RICOH

Technical Bulletin No. RTB-001

SUBJECT: Ink Cartridge "O" Ring and Rubber Pad	DATE: April.30.'91 PAGE: 1 of 2
PREPARED BY: S. Asai CHECKED BY:	FROM: Copier Technical Support Section

CLASSIFICATION:

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

MODEL:
VT2100/2130/2150
VT2300/2500
Ges 5310/5315/5320/5330
Rex 1240/1241/1242/1260
NSH CP310/CP315/CP330

[**Phenomenon 1]:**

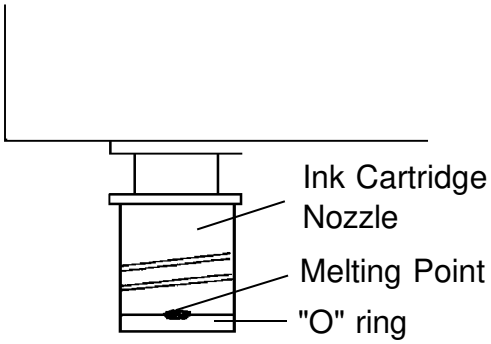
There has been a problem with the "O" ring inside the ink cartridge nozzle. The "O" ring comes off and remains on the nozzle of the ink pump when the ink cartridge is replaced, or it comes off and stays in the cartridge cap when the cap is removed. This occurs when the temperature changes radically making the "O" ring contract.

[Countermeasure 1]:

Instruct customers on how to replace the ink cartridge. Have them follow this procedure:

1. Make sure that the "O" ring does not stay on the nozzle of the ink pump before a new ink cartridge is installed.
   If it remains on the nozzle, remove it; otherwise the new ink cartridge cannot be set properly.

2. Make sure that the "O" ring does not stay in the cartridge cap when the cap is removed from the ink cartridge nozzle.
   If the "O" ring stays in the cartridge cap, remove the "O" ring from the cartridge cap and install it inside the cartridge nozzle.



Note: To prevent the "O" ring from coming off, more than 2 points between the "O" ring and the ink cartridge nozzle were soldered as shown above.
This melting process has been implemented since the March '91 production run.
For a mark of the melting process, a black circle has been stamped on the end of the lot number. (Example: Lot No. 1911932 ⁰)

[Phenomenon 2]:

There has been a problem with the rubber pad located on the ink pump nozzle. It comes off when the ink cartridge is removed. When no rubber pad remains on the ink pump nozzle, ink inside the cartridge may not be pumped to the drum even if a new ink cartridge is installed. This problem does not happen very often.

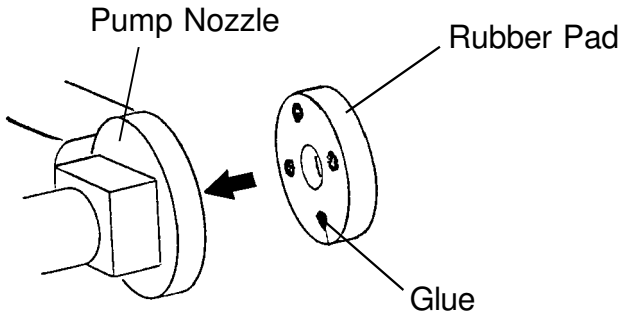
[**Countermeasure 2]:**

Apply a strong adhesive (super glue) as follows:

1. Remove the rubber pad with a small screwdriver.
2. Clean the rubber pad and the ink pump nozzle (contacting place of the rubber pad) with cloth. If stains remain, clean them off with the thermal head cleaner.
3. Apply a little super glue to the 4 points on the rubber pad as shown.

Note: Do not apply too much glue. This is because the rubber pad cannot be inserted correctly if there is too much glue.

4. Insert the rubber pad into the pump nozzle.



Note: The problem has been fixed for machines with serial numbers listed below. Other machines not described here will have this problem fixed from the April mass production run onward.

VT2150: S/N C2801030001-
VT2300: S/N C2811030001-
VT2500: S/N C2821030001-

5310: S/N 50211030181- (Europe/Asia version)
5315: S/N 50321030218- (USA version)
5320: S/N 50431030001- (Taiwan version), 50411030001- (Europe/Asia version)
5330: S/N 50521030004- (USA version), 50531030001- (Taiwan version)
50511030244- (Europe/Asia version)

1240: S/N 50211030091- (Europe/Asia version)
1241: S/N 50321030273- (USA version)
1260: S/N 50521030001- (USA version), 50511030527- (Europe/Asia version)
CP310: S/N 52011030061- (Europe/Asia version)
CP330: S/N 50511030727- (Europe/Asia version)

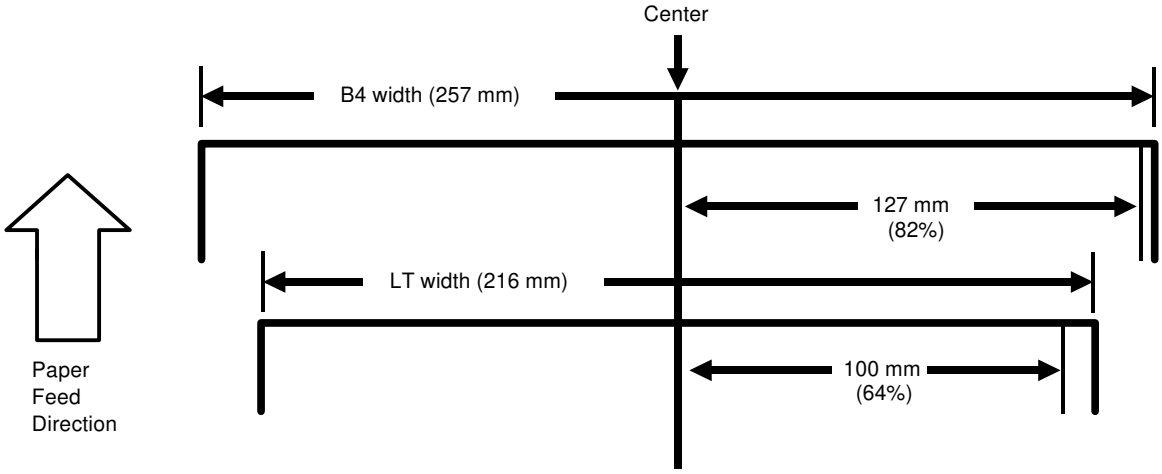
RICOH	Technical Bulletin	No. RTB-002
SUBJECT: One dot black line in 64% or 82% reduction mode		DATE: June 15 '91 PAGE: 1 of 2
PREPARED BY: S. Asai CHECKED BY:	FROM: Copier Technical Support Section	
CLASSIFICATION: ☐ Action Required ■ Troubleshooting ☐ Retrofit Information	☐ Revision of service manual ☐ Information only ☐ Other	MODEL: VT2100/2130/2150 Ges 5310/5315/5320 Rex 1240/1241/1242 NSH CP310/CP315

[Phenomenon]:

For C211 models, a one dot black line appears on the rear side of the copies when 64% (on the VT2130, LG version) or 82% (on the VT2100, B4 version) is selected. This problem does not happen very often.

* In 82% reduction mode, the line appears 127mm from the center.
* In 64% reduction mode, the line appears 100mm from the center.

Note: With the A4 size machine (VT2150), this problem does not occur. This is because the line would be located out of the maximum printing area when 82% reduction mode is selected. Also, this problem does not occur on the C212 and C213 models (VT2300 and VT2500). Because the A/D conversion board used on these machines has a circuit that always changes the dummy pixel data to white data.



[Cause]:

The dummy pixel (D31) of the CCD is mixed with the effective pixels because of the timing delay of the processing circuit. This dummy data is a gray level and is output from the A/D conversion board as a black data or white data. This depends on the optics adjustment and/or the Image Density switch position.

[Temporary Countermeasure]:

In order to discard the dummy pixel (D31) in reduction mode, the reduction ratio of 64% and 82% was slightly changed. This will allow the D31 dummy pixel data to be discarded in reduction mode.

Reduction	Before modification		After modification	
	Reduction ratio	Discarded pixel	Reduction ratio	Discarded pixel
64% (LT version)	64.3%	9/14	62.5%	5/8
82% (A4 version)	81.8%	9/11	81.3%	13/16

Because of this modification, the PROM on the image processing board has been modified. The part number of the PROM remains the same. However, a suffix (9th digit) has been added to the part number as follows:

1. PROM (IC-HN27128AP-20): P/N C2118004A

Note: The above modification has been implemented since 1st mass-production run except for the following machines:

Ges 5315: S/N 50321030001 to 50321030217 = Total 217 units
Rex 1241: S/N 50321030275 to 50321030277 = Total 3 units
Ges 5320: S/N 50411030001 to 50411030045 = Total 45 units

In the near future, the A/D conversion board will be made the same as that of the C212 and C213 models (VT2300 and VT2500). This is to delete the one dot black line and still use the original reduction ratios (64.3% and 81.8%).

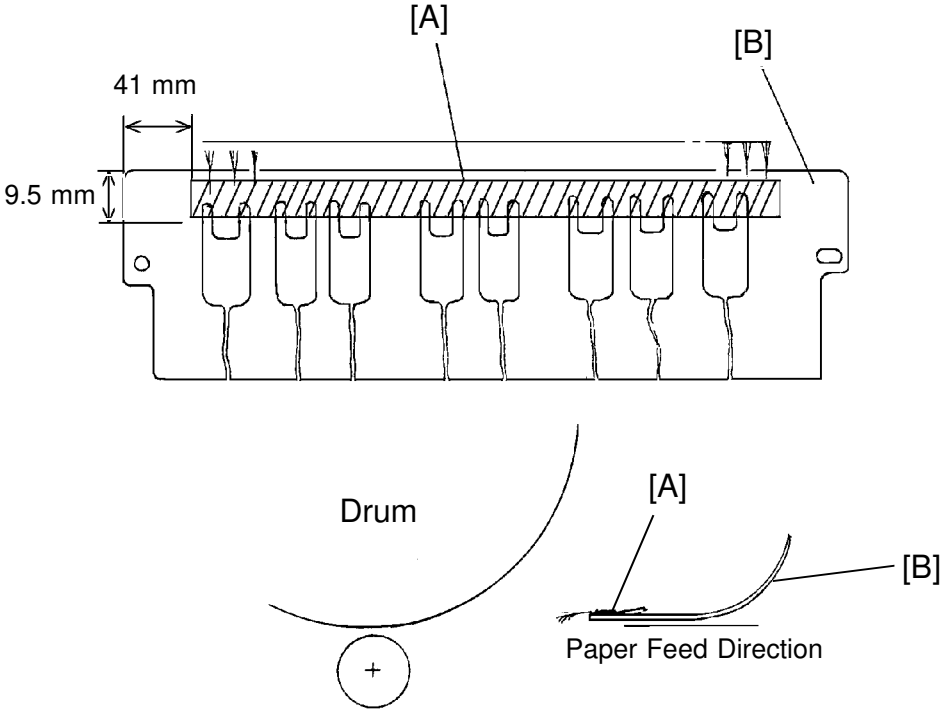
RICOH	Technical Bulletin	No. RTB-003
SUBJECT: Paper jamming around the drum		DATE:June 15 '91 PAGE: 1 of 1
PREPARED BY: S.Asai CHECKED BY:	FROM: Copier Technical Support Section	
CLASSIFICATION: ☐ Action Required ■ Troubleshooting ☐ Retrofit Information	☐ Revision of service manual ☐ Information only ☐ Other	MODEL: VT2100/2130/2150 VT2300/2500 Ges 5310/5315/5320/5330 Rex 1240/1241/1242/1260 NSH CP310/CP315/CP330

[Phenomenon]:

Paper jamming occurs around the drum because of static electricity when the machine is used under low humidity conditions. Heavy static charges will build up around the master during the printing run. This happens particularly when thin paper is being used at high speed rotations. This also happens if the original (and therefore the master on the drum) is changed.

[Countermeasure]:

Stick the antistatic brush (P/N: C2079010) [A] on the upper second feed roller guide plate [B] as illustrated below: (The antistatic brush has been registered as a spare part.)



Note: Depending on the type of paper and/or the environment, paper might still jam even though the antistatic brush was installed on the guide plate.
The occurrence ratio varies according to the environment. If possible, improve the environmental conditions or move the machine to a better place.

RICOH

Technical Bulletin No. RTB-004

SUBJECT: Paper exit pawl air pump	DATE: July 31 '91 PAGE: 1 of 5
PREPARED BY: S.Asai CHECKED BY:	FROM: Copier Technical Support Section

CLASSIFICATION:		MODEL:
☐ Action Required ■ Troubleshooting ☐ Retrofit Information	☐ Revision of service manual ☐ Information only ☐ Other	VT2100/2130/2150 VT2300/2500 Ges 5310/5315/5320/5330 Rex 1240/1241/1242/1260 NSA CP310/CP315/CP330

To ease paper separation from the drum, we have registered the air pump kit **(P/N C2119001)** as a spare part so that the paper exit pawl air pump mechanism such as that of the VT3500 (Ges 5375, Rex 1280, NSA CP375) can be installed on the other models listed above.

Note: When the blank area at the leading edge of copy is too narrow and/or the original has a large solid image, paper might still jam around the drum even though the air pump kit was installed on the machine.

Paper exit pawl air pump mechanism:

The paper exit pawl air pump produces a jet of air when the paper exit pawl comes near the drum surface. This jet of air helps push down on the paper and separate it from the drum.

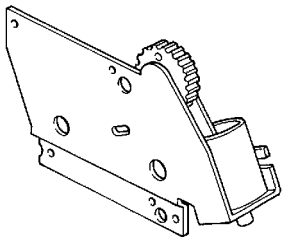
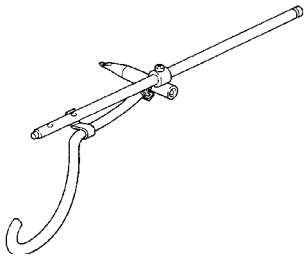
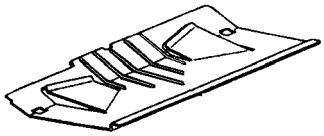
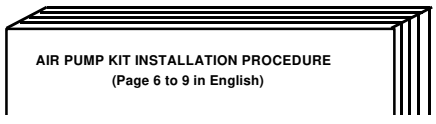
Air pump kit installation procedure:

Part check list and installation procedure follow this page.

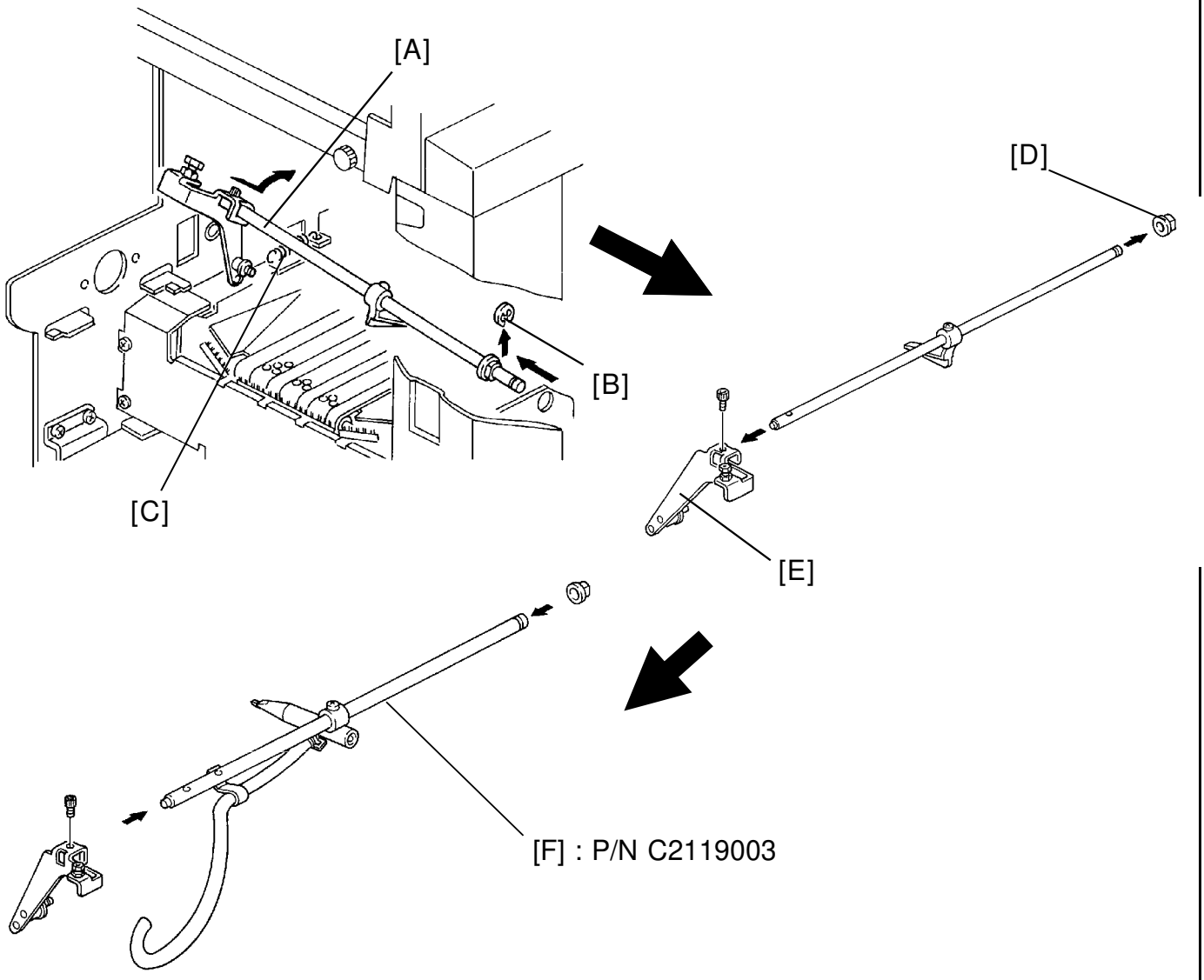
1. PART CHECK

Make sure that you have all the parts listed below.

* The air pump kit (P/N C2119001) consists of the following parts.

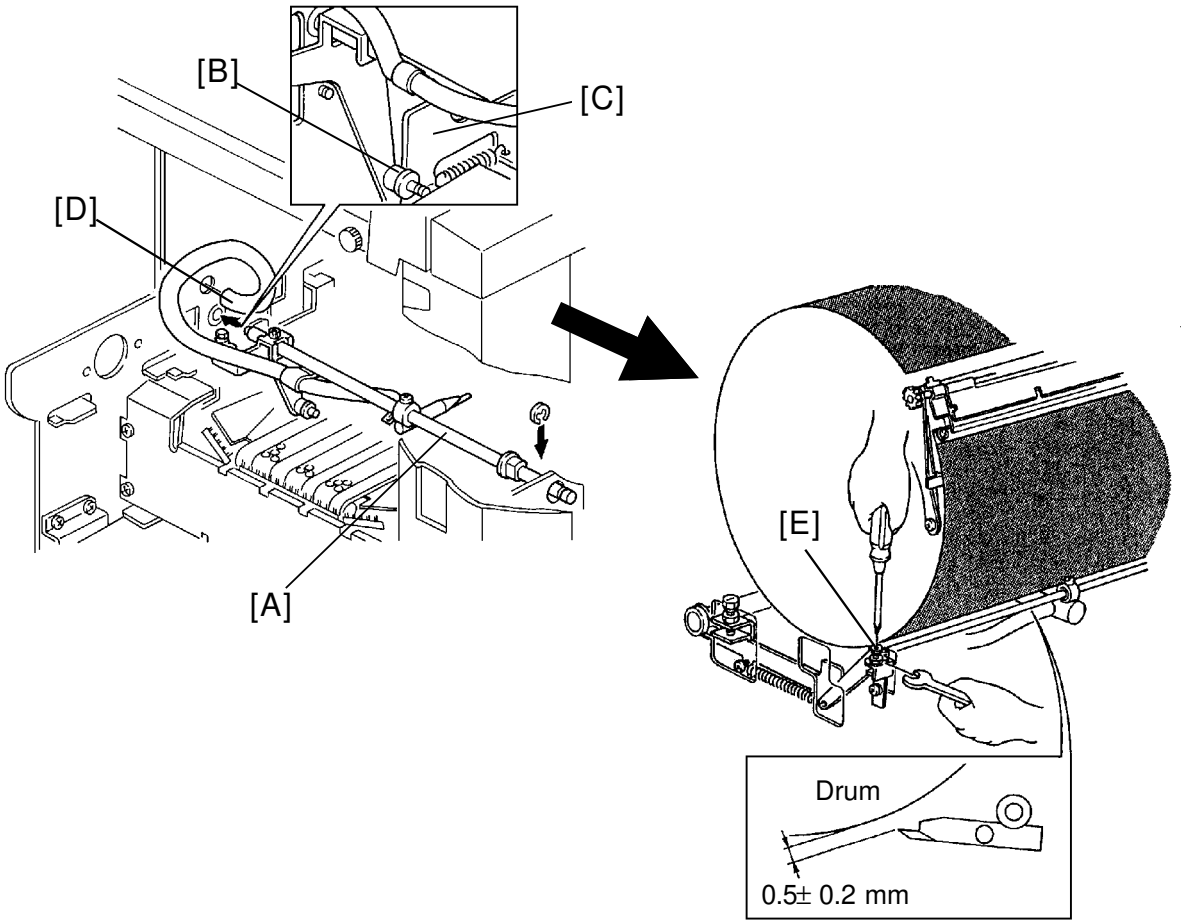
No	Part Number	Description	Qty	Shape
1	C2119002	Air Pump Assembly	1	
2	C2119003	Exit Pawl Assembly	1	
3	C2136201	Shelter Plate	1	
4	C2094711	Hose Band	1	
5	55066073	Stopper Screw	1	
6	C2119004	Installation Procedure	1	

2. INSTALLATION PROCEDURE



Note: Before installing the air pump unit, remove the drum, the rear cover, and the shelter plate.

1. Open the master eject unit and remove the exit pawl assembly [A] (1 E-ring [B] and 1 spring [C]) from the machine .
2. Remove the bushing [D] and the exit pawl lever [E] (1 Allen screw) from the shaft.
3. Mount the above exit pawl lever on the new exit pawl shaft [F] (1 Allen screw used on the previous shaft) and insert the bushing onto the shaft.



4. Install the new exit pawl unit [A](assembled on the previous page) to the machine (1 E-ring and 1 spring).

Note: Make sure that the collar [B] on the exit pawl lever is correctly placed on the exit pawl drive cam [C].

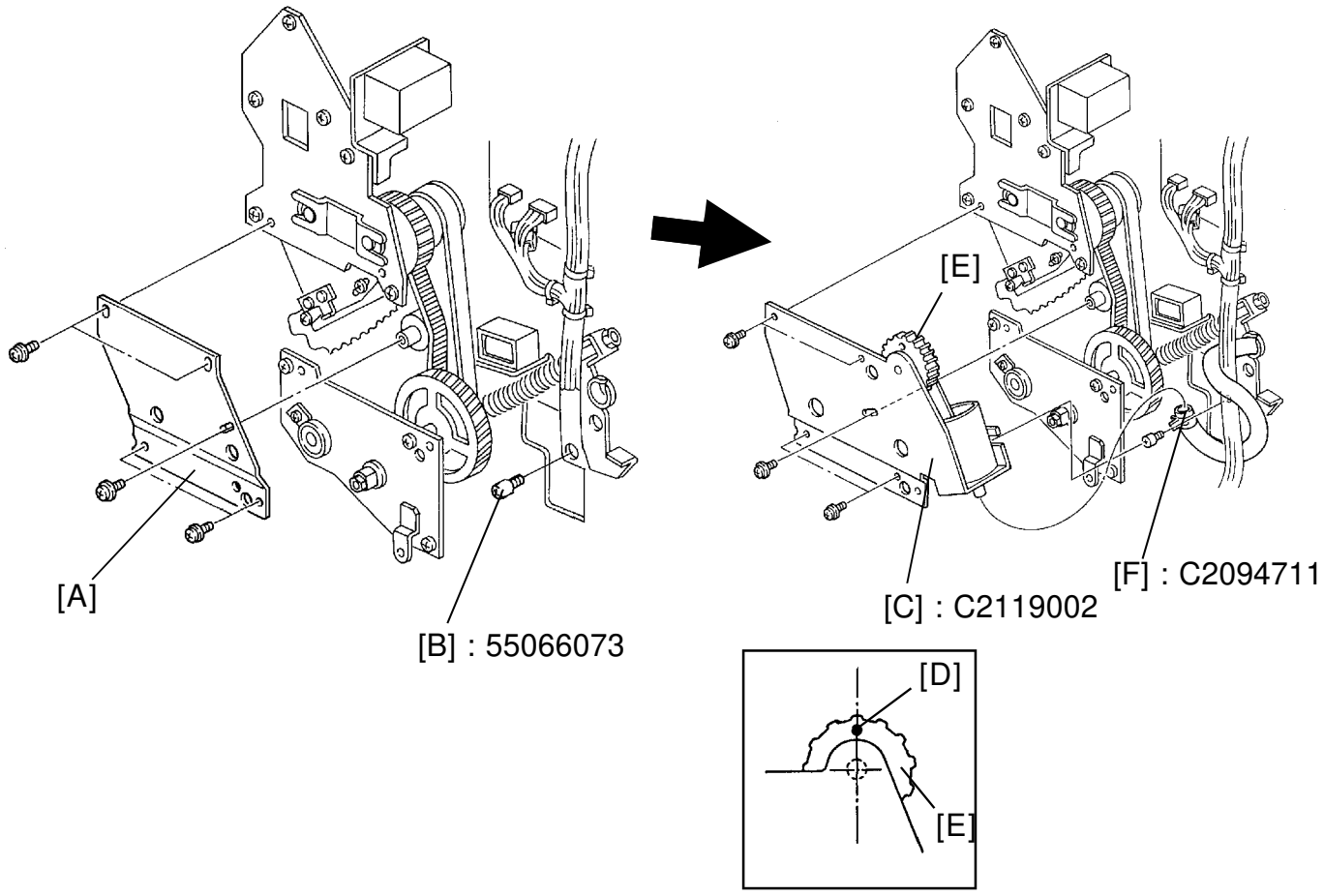
5. Insert the edge of the vinyl hose [D] into the hole on the rear side plate as shown.

- EXIT PAWL CLEARANCE ADJUSTMENT -

6. Manually turn on the paper feed and printing pressure solenoids. Using a spanner (10 mm), gradually rotate the drum rotation shaft counterclockwise to move the exit pawl to the drum.

7. When the printing pressure is applied, adjust the clearance between the drum and the exit pawl by turning the screw [E]so that it is 0.5± 0.2 mm.

Note: Make sure that the exit pawl does not contact the drum surface and the master clamper several times when the printing pressure is applied.



Note: Make sure that the drum stops at its home position. Then, perform the following procedure.

8. Remove the center support plate [A] originally installed on the machine (5 screws).
9. Install the stopper screw [B] on the rear side plate as shown.
10. Install the new center support plate [C] together with the air pump unit (5 screws).

Note: When installing the air pump unit, make sure that the mark [D] on the air pump drive gear [E] is located at the top position and that the drum stops at its home position. Otherwise, the air does not blow from the exit pawl edge at the correct timing.

11. Lay the vinyl hose as shown and install the hose end to the air pump exit with the hose band [F].
12. Install the new shelter plate (P/N C2136201) on the vacuum unit.
13. Re-install the rear cover (6 screws).

RICOH

Technical Bulletin No. RTB-005

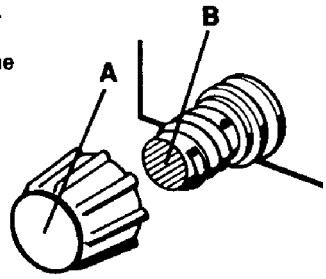
SUBJECT: Black Ink Cartridge Seal	DATE: Sep. 30,'91 PAGE: 1 of 1
PREPARED BY: S.Asai CHECKED BY:	FROM: Copier Technical Support Section

CLASSIFICATION:		MODEL:
☐ Action Required ☐ Troubleshooting ☐ Retrofit Information	☐ Revision of service manual ■ Information only ☐ Other	VT2100/2130/2150 VT2300/2500 Ges 5310/5315/5320/5330 Rex 1240/1241/1242/1260 Nsa CP310/CP315/CP330

To increase ink production, the transparent seal will be removed from the exit of the black ink cartridge (500cc). For the color inks, the transparent seal remains because the color inks are more fluid than the black ink.
Due to this change, the instructions printed on the black ink cartridge will be changed as shown below.

OLD

Handling Instructions
Remove the Cap A from a new cartridge of ink. Do not remove the Seal B. Set ink cartridge.
Manuel d'Instruction
Retirer le bouchon de la nouvelle cartouche d'encre. Ne pas retirer le joint B. Mettre en place la cartouche d'encre.
Bedienungshinweise
Kappe a von neuer farbpatrone entfernen! Dichtung B nicht entfernen.Farbpatrone einsetzen.
Instrucciones de manejo
Extraiga la tapa A del nvevo cartucho de tinta.
No extraiga el precinto B.
Coloque el cartucho de tinta.
Modo di impiego
Rimuovere il coperchio A dalla nuova cartuccia di inchiostro.
Non rimuovere il sigillo B.
Posizionare la cartuccia di inchiostro.



NEW

Handling Instructions
■Set the ink in the machine immediately after the cap is removed to prevent entry of air.

Handhabung
■Den Farbbehalter sofort nach dem Offnen in die Maschine einsetzen, um Eindringen von Luft zu verhindern.

Instructions d'emploi
■Placer l'encre dans l'appareil des que son bouchon a ete ouvert afin d'eviter que l'air ne penetre.

Instrucciones
■Para evitar la entrada de aire, la tinta se debe colocar en la maquina inmediatamente despues de abrir.

Istruzioni per l'uso
■Mettere l'inchiostro nella macchina subito dopo aver tolto il tappo, per evitare che entri aria.

This modification will be implemented from the October '91 production run for the 500cc ink cartridge.

RICOH

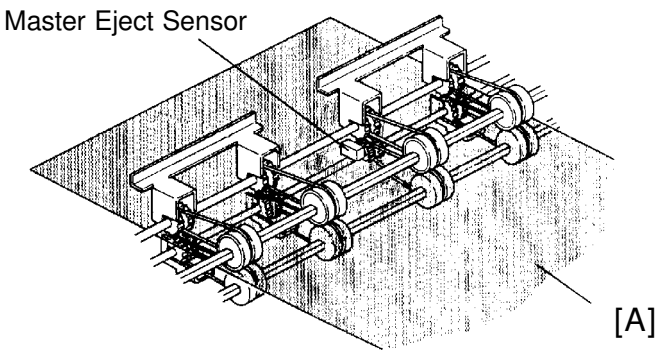
Technical Bulletin No. RTB-006

SUBJECT: F Jam Indication at Power ON	DATE: Nov.15,'91 PAGE: 1 of 1
PREPARED BY: S. Asai CHECKED BY:	FROM: Copier Technical Support Section

CLASSIFICATION:		MODEL:
☐ Action Required ■ Troubleshooting ☐ Retrofit Information	■ Revision of service manual ☐ Information only ☐ Other	VT2300/2500 Ges 5330/ Rex 1260 NSA CP330

[Phenomenon]:
F jam indication (Master eject jam indication) lights when the main switch turns on. This is because the master eject sensor always stays on.

[Adjustment Procedure]:
To ensure that the master eject sensor functions, perform the following adjustment procedure.



1. Clean the sensor surface with cloth dampened with alcohol.

2. Make a master with the blank original.
   a. Set the blank original and make about 20 prints.
   b. Stop printing and remove the master from the drum.

3. Insert the above master [A] between the upper and the lower eject rollers with the master film side up as shown.

4. Confirm that the voltage between TP104 and GND line (CN103-5) on the main PCB is 3.5V± 0.5V

5. If it is not, adjust it by turning VR104 on the main PCB.

Note: Adjust the voltage under the condition that the master is stretched.

6. Make sure that the voltage is 1.7V or less when no master is under the master eject sensor.

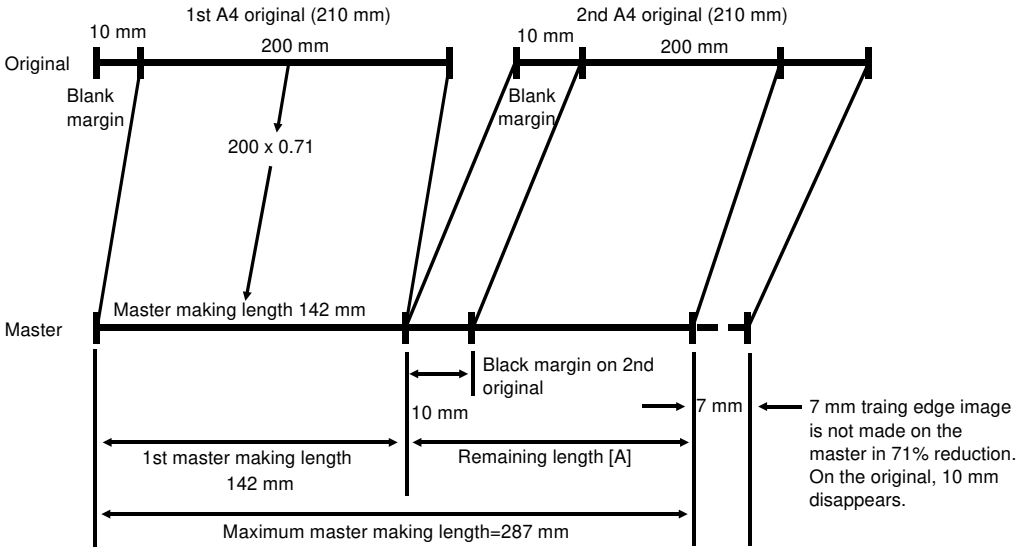
Note: If the sensor surface stains, the voltage may go over 1.7V

RICOH	**Technical Bulletin**	**No. RTB-007**
SUBJECT: ROM Change for Combine 2 Originals Mode		DATE: Nov.15,'91 PAGE: 1 of 3
PREPARED BY: S. Asai CHECKED BY:	FROM: Copier Technical Support Section	
CLASSIFICATION: ☐ Action Required ■ Troubleshooting ☐ Retrofit Information	☐ Revision of service manual ☐ Information only ☐ Other	MODEL: VT2100/2130/2150 Ges 5310/5315/5320 Rex 1240/1241/1242 NSA CP310/CP315

[Phenomenon]:
There have been reports in the field that the Combine 2 Originals mode is canceled when used with the 71% reduction mode and A4 sideways originals (210 mm width). This problem occurs on the VT2150 (A4 size machine).

[Causes]:
On the VT2150 (A4 size machine), there is no room for variation in original length detection in Combine 2 Originals mode. Therefore, if the original feed speed is slightly slower than the standard speed and/or the original registration sensor actuator for detecting the original feed length does not move smoothly, this problem may occur in Combine 2 Originals mode.

Current Original Detection Program in Combine 2 Originals mode on the VT2150:
* Select 71% reduction and use A4 originals.



1. When the 1st original is fed out, the remaining master making length [A] for the 2nd original is 145 mm. **(287 mm – 142 mm = 145 mm)**

2. In Combine 2 Originals mode, the ROM program detects whether the remaining length [A] (145 mm) is more than half of the maximum master making length (287 mm / 2 = 143.5 mm). If the remaining length is less than 143.5 mm, the Combine 2 Originals mode is automatically canceled before the 2nd original is fed in.

   145 – 143.5 = 1.5 mm (Normally, it has 1.5 mm leeway)

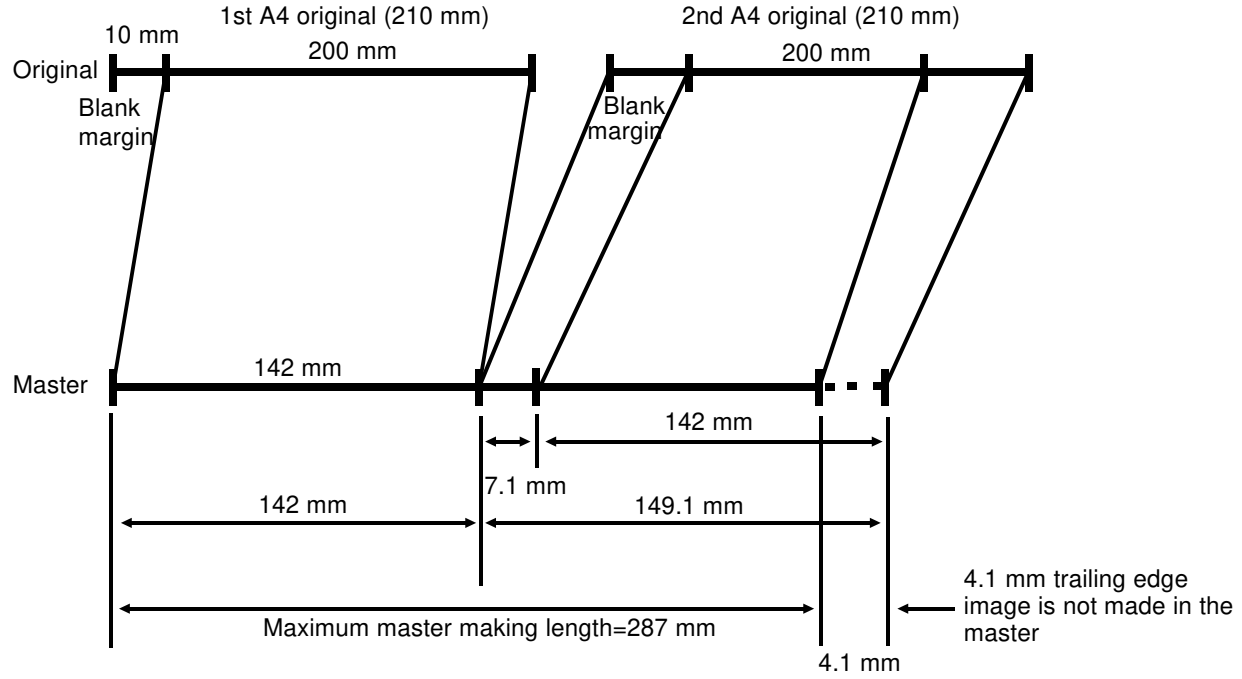
[Countermeasure]:

The ROM program relating to the original length detection in Combine 2 Originals mode has been modified as follows. This modification is applied to the B4/LG size machines (VT2100/2130) to standardize the function of Combine 2 Originals mode.

New Program in Combine 2 Originals mode:

1. Apply reduction ratio for 10 mm leading edge image on the 2nd original.

* For example, select 71% reduction and use A4 originals.



2. Added a leeway of 5% of the length in original length detection in Combine 2 Originals mode.

a. Maximum original size is determined with the following calculation.

$$\text{Max. Original Size} = \frac{\text{Max. Master Making Length}}{2} \times 1.05 \div \text{Reduction Ratio} + 10 \text{ mm (Blank margin on 1st original)}$$

Max. Master Making Length: **B4/LG size machine = 354 mm**
A4 size machine = 287 mm

b. The following table shows the maximum original length (Sub-scan line) on each reduction ratio. If the original length is more than the length mentioned in the table, the Combine 2 Originals mode is canceled.

Printe Size (Model) / Reduction Ratio (Discarded pixel)	B4 Size Machine (VT2100)	LG Size Machine (VT2130)	A4 Size Machine (VT2150)
100%	195.9 mm	195.9 mm	160.7 mm
93% (13/14= 92.85%)	210.1 mm	210.1 mm	172.3 mm
82% (9/11= 81.81%)	237.2 mm	—	194.2 mm
71% (5/7= 71.42%)	270.2 mm	—	220.9 mm
75% (3/4= 75%)	—	257.8 mm	—
64% (9/14= 64.28%)	—	299.1 mm	—

Note: The above figures are true when the image reproduction is exact.

The ROM on the main control board has been modified. The part numbers of the ROM and the main control board remain. However, a suffix (9th character) has been changed as follows:

Old P/N	**New P/N**
C2118045C	C2118045D (ROM: IC-HN27C256G-20)----------Total Sum Check "BC00"
C2118112E	C2118112F (Main Control Board - LG Machine)
C2118113F	C2118113G (Main Control Board - B4 Machine)
C2118114F	C2118114G (Main Control Board - A4 Machine)

The problem on the VT2150 (A4 size machine) has been fixed for machines with serial numbers listed below. Other machines not described here will have this problem fixed from the November mass production run onward.

CP310: S/N 50211100001-
5310: S/N 50211100011-
1240: S/N 50211100121-

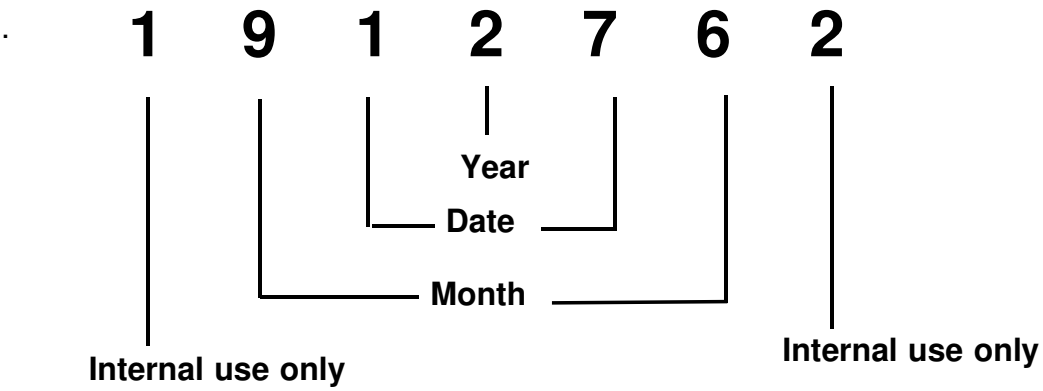
VT2150: S/N C2801100*** (9th, 10th, and 11th digits are as follows:)
074, 143-148, 155, 163-165, 169, 170, 175, 177, 178, 182-186, 189, 191-194

Note: If necessary, check the P/N suffix (9th character) of the ROM inside the machine to judge whether the new ROM has been installed.

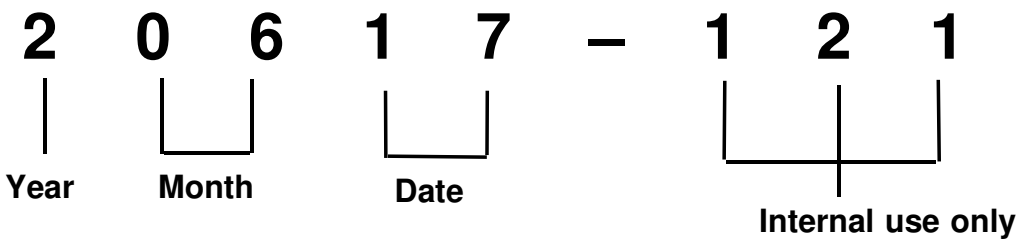
RICOH	Technical Bulletin	No. RTB-008
SUBJECT: Priport Ink Lot Number		DATE: Aug. 15, '92 PAGE: 1 of 2
PREPARED BY: J. Mochizuki CHECKED BY:	FROM: Copier Technical Support Section	
CLASSIFICATION: ☐ Action Required ☐ Troubleshooting ☐ Retrofit Information	☐ Revision of service manual ■ Information only ☐ Other	MODEL: VT2100/2130/2150 Ges 5310/5315/5320 Rex 1240/1241/1242 NSA CP310/CP315

To clarify the ink production dating, the method of lot numbering has been changed as follows:

Old method



New method



The above lot number means that the ink is produced on **June 17, '92**

The table below shows the new lot numbering start date.

Type of ink	New lot numbering start date
Black 800cc	July 13, '92
Black 500cc	July 13, '92
Color Red 500cc	July 13, '92
Color Blue 500cc	July 16, '92
Color Green 500cc	July 14, '92
Color Brown 500cc	July 16, '92

Technical Bulletin No. RTB-009

SUBJECT: Abnormal image appears on the master	DATE: Dec. 31, '92 PAGE: 1 of 2
PREPARED BY: J. Mochizuki CHECKED BY: H. Terashita	FROM: Copier Technical Support Section

CLASSIFICATION:
- ☐ Action Required
- ■ Troubleshooting
- ☐ Retrofit Information
- ☐ Revision of service manual
- ☐ Information only
- ☐ Other

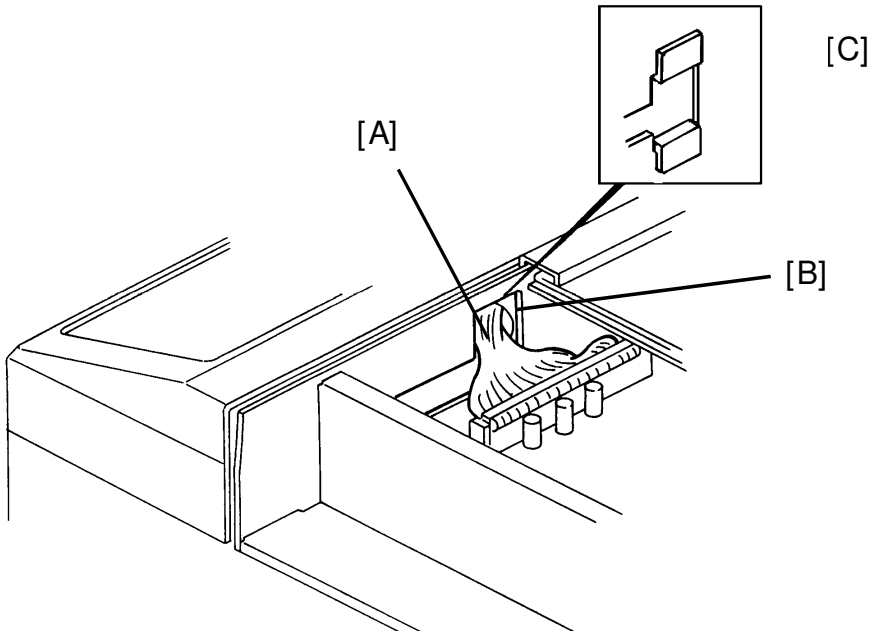
MODEL:
Priport VT2105/
Ges 5325/Rex 1250/
NSA CP325

[Symptom]

The following abnormal image appears on the master regardless of the types of original:

1. Black copy
2. No image
3. Solid black area appears in the middle of the prints
4. Vertical white line in the solid black copy
5. 43mm width vertical white line in the center and thin horizontal black lines outside the white line

[Cause]



Flat Cable - A/D Conversion [A] (C2158012) is damaged by the edge of the scanner side plate cutout [B] and short circuited to the side plate.

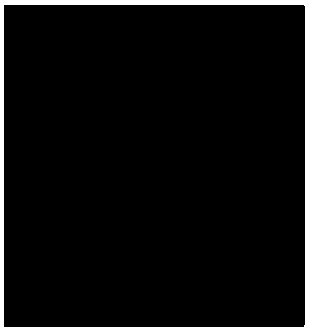
[Countermeasure]

1. File the edge of the sideplate cutout and cover it with insulating tape.
2. Bind the damaged area of the flat cable with insulating tape.

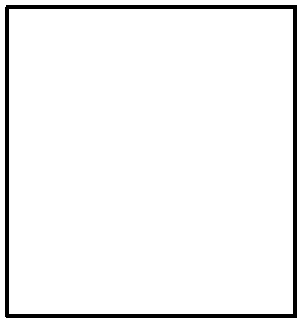
From December '92 production, the edge has been covered with rubber pads [C].

[Possible abnormal images]

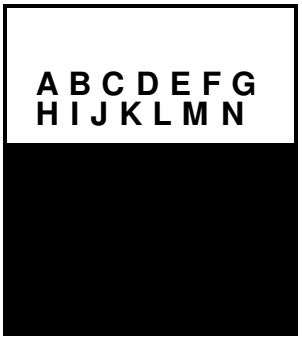
1. Black copy



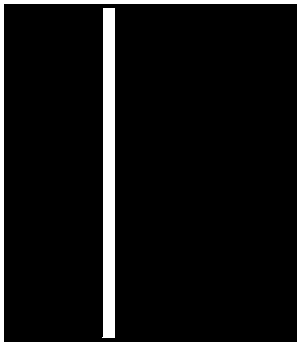
2. No image



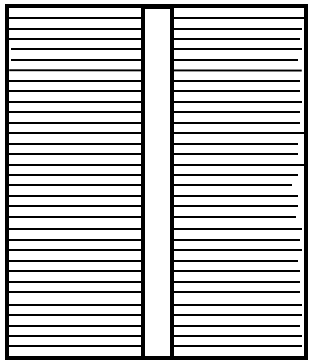
3. Solid black area appears in the middle of the prints



4. Vertical white line in the black copy



5. 43mm white line and holizontal thin lines outside the white line



RICOH	Technical Bulletin	No. RTB-010
SUBJECT: Priport VT2005 Information		DATE: July 15, '94 PAGE: 1 of 2
PREPARED BY: J. Mochizuki CHECKED BY:	FROM: 2nd Technical Support Section	
CLASSIFICATION: ☐ Action Required ☐ Troubleshooting ☐ Retrofit Information ■ Revision of service manual ☐ Information only ☐ Other		MODEL: Priport VT2005 Ges 5323/Rex 1245/ NST CP323

The Priport VT2005 has been added to the line-up of the VT2000 series.

The VT2005 is almost the same as the VT2105. Only the difference is that VT2105 has an automatic document feeder, but the VT2005 does not have it (Originals must be set one by one in the document feeder.). All the PCBs for the VT2005 are identical to the ones for the VT2105 (only the DIP SW setting of the main board is different).

Please add the following items and notes to your VT2105 service manual so that the VT2105 manual can also cover the VT2005.

OVERALL MACHINE INFORMATIONS

Page 1-1

1. SPECIFICATIONS

ADF original capacity: This specification is for the VT2105 only.

Weight: **VT2105:** 120 V version: 99 kg (217.8 lb)
220/240 V version: 104 kg (228.8 lb)

VT2005: 120 V version: 98 kg (215.6 lb)
220/240 V version: 103 kg (226.6 lb)

Dimensions: (WxDxH) **Stored:** VT2105: 735 mm x 607 mm x 577 mm (29.0"x23.9"x22.8")
VT2005: 735 mm x 607 mm x 569 mm (29.0"x23.9"x22.5")

Page 1-6

3. ELECTRICAL COMPONENT DESCRIPTIONS

The following components are for the VT2105 only.

3 Original Pressure Solenoid

18 ADF Drive Motor

19 1st Original Sensor

65 ADF Safety Switch

SERVICE TABLES

Page 4-2

2.1 DIP SWITCH TABLE (ON THE MAIN BOARD)

The factory setting of the DIP switches is different for the VT2105 and the VT2005.

No.	DIP SW	Function	Factory Setting
2	DP102-2	ADF Cover Open	VT2105: OFF VT2005: ON
6	DP101-4	ADF Operation	VT2105: OFF VT2005: ON

Page 4-6

3.2 OUTPUT MODE

The following output modes are for the VT2105 only:

0032-0 Turns on the ADF drive motor.

0033-0 Turns on the ADF original pressure solenoid.

Page 4-7

3.3 INPUT MODE

The following input mode is for the VT2105 only:

0033-1 SN: 1st Original Detection

RICOH

Technical Bulletin No. RTB-011

SUBJECT: Ink Set-off on Prints or Master Damage When Using the VT-II Master **(For N915/N935/N955 Models Only)**	DATE: Dec. 15, '94 PAGE: 1 of 2
PREPARED BY: H. Kokubo CHECKED BY: S. Hamano	FROM: 2nd Technical Support Section

CLASSIFICATION:

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

MODEL:
Priport N860/N865/N915/
N935/N955
(N915/N935/N955 Only)

N860: Ricoh VT2005/Gestetner 5323/RexRotary 1245/nashuatec CP323
N865: Ricoh VT2105/Gestetner 5325/RexRotary 1250/nashuatec CP325/ABDICK 6520
N915: Ricoh VT2100/VT2130/VT2150/Gestetner 5310/5315/5320/
RexRotary 1240/1241/1242/nashuatec CP310/CP315
N935: Ricoh VT2300/Gestetner 5330/RexRotary 1260/nashuatec CP330
N955: Ricoh VT2500

There are two types of master for the N915/N935/N955 models. They are the VT-II master (RICOH VT-II-M/S, NRG CPMT8/9) and VT master (RICOH VT-M/S, NRG CPMT4/5). The VT-II master is slightly more sensitive to the heat of the thermal head than the old VT master. (The VT-II master has started being used instead of the old VT master.) When the VT-II master is used, the following symptom might occur:

SYMPTOM

- Amount of ink transferred on prints increases due to larger holes made by the thermal head on the master than those of the old VT master. As a result, ink set-off on the reverse side of prints will increase.

- The thermal head makes too large holes on the master and some parts of the master surface (the polyester film layer) are peeled off during printing. The damaged parts will appear as black patches on prints.

SOLUTION

Install a special ROM on the image processing PCB to enable the adjustment of the thermal head energy with the DIP switches.

1. Replace the ROM on the image processing PCB (IC422 P/N-C211 8004 for the N915 models, IC432 P/N-C213 8004 for the N935/N955 models) with the following one.

   - **For N915 models: P/N-C211 9006** (IC - HN27128AP-20)
   - **For N935/N955 models: P/N-C213 9005** (IC - HN27128AP-20)

NOTE: - These ROMs are available as normal service parts.
- The ROMs for the N915 and N935/N955 models are different.

2. The thermal head energy can be adjusted using number 5 and 6 of DPS400 on the image processing PCB as follows:

DPS400-5	ON	ON	**OFF**	OFF
DPS400-6	ON	OFF	**ON**	OFF
Thermal Head Energy	STANDARD	-10%	**-15%**	-20%

NOTE: DPS400-5 and -6 are also for the thermal head energy adjustment even with the normal ROM, but the special ROM allows for much wider adjustment range as indicated in the above table.

3. Set DPS400-5 to OFF and DPS400-6 to ON to reduce the thermal head energy by -15%.

NOTE:

1) The thermal head energy can also be reduced by reducing the input voltage with the potentiometer in the power supply unit (see service manual page 5-23 "THERMAL HEAD VOLTAGE ADJUSTMENT"). However, this is not effective against the above symptom and the above solution must be used. The new ROMs enable the adjustment of the pulse length which determines the period that voltage is applied to the thermal head.

2) After you reduce the thermal head energy, tiny white spots tend to be more visible in solid-fill image areas. This is just like the images made with the old VT master. The density of the solid-fill images looks slightly lighter. (Therefore, you should not reduce the thermal head energy more than -15% as indicated in the above procedure.)

3) If the fences on the paper delivery table are not adjusted exactly to the paper size, ink set-off on the reverse side of prints will increase. Instruct the operator if he is not familiar with this.

Technical Bulletin No. RTB-012

SUBJECT: Ink Pump Improvement (For the N860/N865/N915/ N935/N955 Only)	DATE: Nov. 15, '95 PAGE: 1 of 2
PREPARED BY: H. Kokubo CHECKED BY: M. Iwasa	FROM: 2nd Technical Support Section

CLASSIFICATION:
- ☐ Action Required
- ■ Troubleshooting
- ☐ Retrofit Information
- ☐ Revision of service manual
- ☐ Information only
- ☐ Other

MODEL:
Priport
N850/N860/N865/N915/
N935/N955

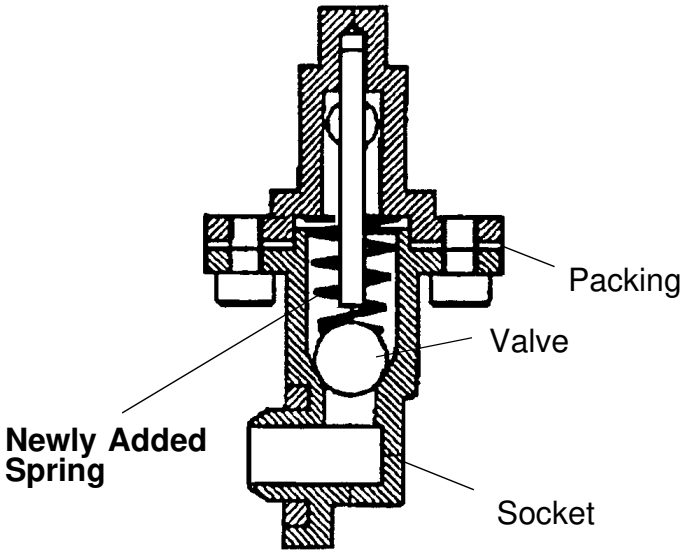
N850: Ricoh VT2200/Gestetner 5327/RexRotary 1252/nashuatec CP327/ABDICK 6530
N860: Ricoh VT2005/Gestetner 5323/RexRotary 1245/nashuatec CP323
N865: Ricoh VT2105/Gestetner 5325/RexRotary 1250/nashuatec CP325/ABDICK 6520
N915: Ricoh VT2100VT/2130/VT2150/Gestetner 5310/5315/5320/ RexRotary 1240/1241/1242/nashuatec CP310/CP315
N935: Ricoh VT2300/Gestetner 5330/RexRotary 1260/nashuatec CP330
N955: Ricoh VT2500

Information for the N850 starts from this bulletin. RTB's number 1 to 11 are for the other models only.

To ensure that all ink in the cartridge is supplied, a spring has been added inside the ink pump as shown to the right. The spring ensures that the small ball, which is used as a valve, is pushed back properly.

This modification has been applied from the September 1995 production runs of all Priport series models. The part numbers of the ink pump assemblies remain the same. (Note that the N850 and RN925 have been using the new type from the first mass production.)

There are three types of ink pump. They are the NA/NB type that can hold the 1000 cc ink cartridge, the N type that can hold the 600 cc ink cartridge only, and the N810 type that is for the N810 and N810-II only. See the following table for the applicable models.



Cross-section of the Bottom Part of the Ink Pump

TYPE OF INK PUMP	APPLICABLE MODELS
NA/NB	NA-2, NA-3, NB-2
N	N865, N860, N915, N935, N955, and all SS series models.
N810	N810, N810-II

There are two types of spring for these three types of the ink pump. The part numbers are:

C222 4710 (Pump Spring - 21 mm) : For the NA/NB type ink pump.

C224 4715 (Pump Spring - 13 mm) : For the N and N810 type ink pumps.

SOLUTION IN THE FIELD

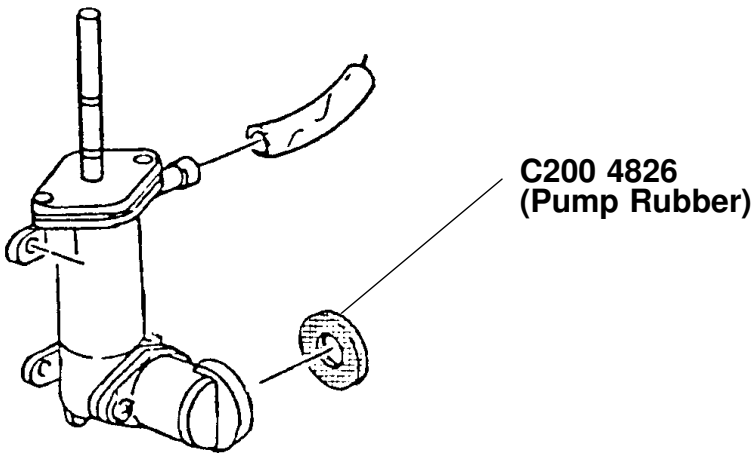
For the field machines, you can install the spring after removing the socket (with two screws). (It takes longer to replace the whole pump assembly.)

CAUTION:	When you remove the socket, ink will leak. Be sure to place absorbant material to prevent the floor from becoming dirty with ink.

NOTE: 1. There is a packing between the socket and housing (see the illustration on the previous page). If it is damaged, you may have to replace the packing at the same time. (Normally, this is not required.) The part number is:

C200 4827 (Packing - Pump Socket)

2. A rubber packing is used as shown below in order to ensure that the nozzle of the ink cartridge tightly contacts the pump socket. Check if this part is dislocated. The rubber packing used in the N810, the N865, and the other later models is adhered with glue, but it is not adhered for the other older models.



RICOH	Technical Bulletin	No. RTB-013

SUBJECT: Master Eject Belt Modification	DATE: Mar. 31, '96 PAGE: 1 of 2
PREPARED BY: H. Kokubo CHECKED BY: M. Iwasa	FROM: Technical Support Section

CLASSIFICATION:

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

MODEL:
Priport
N850/N860/N865/N915/
N935/N955

N850:	Ricoh VT2200/Gestetner 5327/RexRotary 1252/nashuatec CP327/ABDICK 6530
N860:	Ricoh VT2005/Gestetner 5323/RexRotary 1245/nashuatec CP323
N865:	Ricoh VT2105/Gestetner 5325/RexRotary 1250/nashuatec CP325/ABDICK 6520
N915:	Ricoh VT2100/VT2130/VT2150/Gestetner 5310/5315/5320/ RexRotary 1240/1241/1242/nashuatec CP310/CP315
N935:	Ricoh VT2300/Gestetner 5330/RexRotary 1260/nashuatec CP330
N955:	Ricoh VT2500

PROBLEM

Master eject jams frequently occur. In the worst case, the upper or lower master eject belts slip off the rollers.

CAUSE

At the March 1995 production of all PRIPORT models, the vendor who produced the upper and lower master eject belts was changed. (The part numbers were not changed because there was no change in configuration.) Since then, all PRIPORT models have been using the belts manufactured by the new vendor.

Recently it was found that some of these parts tend to stretch and can cause the problem, as stated above, due to part variation. (The occurrence of the problem varies from one lot to another.)

SOLUTION

The upper and lower master eject belts will be modified as follows:

Old P/N	New P/N	Description	Q'ty used	Inter-change-ability	Applicable Models
C219 3545	**C219 3605**	Upper Belt	4 → 4 * (5 → 5)	x/o	NB2, N850, RN925, NA33 * : The number of both parts used for the NA33 is 5.
C219 3546	**C219 3606**	Lower Belt	4 → 4 * (5 → 5)	x/o	
C200 3545	C219 3605	Upper Belt	4 → 4 * (5 → 5)	x/o	NA3, NA2, N865, and other older models. * : The number of both parts used for the NA3 and NA2 is 5.
C200 3546	C219 3606	Lower Belt	4 → 4 * (5 → 5)	x/o	

NOTE: There are two types of old part numbers as shown in the table. Both these types will be changed into a new type of upper and lower belt.

The new upper and lower belts will be implemented into the production from April 1996. For the service parts, the SPC will have the new parts in stock soon.

Technical Bulletin No. RTB-014

SUBJECT: Worn Main Drive Gear (N860/N865 Only)	DATE: June 15, '96 PAGE: 1 of 2
PREPARED BY: H. Kokubo	FROM: Priport Service Planning Section

CLASSIFICATION:

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

MODEL:
Priport
N850/N860/N865/N915/
N935/N955

N850:	Ricoh VT2200/Gestetner 5327/RexRotary 1252/nashuatec CP327/ABDICK 6530
N860:	Ricoh VT2005/Gestetner 5323/RexRotary 1245/nashuatec CP323
N865:	Ricoh VT2105/Gestetner 5325/RexRotary 1250/nashuatec CP325/ABDICK 6520
N915:	Ricoh VT2100VT/2130/VT2150/Gestetner 5310/5315/5320/ RexRotary 1240/1241/1242/nashuatec CP310/CP315
N935:	Ricoh VT2300/Gestetner 5330/RexRotary 1260/nashuatec CP330
N955:	Ricoh VT2500

It was found that gears C2032215 and C2032326 (see the illustration on the next page) can rapidly wear out if they are not greased. In particular, gear C2032215 wears out faster (after about 30,000 to 50,000 copies).

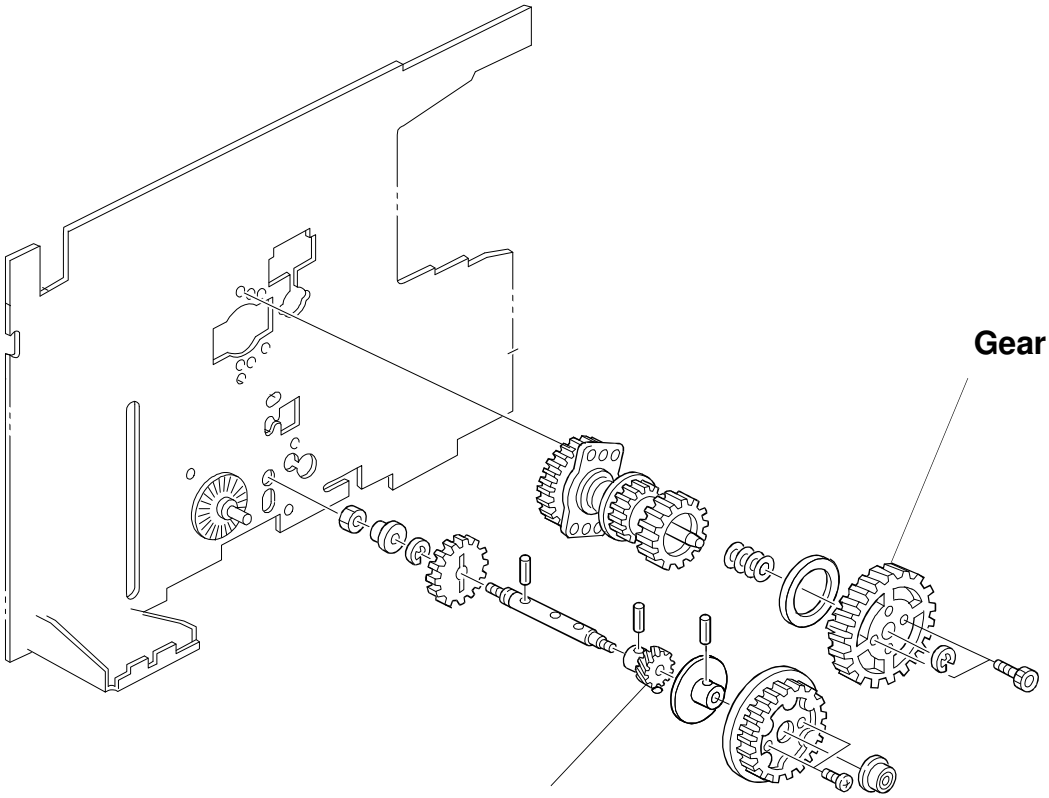
It was also found on the production lines that some machines which were manufactured during the period from the end of 1994 to May 1995 have a lack of greasing for these gears. From April 1995, an inspection process was added to check the greasing of these gears.

NOTE: The N850, N915, N935, and N955 models do not have this problem. The N850 started manufacture after May 1995, and there was no production of the other models during that period. Therefore, it is only possible for the N860 and N865 to have this problem.

RECOMMENDATIONS

Grease the gears (evenly on the surface of the gear C2032215) in the following cases:

1. For the machines detailed above (the N860 and N865 manufactured between the end of 1994 and May 1995), check if grease is properly applied and grease if necessary.
2. Grease the gears every time when they are replaced.
3. Grease at yearly PM intervals (as mentioned in the service manual).



RICOH

Technical Bulletin No. RTB-015

SUBJECT: Paper Table Drive Error E-02 (N850 and NA33 Only)

ISSUED ON: July 31, 1996

CLASSIFICATION:

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

ISSUED BY:

H. Kokubo,
Priport Service Planning Section

MODEL: PRIPORT

N850:	Ricoh VT2200/Gestetner 5327/RexRotary 1252/nashuatec CP327/ABDICK 6530
N860:	Ricoh VT2005/Gestetner 5323/RexRotary 1245/nashuatec CP323
N865:	Ricoh VT2105/Gestetner 5325/RexRotary 1250/nashuatec CP325/ABDICK 6520
N915:	Ricoh VT2100/VT2130/VT2150/Gestetner 5310/5315/5320/RexRotary 1240/1241/1242/ nashuatec CP310/CP315
N935:	Ricoh VT2300/Gestetner 5330/RexRotary 1260/nashuatec CP330
N955:	Ricoh VT2500

SYMPTOM:

The paper feed table is not driven. Service call status code E-02: paper table drive error is displayed.

CAUSE:

The dc motor that drives the table occasionally generates electrical noise when it starts rotating. This electrical noise is input into the ac drive board and damages IC301 on the board.

Electrical noise tends to be generated especially when the motor is still new. While the motor turns, the brushes inside are not yet worn in and this can cause electrical noise to occur.

Since a dc motor of this type is used in the N850 (Ricoh VT2200/Gestetner 5327/ RexRotary 1252/nashuatec CP327/ABDICK 6530) and NA33 (Ricoh VT3800/ Gestetner 5385/RexRotary 1290/nashuatec CP385/ABDICK 6790) models only, this problem does not occur on the other PRIPORT models.

SOLUTION:

To prevent the electrical noise from being generated, a harness which contains two capacitors will be installed between the ac drive board and dc motor from the August 1996 production.

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RICOH Technical Bulletin No. RTB-015

For the field units, the following part has been registered as a service part:

Motor Relay Harness Kit: P/N-C223 8131

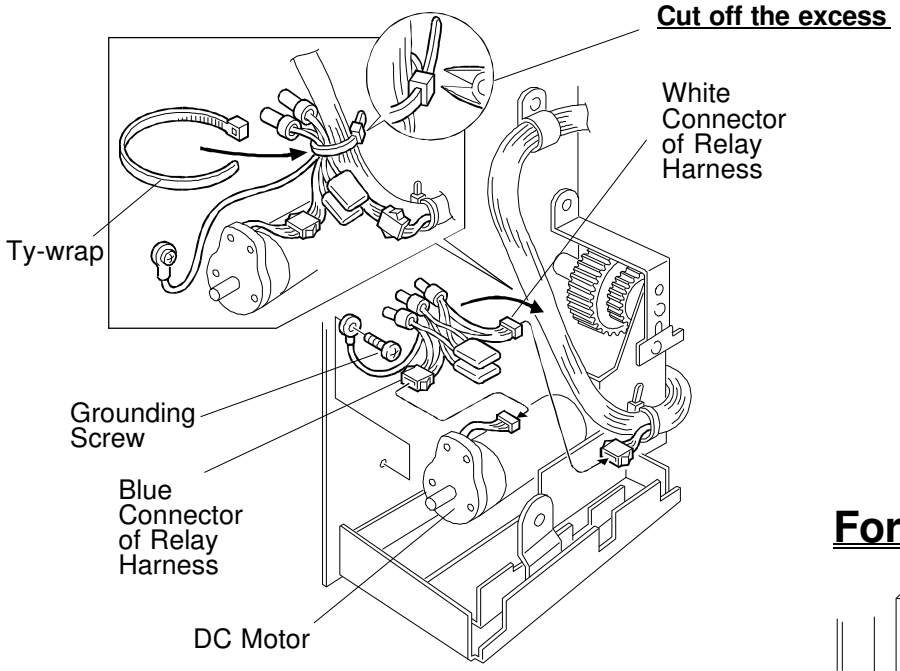
NOTE: The above part includes:

- One Relay Harness (includes the capacitors)
- One Ty-wrap
- One Grounding Screw (M4 x 6)

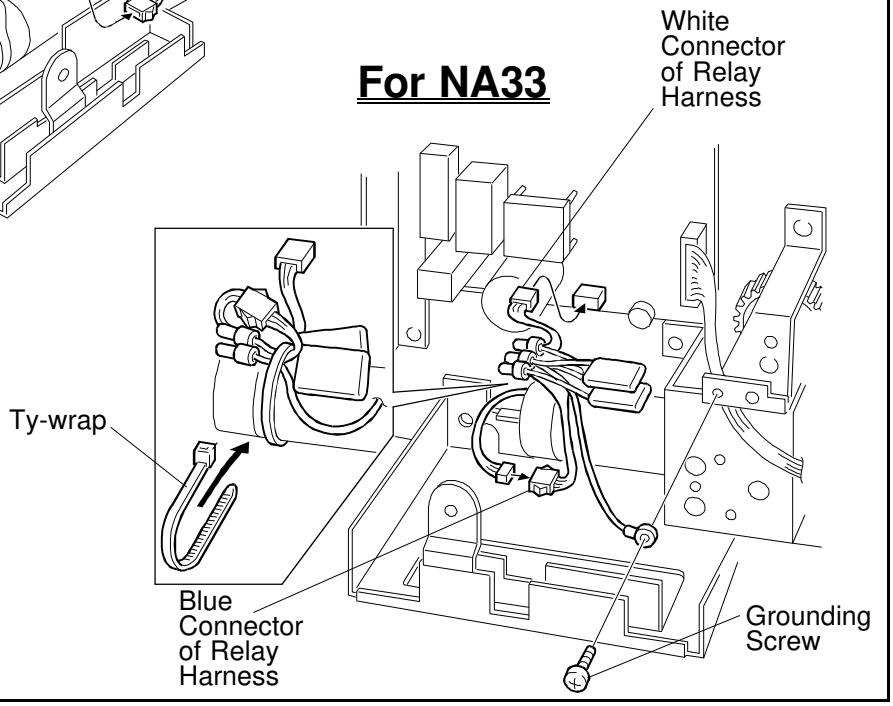
In the field, install the kit as shown below:

NOTE:
- The layout of the dc motor is slightly different between the N850 and NA33 models as shown. To prevent the relay harness from being caught by the gears, firmly secure it with the Ty-wrap as shown in the illustrations for each model.
- Since the Ty-wrap is too long for the N850 model, cut off the excess, as shown.

For N850



For NA33



RICOH

Technical Bulletin No. RTB-016

SUBJECT: Paper Leading Edge Dirty with Ink

ISSUED ON: August 31, 1996

CLASSIFICATION:

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

ISSUED BY:

H. Kokubo,
Priport Service Planning Section

MODEL: PRIPORT

N850:	Ricoh VT2200/Gestetner 5327/RexRotary 1252/nashuatec CP327/ABDICK 6530/SVN3200DNP
N860:	Ricoh VT2005/Gestetner 5323/RexRotary 1245/nashuatec CP323
N865:	Ricoh VT2105/Gestetner 5325/RexRotary 1250/nashuatec CP325/ABDICK 6520
N915:	Ricoh VT2100/VT2130/VT2150/Gestetner 5310/5315/5320/RexRotary 1240/1241/1242/ nashuatec CP310/CP315
N935:	Ricoh VT2300/Gestetner 5330/RexRotary 1260/nashuatec CP330
N955:	Ricoh VT2500

SYMPTOM:

During a long printing run, unwanted ink appears at the leading edge of copies. At first, it is very hard to see, but it becomes more visible as the printing continues.

CAUSE:

Due to the rough edges of the paper, the master wrapped around the drum becomes damaged.

Just when the leading edge of the paper reaches under the drum, it is pressed against the drum surface, so that the master is wrapped around by the press roller. Due to this repeating action, the master's surface is gradually torn where the paper leading edge contacts it.

Also, if paper generates a lot of paper dust, this is accumulated on the press roller surface and damages the master in the same manner.

Normally, even if the master is damaged, there is no ink around the area beneath the master where the paper leading edge contacts (there are no holes in the metal screen). However, after a long printing run, ink leaks onto this area and is transferred to the paper through the damaged part of the master.

SOLUTION:

1. Change the paper type. Re-setting the paper on the paper feed table upside-down (so that the rough edge of the paper faces downward) may also solve the problem.
2. Change the image position on the paper slightly using the IMAGE SHIFTING key before the leading edge of the paper becomes dirty with ink.

-------- Continued ----------

3. Cover the leading edge part of the cloth screen on the drum with tape, so that ink does not leak even when the master is damaged.

   Instructions and remarks for installing the tape for each PRIPORT model are as follows:

Remarks general to all models:

- It is recommended to use:

  Teflon Tape - 19 mm: P/N-A012 9112

- The position of the tape for each model has been determined to maintain the specified leading edge blank margin for copies. (The specification is 10 mm for the NA2/N915/935/955 models, 8 mm for the NA3 model, and 5 mm for the other models.)

- Even after installing the tape, the same problem may occur if the leading edge registration of copies is not adjusted properly (if the paper feed timing is delayed). At first, check that the leading edge registration of copies is OK. If it is out of specification, follow the "SECOND FEED ROLLER START TIMING" adjustment procedure in the service manual. (For the N810 and N810-II models, follow the "LEADING EDGE REGISTRATION ADJUSTMENT" procedure.)

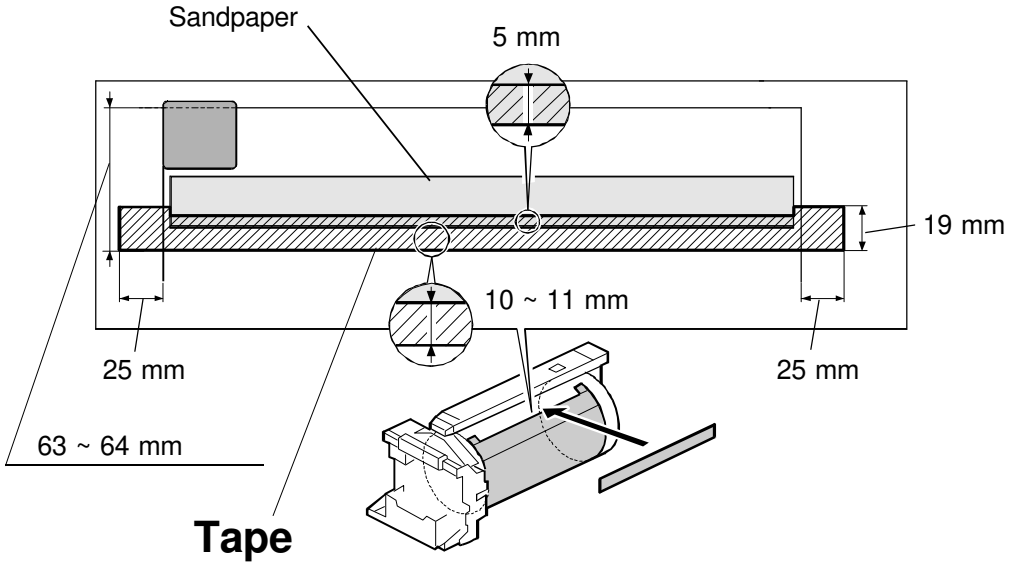
- For each model, strip(s) of sandpaper are used on the leading edge part of the cloth screen. This prevents the master wrapped around the drum from slipping out of the master clamper due to the repeating press roller on/off action. Avoid covering all the sandpaper when you install the tape. (To adhere the tape firmly, some area of the sand paper should be covered. Details are in the instructions for each model on the following pages.)

- Even if the sandpaper is not used on the cloth screen (the old type cloth screen), install the tape at the same position by measuring the distance from the edge of the cloth screen. (Refer to the distance between the edge of the screen and the sand paper, which is shown in the following illustrations for each model.)

RICOH **Technical Bulletin** **No. RTB-016**

For RN925, NB2, N850, N860, N865, N915, N935, and N955 Models

RN925: Ricoh VT2400/Gestetner 5340/RexRotary 1255/nashuatec CP340/ABDICK 6550
NB2: Ricoh VT2600/VT2630/Gestetner 5360/RexRotary 1270/nashuatec CP360
N850: Ricoh VT2200/Gestetner 5327/RexRotary 1252/nashuatec CP327/ABDICK 6530/SVN3200DNP
N860: Ricoh VT2005/Gestetner 5323/RexRotary 1245/nashuatec CP323
N865: Ricoh VT2105/Gestetner 5325/RexRotary 1250/nashuatec CP325/ABDICK 6520
N915: Ricoh VT2100/VT2130/VT2150/Gestetner 5310/5315/5320/RexRotary 1240/1241/1242/ nashuatec CP310/CP315
N935: Ricoh VT2300/Gestetner 5330/RexRotary 1260/nashuatec CP330
N955: Ricoh VT2500



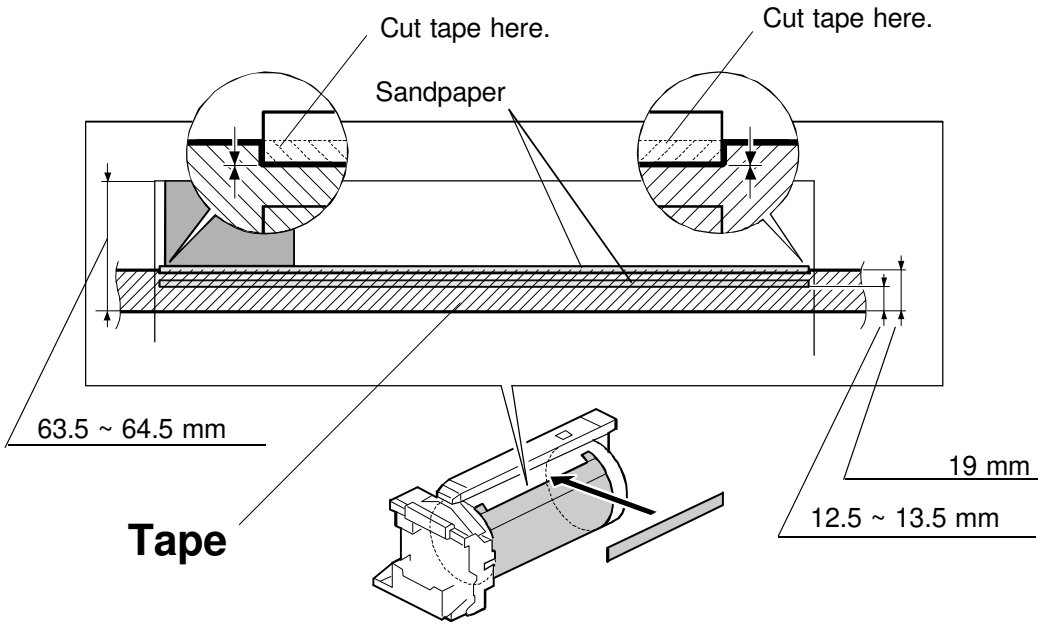
REMARKS:

- Cut the tape where it covers the sandpaper as shown. (The indicated area must be left as shown to hold the tape on the screen firmly.) Be careful not to damage the cloth screen surface.
- Cut both edges of the tape as indicated.
- Even if the sandpaper is not used on the cloth screen (the old type cloth screen), install tape at the same position by measuring the distance from the edge of the cloth screen to the lower edge of the tape (between 63 and 64 mm).
- Since the specification of the leading edge blank margin for the N915/935/955 models is 10 mm (5 mm for the other models), it is permissible to install the tape 5 mm lower than the position indicated above.

RICOH **Technical Bulletin** **No. RTB-016**

For NA33 model

NA33: Ricoh VT3800/Gestetner 5385/RexRotary 1290/nashuatec CP385/ABDICK 6790/SVN3300DNP



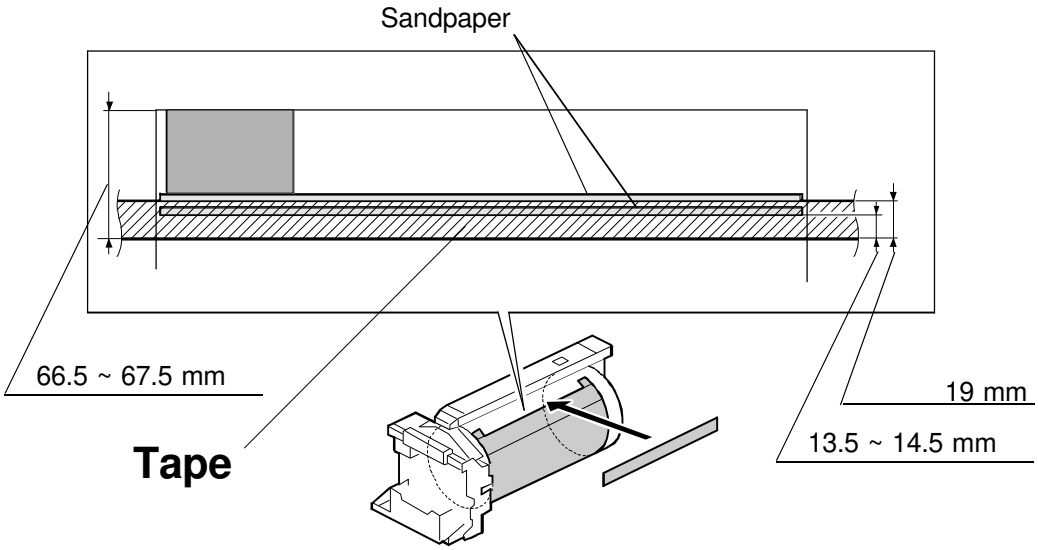
REMARKS:

- Cut the tape where it covers the upper strip of sandpaper as shown. Be careful not to damage the cloth screen surface.
- Cut both edges of the tape at the edge of the metal screen. Do not let the tape ride over the drum flanges.

RICOH **Technical Bulletin** **No. RTB-016**

For NA3 and NA2 Models

NA2: Ricoh VT3500/Gestetner 5375/RexRotary 1280/nashuatec CP375/ABDICK 6720
NA3: Ricoh VT3600/Gestetner 5380/RexRotary 1285/nashuatec CP380/ABDICK 6770



REMARKS:

- The position of the tape is slightly different from that for the NA33 model since the specification of the leading edge blank margin is different. (The position of the sandpaper is also different.) The upper edge of the tape should meet between the two strips of sandpaper. You do not have to cut the tape (unlike in the case of the NA33 model).

- Cut both edges of the tape at the edge of the metal screen. Do not let the tape ride over the drum flanges.

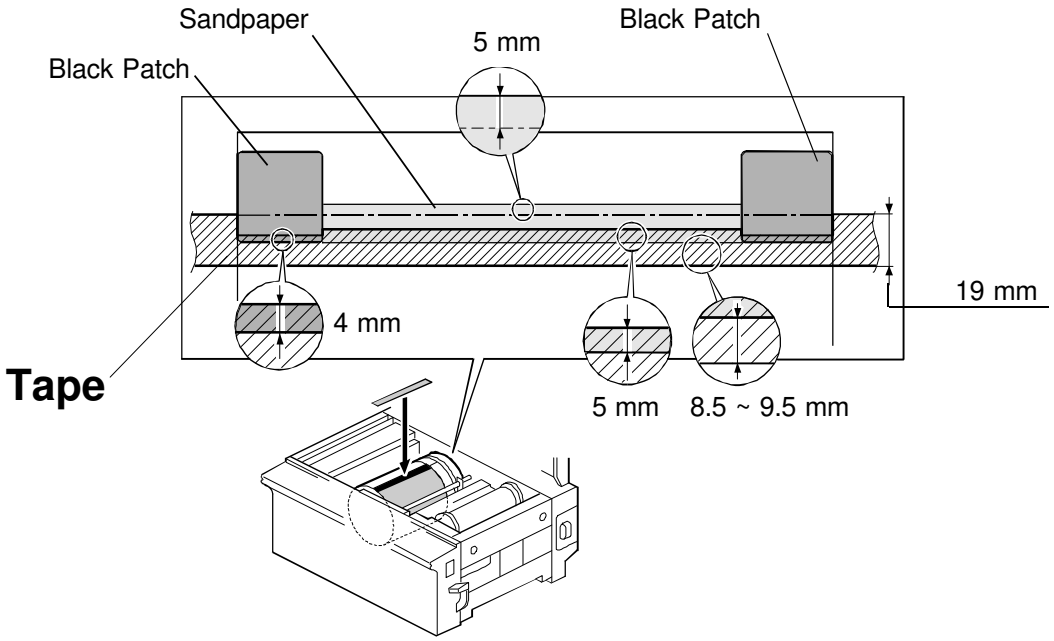
- Even if the sandpaper is not used on the cloth screen (the old type cloth screen), install the tape at the same position by measuring the distance from the edge of the cloth screen to the lower edge of the tape (between 66.5 and 67.5 mm).

- Since the specification of the leading edge blank margin for the NA2 model is 10 mm (8 mm for the NA3 model), it is permissible to install the tape 2 mm lower than the position indicated above (NA2 only).

RICOH **Technical Bulletin** **No. RTB-016**

For N810 and N810-II Models

N810: Ricoh VT1730/Gestetner 5303/RexRotary 1220/nashuatec CP303/ABDICK 6120
N810-II: Ricoh VT1800/Gestetner 5304/RexRotary 1222/nashuatec CP304/ABDICK 6130/SVN3100DNP



REMARKS:

- Cut the tape where it covers the sandpaper as shown. (The indicated area must be left as shown to hold the tape on the screen firmly.) Be careful not to damage the cloth screen surface.

- **Also, cut the tape where it covers the black patches (for the drum master detection sensor) as shown. It they are covered over, drum master detection does not work properly.**

- Cut both edges of the tape at the edge of the metal screen. Do not let the tape ride over the drum flanges.

- Even if the sandpaper is not used on the cloth screen (the old type cloth screen), install tape at the same position by measuring the distance from the edge of the black patch to the lower edge of the tape (between 8.5 and 9.5 mm).

RICOH

Technical Bulletin No. RTB-017

SUBJECT: Add Ink Indicator (Software Modification) - N850 Only -

ISSUED ON: August 31, 1996

CLASSIFICATION:

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

ISSUED BY:

H. Kokubo,
Priport Service Planning Section

MODEL: PRIPORT

N850:	Ricoh VT2200/Gestetner 5327/RexRotary 1252/nashuatec CP327/ABDICK 6530/SVN3200DNP
N860:	Ricoh VT2005/Gestetner 5323/RexRotary 1245/nashuatec CP323
N865:	Ricoh VT2105/Gestetner 5325/RexRotary 1250/nashuatec CP325/ABDICK 6520
N915:	Ricoh VT2100/VT2130/VT2150/Gestetner 5310/5315/5320/RexRotary 1240/1241/1242/ nashuatec CP310/CP315
N935:	Ricoh VT2300/Gestetner 5330/RexRotary 1260/nashuatec CP330
N955:	Ricoh VT2500

Problems of Current Software:

At installation of a new machine, the ADD INK INDICATOR is not reset even after an ink cartridge is installed and the drum idling procedure is carried out.

This problem occurs only in the N850 models.

CAUSE:

At installation, to start rotating the drum and to transfer ink to the drum, the drum idling procedure: ***"While holding down the "0" key on the operation panel, press the Reset key"***, is used.

In the other Priport models, if sufficient ink is detected after performing the above drum idling procedure, the ADD INK INDICATOR is reset (disappears) even without depressing the RESET key. However, in the N850 and RN925 models, the ADD INK INDICATOR is NOT reset by the drum idling procedure even if there is enough ink. (**It is reset by depressing the RESET key.**)

This problem does not occur if you do not use the drum idling procedure. When the ADD INK INDICATOR is displayed during the normal printing procedure, it can be reset properly by depressing the RESET key.

RICOH **Technical Bulletin** **No. RTB-017**

SOLUTION:

The software has been changed from the August 1996 production.

The ADD INK INDICATOR is reset if sufficient ink is detected after performing the drum idling procedure, just like the other Priport models.

The suffix of the MPU board has been advanced and the part number of the ROM has been changed as follows:

Old P/N	New P/N	Description	Note
C224 8045C	C224 **8075A**	IC134 - M27C512-15F1	New Check Sum: 95FH
C224 8042H	C224 8042**J**	MPU Board	

Technical Bulletin No. RTB-018

SUBJECT: Additional Instructions for the ADF Unit Installation/Removal - GOLD Only -

ISSUED ON: January 15, 1997

CLASSIFICATION:

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

ISSUED BY:

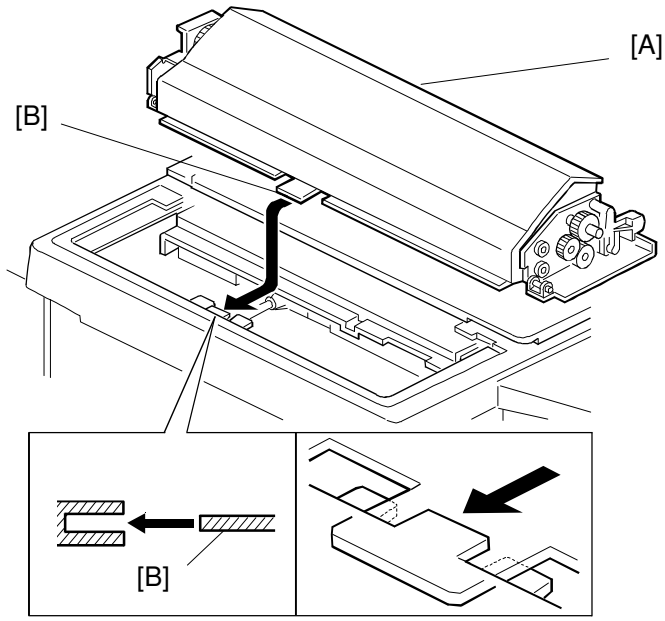
H. Kokubo,
Priport Service Planning Section

MODEL: PRIPORT

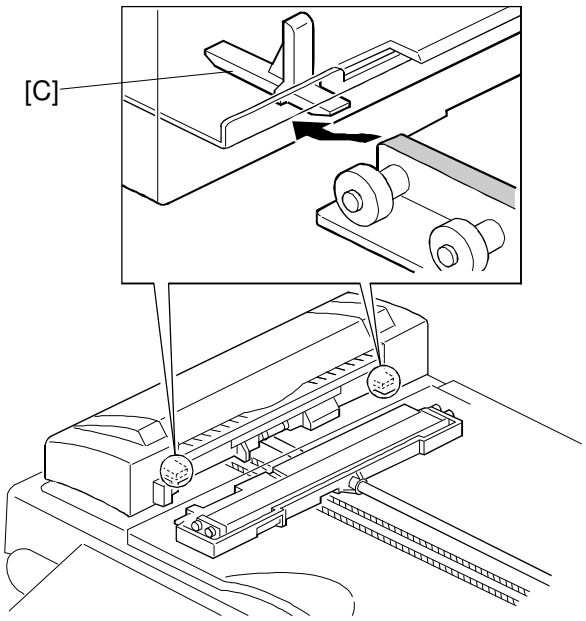
GOLD:	Ricoh VT2250/VT2240/Gestetner 5329(L)/RexRotary 1254(L)/nashuatec CP329(L)/ ABDICK 6560/SVN3250DNP
N850:	Ricoh VT2200/Gestetner 5327/RexRotary 1252/nashuatec CP327/ABDICK 6530/SVN3200DNP
N860:	Ricoh VT2005/Gestetner 5323/RexRotary 1245/nashuatec CP323
N865:	Ricoh VT2105/Gestetner 5325/RexRotary 1250/nashuatec CP325/ABDICK 6520
N915:	Ricoh VT2100/VT2130/VT2150/Gestetner 5310/5315/5320/RexRotary 1240/1241/1242/ nashuatec CP310/CP315
N935:	Ricoh VT2300/Gestetner 5330/RexRotary 1260/nashuatec CP330
N955:	Ricoh VT2500

Information for the GOLD starts from this bulletin. RTB numbers 1 to 17 are for the other models only.

The following two remarks must always be noted (in addition to the ADF unit installation/removal procedures in the service manual) when you install or remove the ADF unit:

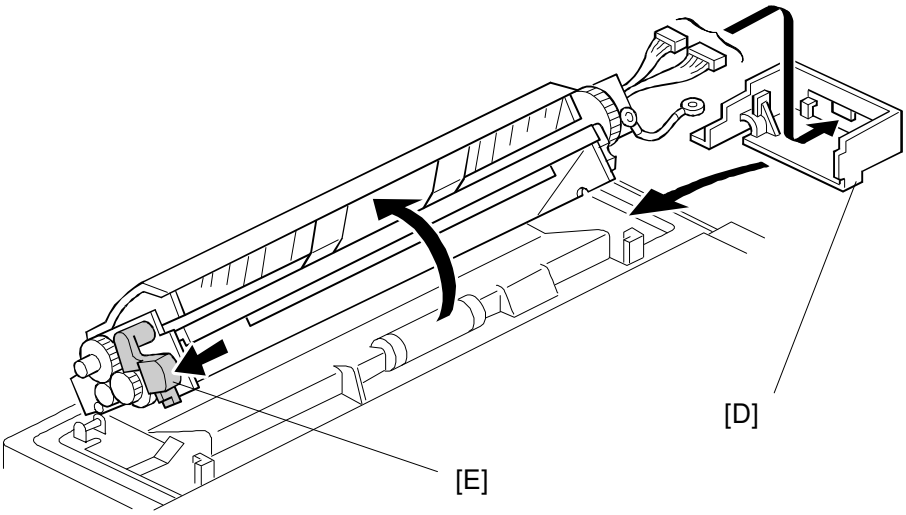


1. When you install the ADF unit [A] on the scanner unit, make sure to insert the tab [B] as shown above.

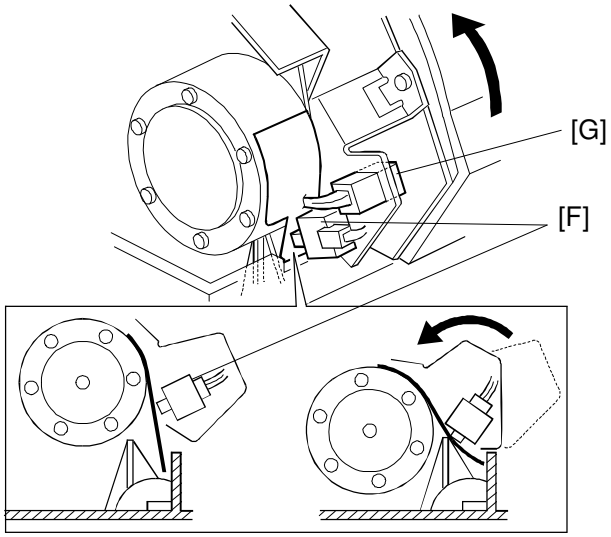


NOTE: If you do not follow the above instruction and the tab rides over the scanner unit frame, the ADF unit leans toward the right. There are guides [C], which are to guide both ends of the carriage, beneath the right end of the ADF (see the illustration above). Thus, these guides are just slightly lowered.

As a result, the carriage tends to be caught by the edge of the guides [C] while the carriage moves toward the original scanning position for the ADF mode. Even if the carriage is stopped on the way to the original scanning position, the master making process will happen as in the normal manner. However, as the original is not scanned properly, images will not be reproduced on the master, resulting in blank (or black) copies.



2. When you install the ADF Lower Rear Cover [D], at first you must open the ADF unit (flip it up) by pressing the Release Lever [E] as shown above.



NOTE:
- There is a switch [F] to detect whether the ADF unit is closed. Make sure that the switch is properly activated when the ADF unit is closed after installing the ADF Lower Rear Cover (see the above illustration). (Since the rib on the the ADF Lower Rear Cover would interfere with the switch [F] if you install the ADF Lower Rear Cover with the ADF unit closed, you must open the ADF unit first as explained above.)
- The connector [G] is not used and remains open.

Model: PRIPORT GOLD/N850/N860/N865/N915/N935/N955	**Date:** 30-Jun-97	**No: 019**
Subject: Master Eject Belt Slip-off	**Prepared by:** H. Kokubo, Priport Service Planning Section	

Classification:

☒ Troubleshooting	☒ Part information	☐ Action required
☐ Mechanical	☐ Electrical	☐ Service manual revision
☐ Paper path	☐ Transmit/receive	☐ Retrofit information
☐ Other ( )		

Model Name:

GOLD: Ricoh VT2250/VT2240, Gestetner 5329(L), RexRotary 1254(L), nashuatec CP329(L), ABDICK 6560, SVN 3250DNP
N850: Ricoh VT2200, Gestetner 5327, RexRotary 1252, nashuatec CP327, ABDICK 6530, SVN 3200DNP
N860: Ricoh VT2005, Gestetner 5323, RexRotary 1245, nashuatec CP323
N865: Ricoh VT2105, Gestetner 5325, RexRotary 1250, nashuatec CP325, ABDICK 6520
N915: Ricoh VT2100/VT2130/VT2150, Gestetner 5310/5315/5320, RexRotary 1240/1241/1242, nashuatec CP310/CP315
N935: Ricoh VT2300, Gestetner 5330, RexRotary 1260, nashuatec CP330
N955: Ricoh VT2500

PROBLEM

We found that the master eject belt may slip off in the following situation:

Even when the Full Master Box indicator (the Empty Master Eject Box indicator) lights, it can be reset once an operator turns the machine off then on (without removing the used masters). If this occurs, the used masters fully stacked in the box can interfere with the master eject belts, resulting in the slip-off problem.

SOLUTION 1

To minimize this problem, the recent series models have the Initial Compression mode in which full master box detection is carried out each time the machine is switched on. For each model, this mode can be set as follows:

- GOLD: Set SP No. 85 to "1"
- N850: Set DPS103-3 on the main board to ON
- N865/N860: Set DPS101-8 on the main board to ON
- RN925: Set SP No. 2-11 to ON
- NA33: Set SP No. 85 to "1"
- NA3: Set SP No. 85 to "1"
- NB2: Set SP No. 85 to "1"

NOTE: An instruction to the operator is also required, to instruct them to empty the master eject box when it is full.

Model: PRIPORT GOLD/N850/N860/N865/N915/N935/N955	**Date:** 30-Jun-97	**No: 019**

SOLUTION 2

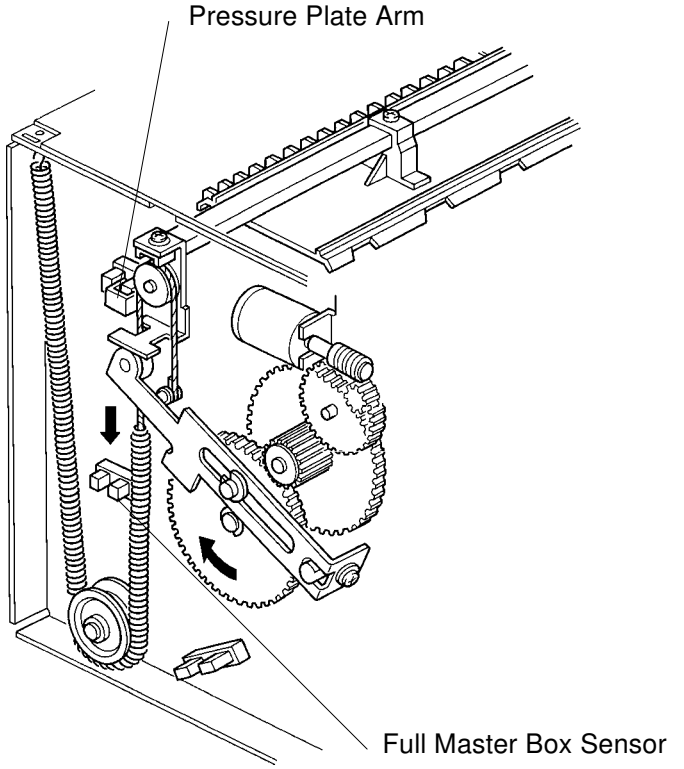
The latest models; i.e. the Gold, N850, and RN925, use a master eject mechanism that is slightly different from the older models. This enables a higher capacity for the master eject box.

Due to this, for these models, the ejected masters tend to interfere more with the master eject belts when the box is full, compared with the older models. To minimize the occurrence of the belt slip-off problem, the capacity of the master eject box has been reduced slightly by using a new actuator for the full master box sensor. (The master eject box capacity is still within the current specification.)

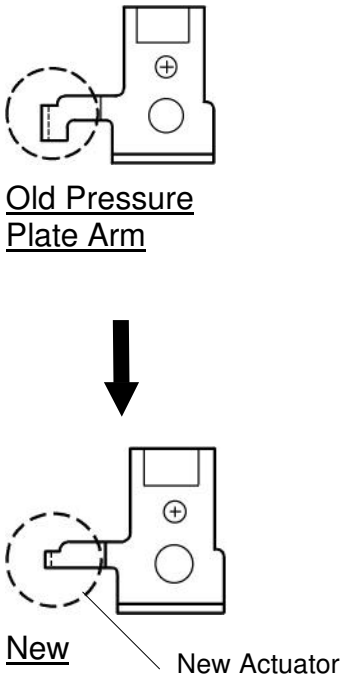
Old Part Number	New Part Number	Description	Interchangeability
C209 3533	**C227 3533**	**Pressure Plate Arm**	**X/O**

The new part has a narrower actuation plate as shown below. This means that the full master condition will be detected earlier than before.

If "SOLUTION 1" is not good enough, install the new part on the operation side of the master eject unit (see below).



VIEW FROM OPERATION SIDE



Model: PRIPORT GOLD/N850/N860/N865/N915/N935/N955	**Date:** 30-Jun-97	**No: 019**

The new part has been implemented from the May 1997 production run. The new actuator can also be used for the NA33, NA3, NB2, and NA2 models, but this is for the field countermeasure only. This is because the specification of the master eject box capacity cannot be maintained if the new actuator is used for these models.

NOTE: On the production line, two of the same new part are used both on the operation and non-operation sides for part standardization purposes. For the field solution, you do not have to replace the non-operation side part.

Model: GOLD/N850/N860/N865/N915/N935/N955	**Date:** 30-Sep-97	**No: 20**
Subject: Fluorescent Lamp Stabilizer Breakage - N850 Only -	**Prepared by**: H. Kokubo, Priport Service Planning Section	

Classification:

☒ Troubleshooting	☐ Part information	☐ Action required
☐ Mechanical	☐ Electrical	☐ Service manual revision
☐ Paper path	☐ Transmit/receive	☐ Retrofit information
☐ Other ( )		

Model Name:

GOLD: Ricoh VT2250/VT2240, Gestetner 5329(L), RexRotary 1254(L), nashuatec CP329(L), ABDICK 6560, SVN 3250DNP
N850: Ricoh VT2200, Gestetner 5327, RexRotary 1252, nashuatec CP327, ABDICK 6530, SVN 3200DNP
N860: Ricoh VT2005, Gestetner 5323, RexRotary 1245, nashuatec CP323
N865: Ricoh VT2105, Gestetner 5325, RexRotary 1250, nashuatec CP325, ABDICK 6520
N915: Ricoh VT2100/VT2130/VT2150, Gestetner 5310/5315/5320, RexRotary 1240/1241/1242, nashuatec CP310/CP315
N935: Ricoh VT2300, Gestetner 5330, RexRotary 1260, nashuatec CP330
N955: Ricoh VT2500

NOTE: This bulletin is for the PRIPORT N850 only.

SYMPTOM

The original transport motor does not work, resulting in the location “A” jam being displayed. When this occurs, the exposure lamp and the original pressure solenoid do not turn on either.

CAUSE

Due to a short out in capacitor C2, either of transistor Q1 or Q2 on the fluorescent lamp stabilizer is broken. This causes fuse FU600 on the A/D conversion board to blow.

This symptom may occur when the scanner unit is opened and closed very shortly after turning on the machine’s power.

When the main switch is turned on, the lamp on signal is generated to turn on the exposure lamp. (This is to stabilize the light intensity of the fluorescent lamp before starting scanning an original.) The lamp turns off after 1 minute.

While the lamp on signal is generated, 24 volts dc is supplied to the fluorescent lamp stabilizer. In this condition, if the scanner unit is opened, the voltage is cut off by the safety switch. However, the lamp on signal stays on (until 1 minute lapses).

If the scanner unit is closed before the lamp on signal turns off (1 minute at most), the voltage is suddenly supplied to the fluorescent lamp stabilizer. Due to excessive load, there is a possibility of capacitor C2 on the fluorescent lamp stabilizer shorting out.

NOTE: 24 volts dc supplied to the fluorescent lamp stabilizer is not cut by opening units/doors other than the scanner unit.

This problem rarely occurs, since the load applied to C2 differs greatly depending on the timing of closing the scanner unit. Also, it is not usual to open and close the scanner unit within 1 minute immediately after turning on the main switch.

SOLUTION

If this problem occurs, replacing fuse FU600 on the A/D conversion board (P/N-1107 0713) or the whole A/D conversion board (P/N-C224 8012) only can cause the same damage again. First, you must check the fluorescent lamp stabilizer (P/N-C224 8006), and replace fuse FU600 if necessary.

From the September ’97 production, new software is implemented. The new software turns off the lamp on signal when the scanner unit (and all other units/doors) is open. Then, it turns on again one second after the scanner unit is closed (and if it is still within the exposure lamp on timing).

The following ROM is used on the main board for this modification:

New Suffix (P/N)	Description	Check Sum
C224 8075-C	ROM IC134 - M27C512-15F1	98D9

Model: PRIPORT GOLD/N850/N860/N865/N915/N935/N955	**Date:** 31-Dec-97	**No: 21**
Subject: Software Modification History - GOLD Only -	**Prepared by**: H. Kokubo, Priport Service Planning Section	

Classification:
☐ Troubleshooting ☒ Part information ☐ Action required
☐ Mechanical ☐ Electrical ☒ Service manual revision
☐ Paper path ☐ Transmit/receive ☐ Retrofit information
☐ Other ( )

Model Name:

GOLD: Ricoh VT2250/VT2240, Gestetner 5329(L), RexRotary 1254(L), nashuatec CP329(L), ABDICK 6560, SVN 3250DNP
N850: Ricoh VT2200, Gestetner 5327, RexRotary 1252, nashuatec CP327, ABDICK 6530, SVN 3200DNP
N860: Ricoh VT2005, Gestetner 5323, RexRotary 1245, nashuatec CP323
N865: Ricoh VT2105, Gestetner 5325, RexRotary 1250, nashuatec CP325, ABDICK 6520
N915: Ricoh VT2100/VT2130/VT2150, Gestetner 5310/5315/5320, RexRotary 1240/1241/1242, nashuatec CP310/CP315
N935: Ricoh VT2300, Gestetner 5330, RexRotary 1260, nashuatec CP330
N955: Ricoh VT2500

This bulletin contains the software modification history of the PRIPORT GOLD. For the newly added SP modes, add the information to your service manual.

Refer to the table below for the necessary information:

No.	Part Numbers	Description	Month Affected	Remarks
1	ROM: C226 8045 ⇒ A Main Board: C226 8042 ⇒ A	• *SP15 and SP32* have been added. For details, refer to the "Newly Added Service Program Modes" table below. • Linking with the PC controller (an optional unit) has been enabled.	From the first mass-production	All units and spare parts in the field are the new type only.
2	ROM: C226 8045A ⇒ D Main Board: C226 8042A ⇒ D	• *SP23, 24, 25, and 39* have been added. *SP12 and 13* that were originally used have been made into user-accessible service program mode. For details, refer to the "Newly Added Service Program Modes" table below. • Functions to protect the One Touch Class mode setting have been added. (See "New Functions For One Touch Class Mode" at the end of this bulletin.) • The default for the center erase margin has been changed from 40 mm to 10 mm. • The circuit of the main board has been redesigned. The suffix of the part number of	December '96 production	• Suffix "B" and "C" are skipped. • The new ROM cannot be used for the old main board (C226 8042A), and vice versa.

No.	Part Numbers	Description	Month Affected	Remarks
		the main board has been advanced from A to B. The new ROM cannot be used for the old main board (C226 8042A) and vice versa.		
3	ROM: C226 8045D ⇒ E Main Board: C226 8042D ⇒ E	The specifications of the Maximum Print Number and Minimum Print Number set with SP mode no. 10 and 11 (in combination with the One Touch Class mode) have been changed. Print quantity settings below the minimum print number, set with SP 10, could not be set. Similarly, a print quantity that exceeded the maximum print number, set with SP 11, could not be set. For the new specifications, in the One Touch Class mode, if the total quantity of prints that will be made exceeds the minimum print number (even if the print quantities for each class are below the minimum print number), the input will be accepted. Similarly, even if the print quantities for each class do not exceed the maximum print number and if the total quantity of print exceeds the maximum print number, the input will not be accepted.	February '97 production	
4	ROM: C226 8045F ⇒ G Main Board: C226 8042F ⇒ G	To enable adjustment of the Paste Shadow Erase level, *SP28* has been added. There are three levels: 0:STD, 1:LT, and 2:LTR The larger value lowers the threshold level for binary processing. Therefore, the shadow of pasted-up edges on originals lightens. (The default is "0.")	May '97 production	The suffix "F" version has no differences in function from the suffix "E" version ROM.
5	ROM: C226 8045H ⇒ J Main Board: C226 8042H ⇒ J	If there is a dark image at the leading edge (20 mm from the edge) of the original, it is used as the sample for the original background correction, resulting in a faint copy. With the new ROM, the original background correction data is sampled at 5 mm from the leading edge of the original. Also, if very dark images are detected in that area, a fixed value that is stored as the standard original background correction value is used.	October '97 production	The suffix "H" version has no differences in function from the suffix "G" version ROM.

No.	Part Numbers	Description	Month Affected	Remarks
6	ROM: C226 8045J ⇒ K Main Board: C226 8042J ⇒ K	• *SP27* has been added to lower the current to the ADF motor. It was found that the ADF motor vibrates due to a part variation. In this case, the problem was solved by reducing the motor current with this SP mode. • Users could reset the jam conditions by pressing the Reset key even without removing the jammed paper/master. If a master feed jam occurs and if this is repeatedly reset without removing the jammed master, the jammed master may twine around the rollers, resulting in a service call. To minimize this, the software has been changed so that the Master Feed Jam condition cannot be reset without once opening and closing the scanner unit. Note that even if the jammed master was not removed, the jam condition could reset by opening and closing any of the covers/doors.	January '98 production	

The check sum of the latest ROM (#C226 8045K) is as follows:

New Suffix (P/N)	Description	Check Sum
C226 8045-K	EPROM - 1Mx8 150NS (128K)	9F7B

NEWLY ADDED SERVICE PROGRAM MODES

*: Accessible by users **: Can be registered in CS mode

No.	Display	Function	Settings	Factory Setting	Comments
*12-1	Set Display Mode	Enables SP12-2.	0: No 1: Yes	0	This can now be used by users.
*12-2	0: JPN 1: ENG 2: GER 3: FRE 4: ITA 5: SPA	Selects the language used on the display.	0: JPN 1: ENG 2: GER 3: FRE 4: ITA 5: SPA	1	• This can now be used by users. • Use after setting SP12-1 to 1.
*13	Set Size Mode	Selects metric sizes (mm) or inch sizes for the display.	0: mm 1: Inch	-	• This can now be used by users. • For U.S.A. version models, "1" is set at the factory.
15	Set Drum Size	Selects the B4 version software (if the maximum printing area is B4 size) or the A4 version software (if the maximum printing area is A4 size). Note that this selection changes the software versions only. For the complete version change, some mechanical parts must be changed. (Therefore, this SP mode must not be changed in the field.)	0: B4 1: A4	-	This function is for factory use only.
*23	Clear 1 Touch Class	By default, after making prints with One Touch Class, the classes that you have selected remain selected ready for the next printing. If you want to set the machine to reset the classes after printing, select "1". Even if you select "1" in this mode, the classes are not reset when the next original is set in the optional document feeder.	0: No 1: Yes	0	
*24	Clear CS Mode	By default, pressing the Clear Modes key does not reset the SP modes registered in the CS Mode keys. If you want to reset the SP modes that are registered in the CS Mode keys by pressing the Clear Modes key, select "1".	0: No 1: Yes	0	

No.	Display	Function	Settings	Factory Setting	Comments
*25	Clear 2 in 1	By default, when master making is finished in Combine 2 Originals mode, this mode stays selected for the next master making. If you want to set the machine to clear this mode after master making is finished, select "1". Even if you select "1" in this mode, Combine 2 Originals mode is not cleared when the next original is set in the optional document feeder.	0: No 1: Yes	0	
27	ADF Current Down	Reduces the current to the ADF motor. It was found that the ADF motor vibrates due to part variation. In this case, the problem was solved by reducing the motor current with this SP mode.	0: No 1: Yes	0	This function is also used at the factory.
28	Paste Shadow Erase	A larger value reduces the threshold level for the binary processing. Therefore, the shadow of pasted-up edges on the original lightens.	0:STD 1:LT 2:LTR	0	
32	Scan Line Adjust	The position of the scanner at the ADF scanning position can be adjusted. If images cannot be scanned in the ADF mode, adjust the position. +0.1% moves the scanner 0.46 mm away from the scanner home position. NOTE: The ADF scan line adjustment must be carried out with SP38 after changing SP32.	-1.9% - +1.9%	-	This function is also used at the factory.
39	Trailing Edge Margin	The trailing edge margin on printouts can be adjusted.	0: 1 mm 1: 2 mm 2: 3 mm	1	This function is also used at the factory.

NEW FUNCTIONS FOR ONE TOUCH CLASS MODE

The following four functions have been added to One Touch Class mode.

- Clearing class numbers
- Protecting One Touch Class settings
- Cancelling protection
- Checking how many prints will be made in One Touch Class mode

NOTE: A similar explanation has been added to the operating instructions booklet.

1. CLEARING CLASS NUMBERS

To clear any class numbers you have programmed, you need to program each class number as 0.

2. PROTECTING ONE TOUCH CLASS SETTINGS

If you want to prevent someone from writing over your settings, you can protect each grade.

1. While pressing the Reset and Stop key simultaneously, press the Program Class key.
   - The display shown below will appear.

     0 : CANCEL PROTECTION
     1 : PROTECT NO. _
2. Enter "1" using the Number keys.
3. Press the Enter key.
   - The grades which are not protected will be displayed.
4. Using the Number keys, enter the grade that you want to protect.
5. Press the Enter key.

3. CANCELLING PROTECTION

1. While pressing the Reset and Stop key simultaneously, press the Program Class key.
   - The display shown below will appear.

     0 : CANCEL PROTECTION
     1 : PROTECT NO. _
2. Enter "0" using the Number keys.
3. Press the Enter key.
   - The grades which are protected will be displayed.
   - If no grade is protected, the machine returns to the ready condition.
4. Using the Number keys, enter the grade that you want to cancel protection for.
5. Press the Enter key.

4. CHECKING HOW MANY PRINTS WILL BE MADE IN ONE TOUCH CLASS MODE

If you want to find out the programmed class numbers before making prints, do the following steps:

1. Flip over the plate located on the left of the operation panel so you can see the "<" and ">" keys (next to the CS Mode keys).
2. Hold down the Reset and Stop keys simultaneously and use the "<" and ">" keys to scroll through the classes.
   - The machine will beep when you reach the end or beginning of the list.
   - If the Print Program Class mode is set to Last with SP mode no. 22, pressing the "<" key shows classes from the last class set.

Model: PRIPORT GOLD/N850/N860/N865/N915/N935/N955	**Date:** 22-Oct-01	**No:** R-C211-**022**
Subject: Master end detection failure	**Prepared by:** H. Onodera, Priport Service Planning Section	

Classification:

☒ Troubleshooting	☐ Part information	☐ Action required
☐ Mechanical	☐ Electrical	☐ Service manual revision
☐ Paper path	☐ Transmit/receive	☐ Retrofit information
☐ Other ( )		

Model Name:

GOLD: Ricoh VT2250/VT2240, Gestetner 5329(L), RexRotary 1254(L), nashuatec CP329(L), ABDICK 6560, Savin 3250DNP
N850: Ricoh VT2200, Gestetner 5327, RexRotary 1252, nashuatec CP327, ABDICK 6530, SVN 3200DNP
N860: Ricoh VT2005, Gestetner 5323, RexRotary 1245, nashuatec CP323
N865: Ricoh VT2105, Gestetner 5325, RexRotary 1250, nashuatec CP325, ABDICK 6520
N915: Ricoh VT2100/VT2130/VT2150, Gestetner 5310/5315/5320, RexRotary 1240/1241/1242, nashuatec CP310/CP315
N935: Ricoh VT2300, Gestetner 5330, RexRotary 1260, nashuatec CP330
N955: Ricoh VT2500

SYMPTOM

The machine continues to rotate the Master Roll even after the actual end condition is reached, stripping the roll paper off the roll. The very edge of the roll paper with the adhesive then causes a jam when it sticks to the Master Feed Rollers.

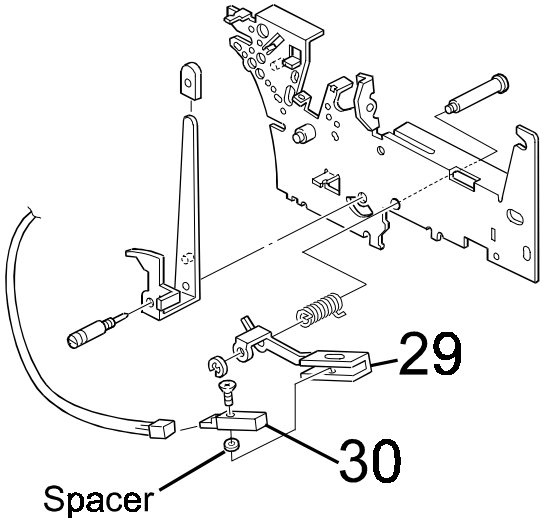
CAUSE

The Master End Sensor does not detect the black end stripe on the roll due to performance variations.

SOLUTION

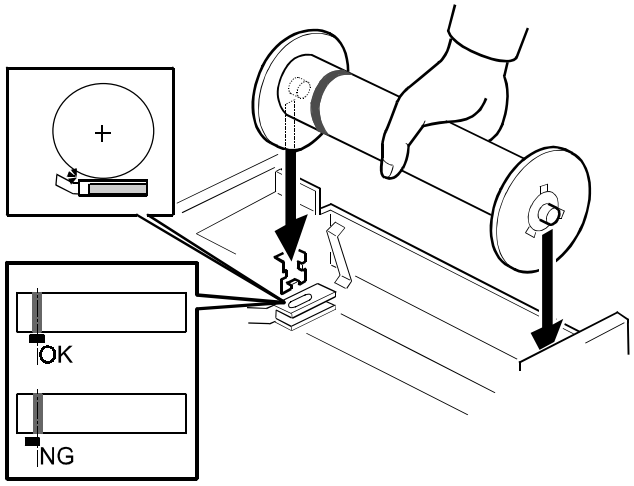
Change the sensor, or adjust the sensor's position as shown on the next page.
An output check for the Master End Sensor has been added from July 2001 production.

SENSOR POSITION ADJUSTMENT PROCEDURE:



1. Unplug the power cord and slide the Scanner Unit to the left as seen from the operation panel side.
2. Lift the release lever and remove the Master Roll.
3. Raise the sensor position by installing a 0.2 mm-thick spacer as shown above (08072071). If this spacer has no effect, install one more 0.2 mm spacer or remove the first one and use a 0.4 mm spacer (07010030Z).

CONFIRMATION: DETECTION CHECK



If a used Master Roll is available (with the black end stripe visible), follow the procedure below:

1. Place the end stripe of the used Master Roll over the Master End Sensor.
2. Return the release lever.
3. Make sure that the roll is contacting the sensor, with the end mark at the center of the sensor, as shown above. If the position is not correct, change the Master End Sensor Bracket (#29 above).
4. Access SP130 (Input Check Mode) and access 26 (SN: Master End).
5. Press the Start key and make sure the sensor correctly detects the end mark.