RIGOH	Technical	Bulletin		No. RTB-001
SUBJECT: Service Manual Cor	rection			DATE: Sept. 15, '96 PAGE: 1 of 4
PREPARED BY: N. Kaiya	. Inove	FROM: 1st Field	l Inforr	nation Dept. QAC
CLASSIFICATION:	 Revision of Information Other 	service manual only	MOD	EL: Azalea
Please add the following betwe	een step 3 on pag	e 3-7 and step 4	on pag	je 3-8.
NOTE:	In Flocedure			
The following procedure g required only for A166-26	iven by sub-steps 5,27, A187-26,27 a	numbered (1) thro and A189-26,27 c	ough (opiers	6) are
This procedure should be installation procedure.	done between st e	eps 3 and 4 of the	e copie	ər
]	
A16	661597.wmf			
(1) Remove the right uppe	er bracket [a] (1 sc	rew).		
(2) Remove the left upper	bracket [b] (1 scre	ew).		
(3) Remove the front uppe	er cover [c] (2 scre	ws).		
(4) Remove the operation	panel [d] (4 screw	/S).		



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Please add the following proce	edure after step	79 on page 3-33.	
 80. A189 copier only: (1) Enter SP mode. (2) Enter SP 5-9-1 and in which should be displa 1: English (NA) 2: E 4: French (EU) 5: F 7: Spanish (EU) 8: D 10: Swedish (EU) 11: 13: Czech (EU) 14: NOTE: 1) When the setting 	put the following yed on the oper inglish (EU) rench (NA) Danish (EU) Dutch (EU) Spanish (NA) is NA, original s	g setting in accordance wit ation panel. 3: German (EU) 6: Italian (EU) 9: Norwegian (EU) 12: Portuguese (EU) 15: Portuguese (NA) size detection is set to LT/I	h the language DLT version.
2) When the setting	is EU, original s	size detection is set to A4/	A3 version.

Please add the following information to appendix 2-30.

1st	2nd	3rd	Display	Function	Default, x Uni (): For Europe	Setting / Range	Comments	Report
5	9	1	Language Setting (A189 copier only)	Selects the language used on the operation panel display (except for SP mode guidance)	1	1: English (NA) 2: English (EU) 3: German (EU) 4: French (EU) 5: French (EU) 6: Italian (EU) 7: Spanish (EU) 8: Danish (EU) 9: Norwegian (EU) 10: Swedish (EU) 11: Dutch (EU) 12: Portuguese (EU) 13: Czech (EU) 14: Spanish (NA) 15: Portuguese (NA)	 When the setting is NA, original size detection is set to LT/DLT version When the setting is EU, original size detection is set to A4/A3 version. 	0

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SUBJECT: Service Manual Correction

DATE: Sept. 15, '96 PAGE: 4 of 4

Please replace page 3-50 with the following.



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Technical Bulletin

Model: Azalea	Date: 28	-Feb-97	No: 002	1/5		
Subject: ROM Modification for Scanner / Printer Function			Prepared by: N. Kaiya			
From: QAC 1st Field Information Dept.			Checke	d by: T. Inoue	nove	
Classification:	 □ Troubleshooting □ Mechanical □ Paper path □ Other () 	 Part information Electrical Transmit/re 	ation ceive	 Action required Service manual revi Retrofit information 	sion	

This RTB explains the necessary ROM modification to be made to the Printer Main Control Board and SCU to enable scanner and printer functions.

Printer Main Control Board ROM

- For the machines produced before the cut-in serial number listed in the following Tables 1 and 2, please update with the ROM (P/N A6245092) in the Interface Kit Type D.
- 2. This printer main control board ROM will be used in the Azalea production from the serial numbers listed in Tables 1 and 2. It is not necessary to change the printer main control board ROM for the machines produced after these serial numbers.

NOTE:

The modification history of the printer main control ROM is as follows:

Basic Model (A166); A1875441 -x/o A1895441 -x/o- A1895445 -x/o- A62445092

Auto Duplex Models (A187 and A189);

A1895445 -x/o- A6245092

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Model: Azalea	Date: 28-Feb-97	No: 002	2/5

Table 1: Printer Main Control ROM cut in serial numbers for Azalea Basic Models

MODEL NAME	V/ Hz	DESTINATION	CODE	SERIAL NUMBER
Nashua C503	115V/ 60Hz	USA, CANADA	A166 - 10	From first mass
Gestetner 2703				production
Savin SDC103	120V/ 60Hz	USA, CANADA	A166 - 15	4A16120001
Aficio Color 2003	120V/ 60Hz	USA, CANADA	A166 - 17	A3966110050
Nashuatec C503				
Gestetner 2703	220- 240V50Hz	EUROPE, etc.	A166 - 22	A156120001
Rex Rotary CC8403				
Infotec 7212Z	220- 240V50Hz	EUROPE, etc.	A166 - 26	3J11260001
Aficio Color 2003	220- 240V50Hz	EUROPE, etc.	A166 - 27	A3966120080
Aficio Color 2003	220- 240V50Hz, 60Hz	Asia, Middle East	A166 - 29	A3966120294
Lanier 5603 DC	120/60Hz	USA	A166 - 55	From first mass
				production

Table 2: Printer Main Control ROM cut in serial numbers for Azalea Auto Duplex Models

MODEL NAME	V/ Hz	DESTINATION	CODE	SERIAL NUMBER
Nashua C503d	120V/ 60Hz	USA, CANADA	A187 - 10	From first mass
Gestetner 2703d				production
Savin SDC103A	120V/ 60Hz	USA, CANADA	A187 - 15	4A26120001
Aficio Color 2103	120V/ 60Hz	USA, CANADA	A187 - 17	A3976120001
Nashuatec C503d				
Gestetner 2703d	220- 240V50Hz	EUROPE, etc.	A187 - 22	A176120001
Rex Rotary CC8403D				
Infotec 7212DZ	220- 240V50Hz	EUROPE, etc.	A187 - 26	3J21260001
Aficio Color 2103	220- 240V50Hz	EUROPE, etc.	A187 - 27	A3976120055
Aficio Color 2103	220- 240V50Hz, 60Hz	Asia, Middle East	A187 - 29	A3976120075
Lanier 5603DC	120V / 60Hz	USA	A187 - 55	From first mass
				production
Nashua C503de	120V/ 60Hz	USA, CANADA	A189 - 10	From first mass
Gestetner 2703de				production
Savin SDC103E	120V/ 60Hz	USA, CANADA	A189 - 15	4A36120001
Aficio Color 2230	120V/ 60Hz	USA, CANADA	A189 - 17	A3996120001
Nashuatec C503d				
Gestetner 2703d	220- 240V50Hz	EUROPE, etc.	A189 - 22	A197010001
Rex Rotary CC8403D				
Infotec 7212EZ	220- 240V50Hz	EUROPE, etc.	A189 - 26	3J30170001
Aficio Color 2203	220- 240V50Hz	EUROPE, etc.	A189 - 27	A3996120120
Aficio Color 2203	220- 240V50Hz, 60Hz	Asia, Middle East	A189 - 29	A3996120229
Lanier 5603DC	120V / 60Hz	USA	A189 - 55	From first mass
				production

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SCU ROM

The following SCU ROMs originally equipped with the machine must be updated as shown in Tables 3 and 4.

Table 3: SCU ROM Modification for Azalea Basic Models

		P/N of SCU ROM	
MODEL NAME	CODE	In the machine	Replace with
Savin SDC103	A166 - 15	A1875285	A1875295
Aficio Color 2003	A166 - 17	A1875285	A1875295
Nashuatec C503		A1875275	A6355202
Gestetner 2703	A166 - 22		
Rex Rotary CC8403			
Aficio Color 2003	A166 - 27	A1875275	A6355202

Table 4: SCU ROM Modification for Azalea Auto Duplex Models

		P/N of the SCU ROM	
MODEL NAME	CODE	In the machine	Replace with
Savin SDC103A	A187 - 15	A1875285	A1875295
Aficio Color 2103	A187 - 17	A1875285	A1875295
Nashuatec C503d	A187 - 22	A1875275	A6355202
Gestetner 2703d			
Rex Rotary CC8403D			
Aficio Color 2103	A187 - 29	A1875275	A6355202
Savin SDC103E	A189 - 15	A1895291 or A1635121	A1895301
		A1895292 or A1635122	A1895302
		A1895293 or A1635123	A1895303
		A1895294 or A1635124	A1895304
Aficio Color 2203	A189 - 17	A1895291 or A1635121	A1895301
		A1895292 or A1635122	A1895302
		A1895293 or A1635123	A1895303
		A1895294 or A1635124	A1895304
Nashuatec C503de	A189 - 22	A1895281	A6365202
Gestetner 2703de		A1895282	A6365203
Rex Rotary CC8403D		A1895283	A6365204
		A1895284	A6365205
Aficio Color 2203	A189 - 29	A1895281	A6365202
		A1895282	A6365203
		A1895283	A6365204
		A1895284	A6365205

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The new SCU ROM is included in production machines from the serial numbers listed in Tables 5 and 6.

MODEL NAME	V/ Hz	DESTINATION	CODE	SERIAL NUMBER
Nashua C503	115V/ 60Hz	USA, CANADA	A166 - 10	From first mass
Gestetner 2703				production
Savin SDC103	115V/ 60Hz	USA, CANADA	A166 - 15	4A16120001
Aficio Color 2003	115V/ 60Hz	USA, CANADA	A166 - 17	A3966110056
Nashuatec C503				
Gestetner 2703	220- 240V50Hz	EUROPE, etc.	A166 - 22	A156120001
Rex Rotary CC8403				
Aficio Color 2003	220- 240V50Hz	Asia, Middle East	A166 - 27	A3966120294
Lanier 5603 DC	120/60Hz	USA	A166 - 55	From first mass
				production

Table 6: SCU ROM cut in serial numbers for Azalea Auto Duplex Models

MODEL NAME	V/ Hz	DESTINATION	CODE	SERIAL NUMBER
Nashua C503d	120V/ 60Hz	USA, CANADA	A187 - 10	From first mass
Gestetner 2703d				production
Savin SDC103A	120V/ 60Hz	USA, CANADA	A187 - 15	4A26120001
Aficio Color 2103	120V/ 60Hz	USA, CANADA	A187 - 17	A3976120001
Nashuatec C503d				
Gestetner 2703d	220- 240V50Hz	EUROPE, etc.	A187 - 22	A176120001
Rex Rotary CC8403D				
Aficio Color 2103	220- 240V50Hz, 60Hz	Asia, Middle East	A187 - 29	A3976120075
Lanier 5603DC	120V/ 60Hz	USA	A187 - 55	From first mass
				production
Nashua C503de	120V/ 60Hz	USA, CANADA	A189 - 10	From first mass
Gestetner 2703de				production
Savin SDC103E	120V/ 60Hz	USA, CANADA	A189 - 15	4A37010001
Aficio Color 2203	120V/ 60Hz	USA, CANADA	A189 - 17	A3997010001
Nashuatec C503d				
Gestetner 2703d	220- 240V50Hz	EUROPE, etc.	A189 - 22	A197010005
Rex Rotary CC8403D				
Aficio Color 2203	220- 240V50Hz, 60Hz	Asia, Middle East	A189 - 29	3997010201
Lanier 5603DC	120V/ 60Hz	USA	A189 - 55	From first mass
				production

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Model: Azalea	Date: 28-Feb-97	No: 002	5/5

For the following models which do not have SCU ROMs installed during production, please use the Language Guidance Type N2 or the Language Guidance Type O2, as indicated in Table 7.

Table 7: Necessary Language Guidance Type

Model Name	Model Code	Guidance Type
Aficio Color 2003	A166-27	Guidance Type N2
Infotec 7212Z	A166-26	Guidance Type N2
Aficio Color 2103	A187-27	Guidance Type N2
Infotec 7212DZ	A187-26	Guidance Type N2
Aficio Color 2203	A189-27	Guidance Type O2
Infotec 7212EZ	A189-26	Guidance Type O2

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Technical Bulletin

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Model: Azalea			Dat	e: 15-Mar-97	No: 3
Subject: Paper Creasing in Duplex Mode				Prepared by: N. Kaiya	
From: QAC 1st Field Information Dept.				Checked by: T. Inoue	
Classification:	☑ Troubleshooting	Part information Action required		n required	
	🗌 Mechanical	Electrical		🛛 Servi	ce manual revision
	Paper path	Transmit/receive		ceive 🗌 Retro	fit information
	☐ Other())				

This RTB explains the countermeasure for paper creasing in duplex mode. The problem was found during our product test and so far it has not been reported from the field.

PROBLEM

Paper creasing on the back side of duplex copies. The problem is likely to occur under the following conditions.

- High humidity
- A3, DLT or A4 lengthwise, LT lengthwise
- When the face side has a large solid area with blank margins around it.

CAUSE

When copying the back side in duplex mode, the paper feeding speed over the pressure roller differs for solid image areas and blank areas. The difference of friction with the pressure roller may cause this symptom. (Friction : Image area > Blank area).

Therefore, if the face side copy has a large solid image with blank margins at both sides, the sides of the paper will feed slower than the middle part, causing the paper to crease in the middle of the trailing half.

COUNTERMEASURE

1. We have tested various combinations of nip band width and configurations of the hot roller and the pressure roller (concave). As a result, the following condition was found to be the optimum to counteract this problem.

	Old	New
Nip Band Width	6.5 ±0.5 mm	5.0 mm ~ 5.5 mm (front to rear deviation within 0.5 mm)
Hot Roller	No	Change
Pressure Roller Concave	+0.01 ±0.01 mm	+0.05 ±0.01 mm

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- 2. Due to the change in nip band width, the following two changes are made.
 - The fusing lamp has been changed. The new lamp heats the front half more strongly, since fusing ability became inferior in this part.
 - The fusing and paper exit unit (P/N A1664350) has been changed because the change in nip band width slightly raised the paper path, and an OHP transparency might hit the tip of the paper exit guide. The part number of the fusing and paper exit unit is not changed since only a few old parts have been shipped.
- 3. In addition, countermeasures are added for the following two side effects which were found during our test.

Blurred image

This problem may appear when non-recommended paper copy is used for duplex full color copying. The blurred image is likely to occur when the difference of nip band width between the center and the sides becomes large. Because this difference of nip band width affects the slackness of the paper as it enters the nip band, if the paper is too slack, the paper touches the hot roller before entering the nip band. Therefore, the image will be rubbed, causing the blurred image.

The paper entrance guide has been modified to lower the paper path, preventing the paper from touching the hot roller surface before entering the nip band.

Scratched Image

If the paper becomes too slack before entering the fusing unit, the paper will come into contact with the upper fusing entrance guide, causing a scratched image. Four spurs are added on the oil sump to prevent the paper from touching the upper fusing entrance guide.



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Π		

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Model: Azalea

Date: 15-Mar-97

No: 3

				Parts C	Catalog
Old P/N	New P/N	Description	Quantity	Page	Index
A1664022	A1664034	Fusing Unit (115V)	1 - 1	53	*
A1664032	A1664043	Fusing Unit (220V)	1 - 1	53	*
AE020063	AE020064	Pressure Roller	1 - 1	57	17
AX430032	AX430041	Fusing Lamp - 120V 400W	1 - 1	57	15
AX430033	AX430042	Fusing Lamp - 230V 400W	1 - 1	57	15
A1664110	A1664112	Fusing Entrance Guide	1 - 1	57	31
	A1664363	Oil Sump Stay	1 - 1	55	20
	A1664364	Spur	1 - 4	55	21

Modification Cut-in

Auto Duplex Models (A187, A189) : From first production

Basic Model (A166) : From December '96 production (refer to MB No.4 for the serial numbers)

Fusing Unit Rollers for the Basic Model

The hot roller and pressure roller for Azalea have been modified as follows.

Production month	unit Aug. '96		Sept Nov. '96		Dec. '96 onwards
Hot Roller	AE010013	x/o	AE010015		AE010015
Pressure Roller	AE020057	x/x (x/o as a set)	AE020063	x/x	AE020064

We will provide two types of pressure roller for Azalea. They are P/N AE020063 and P/N AE020064.

(The pressure roller P/N AE020057 is discontinued.) Please use these rollers as follows:

- 1. For machines produced in August '96 and before, please use AE020063, but please make sure that you use the hot roller AE010015 at the same time.
- 2. For machines produced from September to November '96, please use AE020063.
- 3. For machines produced in Dec. '96 and onward, please use AE020064.

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The old and new machines can be distinguished by the spur assembly attached to the fusing unit. The old and new pressure rollers can be distinguished by the lot number on the flange of the roller. The first two digits of the lot number represents the last two digits of the part number (63 or 64). In addition, we will add white paint to the front end of the AE020064 pressure roller for easier recognition.

Troubleshooting Information

The problem of duplex paper creasing or image blurring may occur in the field with the unit before the modification, but it may also appear due to incorrect pressure roller type or nip band adjustment. Please follow the troubleshooting procedure given below if these problems are found in the field.

Paper creasing in duplex mode

- 1. Check if the correct pressure roller is used. If P/N AE020063 is used in the new fusing unit, it may cause creasing.
- 2. Instruct the customer to copy the original with less solid areas first.
- 3. Widen the nip band width within the adjustment range. Note that the adjustment ranges are different between the old and the new units (see page 1 of this RTB).
- 4. Replace the fusing unit with a new type if it is an old type.

Blurred Image

- 1. Check if the correct pressure roller is used. If P/N AE020064 is used in the old fusing unit, it is likely to cause image blurring.
- 2. Narrow the nip band within the adjustment range. Note that the adjustment ranges are different between the old and the new fusing unit (see page 1 of this RTB).
- If the machine was manufactured in or before September '96, replace the hot roller and pressure roller as follows: Hot Roller AE010013 → AE010015 Pressure Roller AE020057 → AE020063
- 4. Replace the fusing unit with a new type if it is an old type.

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Additional Information about Spurs

1. To do the fusing unit maintenance, the spurs need to be removed in many cases. The spurs can be removed as an assembly by one screw at the center and two hooks on the sides. Be careful not to damage the tips of the spurs.



2. If the spurs are removed from the oil sump stay, it is necessary to align the edge of the spur bracket with the line on the oil sump stay when reinstalling them.



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3. The spurs and oil sump stay have been improved so that the position of the spur bracket on the oil sump stay is fixed by a boss on the oil sump stay and a hole in the spur bracket. This modification has been made from the December '96 production for the basic model (A166) and the January '97 production for the auto duplex (A187) and the edit (A189) models. The part numbers of the spur and oil sump stay are not changed since old parts are not shipped as service parts.



Technical Bulletin

Model: Azalea			Dat	e: 31-Mar-97	No: 4	ļ
Subject: Service Manual Correction				Prepared by: Y	'.Sasaki	
From: QAC 1st Field Information Dept.				Checked by: T. Inoue T. Ind		T. Inoue
Classification:	Troubleshooting	Part information Action required		red		
	Mechanical	Electric	al	🖂 Ser	vice mar	nual revision
	Paper path	🗌 Transn	nit/rec	ceive 🗌 Ret	rofit info	rmation
	Other ()					

When you replace the main control board, please make sure the dip switches are set as follows.

When replacing on an A187/A189 Copier, please be sure to turn the No. 2 switch (DP201) **ON** because on the service part, this switch is OFF for the A166 copier initially.

Otherwise, the auto x function will not work on the A187/A189 copiers.

Main Control Board (PCB6)

RICOH

DPS201 No.	Function	Setting for A166	Setting for A187/A189	Service Parts
1	Not used	OFF	OFF	OFF
2	Duplex set	OFF	ON	OFF

The part number of the main control board is A1895363 as of March 24,1997.

Please correct the point-to-point diagram in your service manual for the main control board as well.

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Technical Bulletin

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Model: Azalea			Date: 30-Apr-97		No: 5
Subject: Self Diagnostic Code of SCU				Prepared by: N.K	Kaiya
From: QAC 1st Field Information Dept.				Checked by: T. II	noue T. Insue
Classification:	Troubleshooting Mechanical Paper path	Part information Electrical Transmit/massing		tion Action	n required ce manual revision fit information
	Other ()				nt information

When turning on the main switch, the machine may display one of the following self diagnostic codes.

E1: Timer Initialization Error

E2: Memory Check Error

These self diagnostic codes are displayed when the CPU detects an abnormal condition during the hardware check routine, which is the first routine the SCU performs right after the main power switch is turned on.

Troubleshooting

When E1 or E2 is displayed, turn the main switch off and on to check if the same code will be displayed. If yes, replace the SCU.

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Model: Azalea			Dat	Date: 31-Jul-97		No: 6
Subject: Developer Initialization				Prepared by: N.Kaiya		
From: QAC 1st Field Information Dept.						
Classification:	Troubleshooting Mechanical	Part inf	orma al	tion	Action	n required ce manual revision
	☐ Paper path ⊠ Other ()	📋 Transm	nit/rec	ceive	∐ Retro	fit information

In order to improve serviceability, developer initialization time has been shortened. The new Printer Main Control Board ROM and the new color developer achieve this.

The recovery procedure for Developer Agitation Error Code 75 has been simplified at the same time.

IC- Printer

The Printer IC (Printer Main Control Board ROM) has been modified to improve the developer agitation program. The basic developer agitation process is not changed; just the threshold levels between the steps are optimized. The part number of the Printelic has been changed as follows.

 $\textbf{A6245092} \rightarrow \textbf{A6245062}$

Color Developer

The toner concentration of the color developer has been reduced. The toner and the carrier in the developer are the same. Only the toner concentration inside the fresh developer has been reduced. The black developer remains unchanged.

Ricoh	Yellow	Ricoh Color Developer Type G Yellow
	Magenta	Ricoh Color Developer Type G Magenta
	Cyan	Ricoh Color Developer Type G Cyan

Gestetner	Yellow	CD108 YLW
	Magenta	CD108 MGT
	Cyan	CD108 CYN

Infotec	Yellow	Developer Yellow Type XXI
	Magenta	Developer Magenta Type XXI
	Cyan	Developer Cyan Type XXI

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Model: Azalea	Date: 31-Jul-97	No: 6

Savin	Yellow	Savin Color Developer Yellow Type G forSavin SDC103
	Magenta	Savin Color Developer Magenta Type G forSavin SDC103
	Cyan	Savin Color Developer Cyan Type G forSavin SDC 103

Supplemental Toner Bottle in the New Developer Carton Box

Each carton of new color developer contains two small bottles containing 30g of the corresponding color toner. This supplemental toner should be added to the toner cartridge in the machine before performing developer agitation. This is to prevent the machine from going into the toner end condition and interrupting the developer agitation. The procedure is outlined below.

- 1. Shake the supplemental toner bottle well.
- 2. Cut off the tip of the supplemental toner bottle.



- 3. Remove the toner cartridge from the development unit, and pour in the supplemental toner.
- 4. Return the toner cartridge to the development unit.



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Compatibility of New Color Developer

- 1. The new color developer can be used in the current Azalea with Printer Main Control ROM P/N A6245092. The developer agitation time will be reduced, but not as much as when used with the new ROM. Please add the supplemental toner in this case also.
- 2. The current color developer can be used in the new Azalea with Printer Main Control ROM P/N A6245062. The amount of developer agitation time reduction will be less than when using the new color developer.
- 3. The new color developer cannot be used in other models. It may cause low image density or firefly spot problems when used with DFCα or Lily.

	Azalea - Current Machines	Azalea - New Machines	Lily, DFC-α
Current Color Developer	ОК	OK (shorter agitation time)	OK
New Color Developer	OK (shorter agitation time)	OK (shortest agitation time)	NG

Please refer to the below table for a summary.

Recovery Procedure for Developer Agitation Error Code 75

The condition for error code 75 is not changed. The color which had the error condition can be checked with the SP Mode. By performing a free run for that color, the developer agitation can be completed.

- 1. Access SP 2-954-9 (Error Code 75 Color Check) to check which color which had the error condition. Refer to the table on the next page to find out the color that requires a free run.
- <u>NOTE</u> : SP 2-954-9 was used for other purposes, but due to this modification, the old function is removed.
- 2. Place a sheet of white paper (A3 or DLT) on the platen glass.
- 3. Access SP 5-802-4 (System Free-run)
- 4. Press the Interrupt key and select the color which was indicated by SP 2-954-9.
- 5. Press the Start key to free-run the copier for around 60 seconds.
- 6. If more than one color needs a free run, follow step 5 for those other colors.
- 7. Press the Interrupt key to return to SP mode.
- 8. Exit SP Mode. Developer agitation is complete.

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Date: 31-Jul-97

No: 6

SP 2-954-9 Error Code 75 Color Check

Display	Color
0	No Problem
1	Black
2	Cyan
3	Black, Cyan
4	Magenta
5	Black, Magenta
6	Cyan, Magenta
7	Black, Cyan, Magenta
8	Yellow
9	Black, Yellow
10	Cyan, Yellow
11	Black, Cyan, Yellow
12	Magenta, Yellow
13	Black, Magenta, Yellow
14	Cyan, Magenta, Yellow
15	Black, Cyan, Magenta, Yellow

Modification Cut-in

The new Printer Main Control ROM has been implemented from the July production. Please refer to the Modification Bulletin for the cut in serial numbers.

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Technical Bulletin

PAGE: 1/1

Model: Azalea D		Date: 31-Aug-97		No: 7	
Subject: E Codes		Prepared by: N.Kaiya			
From: QAC 1st Field Information Dept.					
Classification:	☑ Troubleshooting	Part inf	orma	tion 🗌 Actio	n required
	🗌 Mechanical	Electric	al	Serv	ce manual revision
	Paper path	Transm	nit/rec	ceive 🗌 Retro	ofit information
	Other ()				

Problem

E1 or E2 displayed when the main power switch is turned on

- E1: Abnormal timer initialization
- E2: Abnormal memory check (for the DRAM, not the NVRAM)

Countermeasures

- 1. Check the connection between the SCU board and the harness. Make sure that it is set correctly.
- 2. Replace the SCU board.

Cause

The SCU performs a memory check at power on, but if reading/writing cannot be done, this is displayed.

Immediately after power on, this is executed on the first part of the ROM but the OS (driver and applications not on) has not booted up yet so the normal SC is not displayed and E1/E2 is indicated instead.

RICOH

Technical Bulletin

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Model: Azalea [Date: 31-Aug-97		97	No: 8	
Subject: LED Array			Prepared by: N.Kaiya		aiya	
From: QAC 1st Field Information Dept.						
Classification:	Troubleshooting	🗌 Part informa		tion	Action	n required
	Mechanical	Electric	al		Servic	ce manual revision
	Paper path	🗌 Transm	nit/rec	eive	Retro	fit information
	⊠ Other ()					

The LED array for the printer option has been installed in the copieduring production. It is no longer necessary to replace the LED array when installing the printer option n the Azalea.

Part Number : A1666161 → A6246161



Technical Bulletin

Model: Azalea

Date: 31-Aug-97

No: 8

Cut-in Serial Numbers

Model	V/Hz	Destination	Code	Serial Number
Nashutec C503	120V/60Hz	USA,Canada	A166-10	A167075001
Gestetner 2703				
Savin SDC103	120V/60Hz	USA,Canada	A166-15	4A17070001
Aficio Color 2003	120V/60Hz	USA,Canada	A166-17	A3967080001
Nashuatec C503	220-240V/50Hz	Europe,etc.	A166-22	A157080001
Gestetner 2703				
Rex Rotary				
CC8403				
infotec7212Z	220-240V/50Hz	Europe	A166-26	3J10870001
Aficio Color 2003	220-240V/50Hz,60Hz	Asia,Middle East	A166-29	A3967080325
Lanier 5603 DC	120V/60Hz	USA	A166-55	L011708xxxx

Model	V/Hz	Destination	Code	Serial Number
Nashutec C503d	120V/60Hz	USA,Canada	A187-10	A18708xxxx
Gestetner 2703d				
Savin SDC103A	120V/60Hz	USA,Canada	A187-15	4A27070001
Aficio Color 2103	120V/60Hz	USA,Canada	A187-17	A3977070001
Nashuatec C503d	220-240V/50Hz	Europe,etc.	A187-22	A177070001
Gestetner 2703d				
Rex Rotary CC8403D				
Infotec 7212DZ	220-240V/50Hz	Europe,etc.	A187-26	3J20770001
Aficio Color 2103	220-240V/50Hz	Europe,etc.	A187-27	A3977070101
Aficio Color 2103	220-240V/50Hz,60Hz	Asia,Middle	A187-29	A3977070159
		East		
Lanier 5603DC	120V/60Hz	USA,Canada	A187-55	L0127070046
Nashutec C503de	120V/60Hz	USA,Canada	A189-10	A20708xxxx
Gestetner 2703de				
Savin SDC103E	120V/60Hz	USA,Canada	A189-15	4A37070001
Aficio Color 2203	120V/60Hz	USA,Canada	A189-17	A3997070001
Nashuatec C503de	220-240V/50Hz	Europe,etc.	A189-22	A197070001
Gestetner 2703de				
Rex Rotary CC8403D				
Infotec 7212EZ	220-240V/50Hz	Europe,etc.	A189-26	3J30770001
Aficio Color 2203	220-240V/50Hz	Europe,etc.	A189-27	A3997070117
Lanier 5603DC	120V/60Hz	USA,Canada	A189-55	L0137070155
Aficio Color 2203	220-240V/50Hz	Europe,etc.	A189-27	A3997070117
Aficio Color 2203	220-240V/50Hz,60Hz	Asia,Middle	A189-29	A3997070145
		East		

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Technical Bulletin

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Model: Azalea Da		Date: 15-Sep-97		No: 9	
Subject: Firefly Spots		Prepared by: N.Kaiya			
From: QAC 1st F	ield Information Dept.				
Classification:	 Troubleshooting Mechanical Paper path Other () 	Part info	ormat al iit/rec	ion Action Service eive Retro	n required ce manual revision fit information

This RTB describes the troubleshooting procedures for the firefly spot problem caused by carrier adhesion on the drum surface. Points for distinguishing firefly spots from similar copy quality problems are also explained. The troubleshooting procedure for toner related firefly spots is under investigation.

Definition of the Firefly Spot Problem

Small white (or light) spots found in solid or halftone image areas. The firefly spots are caused by carrier or toner adhesion on the drum, creating a gap between the drum and the transfer belt. As a result, any toner near the perimeter of the adhered toner or the carrier is not transferred. The firefly spot is round and its diameter is approximately 1 to 3 mm.

Characteristics of the Firefly Spot Problem

In most cases, carrier firefly spots do not remain on the copy, resulting in "coreless firefly spots". In most cases, toner adherence firefly spots remain in the center of the blank area, resulting in "core firefly spots". Blanking around the perimeter of the image is characteristic of both "core" and "coreless" firefly spots.

Differentiating Between the Two

Toner core in the center of the circle: Obviously toner-related Carrier core in the center of the circle: Obviously carrier-related Nothing in the center of the circle: Most likely carrier-related

Analysis of Carrier Adhesion

Irregularly charged carrier in the fresh developer

During developer agitation in the Azalea, the development of abnormal carrier leads to its removal, so this problem rarely occurs if the developer agitation is completed under normal conditions.

Check to see that SP3-964 (Developer Agitation Result) is "1". This indicates success.

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Drop in Toner Density

Under normal conditions of toner density, the carrier is covered with toner, but if the toner density drops by approximately 2%, the amount of exposed carrier increases and this results in carrier adhesion. If the toner density is returned to normal levels, this problem can be prevented.

- Sometimes there is a drop in the toner density with larger image areas because the toner supply cannot keep up with the amount of toner required. Under this condition, SP2-953-1 (black) and SP2-953-2 (color) should be changed from 60% (default) to 100% to maintain the proper density. The image area ratio can be checked by using SP3-954-1~4. In most cases, image area ratios of up to 60% as seen by SP3-954 can be covered by a 60% toner supply ratio. By raising the toner supply ratio to 100%, it is estimated that an image area ratio up to around 80% should be covered. However, this also depends on the amount of toner remaining in the toner cartridge.
- 2. Low toner density may occur if process control cannot compensate for the deterioration of the developer over time. In such a case, toner density can be recovered by changing the development potential for the ID sensor pattern.

Decreasing SP2-203-1~4 value leads to a rise in toner density Increasing SP2-203-1~4 value leads to a drop in toner density

However, if the change made at one time is too great, a false toner end detection may occur, so the change should be made in increments of ± 10 . Also, 20~30 copies must be made after the adjustment before the toner density stabilizes.

3. Sometimes, carrier that has leaked out from the development unit gets on the copy. There may be accumulation of carrier outside the development unit caused by vibration during movement or spillage when the developer is replaced. This problem is particularly likely when there is build up on the toner collection plate of the development unit and the development unit rotates and leads to adhesion in the development unit. Sometimes, incorrect application of the entrance seals will also cause this problem.

Others

Creased Paper

If the paper is not stored properly, it may become creased. If this paper is used, insufficient transfer may occur in areas where the paper is creased. There have been cases where this was reported as firefly spots but this is simply a paper problem. If you hold this paper up to the light, the creases are easy to spot. This can also be spotted by tracing the surface of the paper in the area of the blanking with the tip of a finger. Special care should be applied when using thicker paper.

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Model: Azalea

Date: 15-Sep-97

No: 9

Transfer Belt

Sometimes, transfer blanking is caused by uneven resistance or scratches on the transfer belt. Be careful not to damage the belt during maintenance. In these cases, the size of the problem will vary from large to small but since it will occur in the same position repeatedly it is easy to spot. This problem may appear and then disappear due to changes in environment or image density, so caution is necessary.

Foreign Material

Though extremely rare, there have been cases reported of foreign material (fibers, metal fragments, styrofoam) causing the problem. The foreign material was mostly from the site in which the machine was installed. When installing the machine in a small office, take care where supplies are stored.

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Technical Bulletin

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Model: Azalea			Date	e: 15-Feb-98	No: 10
Subject: Fusing Oil Overflow			Prepared by: N.Kaiya		
From: QAC Field	Information Dept.				
Classification:	Troubleshooting	Part inf	orma al	tion	n required ce manual revision
	☐ Paper path ☐ Other ()	Transm	iit/rec	eive 🗌 Retro	fit information

Problem

Fusing oil overflows from the fusing unit oil pan and drops on the paper tray or the duplex tray.

Cause

The amount of silicone oil collected by the pressure roller cleaning blade in the actual field situation exceeds the amount found during the measurement and evaluation process in the pre-production stage. As such, the maximum amount of absorption for the oil pan pads is reached before PM, and this leads to overflow from the fusing section.

Final Countermeasure

Installation of an oil collection tank and other possibilities are being considered.

Temporary Countermeasure for MIF

Please remove the pressure roller cleaning blade assembly and oil pan pads at the next visit.

Procedure

- 1. Follow page 6-75 step 1 through page 6-79 step 25 in the service manual to remove the pressure roller cleaning blade assembly. Keep the cleaning blade assembly and its springs for future re-installation.
- 2. Follow the steps on page 6-83 of the service manual to remove the oil pan pads.
- 3. Wipe off the remaining oil in the oil pan with a cloth.
- 4. Reassemble the fusing unit without the oil pan pads and the cleaning blade assembly.
- 5. Check from rear of the fusing unit that the thermofuse lead wire is not touching the oil supply pad. (If the lead wire is touching the oil supply pad, oil may migrate onto the lead wire.)

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Model: Azalea

Date: 15-Feb-98

No: 10

Remarks

- 1. The pressure roller cleaning blade may scrape off some oil, if only its springs are removed and the blade is remaining in the fusing unit.
- 2. If the machine is already causing fusing oil overflow, check the floor for any oil spillage and wipe off the oil completely.
- 3. Make sure that the screws holding the fusing lamp, pressure roller lamp terminals and thermofuses are firmly secured to the terminal brackets. (This remark applies to all fusing unit maintenance.)
- 4. When reinstalling the oil supply unit assembly, make sure that the oil supply tube does not contact the fusing lamp terminal. Wipe off any silicone oil from the oil supply tube surface. (This remark applies to all fusing unit maintenance.)
- 5. Make sure that the oil supply pad is placed above the oil supply sub roller and not underneath the roller. (The oil supply pad is not removed in the procedure in this RTB, but check that it was not installed in an incorrect position during the previous maintenance.)

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Technical Bulletin

PAGE: 1/1

Model: Azalea		Date	e: 30-Apr-98	No: 11	
Subject: Additional note concerning the oil supply tube				Prepared by: N.K	Kaiya
From: QAC Field	Information Dept.				
Classification:	Troubleshooting Mechanical Paper path	Part informat		tion Action Servio	n required ce manual revision fit information
	Other ()				

NOTE

When replacing the oil supply tube (P/N AA180054) or oil tubes used in the oil supply unit (P/N A1664014), make sure to use the correct spare part and not the tubes from any other models.

<u>Reason</u>

The oil supply tubes used in Azalea are made of insulating and inflammable material.

Some of the oil tubes used in the older products are made from material which is not insulating or inflammable. Use of such oil tubes may cause electrical current leak which may result in smoking from the tube, if the tube gets in contact with the fusing lamp terminal.

To check whether an oil tube is conductive or insulating, check the electrical resistance with a multimeter in the M Ω range. If the oil tube is a correct part for Azalea, it should show no conductivity (∞).

RIGOH

Technical Bulletin

Model: Azalea Da		Date: 15-May-98		No: 12	
Subject: New Toner		Prepared by: N.Kaiya			
From: QAC Field	Information Dept.				
Classification:	 Troubleshooting Mechanical Paper path Other () 	Part inf	ormai al iit/rec	tion Action Servic Servic eive Retro	n required be manual revision fit information

This RTB explains about the new toner for Azalea.

1. Purpose of the new toner

The chargeability has been stabilized to reduce toner scattering inside the machine and to reduce image density fluctuation.

2. Interchangeability of new toner

The new toner is compatible with the current toner. Using a mixture of new and current toner has no effect on performance or copy quality.

Model: Azalea

Date: 15-May-98

No: 12

3. Product name of the new toner

Brand	Name
Ricoh	Ricoh Color Toner Type HX Black
	Ricoh Color Toner Type Hxi Black (for Asian market)
	Ricoh Color Toner Type H Yellow
	Ricoh Color Toner Type H Magenta
	Ricoh Color Toner Type H Cyan
Savin	SVN SDC103 BLK Type H
	SVN SDC103 YLW Type H
	SVN SDC103 MAG Type H
	SVN SDC103 CYN Type H
Nashutec	Nashuatec CT113 BLK
	Nashuatec CT113 YLW
	Nashuatec CT113 MGT
	Nashuatec CT113 CYN
Rex Rotary	Rex Rotary CT113 BLK
	Rex Rotary CT113 YLW
	Rex Rotary CT113 MGT
	Rex Rotary CT113 CYN
Gestetner	Gestetner CT113 BLK
	Gestetner CT113 YLW
	Gestetner CT113 MGT
	Gestetner CT113 CYN
Infotec	Infotec Type XX/4 Blk
	Infotec Type XX/4 Yel
	Infotec Type XX/4 Mag
	Infotec Type XX/4 Cyn
Lanier	Lanier 5603 BLK
	Lanier 5603 YLW
	Lanier 5603 MAG
	Lanier 5603 CYN

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Model: Azalea			Date	e: 15-Jul-98	No: 13
Subject: Error Code 992		Prepared by: N.Kaiya			
From: QAC Field Information Dept.					
Classification:	 Troubleshooting Mechanical Paper path 	Part informati		tion Actio	on required ice manual revision ofit information
	└ Other ()				

Symptom

Error Code 992 is displayed after turning on the main switch or after pressing the start key. The machine does not accept any key operation.

Action

- 1. Check the connection of the memory board and the SCU.
- 2. Check that the Dip Sw. 1 on the SCU are all off.
- 3. Replace the SCU.

Cause

The Error Code 992 is displayed when RTC (Real Time Clock) is not detected during the SCU self diagnostic.

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Model: Azalea Da			e: 30-Sep-98	No.: 14		
Subject: Fusing (ubject: Fusing unit drive gear jumping			Prepared by: N. Kaiya		
From: QAC Field	Information Dept.					
Classification:	Troubleshooting	Part information Electrical Transmit/receive		tion Action	Action required Service manual revision	
	Paper path			eive 🗌 Retro	fit information	
	Other ()					

Problem

Loud noise from the fusing unit due to fusing unit drive gear jumping.

Cause

The problem may happen when the following conditions are met.

- 1. The fusing drive gears are out of grease.
- 2. The fusing drive gears are not properly engaged after they are released by opening the front cover.



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Model: Azalea	Date: 30-Sep-98	No.: 14

Action in the field

- 1. Apply some grease (Mobil Temp 78) to the fusing drive gears. Make sure that all of the gear teeth are covered with grease.
- 2. Add a spacer (AA132097) between the fusing knob and the fusing release slider. The spacer will ensure proper meshing of the drive gears when the front cover is closed.



Production machines

The spacer has been added to the production machines. Please refer to the Modification Bulletin for the cut in serial numbers.

RIGOH

Technical Bulletin

Model: Azalea			Dat	e: 31-Oct-98	No.: 15	
Subject: Oil Mark	bject: Oil Marks on Copies			Prepared by: N.Kaiya		
From: GTS and S Field Information Dept.						
Classification:	 Troubleshooting Mechanical Paper path Other () 	Part inf Electric	ormat al iit/rec	tion Action Servio eive Retro	n required ce manual revision fit information	

Symptom

Oil marks on copies. The bottom surface of the oil sump is wet with silicone oil. The problem may be seen with customers with low copy volume.

Cause

Silicone oil falling from the oil supply sub roller migrates to the bottom surface of the oil sump.

Solution

Install the oil guide (P/N A1664385) on the oil sump.





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Model: Azalea

Date: 31-Oct-98

No.: 15

Procedure

- 1. Remove the fusing unit.
- 2. Remove the fusing unit top cover (1 screw).
- 3. Remove the oil supply pad (4 screws).
- 4. Remove the fusing entrance guide plate (2 screws).
- 5. Remove the oil sump stay (1 screw).
- 6. Remove the oil sump.
- 7. Install the oil guide in the oil sump.
- 8. Put back the removed parts in reverse order.

Production Machines

The oil guide has been installed from the July production machines. For cut-in serial numbers, please refer to the Modification Bulletin.

Technical Bulletin

Model: Azalea			Dat	e: 31-Jan-99	No.: 16	
Subject: Dark or black band at the leading edge				Prepared by: N. Kaiya		
From: GTSS Field Information Dept.						
Classification:	Troubleshooting	Part inf	ormat	tion 🗌 Action	n required	
	🗌 Mechanical	Electrical		Servi	ce manual revision	
	Paper path	Transmit/rec		eive 🗌 Retro	trofit information	
	Other ()					

SYMPTOM

K||(CA(O)|H|

Dark or black band at the leading edge of A3/11x17 copies.

CAUSE

The ID sensor pattern bias is too high, resulting in background being developed around the ID sensor pattern on the OPC drum. The developed background is transferred to the leading edge of the paper only when A3/11x17 size paper is used.

The possible cause for ID sensor pattern bias to increase is the drum potential sensor picking up electrical noise, although there can be other reasons such as incomplete drum grounding. According to our test results, the drum potential sensor may pick up the ac component of the development bias, which results in higher drum potential sensor output. This affects ID sensor pattern bias since ID sensor pattern bias is adjusted based on the output of the potential sensor reading of a fixed development bias (the machine automatically applies high ID sensor pattern bias based on the higher potential sensor output).

SOLUTION

The drum potential sensor has been modified to improve protection against electrical noise. Soldering has been added between the sensor PCB and the outer casing, and between the casing and the cover.

PART NUMBER

AW330005 (old) x/o AW330007 (new)

The new sensor can be distinguished by a label attached to its lead wire with "A" printed on it.