"/> Troubleshooting <input type="checkbox"/> Information only <input type="checkbox"/> Retrofit Information <input type="checkbox"/> Other		MODEL:IXO

This information includes correction to the IXO service manual.

Section 4.4.1. (Page 4-24)

Address	Function			
00F2 - 00F3	CNG hysteresis	00F3	00F2	Value(dB)
		00	01	-24
	,	00	02	-18
		00	04	-12
		00	08	-6
		00	10	0
		00	20	8



Technical Bulletin

No. IXO-020

SUBJECT: Back to Back Test

DATE:

January 28, 1994

PREPARED BY: H.Someya

FROM: 2nd T.S. Section

CHECKED BY:

CLASSIFICATION:

☐ Action Required

☐ Troubleshooting

☐ Retrofit Information

☐ Revision of service manual

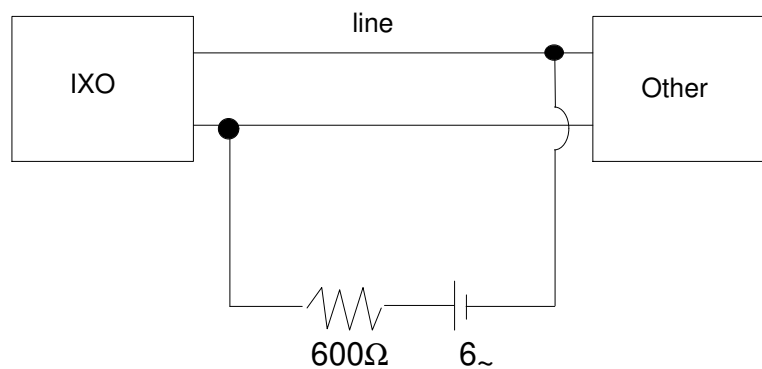
☒ Information only

☐ Other

MODEL: IXO

Photocouplers are used instead of mechanical relays on the NCU for IXO.

When you test back to back communication using IXO, pass current on the line as follows.





Technical Bulletin No. IXO-021

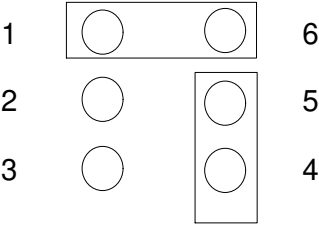
SUBJECT: Jumper Setting for Switzerland		DATE: January 28, 1994
PREPARED BY: H.Someya CHECKED BY:		FROM: 2nd T.S. Section
CLASSIFICATION: <input checked="" type="checkbox"/> Action Required <input type="checkbox"/> Troubleshooting <input type="checkbox"/> Retrofit Information		MODEL: IXO <input type="checkbox"/> Revision of service manual <input type="checkbox"/> Information only <input type="checkbox"/> Other

The Swiss PTT requirements have been reflected in the Universal 1 version from December, 1993.

As a result of this, the NCU modification is not required. However, when installing the machine in Switzerland, set the jumpers on NCU as follows.

TB1	TB2	TB3	TB4	TB5	TB6
Shorted	Shorted	See below	Shorted	Open	Open

TB3



Effective S/Ns:

H504-30	4681230001~
H504-40	U2231200001~
H504-60	6463121869~



Technical Bulletin No. IXO-022

SUBJECT: Austrian PTT Requirements

DATE:

March 14, 1994

PREPARED BY: H.Someya

CHECKED BY:
FROM: 2nd T.S. Section

CLASSIFICATION:
☒ Action Required

☐ Troubleshooting

☐ Retrofit Information

☐ Revision of service manual

☐ Information only

☐ Other

MODEL: IXO

To apply the Austrian PTT requirements, input the following RAM data after setting the country code when installing the machines in Austria.



Address	Value	Address	Value
0303	01	0348	33
0304	0A	0370	64
0305	7A	0371	17
0306	D6	0373	01
0307	C0	0374	0A
0308	C4	0375	03
0309	78	0376	46
030A	AF	0377	72
030B	C0	037E	09
030C	C4	0381	3C
033F	14	0382	28
0340	14	0384	2B
0341	1E	0386	50
0342	1E	0387	50
0343	28	0388	02
0344	28	0389	06

The above settings have been included in the software from the following machines.

H504-30: 4680340001 ~

H504-40: U2240300701 ~

H504-60: 6464034556 ~

RICOH**Technical Bulletin No. IXO-023****SUBJECT:** Duplex Copy**DATE:**

May 24, 1994

PREPARED BY: H.Someya

CHECKED BY: S.Hamano

FROM: 2nd T.S. Section

CLASSIFICATION:☐ Action Required☒ Troubleshooting☐ Retrofit Information☐ Revision of service manual☐ Information only☐ Other**MODEL:**

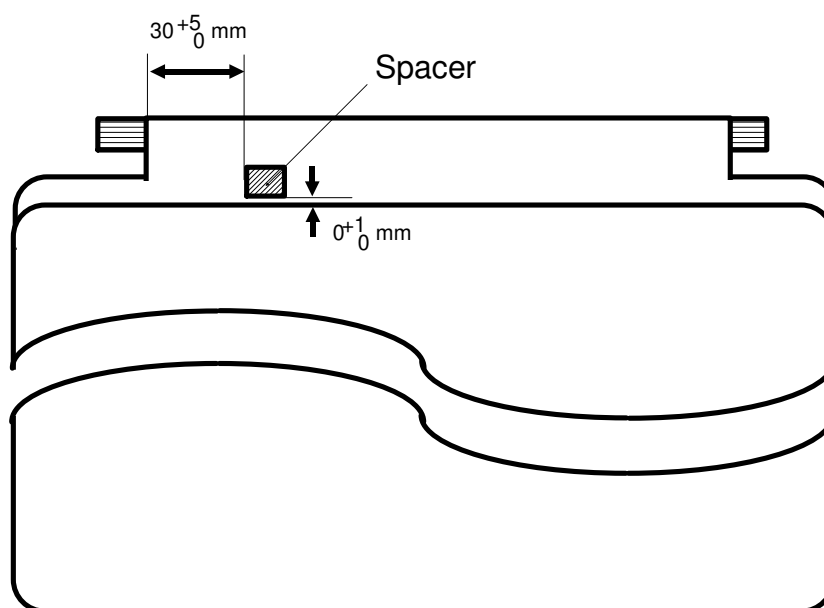
IXO

Symptom : If the operator puts a sheet of paper on the cassette cover, the machine may pick up the paper and print on the back.

Cause : The edge of the paper reaches the feed roller if the paper is inserted far enough into the machine.

Countermeasure : A spacer has been attached to the cassette cover from March production so that the paper does not reach the roller.

Action in the field : Attach the spacer (P/N:H5044126) to the following position on the cover.



Cassette Cover



Technical Bulletin No.IXO-024

SUBJECT: Abnormal Paper Feeding

DATE:
May 24, 1994

PREPARED BY:H.Someya
CHECKED BY:S.Hamano

FROM: 2nd T.S. Section

CLASSIFICATION:

☐ Action Required

☒ Troubleshooting

☐ Retrofit Information

☐ Revision of service manual

☐ Information only

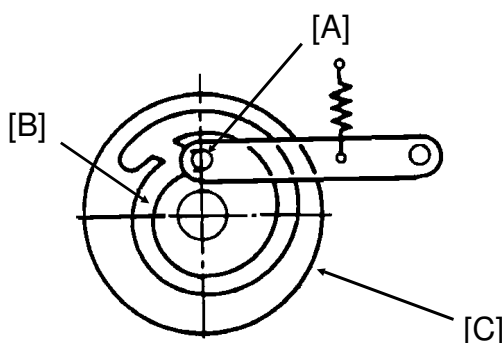
☐ Other

MODEL:

IXO

Symptom: The machine may feed a sheet of paper from the cassette immediately every time the cassette is installed.

Cause: The lever [A] of a certain lot is defective. The pin of the lever comes off the notch [B] of the paper feed cam [C] and the feed roller does not stop at the home position .



Countermeasure:

A spacer has been attached to the inside of the cover on the production line for the applicable lots so that the lever does not come off.

Action in the field:

Modify the machine by attaching the spacer according to the modification procedure if you have any complaints from the customers.

Applicable Machines:

The following machines have not received a countermeasure.

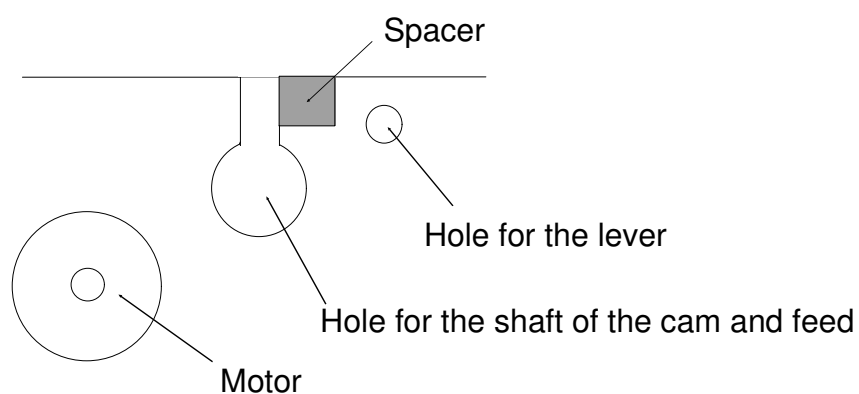
H504-20:R7940200745~0960, 0962~1001, 1010~1022, 1024~1025, 1032~1040, 1048~1050, 1052~1071, 1076~1084, 1090~1128, 1248, 1260, 1263~1272, 1297~1320, 1333~1344, 1357~1380, 1390, 1392~1400
433 units

**Technical Bulletin****No.IXO-024****SUBJECT:** Abnormal Paper Feeding**DATE:**

May 24, 1994

Modification Procedure

1. Remove the op-port ass'y.
2. Remove the upper cover.
3. Attach the spacer to the inside of the base as shown below.

Inside the base on the right-hand side

4. Reassemble the machine.



Technical Bulletin No. IXO-025

SUBJECT: Service Part included in the TIJ unit

DATE:

May 24, 1994

PREPARED BY: H.Someya

CHECKED BY: S.Hamano

FROM: 2nd T.S. Section

CLASSIFICATION:

☐ Action Required

☐ Troubleshooting

☐ Retrofit Information

☐ Revision of service manual

☒ Information only

☐ Other

MODEL:

IXO

We registered the following parts included in the TIJ unit as service parts.

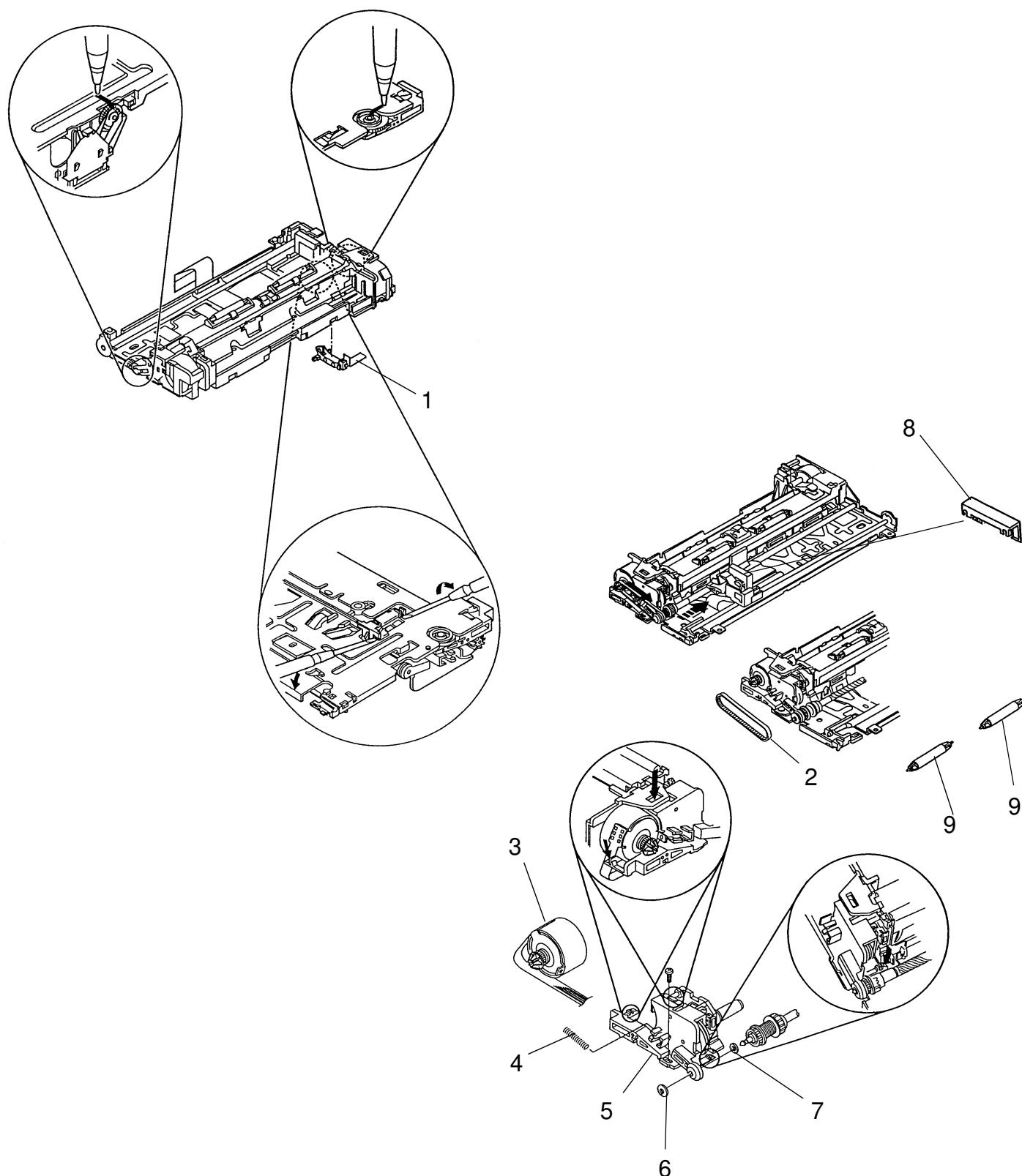
No.	Part Number	Description
1	H5042510	Paper Sensor - TIJ
2	H5042511	Carriage Drive Belt - TIJ
3	H5042512	Carriage Motor - TIJ
4	H5042513	Belt Tension Spring - TIJ
5	H5042514	Purge Unit - TIJ
6	H5042515	Carriage Shaft Stopper - TIJ
7	H5042516	Slider - TIJ
8	H5042517	Ribbon Cable Holder - TIJ
9	H5042518	Ejection Roller - TIJ



RICOH**Technical Bulletin****No. IXO-025****SUBJECT:** Service Part included in the TIJ unit**DATE:**

May 24, 1994

Mark the dial position.





Technical Bulletin No.IXO-026

SUBJECT: IXO Software Modification

DATE:

May 24, 1994

PREPARED BY: H.Someya

CHECKED BY: S.Hamano

FROM: 2nd T.S. Section

CLASSIFICATION:
☐ Action Required

☐ Troubleshooting

☐ Retrofit Information

☐ Revision of service manual

☒ Information only

☐ Other

MODEL:

IXO

The modification history of the ROM is as follows.

P/N(New)	I.C.A.	Reason for Modification	Effective Date
H5047157C ROM version: H5047157C Check sum: 2654	X / O	To prevent the following problem. a)If the user picks up the handset during quasi-ringing in Auto mode, the beeper sounds for 20 seconds and "HANDSET OR PRESS STOP" is displayed on the LCD during this period. (USA version) b)If the user picks up the handset before the TAM takes the line in TAM mode, "COMMUNICATION ERROR" is displayed on the LCD and the beeper starts to sound 40 seconds after picking up the handset. (Except USA version)	H504-20: R7931100901~ H504-21: 6453110087~ H504-22: JT303111544~ H504-27: 043110001~ H504-31: 4681132001~ H504-40: U2231100201~ H504-42: U2431100413~ H504-61: 6493110150~ Other versions: December 1993
H5047157D ROM version: H5047157D Check sum: AE6F	X / O	To prevent the following problem. A high pitched noise sounds on the handset if the IXO dials when the handset is off-hook.	H504-20: R7940200001~ H504-21: 6454020330~ H504-22: JT304023317~ H504-27: 044020041~ H504-40: U2240200014~ H504-41: U2340200001~ H504-42: U2440200001~ H504-50: A0340200001~ H504-52: A1140200001~ H504-60: 6464024216~ Other versions: March 1994



Technical Bulletin No.IXO-026

SUBJECT: IXO Software Modification

DATE:

May 24, 1994

P/N(New)	I.C.A.	Reason for Modification	Effective Date
H5047159 ROM version: H5047159 Check sum: AA21	X / O	1.To introduce the Austrian PTT requirements, the RAM data mentioned in RTB No.IXO-022 has been changed. 2.To correct the spelling on the French LCD. 3.To prevent the following problem. a)The IXO may not communicate with a pc fax with modem since the IXO sends FF as a TURNOFF sequence after sending the V.21 closing flag. b)Forwarding may be disabled in the daily or the later setting. c)The IXO may send CTC in the wrong conditions.	H504-20: R7940300541~ H504-21: 6454030380~ H504-30: 4680340001~ H504-31: 4680342001~ H504-40: U2240300701~ H504-42: U2440300301~ H504-60: 6464034556~ H504-62: 6474030126~ Other versions: April 1994
H5047160 ROM version: H5047160 Check sum: C1FD	X / O	1.To change the ruled lines except the thick lines on the report to "*". 2.To print and detect the ink end mark after cleaning the printer head when IXO detects ink end. 3.To prevent the following problem. a)Stored files may be cleared if training fails when resolution changes between pages in memory transmission. b)Even when the last page is not printed, the reception is shown as OK on the TCR.	June 1994



Technical Bulletin No. IXO-027

SUBJECT: Ink end detection

DATE:

June 30, 1994

PREPARED BY: H.Someya

CHECKED BY: S.Hamano

FROM: 2nd T.S. Section

CLASSIFICATION:

☐ Action Required

☐ Troubleshooting

☐ Retrofit Information

☐ Revision of service manual

☒ Information only

☐ Other

MODEL:

IXO

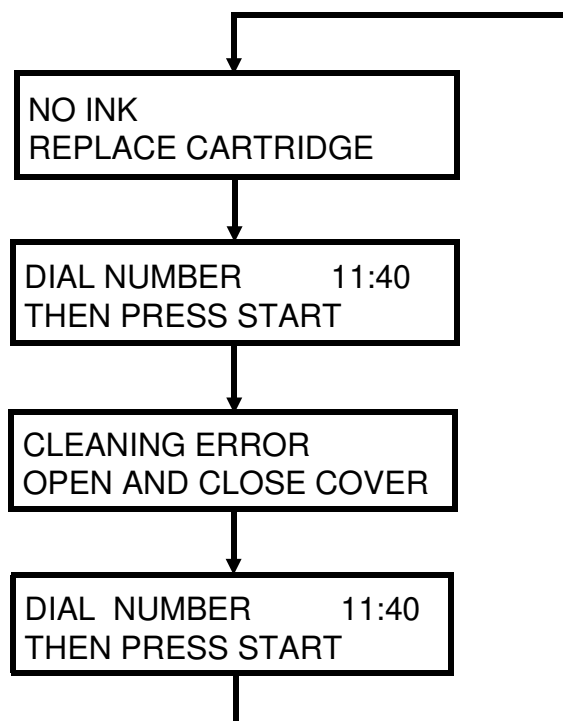
Software modification

After the machine detects ink end, if the user changes an ink cartridge (detected when the printer initializes such as when opening and closing the cover, or removing and resetting the cassette), the software has been changed so that the machine works as follows.

The machine executes the head cleaning automatically. Then, it picks up a sheet of paper in the cassette, prints an ink end mark on it and checks the ink end mark.

If not enough ink is supplied from the new cartridge to the printer head, the machine does not print anything, but displays an error message on the LCD.

According to this modification, the display on the LCD has been changed during ink end detection as follows.



Applied ROM version

H5047160A



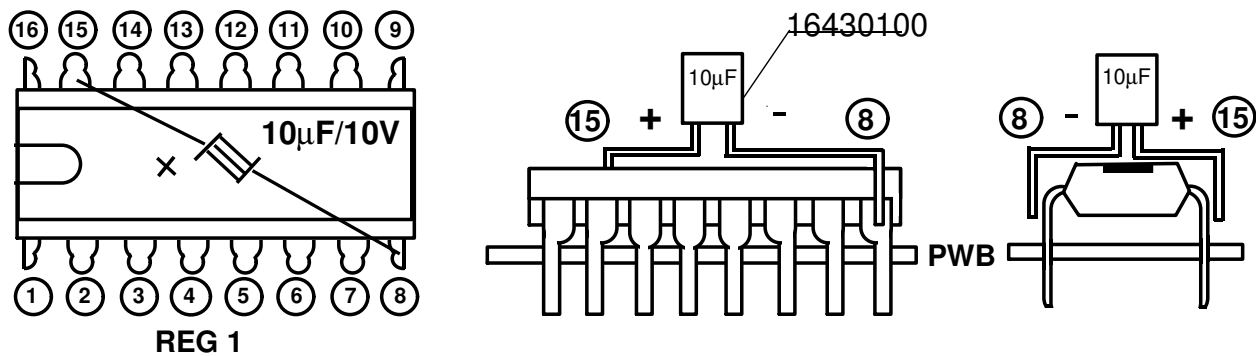
Technical Bulletin No. IXO-028

SUBJECT: No print problem		DATE: Sep. 14, 1994
PREPARED BY: Y.Okunishi CHECKED BY: S.Hamano		FROM: 2nd T.S. Section
CLASSIFICATION: <input type="checkbox"/> Action Required <input checked="" type="checkbox"/> Troubleshooting <input type="checkbox"/> Retrofit Information		MODEL: All models
<input type="checkbox"/> Revision of service manual <input type="checkbox"/> Information only <input type="checkbox"/> Other		

Problem: No print or blank copy with NO INK displayed.
Turning main power OFF/ON is required for recovery.

Cause: The 24V supply from the DC/DC converter on the FDU to the printer unit stops when the voltage of the main power drops to about 50% for more than 440ms. If the power loss is more/less than or of a shorter duration than the above, 24V is supplied properly after the power is back to normal.

Countermeasure:
Put a capacitor (10μf, 10V) between pin #8 and #15 of the IC REG1 on the FDU.





Technical Bulletin No. IXO-029

SUBJECT: Blank Print out / No Ink Problem

DATE:

Oct. 5, 1994

PREPARED BY: Y.Okunishi

CHECKED BY: S.Hamano

FROM: 2nd T.S. Section

CLASSIFICATION:
☐ Action Required

☒ Troubleshooting

☐ Retrofit Information

☐ Revision of service manual

☐ Information only

☐ Other

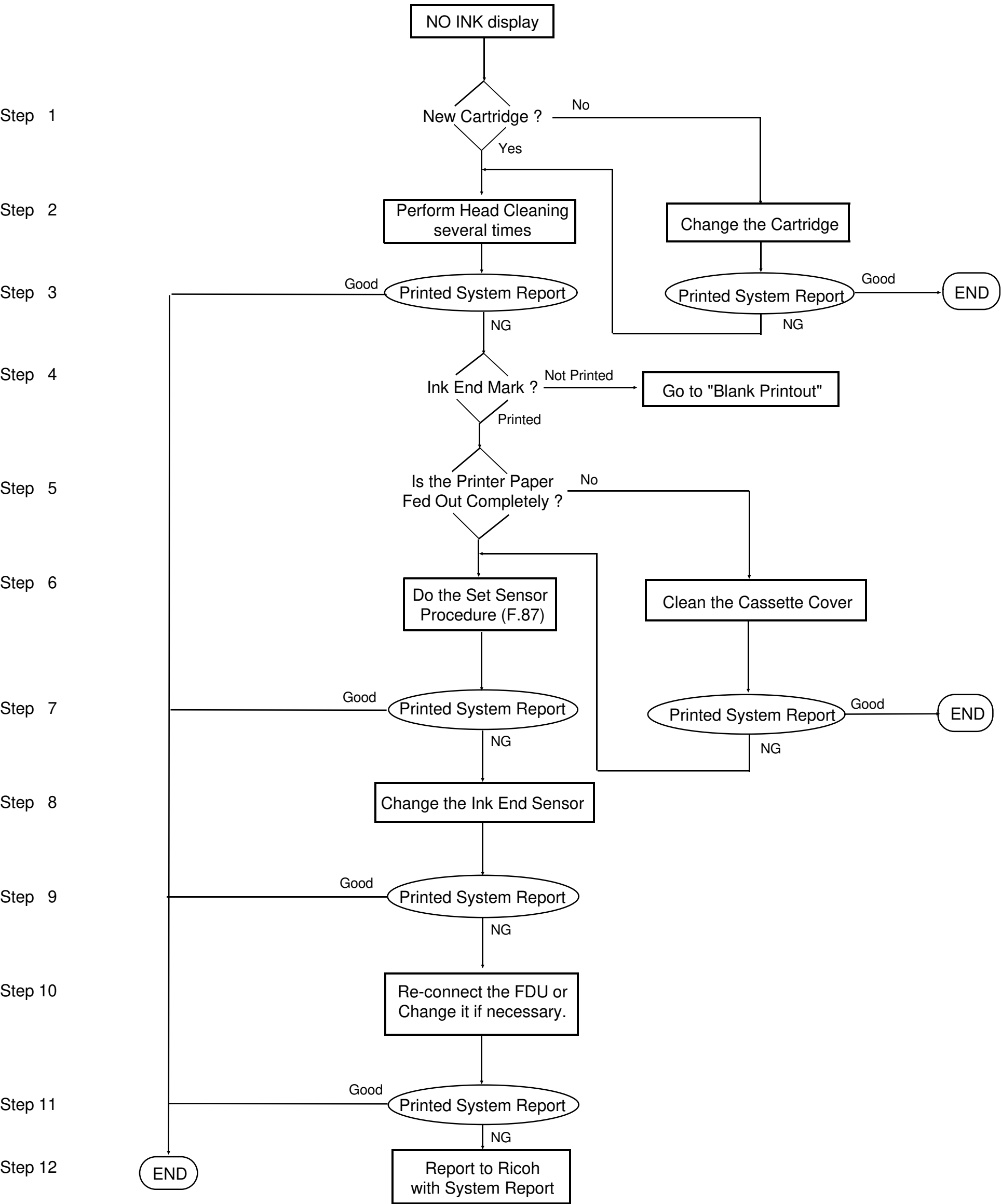
MODEL:

All models of IXO

Problem: Blank printout Page 2

NO INK displayed Page 3

IXO Troubleshooting Chart (1)





SUBJECT: Blank Printout / No Ink Problem

DATE:
Oct. 15, 1994

IXO Troubleshooting Chart (2)

Step 1

Step 2

Step 3

Step 4

Step 5

Step 6

Step 7

Step 8

Step 9

Step 10

Step 11

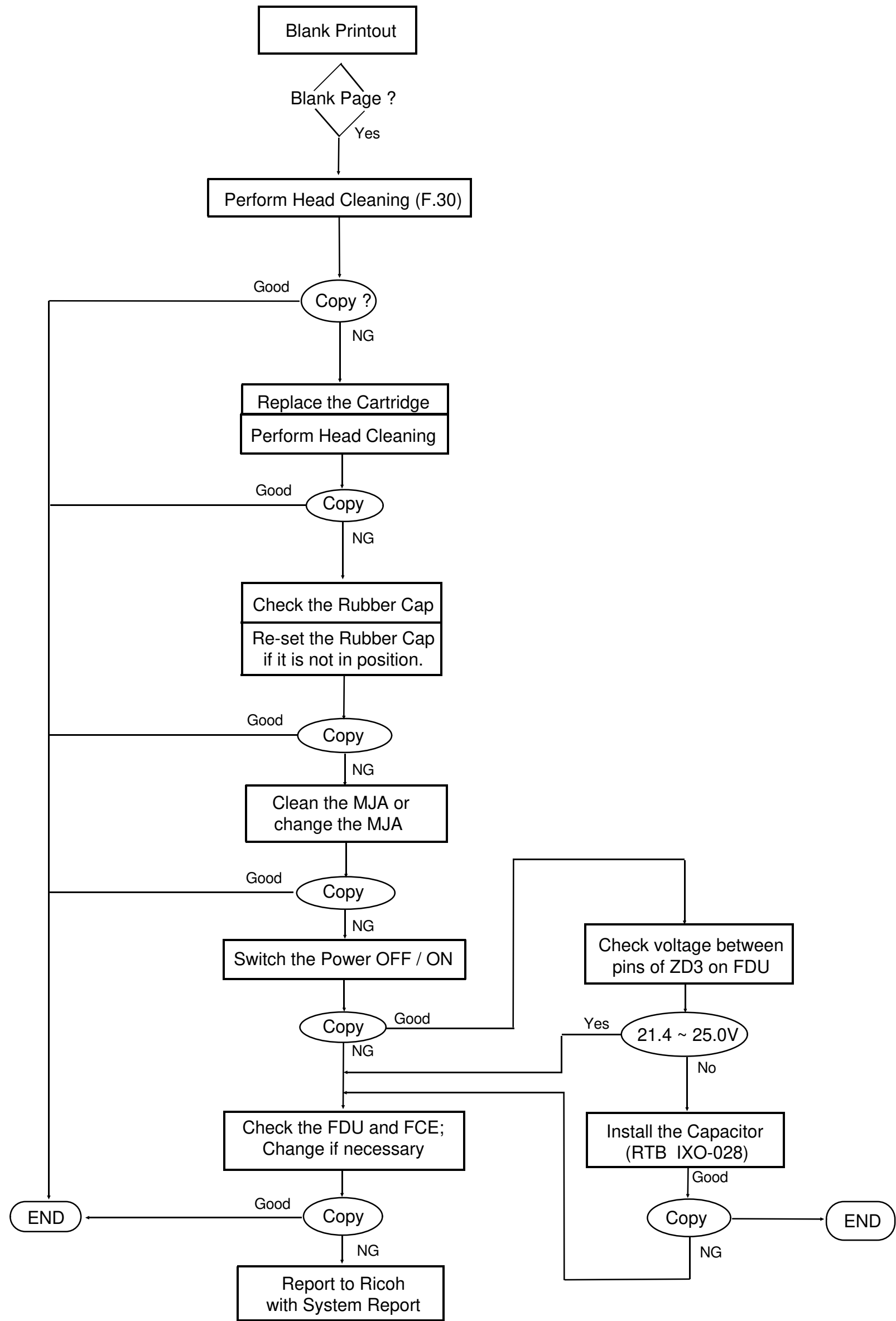
Step 12

Step 13

Step 14

Step 15

Step 16





Technical Bulletin No. IXO-030

SUBJECT: Component Parts of the TIJ Unit

DATE:

Sep.15, 1995

PREPARED BY: Y. Okunishi

FROM: 2nd T.S. Section

CHECKED BY: M. Iwasa

CLASSIFICATION:
☐ Action Required

☐ Revision of service manual

☐ Troubleshooting

☒ Information only

☐ Retrofit Information

☐ Other

MODEL:

IXO

The following components of the TIJ unit have been registered as service parts.

No.	Part Number	Description
1	H504 2510	Paper Sensor - TIJ
2	H504 2517	Ribbon Cable Holder - TIJ
3	H504 2511	Carriage Drive Belt - TIJ
4	H504 2518	Ejection Roller - TIJ
5	H504 2521	Platen Plate - TIJ
6	H504 2512	Carriage Motor - TIJ
7	H504 2513	Belt Tension Spring - TIJ
8	H504 2514	Purge Unit - TIJ
9	H504 2515	Carriage Shaft Stopper - TIJ
10	H504 2516	Slider - TIJ
11	H504 2522	Feed Roller - TIJ
12	H504 2519	Idle Gear - TIJ
13	H504 2523	Release Lever - TIJ
14	H504 2524	Base - TIJ

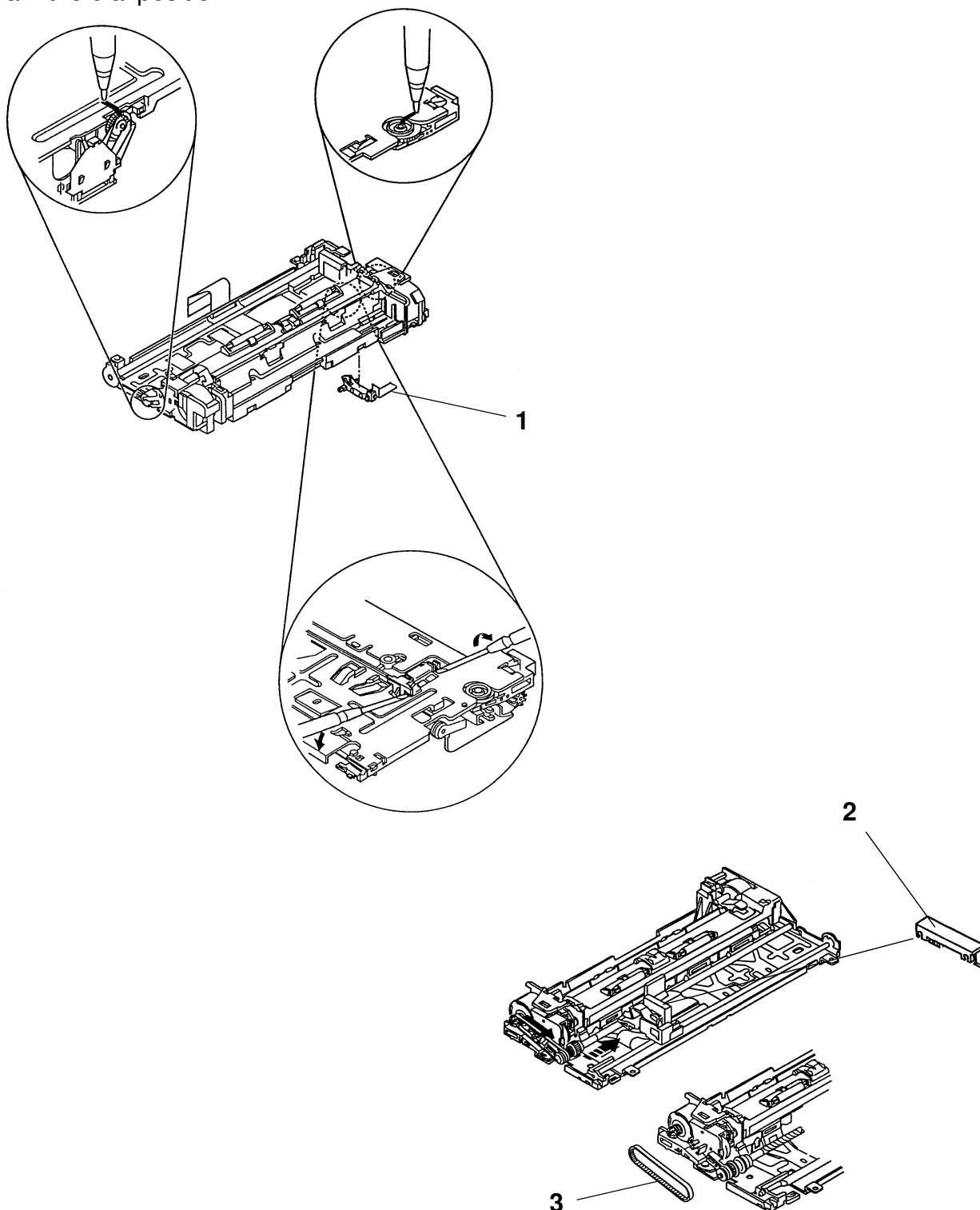
Note: MJA (Maintenance Jet Absorber is not available at Ricoh SPC.
Please request Mr. Iwasa of Service Planning Department the MJA.)

SUBJECT: Component Parts of the TIJ Unit**DATE:**

Sep.15, 1995

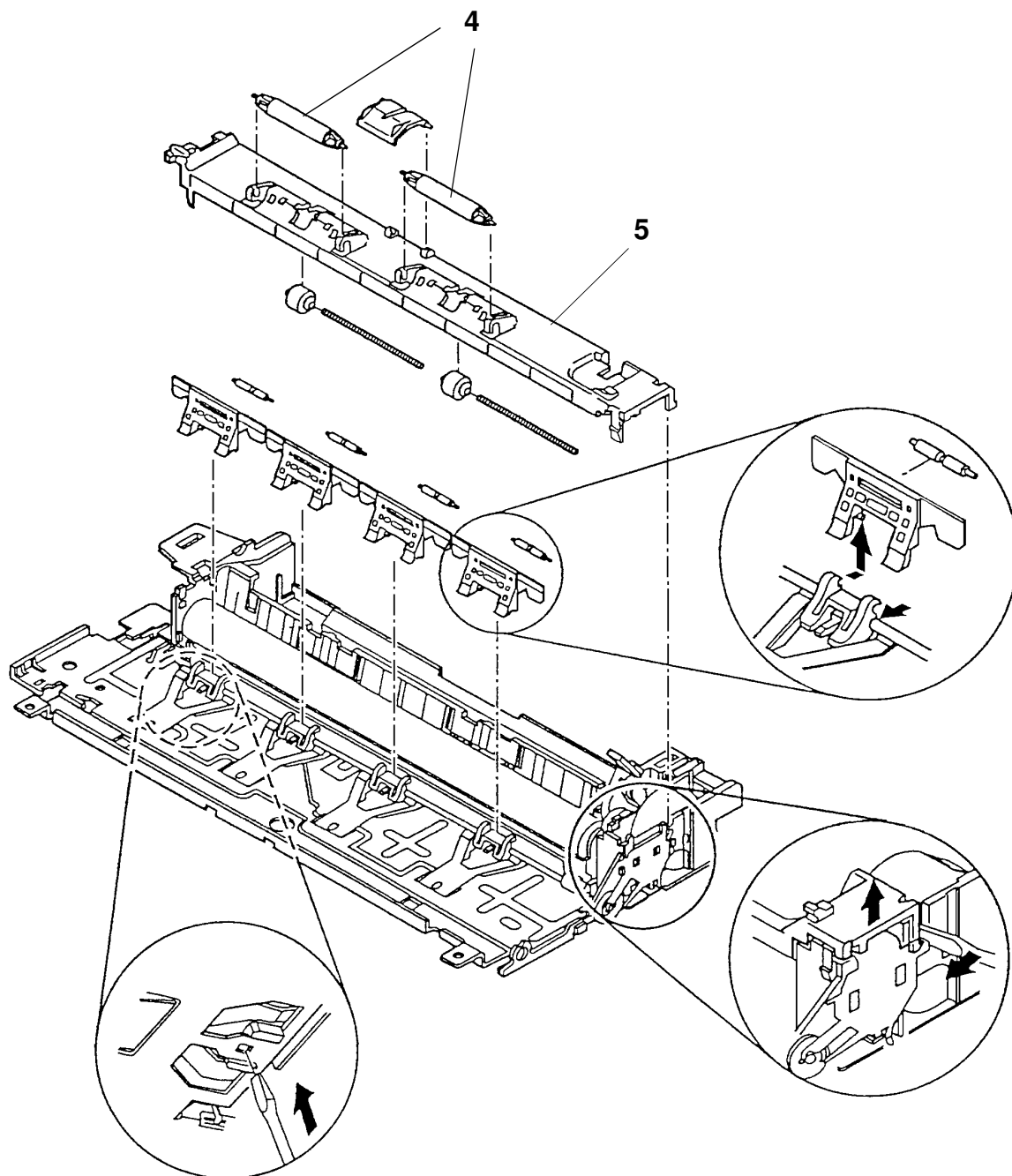
1. Outward

Mark the dial position.



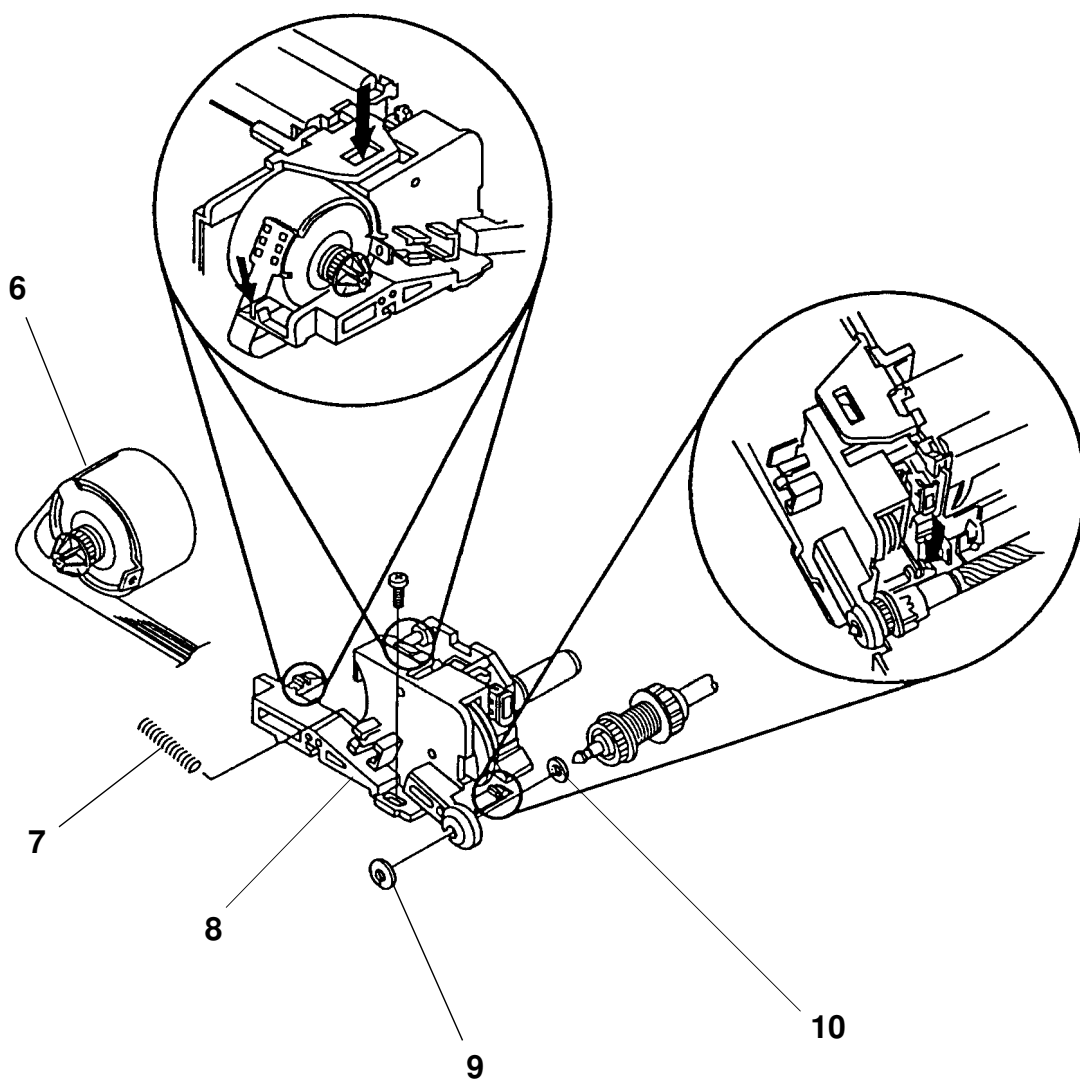
SUBJECT: Component Parts of the TIJ Unit**DATE:**

Sep.15, 1995

2. Upper Side

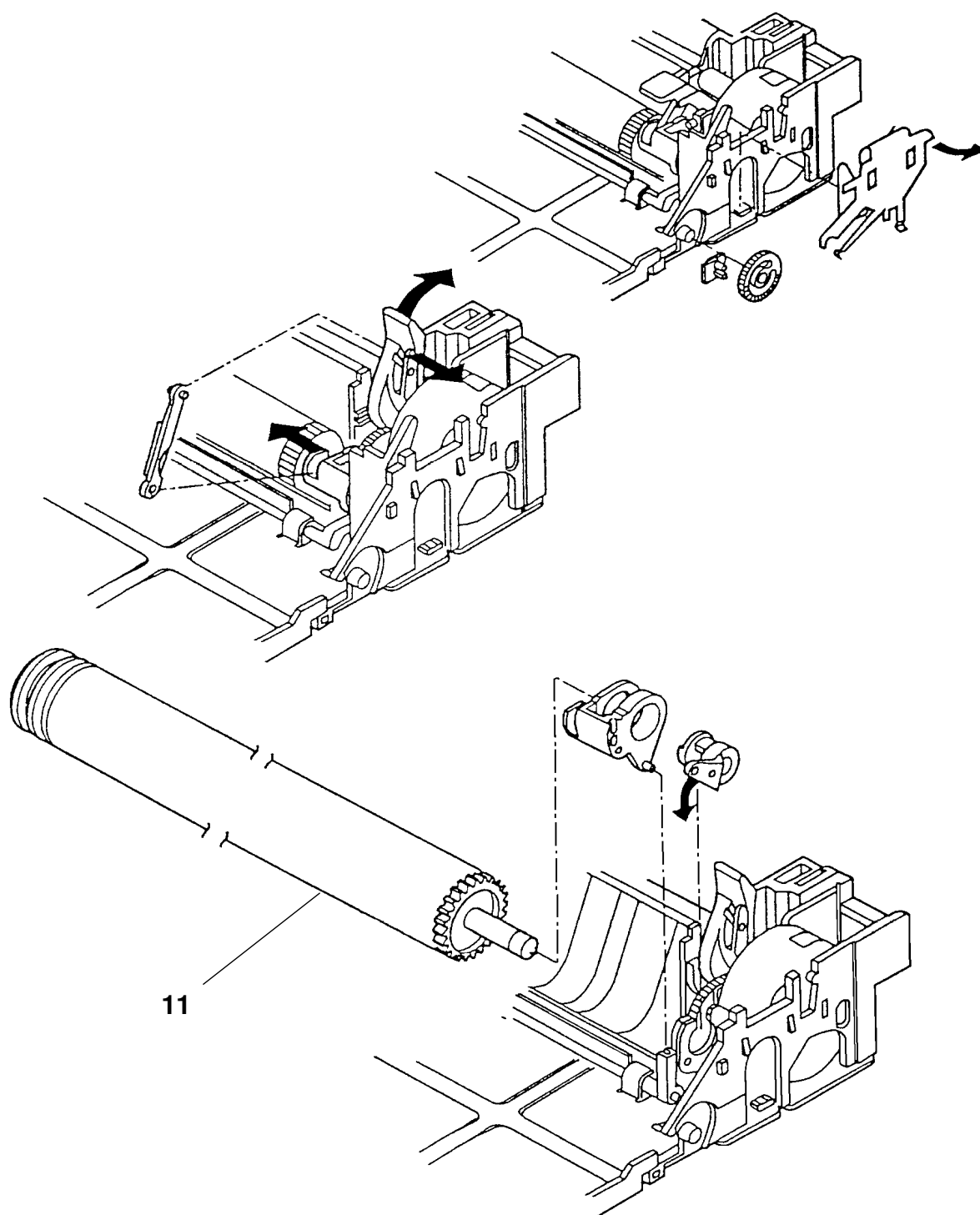
SUBJECT: Component Parts of the TIJ Unit**DATE:**

Sep.15, 1995

3. Left Side

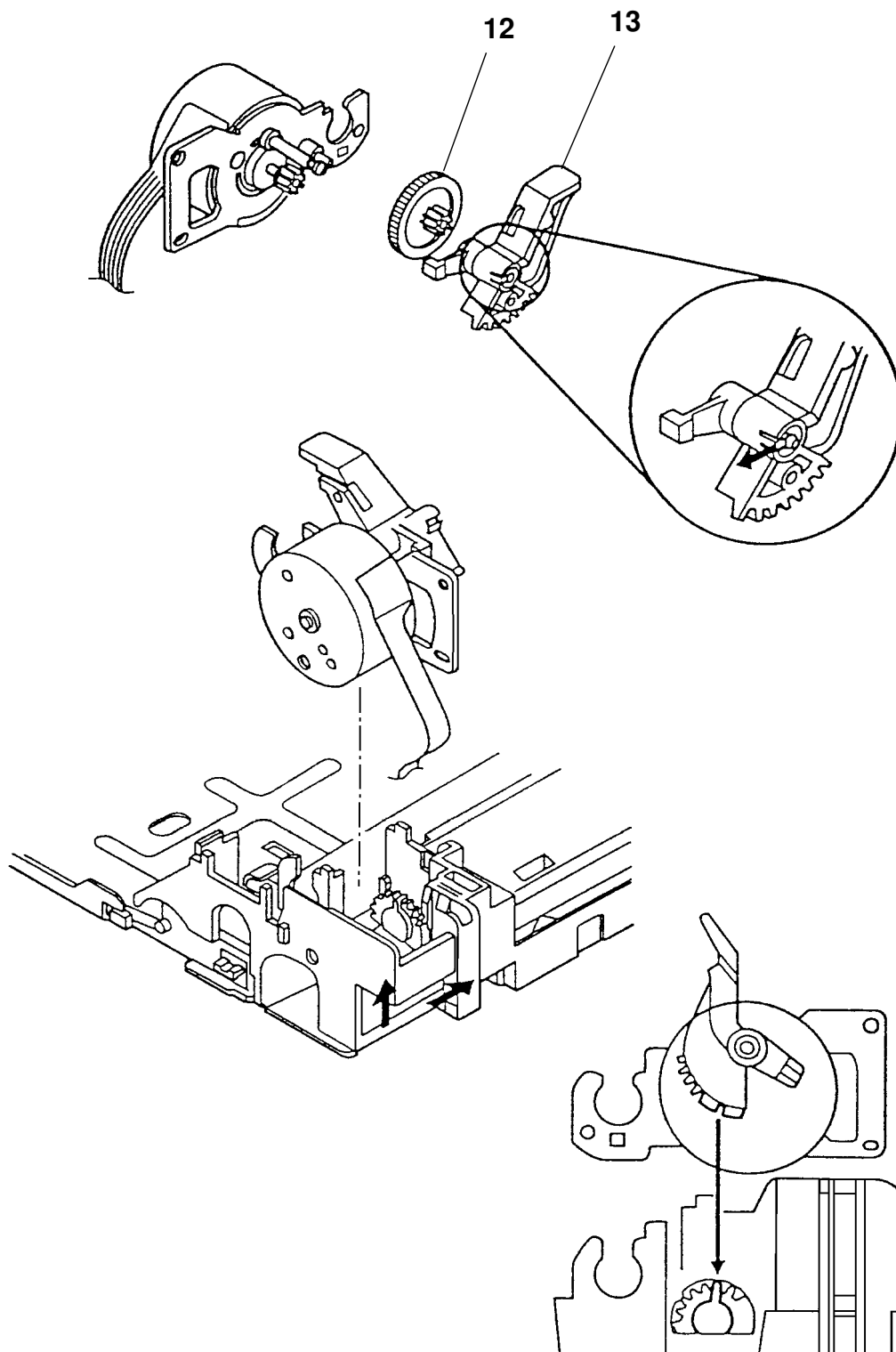
RICOH**Technical Bulletin****No. IXO-030****SUBJECT:** Component Parts of the TIJ Unit**DATE:**

Sep.15, 1995

4. Right Side - 1

RICOH**Technical Bulletin****No. IXO-030****SUBJECT:** Component Parts of the TIJ Unit**DATE:**

Sep.15, 1995

5. Right Side - 2

RICOH**Technical Bulletin****No. IXO-030****SUBJECT:** Component Parts of the TIJ Unit**DATE:**

Sep.15, 1995

6. Bottom Side