Reissued: 11-Dec-01

Model: Pomelo-P3	Date: 06-Nov-01	No.: RG063001a

RTB Correction

The items in bold italics have been corrected or added.

Subject: Firmware History - MCTL			Prepared by: H.K.
From: Technical Services Dept., GTS Division			
Classification:	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☒ Other (Firmware History)		

MCTL firmware history.

MCTL

Part No. V127387	Program name	Version	C.SUM	Production
-	-	***V***1.2	-	1st Mass Production.
-	-	***V***1.3	-	April Production '01
-	-	***V***1.4	-	July Production 01'
		M1.4		***See Note 1***
-	LFA_160P.bin	***V***1.6	AA0C	***Service Parts Only***
-	-	***M1.6***		***November Production 01'***

V: Flash ROM, M: Mask ROM

Note 1:

The firmware device for production machines has been changed from a flash ROM type (V1.4) to a mask ROM type (M1.4) from the following machine S/N:

G063-17 P6910700221

G063-22 P69108XXXX

G063-27 P691080001

Service part MTCL boards (V127387):

All MTCL boards from SPC are still the flash ROM type, i.e. the engine main firmware can be upgraded. It is only the MCTL boards from version M1.4 mounted in production units that are the mask ROM type, i.e. engine main firmware cannot be upgraded.

Distinguishing the flash ROM and mask ROM versions:

After entering engine SP mode, the MCTL version will be indicated as one of the following:

LFAV1.x (flash ROM)

LFAM1.x (mask ROM)

Model: Pomelo-P3	Date: 06-Nov-01	No.: RG063001a

MCTL BOARD

Symptom Corrected	Version
Toner may not be sufficiently transferred to the 2nd (front) side with duplex printing under the following conditions: 1. There are solid image areas on the 1st (rear) and 2nd (front) sides at the same position. 2. The total amount of toner is over 200% with 2 or 3-color patterns. A larger transfer voltage compensation is now applied to the first 2000 prints following toner replacement. With this modification, the default setting of Engine SP mode 45-13 TH1 TUNE UP has been changed from 0 to +3. Please add the following SP mode to your service manual : 45-13 TH1 TUNE UP 0 : No transfer voltage compensation 3 : Enable transfer volage compensation **(Default)** **Note:** As upgrading the firmware alone does not overwrite the old default, it is necessary to manually change the setting after upgrading the firmware. However please do not change the setting when the old version firmware is used.	1.3
As an optional setting, the *Additional SC Reset Prohibition Counter* has been added to Engine SP 45-11 LF2 TUNE UP for quicker detection of fusing-related SCs (per a request from the field in Japan). This counter works for SC 31, 33, 34 and 35. The counter has 2 possible values: 0 and 1. It starts at 0, and when any one of the above SCs occurs, the counter becomes 1. At this time, the SC condition can be cleared by switching the power off/on. However, if the counter is 1 and another one of the SCs occurs within 30 minutes, this second SC cannot be cleared by power off/on. It can only be cleared by turning the power switch on while holding down the Menu, Enter and Down arrow keys (the menu for clearing SC codes will then be displayed). **Necessary settings to activate the function:** Two new settings have been added to SP45-11 LF2 TUNE UP, both of which will activate the function: -3 and +2 (see below). **Manual correction (pg. 5-26):** The Engine Service Manual shows the incorrect default setting for this SP mode. The correction, along with the new settings added for the counter function are as follows: <u>Incorrect:</u> -4: Enable additional cleaning 0: Disable additional cleaning **(default)** (continued on the next page)	1.4

Model: Pomelo-P3	Date: 06-Nov-01	No.: RG063001a

SC 23 (Main Motor Error Misdetection) has been reported from the field in Japan. To avoid misdetections, the period from when the main motor is activated until SC23 occurs has been doubled. Update to this version or newer if SC23 occurs in the field. ***See note 2***	1.6

Note 2:

To further minimize occurrences of main motor error SC23, the capacitance of Capacitor C6 in the main motor has been optimized so that following a long period in print stand-by (C6 charging period: 1 hour or more), the discharge will not affect main motor rotation stability.

The new capacitor is used from the following machine cut-in S/N:

G063-17 P6910700221

G063-22 P69108XXXX

G063-27 P691080001

Model: Pomelo-P3	Date: 11-Dec-01	No.: RG063002

Subject: Firmware History - RPS2&Printer Control Board	Prepared by: H.K.
From: Technical Services Dept., GTS Division	

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

Firmware history.

DIMM Board – RPS2

Part No. G0635720	Program name G0635920x.	Version	C.SUM	Production
B	B	3.4	-	1st Mass Production
C	C	3.55	A6E4	June Production. 01’

Printer Control Board

Part No. G0635741	Program name G0635910x	Version	C.SUM	Production
F	A	1.0.0	-	1st Mass Production.
H	B	1.0.1	-	March Production ‘01
J	C	1.0.2	BA8C	May Production 01’
K	D	1.0.3	0AD2	September Production 01’

“G” is used for correction of characters printed on the PCB (no effect on service activities).

“I “ is not used for suffix control.

DIMM Board – RPS2

Symptom Corrected	Suffix
Due to a software error, an error message is occasionally displayed when using the Reset key for job cancel.	C
The internal calculations for diagonal images are sometimes in error, causing these images to appear incorrectly.	C

Printer Control Board

Symptom Corrected	Suffix
Dither gradiation improvement	H
If any one of the toner colors reaches the End condition during a duplex job, yellow may appear lighter on the printout.	H
Some non-solid image data may be printed out as a black solid image.	J
The Watermark bitmap function does not print any colors except for K.	K
The B&W counter value appears as “0” on the IPDL-C Configuration Page, although its true value is still stored in the machine.	K

Model: Pomelo-P3	Date: 13-Feb-02	No.: RG063003

Subject: Light Bands at 36-mm Intervals	Prepared by: H.K.
From: Technical Services Dept., GTS Division	

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

SYMPTOM

Light bands appear in black halftone areas along the main scan direction (at about 36-mm intervals).

CAUSE

Poor electrical connections caused by foreign material caught between the development bias terminal in the printer unit and the toner cartridge terminal.

SOLUTION

Countermeasure for the production line (from April 2001)

1. Lubricant (grease) will no longer be applied to the toner cartridge terminal and the development bias terminal (see Fig. 1 on the next page).
2. The shape of the left development unit guide has been changed to minimize the possibility of foreign particles being generated from the guide scratching the toner cartridge (see Fig. 2 on the next page).

Countermeasure for the field

Clean the development bias terminal, toner cartridge terminal, and left development unit guide to remove any foreign material.

Fig. 1: Grease Removal

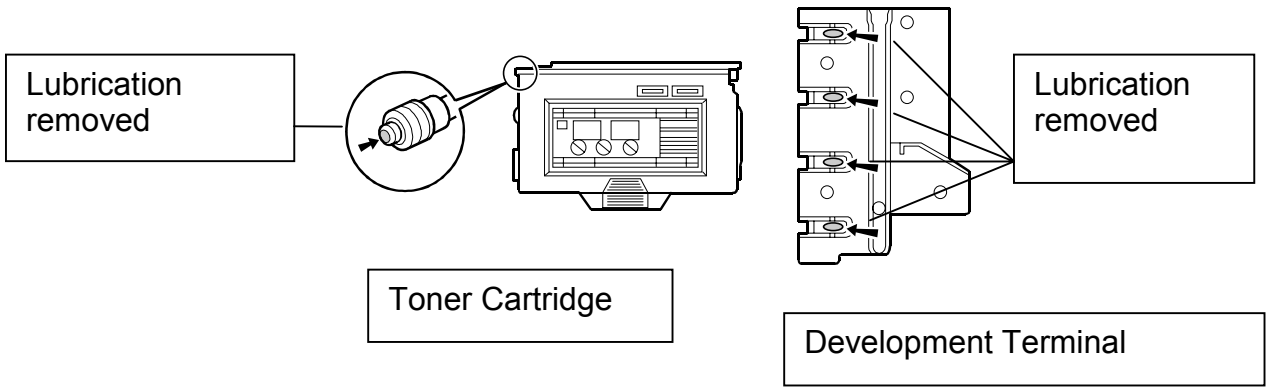
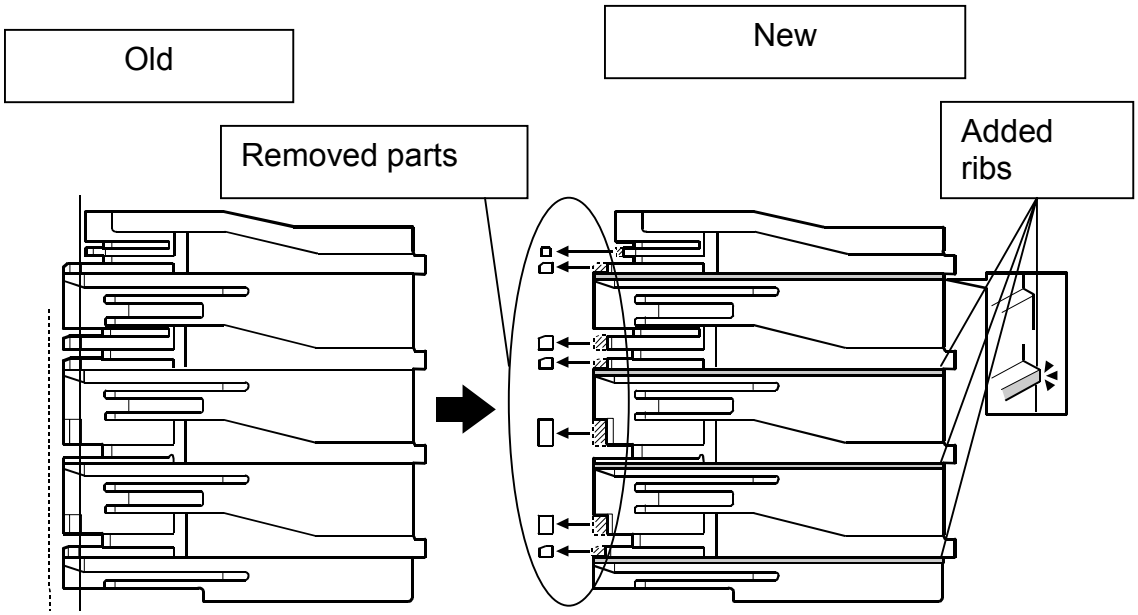


Fig. 2: Shape Change for Left Development Unit Guide



Reissued: 6-Mar-02

Model: Pomelo-P3	Date: 06-Nov-01	No.: RG063001b

RTB Correction

The items in bold italics have been corrected or added.

Subject: Firmware History - MCTL			Prepared by: H.K.
From: Technical Services Dept., GTS Division			
Classification:	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☒ Other (Firmware History)		

This is to inform you of the MCTL firmware history.

MCTL

Part No. V127387	Program name	Version	C.SUM	Production
-	-	***V***1.2	-	1st Mass Production.
-	-	***V***1.3	-	April Production '01
-	-	***V***1.4	-	July Production 01'
		M1.4		See Note 1
-	LFA_160P.bin	V1.6	AA0C	Service Parts Only
-	-	M1.6		November Production 01'
-	***LFA_170P.bin***	***V1.7***	***1D96***	***Service Parts Only***
-	-	***M1.7***		***January'02 Production***

V: Flash ROM, M: Mask ROM

Symptom Corrected	Version
After the oil bottle is replaced following oil end, an SC73 (Drum Cleaner Contact Clutch Error) misdetection might occur if the machine receives a print job before it can complete the oil detection check. ***The software has been modified to ignore this misdetection.*** ***Also, even with versions 1.6 or older, the misdetection can be avoided by turning off the main switch, (replacing the oil bottle if necessary), then waiting 5 minutes before turning the power back on.***	***1.7***

Reissued: 19-Mar-03

Model: General RTB	Date: 4-Feb-03	No.: RGene013b

RTB Reissue

The items in ***bold italics*** have been corrected or updated.

Subject: Service remarks at installation			Prepared by: T. Itoh
From: Technical Service Sec. Service Planning Dept.			
Classification:	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☒ Other (Specification change)		

Please note the following change in counter specification. Although a production line modification will not be applied to some products, the action described in *4. Important Notes for Installation* below must be taken for **all products** at installation.

Overview:

Electronic counters will now be set to **0** when released from the factory, instead of being set to a negative value.

Background:

Previously, counters were set to a negative value when shipped from the factory, and later set to "0" at installation, following installation test copies/prints. However this may cause confusion among some customers as to why the counter value at the commencement of the contract is "0", even though some installation test copies have already been made.

Details:

1. Specification Change

	Specification
Current	• The initial value of the electrical counter is **negative** when products are shipped from the factory. **Note:** After making test samples at installation, the negative counter value can be set to "0" with SP mode.
New	• The initial value of the electrical counter is **"0"** when products are shipped from the factory. **Note:** After making test samples at installation, the (positive) counter value cannot be set back to "0" with SP mode.

2. Firmware Modification

Due to the counter modification, SP5-849 has also been changed as follows for products that have this SP mode (listed below).

	SP mode name:	Specification:
Current	Counter Clear Day	• When the electrical counter is changed **from a negative value to 0**, the machine recognizes this as the counter clear day and stores this date in the NVRAM.
New	Installation Date	• When the electrical counter **reaches a value of 20**, the machine recognizes this as the installation date and stores this date in the NVRAM.

NOTE: The following products have SP5-849. The new firmware for these products has not yet been released. However the release notes for each will clearly mention the new firmware version.

New products: Bellini-C2, Adonis C3
Current products: Martini C1, Model-U C1

3. Schedule for the Counter Modification

The following is the current schedule for when the counter modification will be applied. Please note that there are some models to which the change will not be applied (marked as "---"), due to production schedules, production lot quantities and sales figures.

NOTE: The actual cut-in months that have been confirmed appear in the "Cut-in production month" column below. This RTB will be reissued when these dates have been confirmed for the remaining products.

(1) New products

Product Name	Product Code	Target cut-in production month	Cut-in production month
Bellini C2	B070	2003.03	***April '03 production***
Adonis C3	B079/82	2003.03	First mass production lot
Model J-P2	G080	2003.03	***March '03 production***
Model J-P2 CF	G367	2003.03	***March '03 production***
Model AR- P1	G081/92	2003.03	***March '03 production***
Model K-C1a	B120	2003.03	***March '03 production***

Model: General RTB	Date: 4-Feb-03	No.: RGene013b

(2) Current products

Product Name	Product Code	Target cut-in production month	Cut-in production month
Digital B&W Copiers			
Bellini C1	A294	---	***---***
Martini C1	B064/65	2003.03	***April '03 production (see Note)***
Model M-C2b	B098	2003.03	***March '03 production***
Adonis C2	B003/04/06/07	---	***---***
Russian C2	B022/27/31	2003.03	February ***'03*** production
Model K-C1	B039/40/43	2003.03	***March '03 production***
Stella C1	B044/45/46/49	2003.03	***March '03 production***
Digital WF Copiers			
Dolphin	B010	2003.03	***March '03 production***
Analog Copiers			
All products	-	---	***---***
J2SS-C3	***B047/48***	***(See Note)***	***March '03 production***
Whale	***A174***		***March '03 production***
Color Copiers			
Model I2	B018	---	***---***
Model L2	B017	---	***---***
Model C2	B023	2003.02	February ***'03*** production
Model U-C1	B051/52	2003.03	***April '03 production***
Color Printers			
Model J-P1	G060	---	***---***
Model J-P1 CF	G570	---	***---***
Model U-P1	G071	2003.03	***March '03 production***
Pomelo P3	G063	2003.03	***March '03 production***

NOTE: The counter change will be applied as a running change to production units only. For machines already shipped out or in the field, please be sure to take the action described below in Section 4.

NOTE: ***For Martini-C1 mainframes assembled in Japan, the counter change will be applied from the first unit of April '03 production. For mainframes assembled at REI, the change will be applied midway through April production. These cut-in serial numbers will be announced as soon as they have been confirmed.***

NOTE: ***The change will also be applied to analog models J2SS-C3 and Whale, as production will continue for a while. However, as these models use only mechanical counters, the initial value when shipped from the factory will be 1 or 2 (not 0), following the 1 or 2 factory test copies.***

Model: General RTB	Date: 4-Feb-03	No.: RGene013b

4. Important Notes for Machine Installation – All Products

Please be sure to perform the following at machine installation:

1. If the product is from before the counter modification, i.e. the counter is at a negative value, be sure to set the counter value to 0 **first**, then make the installation test samples.

Digital products	Set the electrical counter to 0 with SP mode.
Analog products	Set the mechanical counter to 0 with a reset key (tool).

2. If the product is modified, i.e. the counter is already at 0 (or above 0 following pre-installation at a service depot), simply make the installation test samples.

3. After completing the installation, make sure to **record the counter value**. This is very important, as this value will be used for billing with Meter Click contracts. Also, inform the customer of the value along with the reason why the counter does not start from "0".

Reissued: 27-May-03

Model: Pomelo-P3	Date: 11-Dec-01	No.: RG063002a

RTB Correction

The items in bold italics have been corrected or added.

Subject: Firmware History - RPS2&Printer Control Board			Prepared by: H.K.
From: 1st Tech. Support Sec. Service Support Dept.			
Classification:	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☒ Other (Firmware History)		

This is to inform you of the firmware history.

DIMM Board – RPS2

Part No. G0635720	Program name G0635920x.	Version	C.SUM	Production
B	B	3.4	-	1st Mass Production
C	C	3.55	A6E4	June Production. 01'

PRINTER CONTROL BOARD

Part No. G0635741	Program name G0635910x	Version	C.SUM	Production
F	A	1.0.0	-	1st Mass Production.
H	B	1.0.1	-	March Production '01
J	C	1.0.2	BA8C	May Production 01'
K	D	1.0.3	0AD2	September Production 01'
M	***E***	***1.0.4***	***454C***	***March production '03***

"G" is used for correction of characters printed on the PCB (no effect on service activities).

"I " is not used for suffix control.

"L" is used for characters printed on the PCB (no effect on service activities).

DIMM Board – RPS2

Symptom Corrected	Suffix
Due to a software error, an error message is occasionally displayed when using the Reset key for job cancel.	C
The internal calculations for diagonal images are sometimes in error, causing these images to appear incorrectly.	C

Reissued: 27-May-03

Model: Pomelo-P3	Date: 11-Dec-01	No.: RG063002a

PRINTER CONTROL BOARD

Symptom Corrected	Suffix
Dither gradiation improvement	H
If any one of the toner colors reaches the End condition during a duplex job, yellow may appear lighter on the printout.	H
Some non-solid image data may be printed out as a black solid image.	J
The Watermark bit map function does not print any colors except for K.	K
The B&W counter value appears as “0” on the IPDL-C Configuration Page, although its true value is still stored in the machine.	K
Specification change : ***The counter specifications have been changed, as described in RTB # RGene013.***	***M***

Model: Pomelo-P3	Date: 3-Jun-03	No.: RG063004

Subject: Firmware Upgrade Procedure	Prepared by: H.K.
From: 1st Tech. Support Sec. Service Support Dept.	

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

Please apply the following to your Service Manuals (pg. 3-6):

Add the **bold/underlined** portion below to Step 3.

3.3.3 SOFTWARE UPGRADE PROCEDURE

Required Tools

- IC card Adapter (G0319350)
- IC card containing new firmware

The controller, RICOH-SCRIPT2, and NIB firmware are stored on a flash ROM. This allows version upgrades using an IC card.

NOTE: Before starting an upgrade procedure, make sure that the software in the IC card is newer than the software for the controller, RICOH-SCRIPT2, or NIB.

To check, print out a configuration page (user mode).

Follow the procedure shown below to upgrade the software:

1. Turn off the machine, and then unplug all cables from the parallel interface board(s) and network interface board, if connected.

2. Install the IC card in the IC card adapter.

3. Remove the controller board. Then install the IC card adapter in either optional bus I/F slot 1 or slot 2. **Turn Dip switch SW1 ON**.

4. Put the controller board back in the machine.

5. Turn on the machine. The machine automatically copies the firmware from the IC card to the appropriate flash ROM (controller, RICOH-SCRIPT2, or network interface board).

CAUTION: 1) Do **not** turn off the machine while the software is being updated. Otherwise, the controller, NIB, or RICOH-SCRIPT2 module may be damaged.

2) Do **not** turn off the machine until at least 30 seconds after the message "OK!!OK!!" or "DOWNLOAD OK." appears.

For the controller or RICOH-SCRIPT2:

The LCD display on the operation panel changes as shown below as the rewrite procedure proceeds. ('MELT' is displayed during the software upgrade for RICOH-SCRIPT2 since it involves a decompression process.)

```
(MELT ->) ERASE -> WRITE -> VERIFY -> OK!!OK!!
```

The appearance of the message "OK!!OK!!" indicates that the controller has received the data from the IC card. However, note that it takes about 30 seconds to rewrite the data in the controller or RICOH-SCRIPT2 after this message is displayed.

The message NG!!NG!!" is displayed if an error occurs during the rewrite process. If this condition occurs, reinstall the IC card and turn the power off and on again.

For the network interface board:

The appearance of the message "DOWNLOAD OK." indicates that the controller has received the data from the IC card. However, note that it takes about 30 seconds to rewrite the data in the network interface board after this message is displayed.

```
DOWNLOAD -> ############ -> DOWNLOAD OK.
```

The message "DOWNLOAD NG." is displayed if an error occurs during the rewrite process. If this condition occurs, reinstall the IC card and turn the power off and on again.

4. When the rewrite ends, turn off the main unit, reset all DIP switches to OFF, and remove the IC card.

5. Replace the IC card cover. Turn the power on again and print the user mode configuration page.

6. Check the new software version and make sure that it matches the version on the IC card.