## Technical Bulletin

### **PAGE: 1/1**

Model: SP5			Date	e: 15-Oct-98	No: 1	
Subject: DIP SW of I/O Board				Prepared by: M.Tsuyuki		
From: GTS and S Field Infomation Dept						
Classification:	Troubleshooting	Part informat		tion Actio	n required	
	Mechanical	Electrical		🖂 Serv	ice manual revision	
	Paper path	Transmit/rec		eive 🗌 Retro	ofit information	
	Other ()					

The DIP switch table for the I/O board is missing from the service manual. Please add the following table to your manual.

#### DIP SW101

Ę

No.	Description	Function
1	Should be off.	-
2	Should be off.	-
3	SC codes display.	On: SC codes are not displayed.
4	Should be off.	-
5	Should be off.	-
6	Version 1	6: Off 7: Off Japanese version
7	Version 2	6: On 7: Off 115 V version
		6: Off 7: On 220/240 V version
8	Should be off.	-

NOTE: When replacing the I/O board in the field, change the setting of DIP SW6 and 7 to suit the requirements for your area.

## Technical Bulletin

### **PAGE: 1/1**

Model: SP5 Dat			Date	e: 15-Oct-98	No: 2	
Subject: Point to Point Diagram				Prepared by: M. Tsuyuki		
From: GTS and S	Field Infomation Dept					
Classification:	Troubleshooting	Part informat		tion 🗌 Action	n required	
	🗌 Mechanical	Electric	al	🛛 Servi	ce manual revision	
	Paper path	🗌 Transm	it/rec	eive 🗌 Retro	fit information	
	Other ()					

Please correct your A229 point to point diagram as follows

• Name of the component (position: E10)

Toner Collection Motor  $\rightarrow$  PSU Cooling Fan

• Symbol of the component (position: E10)

Toner Collection Motor (SOL9)  $\rightarrow$  Toner Collection Motor (M9)

• Signal level (position: O3)

CN209-10:  $+5V[5] \rightarrow +24V[24]$ CN209-11: [▼5]  $\rightarrow$  [▼24]

### • Connector No. (position: D7 and L3-K3)

 $CN266-1 \rightarrow CN266-3$  $CN266-3 \rightarrow CN266-1$  $CN208-A32 \rightarrow CN208-A1$  $CN208-A31 \rightarrow CN208-A2$  $CN208-A30 \rightarrow CN208-A3$  $CN208-A29 \rightarrow CN208-A4$  $CN208-A28 \rightarrow CN208-A5$  $CN208-A27 \rightarrow CN208-A6$  $CN208-A26 \rightarrow CN208-A7$  $CN208-A25 \rightarrow CN208-A8$  $CN208-A24 \rightarrow CN208-A9$  $CN208-A23 \rightarrow CN208-A10$  $CN208-A22 \rightarrow CN208-A11$  $CN208-A21 \rightarrow CN208-A12$  $CN208-A20 \rightarrow CN208-A13$  $CN208-A19 \rightarrow CN208-A14$  $CN208-A18 \rightarrow CN208-A15$  $CN208-A17 \rightarrow CN208-A16$ 

## Technical Bulletin

#### **PAGE: 1/1**

Model: SP5 Dat			Date: 15-Oct-98		No: 3
Subject: SP mode			Prepared by: M. Tsuyuki		
From: GTS and S Field Information Dept					
Classification:	Troubleshooting	Part informat		tion 🗌 Actior	n required
	🗌 Mechanical	Electric	al	🖂 Servio	ce manual revision
	Paper path	🗌 Transm	it/rec	eive 🗌 Retro	fit information
	Other ()				

Please correct and add the following SP mode to your manual.

- Correction
  - SP4-008

Scanner Main Scan Magnification  $\rightarrow$  Scanner Sub Scan Magnification

• Deletion

SP7-823

Because there is no SP7-303.

Addition

SP2-966 (Periodic Auto Process Control)

**Function:** Selects whether process control initial setting is started at periodic intervals if the following conditions exist.

- 1. 24 hours or more have been passed since the last Process Control Initial Setting.
- 2. The copy job is finished.

Settings: OFF(default)/ON

SP6-901 (Original No Wait Time)

SP6-901-1 (Normal Originals)

Function: Adjusts the interval between originals in normal original mode.

Settings: 500ms ~ 700ms / 10mm/step / 620ms (default)

SP6-901-2 (Thin Originals)

Function: Adjust the intervals between originals in thin original mode.

Settings: 500ms ~ 700ms / 10mm/step / 520ms (default)

Model: SP5 Da			Dat	e: 31-Oct-	No.: 4	
Subject: Development Entrance Seal Replacement				Prepared by: A. Sasaki		
From: GTS and S Field Information Dept.						
Classification:	<ul> <li>Troubleshooting</li> <li>Mechanical</li> <li>Paper path</li> <li>Other ()</li> </ul>	Part info Electric Transm	ormat al it/rec	ion [ [ eive [	Actior	n required be manual revision fit information

This is to inform about a problem that could occur in theory.

This problem, however, will not occur at an early stage but may develop as the machine is used over a long period of time. This problem may only occur when the photoconductor gap (PG) is at the narrowest setting (0.65 mm) and the doctor gap is at the widest setting (0.70 mm). This PG/DG setting does not exist in production machines as far as checked in the factory but is still within the adjusting range.

### - Problem -

The lower seal (straight; the upper seal is a loop) of the development unit entrance seal ass'y (P/N A2293092) may get pinched between the developer and the drum if a large amount of developer accumulates near the photoconductor gap (PG). The seal may be pulled out of position by the friction caused by the rotation of the drum. In the worst case, the seal would peel off.



### - Cause -

The width of the lower seal is 18 mm, which may be too much. This problem does not occur with the previous entrance seal ass'y (P/N A0963103) that has a width of 17mm.

### - Countermeasure -

The width of the lower seal will be returned to the original 17 mm from 18 mm. Though the 17 mm lower seal may wrap up, the function of this part is not adversely affected. The part number of the new development unit entrance seal ass'y will be A2293091.

**PAGE: 2/3** 

Model: SP5

Date: 31-Oct-98

No.: 4

### - Targeted Machines -

Model	Code	Brand	Destination	Total	Sub- Total	Serial Numbers
SP5	A229-10	Savin/	USA,	250	100	2B48060001 thru 2B48060100
		Gestetner	Canada		150	2B48070001 thru 2B48070150
	A229-17	Ricoh	USA,	500	169	A7908060194 thru A7908060362
			Canada		331	A7908070001 thru A7908070331
	A229-22	NRG	Europe, etc.	254	70	AS78060001 thru AS78060070
					130	AS78070001 thru AS78070130
					52	AS7808-0001, -0002, -0004,
						-0006 thru -0008, -0012 thru -0014,
						-0017, -0021 thru -0025, -0027,
						-0029 thru -0031, -0034 thru -0042,
						-0044, -0046 thru -0051,
						-0054 thru -0059, -0061,
						-0064 thru -0072, -0074
					2	AS7809-0015, -0016
	A229-26	Infotec	Europe, etc.	120	60	3R30780001 thru 3R30780060
					60	3R30880001 thru 3R30880060
	A229-27	Ricoh	Europe, etc.	486	173	A7908060001 thru A7908060173
					67	A7908070332 thru A7908070398
					120	A7908080001 thru A7908080120
					126	A790809-0002, -0005 thru -0010,
						-0012 thru -0015, -0017 thru -0020,
						-0022, -0024 thru -0027,
						-0029 thru -0032, -0034 thru -0036,
						-0038 thru -0041, -0044 thru -0049,
						-0051 thru -0053, -0055, -0056,
						-0060, -0062, -0064,
						-0068 thru -0070, -0073 thru -0076,
						-0078, -0080, -0083 thru -0086,
						-0089, -0090, -0093, -0096, -0097,
						-0099 thru -0101, -0103 thru -0107,
						-0109, -0111, -0112,
						-0114 thru -0116, -0118 thru -0166
	A229-29	Ricoh	Asia,	25	20	A7908060174 thru A7908060193
			Oceania	_	5	A790808-0121, -0123 thru -0126



Model: SP5

Date: 31-Oct-98

No.: 4

### - Replacement Procedure -

- 1. Remove the 2 screws [A] that secure the entrance seal.
- 2. While pulling on the lock clip [B], slip off the entrance seal ass'y [C].
- 3. Install a new entrance seal ass'y.



RIGOH
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Model: SP5				e: 30-Nov	/-98	No.: 5
Subject: Black Spots on First Copy after Warming up				Prepared by: A. Sasaki		
From: GTS and S Field Information Dept.						
Classification:	Troubleshooting	Part info	ormat	tion	Action	n required
	Mechanical		al	al 🗌 Se		ce manual revision
	Paper path	Transmit/re		eive	Retro	fit information
	Other ()					

This is to inform you about troubleshooting when black spots appear on the first copy after warming up.

### Problem

Black spots may appear on the front or rear side of the first copy after warming up. The diameter of the spots is 3 mm at most. The number of spots may be around 20 in the worst case.

### Cause

When the machine turns off and the temperature of the fusing unit becomes low, toner adheres less strongly to the hot roller cleaning roller [A] and pressure roller cleaning roller [B]. In this condition, the toner on the hot roller cleaning roller [A], pressure roller cleaning roller [B] or pressure roller cleaning brush [C] may be transferred back to the hot roller or pressure roller and may finally adhere to the first copy after warming up.

This problem depends on how much calcium carbonate comes out from the copy paper and mixes with toner. When more calcium carbonate is mixed with toner, the problem becomes worse if the brush [C] is not installed.



According to tests, many brands of paper in Europe and Asia include a lot of calcium carbonate and many of the American ones do not.

That is why the pressure roller cleaning brush [C] is installed only in the European and Asian/Oceanian models to remove toner from the pressure roller cleaning roller [B]. (The brush is not installed in the American model.)



Model: SP5

Date: 30-Nov-98 N

No.: 5

### Action

- Please change the setting of SP1-103 from 0 (5.5 min) to 2 (15 min). A longer fusing idling time can help to make the temperature of the pressure roller just after warming up higher.
- 2. Please judge the necessity of the pressure roller cleaning brush by looking how the mixture of toner and calcium carbonate adheres to the cleaning roller surface.

### - Not necessary -

The brush is not necessary when the surface of the hot roller cleaning roller and pressure roller cleaning roller looks shiny like the pictures below.



Hot roller cleaning roller



Pressure roller cleaning roller

### - Necessary -

The brush (A229 4153) is necessary when the surface of the hot roller cleaning roller and pressure roller cleaning roller does not look smooth, with many small balls with the mixture of toner and calcium carbonate like in the pictures below.



Hot roller cleaning roller



Pressure roller cleaning roller

This is, however, just a recommended guideline and does not match all cases in the field. Even in one machine, the condition of the cleaning roller surface may change in any of the following operations.

- When two or more different kinds of copy paper are used.
- When most copies for one day are single-sided and the number of single-sided copies is large, such as 4,000 copies or more.
- When most copies for one day are single-sided and the image (black) area is low, such as 6% or less.

## Technical Bulletin

Model: SP5L				e: 31-Dec-98		No.: 6
Subject: Different Points from SP5				Prepared by: M.Tsuyuki		
From: GTSS Field Information Dept.						
Classification:	Troubleshooting	Part inf	ormat	tion Action required		n required
	🗌 Mechanical	Electric	al	Service manual re		ce manual revision
	Paper path	Transmit/rec		t/receive Retro		fit information
	Other (Series Model Information)					

The following table shows the differences between the SP5 and SP5L.

No.	Item	SP5	SP5L
1	Copy Speed	Max. 65 cpm	Max. 55 cpm
		(A4/81/2" x 11" sideways)	(A4/81/2" x 11" sideways)
2	Duplex copy on A5/5½" x 8½"	Modify the 2nd tray (by field engineer). (The 2nd tray will be modified to be the same as the SP5L tray.)	Change the fence position of the 2nd tray (by customer).

## Technical Bulletin

Model: SP5/SP5L Dat				e: 31-Jan-99	No.: 7
Subject: Scanned Image on the Hard Disk			Prepared by: A. Sasaki		
From: GTSS Field Information Dept.					
Classification:	Troubleshooting	Part info	ormat	tion 🗌 Actior	n required
	🗌 Mechanical	Electric	al	Servic	ce manual revision
	Paper path Transmit/rec		eceive Retrofit information		
	$\boxtimes$ Other (Software explanation	on)			

With analog copiers, it has not been necessary to think about confidentiality of originals used for copying. Our copiers have recently been shifting from analog to digital in many segments. Since most digital copiers have a hard disk that can store scanned originals for job completion (such as collating), we must prevent the scanned originals from being recalled from the hard disk by someone else.

The following explains how the software handles the scanned images on the hard disk. Please explain to the customers when required.

In the copy mode, when an original is scanned, the scanned original is stored as image on the hard disk.

The stored image on the hard disk is deleted when the job is completed (when the Start key turns green for the next job).

## Technical Bulletin

#### **PAGE: 1/2**

Model: SP5 (3000 Finisher)			Date: 31-Mar-99		No.: 8
Subject: Software Replacement Information				Prepared by: E. F	<sup>-</sup> ukuyama
From: GTSS Field					
Classification:	Troubleshooting	Part info	orma	tion 🗌 Actior	n required
	🗌 Mechanical	Electric	al	Servio	ce manual revision
	Paper path	Transmit/rec		eive 🗌 Retro	fit information
	Other ( )				

Below please find the modification history from the first production run for the Main Board up to Suffix D for the 3000-sheet Finisher (SR730).

### A6975656D

- 1. Occurrences of SC990
- 2. Defective paper exit for LG, DLT, A3 and B4 paper sizes.
- 3. Two staples missing when B5 size paper is stapled.
- 4. Stacking problems occur when paper curls during manual staple mode. (Modification of shift tray height during manual staple mode, exit roller rotation, speed and shift tray lowering timing)
- 5. When the paper curl is large during shift mode, the exit roller rolls up the paper. (Modification of the shift tray height in the shift mode, exit roller rotation speed, and shift tray lowering timing)

Model Code	Cut-in Serial #s
A697-15	1B58120001
A697-17	A7778110001
A697-22	AR38110281
A697-26	3R1128001
A697-55	L0328110267

### A6975656C

- 1. When a jam occurs in the finisher, if the jam is not removed, the stapler motor will not shut off.
- 2. When the power save mode command from the main frame is received, the machine initializes.

Model Code	Cut-in Serial #s
A697-15	1B58090001
A697-17	A7778090001
A697-22	AR38090001
A697-26	3R10980001
A697-55	L0328100052



Model: SP5 (3000 Finisher)

Date: 31-Mar-99

No.: 8

### A6975656B

- 1. To improve the stacking in the shift tray during stapling, the following modifications have been implemented.
- a. The initial lowering timing of the shift tray is now faster and the stack start time has been modified to allow the shift tray to return to the top position first.
- b. The line velocity for the exit roller has been changed from 600 mm/s to 700 mm/s. The paper exit pawl speed has also been changed to match this.
- c. The timing for the lowering of the shift tray has been changed to 50 mm/s after the exit sensor has detected the leading edge of the paper.

	<u> </u>
Model Code	Cut-in Serial #s
A697-15	1B58070001
A697-17	A7778070001
A697-22	AR38070001
A697-26	3R10780001
A697-55	L0328100052

### A6975656A

- 1. Modification to allow use of Chinese paper sizes.
- 2. Modification of the start of the shift tray in staple mode.
- 3. When an exit jam occurs in staple mode, if the door is shut before the paper is removed,
- 4. Corrected the problem of an SC not being displayed even though there was a problem with the paper exit pawl home position sensor during initialization.
- 5. If the diagonal staple mode was selected when there was a problem with the stapler rotation home position sensor, an SC occurred.

Model Code	Cut-in Serial #s
A697-15	1B58070001
A697-17	A7778070001
A697-22	AR38070001
A697-26	3R10780001
A697-55	L0328100052

## Technical Bulletin

**PAGE: 1/5** 

Model: SP5/SP5L Dat			Date: 31-Mar-99 No.: 9		
Subject: Dirty Background at Leading Edge			Prepared by: A. Sasaki		
From: GTSS Field	d Information Dept.				
Classification:	☐ Troubleshooting	Part inf	ormat	tion 🗌 Actior	n required
	Mechanical	Electrical		Servio	ce manual revision
	Paper path	Transmit/rec		eive 🗌 Retro	fit information
	Other ()				

This is to explain an adjustment to minimize dirty background at the leading edge of the copy due to overtoning in the development unit.

### Symptom

Some toner is slightly visible at the leading edge of the copy.

### Solution

Please follow the flow chart of the adjustment procedure on the following pages to minimize the symptom.

Please note that since this adjustment is to stabilize the toner amount in the development unit at a lower level to prevent overtoning, some customers may complain about a lighter image in black solid areas, especially at an early stage from installation and for the first several copies every morning.

Please adjust the SP modes for the development bias to meet the required level for each customer.

However, there is no problem with text area.

### **New Factory Settings**

To minimize the dirty background, the factory settings of some SP modes have been changed to stabilize the toner amount in the development unit at a lower level which prevents overtoning.

Please refer to the explanation on the following page for the details.

Because of the change of the factory settings of some SP modes, black solid areas may be lighter at installation.

This model has a toner recycling system. The toner amount in the development unit is determined with a calculation including not only new toner but also recycled toner. At installation, the pipe for the recycled toner is empty and it takes 1,000 to 2,000 copies for the first recycled toner to come into the development unit.

This means that the toner amount in the development unit is less during the first 1,000 to 2,000 copies after installation and becomes higher after that.

Please adjust the SP modes for the development bias to meet the required level for each customer.



Model: SP5/SP5L

Date: 31-Mar-99

No.: 9

### **Details of the New Factory Settings**

The following settings have been changed.

1. SP2967 (Auto Image Density Adjustment)

Please note that this SP is available in the main software version 7.42.1 onward.

Old Setting	New Setting
OFF	ON

Function: During the period of process control after the main switch is turned on (if the fusing unit temperature is under 100°C), the toner amount in the development unit is checked and a small amount of toner is used if it is too much. Then, new values of Vref and Vt are determined.

2. SP2201-2 and SP2201-4 (Development Bias Adjustment)

	Old Setting	New Setting
SP2201-2	390	440
SP2201-4	270	320

Function: To make the toner amount in the development unit lower and to make the chargeability of toner higher.

3. SP2209 (Toner Supply Rate)

Old Setting	New Setting
650	850

Function: To make the amount of toner supplied for one time smaller and to make the chargeability of toner higher.

The cut-in serial numbers are as follows:

Model Code	Serial Number	Brand
A229-10	2B49410001	Savin/Gestetner
A229-17	A7909410036	Ricoh
A229-22	AS78120001	Gestetner/Nashuatec/Rex Rotary
A229-26	3R31280001	infotec
A229-27	A7908120001	Ricoh
A229-29	A7908120110	Ricoh
A229-50	From first production	Savin/Gestetner
A229-54	From first production	Lanier
A229-55	From first production	Lanier
A229-57	From first production	Ricoh
A229-59	From first production	Ricoh
A229-62	From first production	Gestetner/Nashuatec/Rex Rotary
A229-64	From first production	Lanier
A229-65	From first production	Lanier
A229-66	From first production	infotec
A229-67	From first production	Ricoh



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Model: SP5/SP5L

Date: 31-Mar-99

No.: 9

### **Adjustment Procedure**







**PAGE: 4/5** 

Model: SP5/SP5L

Date: 31-Mar-99

No.: 9

### 2. Laser Beam Pitch Adjustment

(This is to verify that the laser beam pitch is correctly adjusted.)





Model: SP5/SP5L

Date: 31-Mar-99

No.: 9

### 3. Development Bias Adjustment

(This is to adjust the development bias to an appropriate level for each customer.)



## Technical Bulletin

Model: SP5/SP5L Dat			e: 31-Mar-9	9	No.: 10			
Subject: Optics Insulating Sheet is Missing			Prepared by: A. Sasaki					
From: GTSS Field	d Information Dept.							
Classification:	Troubleshooting	Part inf	orma	tion 🛛	Action	n required		
	Mechanical	Electrical		Electrical			Servic	e manual revision
	Paper path	Transmit/rec		eive	Retrof	fit information		
	Other ()							

This is to inform you of a possible 'black copies' problem.

### Symptom

Black copies come out without any service codes and the machine stops with a "Please wait" on screen.

As a second failure resulting from this problem, the SBICU board, xenon lamp flexible board, and two lamp regulators might be damaged.

#### Cause

The lower insulating sheet P/N A229 1806 is not installed.

The xenon lamp flexible board P/N A229 5463 contacts the frame, the insulation becomes worn over time and then shorts to the frame.

### **Possible Units**

The exact number of possible units is unknown.

Three cases have been reported so far, and all of the cases are for the units produced in the U.S.A.

According to the information from the factories in Japan and the U.S.A., the part is correctly installed during the present production.

It seems that this problem may happen only on a limited number of machines of the SP5 (65 ppm) produced in the U.S.A.

### **Action Required**

Please check that the insulating sheet is installed next visit. If it is not installed, please put insulating tape or a mylar under the flat cable of the xenon lamp flexible board temporarily and install the insulating sheet the next time.



### **PAGE: 1/1**

Model: SP5/SP5L			Date: 15-Apr-99			No.: RA229011		
Subject: Paper Jams by Paper Feed Clutch (A229-27 only)				Prepared by: A. Sasaki				
From: Technical	Service Dept., GTS Division							
Classification:	Troubleshooting	Part info	ormat	tion	Action	n required		
	🗌 Mechanical	Electrical		Electrical			Servic	e manual revision
	Paper path	Transmit/re		eive	Retrof	fit information		
	Other ( )							

This is to inform you of a possible problem of a paper jam in Location "A" (No feed).

### Symptom

A paper jam occurs just after installation. The jam location is "A", which means a non-feed. Once it happens, it continues.

### Cause

A ring-shaped magnet in the paper feed clutch is out of position due to mis-positioning of the glue.

### **Possible Units**

The number of possible units is around six, which is about 2% out of 324 units of the A229-27 model (Ricoh European version) with the serial numbers of A7909030-308 through -641.

### Solution in the Field

- 1. Find the magnet around the clutch. It may be found on the frame on the other side.
- 2. Put super glue on the inside edges (four points [A]) as shown to fix the magnet into the clutch.
- Note: For the Paper Feed Clutch removal procedure, refer to Pages 6-70 through 6-72 in the Service Manual.



### **Solution on the Production Line**

To ensure the firmness of the glue, the number of glue positions has been changed from two to four and an inspection process has been added.

## Technical Bulletin

### **PAGE: 1/2**

Model: SP5/SP5L			Date: 15-Apr-99			No.: RA229012	
Subject: Difficulty of Toner Collection Bottle Installation				Prepared by: A. Sasaki			
From: Technical	Service Dept., GTS Division						
Classification:	Troubleshooting	Part info	ormat	tion 🗌 Act	ion	required	
	Mechanical	Electrica	al	🗌 Ser	rvic	e manual revision	
	Paper path     Transmit		it/rec	eive 🗌 Ret	trof	it information	
	Other ()						

This is to inform you of a possible problem of difficulty with the toner collection bottle installation.

### Symptom

When the toner collection bottle is installed, it might not be inserted all the way.

Please note that when removing the bottle [A], the cap [B] of the bottle hole might remain on the nozzle [C] and the sponge seal [D] inside the cap may drop into the bottle.



### Cause

- Enlargement -

The positions of the opening [E] in the bottle and the toner collection nozzle [C] are mismatched by a few millimeters due to a production error on the bottle.



- Enlargement -



Model: SP5/SP5L

Date: 15-Apr-99

No.: RA229012

### **Possible Units**

A small proportion out of all units from the first mass production.

### Solution in the Field

The bottle can be installed with the following procedure.

- 1. Hold the bottle [A] with one hand and the bottle holder [B] with the other hand.
- 2. Push the bottle into the machine.



### Solution on the Production Line

The production process of the bottle has been reviewed and corrected.

## Technical Bulletin

### PAGE: 1/2

Model: SP5/SP5L Da			Dat	Date: 15-Apr-99 No.: RA2290		
Subject: 3rd Tray Lift Motor Malfunction			Prepared by: A. Sasaki			
From: GTSS Field Information Dept.						
Classification:	☐ Troubleshooting	Part inf	ormat	tion 🗌 Actior	n required	
	🗌 Mechanical	Electric	al	Servic	ce manual revision	
	Paper path	Transm	it/rec	eive 🗌 Retro	fit information	
	Other ()					

This is to inform you of a possible 3rd tray lift motor malfunction resulting in the inability to use the tray.

### Symptom

The 3rd tray cannot be raised or lowered.

### Cause

An IC on the motor control board attached to the lift motor is damaged and the lift motor cannot be controlled.

Static electricity is a possible cause.

### **Possible Units**

The exact number of possible units is unknown. Reports have been provided from several areas.

### Countermeasure

To prevent the IC from being damaged, a resistor has been added to the motor control board.

The part number of the motor ass'y AX06-0130 has not been changed.

### How to Check New Motors

There were two steps to the modification.

- 1st Step: A green dot has been added to the right side of the lot number label as shown.
- 2nd Step: The suffix of the part number has been changed from no suffix (AX060130) to "A" (AX060130 A) on the lot number label as shown.



RIGOH	Technical B	PAGE: 2/2	
Model: SP5/SP5L		Date: 15-Apr-99	No.: RA229013

### **Cut-in Serial Number**

The countermeasure has been applied from the April 1999 production.

Service parts have already been changed to the new motors.

## Technical Bulletin

### **PAGE: 1/2**

Model: SP5/SP5L			Date: 15-Apr-99		No.: RA229014
Subject: Service Manual Correction				Prepared by: M. Tsuyuki	
From: GTSS Field	d Information Dept.				
Classification:	Troubleshooting	Part inf	ormat	tion Action	n required
	🗌 Mechanical	Electric	al	🛛 Servi	ce manual revision
	Paper path	Transm	it/rec	eive 🗌 Retro	fit information
	Other ( )				

Please correct your service manual as follows.

### SP2201-2 (page 4-15)

### Incorrect:

Factory setting: -360V

### Correct:

Factory setting: -390V

**NOTE:** The above setting has been changed from November or December production of 1998. See RTB 9 for details.

### SP7-808

### Incorrect:

Resets the following counters. Press "Start" to reset.

- All counters of SP7-003
- All counters of SP7-006
- All counters which are listed on the counter list (UP1-19-2)

### Correct:

Resets <u>all counters except for</u> the following counters. Press "Start" to reset.

- All counters of SP7-003
- All counters of SP7-006
- All counters which are printed on the counter list. This list is printed with "Total Counter" in "User Tools/Counter" menu.

RIGOH
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Model: SP5/SP5L

Date: 15-Apr-99

No.: RA229014

### SC621 (Page 7-21)

Please delete SC621 from your service manual and add the following two SCs (SC621-1 and 2).

SC621-1: Communication error between SBICU board and Finisher.

-Definition- [B]

If ACK does not return within 100 ms after data has been sent from the SBICU board to the finisher, the data is resent. However, data has been has been sent three times, and ACK has not been reteurned.

-Possible Cause-

- Poor connection between the SBICU board and the finisher main board
- Finisher main board defective
- SBICU board defective

SC621-2: Communication error between SBICU board and Finisher.

-Definition- [B]

During communication between the finisher main board and the SBICU board, a break signal is sent from the finisher main board.

-Possible Cause-

- Poor connection between the SBICU board and the finisher main board
- Finisher main board defective
- SBICU board defective

Model: SP5/SP5L Dat			ate: 15-Aug-99		No.: RA229015	
Subject: Light Copies			Prepared by: A. Sasaki		Sasaki	
From: GTSS Field Information Dept.						
Classification:	Troubleshooting	🗌 Part informa		tion 🗌 A	Actior	n required
	🗌 Mechanical	Electric	al		Servio	ce manual revision
	Paper path	🗌 Transm	it/rec	eive 🗌 F	Retro	fit information
	Other ( )					

This bulletin will explain the recommended procedure for increasing the image density of copies (in particular, the density of black solid areas on the left and right sides).

### Symptom

- 1. The image density is low at installation.
- 2. The image density decreases during a continuous copy run.
- 3. Copies have lower image density on the left and right sides than in the middle.

There is no problem with text areas.

### **Possible Cause**

The symptoms described above are caused by a combination of the following:

- As announced by RTB No. 9, the factory settings of some SP modes have been changed to minimize the dirty background. These changes may affect the image density if originals with a high percentage of black area and/or with black solid area at any of the sides are used.
- 2. The value of the toner supply ratio set in the SP mode is too low with respect to the average percent of black area in the originals used.
- 3. The base toner control level in the development unit is set lower than the expected image density level.

### Action Required

Please adjust the toner supply ratio and the bias voltages for the ID sensor pattern and for the image by following the adjustment procedure on the following pages.

#### Note

There might be some visible differences in half-tone areas and gray pattern areas between the first copy and the other copies in a copy run.

This is because uncompressed data is used for the first copy and compressed data stored in the hard disk is used for the other copies.

Model: SP5/SP5L

RIGOH

Date: 15-Aug-99

No.: RA229015

### **Serial Numbers of Machines**

The following machines have the new factory settings of some SP modes.

Please refer to RTB No. 9 for the details.

Model Code	Serial Number	Brand
A229-10	2B49410001	Savin/Gestetner
A229-17	A7909410036	Ricoh
A229-22	AS78120001	Gestetner/Nashuatec/Rex Rotary
A229-26	3R31280001	Infotec
A229-27	A7908120001	Ricoh
A229-29	A7908120110	Ricoh
A229-50	From first production	Savin/Gestetner
A229-54	From first production	Lanier
A229-55	From first production	Lanier
A229-57	From first production	Ricoh
A229-59	From first production	Ricoh
A229-62	From first production	Gestetner/Nashuatec/Rex Rotary
A229-64	From first production	Lanier
A229-65	From first production	Lanier
A229-66	From first production	Infotec
A229-67	From first production	Ricoh

Model: SP5/SP5L Date: 15-Aug-99 No.: RA229015

Adjustment Procedure

Use an A4 or LT sized sample
original from the customer.

Set SP2967 to ON.

Set changed SP settings back
to the factory settings





## Technical Bulletin

### PAGE: 1/2

Model: SP5 / SP5L Dat			e: 31-Aug-99	No.: RA229016	
Subject: Exposure Lamp			Prepared by: A. Sasaki		
From: Technical Service Dept., GTS Division					
Classification:	Troubleshooting Mechanical Paper path	Part informat		tion 🛛 Action	n required ce manual revision fit information
	Other ()				

### Symptom

The first page is blank and SC101 is displayed.

This symptom is limited to the first sheet after turning on the power. However, even on the same machine, this problem does not occur every time the power is turned on.

### Cause

The amount of light from the exposure lamp is insufficient.

If making a copy when the lamp is abnormally slow in reaching the ready status, the lamp is not able to produce the required amount of light within the given regulated time period. The source of the problem has been identified as defective internal components in lamps that were produced in March 1999 (and is therefore limited to these lamps).

### **Action Required**

The lamps produced in March were installed in machines produced in March, April and May, 1999. If any machines have serial numbers matching those listed on the last page of this RTB, please check the exposure lamp lot number by following the procedure described below. If the lamps have lot numbers beginning with 39X, please replace them. The number will be 39X, where 39 indicates a March 1999 production date and X indicates the actual day on which the lamp was produced. Each month is assigned a different lot number (continuing from "37" in Jan. 1999). Therefore, January 1999 is "37", February ="38", and March="39". This information can be found printed in black on the black lamp cap at the rear side (and therefore may be difficult to read).

Procedure for checking the exposure lamp lot numbers (and replacement, if necessary):

- 1. Remove the exposure glass.
- 2. Slide the 1<sup>st</sup> scanner to the cutout in the rear scanner frame.
- 3. Read the lot number printed on the lamp cap.
- 4. If the first two digits of the lot number are 39, replace the exposure lamp.



**PAGE: 2/2** 

Model: SP5 / SP5L

Date: 31-Aug-99

No.: RA229016

### < Serial Numbers of Targeted Machines >

Model	Number	March production	April production	May production
Code	of Unit			
A229-22	325	AS79030153 - 253	AS79040001 - 220	-
A229-26	155	-	3R30490001 - 155	-
A229-27	1,060	A7909030765 - 1000	A7909040001 - 824	-
A229-50	440	2B49030001 - 240	3B89040001 - 200	-
A229-54	145	_	L0469040001 - 145	-
A229-55	398	_	L0339041621 - 2018	-
A229-57	820	A7909031533 - 2352	-	-
A229-59	15	A7909032353 - 2367	-	-
A229-62	110	-	B129040001 - 110	-
A229-64	67	L0339031341 - 400	L0469040146 - 152	-
A229-65	80	-	L0339042019 - 98	-
A229-66	69	-	3U20490001 - 69	-
A229-67	961	A7909031001 - 1532	A9049040001 - 429	-
A229-17	1,964	A7909430661 - 1080	A7909440001 - 1105	A7909450001 - 440
A229-10	636	-	2B49440001 - 430	2B49450001 - 206
	7,245			

## Technical Bulletin

Model: 3000 Finisher for SP5/SP5L Date			te: 15-Oct-99 No.: RA229017		
Subject: SC621			Prepared by: A. Sasaki		
From: Technical Service Dept., GTS Division					
Classification:	<ul> <li>Troubleshooting</li> <li>Mechanical</li> <li>Paper path</li> <li>Other ()</li> </ul>	Part inf	orma al nit/rec	tion Action Servio	n required ce manual revision fit information

### Symptom

SC621 is generated during copy cycle.

### Cause

The stapler rotation HP sensor harness shorts to the frame



### **Temporary Solution in Production**

The routing of the harness has been changed as shown in the photo. This can be done in the field.

The cut-in serial numbers are as follows: A697-15: 1B59060001 A697-17: A7779051901 A697-22: AR39050649 A697-26: 3R10690001 A697-55: L0329064175





Model: 3000 Finisher for SP5/SP5L

Date: 15-Oct-99

No.: RA229017

### **Final Solution in Production**

A tape wrapping the harness has been added to the place where the harness touches the frame and the frame has been changed to make the edge smoother.

The cut-in serial numbers are as follows:

A697-15: 1B59070001 A697-17: A7779061601 A697-22: AR39060271 A697-26: 3R10690276 A697-55: L0329074795

## Technical Bulletin

Model: SP5/SP5L			Date: 15-Jan-00		No.: RA229018
Subject: Service Code SC546				Prepared by: A. Sasaki	
From: GTSS Field Information Dept.					
Classification:	Troubleshooting Mechanical Paper path Other (	Part informat		ion Actio Serve Retr	on required ice manual revision ofit information

Please correct your service manual as follows:

Page 7-19

- Incorrect -

### SC546: Fusing ready temperature malfunction

- Correct -

### SC546-01: Fusing temperature instability 1

- Definition – [A]

The following condition occurs twice consecutively: The fusing temperature goes up or down by more than  $20^{\circ}$ C within 1 second.

- Possible causes -
  - Poor thermistor connection
  - Poor fusing unit connector connection

### SC546-02: Fusing temperature instability 2

- Definition - [A]

The following condition occurs 3 times within 60 seconds: The fusing temperature goes up or down by more than 20°C within 1 second

- Possible causes -
  - Poor thermistor connection
  - Poor fusing unit connector connection



### **PAGE: 1/1**

Model: SP5/SP5L Dat			te: 31-Jan-00	No.: RA229019		
Subject: Heaters				Prepared by: A. Sasaki		
From: Technical Services Dept., GTS Division						
Classification:	Troubleshooting	Part inf	orma	tion 🗌 Act	ion required	
	🗌 Mechanical	Electric	al	🖂 Sei	vice manual revision	
	Paper path	🗌 Transm	iit/rec	eive 🗌 Ret	rofit information	
	Other ()					

Please add the following information to your service manual:

Page 2-131

The drum heater, the optics anti-condensation heater, and the two tray heaters, which turn on when the machine is off, are included in the machine but the connectors, CN102 and CN103, on the PSU are not connected.

Please connect the connectors when necessary.

## Technical Bulletin

Model: SP5/SP5L			Date: 14-Apr-00		No.: RA229020
Subject: Software Update for Mail Box CS360				Prepared by: A. Sasaki	
From: Technical Services Dept., GTS Division					
Classification:	Troubleshooting	Part inf	orma	tion 🛛 Actio	on required
	Mechanical	Electric	al	Serv	vice manual revision
	Paper path	Transm	it/rec	eive 🗌 Retr	ofit information
	Other ()				

### Background

The mail box (CS360) is currently an optional item for the SP5/SP5L (A229) and NAD 30S/30/40 (A230/A231/A232), and can also be installed on the Mojito (A292/A293). The A292/A293 has a faster process speed than the A229 and A230/A231/A232. New software (G909 0339 A) is necessary to allow the CS360 to work smoothly on the Mojito.

### Interchangeability between Main Frame and CS360

The new software can also handle the A229 and A230/A231/A232 perfectly.

	Old CS360 Software	New CS360 Software
NAD 30S/30/40 (A230/A231/A232)	Workable	Workable
SP5/SP5L (A229)	Workable	Workable
Mojito (A292/A293)	Not workable	Workable

### **Cut-in Serial Numbers**

Destination	Cut-in Serial Number
G909-15 (Savin, Gestetner)	2B20030001
G909-17 (Ricoh)	G8170020001
G909-22 (NRG)	BO00020001
G909-26 (Infotec)	From next production
G909-55 (Lanier)	L0340020001

## Technical Bulletin

Model: SP5/SP5	L	Dat	e: 26-Apr-00	No.: RA229021	
Subject: SBICU I	Firmware Modificaiton Historie	Prepared by: A. Sasaki			
From: Technical Service Dept., GTS Division					
Classification:	Troubleshooting Part info			tion 🗌 Actio	n required
	Mechanical	Electric	al	Servi	ce manual revision
	Paper path	Transm	it/rec	eive 🗌 Retro	fit information
	Other ( )				

As there are five types of firmware, use the appropriate one for each customer.

Destination	Part Number	Product Codes/Languages
Amorioa	A 220 7540	A229-10, -17, -50, -54, -55, -57
America A229 7540		US English, French, Spanish
Eu1 Acia	A 220 7560	A229-22, -26, -27, -29, -59, -62, -64, -65, -66, -67, -69
Eu I_Asia	AZZ9 7500	English, French, Spanish, German, Italian, Dutch
Eu2	A 220 7565	A229-22, -26, -27, -62, -64, -65, -66, -67
EUZ A2297565		English, German, Swedish, Norwegian, Danish, Finnish
Eu2	A 220 7566	A229-22, -26, -27, -62, -66, -67
Eus	AZZ9 7500	English, German, Portuguese, Polish, Hungarian, Czech
Eu3 (Lanior)	A 220 7567	A229-64, -65
	AZZ3 7507	English, German, Portuguese, Polish, Czech

Firmware Version and Part Number Suffix for Each Destination

Destination	America	Eu1_Asia	Eu2	Eu3	Eu3 (Lanier)
Part Number	A229 7540	A229 7560	A229 7565	A229 7566	A229 7567
Version/Suffix					
9.29	G	G	С	A	A
9.30	Н	Н	D	В	В
9.33	J	J	E	С	С
9.33.1	К	K	F	D	D
9.34	L	L	G	E	E
9.36	М	М	Н	F	F
9.37	N	N	J	G	G

Date: 26-Apr-00

No.: RA229021

Model: SP5/SP5L

### Version 9.29

Destination	America	Eu1_Asia	Eu2	Eu3	Eu3 (Lanier)
Part Number	A229 7540 G	A229 7560 G	A229 7565 C	A229 7566 A	A229 7567 A

#### 1. New BAM Standards

To meet the new BAM standards, the wattage when the main switch is off has been decreased.

#### 2. Specific Chinese Paper Sizes, 8K and 16K

To make the Auto Paper Selection (APS) function available for the specific Chinese paper sizes, 8K and 16K, the following service programs have been changed:

#### SP5-131 (Paper Size Type Selection)

Setting No. 3 has been added to indicate buttons for the 8K and 16K paper sizes for Tray 2 on the LCD when the screen of the Paper Size Setting menu in the User Tools is opened.

Old	New
0: JP (Japan)	0: JP (Japan)
1: NA (North America)	1: NA (North America)
2: EU (Europe)	2: EU (Europe)
	3: CH (China)

#### SP4-303 (APS A5/HLT Size Original Detection)

Setting Nos. 2 and 3 have been added to detect 8K and 16K as standard original sizes in platen mode.

Old	New
0: Not detected	0: Not detected
1: A5 lengthwise / 51/2" x 81/2"	1: A5 lengthwise / 51/2" x 81/2"
	2: Not detected (for 8K/16K)
	3: A5 lengthwise (for 8K/16K)

Note: The difference between Settings "2" and "3" is only how the machine handles original size when none of the original size sensors can detect the size. (Refer to the table below)

In case of "2", "Cannot detect original size" is displayed.

In case of "3", the original size is handled as A5 lengthwise.

**Original Size** 

Length	Length	Width	Width	Width	SP4303	SP4303	SP4303	SP4303
sensor2	sensor1	sensor1	sensor2	sensor3	Setting 0	Setting 1	Setting 2	Setting 3
0	0	0	0	0	A3L	A3L	8KL	8KL
0	0	0	0	Х	B4L	B4L	8KL	8KL
0	0	0	Х	Х	81⁄2"x13"L	81⁄2"x13"L	81⁄2"x13"L	81⁄2"x13"L
Х	0	0	Х	Х	A4L	A4L	16KL	16KL
Х	0	Х	Х	Х	B5L	B5L	16KL	16KL
Х	Х	0	0	0	A4	A4	16K	16K
Х	Х	0	0	Х	B5	B5	16K	16K
Х	Х	0	Х	Х	A5	A5	A5	A5
Х	Х	Х	Х	Х	A5L		A5L	

Date: 26-Apr-00

No.: RA229021

### Model: SP5/SP5L

RIGOH

#### How to Make the APS Function Valid for the ADF Mode

- 1. Select "3" with SP5-131.
- 2. Print out all SMC data lists (Copy Management Report) using SP5990-1. This is necessary to re-input necessary data after SP5-801 is done.
- 3. Set DIP switches 6 and 7 on the I/O board to the "ON" positions.
- Perform SP5-801 (Memory All Clear). These two steps are necessary to make Setting 3 of SP5-131 valid.
- 5. Set the paper size actuator of Tray 2 to the "\*" (asterisk) position.
- Select 8K or 16K with the User Tools. (System Settings - Paper Size Setting - Tray 2: Paper Size Setting)

### How to Make APS Function Valid for the Platen Mode

- 1. Select "2" or "3" with SP4-303.
- 2. Set the paper size actuator of Tray 2 to the "\*" (asterisk) position.
- Select 8K or 16K with the User Tools. (System Settings - Paper Size Setting - Tray 2: Paper Size Setting)

#### 3. 14 Languages on the LCD

14 languages are available on the LCD by installing the appropriate SBICU firmware.

### Version 9.30

Destination	America	Eu1_Asia	Eu2	Eu3	Eu3 (Lanier)
Part Number	A229 7540 H	A229 7560 H	A229 7565 D	A229 7566 B	A229 7567 B

#### 1. Printer Function

The printer functions have been added to use the SP5/SP5L (A229) as a printer.

### 2. Copy Count in Connect Copy Configuration

The copy counter displayed on the main unit as the total number of copies made on both units becomes different from the actual number when the count of the sub-unit is 256 or larger. The error has been corrected.

### Version 9.33

Destination	America	Eu1_Asia	Eu2	Eu3	Eu3 (Lanier)
Part Number	A229 7540 J	A229 7560 J	A229 7565 E	A229 7566 C	A229 7567 C

### 1. Copy Management Report on LT (11" x 8-1/2") paper

A small part of the Copy Management Report (SP5990) is missing when it is printed out on LT paper.

The error has been corrected.

PAGE: 4/8

Model: SP5/SP5L

### 2. Counting Error for the User Code Counter in Energy Saver Mode

When the machine goes into Energy Saver mode and comes back to the Copy mode, the dialog box asking for a user code is not displayed on the operation panel. This means that copies can be made without any user code, and this can be continued till the next time that the dialog box asking for a user code appears. The copies made in this period are not allocated to any of the user codes set.

The error has been corrected to show the dialog box on the operation panel when the Energy Saver mode is released.

### Version 9.33.1

Destination	America	Eu1_Asia	Eu2	Eu3	Eu3 (Lanier)
Part Number	A229 7540 K	A229 7560 K	A229 7565 F	A229 7566 D	A229 7567 D

#### 1. Counting Error for the User Code Counter in Energy Saver Mode

This error has been corrected in Version 9.33 but there is still a small error.

The dialog box asking for a user code is not displayed on the operation panel if the Energy Saver mode is released before the time set as the Auto Reset Timer in the Copy Features of the User Tools comes, and copies can be made without inputting a user code. In this case, the copies made are allocated to the user code that was used for the previous job.

The error has been corrected to show the dialog box on the operation panel when the Energy Saver mode is released.

#### 2. Slower Copying Speed for Duplex Copies in Document Server Mode

The copying speed of duplex copies in Document Server mode is slower than that in Copy mode by about 30%.

The copying speed in Document Server mode has been increased to be the same as in Copy mode.

### Version 9.34

Destination	America	Eu1_Asia	Eu2	Eu3	Eu3 (Lanier)
Part Number	A229 7540 L	A229 7560 L	A229 7565 G	A229 7566 E	A229 7567 E

#### 1. Display Error for the Key Counter in Energy Saver Mode

The dialog box asking for insertion of a key counter is mistakenly displayed even if a key counter is still inserted when the Energy Saver mode is released. The dialog box disappears if a key counter is inserted.

The error has been corrected not to show the dialog box on the operation panel when the Energy Saver mode is released, if a key counter is inserted.

Date: 26-Apr-00

No.: RA229021

Model: SP5/SP5L

### 2. Improvement for SC365 (Image Storage Address Error)

SC365 may sometimes be indicated when there is a timing error for passing image data into memory during printing process.

The timing has been improved, so that the number of SC365 errors indicated unnecessarily can be decreased.

#### 3. Improvement for Paper Jams in the Fusing Unit

If an accordion-shaped paper jam occurs in the fusing unit, none of the sensors in the machine may detect it. If a customer does not notice the jammed paper at this time and closes the front door without removing the paper, the machine enters the Ready condition again. If the next job starts in this situation, the jammed paper in the fusing unit may wrap around the fusing roller and the copies of the next job will not be completely fused.

To guide the customer to remove jammed paper which does not reach the Fusing Exit Sensor as Index No. 107 of the Electrical Component Layout (or the Exit Unit Entrance Sensor as Jam No. SP7504-15 on the Logging Data Sheet), the software has been modified, so that the jam condition is not reset without pulling out and pushing in the fusing unit. This modification is available only when DIP switch No. 4 on the I/O board is ON.

#### 4. Maximum Number Input for Paper Designate / Chapter Functions

The maximum number which can be input for page numbers of the Designate / Chapter papers has been changed from 99 to 250.

### Version 9.36

Destination	America	Eu1_Asia	Eu2	Eu3	Eu3 (Lanier)
Part Number	A229 7540 M	A229 7560 M	A229 7565 H	A229 7566 F	A229 7567 F

#### 1. The Copier Stops when copying the 64th Copy

This symptom rarely occurs.

On the SP5/SP5L with any of the following conditions:

- a) Output Priority in the System Settings of the User Tools is set to "Printer".
- b) Output Priority in the System Settings of the User Tools is set to "Display" and while the screen of the Printer function is displayed on the LCD.

While copying with the following settings, the machine may stop when the total number of copies made becomes 256, 512, 1024, etc. and does not start copying again even if the Start key is pressed.

a) The total number of copies in a copy job is 256 or more.

- b) Any of the Staple modes is selected
- c) When the last sheet of a stapled set becomes 256, 512, 1024, etc.

#### 2. Malfunction with Originals with Mixed Sizes in Duplex Mode

When several sheets of smaller-sized originals (e.g. A4 sideways) and one sheet of a largersized original (e.g. A3) are copied in the Mixed Original and 1-to-2 duplex modes, an original jam may occur or the machine remains in copy mode without actual copying taking place.



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No.: RA229021

Model: SP5/SP5L

RIGOH

Date: 26-Apr-00

**3.** Malfunction when Printing 600 dpi Files and 400 dpi Files in Document Server Mode When the files transmitted from PCs (600 dpi) and the scanned files (400 dpi) stored in the Document Server are printed at the same time in duplex mode, a copy jam may occur or the machine remains in copy mode without actual copying taking place.

### 4. Malfunction with SP2506 (Cleaning Interval – Multiple Copy)

When SP2506 functions during a copy job, the machine remains in copy mode without actual copying taking place.

The error has been corrected.

5. Some Parts of the Image Missing in Rotate Sort When Printing from the Document Server

When files in the Document Server are printed in the Rotate Sort and Duplex modes on the SP5/SP5L with A4/LT sideways in the trays, the image on the back side of the even-numbered copies is not rotated.

This symptom occurs only when the Auto Tray Switching function of the System Settings in the User Tools is set to "No".

### 6. Display Panel Mistake in Danish

The "Finisher – Shift Tray" and "Finisher – Proof Tray" buttons in the User Tools (System Settings – Basic Page 2 – Copy / Document Server / Printer: Output Tray) are displayed in the opposite positions.

### 7. Prepaid Card System

Please note that this modification has been made just to support the Prepaid Card Systems presently working in the field, and there is no guarantee that all of the Prepaid Card Systems can work with this software.

### Symptom

A copy jam occurs when the credit on a prepaid card becomes zero. **How to Set** 

• Select "3. Prepaid Card" with SP5113.

• Select "Copy" in the User Tools. (System Settings – Count Manager – Set Key Card) **Note** 

The copy speed in the duplex mode is decreased by 40% because the interleaf feeding method cannot be used.

The printing speed decrease in duplex mode can be bypassed by setting DIPSW No.1 on the I/O board to ON, but some copies can be made without any credits on the card.

### 8. Key Operator Code

### Modification

The valid area of the Key Operator Code can be extended by setting DIPSW No.5 on the I/O board to ON, so that the Key Operator Code has to be entered when opening System Settings, Copy Features, Printer Features and Document Server Setting in the User Tools.

Date: 26-Apr-00

No.: RA229021

Version 9.37

Model: SP5/SP5L

Destination	America	Eu1_Asia	Eu2	Eu3	Eu3 (Lanier)
Part Number	A229 7540 N	A229 7560 N	A229 7565 J	A229 7566 G	A229 7567 G

#### 1. Paper Jam in the Sub-unit in Connect Copy mode When making copies in duplex, staple and connect copy modes, a paper jam may occur in the sub-unit.

#### 2. Black Image in the Trailing Edge Area of Copies from the By-pass Tray The by-pass tray becomes empty during copying and if the size of the paper newly placed is changed, a black image may appear at the trailing edge area of copies.

### 3. Request from the Italian Post Office

To meet a request from the Italian Post Office, the program related to the total counter has been modified.

### Version 9.39

Destination	America	Eu1_Asia	Eu2	Eu3	Eu3 (Lanier)
Part Number	A229 7540 P	A229 7560 P	A229 7565 K	A229 7566 H	A229 7567 H

### 1. Paper Rotation by 180 Degrees

When a pre-printed paper such as letterhead paper is used as copy paper in the copy mode, there is a case that the image on copies is rotated by 180 degrees against the letterhead. It depends on whether the staple and/or punch modes are selected. So, customers need to be careful in which way pre-printed paper types are loaded for each copy job.

#### Improvement

By turning on DIP switch No. 8 on the I/O board, the image is always rotated by 180 degrees. So, customers can load such paper always in one way.

#### Note

This improvement is not valid for by-pass feed.

#### 2. SC302-1

#### Symptom

SC302-1 may be displayed during the process control initialization.

#### Cause

It is not a real problem but the conditions to detect the SC are too strict.

### Solution

The conditions have been changed not to detect SC302-1 mistakenly.

Date: 26-Apr-00

No.: RA229021

Model: SP5/SP5L

RIGOH

### 3. SC302, SC391 and SC401

#### Symptom

When SC302 is detected, SC391 and SC401 usually follow.

### Cause

These SC's are all related to high voltages. When one of them is detected, the supply of all high voltages is immediately stopped. So, not only the original SC number is displayed but also the others follow.

### Solution

Only the original SC number is detected.

## 4. SC990 when Initial Mode in User Tools is Set to "Program No. 10" Symptom

SC990 may be displayed when the Modes Clear key is pressed.

This symptom only occurs when the Initial Mode in the Copy Features of the User Tools is set to "Program No. 10" and two machines are connected in tandem.

#### Solution

The software bug is corrected.

### 5. Drum Reverse Rotation

The condition of the drum reverse rotation has been changed to minimize load of the related parts. (See service manual Page 2-58)

#### Old

At the end of every copy job.

#### New

Only when the following two conditions are fulfilled:

- When a copy job is finished.
- When the total time of drum rotation has reached four minutes since the last rotation.

### 6. Charge Corona Cleaner Movement

The condition for detecting an error in the charge corona cleaner movement has been changed not to count a SC up too early even when the movement is not so smooth.

## Technical Bulletin

### PAGE: 1/2

Model: SP5/SP5L Dat			te: 28-Aug-00 No.: RA22902		
Subject: Light Copies (No.2)				Prepared by: A. Sasaki	
From: Technical	Services Dept., GTS Division				
Classification:	Troubleshooting	Part inf	orma	tion 🗌 Ac	tion required
	Mechanical	Electric	al	🗌 Se	rvice manual revision
	Paper path	Transmit/red		eive 🗌 Re	trofit information
	Other ()				

This bulletin will explain the recommended adjustment procedure for when the image density on the whole page becomes lighter and lighter day by day because of low monthly copy volume.

This bulletin is different from RTB #15, which is for lower image density in solid black areas.

### **SYMPTOM**

The image density on the whole page of the copies becomes slightly lighter and lighter day by day.

### **POSSIBLE CAUSE**

The monthly copy volume is very low.

When the copy volume is low, the mixing time in the development unit is short. This causes the chargeability of the toner to become lower. In this condition, the TD sensor tends to detect that the toner amount in the development unit is more than the actual amount, so not enough new toner is supplied.

During the process control initialization the next morning, Vcont is determined at a lower value than the previous day because of the reduced toner amount in the development unit.

### **ADJUSTMENT PROCEDURE**

Before starting the adjustment, do the following:

- Calculate the average monthly copy volume.
- Check the value of SP2906 (Vcont Manual Setting).
- Check the setting of SP2967 (Auto Image Density Adjustment)
- Print out the SMC sheets (SP5990-1)
- Make several copies as samples and check the image density.



Model: SP5/SP5L

Date: 28-Aug-00 No.:

No.: RA229022



## Technical Bulletin

#### PAGE: 1/1

Model: SP5 D			Dat	e: 22-Aug-01	No.: RA229023	
Subject: Toner Pump Lock				Prepared by: M.Matsuda		
From: Technical	Services Dept., GTS Division					
Classification:	Troubleshooting	Part inf	orma	tion 🗌 Actio	n required	
	Mechanical	Electrical		🗌 Servi	ce manual revision	
	Paper path	Transm	it/rec	eive 🗌 Retro	fit information	
	🗌 Other ( )					

### SYMPTOM

The toner recycling pump locks.

### CAUSE

The quality of recycled toner gradually decreases, eventually hardening and clumping to the point where the Toner Recycling Pump is no longer able to effectively circulate it.

**Note:** In particular, this occurs when the surrounding temperature of the machine is high, such as in relatively high-temperature environments or when there is a minimum amount of free space around the machine.

### SOLUTION

Replace the Pulley and Timing Belt with the modified parts listed below, which will effectively increase the drive power of the pump from 225 rpm to 400 rpm.

Old Parts Number	New Parts Number	Description	Int	Page and Index No
AB030458	AB030720	Pulley	As a set X/O	121 - 28
AA043415	AA043573	Timing Belt		123 - 24

Note: Be sure to replace these 2 parts as a set.

## Technical Bulletin

Model: SP5 Da			Dat	ate: 9-May-02 No.: RA229		No.: RA229024
Subject: Service Manual Revision			Prepared	d by: M. N	Vatsuda	
From: Technical	Services sec. Service Planning	) Dept.				
Classification:	Troubleshooting	Part inf	ormat	tion	Action	n required
	Mechanical	Electric	al		Servic	e manual revision
	Paper path     Transmit		it/rec	eive	Retrof	fit information
	Other ()					

Please add the following SC code to the SP5 Service Manual.

### SC364: Data Transfer Timeout

-Definition- [B]

Data transfer to mainframe memory is not completed within 20 seconds.

- Possible causes -
- Defective SICU board.

RIGOH	Technic	Technical Bulletin				
Model: SP5	Model: SP5 Dat			e: 4-Feb-04	No.: RA229025	
Subject: OPC Drum Change/ Drum Setting Powder				Prepared by: F.N	loguchi	
From: 2nd Tech	Support Sec. Service Support De	ept.				
Classification:	<ul> <li>☐ Troubleshooting</li> <li>☐ Mechanical</li> <li>☐ Paper path</li> <li>☑ Other ( )</li> </ul>	Part info	orma <sup>.</sup> al it/rec	tion Action Servio eive Retro	n required ce manual revision fit information	

### **Important Note:**

The OPC drum has been changed as follows, which requires the application of a setting powder at drum installation. The Drum yield and SP mode setting have not been changed.

### Change, Background

As of the end of January 2004 (Japan production) and September 2004 (RPL production), the organic solvent dichloromethane will no longer be used for OPC drum production as part of Ricoh's ongoing efforts, through the expanding application of in-house environmental management standards, to eliminate the use of environmentally sensitive materials in the manufacturing process.

### Affected Drums and Models

To distinguish the drums from before and after this change, the drum lot numbers and service parts numbers will be changed as follows.

### Lot Number Change:



Space

### Service P/N Change:

Old P/N	New P/N	New Drum Produ	New Drum Service	
		Japan Production RPL Production		Faits Available.
		(NA/Asia):	(Europe):	
A2949510	A2959510	End of January 04'	Early September 04' *See Note below	End of February 04' or later (US/Asia)
				End of September 04' or later (EU) *See Note below

**Note:** As the service parts OPC drum from ESPC is produced at RPL, the actual outflow of the new drum to the European market will be from the end of September 2004. The current drum (A2949510) will available for ordering until this time.

rigoh	Technical B	Technical Bulletin		
Model: SP5		Date: 4-Feb-04	No.: RA229025	

### Important Note for Installation of the New Drum

Since the smoothness of the new drum (without dichloromethane) is reduced, it is essential to make sure and apply Drum Setting Powder (P/N: 54429101) to the drum surface as shown below before installing.

**Note:** If the setting powder is not applied, the drum's cleaning blade may turn outward, causing a drum cleaning failure.

### Application Procedure for Drum Setting Powder

1. Apply the setting powder (P/N 54429101) to the drum by tapping the powder bag across the surface area shown in the illustration below, i.e. spanning the entire length of the drum but covering about a 45-90 degree portion (up to 1/4) of the total surface.

#### Note:

- Be sure to apply enough powder to give the area a moderate dusting (so that the area turns white).
- If setting powder is not available, please apply waste toner in the same manner described above (waste toner is charged and will be attracted to the drum surface). Please note that although dirty background will have a greater tendency to occur, be sure to apply the waste toner if there is no setting powder available.



2. Install the new drum in the OPC unit so that the powdered area (in bold below) faces the cleaning blade.

3. Rotate the drum once along its normal rotational direction (arrow shown below), so that it stops again at the same position.

**Note:** Be sure not to rotate the drum in the opposite direction.

