Model: K-P1, A-C2, J-P1	Date: 03-Jul-01	No.: RB003008

Subject: Slow Printing from Macintosh	Prepared by: K. Misugi
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

Depending on network conditions, printing from a Macintosh is very slow.

This symptom occurs in the following machines:
Model K-P1 (Kir-P), Model A-C2 (Adonis-C2), Model J-P1 (Model J).

This occurs in the following conditions:
- Macintosh with PowerPC G3 or G4 processor
- Network: Apple Talk (Ether Talk)
- Network Speed: 100Mbps (100Base fixed)

CAUSE

When the data is transferred at 100Mbps, depending on network conditions, the controller ASIC is not able to receive all data packets and a retry procedure occurs. As a result, print jobs from a Macintosh take a long time to print out.

SOLUTION

Please also see the flow chart on the last page.

1) Check what type of hub the customer is using.
   If the customer is using a dual speed (10M/100Mbps) hub, go to step 2.
   If the customer is using a 100Base fixed (100Mbps only) hub, go to step 3.

2) For the customer using a dual speed hub:
   Set the network (ethernet) speed of the machine to 10Mbps.
   The default setting of the machine is “Auto.” This setting can be changed in the “Network Setup” in the user mode “Host Interface” (“Interface Settings” in the “System Settings” for the Model A-C2).

   End of procedure for the customer using a dual speed hub.

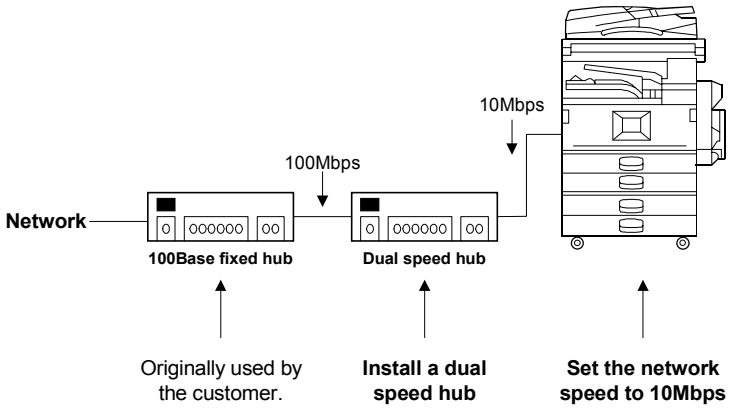
3) For the customer using a 100Base fixed hub:

Temporary solutions:
Perform both of the following:

a) Set the network (ethernet) speed of the machine to 10Mbps.
The default setting of the machine is “Auto.” This setting can be changed in the “Network Setup” in the user mode “Host Interface” (“Interface Settings” in the “System Settings” for the Model A-C2).

b) Install a dual speed hub between the 100Base fixed hub and the machine.

End of procedure for the customer using a 100Base fixed hub.



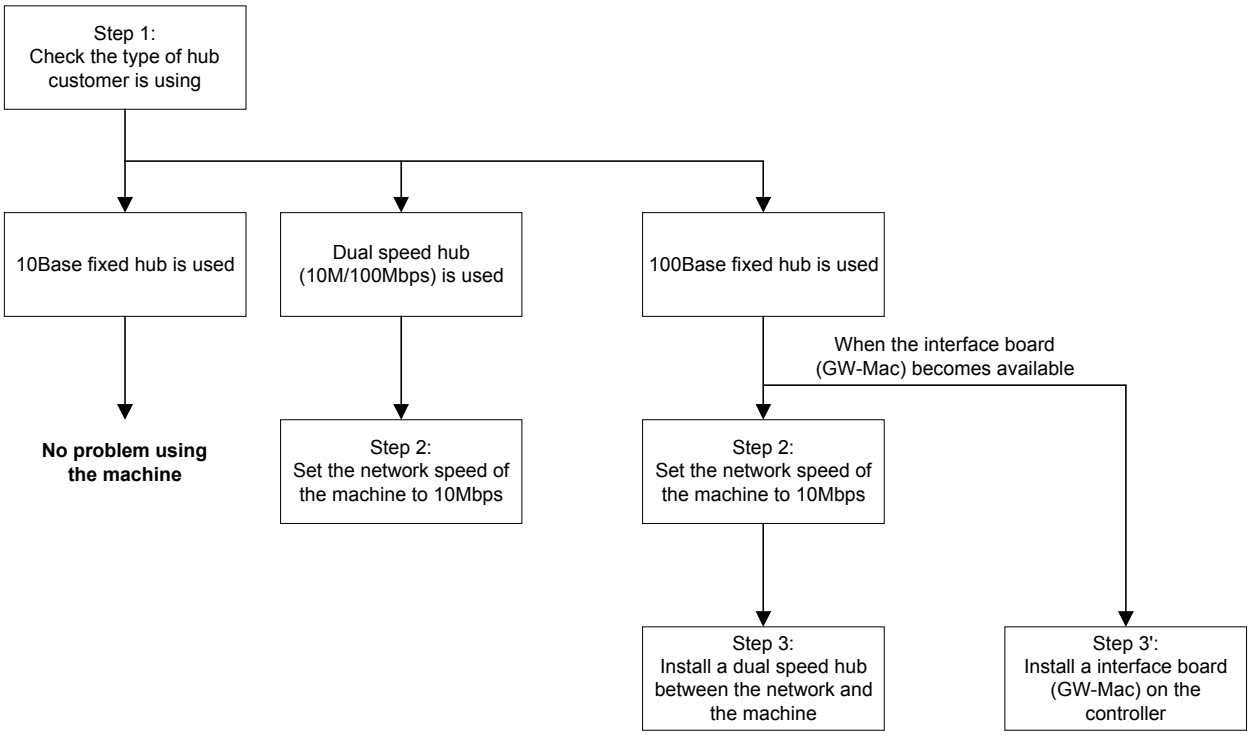
Note:
There is almost no effect on actual print time when the machine’s network speed setting is changed from 100Mbps to 10Mbps.

Permanent Countermeasure:
An interface board (GW-MAC) and a DIMM which contains firmware to drive the board will be supplied for attachment to the controller board. With these parts, the machine will work without installing a dual speed hub.

Detailed information on the interface board (GW-MAC) will be announced separately in mid July.

Flow Chart:

When machines are being connected to Macintosh with PowerPC G3/G4 processors with Apple Talk, check the type of hub being used and follow the steps explained below.



Model: General (GW Models)	Date: 20-Dec-01	No.: RGene010

Subject: Series Print Mode	Prepared by: K. Misugi
From: Technical Services Dept., GTS Division	

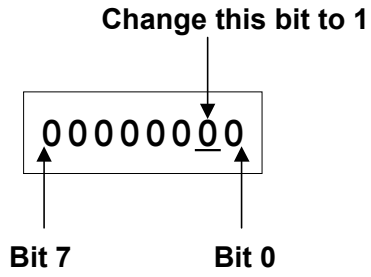
Classification:	☒ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Other ( )		

In response to complaints from customers that the intervals between jobs are too long when sent in series, a new service switch has been added to improve performance.

New service switch:
Controller SP mode bit switch 2, bit 1
Series print mode On/Off
0: Off (default setting)
1: On

This switch has been added to the following GW models:
K-P1 (Kir-P1), J-P1, A-P3 (Adonis-P3), and R-C2 (Russian-C2).

Enter the printer controller service mode, access the bit switch settings display, then change bit 1 of bit switch 2 to “1.”



Important: Do not change any other settings. (The default setting is “0.”)

Descriptions:
Series print mode Off (default):
The machine starts to feed paper for the next job after the last sheet of the previous job has fed out from the machine.

Series print mode On:
The machine starts to feed paper for the next job before the last sheet of the previous job is fed out.

Conditions for use:
For the Series Print mode to become effective, jobs must be sent from the same PC, using the same PDL and interface (Ethernet, IEEE1284, IEEE1394).

Limitations:
Series Print mode cannot be used when:
- The above conditions are not met
- Stapling or punching is used
- A user code is used
- Color and black-and-white jobs are mixed (only for color machines)

Remarks:
When enabled, the machine handles the jobs waiting to be printed as a single job.
When the Job Reset key on the operation panel is pressed, all jobs combined by this feature are cancelled.

Applied from the following software versions:

K-P1: Controller Ver. 1.11
J-P1: 1st mass production of P1b
A-P3: 1st mass production
U-P1: 1st mass production
R-C2: 1st mass production

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060001

Subject: Long & Short Haul Transportation	Prepared by: T.Itoh
From: Technical Services Dept., GTS Division	

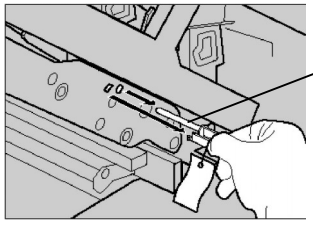
Classification:			
	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☒ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Other ( )		

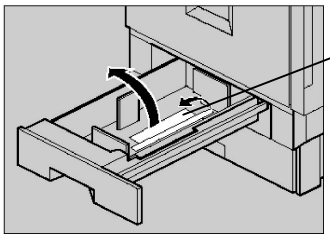
Please make note of the following points when transporting the machine for both short and long hauls.

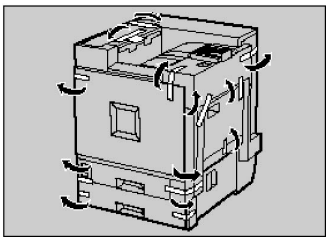
Printer

The machine should basically be returned to the original condition as when it first arrived from the factory.

1. Remove the toner cartridges to prevent toner from flowing into the toner supply tube due to vibrations experienced during transport. This may cause the tube to be clogged with toner.
2. Put bubble wrap into the toner cartridge holder to shield the toner supply entrance. This prevents toner from flowing out to the toner cartridge holder.
3. Put the lock pin [A] (which comes with the machine) in the transfer belt unit.
4. Make sure there is no paper left in the paper trays and fix down the bottom plates with a sheet of paper and tape [B].
5. Empty out the waste toner bottle and attach securing tape to prevent the bottle from coming out.
6. Attach shipping tape to the covers and doors as shown, or shrink-wrap the machine tightly.







NOTE: 1. If pre-installing machines for some test prints at a service depot, please use a jig oil supply unit, and not the oil supply unit enclosed as an accessory.

This is because the toner supply system uses a touch-and-release mechanism, which can cause the unit to move freely up and down during transport if shipping the mainframe with the oil supply unit installed.
This in turn may damage the white holder on the fusing unit. However if simply moving the machine from floor to floor, the oil supply unit can be left installed.

2. If shipping a used machine to a new location, please dispose of the used oil supply unit and install a new one because of the reason explained above. This is not necessary when simply moving the machine from floor to floor.

3. Whenever moving the machine to a new location, be sure to perform Auto Adjust (User Program mode) or Forced Line Position Adjustment (SP5-993-002) to optimize color line alignment.

4. Make sure that the side fences in the trays are properly positioned to prevent color shifting.

Duplex Unit

NOTE: Do not lift the printer by the inverter unit (left side of the machine).

Paper Supply Units
When transporting the machine with the Paper Supply Unit installed:

1. Make sure the lock plate is properly installed.
2. Make sure there is no paper left in the paper trays and fix down the bottom plates with a sheet of paper and tape.
3. Attach shipping tape to the trays or shrink-wrap the printer and paper supply unit tightly.

NOTE: Do not hold the printer up by the handles. This is because the lock plate joins the printer to the paper supply unit only on the right rear corner. Lifting the printer up by the handles can damage the lock plate.

Finisher

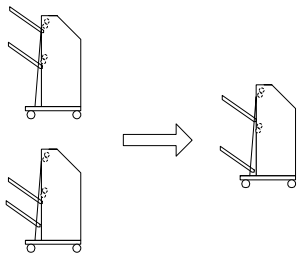
This finisher contains a very precise but delicate up-and-down mechanism for the tray. Therefore, the following procedure should be followed when transporting the Finisher.

<u>When transporting the finisher from floor to floor:</u>
Remove the output trays from the finisher to prevent stress or damage.

<u>When transporting the finisher (used for demonstration or fair) by truck:</u>
The finisher should be repacked in the carton, i.e. returned to the same condition as when it first arrived from the factory.

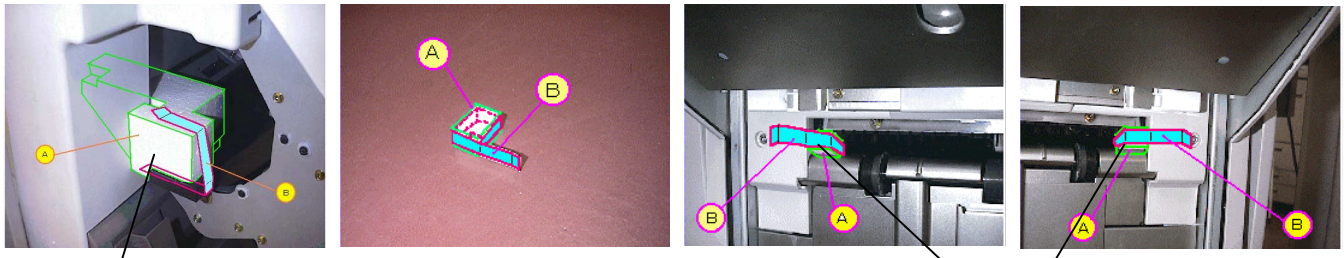
When transporting the finisher (used for demonstration or fair) by truck without a carton:
NOTE: Machine quality cannot be guaranteed under these conditions.

1. Remove the output trays.
2. Move the trays to the proper position for transportation, as follows.
   (1) Make sure that the main switch is turned off.
   (2) Turn on DIP SW 101-4 on the Finisher main board.
   (3) Turn on the main switch.
   (4) After the finisher completes the initialization, turn off the DIP SW 101-4.
   The finisher automatically repositions the shift trays to the shipping position as shown.



3. Fix the trays, covers and paper transport guide using tape to prevent movement during transport.

When laying down the finisher for transport:
1. Set the plastic foam [A] (factory packing material) as shown in the picture.
2. Set the cartons [B] between the lower and upper guide plates as shown in the pictures.



[A] [B]

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002

Subject: Firmware Modification	Prepared by: T.Itoh
From: Technical Services Dept., GTS Division	

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

This bulletin explains the history of the firmware modification for Model-J July production units onward, which has officially been launched from September 2001.

The following table explains the types of firmware used for the Model-J.

	BCU		Controller		
Firmware Type	**Main**	**Music**	**Controller**		**NIB**
			1	2	
Remarks	Unique for P1b	Common with P1a	Unique for P1b		Common with P1a

NOTE: P1a means Model-J produced in April 2001, which has been used for the Pre-Marketing Observation activities.
P1b means Model-J produced in July 2001, which has officially been launched in the market.

The modification history is explained from the next page.

[Modification History]

1. Engine Main Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0775611	B1.10	-	Firmware installed from the first mass production run.	July
G0775611D	B1.11A	-	Charge and development bias applied during toner end recovery has been changed to optimize drum cleaning.	August
G0775611E	B1.11B	-	The frequency to control the color drum motor has been optimized so that the motor starts rotating smoothly.	August
G0775611G	B1.11D	-	The following specification change has been applied: The yield target of PCUs has been changed from 100KP to 50KP.	-
G0775611H	B1.11F	-	The following problem has been fixed. • The machine suddenly keeps running due to memory overflow. • SC670 when the machine wakes up from the energy saver mode	-
G0775611J	B1.11G	45A0	The following problem has been fixed. Black developer initialization fails because toner is mistakenly supplied due to a software bug, causing SC370 (Developer Initialization Error – Black). This happens when initializing only the black developer. (If initializing the developer for black and other color(s) simultaneously, this problem does not occur.) If the main switch is turned off and on, the SC code is reset and the machine re-starts the developer initialization. In the worst case, toner flows out from the development unit (the entrance area where toner is supplied) to the inside of machine.	September Local Modification (See **NOTE**.)

NOTE: Engine main firmware version B1.11G has been implemented from the September 25th production run. The machines with Ver. B1.11F or older have been reworked locally. However, some machines have been released to the market without modification. So, please make sure that the version of the engine main firmware is “B1.11G” at installation or the next visit. If not, please update it to “B1.11G”.

2. Engine MUSIC

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605612B	1.04		Firmware installed from the first mass production run.	July

3. Controller Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605910G G0605911G	2.00	-	Firmware installed from the first mass production run.	July
G0605910H G0605911H	2.01	-	• "Asia" has been added to the destination code.	July
G0775910 G0775911	2.04	-	• The counter click up specification has been changed as follows: **Old specification:** The machine counts a page up as black or color based on the color data sent from the application. Therefore if a document from the PC contains blank (but defined) spaces highlighted in red, e.g., the controller interprets this as color data and counts it as a color print. **New specification:** The machine counts up the page as B/W or color based on the CMYK data, i.e. the actual toner colors used to develop the image, regardless of the actual color data from the application. • To meet the CPU specification change from 250MHz to 300MHz. • Color profile of the PCL driver has been changed to Ver. 1.1.2a. The following problem has been corrected: When designating the finisher shift tray 1 for the paper output tray as the default, paper is not fed out to shift tray 1.	August Local Modification (See **NOTE**.)
G0775910A G0775911A	2.05	13D2 7709	• The following problem has been corrected. 1. B&W prints cannot be made if color toner is empty. 2. HDD format cannot be done when SC860 is detected. • The CRD version of PS3 has been updated to Ver. 1.2.1. • The presentation color profile version of PCL has been updated to Ver. 1.2.1. (The photographic color profile stays the same as Ver. 1.1.2a.)	

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0775910A G0775911A	2.05A	28E0 176D	The following problem has been fixed. (This problem occurs only when selecting German language.) When selecting the meter click mode and printing the counter sheet from the user program mode, the messagesn for “Color” and “Black” are printed the other way around.	October ’01 Local Modification (See **NOTE**.)
G0775910B G0775911B	2.06	A556 B965	The following problem has been fixed. 1. When an all memory clear (SP5-801-001 or 002) is done, the destination code is cleared to “0 (Japan)”. Since Japanese fonts are not stored for the messages, strange characters appear. 2. When printing A3+ (12”x18”) size documents, the image is not shifted to the center, causing a big white margin at the trailing edge.	October, ‘01

NOTE: The Meter Click counter specification has been changed from the controller firmware (Ver. 2.04). The machines with Ver. 2.01 or older have been reworked locally. However, some machines have been released to the market without modification. So, please make sure that the version of the engine main firmware is “2.04” or later at installation or the next visit. If not, please update it to the latest firmware.

NOTE: Messages “Color” and “Black” in the meter click counter are displayed the wrong way round on the screen and printed out only when German language is selected. The machines with Ver. 2.05 or older have been reworked locally. However, some machines have been released to the market without modification. If the machine is set to German language, please make sure that the version of the engine main firmware is “2.05A” or later at installation or the next visit. If not, please update it to the latest firmware.

4. NIB Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605920J	1.72.1	B453	Firmware installed from the first mass production run.	July
G0605920K	1.74	3355	The followings have been corrected: • When the job is canceled, the lpr connection is terminated and a blank space is displayed in the syslog. Instead of the blank space, “Lost connection” is displayed. • When 50 or more lpq/lprm commands are sent, the lpd process cannot be completed properly and the job is not printed out. • If DHCP is ON and TCP/IP is OFF, the current device name (RNPXXXXXX) in SmartNetMonitor is not displayed. • The NIB stops printing if several prints jobs are continuously sent to the NIB via the IPP port (SmartNetMonitor for Client), and a print job sent via the standard IPP port may be canceled.	July
G0605920L	1.75.1	64F4	The following has been corrected: Nothing was displayed even though the “prnlog 0” command was done in telnet.	September

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060003

Subject: Oil Leak	Prepared by: T.Itoh
From: Technical Services Dept., GTS Division	

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

An oil leakage problem has recently been reported from the field. This bulletin explains the possible causes and actions required at installation.

SYMPTOM

The following problem may occur soon after installing the machine.

- Oil stain on printouts

NOTE: Oil marks due to accumulated oil on the pick-off pawls may appear at the trailing edges, especially when a new oil supply unit is installed. This is not a problem, but a product remark.

- Oil leaks to the fusing unit, transfer belt unit, and/or black PCU.

POSSIBLE CAUSES

	Possible Causes	Symptom
1	<u>Excessive oil soaked through the oil supply felt</u> The oil pack in the assembled unit is pressed by unit cover, causing the air pressure in the pack to increase. This results in excessive oil soaked through the oil supply felt.	• When removing the shield tape from the oil supply roller, oil drops from the oil supply felt. • The case of the oil supply unit is not stained with oil since the oil leaked through the felt.
2	<u>Broken oil pack</u> The edges of the oil pack break and oil leaks through that point. (As a temporary solution, tapes have been attached and heat pressed.)	• When unpacking the machine, oil has already leaked and the carton has been stained with oil. • The case of the oil supply unit is stained with oil.
3	<u>Oil supply unit not set properly or unit movement error</u> Oil leak problems caused by these factors have never been reported. However, if the oil supply unit is not released from the oil supply roller, oil is always supplied. This causes the oil leak.	

SOLUTION (at production)

Possible Causes	Countermeasure	Cut-in Lot No.
Excessive oil soaked through the oil supply felt	1. The condition of the oil supply felt with the shield tape and units of good condition have been selected. (See **NOTE 1**.) 2. The vendor has been instructed how to set the oil pack in the unit. 3. A special jig has been used to assemble the oil pack in the unit and the oil amount has been optimized. (This improvement is effective for preventing the oil pack from breaking. See **NOTE 3**.)	1. Z1830x 2. Z1831x 3. Z1921x (See **NOTE 2**.)
Broken oil pack	Temporary Solution: 1. The edges of the oil pack have been shielded with tapes and tapes are heat pressed. (See **NOTE 3**.)	1. First mass production

NOTE 1: Expected occurrence ratio
Oil supply units enclosed in machines and of maintenance kits have been visually inspected before shipping them to the market.
Therefore, it is expected that the occurrence ratio in the field will be very limited.

NOTE 2: How to read the lot number of the oil supply unit
Example. Z1830J

(Z): Vendor code, (1): Year, (8): Month, (30) Day, (J): Suffix

NOTE 3: Oil pack breakage
To prevent the excessive oil from soaking through the oil supply felt, a special jig has been used to assemble the oil pack in the unit and oil amount has been optimized. As a result this improvement, the occurrence ratio of the oil pack breakage has noticeably decreased since the pressure applied to the edges of oil pack has reduced.

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060003

ACTION REQUIRED (in the field)

Please make the following notes when installing machines and/or replacing the oil supply unit.

1. Make sure that the carton of the oil supply unit is not stained with oil. If the carton is already stained with oil, please replace the unit.
2. Open the box and check if oil does not leak from anywhere in the unit. If anywhere on the oil supply unit is already stained with oil, replace the unit.
3. Before removing the shield tape (with the green ② tab), check if excessive oil has soaked through the oil supply felt by following procedure below.
   (1) Lightly touch the oil supply felt from the top of the shield tape with your finger.
   (2) Check whether you feel that the oil supply felt is softer or harder.
   If excessive oil has soaked through the felt, you feel that the oil supply felt is softer.
   (3) If excessive oil is soaked, replace the unit.

4. Keep the oil supply unit horizontal and remove the shield tape (with the green ② tab). Check the amount of oil on the oil supply felt. If oil tends to drop from the felt when tilting the unit, replace the unit.
5. If it is difficult to judge whether the condition on the oil supply felt is OK or NG, clean the oil supply felt with a clean cloth to remove any oil on the felt as shown.

6. Make sure that shield tape (with the green ① tab) has been removed, and then install the oil supply unit onto the fusing unit.
7. Make sure that the oil supply unit is properly set and the release (green) lever is moving freely. (If the release lever stops and does not return to the original position after pressing and releasing it, check the cause of it.)

Check points & action required when the problem has occurred:

1. If the ID sensor is dirty with oil, the output voltage may drop, causing an SC code (SC385, SC285). Completely clean the surface of the ID sensor or replace it.
2. If the black PCU is stained with oil, replace it.
3. If the transfer belt cleaning unit has been stained with oil, clean it completely. If the unit is stained with oil, this causes the toner collection tube to be clogged with toner.

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060004

Subject: Engine NVRAM Memory Clear	Prepared by: T.Itoh
From: Technical Services Dept., GTS Division	

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

There was a correction on page 5-46 of the service manual concerning the Memory Clear function (SP5-801-001) as shown below.

Incorrect	Correct
NOTE 1: Memory Clear (SP5-801 & 7-808) The serial number information, meter charge setting (SP5-930), and meter charge counters (SP7-003) are not cleared.	NOTE: Memory Clear SP5-801-001 All memory is cleared except for the meter charge counters (SP7-003). SP5-801-002 All engine related SP modes are cleared except for serial number information and meter charge counters (SP7-003).

NOTE:

- Performing SP5-801-001 or SP5-801-002 clears the serial number information and destination code. This causes the machine to display strange characters on the screen since the destination code is reset to “0 (Japan)” and Japanese language is not stored in the firmware.
  Therefore, please do not perform SP5-801-001 and 002 in the field. (These SP modes will be deleted from the SP mode list in the near future.)
  If any memory clear is required, please use other SP modes (SP5-801-003 to 011 for the printer and SP5-998-001 and 002 for the engine).
- If this problem happens in the field, the following procedure can recover the machine. From the controller firmware (Ver. 2.06 or later), the messages in the SP and PP modes are displayed properly even if the destination code is cleared. However, you still need to restore the serial number, destination code, and other factory settings.

Procedure required when strange characters are displayed.

1. Make sure that the front cover is opened.
2. Enter the PP (Production Program) mode.

NOTE: Please contact a product specialist for the procedure of how to access the PP mode.

3. Select “2” for Engine by using the Up and Down keys. (You can see the number on the screen.) Then, press the Enter key.

4. Select “5” for Mode by using Up and Down keys. (You can see the number on the screen.) Then, press the Enter key.
5. Press the Down key 4 times if the controller firmware version is 2.04.
   Press the Down key 5 times if the controller firmware version is 2.05 or later.
   Then, press the Enter key.
6. Press the Down key once for the Asia version, twice for the Europe version, 3 times for the USA version. Then, press the Enter Key. (This changes the data to appropriate destination code.)
7. Turn the main switch off and on. (Then, messages are displayed correctly.)
8. Enter the PP mode again to set the serial number (SP5-801-001: Machine Serial).
9. Turn the main switch off and on.
10. Clear the memory using the following SP modes:
    SP5-801-003 (SCS)
    SP5-801-004 (IMH)
    SP5-801-005 (MCS)
    SP5-801-008 (PRT)
    SP5-801-011 (NCS)
    NOTE: Do not perform SP5-801-001 (All) or 002 (ENG All).
11. Turn the main switch off and on.
12. Check SP5-907-001 (Plug/Play) and make sure that the correct data is set.
13. Take the Factory Data sheet out from the front cover.
14. Check <value> of the SP modes on the sheet and reset the SP mode settings to <Value> if <value> is different from <default>.

Model: Model-J P1b	Date: 10-Jan-02	No.: RG060005

Subject: Fusing Clutch	Prepared by: T.Itoh
From: Technical Services Dept., GTS Division	

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

A fusing clutch has been added to the black development drive unit. The fusing clutch switches on in order to operate the fusing unit. However it is switched off during the process control self-checks, line position adjustment, and image processing for print/copy jobs. This is to maximize the life of the fusing unit and oil supply unit.

For this modification, the following major parts have been modified that also include the firmware.
However, all modifications could not be implemented at the same time. Modifications have been applied as shown in the following table.
Since the cut-in serial number of each part differs, there are some notes when replacing the BCU board in the field. Please read this RTB carefully.

Modification History

	Old P/N	New P/N	Q'ty	ICA	Description
1st Modification					
1	G0775061	G0775069	1-1	O/O	BCU Board (See **NOTE**.) Engine main firmware: Ver. **1.11G**
2nd Modification					
1	G0775069	G0775069A	1-1	X/O	BCU Board (See **NOTE**.) Engine main firmware: Ver. 1.11G -> **1.11H**
2	G0601100	G0771100	1-1	X/O	Drive Unit - K Development
3rd Modification					
1	G0775069A	G0775067	1-1	X/O	BCU Board (See **NOTE**.) Engine main firmware: Ver. 1.11H -> **1.15E**

For more details on modifications, please refer to the MB, which will be issued as soon as possible.

NOTE: 1. A DIP switch has been added to the BCU board (#B0775069 or later).
The part #G0775069 has not been registered as a service part.
The part #G0775067 is available as a new BCU board.

2. The machine can recognize whether or not the fusing clutch is being used in accordance to the DIP switch setting. The DIP switch setting is very important! If the switch is not set correctly, a paper jam or a fusing problem will occur. Please refer to the "DIP Switch Settings" section.

3. The engine main firmware has been modified twice. However the firmware (Ver. 1.15E) for controlling the fusing clutch could not be been issued when the fusing clutch was implemented in machines. Ver. 1.11H firmware has temporarily been installed. The firmware will turn on the fusing clutch operation.

DIP Switch Settings

When replacing the BCU board with a new one that has a DIP switch on it, check if the old board also has a DIP switch.

If there is no DIP switch on the old board, keep the DIP switch on the new board switched OFF.

If there is a DIP switch on the old board, the DIP switch setting on the new BCU board must be the same as on the old board. Otherwise, problems will occur. Please refer to the following table.

The default setting of the DIP switch on the service part is switched OFF.

Fusing Clutch		Not installed	Installed
Setting of DIP SW 4	**Correct**	**OFF**	**ON**
	Incorrect	ON	OFF
Expected problem if the setting is wrong		The fusing unit is driven as usual. However, the machine detects that a fusing clutch has been installed. This causes the PM counter from the fusing unit and oil supply unit to stop counting, because the machine does not send the signal to turn the clutch on (at the process control self check, etc, as mentioned above).	The fusing clutch does not operate and the fusing unit is not driven at all. This causes a paper jam.

NOTE: 1. DIP SW 1 to 3 must be switched OFF (factory use only).
2. A caution sheet (BCU Board DIP Switch Settings) is enclosed with the service part of the new BCU board (#B0775067). (Refer to the last page of the caution sheet enclosed with the service part.)

Cut-in serial number for each part

		1st Modification	2nd Modification	3rd Modification	Remarks
Modification	BCU Board	New	New	New	
	DIP SW 4 Setting	OFF	ON	ON	
	Firmware Version	1.11G	1.11H	1.15E	
	Fusing Clutch	-	Installed	Installed	
Machine Type		**Machine A**	**Machine B**	**Machine C**	
Product Code	G060-17	P6011000732	P6011100001	P60112XXXXX	
	G060-22	P6011100920	P6011100920	P60112XXXXX	See **NOTE.**
	G060-24	L0881110001	L0881110001	L088112XXXX	
	G060-26	4G81110001	4G81110001	4G8112XXXX	
	G060-27	P6011001617	P6011001999	P60112XXXXX	
	G060-29	P6011002121	P6011102160	P60112XXXXX	
	Others	From first mass production			

NOTE: The modification of BCU board, fusing clutch, and firmware (Ver. 1.11H) has been implemented at the same time.

Machine A	• Although the BCU board is new, the fusing clutch is not implemented. • The DIP switches must always be switched OFF.
Machine B	• DIP SW 4 is switched ON and the fusing clutch is always turned on with firmware Ver. 1.11H. • Updating the firmware to Ver. 1.15E enables operation of the fusing clutch to be switched ON or OFF. **NOTE:** Downgrading the firmware causes paper jams. • DIP SW 4 must always be switched ON.
Machine C	• All modifications have been implemented. The fusing clutch is operational, switched either ON or OFF. **NOTE:** Downgrading the firmware to Ver. 1.11G or older causes paper jams. • DIP SW 4 must always be switched ON.

Model: Model-J P1b	Date: 10-Jan-02	No.: RG060005

Caution sheet enclosed with the service parts

BCU Board DIP Switch Settings

A fusing clutch has been added to the G060 series (Model J-P1b). To regulate the new clutch, a DIP Switch has been added to the BCU board. The new board can be used in both new machines (with the fusing clutch) and older machines (without the clutch). However the switch setting is different as shown below.

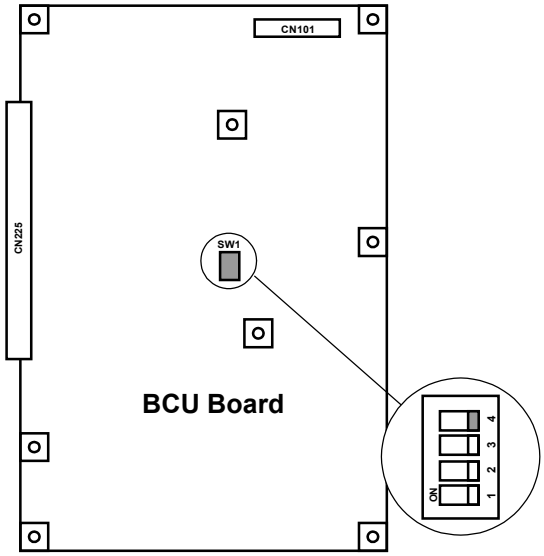
Note: This setting is very important. If the switch is not set correctly, a paper jam or fusing problem will occur (See **Caution** below.)

DIP switch settings (service parts default: **All OFF**)

DIP SW No.	OFF	ON
4	Fusing clutch is **not** installed.	Fusing clutch **is** installed.
1 to 3	Factory Use Only: Keep these switches OFF.	

BCU Board Installation Procedure:

1. Make sure all DIP switches on the new BCU board are switched OFF.
2. If the board already installed in the machine has no DIP SW, simply install the new board as is, i.e. with the DIP SW switched OFF.
3. However if the board already installed has a DIP SW, set the SW on the new board to match the setting on the old board before installation.
4. After installing the BCU board, make sure the machine is able to print out the configuration page normally.



Caution:

1. If the switch is mistakenly turned **OFF** in machines that have a clutch, a paper jam will occur near the fusing unit entrance. This occurs since the machine cannot drive the clutch.
2. Similarly, if the switch is mistakenly turned **ON** in machines that do not have the new clutch, fusing problems will occur. This will cause the machine to detect that a clutch has been installed. The machine will then release the “Clutch Off” signal to stop the drive to the fusing components, whenever they are not needed. Upon doing this, the PM counters for the fusing unit and oil supply unit will not count up, even though the parts are actually moving (as the clutch is not there to stop them). As a result, the message for the End of the PM period will come too late, overstressing these parts.

Machines with the new clutch:

Product code	Cut in serial number
G060-17	P6011100001 -
G060-22	P6011100920 -
G060-24	L0881110001 -
G060-26	4G81110001 -
G060-27	P6011001999 -
G060-29	P6011102160 -
Others	From the mass production

Model: Model-J P1b	Date: 24-Jan-02	No.: RG060006

Subject: Duplex printing with direction-sensitive paper (Letterhead Mode)	Prepared by: T.Itoh
From: Technical Services Dept., GTS Division	

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

In response to the following symptom reported from the field, the controller firmware has been modified and a “Letterhead Mode” has been added (details below).

At present, this new mode can only be activated from within SP mode (default: Disabled), because the specifications of the mode are subject to change with the standardization with other GW products.

SYMPTOM

When printing odd pages in duplex mode with direction-sensitive paper (such as letterhead, pre-punched, and/or pre-printed paper), the last page is printed on the rear side instead of the front.

CAUSE

With duplex mode, the machine prints the even-numbered page first onto the paper's rear side, inverts the paper, then prints the odd numbered page onto the front side. However when the total number of pages is an odd number, e.g. 5 pages, the final sheet of paper is not inverted through the duplex unit, which means that it is printed out onto the paper's rear side.

SOLUTION

The Letterhead function is available with controller firmware (Ver. 2.11) only when the setting has been changed to Enabled in SP mode (default: Disabled).

When selecting direction-sensitive paper (letterhead, pre-punched, pre-printed), along with the first sheet designated as duplex, the machine also passes all sheets following this through the duplex unit.

NOTE: This does not apply to paper fed from trays for which the duplex function has been disabled.

How to activate "Letterhead" mode

1. Access SP mode.
2. Set Bit Switch 2-4 to 1.

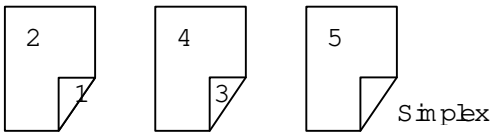
Specification & Remarks

The following explains how the machine works, with an example in each print mode. (Illustrations show the order in which sheets are output to the internal exit tray.)

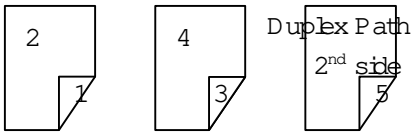
Example: 5-page duplex print job.

*Printing page order: **2 -- 1 -- 4 -- 3 -- 5.***
1st sheet: Pg **2** onto rear side ---> [inversion] --> Pg **1** onto front
2nd sheet: Pg **4** onto rear side --> [inversion] --> Pg **3** onto front
3rd sheet: **(depends on paper type and feed station, as described below)**

1. Normal paper from paper trays:
The last page is not passed through the duplex unit since normal paper is not direction-sensitive.

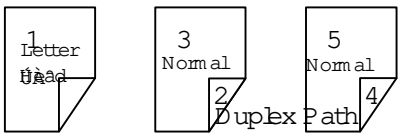


2. Letterhead paper from paper trays:
The last (3rd) sheet of paper is passed through the duplex unit simply to invert it, which allows Pg. 5 to be printed out onto the front side (i.e. the side containing the letterhead pattern).



NOTE: The letterhead paper should be loaded into the tray **face-up.**

3. Letterhead fed as a cover sheet from the by-pass table, with normal paper from the paper tray for the remaining pages.
(only with the RPCS driver):



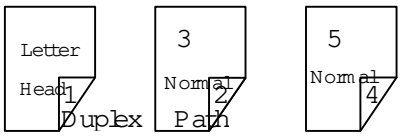
NOTE: Please place the letterhead paper on the by-pass table **face-up**.

4. Letterhead paper fed as a cover sheet from one paper tray, with normal paper for the remaining pages from another paper tray.
(only with the RPCS driver.)

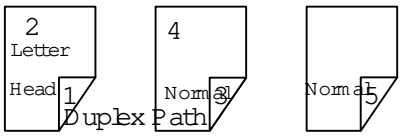
a. When selecting a *one-sided cover sheet* (in the driver).

NOTE: Although this operation is possible, the image will come out on the rear side of the letterhead sheet, i.e. the side without the letterhead pattern. We therefore recommend #3 above, i.e. feeding from the bypass tray.

Even though the cover sheet is one-sided, the 1st sheet of paper will still be sent through the duplex unit and inverted, because the job has been selected as a duplex job in the driver. This cover sheet image is then printed on the rear side, i.e. the side without the letterhead.



b. When selecting a *double-sided cover sheet*:
In this case, letterhead paper should be loaded into one tray and normal paper in another tray.



NOTE: Please load the letterhead paper in the paper tray **face up**.

- Letterhead paper orientation for paper loading -
LH: Letterhead

	LH - Paper tray	LH - Bypass
Simplex jobs	**Face-down**	**Face-up**
Duplex jobs	**Face-up**	1-sided coversheet: **Face-up**

Reissued: 24-Jan-02

Model: Model-J P1b	Date: 24-Jan-02	No.: RG060002a

RTB Reissued

Subject: Firmware Modification	Prepared by: T.Itoh
From: Technical Services Dept., GTS Division	

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

This bulletin explains the firmware modification history for the Model-J (details begin on page 2).

	BCU		Controller		
Firmware Type	**Main**	**Music**	**Controller**		**NIB**
			1	2	
Remarks			File Name G0775910#.bin # : suffix	File Name G0775911#.bin # : suffix	

RTB Revision List

Issue Date	Control Symbol	Revised contents
09-Jan-02	-	First edition
24-Jan-02	<<A>>	Engine Main: 1.11G -> 1.11H -> 1.15E Controller: 2.06 -> 2.07 -> 2.08 -> 2.11

Reissued: 24-Jan-02

Model: Model-J P1b	Date: 24-Jan-02	No.: RG060002a

Modification History – only new changes are described here (see previous RTBs for earlier changes)

1. Engine Main Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0775621 <<A>>	B1.11H	-	A fusing clutch has been added to maximize the life of the fusing unit and oil supply unit. This firmware version was temporarily installed in production machines to keep the clutch constantly moving, until the clutch control program could be added to the next version (1.15E). **NOTE:** Therefore this version has not been released.	
G0775621A <<A>>	B1.15E	171C	• Fusing clutch control has been added to start/stop the clutch. • The following has been corrected: ※ When a paper jam occurs midway through a staple job, job recovery may re-start the job from the 1st page instead. • Over-occurrence of the following SC codes (due to software bugs) has been fixed: ※ SC220/230 at the start of a job ※ SC544/554 during warm-up under low-temp conditions in 62.5mm/s mode. • SP1-916 (Idling mode) has been added.	

916	[Idling Mode]			
	1	Mode Set	*	Enables or disables fusing unit idling performed after the machine reaches the Ready condition. Idling is performed for the time specified in SP1-916-2. [0 or 1/ 0 / -] **DFU** 0: OFF, 1: ON
	2	Idling Time		Specifies the time for fusing unit idling. [10 to 120 / 30 / 10 sec/step] **DFU**
	3	Pre-Job Mode		Enables or disables the 4-second fusing unit idling performed at the start of a print job. [0 or 1/ 0 / -] **DFU** 0: OFF, 1: ON

Reissued: 24-Jan-02

Model: Model-J P1b	Date: 24-Jan-02	No.: RG060002a

2. Engine MUSIC

No changes this time

3. Controller Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0775910B G0775911B <<A>>	2.07	-	• PS configuration page printing is now limited to plain or recycled paper (previously, it could be printed out onto any paper type). • The following has been fixed: Selecting a custom paper size in the PCL may, in rare cases, cause the PC to freeze.	
G0775910C G0775911C <<A>>	2.08	-	The following has been fixed: If the output tray becomes full while the machine is receiving print job data in Series Print mode, following tray-full recovery, the remaining pages may be printed out in the wrong order. See RTB RGene010 for details on Series Print mode.	
G0775910D G0775911D <<A>>	2.11	CCB1 2519	• Letterhead Mode has been added (see RTB #006 for details). • The following has been fixed: Paper is not punched at the designated position in Series Print mode (see RTB RGene010 for details on Series Print mode).	

4. NIB Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605920L	1.75.1	64F4	The following has been corrected: Nothing was displayed even though the “prnlog 0” command was done in telnet.	September (Local modification for –17 model)

Model: Model-J	Date: 20-Feb-02	No.: RG060007

Subject: Machine does not reach Ready condition	Prepared by: H. Someya
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:

If the machine enters Energy Saver 1 Mode and cools down for more than 1 minute, when recovery warm-up occurs, the machine does not display “Ready”.

The symptom occurs only on G060-17 models (120V/60Hz) when all of the following conditions are met:

1. The machine has the fusing clutch installed.
2. The main engine firmware is version B1.15E.
3. Energy Saver 1 Mode is set to ON.
   (Printer default: OFF, with CF expander installed: ON).
4. The user operates the machine (after more than 1 minute) in the following manner:

- Pressing the Energy Saver Key
- Opening and closing the platen cover
- Placing an original in the ARDF
- Sending a print job

Note: This does not occur when the machine is turned OFF/ON or opening and closing any covers, except the ARDF top cover.

Cause:

The conditions for Energy Saver Mode recovery warm-up were changed when the fusing clutch modification was applied, as a result the 120V/60Hz machine does not have enough power to reach the temperature required to trigger the “Ready” display.

Production Countermeasure:

The temperature at which the display changes to “Ready” has been lowered by 1°C.
This has been applied from engine firmware ver B1.17C.

Note: The actual operating temperature has not been changed, only the display trigger temperature.

Model: Model-J	Date: 20-Feb-02	No.: RG060007

Action in the Field:

Update the engine firmware to ver B1.17C or newer on G060-17 machines if the serial number is between P60112xxxxx - P60201xxxxx and the engine firmware is ver B1.15E.

Note: If the CF expander is installed, Energy Saver 1 Mode will automatically be activated (the default changes to ON), therefore please make sure this update is performed.

A separate RTB will be issued regarding the firmware modification history of engine firmware ver B1.17C.

Reissued: 7-Mar-02

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002b

RTB Reissue

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

This bulletin explains the firmware modification history for the Model-J (details begin on page 2).

	BCU		Controller		
Firmware Type	**Main**	**Music**	**Controller**		**NIB**
			1	2	
Remarks	(see Note below)	(see Note below)	File Name G0775910#.bin # : suffix	File Name G0775911#.bin # : suffix	(see Note below)

Note: The Main, Music, and NIB firmware are used for both the G060 printer and the G060/G570 CF Expander.

RTB Revision List

Issue Date	Control Symbol	Revised contents
09-Jan-02	-	First edition
24-Jan-02	<<A>>	Engine Main: 1.11G -> 1.11H -> 1.15E Controller: 2.06 -> 2.07 -> 2.08 -> 2.11
7-Mar-02	<<B>>	Engine Main: 1.15E -> 1.17C Engine MUSIC: 1.04 -> 1.06 Controller: 2.11 -> 2.12 -> 2.13

Reissued: 7-Mar-02

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002b

Modification History

1. Engine Main Firmware

<table>
<tr><th>P/N</th><th>Version</th><th>Check Sum</th><th>Contents of Modification</th><th>Cut-in Month</th></tr>
<tr><td>G0775623
<<B>></td><td>B1.17C</td><td>169B</td><td>
• To optimize the amount of oil supplied to the fusing belt in OHP mode, the number of supply cycles during idling has been reduced to 1.
• SP1-996-6 (OHP Pre-Job mode) has been added.
<table>
<tr><td>996</td><td colspan="3">[OHP/TH Fusing]</td></tr>
<tr><td></td><td>6</td><td>Pre-Job Mode</td><td>*</td><td>Enables or disables the 30-second fusing unit idling performed at the start of an OHP print job. When enabled, idling is performed even if the machine is at the Ready condition.
[0 or 1/ 0 / -]
0: OFF, 1: ON</td></tr>
</table>
• A new Coverage Counter has been added to SP7-908-1 to -8 (SP7-908-5 to –8 are the same as SP7-833-11 to -14). With this new counter, B/W pages that follow color pages in ACS will be counted as B/W, and the CMY counters will not count up. To activate this function, it is necessary to use the 8kB NVRAM on the BCU board and controller firmware version 2.13 or newer.
• The machine automatically detects whether a 4kB or 8kB NVRAM is installed on the BCU board.
• A grid pattern has been added to SP mode copy images. To activate this, it is necessary to use system firmware ver1.07 or newer (for the CF expander only).

• The following have been corrected:
※ SC240 misdetection.
※ When the K toner cartridge is replaced, the “previous PM counter” values for CMY are all overwritten to the previous value for K toner (SP7-906-23 to -25).
※ If machine enters Energy Saver 1 Mode then cools down for more than 1 minute, it will not display “Ready” after recovery warm-up (only for G060-17 models).
※ When a B/W job is performed, the coverage counters (SP7-833-1 to -4) for CMY are not set to 0 as they should be, i.e. the values from the previous job remain.
</td><td>March, 2002 (See NOTE. 1.)</td></tr>
</table>

NOTE: **1.** G060-17 models – Engine main firmware version B1.17C was applied to the production line on February 18th, 2002, and most machines with Ver. B1.15E have been reworked locally: However, some of these machines have been released to the market without modification. Therefore, please update the engine firmware to ver B1.17C or newer on G060-17 machines in the following serial number range: P60112xxxxx – P60201xxxxx.

Reissued: 7-Mar-02

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002b

2. Engine MUSIC

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605624	1.06	62FD	The firmware header has been corrected to allow this firmware to be updated using the IC card.	March, 2002

3. Controller Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0775910E G0775911E <<B>>	2.12	-	• The following has been fixed: While downloading PS fonts to a machine with the HDD option installed, the correct PS serial number cannot be output.	
G0775910F G0775911F <<B>>	2.13	412E C03D	• Euro fonts PC858, ISO8859-15, L9, PS Math, and MC Text are now supported. • PS performance improvement. • RMS is supported with the use of the customized controller (field monitoring machines only). • A new Coverage Counter has been added to SP7-908-1 to -8 (SP7-908-5 to -8 are the same as SP7-833-11 to -14). With this new counter, B/W pages that follow color pages in ACS will be counted as B/W, and the CMY counters will not count up. To activate this function, it is necessary to use the 8kB NVRAM on the BCU board and engine firmware version B1.17C or newer. • The following have been fixed: ※ When the undefined command, "<ESC>&k#w", is received, it appears on the output as a character string [e.g. as "<ESC>&k6w"]. ※ If Job Reset is selected while the first page of a multiple-page document is being processed, the panel continues to display “Printing”. ※ AutoContinue timer bug. ※ The Punch Counter counts up by 2 for every sheet punched when using the function in Duplex Mode.	March, 2002

4. NIB Firmware

Nothing new this time

Model: Model-J P1b	Date: 15-Mar-02	No.: RG060008

Subject: SC999	Prepared by: T. Itoh
From: Technical Services Dept., GTS Division	

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

The following SC code has been added to the controller (printer) and system (CF) firmware.

Configuration	Type of firmware	Firmware Version
Printer	Controller	Ver. 2.07
CF Expander	System	Ver. 1.02 (from 1st lot of mass production)

SC No.	Item	Definition	Possible Cause	Related SCs	Troubleshooting Procedure
SC 999	Firmware error	During firmware download or power On with the IC card inserted, a mismatch or downloading error occurs.	• Wrong version downloaded into IC card • Incorrect destination code • Poor connection between BCU and controller board • Power off during updating • Defective IC card • Defective DIMM • Defective BCU		1. Check if the type and version of firmware is correct. If correct, turn off the main switch and reinsert the IC card, then retry the update. See **NOTE**. 2. Check if the correct destination code is set (SP5-808-1). If it is not, please contact a product specialist for how to change the setting. 3. Check the connection of connectors and PCBs. 4. Replace the IC card. 5. Replace the DIMM 6. Replace the BCU board.

NOTE: Whenever updating the firmware, the front cover should be opened before turning on the main switch.

Model: Model-J P1b	Date: 1-Apr-02	No.: RG060009

Subject: Low humming noise from paper transfer unit	Prepared by: T. Itoh
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

The machine makes a low humming noise while printing. The noise tends to be louder in 62.5mm/s mode (1200x1200 dpi, or OHP/Thick Paper mode).

CAUSE

The transfer charge brushes become dirty with toner and/or dust. This increases the friction between the fibers and transfer belt, causing the brush to vibrate and generate the humming noise.

SOLUTION

Production line modification:

Cushions (#G0603705) have been added to the transfer belt unit to absorb the vibration of the brushes. They are attached directly onto the unit underneath the brushes. Please refer to the following table for the cut-in serial number of this modification:

Cut-in Serial Numbers

Model Code	Cut-in Serial Number
G060-17	P6010800001
G060-22	P6010800919
G060-24	L0881110001
G060-26	4G80810001
G060-27	P6010801286
G060-29	P6010801396

Troubleshooting in the field:

Attach the cushions (#G0603705: 4pcs/machine) onto the transfer charge brushes as shown below (this is to reduce the working time in the field. Installing the cushions onto the transfer unit would require belt removal).

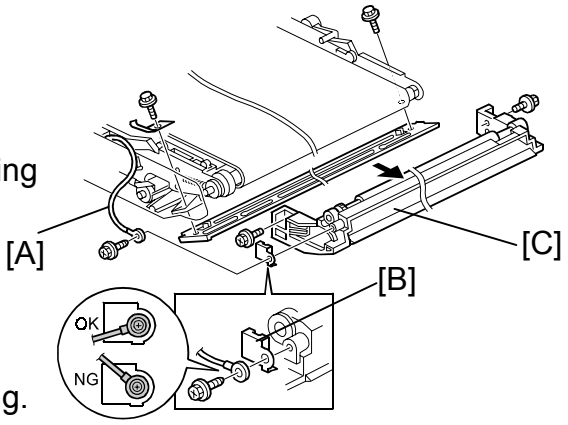
Please refer to the following pages for the detailed procedure.

Cushion Installation Procedure

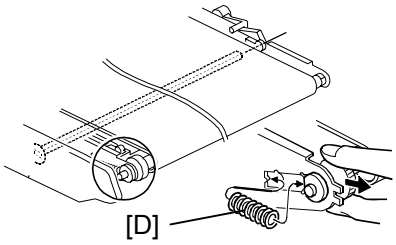
1. Make sure the machine's main power switch is turned off.
2. Open the front cover.
3. Turn the release lever of the paper transfer belt unit counterclockwise and pull out the transfer belt unit. Place a sheet of paper underneath the transfer belt cleaning unit to catch any toner that may fall out. Next, remove the cleaning unit (1 screw).

   NOTE: Also remove the duplex unit if installed (1 screw).
4. Remove the paper transfer unit (lock bracket, 1 screw) and place it onto a few sheets of **clean paper**.

   NOTE: If the paper transfer unit is placed on a dirty surface, foreign particles may get onto the transfer belt and cause damage to the OPC drums.
5. Remove the following parts from the unit.
   - High voltage wire [A]
     NOTE: When re-securing the wire, make sure to angle it down as shown in the illustration. This will prevent it from touching the PCUs.
   - Wire contact [B]
   - Transfer entrance guide [C]
   - Tension springs [D]
     NOTE: Be careful so that the springs do not jump out when removing or reinstalling.

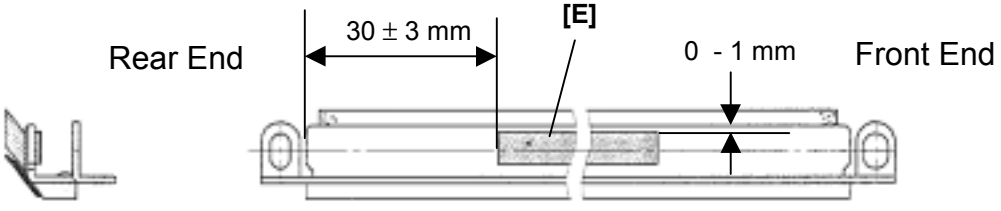


6. Remove the 4 transfer charge brushes (2 screws each).
7. Use a screwdriver to remove excess toner/dust from the brush fibers, being sure to stroke the fibers in the direction that they lean. Then, clean off the fibers with a dry cloth.



NOTE: If the fibers are stroked in the opposite direction, this may lead to vertical white lines on the outputs.

8. Clean the cushion attachment areas on the surfaces of the metal plates with alcohol.
9. Mark a line 30 ± 3mm from the rear edge of the brush.
10. Place the brush onto a few sheets of clean paper and attach the cushion [E] onto the metal plate of each brush, aligning the edge of the cushion with the edge of the brush.

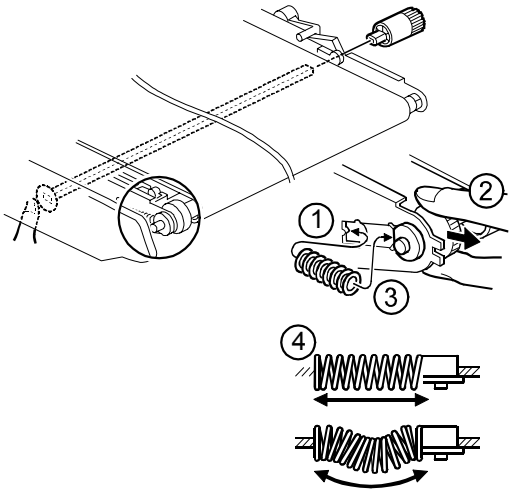


NOTE: When attaching the cushions, be careful not to push down on the brush too strongly. This is because doing so can damage the Mylar and/or flatten out the brush fibers, which can prevent contact between the fibers and transfer belt and lead to vertical white lines.

11. Reinstall the brushes.
12. Reassemble the paper transfer belt unit.

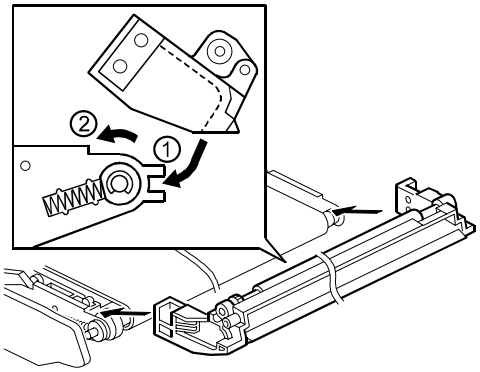
Tension springs:

1. Set the left end of the spring onto the projection.
2. Pull the transfer belt roller to the right.
3. Set the right end of the spring on the bushing.
4. Check that the spring is straight.



Transfer entrance guide:

1. Set the transfer entrance guide into position.
2.
3. Screw the transfer entrance guide into the position.



13. Perform Forced Line Position Adjustment (SP5-993-002 or 'Auto Adjust' in UP Mode).
14. Make test prints in 2-dot pattern mode (SP5-997-2: '12') for each color (CMYK) and check to see that no vertical white lines appear on the outputs.

Model: Model-J P1b	Date: 1-Apr-02	No.: RG060010

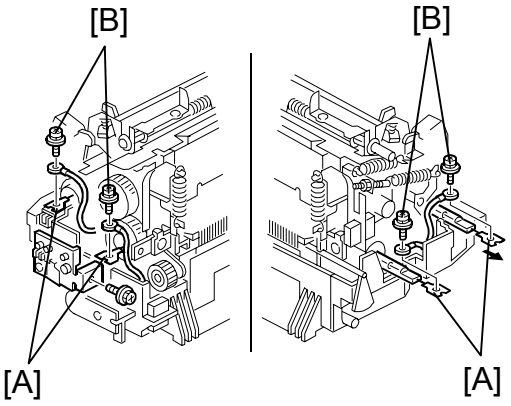
Subject: Notes when reassembling the fusing unit	Prepared by: T. Itoh
From: Technical Services Dept., GTS Division	

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

Please make note of the following points when reassembling the fusing unit.

1. Securing the heater terminal [A]

When replacing the fusing lamps or reassembling the fusing unit, make sure that the screws [B] securing the lamps are firmly tightened.



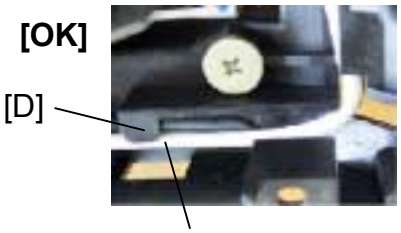
If they are not, there will be too much space between the screw and lamp terminal, causing a short. This can lead to SC543 or SC553, or in the worst case burn marks on the terminal area.

SC543: Heating roller fusing lamp overheat
SC553: Pressure roller fusing lamp overheat

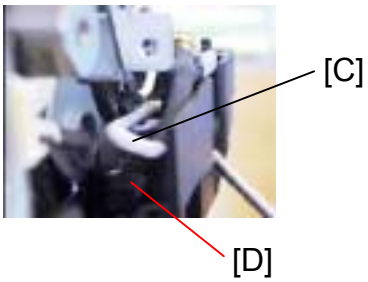
2. Wiring the cable of the heating roller fusing lamp

When securing the white cable [C] of the heating roller fusing lamp (front side), <u>make sure to lead it underneath the projection [D] as shown</u>.

[OK]

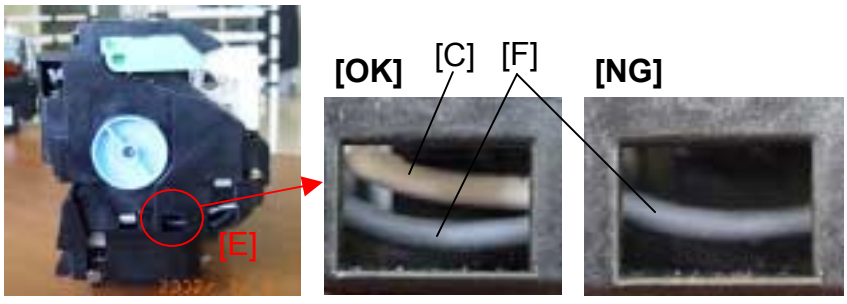


[NG]



NOTE:

1. This positioning is essential. If the cable is above the projection, the C-ring of the heating roller may contact the cable and damage the protective sleeve. In the worst case, this could lead to an electrical short circuit.
2. If the white cable has been properly led, you will be able to see both it [C] and the gray cable [F] through the window [E] in the fusing unit cover.



Model: Model-J	Date: 3-Apr-02	No.: RG060011

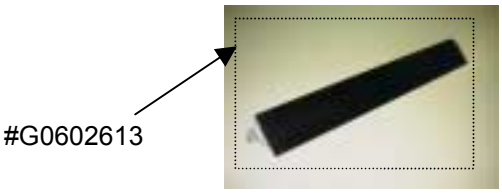
Subject: Paper Jam at registration area	Prepared by: T. Itoh
From: Technical Services Dept., GTS Division	

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

SYMPTOM

Registration jams may occur during multi-print duplex jobs, which are then logged in the following SP modes.

SP7-504-8 Regist.: ON
SP7-504-61 Regist.: OFF



CAUSE

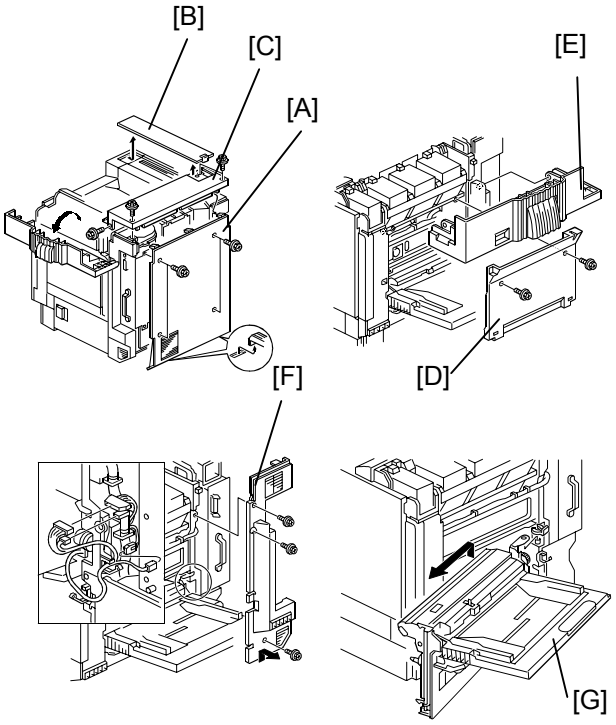
The electrical resistance of the Sheet (#G0602632) attached to the Guide Plate – Middle Registration is out of specification in some machines from July to September '01 production. This may cause the static electricity generated during a multi-print run to charge the Sheet, leading to a jam at the registration area (occasionally a Z-jam).

NOTE: The Sheet cannot be replaced individually in the field, since it is fixed to another sheet of Mylar. Therefore as mentioned in MB #MG060003, the "Guide Plate – Middle Registration" (#G0602613) has been newly registered as an assembly of the previous Guide Plate, Sheet, and Guide.

SOLUTION

Replace the Guide Plate with the newly registered "Guide Plate – Middle Registration" assembly (#G0602613):

1. Make sure that the main switch is turned off and the power cord is unplugged.
2. Remove the following parts:
   - Rear Cover [A] (4 screws)
   - Upper Exit Cover [B]
     Note: Also remove the Mailbox if installed.
   - Upper Rear Cover [C] (4 screws)
   - Right Cover [D] (2 screws)
   - Upper Right Cover [E]
   - Right Rear Cover [F] (3 screws)
3. Open the Right Door Unit [G] and remove it (3 connectors, 1 snap-ring).

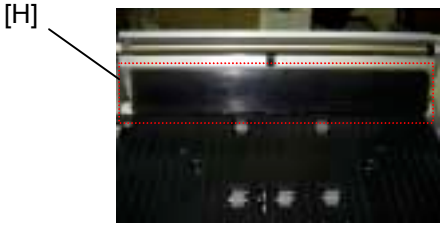


Model: Model-J	Date: 3-Apr-02	No.: RG060011

4. Replace the Guide Plate [H] with the new #G0602613 assembly (2 screws).

   Note: Clean the Registration Rollers with a damp cloth.

5. Reattach all parts removed above.



Reissued: 30-Apr-02

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002c

RTB Reissue

Subject: Firmware Modification			Prepared by: H. Someya
From: Technical Services sec. Service Planning Dept.			
Classification:	☐ Troubleshooting	☒ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Other ( )		

This bulletin explains the firmware modification history for the Model-J (details begin on page 2).

	BCU		Controller		
Firmware Type	**Main**	**Music**	**Controller**		**NIB**
			1	2	
Remarks	(see Note below)	(see Note below)	File Name G0775910#.bin # : suffix	File Name G0775911#.bin # : suffix	(see Note below)

Note: The Main, Music and NIB firmware are used for both the G060 printer and G060/G570 CF Expander.

RTB Revision List

Issue Date	Control Symbol	Revised contents
09-Jan-02	-	First edition
24-Jan-02	<<A>>	Engine Main: 1.11G -> 1.11H -> 1.15E Controller: 2.06 -> 2.07 -> 2.08 -> 2.11
7-Mar-02	<<B>>	Engine Main: 1.15E -> 1.17C Engine MUSIC: 1.04 -> 1.06 Controller: 2.11 -> 2.12 -> 2.13
15-Apr-02	<<C>>	NIB: 1.75.1 -> 1.78

Reissued: 30-Apr-02

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002c

Modification History

1. Engine Main Firmware

No new changes

2. Engine MUSIC

No new changes

3. Controller Firmware

No new changes

4. NIB Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605920M <<C>>	1.78	AB29	• If an undefined remote printer number is input in the Netware configuration page, communication between the NIB and Netware Server will be cut off. • No error message is displayed in Netscape Navigator even when an incorrect URL is input in the address bar. • Up to 32 characters can be input in the NetBEUI configuration screen Comment box, even though the specification is 31 characters maximum. • If Trap is selected for the Access Type in the SNMP Configuration screen during the snmpd process, communication may be cut off. • The NIB does not respond to the “lprm –“ command (root directory) from a FreeBSD host computer. • TCP Ports 11021 and 11023 (Design use) have been closed. • There were two error messages displayed when no files were available for download using FTP. The two messages were merged to “550: No such file or directory”. • PS status can be displayed in the STAT command using ftpd/ rshd/ telnetd/ lpd. • During a given FTP login session, the NIB counts up every user command issued as a new session. • The length of the login user name can be up to 64 characters when using FTP.	January, 2002

Model: Model-J P1b	Date: 9-May-02	No.: RG060012

Subject: User instruction required	Prepared by: T. Itoh
From: Technical Services sec. Service Planning Dept.	

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

This RTB has been issued in response to cases of fusing unit damage in the field resulting from incorrect user operation. This can in turn cause fusing jams, some of which damage the roller with the separation pawls. Therefore please advise users of the points described in the Cause/Solution table below at installation or when on-site for servicing.

SYMPTOM

- Non-fused or offset images
- Paper jam causing damage to the fusing belt and/or pressure roller

CAUSE / SOLUTION

In addition to the following table, please also see Notes 1 and 2 on the next page.

	CAUSE	SOLUTION
1	Using coated paper ● Unlike plain PPC paper, the surface of chemically-treated paper is sticky and tends to wrap around the pressure roller or fusing belt.	● Please advise users not to use coated paper on this product. As a reminder, please refer to **Note 1** below, which explains the paper types not supported on this printer. This is also mentioned on page 26 of the Operating Instructions Maintenance Guide 2.
2	Incorrect paper loading / paper type setting in printer driver ● Loading Normal Thick Paper (105 to 163g/m^2; 28 to 43lb), Envelopes or Label Paper in a paper tray. ● Selecting “Cardstock”, “Label”, or “Bond” in the printer driver even when using Normal Thick Paper, Label paper, Cardstock or Envelopes (which are all fed from the Bypass Tray).	● Please advise users of the following: ➢ Always feed Envelopes, Label Paper and Normal Thick Paper (105 to 163g/m^2) from the Bypass Tray. ➢ Always select “Thick Paper” in the printer driver whenever feeding Envelopes, Label Paper, Normal Thick Paper, Cardstock or Bond. Please also see **Note 2** below.
3	External output tray closed Whenever printing from the bypass tray, the paper is fed out to the external output tray. However if this tray is closed (folded) when the paper is exited, the paper will fold up into an accordion and cause a jam at the exit area.	● Please advise users to confirm that the external output tray is in the open position whenever feeding from the bypass tray.

Detailed Notes for the Causes/Solutions in the Above Table

Note 1: Avoiding paper types not supported on this printer

Please advise users not to use the following paper types on this printer:

- Paper out of weight specification:

  Paper weight specifications:
  Paper Trays: 60 to 105 g/m^2 (16 to 28lb)
  By-pass Tray: 60 to 163g/m^2 (16 to 43lb)

- Paper meant to be used with an ink-jet printer
- Coated paper
- Thermal, carbon or conductive paper, aluminum foil
- Paper with the following characteristics:
  * Bent, folded, creased, curled, twisted, torn, wrinkled, or damp
  * Dry enough to generate static electricity
  * Paper with preprinted images (except letterhead)
  * Paper with windows, holes, perforations, cutouts, or embossing
  * Label paper with any of its sticky surfaces exposed
  * Paper with clips or staples

Note 2: How the machine interprets paper types selected in the printer driver

The printer is not able to interpret the “Cardstock”, “Label” and “Envelope” paper type settings in the driver, and will treat such cases the same as Plain Paper (see the table on next page).

As a result, the oil supply roller becomes dirty with toner, an insufficient amount of oil is applied to the fusing belt, and a paper jam occurs. This can also result in offset images as well.

Please therefore advise users to:

1) Always feed Envelopes, Label Paper and Normal Thick Paper from the Bypass Tray.
2) Always use **Thick Paper** as the driver setting whenever feeding the following types:

Paper Type Used	Paper Feed Station	Driver Setting
Normal Thick Paper	By-pass tray	Thick Paper
Labels	By-pass tray	Thick Paper
Cardstock	By-pass tray	Thick Paper
Envelope	By-pass tray	Thick Paper

Reference – Paper Type Settings and Parameters

In addition to color mode and resolution, the paper type selected in the printer driver determines what processing parameters (e.g. fusing temp.) the printer uses for the job.

Table key:

Blue shading	The printer cannot interpret these paper types, which are then treated as plain paper (i.e. processing parameters for plain paper are used).
SP	The value of each parameter is unique for each paper type. The settings of these parameters are adjustable in SP mode.
SP "1" through "4" tags	Items marked with the same number use common values.

Paper Feed Station	Paper Type	Leading Edge Registration	Paper Buckle	Fusing Temp.	Paper Transfer Current	Paper Attraction Roller Bias
Paper Tray	Plain	SP	SP	SP	SP	SP
	Recycled					
	Color					
	Special	-	-	SP	SP	SP
	Letterhead					
	Preprinted					
	Prepunched					
	Bond					
	Cardstock					
By-pass	Plain	SP 1	SP 3	SP	SP	SP
	Recycled					
	Color					
	Special	-	-	SP	SP	SP
	Letterhead					
	Preprinted					
	Prepunched					
	Bond					
	Cardstock					
	Labels					
	OHP	SP	SP	SP	SP	SP
	Thick	SP 2	SP 4	SP	SP	SP
	Plain (Duplex)	SP 1	SP 3	SP	SP	SP
	Thick (Duplex)	SP 2	SP 4	SP	SP	SP

In addition, since the paper types described above are actually selectable in the printer driver, to prevent confusion these items may be deleted from the driver display (details TBA).

Model: Model-J P1b	Date: 9-May-02	No.: RG060012

Additional Action – Registration jams

Generally, the more frequently jams occur (even those originating outside the fusing unit), the greater the chance for fusing unit damage – as paper in transit through the fusing unit will be stopped there. When servicing the machine for fusing jams, please also check the machine history for a high occurrence of registration jams. If the S/N is in the range mentioned in RTB #RG060011 (July-Aug ’01 machines), please install the new Guide.

Reissued: 28-Jun-02

Model: Model-J P1b	Date: 9-Jan-02	No.:RG060002d

RTB Reissue

Subject: Firmware Modification			Prepared by: H. Someya
From: Technical Services sec. Service Planning Dept.			
Classification:	☐ Troubleshooting	☒ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Other ( )		

Firmware modification history for the Model-J (details begin on page 2).

	BCU		Controller		
Firmware Type	**Main**	**Music**	**Controller**		**NIB**
			1	2	
Remarks	(see Note below)	(see Note below)	File Name G0775910#.bin # : suffix	File Name G0775911#.bin # : suffix	(see Note below)

Note: The Main, Music, and NIB firmware are used for both the G060 printer and G060/G570 CF Expander.

RTB Revision List

Issue Date	Control Symbol	Revised contents
09-Jan-02	-	First edition
24-Jan-02	<<A>>	Engine Main: 1.11G -> 1.11H -> 1.15E Controller: 2.06 -> 2.07 -> 2.08 -> 2.11
7-Mar-02	<<B>>	Engine Main: 1.15E -> 1.17C Engine MUSIC: 1.04 -> 1.06 Controller: 2.11 -> 2.12 -> 2.13
15-Apr-02	<<C>>	NIB: 1.75.1 -> 1.78
28-Jun-02	<<D>>	Engine: 1.17C -> 1.18 -> 1.18B Engine MUSIC: 1.06 -> 1.07 Controller: 2.13 -> 2.14 NIB: 1.78 -> 1.81

Reissued: 28-Jun-02

Model: Model-J P1b	Date: 9-Jan-02	No.:RG060002d

Modification History

1. Engine Main Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0775623A <<D>>	B1.18	F284	• The following have been corrected: ※ Main scan magnification error (see RTB #RG060015 for details; to be released soon). ※ SC471 caused by stop timing error for transfer belt contact motor. ※ SC545 in fusing phase control mode. ※ SC543 **NOTE:** This version has not been released (see "side effect" below).	May, 2002
G0775623B <<D>>	B1.18B	D7B1	• The following have been corrected: ※ SC230 at automatic line position adjustment (see RTB #RG570004 for details; to be released soon). ※ Side effect for B1.18 SC545 modification (only for G060-17 models): The machine does not display "Ready" after recovery warm-up from Energy Saver 1 Mode in phase control mode (see RTB #RG060013 for details; to be released soon).	Middle of June, 2002

2. Engine MUSIC

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0775624 <<B>>	1.06	62FD	The firmware header has been corrected to allow the MUSIC firmware to be updated using the IC card.	March, 2002
G0775624A <<D>>	1.07	6576	The firmware header has been corrected for Japanese models only.	May, 2002

Model: Model-J P1b	Date: 9-Jan-02	No.:RG060002d

3. Controller Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0775910G G0775911G <<D>>	2.14	AB1E 2573	• The following have been fixed: ※ PCL - Modified the dither size for when the UDFP command is used (GFPR# RE02030021) - Modified so that some characters in symbol sets MS Text and Windows Baltic (19L) will appear exactly as they do with HP printers. ※ PS - The margin for Custom size has been changed from 12 to 11 points to expand the maximum printing area. - Modified the dither setting for when the DeviceGray command is used. • Change in Specification: ※ Supports the Status Readback function of PCL5e. ※ When the machine has no HDD option, the PCL HDD Directory List (and font source) will not be printed on the PCL Configuration Page.	June, 2002

4.

Reissued: 28-Jun-02

Model: Model-J P1b	Date: 9-Jan-02	No.:RG060002d

NIB Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605920N <<D>>	1.81	8FA3	• The following have been fixed: ※ Cannot connect to Novell NDS (GFPR# RC02010007). ※ Two or more print queues can be attached to a single printer object (TechMail RC010430). ※ The controller freezes if it is disconnected while the data which generates the Readback command is being printed out with ftp/rsh. ※ The controller freezes when it cannot find the file specified for rcp transmission. ※ The parameters of sysLocation and sysContact cannot be set correctly using the snmp command with telnet. ※ The Fax Management Tool cannot be used for a while after any of the NIB setting(s) are changed. • Change in Specification: ※ SNMP vulnerability - SNMP security vulnerabilities reported by CERT on Feb.12, 2002 have been resolved and tested using the PROTOS c06-snmpv1 test suite. **CERT** :http://www.cert.org/advisories/CA-2002-03.html **PROTOS c06-snmpv1 test suite :**http://www.ee.oulu.fi/research/ouspg/protos/testing/c06/snmpv1/ ※ TCP ports for disabled services (e.g. FTP) were open. ※ An unnecessary TCP port was open.	June, 2002

Reissued: 18-Jul-02

Model: Model-J P1b	Date: 9-Jan-02	No.:RG060002e

RTB Reissue

Subject: Firmware Modification	Prepared by: H. Someya
From: Technical Services sec. Service Planning Dept.	

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

This bulletin explains the firmware modification history for the Model-J (details begin on page 2).

	BCU		Controller		
Firmware Type	**Main**	**Music**	**Controller**		**NIB**
			1	2	
Remarks	(see Note below)	(see Note below)	File Name G0775910#.bin # : suffix	File Name G0775911#.bin # : suffix	(see Note below)

Note: The Main, Music and NIB firmware are used for both the G060 printer and G060/G570 CF Expander.

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RTB Revision List

Issue Date	Control Symbol	Revised contents
09-Jan-02	-	First edition
24-Jan-02	<<A>>	Engine Main: 1.11G -> 1.11H -> 1.15E Controller: 2.06 -> 2.07 -> 2.08 -> 2.11
7-Mar-02	<<B>>	Engine Main: 1.15E -> 1.17C Engine MUSIC: 1.04 -> 1.06 Controller: 2.11 -> 2.12 -> 2.13
15-Apr-02	<<C>>	NIB: 1.75.1 -> 1.78
28-Jun-02	<<D>>	Engine: 1.17C -> 1.18 -> 1.18B Engine MUSIC: 1.06 -> 1.07 Controller: 2.13 -> 2.14 NIB: 1.78 -> 1.81
18-Jul-02	<<E>>	Controller: 2.14 -> 2.16

Model: Model-J P1b	Date: 9-Jan-02	No.:RG060002e

Modification History

1. Engine Main Firmware

No modifications

2. Engine MUSIC

No modifications

3. Controller Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0775910H G0775911H <<E>>	2.16		• The following has been fixed: The printing speed of a PS job slows down after a PS3 job is reset.	???

4. NIB Firmware

No modifications

Model: Model-J P1b/P1c	Date: 1-Jul-02	No.: RG060013

Subject: No Ready condition in phase control mode	Prepared by: H. Someya
From: Technical Services sec. Service Planning Dept.	

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

Symptom:

If the machine enters Energy Saver 1 then recovers within about 50 seconds, the display continually reads “Warming up”, and the machine does not reach the “Ready” condition.

This occurs only on G060-17 and G082-17 models (120V/60Hz) when all of the following conditions are met:

1. The fusing control method is changed to phase control (default: On/Off control)
2. The main engine firmware is version B1.18.
3. Energy Saver 1 Mode is set to ON (P1b/P1c Printer default: OFF, with CF expander installed: ON).
4. The machine recovers from Energy Saver 1 within about 50 seconds.
5. The fusing clutch is installed.

Cause:

When the software was modified to verB1.18, some phase control parameters were changed to prevent SC545 occurrences. However, as a side effect of this, the machine cannot supply enough power to trigger the “Ready” display at the end of a phase control warm-up.

Production Countermeasure:

1. The phase control parameters have been adjusted so that even at the end of the warm-up, the machine is able to supply enough power to reach the temperature necessary to trigger the “Ready” condition.
2. The machine displays “Ready” on the LCD 30 seconds after the recovery from Energy Saver 1 begins, even if the temperature does not reach the necessary level.

These changes have been applied from engine firmware ver B1.18B.

Action in the Field:

Upgrade the engine firmware to verB1.18B on G060-17 / G082-17 machines that use phase control from the S/N range below (which contain verB1.18).

Machines containing verB1.18:

Model Code	S/N range
G060-17	P6020500801 to P6020600401
G082-17	P8920500029 to P8920600250

A separate RTB has been issued regarding the firmware modification history of engine firmware ver B1.18B.

Model: Model-J P1b/P1c	Date: 16-Jul-02	No.: RG060014

Subject: Coverage (SP7-833 and 908)	Prepared by: T. Itoh
From: Technical Services sec. Service Planning Dept.	

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

This RTB has been issued to 1) replace the term “image coverage ratio” with **pixel coverage ratio,** so as to clear up any misunderstandings, and to 2) clarify the differences between SP7-833 and 908.

NOTE: SP7-908-1 thru 8 have been applied to the P1b from March ’02 production, and both SP7-833 and 908 have been applied on the P1c from the first mass production run. Also, SP7-908-5 thru 8 contain the same data as SP7-833-11 thru 14.

1. Terminology: Replacing “image coverage” with “pixel coverage ratio”

The original meaning of “image coverage” is simply the percent of pixels being used to write the image. However since this refers only to the print data itself, and not the final image on the output, a more clear term is the **pixel coverage ratio**.

The machine keeps track of two types of pixel coverage ratios:

1) The ratio for the most recently printed page
2) The average ratio for all pages printed up to the present

Calculation method for both #1 and 2 above:

Pixels used for image areas / Total pixel area of 1-full pg. (corresponding paper size)

NOTE:

1. To calculate #2 above, the machine keeps a cumulative count for these 2 values.
2. The pixel coverage ratio only refers to the percent of pixels to be used for image writing in the data itself, not the finished product (output). It is not directly proportional to the amount of toner consumed, and can therefore not be used to calculate toner consumption.

   The amount of toner actually consumed (i.e. used on the output) also depends on factors such as the:

   - Type of image (solid, text, or lines):
     The “edge effect”, a general side effect of the development process whereby extra toner is attracted to the edges of images, i.e. becoming

slightly darker. Of course images containing more edges will show this effect more prominently.
- Toner concentration
- Development capability

2. Difference between SP7-833 and SP7-908

Both calculate the pixel coverage ratios mentioned above for each toner color, but the calculation is different for Bk pages printed in Color development mode (i.e. development with the transfer unit in contact with all 4 PCUs). Please also see the example below.

SP7-833-5 to 8 (Coverage)	SP7-908-1 to 4 (New Coverage)
The total pixel area for Bk pages made in Color development mode *is added* to the cumulative count.	This value is ***not** added* to the cumulative count.

- SP7-833 (existing SP mode):
  The idea of this mode is to show the pixel coverage ratio for each color for pages made when the machine operates with the transfer unit in contact with all 4 PCUs. So even though no CMY toner is actually being used for Bk pages in Color development mode, this SP mode includes these pages.

  NOTE: This data is used for process control and toner refresh.

- SP7-908 (newly added):
  The idea of this mode is to show the pixel coverage ratio for each color for pages made when CMY toner is actually being used to develop the image.

  As shown in the example below, for print data containing Bk pages, the ratio calculated by SP7-833 will be lower.

Example:

When printing the following 3 pages, the average pixel coverage ratio will be lower with SP7-833 as shown in the table below.

1st Page	2nd Page	3rd Page
Color	B&W	Color
C: 7% M: 8% Y: 3% K: 7%	K: 8%	C: 6% M: 9% Y: 4% K: 6%

Average pixel coverage ratio:

	Bk	Cyan	Magenta	Yellow
SP7-833	(7%+8%+6%)/3 = 7%	(7%+6%)/**3** = 4.3%	(8%+9%)/**3** = 5.7%	(3%+4%)/***3*** = 2.3%
SP7-908	(7%+8%+6%)/3 = 7%	(7%+6%)/**2** = 6.5%	(8%+9%)/**2** = 8.5%	(3%+4%)/***2*** = 3.5%

Model: Model-J P1b/P1c	Date: 16-Jul-02	No.: RG060014

REMARKS:

- To enable SP7-908 in production units, the following have been modified.
  - Engine main and controller firmware (from March '02 production):
    Engine: verB1.17C
    Controller: ver2.13
  - BCU NVRAM: 4KB → 8KB type for storage of paper size pixel area data.

    NOTE: The 8KB type can be used on all machines. The machine automatically recognizes whether the NVRAM is a 4KB or 8KB type.

- It is not recommended to upgrade pre-modification MIF for SP7-908, since it is necessary to not only install the 8KB RAM, but also to replace all maintenance kits (kit PM counters stored in NVRAM).

- The following shows the SP7-908 displays for machines with the 4KB NVRAM and each version of main/controller firmware:

NVRAM = 4KB		Controller firmware	
		2.12 or earlier	2.13 or later
Engine firmware	B1.15E or earlier	(feature not displayed)	Unspecified value displayed.
	B1.17C or later	(feature not displayed)	SP7-908 value is "999.99".

Model: Model-J P1b/P1c	Date: 18-Jul-02	No.: RG060015

Subject: Main-scan Magnification Error	Prepared by: T. Itoh
From: Technical Services sec. Service Planning Dept.	

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

SYMPTOM

- B&W Mode: Image is reduced approximately 4mm along the *main scan direction*
- Color Mode: Color lines may shift approximately 2-3mm along the *main scan direction.*

CAUSE

The main scan magnification adjustment, a factory adjustment, was performed on some machines while the polygon mirror motor was running. This caused an incorrect value to be stored in SP2-103-55 and/or 59, which reduced the main scan magnification for black. The position of color lines was also affected, since this is calibrated based on the black main scan magnification.

SOLUTION

Temporary

The factory has been advised not to adjust the main scan magnification adjustment while the polygon mirror motor is running (from Apr ’02).

Permanent

The engine main firmware has been modified so that the main scan magnification adjustment cannot be adjusted while the polygon mirror motor is running. This has been applied from May ’02 production runs as Ver B1.18.

ACTION IN THE FIELD

Please follow the troubleshooting procedure beginning on the next page.

NOTE: Please use Ver B1.18B if updating the firmware in this procedure, as Ver B1.18 was not released to the field (in order to allow other minor bugs to be corrected). Please refer to RTB #RG060002 “Firmware Modification”.

TROUBLESHOOTING

NOTE: The settings of SP2-103-55/59 and the SP modes from Step 3 in the table on the next page should only be changed as part of this troubleshooting procedure (normally, they should be left as is).

Perform the following for **SP2-103-55** (Main scan magnification for black: 64.3MHz), then for **SP2-103-59** (Main scan magnification for black: 47.6MHz).

1. Print out the SMC sheet.
2. Compare the SP mode data on the SMC sheet to that on the factory setting sheet, which is located behind the jam removal instruction sheet on the front cover.
3. Update the main engine firmware to Ver B1.18B only if:

   A) The SMC SP setting is the same as the factory sheet setting, or is greater than 200,

   OR:

   B) Both the SMC SP setting and factory sheet setting are greater than 200.

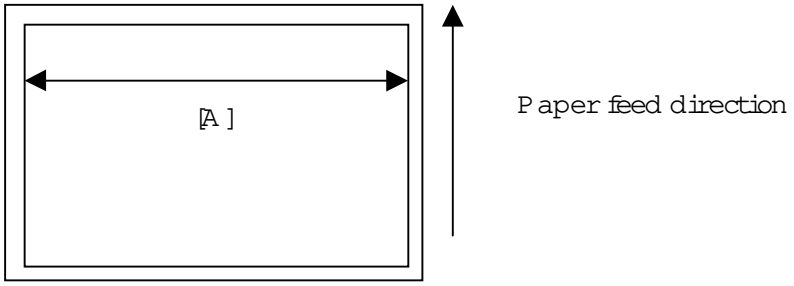
   - **If neither A or B is true, please stop here and do not perform the rest of the procedure.**

4. Input the following data in the SP mode.

   NOTE: If the update to Ver 1.18B is necessary but this version is not available for some reason, input the following data while the machine is in stand-by mode (motor not running) with the front cover open. If Ver 1.18B is available, the data can be input without paying attention to this.

   -For case **A** above, input: (value on factory setting sheet) + 1
   -For case **B** above, input: 140.

5. Perform the procedure in the table below.

	SP2-103-55	SP2-103-59
(1)	Print out a test pattern (SP5-997) with the following settings: Paper Tray: Select a DLT/LT LEF or A3/A4 LEF tray Pattern: 1-dot trimming pattern (No. 14) Single Color: Black Color Mode: Single Color Resolution: * 1200x1200 for **SP2-103-55** * 1200x600 for **SP2-103-59**	
(2)	Measure distance [A] (along the main scan direction) and check to see if it is within the adjustment standard. - Main scan magnification adjustment standard [B]: Inch: 10.84" +/- 0.03" Metric: 293 mm +/- 0.9 mm  ● If [A] is not within adjustment standards: 1. Calculate value [C]: Metric: [C] = ([B] - [A]) x 1200/25.4 Inch: [C] = ([B] - [A]) x 1200 2. If [A]<[B], input: [current value in SP2-103-55 or 59] **–** [C] If [A]>[B], input: [current value in SP2-103-55 or 59] **+** [C] **Example**: SP2-103-55 If [A] is 1 mm (0.04") shorter than [B]: → [C] = 1 mm x 1200 / 25.4 = 47.2 = 47 (rounded off to nearest whole number). → If the current setting is 140, input 140-47=**93**.	
(3)	For **SP2-103-55** only: ● Input the same value used in Troubleshooting Step 4 above into the following SP modes: SP2-103-56 (Y) SP2-103-57 (M) SP2-103-58 (C) For **SP2-103-55** only: ● Input the factory defaults (factory sheet data) into the following SP modes: SP2-909-01 (Y) SP2-909-02 (M) SP2-909-03 (C) ● Perform the Line Position Adjustment (Auto Adjust in UP mode or SP5-993-2).	-

Model: Model-J P1b/P1c	Date: 18-Jul-02	No.: RG060016

Subject: Toner end mal-detection	Prepared by: T. Itoh
From: Technical Services sec. Service Planning Dept.	

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

The following two modifications have been applied to minimize misdetections of the Toner End condition.

In addition to these changes, please remind customers to try detaching and reattaching the toner bottle if there is clearly more toner remaining in the bottle. This is mentioned in the Operating Instructions (*Maintenance Guide 1, Replacing the Toner Cartridge*) and in the Service Launching Guide:

Symptom	Action Required
Toner end might be detected even when some toner still remains in the toner cartridge. Because of the shape of the toner cartridge, toner may accumulate at the sloping area and not be supplied properly, causing false toner end detection.	Opening and closing the top right cover or reinserting the toner cartridge can recover a toner end condition caused by false detection.

Modifications:

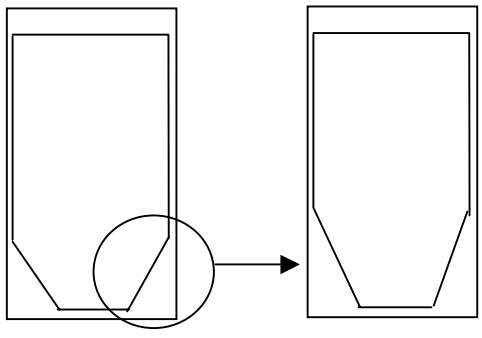
1. Engine firmware

The toner supply control has been changed in Version B1.15E as follows, applied from the beginning of mass production of the P1c.

Old	**New**
The air pump motor is turned on for 1 second to fluidify the toner in the cartridge, then the toner supply clutch is turned on for a calculated interval to feed the required amount of toner.	The air pump motor and toner supply clutch are turned on in alternation for 1 second each until the required amount of toner has been fed into the development unit – ensuring that the toner is kept in a constant fluid state in toner supply mode.

2. Black toner cartridge

Modification	Cut-in
Strips of Mylar have been attached to the inner package to prevent the package from bending or becoming dented. **Note:** Applied to all toner colors.	August, '01
The shape of the black toner package has been changed to create a steeper slope in the area circled in the illustration, allowing the toner to flow more easily. **Note:** Applied only to Black toner, since this change would reduce the package capacity too much for the color toners.	April, '02



Model: Model-J P1b/P1c	Date: 18-Jul-02	No.: RG060017

Subject: Transfer Unit - Transport Damage	Prepared by: T. Itoh
From: Technical Services sec. Service Planning Dept.	

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

The following changes have been made to increase the durability of the packaged Transfer Unit (service part) against rough handling during transport.

Symptom

If the Transport Unit experiences rough handling during shipping, the unit components can become damaged, e.g. back-up rollers detached, plastic components broken.

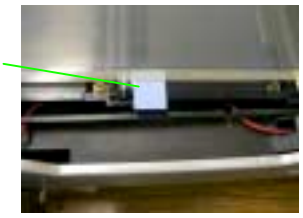
Solution

The following modifications have been or will be applied to the packing material and Transport Unit (service part).

	Modification	Cut-in
Packing material	**Temporary:** A side pad has been added to keep the unit from moving side-to-side during transport.	Applied to service parts from mid-June '02.
	Permanent: Cushions have been added to absorb the shock during transport.	Applied to service parts from the end of June '02.
For back-up rollers	**Temporary:** 4 stoppers have been added to the yellow and cyan back-up rollers to keep them properly fixed in place.	Applied to service parts from mid-June '02.
	Permanent: The shape of the bushings for the back-up roller will be changed to reduce the mechanical play (and the temporary 4 stoppers removed).	Scheduled to be applied to service parts in mid-July '02, then to units in production machines when the old stock runs out (O/O interchangeability).

NOTE: If the 4 temporary stoppers [A] for the back-up rollers are present in the circled areas, be sure to remove them before installing the unit. Installing the transfer unit with these stoppers may cause noise or image problems.

[A]



Reissued: 6-Sep-02

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002f

RTB Reissue

Subject: Firmware Modification			Prepared by: H. Someya
From: Technical Services sec. Service Planning Dept.			
Classification:	☐ Troubleshooting	☒ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Other ( )		

Firmware modification history for the Model-J (details begin on page 2).

	BCU		Controller		
Firmware Type	**Main**	**Music**	**Controller**		**NIB**
			1	2	
Remarks	(see Note below)	(see Note below)	File Name G0775910#.bin # : suffix	File Name G0775911#.bin # : suffix	(see Note below)

Note: The Main, Music and NIB firmware are used for both the G060 printer and G060/G570 CF Expander.

.

RTB Revision List

Issue Date	Control Symbol	Revised contents
09-Jan-02	-	First edition
24-Jan-02	<<A>>	Engine Main: 1.11G -> 1.11H -> 1.15E Controller: 2.06 -> 2.07 -> 2.08 -> 2.11
7-Mar-02	<<B>>	Engine Main: 1.15E -> 1.17C Engine MUSIC: 1.04 -> 1.06 Controller: 2.11 -> 2.12 -> 2.13
15-Apr-02	<<C>>	NIB: 1.75.1 -> 1.78
28-Jun-02	<<D>>	Engine: 1.17C -> 1.18 -> 1.18B Engine MUSIC: 1.06 -> 1.07 Controller: 2.13 -> 2.14 NIB: 1.78 -> 1.81
18-Jul-02	<<E>>	Controller: 2.14 -> 2.16
6-Sep-02	<<F>>	Engine: 1.18B -> 1.19

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002f

Modification History

1. Engine Main Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0775623C <<F>>	B1.19	BB39	• The following have been corrected: ※ When SP1-916-1 is set to 1, the machine may not reach the Ready condition after the main SW is turned on in low-temp, low-humidity environments. ※ Upgrade error recovery cannot be performed with version 4 of the BCU ASIC (Gate Array PCI).	August, 2002

2. Engine MUSIC

Nothing new

3. Controller Firmware

Nothing new

4. NIB Firmware

Nothing new

Model: General RTB	Date: 8-Nov-02	No.: RGene011

Subject: Euro symbol not printed with PS driver	Prepared by: T. Itoh
From: Technical Services sec. Service Planning Dept.	

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

SYMPTOM

When printing with the PS driver, the Euro currency symbol is not printed out with 112 of 136 fonts, which are stored in the font ROM in GW-based products.

The following are GW-based products:

Model-K3, Model-K P2, Russian-C2, Adonis- C2, Model-A P3, Model-J P1b, Model-J CF Model-U P1, Model-U C1, Martini-C1.

CAUSE

The Euro currency symbol was not included in the font ROM.

SOLUTION

Temporary Solution (1)

A workaround for each operating system has been previously released on the FAQ page, and is included on pp. 5-8 below.

Temporary Solution (2)

Although the font ROM will be modified as a permanent solution (details below), before this can be applied, the controller firmware has been modified on the following GW-based products:

Product	Firmware Version	Product	Firmware Version
Model-K3	1.01 (Controller)	Model-J P1b	2.18 (Controller)
Model-K P2	1.06.1 (Controller)	Model-J CF	1.11 (Printer Application)
Russian-C2	2.03 (Printer Application)	Model-U P1	2.20 (Printer Application)
Adonis-C2	3.09 (Printer Application)	Model-U C1	1.22 (Printer Application)
Model-A P3	1.08 (Controller)	Martini-C1	1.01 (Printer Application)

Specifically, the Euro currency symbol has been added along with the “PS fonts download” feature, which allows the symbol to be downloaded to machine RAM. Enable this feature by changing the setting of Bit SW#3-0 to “1 (ON)” in SP mode (default: OFF).

Remarks for Temporary Solution 2:

1. Switching PDL to PS takes approximate 7 to 10 seconds.

   When PS fonts download is enabled, the Euro symbol is temporarily downloaded to the machine RAM at the first PS printing job, and whenever the PDL is switched from RPCS or PCL to PS. The total download time is approximately 7 to 10 seconds. This is because once the data is downloaded, it will remain in the RAM until the PDL is switched or the power turned off.

2. Printing high image area documents at 1200 dpi may cause a memory overflow error in machines equipped only with 32MB of memory (ex. Model-K P2).

   This is because the PS fonts download feature uses approximately 800kB, which can bring the amount of available memory close to capacity with the above printing conditions.

   Workaround:

   - Printing at 600dpi may prevent an overflow, even with just the 32MB memory installed.
   - Changing the memory usage setting from “Frame Priority” to “Font Priority” may prevent an overflow.

Permanent Solution

Modification of the font ROM on the ROM DIMM or the Controller Board, from October ’02, production or later (details differ depending on the model). Specifically, the Euro currency symbol has been added to the 112 fonts mentioned above.

Note:

1. When the new ROM DIMM or Controller Board is installed, it is <u>not</u> necessary to disable the PS fonts download feature (temporary solution).
2. An MB will be issued separately announcing the P/N change for the ROMM DIMM and Controller Boards, and cut-in serial number.

ROM DIMM and Controller Board P/N:

Model	Where the font ROM is soldered	Current P/N	Model	Where the font ROM is soldered	Current P/N
Model-K P2	Controller	G0735712	Model-J CF	ROM DIMM	G5706687
		G0745712	Model-U P1	ROM DIMM	G0705851
Adonis-C2	ROM DIMM	B3615117	Model-U C1	ROM DIMM	B5295117
		B3625118			B4635117
Model-A P3	Controller	G0656022	Martini-C1	ROM DIMM	G3395117
		G0656023			G3385117
Russian-C2	ROM DIMM	B4615117	Model-K3	Controller	B5165750
		B4535117			
Model-J P1b	ROM DIMM	G0776120			

Model: General RTB	Date: 8-Nov-02	No.: RGene011

Font Table

	Euro symbol is printed correctly.
	This is a symbol font, so no countermeasure is applied.
	Both temporary and permanent solutions work to print out the Euro currency symbol correctly.

AlbertusMT	Helvetica	Univers
AlbertusMT-Italic	Helvetica-Bold	Univers-Bold
AlbertusMT-Light	Helvetica-BoldOblique	Univers-BoldExt
AntiqueOlive-Bold	Helvetica-Condensed	Univers-BoldExtObl
AntiqueOlive-Compact	Helvetica-Condensed-Bold	Univers-BoldOblique
AntiqueOlive-Italic	Helvetica-Condensed-BoldObl	Univers-Condensed
AntiqueOlive-Roman	Helvetica-Condensed-Oblique	Univers-CondensedBold
Apple-Chancery	Helvetica-Narrow	Univers-CondensedBoldOblique
Arial-BoldItalicMT	Helvetica-Narrow-Bold	Univers-CondensedOblique
Arial-BoldMT	Helvetica-Narrow-BoldOblique	Univers-Extended
Arial-ItalicMT	Helvetica-Narrow-Oblique	Univers-ExtendedObl
ArialMT	Helvetica-Oblique	Univers-Light
AvantGarde-Book	HoeflerText-Black	Univers-LightOblique
AvantGarde-BookOblique	HoeflerText-BlackItalic	Univers-Oblique
AvantGarde-Demi	HoeflerText-Italic	Wingdings-Regular
AvantGarde-DemiOblique	HoeflerText-Ornaments	ZapfChancery-MediumItalic
Bodoni	HoeflerText-Regular	ZapfDingbats
Bodoni-Bold	JoannaMT	
Bodoni-BoldItalic	JoannaMT-Bold	
Bodoni-Italic	JoannaMT-BoldItalic	
Bodoni-Poster	JoannaMT-Italic	
Bodoni-PosterCompressed	LetterGothic	
Bookman-Demi	LetterGothic-Bold	
Bookman-DemiItalic	LetterGothic-BoldSlanted	
Bookman-Light	LetterGothic-Slanted	
Bookman-LightItalic	LubalinGraph-Book	
Carta	LubalinGraph-BookOblique	
Chicago	LubalinGraph-Demi	
Clarendon	LubalinGraph-DemiOblique	
Clarendon-Bold	Marigold	
Clarendon-Light	MonaLisa-Recut	
CooperBlack	Monaco	
CooperBlack-Italic	NewCenturySchlbk-Bold	
Copperplate-ThirtyThreeBC	NewCenturySchlbk-BoldItalic	
Copperplate-ThirtyTwoBC	NewCenturySchlbk-Italic	
Coronet-Regular	NewCenturySchlbk-Roman	
Courier	NewYork	
Courier-Bold	Optima	
Courier-BoldOblique	Optima-Bold	
Courier-Oblique	Optima-BoldItalic	
Eurostile	Optima-Italic	
Eurostile-Bold	Oxford	
Eurostile-BoldExtendedTwo	Palatino-Bold	
Eurostile-ExtendedTwo	Palatino-BoldItalic	

Geneva	Palatino-Italic
GillSans	Palatino-Roman
GillSans-Bold	StempelGaramond-Bold
GillSans-BoldCondensed	StempelGaramond-BoldItalic
GillSans-BoldItalic	StempelGaramond-Italic
GillSans-Condensed	StempelGaramond-Roman
GillSans-ExtraBold	Symbol
GillSans-Italic	Tekton
GillSans-Light	Times-Bold
GillSans-LightItalic	Times-BoldItalic
Goudy	Times-Italic
Goudy-Bold	Times-Roman
Goudy-BoldItalic	TimesNewRomanPS-BoldItalicMT
Goudy-ExtraBold	TimesNewRomanPS-BoldMT
Goudy-Italic	TimesNewRomanPS-ItalicMT
	TimesNewRomanPSMT

Workaround Announced on the FAQ Page

Question:

Euro Fonts printing problem

Answer:

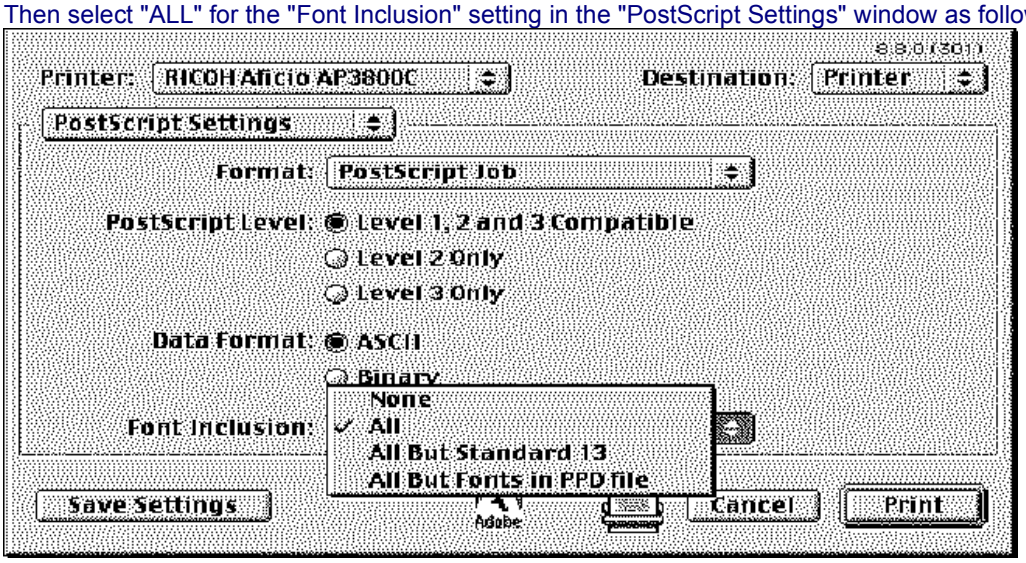
If Euro Fonts can't be printed by the PS driver, the following solutions may be effective.

Solution

MacOS 9.x / 8.x

Use the AdobePS 8.8 printer driver.
Get the printer driver from the Adobe site on the web.
http://www.adobe.com/support/downloads/product.jsp?product=44&platform=Macintosh

Then select "ALL" for the "Font Inclusion" setting in the "PostScript Settings" window as follows.



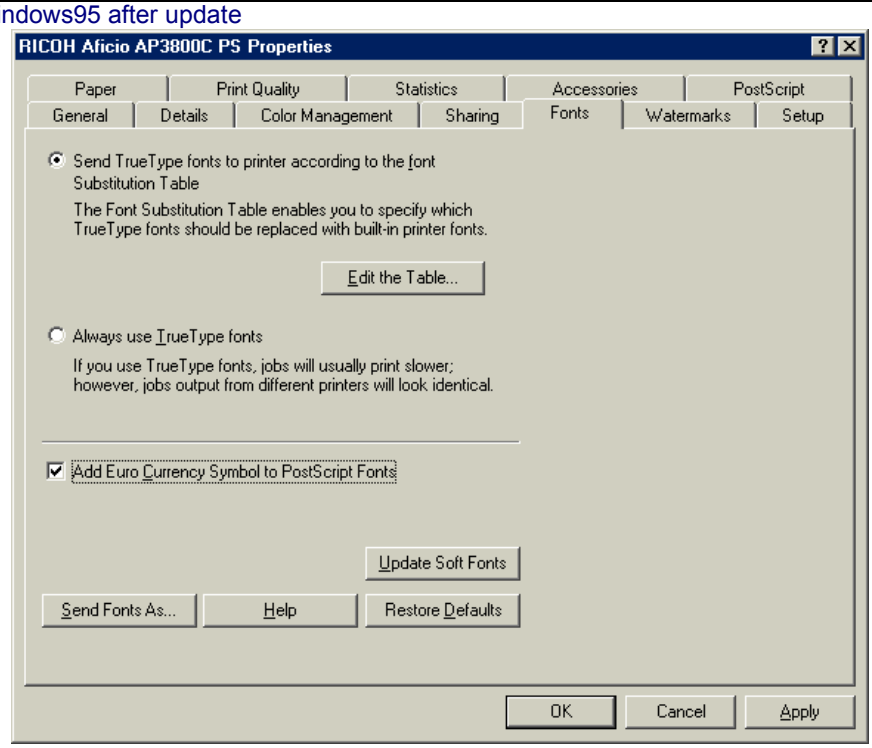
Windows 95

Update Windows95 to "Euro Currency Support for Windows95".
You can get it from the following URL.

http://www.microsoft.com/windows95/downloads/contents/WURecommended/S_WUFeatured/W95EuroPatch/Default.asp

Then the "Add Euro Currency Symbol to PostScript Fonts" check box is available.
Check "Add Euro Currency Symbol to PostScript Fonts". (Before update, the check box doesn't work.)

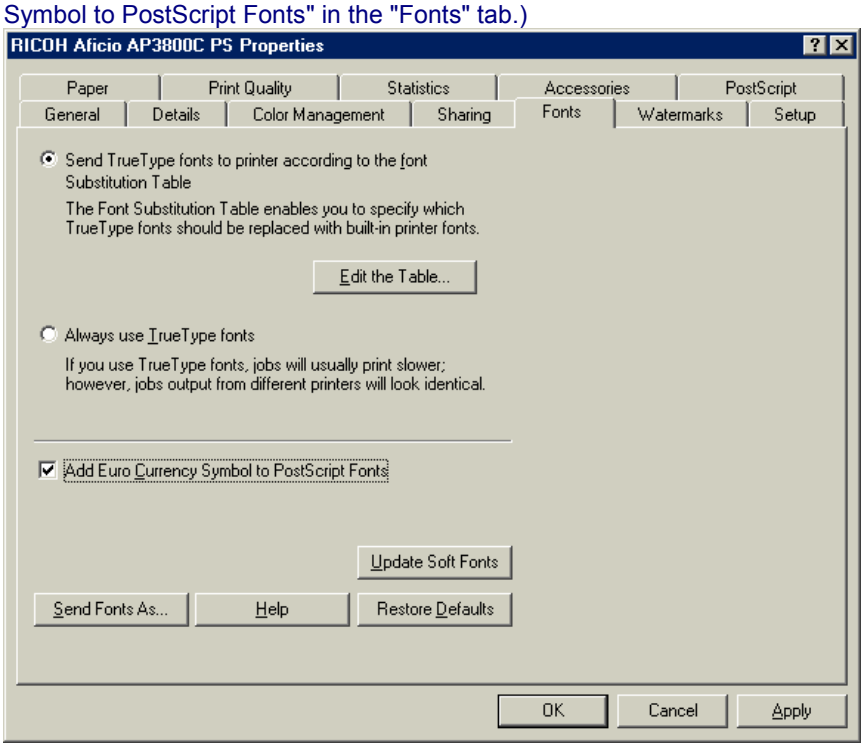
Windows95 after update



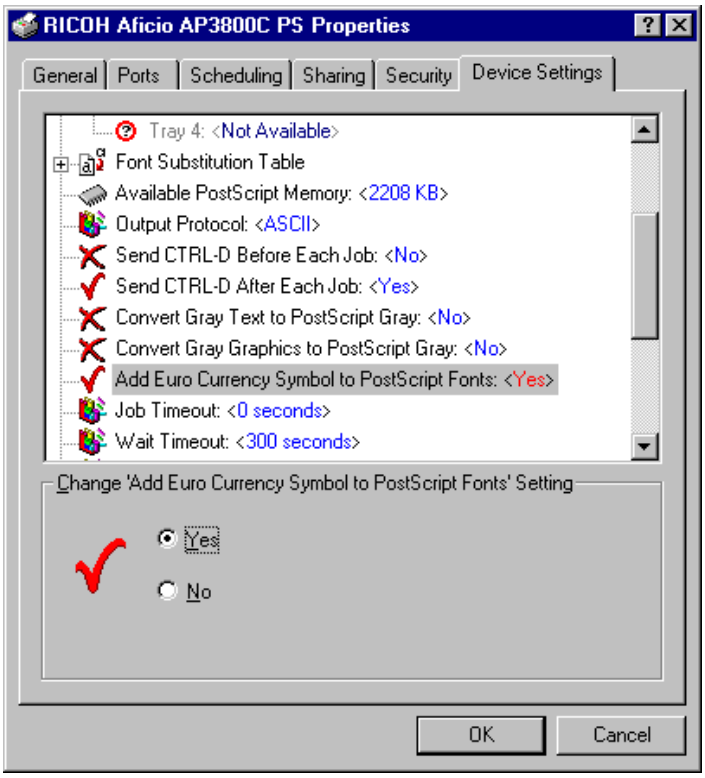
Windows 98 / ME / NT4.0 / XP

Check "Add Euro Currency Symbol to PostScript Fonts" .

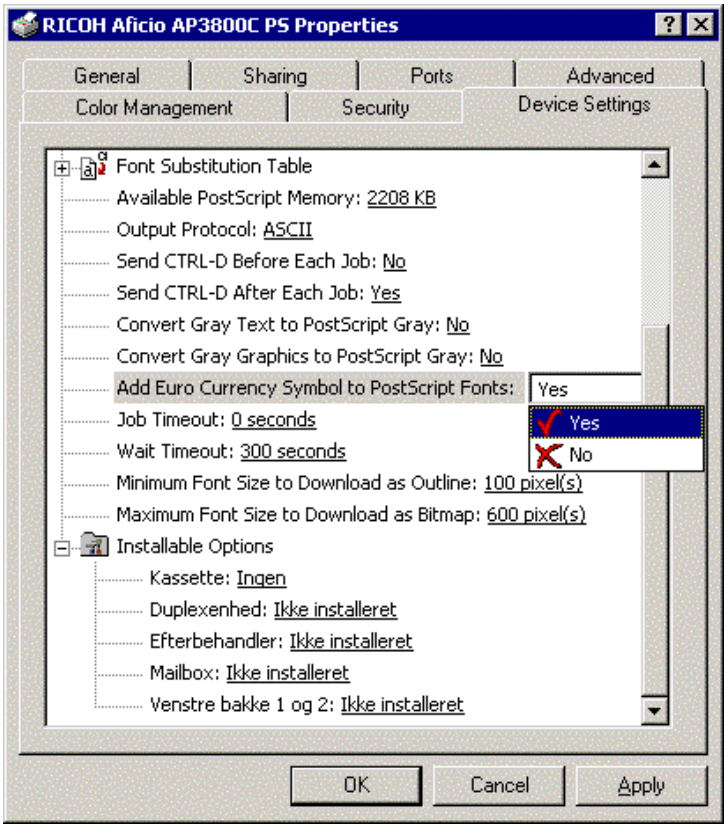
Windows 98 / ME (Note: The AdobePS driver version 4.3.1 or later has "Add Euro Currency Symbol to PostScript Fonts" in the "Fonts" tab.)



Windows NT4.0



Windows XP



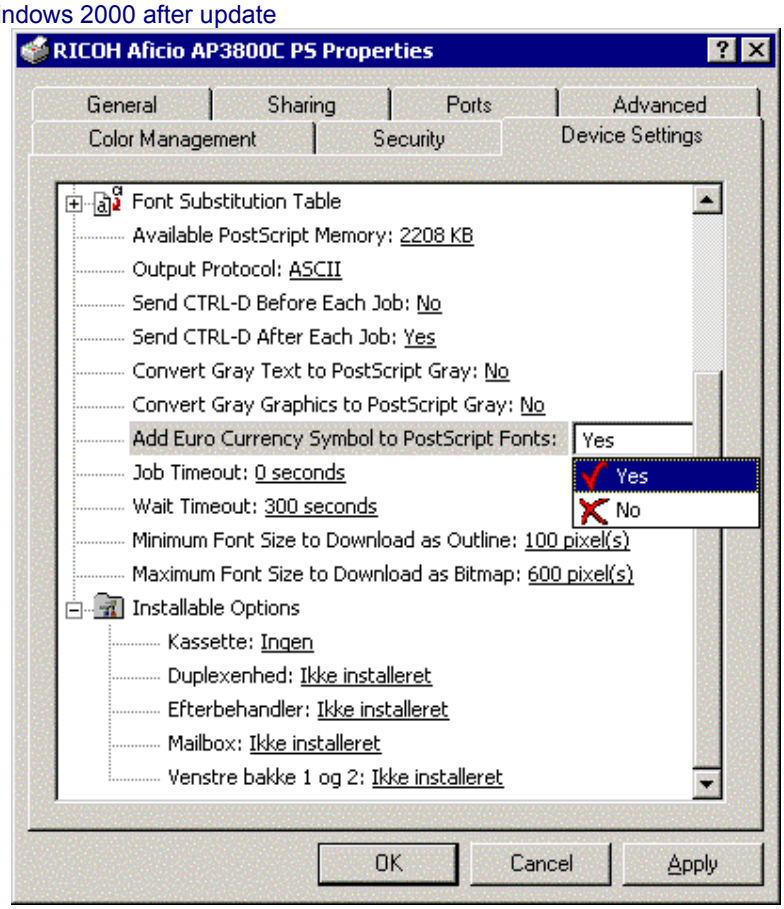
Windows 2000

Update the printer driver to v5.5.2 or later.
You can get it from the printer driver v1.0.6 on the Adobe web site that includes the W2000 driver v 5.5.2.

http://www.adobe.com/support/downloads/product.jsp?product=44&platform=Windows

Then the "Add Euro Currency Symbol to PostScript Fonts" check box is displayed.
Check "Add Euro Currency Symbol to PostScript Fonts".

Windows 2000 after update



Model: Model-J	Date: 9-Dec-02	No.: RG060018

Subject: SC220-004	Prepared: H.Taguchi
From: Technical Services sec. Service Planning Dept.	

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

Symptom:

SC220-004 may occur when the first black-and-white page is printed out after turning on the main power switch or when the machine recovers from Energy Saver Mode.

Cause:

The modified EMAC (EMAC2) on the LD Unit sometimes does not work properly with engine firmware version B1.19 or older.

Action in the Field:

Upgrade the engine firmware to version B1.21 or newer on machines from the serial number ranges listed below when the problem is reported, or when installing the new laser optics housing Unit (P/N #G0801853) with EMAC2.

Machines equipped with the EMAC2 that require upgrade to version B1.21 or newer:

G060-17: P6020700040 to P6020701800

G060-22: P6020701851 to P6020702225, P6020800001 to P6020800250

G060-24: L0882070001 to L0882070088, L0882080001 to L0882080020

G060-26: 4G80720001 to 4G80720070

G060-27: P6020702226 to P6020703275, P6020800251 to P6020800737

G060-29: P6020703276 to P6020703461, P6020800793 to P6020800892

G060-17: P8920700001 to P8920700100, P8920800001 to P8920800050

Reissued: 27-Dec-02

Model: Model-J	Date: 9-Dec-02	No.:RG060019a

RTB Reissue

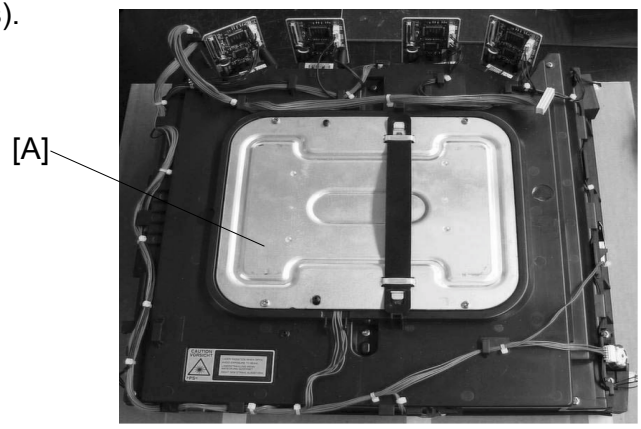
The items in bold italics have been corrected or added.

Subject: Action required when replacing the laser optics housing unit			Prepared: H.Taguchi
From: Technical Services Sec. Service Planning Dept.			
Classification:	☐ Troubleshooting	☐ Part information	☒ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Other ( )		

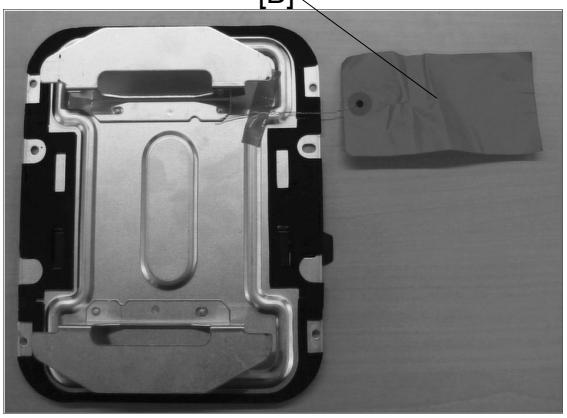
Be sure to remove the sponge supporting the polygon mirror motor before installing the new laser optics housing unit (P/N #G0801853).

Caution: If the sponge is not removed, the polygon mirror motor can be damaged and/or the printer may not function correctly.

1. Open the upper cover [A] (4 screws).

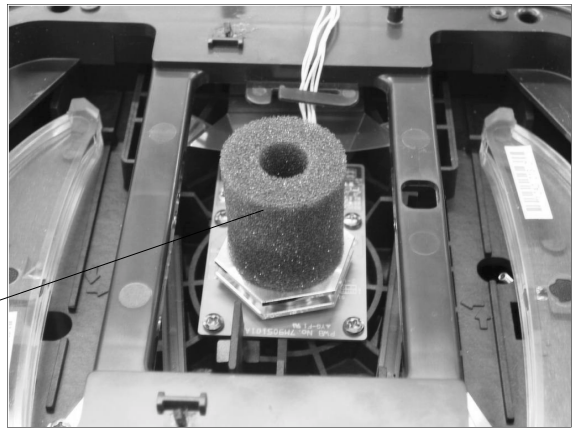


2. Remove the red tag [B] (tape).



Model: Model-J	Date: 9-Dec-02	No.:RG060019a

3. Remove the sponge [C].



Note 1: Be sure not to touch any of the mirror or lens surfaces.

Note 2: Be sure that dust does not get into the unit.

4. Reattach the upper cover

5. If the engine firmware is version B1.19 or older, upgrade it to version B1.21 or newer (refer to RTB #RG060018 for details).

6. Please make a color demo page in the UP mode just after completing the following steps (before fully reassembling the machine).

- ***Housing unit is replaced.***
- ***Flat cables and harness are connected.***
- ***Toner supply unit is repositioned.***
- ***Upper cover is placed in position.***

If color(s) are missing on the output, refer to RTB #RG060020 for details

Model: Model-J P1b	Date: 27-Dec-02	No.: RG060020

Subject: Color missing	Prepared by: H.Taguchi
From: Technical Services Sec. Service Planning Dept.	

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

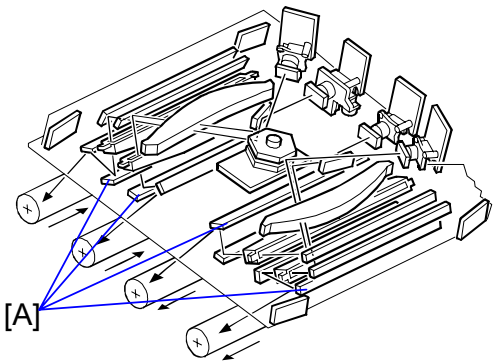
SYMPTOM

The following problem has recently been reported from the field.
After replacing the laser optics housing unit and when printing color images, color(s) were missing on output prints without any SC code.

CAUSE

The third mirror(s) [A], which direct the laser to the OPC, were out of position. Rough handling of the service part during transportation might cause this problem.

As shown in the pictures, the spring plate [B] positions the mirror. The mirror may become the out of position, changing the angle with the OPC drum.

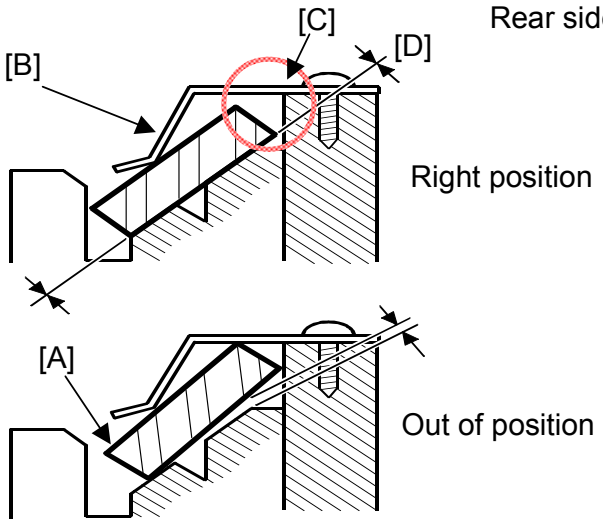


Action Required / Troubleshooting

When replacing the laser optics housing unit, please make a color demo page in the UP mode just after completing the following steps (before fully reassembling the machine).

- Housing unit is replaced.
- Flat cables and harness are connected.
- Toner supply unit is repositioned.
- Upper cover is placed in position.

If color(s) is (are) missing on the output, remove the laser optics housing unit and lower cover (10 screws), and reposition the mirror(s) for the missing color(s) once the spring plate is removed.



There is a space [C] that allows some movement along from the mounting plane [D]. However, movement along this plane will not cause the missing color problem. If the mirror is angled away from the mounting plane, colors may be lost.

NOTE: To minimize the problem occurrence on the service parts, a modification is under investigation. The details will be informed when a modification is applied.

Model: General RTB	Date: 27-Dec-02	No.: RGene012

Subject: GW Products - Hardware Ethernet Problem	Prepared by: T. Itoh
From: Technical Services Sec. Service Planning Dept.	

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

SYMPTOM

When the main switch is turned on, the error message “Hardware Ethernet Problem” may be displayed under the following condition on the GW-based products.

Conditions:

- Network speed on the hub has been set to 100Mbps fixed with full duplex, and
- Length of network cable is too long (60 m or more) or the cable quality is not good enough

CAUSE

When the main switch is turned on, the machine performs a loop-back test. If the cable length is too long or its quality is not good enough, the damping factor for the data transmission becomes worse, and the machine incorrectly detects an error during this test. This happens only when the network speed is set to 100Mbps fixed with full duplex. The PHY chip used on the controller board causes this.

SOLUTION

- Temporary Solution -

- Set the network speed on the hub to Auto-sensing,
- Use a shorter cable or a cable with a lower damping factor, or
- Disconnect the network cable and power on the printer; then, set the cable after the printer comes to the ready condition.

- Permanent Solution -

The controller firmware will be modified to avoid the incorrect detection of this error message. The schedule of firmware modification is as follows.

Product Type	Product	Firmware Modification Cut-in Schedule
Fax	Kaiser 3	at next modification
Printer	Model-K P1	
	Model-K P2	
	Model-J P1b	
	Model-J CF	
	Model-U P1e	’03 January production run
	Model-A P3	’03 March production run
MFP	Model-R C2	at next modification run
	Model-A C2	
	Model-M C1	
	Model-U C1	’03 February production run

NOTE:
Firmware will be posted in the usual manner when it is released.

Reissued: 31-Jan-03

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002h

RTB Reissue

Subject: Firmware Modification			Prepared by: H. Someya
From: Technical Services Sec. Service Planning Dept.			
Classification:	☐ Troubleshooting	☒ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Other ( )		

This bulletin explains the firmware modification history for the Model-J (details begin on page 2).

	BCU		Controller		
Firmware Type	**Main**	**Music**	**Controller**		**NIB**
			1	2	
Remarks	(see Note below)	(see Note below)	File Name G0775910#.bin # : suffix	File Name G0775911#.bin # : suffix	(see Note below)

Note: The Main, Music and NIB firmware are used for both the G060 printer and G060/G570 CF Expander.

.

RTB Revision List

Issue Date	Control Symbol	Revised contents
09-Jan-02	-	First edition
24-Jan-02	<<A>>	Engine Main: 1.11G -> 1.11H -> 1.15E Controller: 2.06 -> 2.07 -> 2.08 -> 2.11
7-Mar-02	<<B>>	Engine Main: 1.15E -> 1.17C Engine MUSIC: 1.04 -> 1.06 Controller: 2.11 -> 2.12 -> 2.13
15-Apr-02	<<C>>	NIB: 1.75.1 -> 1.78
28-Jun-02	<<D>>	Engine: 1.17C -> 1.18 -> 1.18B Engine MUSIC: 1.06 -> 1.07 Controller: 2.13 -> 2.14 NIB: 1.78 -> 1.81
18-Jul-02	<<E>>	Controller: 2.14 -> 2.16
6-Sep-02	<<F>>	Engine: 1.18B -> 1.19
1-Nov-02	<<G>>	Engine: 1.19 -> 1.21 -> 1.22 Controller: 2.16 -> 2.17 -> 2.18 NIB: 1.81 -> 1.82
31-Jan-03	<<H>>	Controller: 2.18 -> 2.19

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002h

[Modification History]

1. Engine Main Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0775611	B1.10	-	Firmware installed from the first mass production run.	July
G0775611D	B1.11A	-	Charge and development bias applied during the toner end recovery mode has been changed to optimize the drum cleaning function.	August
G0775611E	B1.11B	-	The frequency to control the color drum motor has been optimized so that the motor starts smoothly rotating.	August
G0775611G	B1.11D	-	The following specification change has been applied: The yield target of PCUs has been changed from 100KP to 50KP.	-
G0775611H	B1.11F	-	The following problem has been fixed. • The machine suddenly keeps running due to memory overflow. • SC670 when the machine starts waking up from the energy saver mode	-
G0775611J	B1.11G	45A0	The following problem has been fixed. Black developer initialization fails because toner is mistakenly supplied due to software bug, causing SC370 (Developer Initialization Error – Black). This happens when performing only the black developer initialization. (If performing the developer initialization for black and other color(s) simultaneously, this problem does not occur.) If the main switch is tuned off and on, the SC code is reset and the machine re-starts the developer initialization. In the worst case, toner flows out from development unit (the entrance area where toner is supplied) to the inside of machine.	September Local Modification (See **NOTE. 1**.)
G0775621 <<A>>	B1.11H	-	A fusing clutch has been added to maximize the life of the fusing unit and oil supply unit. This firmware version was temporarily installed in production machines to keep the clutch constantly moving, until the clutch control program could be added to the next version (1.15E). **NOTE:** Therefore this version has <u>not</u> been released.	
G0775621A <<A>>	B1.15E	171C	• Fusing clutch control has been added to start/stop the clutch. • The following has been corrected: ※ When a paper jam occurs midway through a staple job, job recovery may re-start the job from the 1st page instead. • Over-occurrence of the following SC codes (due to software bugs) has been fixed: ※ SC220/230 at the start of a job ※ SC544/554 during warm-up under low-temp conditions in 62.5mm/sec mode.	December, 2001

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002h

<table>
<tr><th>P/N</th><th>Version</th><th>Check Sum</th><th>Contents of Modification</th><th>Cut-in Month</th></tr>
<tr><td></td><td></td><td></td><td>
• SP1-916 (Idling mode) has been added.
<table>
<tr><td>916</td><td colspan="4">[Idling Mode]</td></tr>
<tr><td></td><td>1</td><td>Mode Set</td><td>*</td><td>Enables or disables fusing unit idling performed after the machine reaches the Ready condition. Idling is performed for the time specified in SP1-916-2.
[0 or 1/ 0 / -] DFU
0: OFF, 1: ON</td></tr>
<tr><td></td><td>2</td><td>Idling Time</td><td></td><td>Specifies the time for fusing unit idling.
[10 to 120 / 30 / 10 sec/step] DFU</td></tr>
<tr><td></td><td>3</td><td>Pre-Job Mode</td><td></td><td>Enables or disables the 4-second fusing unit idling performed at the start of a print job.
[0 or 1/ 0 / -] DFU
0: OFF, 1: ON</td></tr>
</table>
</td><td></td></tr>
<tr><td>G0775623
<<B>></td><td>B1.17C</td><td>169B</td><td>
• To optimize the amount of oil supplied to the fusing belt in OHP mode, the number of supply cycles during idling has been reduced to 1.
• SP1-996-6 (OHP Pre-Job mode) has been added.
<table>
<tr><td>996</td><td colspan="4">[OHP/TH Fusing]</td></tr>
<tr><td></td><td>6</td><td>Pre-Job Mode</td><td>*</td><td>Enables or disables the 30-second fusing unit idling performed at the start of an OHP print job. When enabled, idling is performed even if the machine is at the Ready condition.
[0 or 1/ 0 / -]
0: OFF, 1: ON</td></tr>
</table>
• A new Coverage Counter has been added to SP7-908-1 to -8 (SP7-908-5 to –8 are the same as SP7-833-11 to -14). With this new counter, B/W pages that follow color pages in ACS will be counted as B/W, and the CMY counters will not count up. To activate this function, it is necessary to use the 8kB NVRAM on the BCU board and controller firmware version 2.13 or newer.
• The machine automatically detects whether a 4kB or 8kB NVRAM is installed on the BCU board.
• A grid pattern has been added to SP mode copy images. To activate this, it is necessary to use system firmware ver1.07 or newer (for the CF expander only).
</td><td>March, 2002 (See NOTE. 2.)</td></tr>
</table>

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002h

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			• The following have been corrected: ※ SC240 misdetection. ※ When the K toner cartridge is replaced, the "previous PM counter" values for CMY are all overwritten to the previous value for K toner (SP7-906-23 to –25). ※ If machine enters Energy Saver 1 Mode then cools down for more than 1 minute, it will not display "Ready" after recovery warm-up (only for G060-17 models). ※ When a B/W job is performed, the coverage counters (SP7-833-1 to -4) for CMY are not set to 0 as they should be, i.e. the values from the previous job remain.	
G0775623A <<D>>	B1.18	F284	• The following have been corrected: ※ Main scan magnification error (see RTB #RG060015 for details; to be released soon). ※ SC471 caused by stop timing error for transfer belt contact motor. ※ SC545 in fusing phase control mode. ※ SC543 **NOTE:** This version has <u>not</u> been released (see "side effect" below).	May, 2002
G0775623B <<D>>	B1.18B	D7B1	• The following have been corrected: ※ SC230 at automatic line position adjustment ***(see RTB #RG570004 for details; to be released soon)***. ※ Side effect for B1.18 SC545 modification (only for G060-17 models): The machine does not display "Ready" after recovery warm-up from Energy Saver 1 Mode in phase control mode (see RTB #RG060013 for details; to be released soon).	Middle of June, 2002
G0775623C <<F>>	B1.19	BB39	• The following have been corrected: ※ When SP1-916-1 is set to 1, the machine may not reach the Ready condition after the main SW is turned on in low-temp, low-humidity environments. ※ Upgrade error recovery cannot be performed with version 4 of the BCU ASIC (Gate Array PCI).	August, 2002
G0775623D <<G>>	B1.21	3F29	• The following have been corrected: ※ SC220-4 for machines with LD unit E-MAC2 installed. • Destination code for China added. • New SP mode added: SP3-922 (OPU_Refresh2). To activate this function, it is necessary to	September, 2002

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002h

<table>
<tr><th>P/N</th><th>Version</th><th>Check Sum</th><th>Contents of Modification</th><th>Cut-in Month</th></tr>
<tr><td></td><td></td><td></td><td>use controller firmware version 2.17 and CF system firmware version 1.10 or newer.

<table>
<tr><td>922</td><td colspan="4">[OPU_Refresh2]</td></tr>
<tr><td></td><td>1</td><td>Mode_Set</td><td>*</td><td>Enables or disables the filming removal mode (CMY), which forcibly creates a temporary 15mm-wide toner line on the drum surface by applying the development bias and turning on the development clutch at the end of a job.
[0 to 2/ 0 / -]
0: Disabled
1: Performed at end of job only when ave. pixel cov. ratio of previous job is low.
2: Performed at end of every job</td></tr>
<tr><td></td><td>2</td><td>Bias_Set</td><td>*</td><td>Development bias setting for filming removal mode (CMY)
[100 to 400/ 200 / 10] DFU
0: OFF, 1: ON</td></tr>
</table>
</td><td></td></tr>
<tr><td>G0775623E
<<G>></td><td>B1.22</td><td>CCAA</td><td>• The following has been corrected:
※ Paper jam with Series Printing when the exit tray setting is not the same for all individual jobs.</td><td>October, 2002</td></tr>
</table>

NOTE: 1. Engine main firmware version B1.11G has been implemented from September 25th production run. The machines with Ver. B1.11F or older have been reworked in local: However, some machines have been released to the market without modification. So, please make sure that the version of the engine main firmware is “B1.11G” at installation or next visit. If not, please update it to “B1.11G” or later.

NOTE: 2. G060-17 models – Engine main firmware version B1.17C was applied to the production line on February 18th, 2002, and most machines with Ver. B1.15E have been reworked locally: However, some of these machines have been released to the market without modification. Therefore please update the engine firmware to ver B1.17C or newer on G060-17 machines in the following serial number range: P60112xxxxx – P60201xxxxx.

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002h

2. Engine MUSIC

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605612B	1.04	-	Firmware installed from the first mass production run.	July
G0775624 <<B>>	1.06	62FD	The firmware header has been corrected to allow the MUSIC firmware to be updated using the IC card.	March, 2002
G0775624A <<D>>	1.07	6576	The firmware header has been corrected for Japanese models only.	May, 2002

3. Controller Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605910G G0605911G	2.00	-	Firmware installed from the first mass production run.	July
G0605910H G0605911H	2.01	-	• "Asia" has been added to the destination code.	July
G0775910 G0775911	2.04	-	• The counter click up specification has been changed as follows: **Old specification:** Machine counts a page up as black or color based on the color data sent from the application. Therefore if a document from the PC contains blank (but defined) spaces highlighted in red, e.g., the controller interprets this as color data and counts it as a color print. **New specification:** The machine counts up the page as B/W or color based on the CMYK data, i.e. the actual toner colors used to develop the image, regardless of the actual color data from the application. • To meet the CPU specification change from 250MHz to 300MHz. • Color profile of the PCL driver has been changed to Ver. 1.1.2a. The following problem has been corrected: When designating the Finisher shift tray 1 for paper output tray as default, paper is not fed out to shift tray 1.	August Local Modification (See **NOTE**. **1.**)
G0775910A G0775911A	2.05	13D2 7709	• The following problem has been corrected. 1. B&W prints cannot be made if color toner is empty. 2. HDD format cannot be done when SC860 is detected.	

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002h

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			• CRD version of PS3 has been updated to Ver. 1.2.1. • Presentation color profile version of PCL has been updated to Ver. 1.2.1. (Photographic color profile stays the same as Ver. 1.1.2a.)	
G0775910A G0775911A	2.05A	28E0 176D	The following problem has been fixed. (This problem occurs only when selecting German language.) When selecting the meter click mode and printing the counter sheet from the user program mode, the message of “Color” and “Black” is printed in the other way around.	October ’01 Local Modification (See **NOTE**. **2.**)
G0775910B G0775911B	2.06	A556 B965	The following problem has been fixed. • When all memory clear (SP5-801-001 or 002) is done, the destination code is cleared to “0 (Japan)”. Since Japanese fonts are not stored for the messages, strange characters appear. • When printing A3+ (12”x18”) size documents, the image is not shift to center, causing a big white margin at the trailing edge.	October, ‘01
G0775910B G0775911B <<A>>	2.07	-	• PS configuration page printing is now limited to plain or recycled paper (previously, it could be printed out onto any paper type). • The following has been fixed: Selecting a custom paper size in the PCL may, in rare cases, cause the PC to freeze.	
G0775910C G0775911C <<A>>	2.08	-	The following has been fixed: If the output tray becomes full while the machine is receiving print job data in Series Print mode, following tray-full recovery, the remaining pages may be printed out in the wrong order. See RTB RGene010 for details on Series Print mode.	
G0775910D G0775911D <<A>>	2.11	CCB1 2519	• Letterhead Mode has been added (see RTB #006 for details). • The following has been fixed: Paper is not punched at the designated position in Series Print mode (see RTB RGene010 for details on Series Print mode).	January, 2002
G0775910E G0775911E <<B>>	2.12	-	• The following has been fixed: While downloading PS fonts to a machine with the HDD option installed, the correct PS serial number cannot be output.	
G0775910F G0775911F <<B>>	2.13	412E C03D	• Euro fonts PC858, ISO8859-15, L9, PS Math and MC Text are now supported. • PS performance improvement. • RMS is supported with the use of the customized controller (field monitoring machines only). • A new Coverage Counter has been added to SP7-908-1 to -8 (SP7-908-5 to –8 are the same as SP7-833-11 to -14). With this new counter, B/W pages that follow color pages in ACS will be counted as B/W, and the CMY counters will not count up. To activate this function, it is	March, 2002

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002h

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			necessary to use the 8kB NVRAM on the BCU board and engine firmware version B1.17C or newer. • The following have been fixed: ※ When the undefined command, "<ESC>&k#w", is received, it appears on the output as a character string [e.g. as "<ESC>&k6w"]. ※ If Job Reset is selected while the first page of a multiple-page document is being processed, the panel continues to display “Printing”. ※ AutoContinue timer bug. ※ The Punch Counter counts up by 2 for every sheet punched when using the function in Duplex Mode.	
G0775910G G0775911G <<D>>	2.14	AB1E 2573	• The following have been fixed: ※ PCL - Modified the dither size for when the UDFP command is used (GFPR# RE02030021) - Modified so that some characters in symbol sets MS Text and Windows Baltic (19L) will appear exactly as they do with HP printers. ※ PS - The margin for Custom size has been changed from 12 to 11 points to expand the maximum printing area. - Modified the dither setting for when the DeviceGray command is used. • Change in Specification: ※ Supports the Status Readback function of the PCL5e. ※ When the machine has no HDD option, the PCL HDD Directory List (and font source) will not be printed on the PCL Configuration Page.	June, 2002
G0775910H G0775911H <<E>>	2.16	F270 7677	• The printing speed of a PS job slows down after a PS3 job is reset.	July, 2002
G0775910J G0775911J <<G>>	2.17	9A5A BDF1	• When paper size error occurs using PCL printing, the printer error message of SNM for Client is not displayed on the PC.	September, 2002
G0775910K G0775911K <<G>>	2.18	2A77 4BAB	• The following have been fixed: ※ PCL - Slow Printing from AutoCAD.(GFPR# RC02070001) ※ PS - Euro symbol is not printed.(GFPR# RC02040005)	October, 2002

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002h

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			Please refer to RTB #RGENE011 which will be issued soon, for the procedure of how to fix this issue. - PS print file is printed as text.(GFPR# RE02040013)	
G0775910L G0775911L <<H>>	2.19	1421 2E85	• The following have been fixed: ※ After using a User Tool at the operation panel, PCL print jobs may keep showing "Printing..." on operation panel. ※ The Form Lines value (in the PCL Menu) changes after you reboot the Machine. (GFPR# RA02090003) ※ PCL - Response to the PJL INFO CONFIG command does not include a serial number. - The print job may stop during the processing of the file when using "INFICO". (GFPR# RE02090012) - The work area of the RAM is reduced whenever fonts that have been downloaded to the HDD are used. ※ PS - 16bit color blend data does not print correctly. (TechMail#RE0200414) - Slow Printing from AutoCAD. (GFPR# RC02070001) - Printing may not work correctly when a protocol other than EtherTalk is used with Macintosh 8.x/9.x.(TechMail#UK020107) - The printer controller locks up when printing from Unix Acrobat. - Lines may be printed on the blank parts of the page. - The error log is not included on the Configuration page when the punch error occurred. - When data is sent that outputs 3 hole punch to the European model (which supports 2&4 hole punch), the output has 2 hole punch. (Now the output has no punch holes). - Printing on envelopes may not work correctly. ※ PJL - Response to the PJL INFO CONFIG command does not include a serial number.	December, 2002

NOTE: 1. The Meter Click counter specification has been changed from the controller firmware (Ver. 2.04). The machines with Ver. 2.01 or older have been reworked in local. However, some machines have been released to the market without modification. So, please make sure that the version of the engine main firmware is “2.04” or later at installation or next visit. If not, please update it to the latest firmware.

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002h

NOTE: 2. Messages "Color" and "Black" in the meter click counter is reversibly displayed on the screen and print out only when German language is selected. The machines with Ver. 2.05 or older have been reworked in local. However, some machines have been released to the market without modification. If the machine is set to German language, please make sure that the version of the engine main firmware is "2.05A" or later at installation or next visit. If not, please update it to the latest firmware.

4. NIB Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605920J	1.72.1	B453	Firmware installed from the first mass production run.	July
G0605920K	1.74	3355	The followings have been corrected: • When the job is canceled, the lpr connection is terminated and a blank space is displayed in the syslog. Instead of the blank space, "Lost connection" is displayed. • When 50 or more lpq/lprm commands are sent, the lpd process cannot be completed properly and the job is not printed out. • If DHCP is ON and TCP/IP is OFF, the current device name (RNPXXXXXX) in SmartNetMonitor is not displayed. • NIB stops printing if several prints jobs are continuously sent to the NIB via the IPP port (SmartNetMonitor for Client), and a print job sent via the standard IPP port may be canceled.	July
G0605920L	1.75.1	64F4	The followings have been corrected: Nothing was displayed even though the "prnlog 0" command was done in telnet.	September (Local modification for –17 model)
G0605920M <<C>>	1.78	AB29	• If an undefined remote printer number is input in the Netware configuration page, communication between the NIB and Netware Server will be cut off. • No error message is displayed in Netscape Navigator even when an incorrect URL is input in the address bar. • Up to 32 characters can be input in the NetBEUI configuration screen Comment box, even though specification is 31 characters maximum. • If Trap is selected for the Access Type in the SNMP Configuration screen during the snmpd process, communication may be cut off. • The NIB does not respond to the "lprm –" command (root directory) from a FreeBSD host computer. • TCP Ports 11021 and 11023 (Design use) have been closed.	January, 2002

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002h

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			• There were two error messages displayed when no files were available for download using FTP. The two messages were merged to "550: No such file or directory". • PS status can be displayed in STAT command using ftpd/ rshd/ telnetd/ lpd. • During a given FTP login session, the NIB counts up every user command issued as a new session. • The length of the login user name can be up to 64 characters when using FTP.	
G0605920N <<D>>	1.81	8FA3	• The following have been fixed: ※ Cannot connect to Novell NDS (GFPR# RC02010007). ※ Two or more print queues can be attached to a single printer object (TechMail RC010430). ※ The controller freezes if it is disconnected while the data which generates the Readback command is being printed out with ftp/rsh. ※ The controller freezes when it cannot find the file specified for rcp transmission. ※ The parameters of sysLocation and sysContact cannot be set correctly using the snmp command with telnet. ※ The Fax Management Tool cannot be used for a while after any of the NIB setting(s) are changed. • Change in Specification: ※ SNMP vulnerability - SNMP security vulnerabilities reported by CERT on Feb.12, 2002 has been resolved and tested using the PROTOS c06-snmpv1 test suite. **CERT** :http://www.cert.org/advisories/CA-2002-03.html **PROTOS c06-snmpv1 test suite :**http://www.ee.oulu.fi/research/ouspg/protos/testing/c06/snmpv1/ ※ TCP ports for disabled services (e.g. FTP) were open. ※ An unnecessary TCP port was open.	June, 2002
G0605920P <<G>>	1.82	384B	• HTTP and telnet protocols can be opened/closed using telnet. NOTE: After making the setting to disable HTTP, you cannot access the target device through a web browser. If your want to change this settings, please use telnet to open HTTP. When telnet port is disabled, you have to do clear the network settings (SP5-801-11) to open the telnet protocol. • Changed the default setting of DHCP to ON. NOTE: There is no change when updating the firmware. This feature is for the factory default. • It does not work in a UNIX environment even if the install Script in the controller is downloaded.	October, 2002

Reissued: 7-Feb-03

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002i

RTB Reissue

Subject: Firmware Modification			Prepared by: H. Taguchi
From: Technical Services Sec. Service Planning Dept.			
Classification:	☐ Troubleshooting	☒ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Other ( )		

This bulletin explains the firmware modification history for the Model-J (details begin on page 2).

	BCU		Controller		
Firmware Type	**Main**	**Music**	**Controller**		**NIB**
			1	2	
Remarks	(see Note below)	(see Note below)	File Name G0775910#.bin # : suffix	File Name G0775911#.bin # : suffix	(see Note below)

Note: The Main, Music and NIB firmware are used for both the G060 printer and G060/G570 CF Expander.

.

RTB Revision List

Issue Date	Control Symbol	Revised contents
09-Jan-02	-	First edition
24-Jan-02	<<A>>	Engine Main: 1.11G -> 1.11H -> 1.15E Controller: 2.06 -> 2.07 -> 2.08 -> 2.11
7-Mar-02	<<B>>	Engine Main: 1.15E -> 1.17C Engine MUSIC: 1.04 -> 1.06 Controller: 2.11 -> 2.12 -> 2.13
15-Apr-02	<<C>>	NIB: 1.75.1 -> 1.78
28-Jun-02	<<D>>	Engine: 1.17C -> 1.18 -> 1.18B Engine MUSIC: 1.06 -> 1.07 Controller: 2.13 -> 2.14 NIB: 1.78 -> 1.81
18-Jul-02	<<E>>	Controller: 2.14 -> 2.16
6-Sep-02	<<F>>	Engine: 1.18B -> 1.19
1-Nov-02	<<G>>	Engine: 1.19 -> 1.21 -> 1.22 Controller: 2.16 -> 2.17 -> 2.18 NIB: 1.81 -> 1.82
31-Jan-03	<<H>>	Controller: 2.18 -> 2.19
7-Feb-03	***<<I>>***	***Engine: 1.22 -> 1.23 -> 1.24***

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002i

[Modification History]

1. Engine Main Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0775611	B1.10	-	Firmware installed from the first mass production run.	July
G0775611D	B1.11A	-	Charge and development bias applied during the toner end recovery mode has been changed to optimize the drum cleaning function.	August
G0775611E	B1.11B	-	The frequency to control the color drum motor has been optimized so that the motor starts smoothly rotating.	August
G0775611G	B1.11D	-	The following specification change has been applied: The yield target of PCUs has been changed from 100KP to 50KP.	-
G0775611H	B1.11F	-	The following problem has been fixed. • The machine suddenly keeps running due to memory overflow. • SC670 when the machine starts waking up from the energy saver mode	-
G0775611J	B1.11G	45A0	The following problem has been fixed. Black developer initialization fails because toner is mistakenly supplied due to software bug, causing SC370 (Developer Initialization Error – Black). This happens when performing only the black developer initialization. (If performing the developer initialization for black and other color(s) simultaneously, this problem does not occur.) If the main switch is tuned off and on, the SC code is reset and the machine re-starts the developer initialization. In the worst case, toner flows out from development unit (the entrance area where toner is supplied) to the inside of machine.	September Local Modification (See **NOTE. 1**.)
G0775621 <<A>>	B1.11H	-	A fusing clutch has been added to maximize the life of the fusing unit and oil supply unit. This firmware version was temporarily installed in production machines to keep the clutch constantly moving, until the clutch control program could be added to the next version (1.15E). **NOTE:** Therefore this version has <u>not</u> been released.	
G0775621A <<A>>	B1.15E	171C	• Fusing clutch control has been added to start/stop the clutch. • The following has been corrected: ※ When a paper jam occurs midway through a staple job, job recovery may re-start the job from the 1st page instead. • Over-occurrence of the following SC codes (due to software bugs) has been fixed: ※ SC220/230 at the start of a job ※ SC544/554 during warm-up under low-temp conditions in 62.5mm/sec mode.	December, 2001

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002i

<table>
<tr><th>P/N</th><th>Version</th><th>Check Sum</th><th>Contents of Modification</th><th>Cut-in Month</th></tr>
<tr><td></td><td></td><td></td><td>
• SP1-916 (Idling mode) has been added.
<table>
<tr><td>916</td><td colspan="4">[Idling Mode]</td></tr>
<tr><td></td><td>1</td><td>Mode Set</td><td>*</td><td>Enables or disables fusing unit idling performed after the machine reaches the Ready condition. Idling is performed for the time specified in SP1-916-2.
[0 or 1/ 0 / -] DFU
0: OFF, 1: ON</td></tr>
<tr><td></td><td>2</td><td>Idling Time</td><td></td><td>Specifies the time for fusing unit idling.
[10 to 120 / 30 / 10 sec/step] DFU</td></tr>
<tr><td></td><td>3</td><td>Pre-Job Mode</td><td></td><td>Enables or disables the 4-second fusing unit idling performed at the start of a print job.
[0 or 1/ 0 / -] DFU
0: OFF, 1: ON</td></tr>
</table>
</td><td></td></tr>
<tr><td>G0775623
<<B>></td><td>B1.17C</td><td>169B</td><td>
• To optimize the amount of oil supplied to the fusing belt in OHP mode, the number of supply cycles during idling has been reduced to 1.
• SP1-996-6 (OHP Pre-Job mode) has been added.
<table>
<tr><td>996</td><td colspan="4">[OHP/TH Fusing]</td></tr>
<tr><td></td><td>6</td><td>Pre-Job Mode</td><td>*</td><td>Enables or disables the 30-second fusing unit idling performed at the start of an OHP print job. When enabled, idling is performed even if the machine is at the Ready condition.
[0 or 1/ 0 / -]
0: OFF, 1: ON</td></tr>
</table>
• A new Coverage Counter has been added to SP7-908-1 to -8 (SP7-908-5 to –8 are the same as SP7-833-11 to -14). With this new counter, B/W pages that follow color pages in ACS will be counted as B/W, and the CMY counters will not count up. To activate this function, it is necessary to use the 8kB NVRAM on the BCU board and controller firmware version 2.13 or newer.
• The machine automatically detects whether a 4kB or 8kB NVRAM is installed on the BCU board.
• A grid pattern has been added to SP mode copy images. To activate this, it is necessary to use system firmware ver1.07 or newer (for the CF expander only).
</td><td>March, 2002 (See NOTE. 2.)</td></tr>
</table>

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002i

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			• The following have been corrected: ※ SC240 misdetection. ※ When the K toner cartridge is replaced, the "previous PM counter" values for CMY are all overwritten to the previous value for K toner (SP7-906-23 to –25). ※ If machine enters Energy Saver 1 Mode then cools down for more than 1 minute, it will not display "Ready" after recovery warm-up (only for G060-17 models). ※ When a B/W job is performed, the coverage counters (SP7-833-1 to -4) for CMY are not set to 0 as they should be, i.e. the values from the previous job remain.	
G0775623A <<D>>	B1.18	F284	• The following have been corrected: ※ Main scan magnification error (see RTB #RG060015 for details; to be released soon). ※ SC471 caused by stop timing error for transfer belt contact motor. ※ SC545 in fusing phase control mode. ※ SC543 **NOTE:** This version has <u>not</u> been released (see "side effect" below).	May, 2002
G0775623B <<D>>	B1.18B	D7B1	• The following have been corrected: ※ SC230 at automatic line position adjustment ***(see RTB #RG570004 for details; to be released soon)***. ※ Side effect for B1.18 SC545 modification (only for G060-17 models): The machine does not display "Ready" after recovery warm-up from Energy Saver 1 Mode in phase control mode (see RTB #RG060013 for details; to be released soon).	Middle of June, 2002
G0775623C <<F>>	B1.19	BB39	• The following have been corrected: ※ When SP1-916-1 is set to 1, the machine may not reach the Ready condition after the main SW is turned on in low-temp, low-humidity environments. ※ Upgrade error recovery cannot be performed with version 4 of the BCU ASIC (Gate Array PCI).	August, 2002
G0775623D <<G>>	B1.21	3F29	• The following have been corrected: ※ SC220-4 for machines with LD unit E-MAC2 installed. • Destination code for China added. • New SP mode added: SP3-922 (OPU_Refresh2). To activate this function, it is necessary to	September, 2002

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002i

<table>
<tr><th>P/N</th><th>Version</th><th>Check Sum</th><th>Contents of Modification</th><th>Cut-in Month</th></tr>
<tr><td></td><td></td><td></td><td>use controller firmware version 2.17 and CF system firmware version 1.10 or newer.
<table>
<tr><td>922</td><td colspan="4">[OPU_Refresh2]</td></tr>
<tr><td></td><td>1</td><td>Mode_Set</td><td>*</td><td>Enables or disables the filming removal mode (CMY), which forcibly creates a temporary 15mm-wide toner line on the drum surface by applying the development bias and turning on the development clutch at the end of a job.
[0 to 2/ 0 / -]
0: Disabled
1: Performed at end of job only when ave. pixel cov. ratio of previous job is low.
2: Performed at end of every job</td></tr>
<tr><td></td><td>2</td><td>Bias_Set</td><td>*</td><td>Development bias setting for filming removal mode (CMY)
[100 to 400/ 200 / 10] DFU
0: OFF, 1: ON</td></tr>
</table></td><td></td></tr>
<tr><td>G0775623E
<<G>></td><td>B1.22</td><td>CCAA</td><td>• The following has been corrected:
※ Paper jam with Series Printing when the exit tray setting is not the same for all individual jobs.</td><td>October, 2002</td></tr>
<tr><td>G0775623F
<<I>></td><td>B1.23</td><td>3D1F</td><td>• The target PM intervals for SP7-803 (PM counter) have been changed as follows on the China model only (G060-69).
※ PCU:
SP7-803-1 PCU [K] Target sheets: 25000
SP7-803-2, 3, 4 PCU [CMY] Target sheets: 25000
SP7-803-17 PCU [K] Target revolutions: 137669
SP7-803-18, 19, 20 PCU [CMY] Target revolutions: 147953

※ Development unit:
SP7-803-5 Dev [K] Target sheets: 50000
SP7-803-6, 7, 8 Dev [CMY] Target sheets: 50000
SP7-803-21 Dev [K] Target revolutions: 538051
SP7-803-22, 23, 24 Dev [CMY] Target revolutions: 586693

※ Fusing unit:
SP7-803-15 Fusing, Target sheets: 50000</td><td>November, 2002</td></tr>
</table>

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002i

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			SP7-803-26 Fusing, Target revolutions: 4651000 • ***The target no. of revolutions for Fusing near end for SP-7-905-7 has been changed as follows for the China model only (G060-69).*** ※ ***Fusing: Alert*** ***SP7-905-7 Fusing near end, Target revolutions: 4418000***	
G0775623G <<I>>	***B1.24***	***514B***	• ***Supports 2-level European cabinet paper feeder: Firmware modified so that if the destination code is set to Europe, the paper will be fed out from the lower position whenever the Finisher and a feed station other than the paper feed unit is installed (EU cabinet feeder is the same height as a 2-level PFU, i.e. requires lower-position exit).***	***December, 2002***

NOTE: 1. Engine main firmware version B1.11G has been implemented from September 25th production run. The machines with Ver. B1.11F or older have been reworked in local: However, some machines have been released to the market without modification. So, please make sure that the version of the engine main firmware is "B1.11G" at installation or next visit. If not, please update it to "B1.11G" or later.

NOTE: 2. G060-17 models – Engine main firmware version B1.17C was applied to the production line on February 18th, 2002, and most machines with Ver. B1.15E have been reworked locally: However, some of these machines have been released to the market without modification. Therefore please update the engine firmware to ver B1.17C or newer on G060-17 machines in the following serial number range: P60112xxxxx – P60201xxxxx.

2. Engine MUSIC

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605612B	1.04	-	Firmware installed from the first mass production run.	July
G0775624 <<B>>	1.06	62FD	The firmware header has been corrected to allow the MUSIC firmware to be updated using the IC card.	March, 2002
G0775624A <<D>>	1.07	6576	The firmware header has been corrected for Japanese models only.	May, 2002

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002i

3. Controller Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605910G G0605911G	2.00	-	Firmware installed from the first mass production run.	July
G0605910H G0605911H	2.01	-	• "Asia" has been added to the destination code.	July
G0775910 G0775911	2.04	-	• The counter click up specification has been changed as follows: **Old specification:** Machine counts a page up as black or color based on the color data sent from the application. Therefore if a document from the PC contains blank (but defined) spaces highlighted in red, e.g., the controller interprets this as color data and counts it as a color print. **New specification:** The machine counts up the page as B/W or color based on the CMYK data, i.e. the actual toner colors used to develop the image, regardless of the actual color data from the application. • To meet the CPU specification change from 250MHz to 300MHz. • Color profile of the PCL driver has been changed to Ver. 1.1.2a. The following problem has been corrected: When designating the Finisher shift tray 1 for paper output tray as default, paper is not fed out to shift tray 1.	August Local Modification (See **NOTE**. **1.**)
G0775910A G0775911A	2.05	13D2 7709	• The following problem has been corrected. 1. B&W prints cannot be made if color toner is empty. 2. HDD format cannot be done when SC860 is detected. • CRD version of PS3 has been updated to Ver. 1.2.1. • Presentation color profile version of PCL has been updated to Ver. 1.2.1. (Photographic color profile stays the same as Ver. 1.1.2a.)	
G0775910A G0775911A	2.05A	28E0 176D	The following problem has been fixed. (This problem occurs only when selecting German language.) When selecting the meter click mode and printing the counter sheet from the user program mode, the message of "Color" and "Black" is printed in the other way around.	October '01 Local Modification (See **NOTE**.

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002i

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
				2.)
G0775910B G0775911B	2.06	A556 B965	The following problem has been fixed. • When all memory clear (SP5-801-001 or 002) is done, the destination code is cleared to "0 (Japan)". Since Japanese fonts are not stored for the messages, strange characters appear. • When printing A3+ (12"x18") size documents, the image is not shift to center, causing a big white margin at the trailing edge.	October, '01
G0775910B G0775911B <<A>>	2.07	-	• PS configuration page printing is now limited to plain or recycled paper (previously, it could be printed out onto any paper type). • The following has been fixed: Selecting a custom paper size in the PCL may, in rare cases, cause the PC to freeze.	
G0775910C G0775911C <<A>>	2.08	-	The following has been fixed: If the output tray becomes full while the machine is receiving print job data in Series Print mode, following tray-full recovery, the remaining pages may be printed out in the wrong order. See RTB RGene010 for details on Series Print mode.	
G0775910D G0775911D <<A>>	2.11	CCB1 2519	• Letterhead Mode has been added (see RTB #006 for details). • The following has been fixed: Paper is not punched at the designated position in Series Print mode (see RTB RGene010 for details on Series Print mode).	January, 2002
G0775910E G0775911E <<B>>	2.12	-	• The following has been fixed: While downloading PS fonts to a machine with the HDD option installed, the correct PS serial number cannot be output.	
G0775910F G0775911F <<B>>	2.13	412E C03D	• Euro fonts PC858, ISO8859-15, L9, PS Math and MC Text are now supported. • PS performance improvement. • RMS is supported with the use of the customized controller (field monitoring machines only). • A new Coverage Counter has been added to SP7-908-1 to -8 (SP7-908-5 to –8 are the same as SP7-833-11 to -14). With this new counter, B/W pages that follow color pages in ACS will be counted as B/W, and the CMY counters will not count up. To activate this function, it is necessary to use the 8kB NVRAM on the BCU board and engine firmware version B1.17C or newer. • The following have been fixed: ※ When the undefined command, "<ESC>&k#w", is received, it appears on the output as a character string [e.g. as "<ESC>&k6w"]. ※ If Job Reset is selected while the first page of a multiple-page document is being processed, the panel continues to display "Printing". ※ AutoContinue timer bug.	March, 2002

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002i

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			※ The Punch Counter counts up by 2 for every sheet punched when using the function in Duplex Mode.	
G0775910G G0775911G <<D>>	2.14	AB1E 2573	• The following have been fixed: ※ PCL - Modified the dither size for when the UDFP command is used (GFPR# RE02030021) - Modified so that some characters in symbol sets MS Text and Windows Baltic (19L) will appear exactly as they do with HP printers. ※ PS - The margin for Custom size has been changed from 12 to 11 points to expand the maximum printing area. - Modified the dither setting for when the DeviceGray command is used. • Change in Specification: ※ Supports the Status Readback function of the PCL5e. ※ When the machine has no HDD option, the PCL HDD Directory List (and font source) will not be printed on the PCL Configuration Page.	June, 2002
G0775910H G0775911H <<E>>	2.16	F270 7677	• The printing speed of a PS job slows down after a PS3 job is reset.	July, 2002
G0775910J G0775911J <<G>>	2.17	9A5A BDF1	• When paper size error occurs using PCL printing, the printer error message of SNM for Client is not displayed on the PC.	September, 2002
G0775910K G0775911K <<G>>	2.18	2A77 4BAB	• The following have been fixed: ※ PCL - Slow Printing from AutoCAD.(GFPR# RC02070001) ※ PS - Euro symbol is not printed.(GFPR# RC02040005) Please refer to RTB #RGENE011 which will be issued soon, for the procedure of how to fix this issue. - PS print file is printed as text.(GFPR# RE02040013)	October, 2002
G0775910L G0775911L <<H>>	2.19	1421 2E85	• The following have been fixed: ※ After using User Tool on operation panel, PCL print jobs may keep showing "Printing..." on operation panel. ※ Form Lines value (under PCL Menu) change after reboot the Machine. (GFPR# RA02090003)	December, 2002

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002i

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			※ PCL - Response to PJL INFO CONFIG command does not include serial number. - The print may stop during the processing of the file when using "INFICO". (GFPR# RE02090012) - The work area of RAM is reduced whenever fonts that have been downloaded to HDD are used. ※ PS - 16bit color blend data does not print correctly. (TechMail#RE0200414) - Slow Printing from AutoCAD. (GFPR# RC02070001) - Printing may not work correctly when a protocol other than EtherTalk is used on Macintosh 8.x/9.x.(TechMail#UK020107) - The printer controller locks-up when printing from Unix Acrobat. - Lines may be printed on the blank of page. - The error log is not described in Configuration page when the punch error occurred. - When data is sent that outputs 3 hole punch to the European model (which supports 2&4 hole punch), output has 2 hole punch. (Now output has no punch). - Printing on envelope may not work correctly. ※ PJL - Response to PJL INFO CONFIG command does not include serial number.	

NOTE: 1. The Meter Click counter specification has been changed from the controller firmware (Ver. 2.04). The machines with Ver. 2.01 or older have been reworked in local. However, some machines have been released to the market without modification. So, please make sure that the version of the engine main firmware is “2.04” or later at installation or next visit. If not, please update it to the latest firmware.

NOTE: 2. Messages “Color” and “Black” in the meter click counter is reversibly displayed on the screen and print out only when German language is selected. The machines with Ver. 2.05 or older have been reworked in local. However, some machines have been released to the market without modification. If the machine is set to German language, please make sure that the version of the engine main firmware is “2.05A” or later at installation or next visit. If not, please update it to the latest firmware.

4. NIB Firmware

Reissued: 7-Feb-03

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002i

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605920J	1.72.1	B453	Firmware installed from the first mass production run.	July
G0605920K	1.74	3355	The followings have been corrected: • When the job is canceled, the lpr connection is terminated and a blank space is displayed in the syslog. Instead of the blank space, "Lost connection" is displayed. • When 50 or more lpq/lprm commands are sent, the lpd process cannot be completed properly and the job is not printed out. • If DHCP is ON and TCP/IP is OFF, the current device name (RNPXXXXXX) in SmartNetMonitor is not displayed. • NIB stops printing if several prints jobs are continuously sent to the NIB via the IPP port (SmartNetMonitor for Client), and a print job sent via the standard IPP port may be canceled.	July
G0605920L	1.75.1	64F4	The followings have been corrected: Nothing was displayed even though the "prnlog 0" command was done in telnet.	September (Local modification for –17 model)
G0605920M <<C>>	1.78	AB29	• If an undefined remote printer number is input in the Netware configuration page, communication between the NIB and Netware Server will be cut off. • No error message is displayed in Netscape Navigator even when an incorrect URL is input in the address bar. • Up to 32 characters can be input in the NetBEUI configuration screen Comment box, even though specification is 31 characters maximum. • If Trap is selected for the Access Type in the SNMP Configuration screen during the snmpd process, communication may be cut off. • The NIB does not respond to the "lprm –" command (root directory) from a FreeBSD host computer. • TCP Ports 11021 and 11023 (Design use) have been closed. • There were two error messages displayed when no files were available for download using FTP. The two messages were merged to "550: No such file or directory". • PS status can be displayed in STAT command using ftpd/ rshd/ telnetd/ lpd. • During a given FTP login session, the NIB counts up every user command issued as a new session. • The length of the login user name can be up to 64 characters when using FTP.	January, 2002
G0605920N <<D>>	1.81	8FA3	• The following have been fixed: ※ Cannot connect to Novell NDS (GFPR# RC02010007). ※ Two or more print queues can be attached to a single printer object (TechMail RC010430).	June, 2002

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002i

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			※ The controller freezes if it is disconnected while the data which generates the Readback command is being printed out with ftp/rsh. ※ The controller freezes when it cannot find the file specified for rcp transmission. ※ The parameters of sysLocation and sysContact cannot be set correctly using the snmp command with telnet. ※ The Fax Management Tool cannot be used for a while after any of the NIB setting(s) are changed. • Change in Specification: ※ SNMP vulnerability - SNMP security vulnerabilities reported by CERT on Feb.12, 2002 has been resolved and tested using the PROTOS c06-snmpv1 test suite. **CERT** :http://www.cert.org/advisories/CA-2002-03.html **PROTOS c06-snmpv1 test suite :**http://www.ee.oulu.fi/research/ouspg/protos/testing/c06/snmpv1/ ※ TCP ports for disabled services (e.g. FTP) were open. ※ An unnecessary TCP port was open.	
G0605920P <<G>>	1.82	384B	• HTTP and telnet protocols can be opened/closed using telnet. NOTE: After making the setting to disable HTTP, you cannot access the target device through a web browser. If your want to change this settings, please use telnet to open HTTP. When telnet port is disabled, you have to do clear the network settings (SP5-801-11) to open the telnet protocol. • Changed the default setting of DHCP to ON. NOTE: There is no change when updating the firmware. This feature is for the factory default. • It does not work in a UNIX environment even if the install Script in the controller is downloaded.	October, 2002

Model: Model-J	Date: 21-Feb-03	No.: RG060021

Subject: Color shift due to wrong description in Installation Procedure	Prepared by: H.Taguchi
From: Technical Services Sec. Service Planning Dept.	

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

The following has not been reported from the field, but please make note of the action below in case a report is received.

SYMPTOM

Color shift after adjusting the fusing unit line speed at unit replacement.

CAUSE (Fusing Maintenance Kit Installation Procedure, Offset settings, Step 22):

The two input values (0, 1) for adjusting the fusing roller line speed were reversed. Inputting the values in the reverse order will cause color shifting to worsen.

Note: The values described in the mainframe Operating Instructions are correct.

Page	Incorrect	CORRECT
A-6 **Step 22**	Check the test sheets and make the offset settings for A through H. Select ***"0"*** for a white square, and select ***"1"*** for a out-of-register square.	Check the test sheets and make the offset settings for A through H. Select ***"1"*** for a white square, and select ***"0"*** for a out-of-register square.

Affected Units:

All Type 3800C (Fusing Unit) Maintenance Kits produced in 2001 and 2002.

SOLUTION

The Installation Procedure bundled together with the Fusing Maintenance Kit has been revised from January 1, 2003 kit production.

Action in the Field

- User Maintenance:
  Please advise customers of the above correction at installation, the next service visit, or when customers report the symptom due to the above setting error.

- Service Maintenance:
  Please make note of this correction to ensure the proper values are input.

Model: Model-J	Date: 12-Jun-03	No.: RG060022

Subject: Main-scan magnification error	Prepared by: H.Taguchi
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 ( )		

SYMPTOM

The image appears further enlarged or reduced along the main scan direction in relation to the magnification setting for the original data.

CAUSE

The parameters for main scan magnification have not been set correctly.

SOLUTION

Perform the following after the machine has come to a complete stop and reached the Ready condition.

1. Load the following sizes for feeding: A3 or A4 LEF (EU, Asia, China), DLT or LT LEF (N.A.).
2. Print out the SMC report.
3. Set the following SP modes as described below, then print out the test pattern for 1200 x 1200dpi, and then for 1200 x 600dpi.

SP5-997-001 (Tray Selection)	Choose the tray containing the target paper size.
SP5-997-002 (Pattern)	1-dot trimming pattern
SP5-997-003 (Single Color)	Black
SP5-997-004 (Color Mode)	Single Color
SP5-997-005 (Resolution)	1200 x 1200 or 1200 x 600
SP5-997-007 (Print)	Execute

4. Measure the vertical line interval using a ruler.
5. Adjust SP2-103-55 (1200 x 1200dpi), and then SP2-103-59 (1200 x 600dpi) so that the vertical line interval falls within the following targets: 293mm (A3 or A4 LEF), 275.4mm (DLT or LT LEF).

   Examples:

   1. Interval is 1mm shorter than target (1200 dpi):

      1mm x 1200dpi / 25.4mm/inch = 47.2 dot → 47

      Input: (Current value of SP2-103-55) – 47

2. Interval is 3mm longer than target (600dpi):

   3mm x 600dpi / 25.4mm/inch = 70.53 dot → 71

   Input: (Current value of SP2-103-59) + 71

6. Print out and check the test patterns.
7. Repeat step 3 to 5 again until the main scan magnification is acceptable.
8. Perform Line Position Adjustment (SP5-993-02).

Model: Model-J	Date: 21-May-03	No.: RG060023

Subject: Tear off the harness	Prepared by: H.Taguchi
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 ( )		

SYMPTOM

Power is not supplied when the main switch is turned ON after replacing the PSU [A], Harness - AC Switch [B] or Bracket – PSU Fan [C].

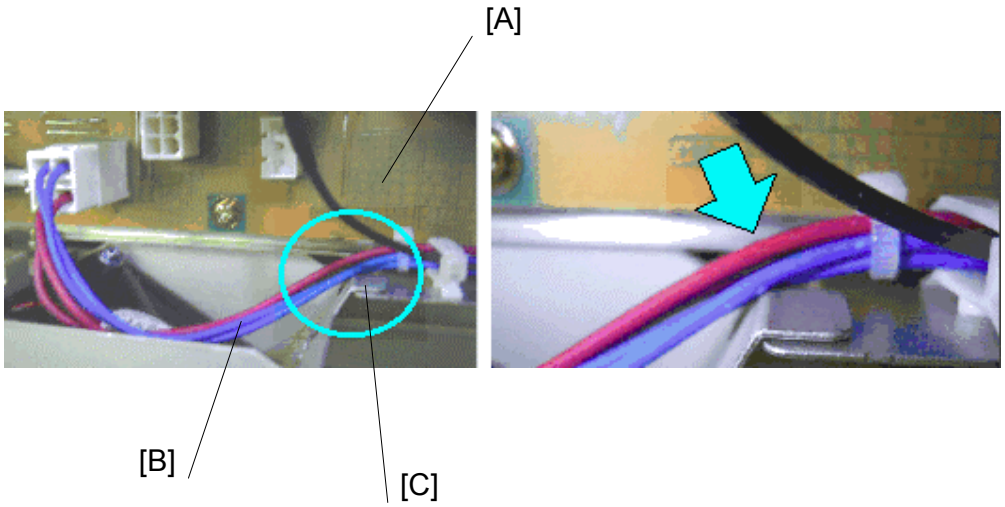
Note: This may occur on all G060 and G080 series models.

CAUSE

When replacing the above mentioned parts, the harness may be damaged when it comes in contact with the edge of the bracket or PSU bracket.

SOLUTION

When replacing the PSU, Harness or Bracket, wrap the area of the harness shown by the arrow in electrical tape to protect it from the bracket edges.



Model: Model-J	Date: 19-Jun-03	No.: RG060024

Subject: Fusing unit damage	Prepared by: H.Taguchi
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 ( )		

SYMPTOM

Fusing unit damaged by pick-off pawls.

CAUSE

There are three possible causes:

1. Pick-off pawls

   When a paper jam occurs in the fusing unit, paper may push the pawls up or down against the fusing belt or pressure roller, causing the belt or roller to be damaged by the pawls.

2. Fusing belt

   The fusing belt layer may peel off from the base layer during a print run due to an insufficient amount of adhesive applied.

3. Oil supply unit

   The oil supply unit deforms due to heat from the fusing unit, causing the oil not to be applied evenly to the fusing belt. This may cause a paper jam or the oil supply roller to become dirty with toner.

SOLUTION

Production line

1. Pick-off pawls

   The edges of pawls have been rounded to minimize belt or roller damage with a paper jam.

2. Fusing belt

   The amount of adhesive has been increased and is more evenly applied to the base layer.

3. Oil supply unit
   A metal plate will be added underneath the oil supply felt to ensure the unit does not deform.

Cut-in S/N

1. Pick-off pawls

   Mainframe cut-in S/N:

   G060-17: From P6021200020

   G060-22: From P6021201401

   G060-24: From L0882120001

   G060-26: From 4G81220023

   G060-27: From P6021201675

   G060-29: From P6021201691

   G060-69: From P6021201759

   G082-17: From P8930200001

   Cut-in product P/N (on the seal attached to the Fusing unit):

   G765-17: From P/N G7650218**B**

   Note: This modification was applied from P/N suffix **B**.

   G765-27: From P/N G7650228**D**

   Note: This modification was applied from P/N suffix **D**.

2. Fusing belt

   Mainframe cut-in S/N:

   G060-17: From P6021100986

   G060-22: From P6021201401

   G060-24: From L0882120001

   G060-26: From 4G81220001

   G060-27: From P6021201675

   G060-29: From P6021100876

   G060-69: From P6021201759

   G082-17: From P8930200001

   Cut-in product P/N (on the seal attached to the Fusing unit):

   G765-17: From P/N G765-0218**B**

   G765-27: From P/N G765-0228**B**

   Note: This modification was applied from P/N suffix **B**.

3. Oil supply unit

   (Schedule and cut-in serial numbers TBA).

Reissued: 30-Jul-03

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002j

RTB Reissue

Subject: Firmware Modification			Prepared by: H. Someya
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 modification history for the Model-J (details begin on page 2).

	BCU		Controller		
Firmware Type	**Main**	**Music**	**Controller**		**NIB**
			1	2	
Remarks	(see Note below)	(see Note below)	File Name G0775910#.bin # : suffix	File Name G0775911#.bin # : suffix	(see Note below)

Note: The Main, Music and NIB firmware are used for both the G060 printer and G060/G570 CF Expander.

.

RTB Revision List

Issue Date	Control Symbol	Revised contents
09-Jan-02	-	First edition
24-Jan-02	<<A>>	Engine Main: 1.11G -> 1.11H -> 1.15E Controller: 2.06 -> 2.07 -> 2.08 -> 2.11
7-Mar-02	<<B>>	Engine Main: 1.15E -> 1.17C Engine MUSIC: 1.04 -> 1.06 Controller: 2.11 -> 2.12 -> 2.13
15-Apr-02	<<C>>	NIB: 1.75.1 -> 1.78
28-Jun-02	<<D>>	Engine: 1.17C -> 1.18 -> 1.18B Engine MUSIC: 1.06 -> 1.07 Controller: 2.13 -> 2.14 NIB: 1.78 -> 1.81
18-Jul-02	<<E>>	Controller: 2.14 -> 2.16
6-Sep-02	<<F>>	Engine: 1.18B -> 1.19
1-Nov-02	<<G>>	Engine: 1.19 -> 1.21 -> 1.22 Controller: 2.16 -> 2.17 -> 2.18 NIB: 1.81 -> 1.82
31-Jan-03	<<H>>	Controller: 2.18 -> 2.19
7-Feb-03	<<I>>	Engine: 1.22 -> 1.23 -> 1.24
30-Jul-03	***<<J>>***	***Controller: 2.19 -> 2.20 -> 2.21*** ***NIB: 1.82 -> 1.83***

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002j

[Modification History]

1. Engine Main Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0775611	B1.10	-	Firmware installed from the first mass production run.	July
G0775611D	B1.11A	-	Charge and development bias applied during the toner end recovery mode has been changed to optimize the drum cleaning function.	August
G0775611E	B1.11B	-	The frequency to control the color drum motor has been optimized so that the motor starts smoothly rotating.	August
G0775611G	B1.11D	-	The following specification change has been applied: The yield target of PCUs has been changed from 100KP to 50KP.	-
G0775611H	B1.11F	-	The following problem has been fixed. • The machine suddenly keeps running due to memory overflow. • SC670 when the machine starts waking up from the energy saver mode	-
G0775611J	B1.11G	45A0	The following problem has been fixed. Black developer initialization fails because toner is mistakenly supplied due to software bug, causing SC370 (Developer Initialization Error – Black). This happens when performing only the black developer initialization. (If performing the developer initialization for black and other color(s) simultaneously, this problem does not occur.) If the main switch is tuned off and on, the SC code is reset and the machine re-starts the developer initialization. In the worst case, toner flows out from development unit (the entrance area where toner is supplied) to the inside of machine.	September Local Modification (See **NOTE. 1**.)
G0775621 <<A>>	B1.11H	-	A fusing clutch has been added to maximize the life of the fusing unit and oil supply unit. This firmware version was temporarily installed in production machines to keep the clutch constantly moving, until the clutch control program could be added to the next version (1.15E). **NOTE:** Therefore this version has <u>not</u> been released.	
G0775621A <<A>>	B1.15E	171C	• Fusing clutch control has been added to start/stop the clutch. • The following has been corrected: ※ When a paper jam occurs midway through a staple job, job recovery may re-start the job from the 1st page instead. • Over-occurrence of the following SC codes (due to software bugs) has been fixed: ※ SC220/230 at the start of a job ※ SC544/554 during warm-up under low-temp conditions in 62.5mm/sec mode.	December, 2001

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002j

<table>
<tr><th>P/N</th><th>Version</th><th>Check Sum</th><th>Contents of Modification</th><th>Cut-in Month</th></tr>
<tr><td></td><td></td><td></td><td>
• SP1-916 (Idling mode) has been added.
<table>
<tr><td>916</td><td colspan="4">[Idling Mode]</td></tr>
<tr><td></td><td>1</td><td>Mode Set</td><td>*</td><td>Enables or disables fusing unit idling performed after the machine reaches the Ready condition. Idling is performed for the time specified in SP1-916-2.
[0 or 1/ 0 / -] DFU
0: OFF, 1: ON</td></tr>
<tr><td></td><td>2</td><td>Idling Time</td><td></td><td>Specifies the time for fusing unit idling.
[10 to 120 / 30 / 10 sec/step] DFU</td></tr>
<tr><td></td><td>3</td><td>Pre-Job Mode</td><td></td><td>Enables or disables the 4-second fusing unit idling performed at the start of a print job.
[0 or 1/ 0 / -] DFU
0: OFF, 1: ON</td></tr>
</table>
</td><td></td></tr>
<tr><td>G0775623
<<B>></td><td>B1.17C</td><td>169B</td><td>
• To optimize the amount of oil supplied to the fusing belt in OHP mode, the number of supply cycles during idling has been reduced to 1.
• SP1-996-6 (OHP Pre-Job mode) has been added.
<table>
<tr><td>996</td><td colspan="4">[OHP/TH Fusing]</td></tr>
<tr><td></td><td>6</td><td>Pre-Job Mode</td><td>*</td><td>Enables or disables the 30-second fusing unit idling performed at the start of an OHP print job. When enabled, idling is performed even if the machine is at the Ready condition.
[0 or 1/ 0 / -]
0: OFF, 1: ON</td></tr>
</table>
• A new Coverage Counter has been added to SP7-908-1 to -8 (SP7-908-5 to –8 are the same as SP7-833-11 to -14). With this new counter, B/W pages that follow color pages in ACS will be counted as B/W, and the CMY counters will not count up. To activate this function, it is necessary to use the 8kB NVRAM on the BCU board and controller firmware version 2.13 or newer.
• The machine automatically detects whether a 4kB or 8kB NVRAM is installed on the BCU board.
• A grid pattern has been added to SP mode copy images. To activate this, it is necessary to use system firmware ver1.07 or newer (for the CF expander only).
</td><td>March, 2002 (See NOTE. 2.)</td></tr>
</table>

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002j

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			• The following have been corrected: ※ SC240 misdetection. ※ When the K toner cartridge is replaced, the "previous PM counter" values for CMY are all overwritten to the previous value for K toner (SP7-906-23 to –25). ※ If machine enters Energy Saver 1 Mode then cools down for more than 1 minute, it will not display "Ready" after recovery warm-up (only for G060-17 models). ※ When a B/W job is performed, the coverage counters (SP7-833-1 to -4) for CMY are not set to 0 as they should be, i.e. the values from the previous job remain.	
G0775623A <<D>>	B1.18	F284	• The following have been corrected: ※ Main scan magnification error (see RTB #RG060015 for details; to be released soon). ※ SC471 caused by stop timing error for transfer belt contact motor. ※ SC545 in fusing phase control mode. ※ SC543 **NOTE:** This version has <u>not</u> been released (see "side effect" below).	May, 2002
G0775623B <<D>>	B1.18B	D7B1	• The following have been corrected: ※ SC230 at automatic line position adjustment ***(see RTB #RG570004 for details; to be released soon)***. ※ Side effect for B1.18 SC545 modification (only for G060-17 models): The machine does not display "Ready" after recovery warm-up from Energy Saver 1 Mode in phase control mode (see RTB #RG060013 for details; to be released soon).	Middle of June, 2002
G0775623C <<F>>	B1.19	BB39	• The following have been corrected: ※ When SP1-916-1 is set to 1, the machine may not reach the Ready condition after the main SW is turned on in low-temp, low-humidity environments. ※ Upgrade error recovery cannot be performed with version 4 of the BCU ASIC (Gate Array PCI).	August, 2002
G0775623D <<G>>	B1.21	3F29	• The following have been corrected: ※ SC220-4 for machines with LD unit E-MAC2 installed. • Destination code for China added. • New SP mode added: SP3-922 (OPU_Refresh2). To activate this function, it is necessary to	September, 2002

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002j

<table>
<tr><th>P/N</th><th>Version</th><th>Check Sum</th><th>Contents of Modification</th><th>Cut-in Month</th></tr>
<tr><td></td><td></td><td></td><td>use controller firmware version 2.17 and CF system firmware version 1.10 or newer.
<table>
<tr><td>922</td><td colspan="4">[OPU_Refresh2]</td></tr>
<tr><td></td><td>1</td><td>Mode_Set</td><td>*</td><td>Enables or disables the filming removal mode (CMY), which forcibly creates a temporary 15mm-wide toner line on the drum surface by applying the development bias and turning on the development clutch at the end of a job.
[0 to 2/ 0 / -]
0: Disabled
1: Performed at end of job only when ave. pixel cov. ratio of previous job is low.
2: Performed at end of every job</td></tr>
<tr><td></td><td>2</td><td>Bias_Set</td><td>*</td><td>Development bias setting for filming removal mode (CMY)
[100 to 400/ 200 / 10] DFU
0: OFF, 1: ON</td></tr>
</table></td><td></td></tr>
<tr><td>G0775623E
<<G>></td><td>B1.22</td><td>CCAA</td><td>• The following has been corrected:
※ Paper jam with Series Printing when the exit tray setting is not the same for all individual jobs.</td><td>October, 2002</td></tr>
<tr><td>G0775623F
<<I>></td><td>B1.23</td><td>3D1F</td><td>• The target PM intervals for SP7-803 (PM counter) have been changed as follows on the China model only (G060-69).
※ PCU:
SP7-803-1 PCU [K] Target sheets: 25000
SP7-803-2, 3, 4 PCU [CMY] Target sheets: 25000
SP7-803-17 PCU [K] Target revolutions: 137669
SP7-803-18, 19, 20 PCU [CMY] Target revolutions: 147953

※ Development unit:
SP7-803-5 Dev [K] Target sheets: 50000
SP7-803-6, 7, 8 Dev [CMY] Target sheets: 50000
SP7-803-21 Dev [K] Target revolutions: 538051
SP7-803-22, 23, 24 Dev [CMY] Target revolutions: 586693

※ Fusing unit:
SP7-803-15 Fusing, Target sheets: 50000</td><td>November, 2002</td></tr>
</table>

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002j

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			SP7-803-26 Fusing, Target revolutions: 4651000 • The target no. of revolutions for Fusing near end for SP-7-905-7 has been changed as follows for the China model only (G060-69). ※ Fusing: Alert SP7-905-7 Fusing near end, Target revolutions: 4418000	
G0775623G <<I>>	B1.24	514B	• Supports 2-level European cabinet paper feeder: Firmware modified so that if the destination code is set to Europe, the paper will be exited from the lower position whenever the Finisher and feed station other than the paper feed unit is installed (EU cabinet feeder is the same height as a 2-level PFU, i.e. requires lower-position exit).	December, 2002

NOTE: 1. Engine main firmware version B1.11G has been implemented from September 25th production run. The machines with Ver. B1.11F or older have been reworked in local: However, some machines have been released to the market without modification. So, please make sure that the version of the engine main firmware is “B1.11G” at installation or next visit. If not, please update it to “B1.11G” or later.

NOTE: 2. G060-17 models – Engine main firmware version B1.17C was applied to the production line on February 18th, 2002, and most machines with Ver. B1.15E have been reworked locally: However, some of these machines have been released to the market without modification. Therefore please update the engine firmware to ver B1.17C or newer on G060-17 machines in the following serial number range: P60112xxxxx – P60201xxxxx.

2. Engine MUSIC

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605612B	1.04	-	Firmware installed from the first mass production run.	July
G0775624 <<B>>	1.06	62FD	The firmware header has been corrected to allow the MUSIC firmware to be updated using the IC card.	March, 2002
G0775624A <<D>>	1.07	6576	The firmware header has been corrected for Japanese models only.	May, 2002

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002j

3. Controller Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605910G G0605911G	2.00	-	Firmware installed from the first mass production run.	July
G0605910H G0605911H	2.01	-	• "Asia" has been added to the destination code.	July
G0775910 G0775911	2.04	-	• The counter click up specification has been changed as follows: **Old specification:** Machine counts a page up as black or color based on the color data sent from the application. Therefore if a document from the PC contains blank (but defined) spaces highlighted in red, e.g., the controller interprets this as color data and counts it as a color print. **New specification:** The machine counts up the page as B/W or color based on the CMYK data, i.e. the actual toner colors used to develop the image, regardless of the actual color data from the application. • To meet the CPU specification change from 250MHz to 300MHz. • Color profile of the PCL driver has been changed to Ver. 1.1.2a. The following problem has been corrected: When designating the Finisher shift tray 1 for paper output tray as default, paper is not fed out to shift tray 1.	August Local Modification (See **NOTE**. **1.**)
G0775910A G0775911A	2.05	13D2 7709	• The following problem has been corrected. 1. B&W prints cannot be made if color toner is empty. 2. HDD format cannot be done when SC860 is detected. • CRD version of PS3 has been updated to Ver. 1.2.1. • Presentation color profile version of PCL has been updated to Ver. 1.2.1. (Photographic color profile stays the same as Ver. 1.1.2a.)	
G0775910A G0775911A	2.05A	28E0 176D	The following problem has been fixed. (This problem occurs only when selecting German language.) When selecting the meter click mode and printing the counter sheet from the user program mode, the message of "Color" and "Black" is printed in the other way around.	October '01 Local Modification (See **NOTE**.

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002j

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
				2.)
G0775910B G0775911B	2.06	A556 B965	The following problem has been fixed. • When all memory clear (SP5-801-001 or 002) is done, the destination code is cleared to "0 (Japan)". Since Japanese fonts are not stored for the messages, strange characters appear. • When printing A3+ (12"x18") size documents, the image is not shift to center, causing a big white margin at the trailing edge.	October, '01
G0775910B G0775911B <<A>>	2.07	-	• PS configuration page printing is now limited to plain or recycled paper (previously, it could be printed out onto any paper type). • The following has been fixed: Selecting a custom paper size in the PCL may, in rare cases, cause the PC to freeze.	
G0775910C G0775911C <<A>>	2.08	-	The following has been fixed: If the output tray becomes full while the machine is receiving print job data in Series Print mode, following tray-full recovery, the remaining pages may be printed out in the wrong order. See RTB RGene010 for details on Series Print mode.	
G0775910D G0775911D <<A>>	2.11	CCB1 2519	• Letterhead Mode has been added (see RTB #006 for details). • The following has been fixed: Paper is not punched at the designated position in Series Print mode (see RTB RGene010 for details on Series Print mode).	January, 2002
G0775910E G0775911E <<B>>	2.12	-	• The following has been fixed: While downloading PS fonts to a machine with the HDD option installed, the correct PS serial number cannot be output.	
G0775910F G0775911F <<B>>	2.13	412E C03D	• Euro fonts PC858, ISO8859-15, L9, PS Math and MC Text are now supported. • PS performance improvement. • RMS is supported with the use of the customized controller (field monitoring machines only). • A new Coverage Counter has been added to SP7-908-1 to -8 (SP7-908-5 to –8 are the same as SP7-833-11 to -14). With this new counter, B/W pages that follow color pages in ACS will be counted as B/W, and the CMY counters will not count up. To activate this function, it is necessary to use the 8kB NVRAM on the BCU board and engine firmware version B1.17C or newer. • The following have been fixed: ※ When the undefined command, "<ESC>&k#w", is received, it appears on the output as a character string [e.g. as "<ESC>&k6w"]. ※ If Job Reset is selected while the first page of a multiple-page document is being processed, the panel continues to display "Printing". ※ AutoContinue timer bug.	March, 2002

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002j

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			※ The Punch Counter counts up by 2 for every sheet punched when using the function in Duplex Mode.	
G0775910G G0775911G <<D>>	2.14	AB1E 2573	• The following have been fixed: ※ PCL - Modified the dither size for when the UDFP command is used (GFPR# RE02030021) - Modified so that some characters in symbol sets MS Text and Windows Baltic (19L) will appear exactly as they do with HP printers. ※ PS - The margin for Custom size has been changed from 12 to 11 points to expand the maximum printing area. - Modified the dither setting for when the DeviceGray command is used. • Change in Specification: ※ Supports the Status Readback function of the PCL5e. ※ When the machine has no HDD option, the PCL HDD Directory List (and font source) will not be printed on the PCL Configuration Page.	June, 2002
G0775910H G0775911H <<E>>	2.16	F270 7677	• The printing speed of a PS job slows down after a PS3 job is reset.	July, 2002
G0775910J G0775911J <<G>>	2.17	9A5A BDF1	• When paper size error occurs using PCL printing, the printer error message of SNM for Client is not displayed on the PC.	September, 2002
G0775910K G0775911K <<G>>	2.18	2A77 4BAB	• The following have been fixed: ※ PCL - Slow Printing from AutoCAD.(GFPR# RC02070001) ※ PS - Euro symbol is not printed.(GFPR# RC02040005) Please refer to RTB #RGENE011 which will be issued soon, for the procedure of how to fix this issue. - PS print file is printed as text.(GFPR# RE02040013)	October, 2002
G0775910L G0775911L <<H>>	2.19	1421 2E85	• The following have been fixed: ※ After using User Tool on operation panel, PCL print jobs may keep showing "Printing..." on operation panel. ※ Form Lines value (under PCL Menu) change after reboot the Machine. (GFPR# RA02090003)	December, 2002

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002j

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			※ PCL - Response to PJL INFO CONFIG command does not include serial number. - The print may stop during the processing of the file when using "INFICO". (GFPR# RE02090012) - The work area of RAM is reduced whenever fonts that have been downloaded to HDD are used. ※ PS - 16bit color blend data does not print correctly. (TechMail#RE0200414) - Slow Printing from AutoCAD. (GFPR# RC02070001) - Printing may not work correctly when a protocol other than EtherTalk is used on Macintosh 8.x/9.x.(TechMail#UK020107) - The printer controller locks-up when printing from Unix Acrobat. - Lines may be printed on the blank of page. - The error log is not described in Configuration page when the punch error occurred. - When data is sent that outputs 3 hole punch to the European model (which supports 2&4 hole punch), output has 2 hole punch. (Now output has no punch). - Printing on envelope may not work correctly. ※ PJL - Response to PJL INFO CONFIG command does not include serial number.	
G0775910M G0775911M <<J>>	***2.20***	***-***	• ***The following have been fixed:*** ※ ***PCL*** ***- The following problems with the CAD print file were fixed.*** ***1) Modified the available pen number from 8 to 256 when BitSw #3-3 is ON. (GFPR# RE02030003)*** ***2) The "null" character is ignored when it is included in HP/GL2 data. (GFPR# RE02050016)*** ***3) The status flag for the bold selection command is refreshed when the bold selection command In HP/GL2 data is selected. (GFPR# RE02050016)*** ***- Supports mixed binding orientations with duplex jobs using cover sheets. (GFPR# RC02080003)*** ***- When using the "PageLength" command, duplex printing does not work. (GFPR#RC02120014)*** ***-The downloaded PCL Barcode fonts are not printed correctly on the PCL font list. (GFPR#RC03010004)*** ***- The Barcodes are printed with a shift. (GFPR#RE03010016)*** ***- Selecting a HDD font may reduce available memory.***	***-***

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002j

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			- Support for SAP Barcode & OCR printing. ※ ***PS*** ***- A PS error occurs when an unknown media type is specified. (GFPR# RE03010003)*** ***- The default setting of mainframe System/Resolution is "1200 x 600dpi".***	
G0775910N ***G0775911N*** ***<<J>>***	***2.21***	***3BC5*** ***18E2***	• ***Change in specification*** ***- Changing Adobe PostScript 3 Logo in the PS config page to red.***	***April, 2003***

NOTE: 1. The Meter Click counter specification has been changed from the controller firmware (Ver. 2.04). The machines with Ver. 2.01 or older have been reworked in local. However, some machines have been released to the market without modification. So, please make sure that the version of the engine main firmware is “2.04” or later at installation or next visit. If not, please update it to the latest firmware.

NOTE: 2. Messages “Color” and “Black” in the meter click counter is reversibly displayed on the screen and print out only when German language is selected. The machines with Ver. 2.05 or older have been reworked in local. However, some machines have been released to the market without modification. If the machine is set to German language, please make sure that the version of the engine main firmware is “2.05A” or later at installation or next visit. If not, please update it to the latest firmware.

4. NIB Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605920J	1.72.1	B453	Firmware installed from the first mass production run.	July
G0605920K	1.74	3355	The followings have been corrected: • When the job is canceled, the lpr connection is terminated and a blank space is displayed in the syslog. Instead of the blank space, “Lost connection” is displayed. • When 50 or more lpq/lprm commands are sent, the lpd process cannot be completed properly and the job is not printed out. • If DHCP is ON and TCP/IP is OFF, the current device name (RNPXXXXXX) in SmartNetMonitor is not displayed.	July

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002j

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			• NIB stops printing if several prints jobs are continuously sent to the NIB via the IPP port (SmartNetMonitor for Client), and a print job sent via the standard IPP port may be canceled.	
G0605920L	1.75.1	64F4	The followings have been corrected: Nothing was displayed even though the "prnlog 0" command was done in telnet.	September (Local modification for –17 model)
G0605920M <<C>>	1.78	AB29	• If an undefined remote printer number is input in the Netware configuration page, communication between the NIB and Netware Server will be cut off. • No error message is displayed in Netscape Navigator even when an incorrect URL is input in the address bar. • Up to 32 characters can be input in the NetBEUI configuration screen Comment box, even though specification is 31 characters maximum. • If Trap is selected for the Access Type in the SNMP Configuration screen during the snmpd process, communication may be cut off. • The NIB does not respond to the "lprm –" command (root directory) from a FreeBSD host computer. • TCP Ports 11021 and 11023 (Design use) have been closed. • There were two error messages displayed when no files were available for download using FTP. The two messages were merged to "550: No such file or directory". • PS status can be displayed in STAT command using ftpd/ rshd/ telnetd/ lpd. • During a given FTP login session, the NIB counts up every user command issued as a new session. • The length of the login user name can be up to 64 characters when using FTP.	January, 2002
G0605920N <<D>>	1.81	8FA3	• The following have been fixed: ※ Cannot connect to Novell NDS (GFPR# RC02010007). ※ Two or more print queues can be attached to a single printer object (TechMail RC010430). ※ The controller freezes if it is disconnected while the data which generates the Readback command is being printed out with ftp/rsh. ※ The controller freezes when it cannot find the file specified for rcp transmission. ※ The parameters of sysLocation and sysContact cannot be set correctly using the snmp command with telnet. ※ The Fax Management Tool cannot be used for a while after any of the NIB setting(s) are changed. • Change in Specification:	June, 2002

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002j

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			※ SNMP vulnerability - SNMP security vulnerabilities reported by CERT on Feb.12, 2002 has been resolved and tested using the PROTOS c06-snmpv1 test suite. **CERT** :http://www.cert.org/advisories/CA-2002-03.html **PROTOS c06-snmpv1 test suite :**http://www.ee.oulu.fi/research/ouspg/protos/testing/c06/snmpv1/ ※ TCP ports for disabled services (e.g. FTP) were open. ※ An unnecessary TCP port was open.	
G0605920P <<G>>	1.82	384B	• HTTP and telnet protocols can be opened/closed using telnet. NOTE: After making the setting to disable HTTP, you cannot access the target device through a web browser. If your want to change this settings, please use telnet to open HTTP. When telnet port is disabled, you have to do clear the network settings (SP5-801-11) to open the telnet protocol. • Changed the default setting of DHCP to ON. NOTE: There is no change when updating the firmware. This feature is for the factory default. • It does not work in a UNIX environment even if the install Script in the controller is downloaded.	October, 2002
G0605920Q <<J>>	***1.83***	***E5D7***	• ***The following have been fixed:*** ***- Access Mask does not work.***	***July, 2003***

Model: Model-J	Date: 31-Jul-03	No.: RG060025

Subject: Additional SC codes	Prepared by: H.Taguchi
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 ( )		

The following SCs have been added to the Service Manual.

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SC No.	Item	Definition	Possible Cause	Related SCs	Troubleshooting Procedure	Type
SC 660	BCU NVRAM read/write diagnostics error	A read/write diagnostics error is detected when the main switch is turned ON. **Note:** This only occurs with the 8kB NVRAM.	• Defective 8kB NVRAM (BCU)		1. Turn the main switch OFF/ON. 2. Replace the NVRAM.	

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SC 991	Software Performance Error - Logged	The software performs an unexpected operation. **Note:** Unlike SC990, the software/machine continue to function without requiring any action.	• Incorrect program argument or other parameter • Insufficient working memory		This SC is not displayed on the LCD (logged only).	CTL

Reissued: 29-Aug-03

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002k

RTB Reissue

Subject: Firmware Modification			Prepared by: H. Someya
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 ( )		

This bulletin explains the firmware modification history for the Model-J (details begin on page 2).

	BCU		Controller		
Firmware Type	**Main**	**Music**	**Controller**		**NIB**
			1	2	
Remarks	(see Note below)	(see Note below)	File Name G0775910#.bin # : suffix	File Name G0775911#.bin # : suffix	(see Note below)

Note: The Main, Music and NIB firmware are used for both the G060 printer and G060/G570 CF Expander.

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RTB Revision List

Issue Date	Control Symbol	Revised contents
09-Jan-02	-	First edition
24-Jan-02	<<A>>	Engine Main: 1.11G -> 1.11H -> 1.15E Controller: 2.06 -> 2.07 -> 2.08 -> 2.11
7-Mar-02	<<B>>	Engine Main: 1.15E -> 1.17C Engine MUSIC: 1.04 -> 1.06 Controller: 2.11 -> 2.12 -> 2.13
15-Apr-02	<<C>>	NIB: 1.75.1 -> 1.78
28-Jun-02	<<D>>	Engine: 1.17C -> 1.18 -> 1.18B Engine MUSIC: 1.06 -> 1.07 Controller: 2.13 -> 2.14 NIB: 1.78 -> 1.81
18-Jul-02	<<E>>	Controller: 2.14 -> 2.16
6-Sep-02	<<F>>	Engine: 1.18B -> 1.19
1-Nov-02	<<G>>	Engine: 1.19 -> 1.21 -> 1.22 Controller: 2.16 -> 2.17 -> 2.18 NIB: 1.81 -> 1.82
31-Jan-03	<<H>>	Controller: 2.18 -> 2.19
7-Feb-03	<<I>>	Engine: 1.22 -> 1.23 -> 1.24
30-Jul-03	<<J>>	Controller: 2.19 -> 2.20 -> 2.21 NIB: 1.82 -> 1.83
29-Aug-03	***<<K>>***	***Engine: 2.24 -> 2.25 -> 2.26***

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002k

[Modification History]

1. Engine Main Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0775611	B1.10	-	Firmware installed from the first mass production run.	July
G0775611D	B1.11A	-	Charge and development bias applied during the toner end recovery mode has been changed to optimize the drum cleaning function.	August
G0775611E	B1.11B	-	The frequency to control the color drum motor has been optimized so that the motor starts smoothly rotating.	August
G0775611G	B1.11D	-	The following specification change has been applied: The yield target of PCUs has been changed from 100KP to 50KP.	-
G0775611H	B1.11F	-	The following problem has been fixed. • The machine suddenly keeps running due to memory overflow. • SC670 when the machine starts waking up from the energy saver mode	-
G0775611J	B1.11G	45A0	The following problem has been fixed. Black developer initialization fails because toner is mistakenly supplied due to software bug, causing SC370 (Developer Initialization Error – Black). This happens when performing only the black developer initialization. (If performing the developer initialization for black and other color(s) simultaneously, this problem does not occur.) If the main switch is tuned off and on, the SC code is reset and the machine re-starts the developer initialization. In the worst case, toner flows out from development unit (the entrance area where toner is supplied) to the inside of machine.	September Local Modification (See **NOTE. 1**.)
G0775621 <<A>>	B1.11H	-	A fusing clutch has been added to maximize the life of the fusing unit and oil supply unit. This firmware version was temporarily installed in production machines to keep the clutch constantly moving, until the clutch control program could be added to the next version (1.15E). **NOTE:** Therefore this version has <u>not</u> been released.	
G0775621A <<A>>	B1.15E	171C	• Fusing clutch control has been added to start/stop the clutch. • The following has been corrected: ※ When a paper jam occurs midway through a staple job, job recovery may re-start the job from the 1st page instead. • Over-occurrence of the following SC codes (due to software bugs) has been fixed: ※ SC220/230 at the start of a job ※ SC544/554 during warm-up under low-temp conditions in 62.5mm/sec mode.	December, 2001

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002k

<table>
<tr><th>P/N</th><th>Version</th><th>Check Sum</th><th>Contents of Modification</th><th>Cut-in Month</th></tr>
<tr><td></td><td></td><td></td><td>
SP1-916 (Idling mode) has been added.
<table>
<tr><td>916</td><td colspan="4">[Idling Mode]</td></tr>
<tr><td></td><td>1</td><td>Mode Set</td><td>*</td><td>Enables or disables fusing unit idling performed after the machine reaches the Ready condition. Idling is performed for the time specified in SP1-916-2.
[0 or 1/ 0 / -] DFU
0: OFF, 1: ON</td></tr>
<tr><td></td><td>2</td><td>Idling Time</td><td></td><td>Specifies the time for fusing unit idling.
[10 to 120 / 30 / 10 sec/step] DFU</td></tr>
<tr><td></td><td>3</td><td>Pre-Job Mode</td><td></td><td>Enables or disables the 4-second fusing unit idling performed at the start of a print job.
[0 or 1/ 0 / -] DFU
0: OFF, 1: ON</td></tr>
</table>
</td><td></td></tr>
<tr><td>G0775623
<<B>></td><td>B1.17C</td><td>169B</td><td>
To optimize the amount of oil supplied to the fusing belt in OHP mode, the number of supply cycles during idling has been reduced to 1.
SP1-996-6 (OHP Pre-Job mode) has been added.
<table>
<tr><td>996</td><td colspan="4">[OHP/TH Fusing]</td></tr>
<tr><td></td><td>6</td><td>Pre-Job Mode</td><td>*</td><td>Enables or disables the 30-second fusing unit idling performed at the start of an OHP print job. When enabled, idling is performed even if the machine is at the Ready condition.
[0 or 1/ 0 / -]
0: OFF, 1: ON</td></tr>
</table>
A new Coverage Counter has been added to SP7-908-1 to -8 (SP7-908-5 to –8 are the same as SP7-833-11 to -14). With this new counter, B/W pages that follow color pages in ACS will be counted as B/W, and the CMY counters will not count up. To activate this function, it is necessary to use the 8kB NVRAM on the BCU board and controller firmware version 2.13 or newer.
The machine automatically detects whether a 4kB or 8kB NVRAM is installed on the BCU board.
A grid pattern has been added to SP mode copy images. To activate this, it is necessary to use system firmware ver1.07 or newer (for the CF expander only).
</td><td>March, 2002 (See NOTE. 2.)</td></tr>
</table>

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002k

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			• The following have been corrected: ※ SC240 misdetection. ※ When the K toner cartridge is replaced, the "previous PM counter" values for CMY are all overwritten to the previous value for K toner (SP7-906-23 to –25). ※ If machine enters Energy Saver 1 Mode then cools down for more than 1 minute, it will not display "Ready" after recovery warm-up (only for G060-17 models). ※ When a B/W job is performed, the coverage counters (SP7-833-1 to -4) for CMY are not set to 0 as they should be, i.e. the values from the previous job remain.	
G0775623A <<D>>	B1.18	F284	• The following have been corrected: ※ Main scan magnification error (see RTB #RG060015 for details; to be released soon). ※ SC471 caused by stop timing error for transfer belt contact motor. ※ SC545 in fusing phase control mode. ※ SC543 **NOTE:** This version has <u>not</u> been released (see "side effect" below).	May, 2002
G0775623B <<D>>	B1.18B	D7B1	• The following have been corrected: ※ SC230 at automatic line position adjustment ***(see RTB #RG570004 for details; to be released soon)***. ※ Side effect for B1.18 SC545 modification (only for G060-17 models): The machine does not display "Ready" after recovery warm-up from Energy Saver 1 Mode in phase control mode (see RTB #RG060013 for details; to be released soon).	Middle of June, 2002
G0775623C <<F>>	B1.19	BB39	• The following have been corrected: ※ When SP1-916-1 is set to 1, the machine may not reach the Ready condition after the main SW is turned on in low-temp, low-humidity environments. ※ Upgrade error recovery cannot be performed with version 4 of the BCU ASIC (Gate Array PCI).	August, 2002
G0775623D <<G>>	B1.21	3F29	• The following have been corrected: ※ SC220-4 for machines with LD unit E-MAC2 installed. • Destination code for China added. • New SP mode added: SP3-922 (OPU_Refresh2). To activate this function, it is necessary to	September, 2002

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002k

<table>
<tr><th>P/N</th><th>Version</th><th>Check Sum</th><th>Contents of Modification</th><th>Cut-in Month</th></tr>
<tr><td></td><td></td><td></td><td>use controller firmware version 2.17 and CF system firmware version 1.10 or newer.
<table>
<tr><td>922</td><td colspan="4">[OPU_Refresh2]</td></tr>
<tr><td></td><td>1</td><td>Mode_Set</td><td>*</td><td>Enables or disables the filming removal mode (CMY), which forcibly creates a temporary 15mm-wide toner line on the drum surface by applying the development bias and turning on the development clutch at the end of a job.
[0 to 2/ 0 / -]
0: Disabled
1: Performed at end of job only when ave. pixel cov. ratio of previous job is low.
2: Performed at end of every job</td></tr>
<tr><td></td><td>2</td><td>Bias_Set</td><td>*</td><td>Development bias setting for filming removal mode (CMY)
[100 to 400/ 200 / 10] DFU
0: OFF, 1: ON</td></tr>
</table></td><td></td></tr>
<tr><td>G0775623E
<<G>></td><td>B1.22</td><td>CCAA</td><td>• The following has been corrected:
※ Paper jam with Series Printing when the exit tray setting is not the same for all individual jobs.</td><td>October, 2002</td></tr>
<tr><td>G0775623F
<<I>></td><td>B1.23</td><td>3D1F</td><td>• The target PM intervals for SP7-803 (PM counter) have been changed as follows on the China model only (G060-69).
※ PCU:
SP7-803-1 PCU [K] Target sheets: 25000
SP7-803-2, 3, 4 PCU [CMY] Target sheets: 25000
SP7-803-17 PCU [K] Target revolutions: 137669
SP7-803-18, 19, 20 PCU [CMY] Target revolutions: 147953

※ Development unit:
SP7-803-5 Dev [K] Target sheets: 50000
SP7-803-6, 7, 8 Dev [CMY] Target sheets: 50000
SP7-803-21 Dev [K] Target revolutions: 538051
SP7-803-22, 23, 24 Dev [CMY] Target revolutions: 586693

※ Fusing unit:
SP7-803-15 Fusing, Target sheets: 50000</td><td>November, 2002</td></tr>
</table>

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002k

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			SP7-803-26 Fusing, Target revolutions: 4651000 • The target no. of revolutions for Fusing near end for SP-7-905-7 has been changed as follows for the China model only (G060-69). ※ Fusing: Alert SP7-905-7 Fusing near end, Target revolutions: 4418000	
G0775623G <<I>>	B1.24	514B	• Supports 2-level European cabinet paper feeder: Firmware modified so that if the destination code is set to Europe, the paper will be exited from the lower position whenever the Finisher and feed station other than the paper feed unit is installed (EU cabinet feeder is the same height as a 2-level PFU, i.e. requires lower-position exit).	December, 2002
G0775623H	***B1.25***	***094B***	• ***Fusing belt rotation timing (warm-up) and lamp off timing (job end) have been changed to prevent unnecessary occurrences of SC543 (heating roller fusing lamp overheat).*** • ***Occurrence conditions for SC552 changed from 150sec → 210sec to prevent unnecessary occurrences.*** ***The following has been fixed:*** • ***Fusing jam misdetection with left door closed due to vibration of fusing exit sensor feeler.***	***March, 2003***
G0775623J	***B1.26***	***4ED0***	***The following have been fixed.*** • ***"Copying" displayed for about 30 seconds before copying begins*** • ***Color drum lock at first color print following a 3-hour interval when energy saver is disabled.***	***April, 2003***

NOTE: 1. Engine main firmware version B1.11G has been implemented from September 25th production run. The machines with Ver. B1.11F or older have been reworked in local: However, some machines have been released to the market without modification. So, please make sure that the version of the engine main firmware is “B1.11G” at installation or next visit. If not, please update it to “B1.11G” or later.

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002k

NOTE: 2. G060-17 models – Engine main firmware version B1.17C was applied to the production line on February 18th, 2002, and most machines with Ver. B1.15E have been reworked locally: However, some of these machines have been released to the market without modification. Therefore please update the engine firmware to ver B1.17C or newer on G060-17 machines in the following serial number range: P60112xxxxx – P60201xxxxx.

2. Engine MUSIC

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605612B	1.04	-	Firmware installed from the first mass production run.	July
G0775624 <<B>>	1.06	62FD	The firmware header has been corrected to allow the MUSIC firmware to be updated using the IC card.	March, 2002
G0775624A <<D>>	1.07	6576	The firmware header has been corrected for Japanese models only.	May, 2002

3. Controller Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605910G G0605911G	2.00	-	Firmware installed from the first mass production run.	July
G0605910H G0605911H	2.01	-	• "Asia" has been added to the destination code.	July
G0775910 G0775911	2.04	-	• The counter click up specification has been changed as follows: **Old specification:** Machine counts a page up as black or color based on the color data sent from the application. Therefore if a document from the PC contains blank (but defined) spaces highlighted in red, e.g., the controller interprets this as color data and counts it as a color print. **New specification:** The machine counts up the page as B/W or color based on the CMYK data, i.e. the actual toner colors used to develop the image, regardless of the actual color data from the application. • To meet the CPU specification change from 250MHz to 300MHz.	August Local Modification (See **NOTE**. **1.**)

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002k

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			• Color profile of the PCL driver has been changed to Ver. 1.1.2a. The following problem has been corrected: When designating the Finisher shift tray 1 for paper output tray as default, paper is not fed out to shift tray 1.	
G0775910A G0775911A	2.05	13D2 7709	• The following problem has been corrected. 1. B&W prints cannot be made if color toner is empty. 2. HDD format cannot be done when SC860 is detected. • CRD version of PS3 has been updated to Ver. 1.2.1. • Presentation color profile version of PCL has been updated to Ver. 1.2.1. (Photographic color profile stays the same as Ver. 1.1.2a.)	
G0775910A G0775911A	2.05A	28E0 176D	The following problem has been fixed. (This problem occurs only when selecting German language.) When selecting the meter click mode and printing the counter sheet from the user program mode, the message of “Color” and “Black” is printed in the other way around.	October ’01 Local Modification (See **NOTE**. **2.**)
G0775910B G0775911B	2.06	A556 B965	The following problem has been fixed. • When all memory clear (SP5-801-001 or 002) is done, the destination code is cleared to “0 (Japan)”. Since Japanese fonts are not stored for the messages, strange characters appear. • When printing A3+ (12”x18”) size documents, the image is not shift to center, causing a big white margin at the trailing edge.	October, ‘01
G0775910B G0775911B <<A>>	2.07	-	• PS configuration page printing is now limited to plain or recycled paper (previously, it could be printed out onto any paper type). • The following has been fixed: Selecting a custom paper size in the PCL may, in rare cases, cause the PC to freeze.	
G0775910C G0775911C <<A>>	2.08	-	The following has been fixed: If the output tray becomes full while the machine is receiving print job data in Series Print mode, following tray-full recovery, the remaining pages may be printed out in the wrong order. See RTB RGene010 for details on Series Print mode.	
G0775910D G0775911D <<A>>	2.11	CCB1 2519	• Letterhead Mode has been added (see RTB #006 for details). • The following has been fixed: Paper is not punched at the designated position in Series Print mode (see RTB RGene010 for details on Series Print mode).	January, 2002

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002k

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0775910E G0775911E <<B>>	2.12	-	• The following has been fixed: While downloading PS fonts to a machine with the HDD option installed, the correct PS serial number cannot be output.	
G0775910F G0775911F <<B>>	2.13	412E C03D	• Euro fonts PC858, ISO8859-15, L9, PS Math and MC Text are now supported. • PS performance improvement. • RMS is supported with the use of the customized controller (field monitoring machines only). • A new Coverage Counter has been added to SP7-908-1 to -8 (SP7-908-5 to –8 are the same as SP7-833-11 to -14). With this new counter, B/W pages that follow color pages in ACS will be counted as B/W, and the CMY counters will not count up. To activate this function, it is necessary to use the 8kB NVRAM on the BCU board and engine firmware version B1.17C or newer. • The following have been fixed: ※ When the undefined command, "<ESC>&k#w", is received, it appears on the output as a character string [e.g. as "<ESC>&k6w"]. ※ If Job Reset is selected while the first page of a multiple-page document is being processed, the panel continues to display “Printing”. ※ AutoContinue timer bug. ※ The Punch Counter counts up by 2 for every sheet punched when using the function in Duplex Mode.	March, 2002
G0775910G G0775911G <<D>>	2.14	AB1E 2573	• The following have been fixed: ※ PCL - Modified the dither size for when the UDFP command is used (GFPR# RE02030021) - Modified so that some characters in symbol sets MS Text and Windows Baltic (19L) will appear exactly as they do with HP printers. ※ PS - The margin for Custom size has been changed from 12 to 11 points to expand the maximum printing area. - Modified the dither setting for when the DeviceGray command is used. • Change in Specification: ※ Supports the Status Readback function of the PCL5e. ※ When the machine has no HDD option, the PCL HDD Directory List (and font source) will not be printed on the PCL Configuration Page.	June, 2002
G0775910H G0775911H	2.16	F270 7677	• The printing speed of a PS job slows down after a PS3 job is reset.	July, 2002

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002k

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
<<E>>				
G0775910J G0775911J <<G>>	2.17	9A5A BDF1	• When paper size error occurs using PCL printing, the printer error message of SNM for Client is not displayed on the PC.	September, 2002
G0775910K G0775911K <<G>>	2.18	2A77 4BAB	• The following have been fixed: ※ PCL - Slow Printing from AutoCAD.(GFPR# RC02070001) ※ PS - Euro symbol is not printed.(GFPR# RC02040005) Please refer to RTB #RGENE011 which will be issued soon, for the procedure of how to fix this issue. - PS print file is printed as text.(GFPR# RE02040013)	October, 2002
G0775910L G0775911L <<H>>	2.19	1421 2E85	• The following have been fixed: ※ After using User Tool on operation panel, PCL print jobs may keep showing "Printing..." on operation panel. ※ Form Lines value (under PCL Menu) change after reboot the Machine. (GFPR# RA02090003) ※ PCL - Response to PJL INFO CONFIG command does not include serial number. - The print may stop during the processing of the file when using "INFICO". (GFPR# RE02090012) - The work area of RAM is reduced whenever fonts that have been downloaded to HDD are used. ※ PS - 16bit color blend data does not print correctly. (TechMail#RE0200414) - Slow Printing from AutoCAD. (GFPR# RC02070001) - Printing may not work correctly when a protocol other than EtherTalk is used on Macintosh 8.x/9.x.(TechMail#UK020107) - The printer controller locks-up when printing from Unix Acrobat. - Lines may be printed on the blank of page. - The error log is not described in Configuration page when the punch error occurred. - When data is sent that outputs 3 hole punch to the European model (which supports 2&4 hole punch), output has 2 hole punch. (Now output has no punch). - Printing on envelope may not work correctly. ※ PJL	December, 2002

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002k

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			- Response to PJL INFO CONFIG command does not include serial number.	
G0775910M G0775911M <<J>>	2.20	-	• The following have been fixed: ※ PCL - The following problems with the CAD print file were fixed. 1) Modified the available pen number from 8 to 256 when BitSw #3-3 is ON. (GFPR# RE02030003) 2) The "null" character is ignored when it is included in HP/GL2 data. (GFPR# RE02050016) 3) The status flag for the bold selection command is refreshed when the bold selection command In HP/GL2 data is selected. (GFPR# RE02050016) - Supports mixed binding orientations with duplex jobs using cover sheets. (GFPR# RC02080003) - When using the "PageLength" command, duplex print does not work. (GFPR#RC02120014) -The downloaded PCL Barcode fonts are not printed correctly on the PCL font list. (GFPR#RC03010004) - The Barcodes are printed with shift. (GFPR#RE03010016) - Selecting HDD font may reduce available memory. - Supported SAP Barcode & OCR printing. ※ PS - PS error occurs when unknown media type is specified. (GFPR# RE03010003) - The default setting of mainframe System/Resolution is "1200 x 600dpi".	-
G0775910N G0775911N <<J>>	2.21	3BC5 18E2	• Change in specification - Changing Adobe PostScript 3 Logo in PS config page to red.	April, 2003

NOTE: **1.** The Meter Click counter specification has been changed from the controller firmware (Ver. 2.04). The machines with Ver. 2.01 or older have been reworked in local. However, some machines have been released to the market without

modification. So, please make sure that the version of the engine main firmware is "2.04" or later at installation or next visit. If not, please update it to the latest firmware.

NOTE: **2.** Messages "Color" and "Black" in the meter click counter is reversibly displayed on the screen and print out only when German language is selected. The machines with Ver. 2.05 or older have been reworked in local. However, some machines have been released to the market without modification. If the machine is set to German language, please make sure that the version of the engine main firmware is "2.05A" or later at installation or next visit. If not, please update it to the latest firmware.

4. NIB Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605920J	1.72.1	B453	Firmware installed from the first mass production run.	July
G0605920K	1.74	3355	The followings have been corrected: • When the job is canceled, the lpr connection is terminated and a blank space is displayed in the syslog. Instead of the blank space, "Lost connection" is displayed. • When 50 or more lpq/lprm commands are sent, the lpd process cannot be completed properly and the job is not printed out. • If DHCP is ON and TCP/IP is OFF, the current device name (RNPXXXXXX) in SmartNetMonitor is not displayed. • NIB stops printing if several prints jobs are continuously sent to the NIB via the IPP port (SmartNetMonitor for Client), and a print job sent via the standard IPP port may be canceled.	July
G0605920L	1.75.1	64F4	The followings have been corrected: Nothing was displayed even though the "prnlog 0" command was done in telnet.	September (Local modification for –17 model)
G0605920M <<C>>	1.78	AB29	• If an undefined remote printer number is input in the Netware configuration page, communication between the NIB and Netware Server will be cut off. • No error message is displayed in Netscape Navigator even when an incorrect URL is input in the address bar. • Up to 32 characters can be input in the NetBEUI configuration screen Comment box, even though specification is 31 characters maximum. • If Trap is selected for the Access Type in the SNMP Configuration screen during the snmpd process, communication may be cut off.	January, 2002

Reissued: 29-Aug-03

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002k

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			• The NIB does not respond to the "lprm –" command (root directory) from a FreeBSD host computer. • TCP Ports 11021 and 11023 (Design use) have been closed. • There were two error messages displayed when no files were available for download using FTP. The two messages were merged to "550: No such file or directory". • PS status can be displayed in STAT command using ftpd/ rshd/ telnetd/ lpd. • During a given FTP login session, the NIB counts up every user command issued as a new session. • The length of the login user name can be up to 64 characters when using FTP.	
G0605920N <<D>>	1.81	8FA3	• The following have been fixed: ※ Cannot connect to Novell NDS (GFPR# RC02010007). ※ Two or more print queues can be attached to a single printer object (TechMail RC010430). ※ The controller freezes if it is disconnected while the data which generates the Readback command is being printed out with ftp/rsh. ※ The controller freezes when it cannot find the file specified for rcp transmission. ※ The parameters of sysLocation and sysContact cannot be set correctly using the snmp command with telnet. ※ The Fax Management Tool cannot be used for a while after any of the NIB setting(s) are changed. • Change in Specification: ※ SNMP vulnerability - SNMP security vulnerabilities reported by CERT on Feb.12, 2002 has been resolved and tested using the PROTOS c06-snmpv1 test suite. **CERT** :http://www.cert.org/advisories/CA-2002-03.html **PROTOS c06-snmpv1 test suite :**http://www.ee.oulu.fi/research/ouspg/protos/testing/c06/snmpv1/ ※ TCP ports for disabled services (e.g. FTP) were open. ※ An unnecessary TCP port was open.	June, 2002

Reissued: 29-Aug-03

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002k

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605920P <<G>>	1.82	384B	• HTTP and telnet protocols can be opened/closed using telnet. NOTE: After making the setting to disable HTTP, you cannot access the target device through a web browser. If your want to change this settings, please use telnet to open HTTP. When telnet port is disabled, you have to do clear the network settings (SP5-801-11) to open the telnet protocol. • Changed the default setting of DHCP to ON. NOTE: There is no change when updating the firmware. This feature is for the factory default. • It does not work in a UNIX environment even if the install Script in the controller is downloaded.	October, 2002
G0605920Q <<J>>	1.83	E5D7	• The following have been fixed: - Access Mask does not work.	July, 2003

Model: Model-J	Date: 11-Nov-03	No.: RG060026

Subject: Line Position Adjustment Result	Prepared by: H.Taguchi
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 add the items in **bold** below to your Service Manuals.

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SP5-993-007 (Line Position Adjustment Result)

No.	Result	Description	Note
01	Successfully completed	Data sampling was correctly done and line position adjustment was successfully completed.	
02	Out of adjustment range (over ±2 mm)	The calculated result for line position correction is greater than ±2 mm.	
03	Calculation Error	Distance between the lines is greater than ±2 mm.	
04	Sampling Error	Data sampling cannot be done properly.	
05	Descending slope error	The ascending or descending slope of the ID sensor signal wave is out of specification.	(See Note 1)
06	Ascending slope error		(See Note 1)
07	Pattern lines mismatch (less than 64 lines)	The detected number of pattern lines is less than 64.	(See Note 1)
08	Sampling time-out	Data sampling cannot be done within the allocated time.	
09	Sampling start error	The start mark cannot be detected within the allocated time.	
10	Pattern length mismatch	The pattern length is shorter or longer than specified.	(See Note 1)
11	Pattern lines mismatch (over 64 lines)	The detected number of pattern lines is over 64.	
12	Magnification mismatch	The calculated magnification value does not match any data in the laser power frequency adjustment data table.	
13	Toner condition	The machine is in the toner near-end or toner end condition.	
17	Not executed	The machine is not ready to do the line position adjustment manually from the user menu.	
18	Potential control error	Line position adjustment cannot be done due to failed potential control.	
19	**Cyan line error**	**The necessary mirror angle correction is outside the adjustment range (cyan only).**	
29	**Magenta line error**	**The necessary mirror angle correction is outside the adjustment range (magenta only).**	

No.	Result	Description	Note
39	**Cyan & Magenta line error**	**The necessary mirror angle correction is outside the adjustment range (cyan and magenta).**	
49	**Yellow line error**	**The necessary mirror angle correction is outside the adjustment range (yellow only).**	
59	**Cyan & yellow line error**	**The necessary mirror angle correction is outside the adjustment range (cyan and yellow).**	
69	**Magenta & yellow line error**	**The necessary mirror angle correction is outside the adjustment range (magenta and yellow).**	
79	**Cyan, magenta, & yellow line error**	**The necessary mirror angle correction is outside the adjustment range (cyan, magenta and yellow).**	

Page 4-5

Possible causes of errors in the line position adjustment

	Possible Cause	Possible Error Code	Action
1	The pattern does not reach the proper density.		
	1. Dirty ID sensor (toner, dust, or foreign material)	04, 05, 06, 07, 08, 09, 10	1. Clean the ID sensors.
	2. Incorrect toner density Low: ID sensor cannot detect the pattern lines. High: Lines may be partially blank due to improper toner density and/or paper transfer current.		2. Correct the toner density.
	3. Incorrect transfer current		3. Correct the transfer current.
2	The ID sensors are affected by electrical noise or dirt/damage on the transfer belt.		
	1. Scratched or damaged OPC drum	02, 03, 04, 05, 06, 10, 11, 12	1. Replace PCU
	2. Scratched or damaged transfer belt		2. Replace transfer belt
	3. Dirty transfer belt		3. Clean or replace transfer belt
	4. High voltage leak in transfer unit		4. Fix the high voltage leak
	5. Residual image on transfer belt		5. Check transfer belt cleaning and clean the belt
	6. Toner dropped from development unit		6. Clean the development unit and adjust the toner density
	7. Carrier dropped from development unit		7. Clean the development unit and adjust the toner density
3	The transfer belt is covered with toner.		
	Development does not work properly.	All error codes	Check all units and high voltage cable connectors.
4	None of the patterns are developed.		
	Development does not work properly.	09, 04	Check all units and high voltage cable connectors.
5	Some of the patterns are not developed;		
	Development does not work properly.	07, 08	Check all units and high voltage cable connectors.
6	The machine is not in the condition to execute the line position adjustment;		
	The machine is in the toner near end or end condition.	13	Replenish toner.

	Possible Cause	Possible Error Code	Action
	The machine is not ready to do the line position adjustment manually from the user menu.	17	Wait until machine becomes the ready condition from the energy saver or auto off mode.
	Line position adjustment cannot be done due to failed potential control.	18	Fix the problem causing the potential control error.
7	The MUSIC CPU is abnormal (1)		
	No error code is displayed. However, the machine keeps displaying "execution" on the screen. In addition, the green LED on the BICU stays on or off under the following condition. 1. The MUSIC CPU resets due to electrical noise generated by a high voltage leak on a damaged OPC drum.	-	1. Fix the bias leak and/or replace PCU
8	The MUSIC CPU is abnormal (2)		
	No error code is displayed. However, the machine keeps displaying "execution" on the screen. The green LED on the BICU keeps blinking faintly (this is normal) even under one of the following conditions. 1. Poor connection between the toner cartridge detection board and the memory chip on the toner cartridge 2. The memory chip on the toner cartridge fails.	-	1. Check the connection between the detection board and memory chip. 2. Replace the toner cartridge.
9	**The ID sensors are affected by dirt/damage on the transfer belt or dirt ID sensor**		
	1. Dirty transfer belt.	**19, 29, 39, 49, 59, 69, 79**	**Clean the transfer belt.**
	2. Scratched or damaged transfer belt.		**Replace the transfer belt.**
	3. Dirty ID sensor (toner, dust, or foreign material)		**Clean the ID sensors.**

Firmware:
The additional results listed above in bold are supported from the following firmware versions:

- Engine main firmware: v1.17 or newer

Model: Model-J	Date: 12-Feb-04	No.: RG060027

Subject: Cold offset at power on in cold conditions	Prepared by: H.Taguchi
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 ( )		

Symptom

Cold offset (poor fusing) may occur when all of the following conditions are met:

1. The machine is turned on under low-temperature conditions
2. The weight of the paper loaded in the tray is near the upper limit for plain paper (e.g. 100g/28lb)
3. Copies are taken in B&W mode (185 mm/sec).

Note:

- The offset normally occurs between the second and fifth copy, gradually improving and disappearing within a total of approximately 15 copies.
- This does not occur in Color mode or with paper weights of 80g/24lb or less.

Cause

The heat distribution across the fusing belt is not uniform while the initial copies are made onto thicker plain paper in B&W mode (highest processing speed).

Action Required

1. SP1-912-2: Change the threshold for enabling low temperature correction from 17°C to **22°C**.
2. SP1-916-1: Enable idling mode (set to a value of **1**).

SP Mode	Default	Change to
SP1-912-2	17°C	**22°C**
SP1-916-1	0: OFF	**1: ON**

See Note below.

Note:

- Enabling Idling Mode causes the warm-up time to increase by 30sec, so please advise customers of this point.

Reissued: 8-Apr-04

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002I

RTB Reissue

Subject: Firmware Modification			Prepared by: H. Taguchi
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 ( )		

This bulletin explains the firmware modification history for the Model-J (details begin on page 2).

	BCU		Controller		
Firmware Type	**Main**	**Music**	**Controller**		**NIB**
			1	2	
Remarks	(see Note below)	(see Note below)	File Name G0775910#.bin # : suffix	File Name G0775911#.bin # : suffix	(see Note below)

Note: The Main, Music and NIB firmware are used for both the G060 printer and G060/G570 CF Expander.

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RTB Revision List

Issue Date	Control Symbol	Revised contents
09-Jan-02	-	First edition
24-Jan-02	<<A>>	Engine Main: 1.11G -> 1.11H -> 1.15E Controller: 2.06 -> 2.07 -> 2.08 -> 2.11
7-Mar-02	<<B>>	Engine Main: 1.15E -> 1.17C Engine MUSIC: 1.04 -> 1.06 Controller: 2.11 -> 2.12 -> 2.13
15-Apr-02	<<C>>	NIB: 1.75.1 -> 1.78
28-Jun-02	<<D>>	Engine: 1.17C -> 1.18 -> 1.18B Engine MUSIC: 1.06 -> 1.07 Controller: 2.13 -> 2.14 NIB: 1.78 -> 1.81
18-Jul-02	<<E>>	Controller: 2.14 -> 2.16
6-Sep-02	<<F>>	Engine: 1.18B -> 1.19
1-Nov-02	<<G>>	Engine: 1.19 -> 1.21 -> 1.22 Controller: 2.16 -> 2.17 -> 2.18 NIB: 1.81 -> 1.82
31-Jan-03	<<H>>	Controller: 2.18 -> 2.19
7-Feb-03	<<I>>	Engine: 1.22 -> 1.23 -> 1.24
30-Jul-03	<<J>>	Controller: 2.19 -> 2.20 -> 2.21 NIB: 1.82 -> 1.83
29-Aug-03	<<K>>	Engine: 1.24 -> 1.25 -> 1.26
8-Apr-04	***<<L>>***	***Engine: 1.26 → 1.27***

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002I

[Modification History]

1. Engine Main Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0775611	B1.10	-	Firmware installed from the first mass production run.	July
G0775611D	B1.11A	-	Charge and development bias applied during the toner end recovery mode has been changed to optimize the drum cleaning function.	August
G0775611E	B1.11B	-	The frequency to control the color drum motor has been optimized so that the motor starts smoothly rotating.	August
G0775611G	B1.11D	-	The following specification change has been applied: The yield target of PCUs has been changed from 100KP to 50KP.	-
G0775611H	B1.11F	-	The following problem has been fixed. • The machine suddenly keeps running due to memory overflow. • SC670 when the machine starts waking up from the energy saver mode	-
G0775611J	B1.11G	45A0	The following problem has been fixed. Black developer initialization fails because toner is mistakenly supplied due to software bug, causing SC370 (Developer Initialization Error – Black). This happens when performing only the black developer initialization. (If performing the developer initialization for black and other color(s) simultaneously, this problem does not occur.) If the main switch is tuned off and on, the SC code is reset and the machine re-starts the developer initialization. In the worst case, toner flows out from development unit (the entrance area where toner is supplied) to the inside of machine.	September Local Modification (See **NOTE. 1**.)
G0775621 <<A>>	B1.11H	-	A fusing clutch has been added to maximize the life of the fusing unit and oil supply unit. This firmware version was temporarily installed in production machines to keep the clutch constantly moving, until the clutch control program could be added to the next version (1.15E). **NOTE:** Therefore this version has <u>not</u> been released.	
G0775621A <<A>>	B1.15E	171C	• Fusing clutch control has been added to start/stop the clutch. • The following has been corrected: ※ When a paper jam occurs midway through a staple job, job recovery may re-start the job from the 1st page instead. • Over-occurrence of the following SC codes (due to software bugs) has been fixed: ※ SC220/230 at the start of a job ※ SC544/554 during warm-up under low-temp conditions in 62.5mm/sec mode.	December, 2001

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002I

<table>
<tr><th>P/N</th><th>Version</th><th>Check Sum</th><th>Contents of Modification</th><th>Cut-in Month</th></tr>
<tr><td></td><td></td><td></td><td>
• SP1-916 (Idling mode) has been added.
<table>
<tr><td>916</td><td colspan="4">[Idling Mode]</td></tr>
<tr><td></td><td>1</td><td>Mode Set</td><td>*</td><td>Enables or disables fusing unit idling performed after the machine reaches the Ready condition. Idling is performed for the time specified in SP1-916-2.
[0 or 1/ <u>0</u> / -] DFU
0: OFF, 1: ON</td></tr>
<tr><td></td><td>2</td><td>Idling Time</td><td></td><td>Specifies the time for fusing unit idling.
[10 to 120 / <u>30</u> / 10 sec/step] DFU</td></tr>
<tr><td></td><td>3</td><td>Pre-Job Mode</td><td></td><td>Enables or disables the 4-second fusing unit idling performed at the start of a print job.
[0 or 1/ <u>0</u> / -] DFU
0: OFF, 1: ON</td></tr>
</table>
</td><td></td></tr>
<tr><td>G0775623
<<B>></td><td>B1.17C</td><td>169B</td><td>
• To optimize the amount of oil supplied to the fusing belt in OHP mode, the number of supply cycles during idling has been reduced to 1.
• SP1-996-6 (OHP Pre-Job mode) has been added.
<table>
<tr><td>996</td><td colspan="4">[OHP/TH Fusing]</td></tr>
<tr><td></td><td>6</td><td>Pre-Job Mode</td><td>*</td><td>Enables or disables the 30-second fusing unit idling performed at the start of an OHP print job. When enabled, idling is performed even if the machine is at the Ready condition.
[0 or 1/ <u>0</u> / -]
0: OFF, 1: ON</td></tr>
</table>
• A new Coverage Counter has been added to SP7-908-1 to -8 (SP7-908-5 to –8 are the same as SP7-833-11 to -14). With this new counter, B/W pages that follow color pages in ACS will be counted as B/W, and the CMY counters will not count up. To activate this function, it is necessary to use the 8kB NVRAM on the BCU board and controller firmware version 2.13 or newer.
• The machine automatically detects whether a 4kB or 8kB NVRAM is installed on the BCU board.
• A grid pattern has been added to SP mode copy images. To activate this, it is necessary to use system firmware ver1.07 or newer (for the CF expander only).
</td><td>March, 2002 (See NOTE. 2.)</td></tr>
</table>

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002I

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			• The following have been corrected: ※ SC240 misdetection. ※ When the K toner cartridge is replaced, the "previous PM counter" values for CMY are all overwritten to the previous value for K toner (SP7-906-23 to –25). ※ If machine enters Energy Saver 1 Mode then cools down for more than 1 minute, it will not display "Ready" after recovery warm-up (only for G060-17 models). ※ When a B/W job is performed, the coverage counters (SP7-833-1 to -4) for CMY are not set to 0 as they should be, i.e. the values from the previous job remain.	
G0775623A <<D>>	B1.18	F284	• The following have been corrected: ※ Main scan magnification error (see RTB #RG060015 for details; to be released soon). ※ SC471 caused by stop timing error for transfer belt contact motor. ※ SC545 in fusing phase control mode. ※ SC543 **NOTE:** This version has <u>not</u> been released (see "side effect" below).	May, 2002
G0775623B <<D>>	B1.18B	D7B1	• The following have been corrected: ※ SC230 at automatic line position adjustment ***(see RTB #RG570004 for details; to be released soon)***. ※ Side effect for B1.18 SC545 modification (only for G060-17 models): The machine does not display "Ready" after recovery warm-up from Energy Saver 1 Mode in phase control mode (see RTB #RG060013 for details; to be released soon).	Middle of June, 2002
G0775623C <<F>>	B1.19	BB39	• The following have been corrected: ※ When SP1-916-1 is set to 1, the machine may not reach the Ready condition after the main SW is turned on in low-temp, low-humidity environments. ※ Upgrade error recovery cannot be performed with version 4 of the BCU ASIC (Gate Array PCI).	August, 2002
G0775623D <<G>>	B1.21	3F29	• The following have been corrected: ※ SC220-4 for machines with LD unit E-MAC2 installed. • Destination code for China added. • New SP mode added: SP3-922 (OPU_Refresh2). To activate this function, it is necessary to	September, 2002

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002I

<table>
<tr><th>P/N</th><th>Version</th><th>Check Sum</th><th>Contents of Modification</th><th>Cut-in Month</th></tr>
<tr><td></td><td></td><td></td><td>use controller firmware version 2.17 and CF system firmware version 1.10 or newer.
<table>
<tr><td>922</td><td colspan="4">[OPU_Refresh2]</td></tr>
<tr><td></td><td>1</td><td>Mode_Set</td><td>*</td><td>Enables or disables the filming removal mode (CMY), which forcibly creates a temporary 15mm-wide toner line on the drum surface by applying the development bias and turning on the development clutch at the end of a job.
[0 to 2/ 0 / -]
0: Disabled
1: Performed at end of job only when ave. pixel cov. ratio of previous job is low.
2: Performed at end of every job</td></tr>
<tr><td></td><td>2</td><td>Bias_Set</td><td>*</td><td>Development bias setting for filming removal mode (CMY)
[100 to 400/ 200 / 10] DFU
0: OFF, 1: ON</td></tr>
</table></td><td></td></tr>
<tr><td>G0775623E
<<G>></td><td>B1.22</td><td>CCAA</td><td>• The following has been corrected:
※ Paper jam with Series Printing when the exit tray setting is not the same for all individual jobs.</td><td>October, 2002</td></tr>
<tr><td>G0775623F
<<I>></td><td>B1.23</td><td>3D1F</td><td>• The target PM intervals for SP7-803 (PM counter) have been changed as follows on the China model only (G060-69).
※ PCU:
SP7-803-1 PCU [K] Target sheets: 25000
SP7-803-2, 3, 4 PCU [CMY] Target sheets: 25000
SP7-803-17 PCU [K] Target revolutions: 137669
SP7-803-18, 19, 20 PCU [CMY] Target revolutions: 147953

※ Development unit:
SP7-803-5 Dev [K] Target sheets: 50000
SP7-803-6, 7, 8 Dev [CMY] Target sheets: 50000
SP7-803-21 Dev [K] Target revolutions: 538051
SP7-803-22, 23, 24 Dev [CMY] Target revolutions: 586693

※ Fusing unit:
SP7-803-15 Fusing, Target sheets: 50000</td><td>November, 2002</td></tr>
</table>

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002I

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			SP7-803-26 Fusing, Target revolutions: 4651000 • The target no. of revolutions for Fusing near end for SP-7-905-7 has been changed as follows for the China model only (G060-69). ※ Fusing: Alert SP7-905-7 Fusing near end, Target revolutions: 4418000	
G0775623G <<I>>	B1.24	514B	• Supports 2-level European cabinet paper feeder: Firmware modified so that if the destination code is set to Europe, the paper will be exited from the lower position whenever the Finisher and feed station other than the paper feed unit is installed (EU cabinet feeder is the same height as a 2-level PFU, i.e. requires lower-position exit).	December, 2002
G0775623H	B1.25	094B	• Fusing belt rotation timing (warm-up) and lamp off timing (job end) have been changed to prevent unnecessary occurrences of SC543 (heating roller fusing lamp overheat). • Occurrence conditions for SC552 changed from 150sec → 210sec to prevent unnecessary occurrences. The following has been fixed: • Fusing jam misdetection with left door closed due to vibration of fusing exit sensor feeler.	March, 2003
G0775623J	B1.26	4ED0	The following have been fixed. • "Copying" displayed for about 30 seconds before copying begins • Color drum lock at first color print following a 3-hour interval when energy saver is disabled.	April, 2003
G0775623K <<L>>	***B1.27***	***3CE1***	• ***The calculation method for average image (pixel) coverage ratios in SP7-908 and SP7-833 has been optimized.*** • ***The following have been fixed:*** - ***The second page is not transported to the Finisher stapling tray with duplex printing and mixed paper size stapling jobs.*** - ***The machine freezes when the paper height sensor detects paper jam following jam recovery.***	***April, 2004***

NOTE: 1. Engine main firmware version B1.11G has been implemented from September 25th production run. The machines with Ver. B1.11F or older have been reworked in local: However, some machines have been released to the market without modification. So, please make sure that the version of the engine main firmware is “B1.11G” at installation or next visit. If not, please update it to “B1.11G” or later.

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002I

NOTE: 2. G060-17 models – Engine main firmware version B1.17C was applied to the production line on February 18th, 2002, and most machines with Ver. B1.15E have been reworked locally: However, some of these machines have been released to the market without modification. Therefore please update the engine firmware to ver B1.17C or newer on G060-17 machines in the following serial number range: P60112xxxxx - P60201xxxxx.

2. Engine MUSIC

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605612B	1.04	-	Firmware installed from the first mass production run.	July
G0775624 <<B>>	1.06	62FD	The firmware header has been corrected to allow the MUSIC firmware to be updated using the IC card.	March, 2002
G0775624A <<D>>	1.07	6576	The firmware header has been corrected for Japanese models only.	May, 2002

3. Controller Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605910G G0605911G	2.00	-	Firmware installed from the first mass production run.	July
G0605910H G0605911H	2.01	-	• "Asia" has been added to the destination code.	July
G0775910 G0775911	2.04	-	• The counter click up specification has been changed as follows: **Old specification:** Machine counts a page up as black or color based on the color data sent from the application. Therefore if a document from the PC contains blank (but defined) spaces highlighted in red, e.g., the controller interprets this as color data and counts it as a color print. **New specification:** The machine counts up the page as B/W or color based on the CMYK data, i.e. the actual toner colors used to develop the image, regardless of the actual color data from the application. • To meet the CPU specification change from 250MHz to 300MHz. • Color profile of the PCL driver has been changed to Ver. 1.1.2a.	August Local Modification (See **NOTE. 1.**)

Reissued: 8-Apr-04

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002I

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			The following problem has been corrected: When designating the Finisher shift tray 1 for paper output tray as default, paper is not fed out to shift tray 1.	
G0775910A G0775911A	2.05	13D2 7709	• The following problem has been corrected. 1. B&W prints cannot be made if color toner is empty. 2. HDD format cannot be done when SC860 is detected. • CRD version of PS3 has been updated to Ver. 1.2.1. • Presentation color profile version of PCL has been updated to Ver. 1.2.1. (Photographic color profile stays the same as Ver. 1.1.2a.)	
G0775910A G0775911A	2.05A	28E0 176D	The following problem has been fixed. (This problem occurs only when selecting German language.) When selecting the meter click mode and printing the counter sheet from the user program mode, the message of “Color” and “Black” is printed in the other way around.	October ’01 Local Modification (See **NOTE**. **2.**)
G0775910B G0775911B	2.06	A556 B965	The following problem has been fixed. • When all memory clear (SP5-801-001 or 002) is done, the destination code is cleared to “0 (Japan)”. Since Japanese fonts are not stored for the messages, strange characters appear. • When printing A3+ (12”x18”) size documents, the image is not shift to center, causing a big white margin at the trailing edge.	October, ‘01
G0775910B G0775911B <<A>>	2.07	-	• PS configuration page printing is now limited to plain or recycled paper (previously, it could be printed out onto any paper type). • The following has been fixed: Selecting a custom paper size in the PCL may, in rare cases, cause the PC to freeze.	
G0775910C G0775911C <<A>>	2.08	-	The following has been fixed: If the output tray becomes full while the machine is receiving print job data in Series Print mode, following tray-full recovery, the remaining pages may be printed out in the wrong order. See RTB RGene010 for details on Series Print mode.	
G0775910D G0775911D <<A>>	2.11	CCB1 2519	• Letterhead Mode has been added (see RTB #006 for details). • The following has been fixed: Paper is not punched at the designated position in Series Print mode (see RTB RGene010 for details on Series Print mode).	January, 2002
G0775910E G0775911E <<B>>	2.12	-	• The following has been fixed: While downloading PS fonts to a machine with the HDD option installed, the correct PS serial number cannot be output.	

Reissued: 8-Apr-04

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002I

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0775910F G0775911F <<B>>	2.13	412E C03D	• Euro fonts PC858, ISO8859-15, L9, PS Math and MC Text are now supported. PS performance improvement. • RMS is supported with the use of the customized controller (field monitoring machines only). • A new Coverage Counter has been added to SP7-908-1 to -8 (SP7-908-5 to –8 are the same as SP7-833-11 to -14). With this new counter, B/W pages that follow color pages in ACS will be counted as B/W, and the CMY counters will not count up. To activate this function, it is necessary to use the 8kB NVRAM on the BCU board and engine firmware version B1.17C or newer. • The following have been fixed: ※ When the undefined command, "<ESC>&k#w", is received, it appears on the output as a character string [e.g. as "<ESC>&k6w"]. ※ If Job Reset is selected while the first page of a multiple-page document is being processed, the panel continues to display “Printing”. ※ AutoContinue timer bug. ※ The Punch Counter counts up by 2 for every sheet punched when using the function in Duplex Mode.	March, 2002
G0775910G G0775911G <<D>>	2.14	AB1E 2573	• The following have been fixed: ※ PCL - Modified the dither size for when the UDFP command is used (GFPR# RE02030021) - Modified so that some characters in symbol sets MS Text and Windows Baltic (19L) will appear exactly as they do with HP printers. ※ PS - The margin for Custom size has been changed from 12 to 11 points to expand the maximum printing area. - Modified the dither setting for when the DeviceGray command is used. • Change in Specification: ※ Supports the Status Readback function of the PCL5e. ※ When the machine has no HDD option, the PCL HDD Directory List (and font source) will not be printed on the PCL Configuration Page.	June, 2002
G0775910H G0775911H <<E>>	2.16	F270 7677	• The printing speed of a PS job slows down after a PS3 job is reset.	July, 2002
G0775910J G0775911J <<G>>	2.17	9A5A BDF1	• When paper size error occurs using PCL printing, the printer error message of SNM for Client is not displayed on the PC.	September, 2002

Reissued: 8-Apr-04

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002I

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0775910K G0775911K <<G>>	2.18	2A77 4BAB	• The following have been fixed: PCL - Slow Printing from AutoCAD.(GFPR# RC02070001) ※ PS - Euro symbol is not printed.(GFPR# RC02040005) Please refer to RTB #RGENE011 which will be issued soon, for the procedure of how to fix this issue. - PS print file is printed as text.(GFPR# RE02040013)	October, 2002
G0775910L G0775911L <<H>>	2.19	1421 2E85	• The following have been fixed: ※ After using User Tool on operation panel, PCL print jobs may keep showing "Printing..." on operation panel. ※ Form Lines value (under PCL Menu) change after reboot the Machine. (GFPR# RA02090003) ※ PCL - Response to PJL INFO CONFIG command does not include serial number. - The print may stop during the processing of the file when using "INFICO". (GFPR# RE02090012) - The work area of RAM is reduced whenever fonts that have been downloaded to HDD are used. ※ PS - 16bit color blend data does not print correctly. (TechMail#RE0200414) - Slow Printing from AutoCAD. (GFPR# RC02070001) - Printing may not work correctly when a protocol other than EtherTalk is used on Macintosh 8.x/9.x.(TechMail#UK020107) - The printer controller locks-up when printing from Unix Acrobat. - Lines may be printed on the blank of page. - The error log is not described in Configuration page when the punch error occurred. - When data is sent that outputs 3 hole punch to the European model (which supports 2&4 hole punch), output has 2 hole punch. (Now output has no punch). - Printing on envelope may not work correctly. ※ PJL - Response to PJL INFO CONFIG command does not include serial number.	December, 2002
G0775910M G0775911M <<J>>	2.20	-	• The following have been fixed: ※ PCL - The following problems with the CAD print file were fixed. 1) Modified the available pen number from 8 to 256 when BitSw #3-3 is ON.	-

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002I

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			(GFPR# RE02030003) 2) The "null" character is ignored when it is included in HP/GL2 data. (GFPR# RE02050016) 3) The status flag for the bold selection command is refreshed when the bold selection command In HP/GL2 data is selected. (GFPR# RE02050016) - Supports mixed binding orientations with duplex jobs using cover sheets. (GFPR# RC02080003) - When using the "PageLength" command, duplex print does not work. (GFPR#RC02120014) -The downloaded PCL Barcode fonts are not printed correctly on the PCL font list. (GFPR#RC03010004) - The Barcodes are printed with shift. (GFPR#RE03010016) - Selecting HDD font may reduce available memory. - Supported SAP Barcode & OCR printing. ※ PS - PS error occurs when unknown media type is specified. (GFPR# RE03010003) - The default setting of mainframe System/Resolution is "1200 x 600dpi".	
G0775910N G0775911N <<J>>	2.21	3BC5 18E2	• Change in specification - Changing Adobe PostScript 3 Logo in PS config page to red.	April, 2003

NOTE: 1. The Meter Click counter specification has been changed from the controller firmware (Ver. 2.04). The machines with Ver. 2.01 or older have been reworked in local. However, some machines have been released to the market without modification. So, please make sure that the version of the engine main firmware is “2.04” or later at installation or next visit. If not, please update it to the latest firmware.

NOTE: 2. Messages “Color” and “Black” in the meter click counter is reversibly displayed on the screen and print out only when German language is selected. The machines with Ver. 2.05 or older have been reworked in local. However, some machines have been released to the market without modification. If the machine is set to German language, please make sure that the version of the engine main firmware is “2.05A” or later at installation or next visit. If not, please update it to the latest firmware.

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002I

4. NIB Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605920J	1.72.1	B453	Firmware installed from the first mass production run.	July
G0605920K	1.74	3355	The followings have been corrected: • When the job is canceled, the lpr connection is terminated and a blank space is displayed in the syslog. Instead of the blank space, "Lost connection" is displayed. • When 50 or more lpq/lprm commands are sent, the lpd process cannot be completed properly and the job is not printed out. • If DHCP is ON and TCP/IP is OFF, the current device name (RNPXXXXXX) in SmartNetMonitor is not displayed. • NIB stops printing if several prints jobs are continuously sent to the NIB via the IPP port (SmartNetMonitor for Client), and a print job sent via the standard IPP port may be canceled.	July
G0605920L	1.75.1	64F4	The followings have been corrected: Nothing was displayed even though the "prnlog 0" command was done in telnet.	September (Local modification for –17 model)
G0605920M <<C>>	1.78	AB29	• If an undefined remote printer number is input in the Netware configuration page, communication between the NIB and Netware Server will be cut off. • No error message is displayed in Netscape Navigator even when an incorrect URL is input in the address bar. • Up to 32 characters can be input in the NetBEUI configuration screen Comment box, even though specification is 31 characters maximum. • If Trap is selected for the Access Type in the SNMP Configuration screen during the snmpd process, communication may be cut off. • The NIB does not respond to the "lprm –" command (root directory) from a FreeBSD host computer. • TCP Ports 11021 and 11023 (Design use) have been closed. • There were two error messages displayed when no files were available for download using FTP. The two messages were merged to "550: No such file or directory". • PS status can be displayed in STAT command using ftpd/ rshd/ telnetd/ lpd. • During a given FTP login session, the NIB counts up every user command issued as a new session. • The length of the login user name can be up to 64 characters when using FTP.	January, 2002

Reissued: 8-Apr-04

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002I

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605920N <<D>>	1.81	8FA3	• The following have been fixed: ※ Cannot connect to Novell NDS (GFPR# RC02010007). ※ Two or more print queues can be attached to a single printer object (TechMail RC010430). ※ The controller freezes if it is disconnected while the data which generates the Readback command is being printed out with ftp/rsh. ※ The controller freezes when it cannot find the file specified for rcp transmission. ※ The parameters of sysLocation and sysContact cannot be set correctly using the snmp command with telnet. ※ The Fax Management Tool cannot be used for a while after any of the NIB setting(s) are changed. • Change in Specification: ※ SNMP vulnerability - SNMP security vulnerabilities reported by CERT on Feb.12, 2002 has been resolved and tested using the PROTOS c06-snmpv1 test suite. **CERT** :http://www.cert.org/advisories/CA-2002-03.html **PROTOS c06-snmpv1 test suite :**http://www.ee.oulu.fi/research/ouspg/protos/testing/c06/snmpv1/ ※ TCP ports for disabled services (e.g. FTP) were open. ※ An unnecessary TCP port was open.	June, 2002
G0605920P <<G>>	1.82	384B	• HTTP and telnet protocols can be opened/closed using telnet. NOTE: After making the setting to disable HTTP, you cannot access the target device through a web browser. If your want to change this settings, please use telnet to open HTTP. When telnet port is disabled, you have to do clear the network settings (SP5-801-11) to open the telnet protocol. • Changed the default setting of DHCP to ON. NOTE: There is no change when updating the firmware. This feature is for the factory default. • It does not work in a UNIX environment even if the install Script in the controller is downloaded.	October, 2002
G0605920Q <<J>>	1.83	E5D7	• The following have been fixed: - Access Mask does not work.	July, 2003

Reissued: 30-Jul-04

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002m

RTB Reissue

Subject: Firmware Modification			Prepared by: H. Taguchi
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 ( )		

This bulletin explains the firmware modification history for the Model-J (details begin on page 2).

	BCU		Controller		
Firmware Type	**Main**	**Music**	**Controller**		**NIB**
			1	2	
Remarks	(see Note below)	(see Note below)	File Name G0775910#.bin # : suffix	File Name G0775911#.bin # : suffix	(see Note below)

Note: The Main, Music and NIB firmware are used for both the G060 printer and G060/G570 CF Expander.

RTB Revision List

Issue Date	Control Symbol	Revised contents
09-Jan-02	-	First edition
24-Jan-02	<<A>>	Engine Main: 1.11G -> 1.11H -> 1.15E Controller: 2.06 -> 2.07 -> 2.08 -> 2.11
7-Mar-02	<<B>>	Engine Main: 1.15E -> 1.17C Engine MUSIC: 1.04 -> 1.06 Controller: 2.11 -> 2.12 -> 2.13
15-Apr-02	<<C>>	NIB: 1.75.1 -> 1.78
28-Jun-02	<<D>>	Engine: 1.17C -> 1.18 -> 1.18B Engine MUSIC: 1.06 -> 1.07 Controller: 2.13 -> 2.14 NIB: 1.78 -> 1.81
18-Jul-02	<<E>>	Controller: 2.14 -> 2.16
6-Sep-02	<<F>>	Engine: 1.18B -> 1.19
1-Nov-02	<<G>>	Engine: 1.19 -> 1.21 -> 1.22 Controller: 2.16 -> 2.17 -> 2.18 NIB: 1.81 -> 1.82
31-Jan-03	<<H>>	Controller: 2.18 -> 2.19
7-Feb-03	<<I>>	Engine: 1.22 -> 1.23 -> 1.24
30-Jul-03	<<J>>	Controller: 2.19 -> 2.20 -> 2.21 NIB: 1.82 -> 1.83
29-Aug-03	<<K>>	Engine: 1.24 -> 1.25 -> 1.26
8-Apr-04	<<L>>	Engine: 1.26 → 1.27
30-July-04	***<<M>>***	***Engine: 1.27 → 1.28*** ***Controller: 2.21 → 2.22***

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002m

[Modification History]

1. Engine Main Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0775611	B1.10	-	Firmware installed from the first mass production run.	July
G0775611D	B1.11A	-	Charge and development bias applied during the toner end recovery mode has been changed to optimize the drum cleaning function.	August
G0775611E	B1.11B	-	The frequency to control the color drum motor has been optimized so that the motor starts smoothly rotating.	August
G0775611G	B1.11D	-	The following specification change has been applied: The yield target of PCUs has been changed from 100KP to 50KP.	-
G0775611H	B1.11F	-	The following problem has been fixed. • The machine suddenly keeps running due to memory overflow. • SC670 when the machine starts waking up from the energy saver mode	-
G0775611J	B1.11G	45A0	The following problem has been fixed. Black developer initialization fails because toner is mistakenly supplied due to software bug, causing SC370 (Developer Initialization Error – Black). This happens when performing only the black developer initialization. (If performing the developer initialization for black and other color(s) simultaneously, this problem does not occur.) If the main switch is tuned off and on, the SC code is reset and the machine re-starts the developer initialization. In the worst case, toner flows out from development unit (the entrance area where toner is supplied) to the inside of machine.	September Local Modification (See **NOTE. 1**.)
G0775621 <<A>>	B1.11H	-	A fusing clutch has been added to maximize the life of the fusing unit and oil supply unit. This firmware version was temporarily installed in production machines to keep the clutch constantly moving, until the clutch control program could be added to the next version (1.15E). **NOTE:** Therefore this version has <u>not</u> been released.	
G0775621A <<A>>	B1.15E	171C	• Fusing clutch control has been added to start/stop the clutch. • The following has been corrected: ※ When a paper jam occurs midway through a staple job, job recovery may re-start the job from the 1st page instead. • Over-occurrence of the following SC codes (due to software bugs) has been fixed: ※ SC220/230 at the start of a job ※ SC544/554 during warm-up under low-temp conditions in 62.5mm/sec mode.	December, 2001

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002m

<table>
<tr><th>P/N</th><th>Version</th><th>Check Sum</th><th>Contents of Modification</th><th>Cut-in Month</th></tr>
<tr><td></td><td></td><td></td><td>
• SP1-916 (Idling mode) has been added.
<table>
<tr><td>916</td><td colspan="4">[Idling Mode]</td></tr>
<tr><td></td><td>1</td><td>Mode Set</td><td>*</td><td>Enables or disables fusing unit idling performed after the machine reaches the Ready condition. Idling is performed for the time specified in SP1-916-2.
[0 or 1/ <u>0</u> / -] DFU
0: OFF, 1: ON</td></tr>
<tr><td></td><td>2</td><td>Idling Time</td><td></td><td>Specifies the time for fusing unit idling.
[10 to 120 / <u>30</u> / 10 sec/step] DFU</td></tr>
<tr><td></td><td>3</td><td>Pre-Job Mode</td><td></td><td>Enables or disables the 4-second fusing unit idling performed at the start of a print job.
[0 or 1/ <u>0</u> / -] DFU
0: OFF, 1: ON</td></tr>
</table>
</td><td></td></tr>
<tr><td>G0775623
<<B>></td><td>B1.17C</td><td>169B</td><td>
• To optimize the amount of oil supplied to the fusing belt in OHP mode, the number of supply cycles during idling has been reduced to 1.
• SP1-996-6 (OHP Pre-Job mode) has been added.
<table>
<tr><td>996</td><td colspan="4">[OHP/TH Fusing]</td></tr>
<tr><td></td><td>6</td><td>Pre-Job Mode</td><td>*</td><td>Enables or disables the 30-second fusing unit idling performed at the start of an OHP print job. When enabled, idling is performed even if the machine is at the Ready condition.
[0 or 1/ <u>0</u> / -]
0: OFF, 1: ON</td></tr>
</table>
• A new Coverage Counter has been added to SP7-908-1 to -8 (SP7-908-5 to –8 are the same as SP7-833-11 to -14). With this new counter, B/W pages that follow color pages in ACS will be counted as B/W, and the CMY counters will not count up. To activate this function, it is necessary to use the 8kB NVRAM on the BCU board and controller firmware version 2.13 or newer.
• The machine automatically detects whether a 4kB or 8kB NVRAM is installed on the BCU board.
• A grid pattern has been added to SP mode copy images. To activate this, it is necessary to use system firmware ver1.07 or newer (for the CF expander only).
</td><td>March, 2002 (See NOTE. 2.)</td></tr>
</table>

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002m

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			• The following have been corrected: ※ SC240 misdetection. ※ When the K toner cartridge is replaced, the "previous PM counter" values for CMY are all overwritten to the previous value for K toner (SP7-906-23 to –25). ※ If machine enters Energy Saver 1 Mode then cools down for more than 1 minute, it will not display "Ready" after recovery warm-up (only for G060-17 models). ※ When a B/W job is performed, the coverage counters (SP7-833-1 to -4) for CMY are not set to 0 as they should be, i.e. the values from the previous job remain.	
G0775623A <<D>>	B1.18	F284	• The following have been corrected: ※ Main scan magnification error (see RTB #RG060015 for details; to be released soon). ※ SC471 caused by stop timing error for transfer belt contact motor. ※ SC545 in fusing phase control mode. ※ SC543 **NOTE:** This version has <u>not</u> been released (see "side effect" below).	May, 2002
G0775623B <<D>>	B1.18B	D7B1	• The following have been corrected: ※ SC230 at automatic line position adjustment ***(see RTB #RG570004 for details; to be released soon)***. ※ Side effect for B1.18 SC545 modification (only for G060-17 models): The machine does not display "Ready" after recovery warm-up from Energy Saver 1 Mode in phase control mode (see RTB #RG060013 for details; to be released soon).	Middle of June, 2002
G0775623C <<F>>	B1.19	BB39	• The following have been corrected: ※ When SP1-916-1 is set to 1, the machine may not reach the Ready condition after the main SW is turned on in low-temp, low-humidity environments. ※ Upgrade error recovery cannot be performed with version 4 of the BCU ASIC (Gate Array PCI).	August, 2002
G0775623D <<G>>	B1.21	3F29	• The following have been corrected: ※ SC220-4 for machines with LD unit E-MAC2 installed. • Destination code for China added. • New SP mode added: SP3-922 (OPU_Refresh2). To activate this function, it is necessary to	September, 2002

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002m

<table>
<tr><th>P/N</th><th>Version</th><th>Check Sum</th><th>Contents of Modification</th><th>Cut-in Month</th></tr>
<tr><td></td><td></td><td></td><td>use controller firmware version 2.17 and CF system firmware version 1.10 or newer.
<table>
<tr><td>922</td><td colspan="4">[OPU_Refresh2]</td></tr>
<tr><td></td><td>1</td><td>Mode_Set</td><td>*</td><td>Enables or disables the filming removal mode (CMY), which forcibly creates a temporary 15mm-wide toner line on the drum surface by applying the development bias and turning on the development clutch at the end of a job.
[0 to 2/ 0 / -]
0: Disabled
1: Performed at end of job only when ave. pixel cov. ratio of previous job is low.
2: Performed at end of every job</td></tr>
<tr><td></td><td>2</td><td>Bias_Set</td><td>*</td><td>Development bias setting for filming removal mode (CMY)
[100 to 400/ 200 / 10] DFU
0: OFF, 1: ON</td></tr>
</table></td><td></td></tr>
<tr><td>G0775623E
<<G>></td><td>B1.22</td><td>CCAA</td><td>• The following has been corrected:
※ Paper jam with Series Printing when the exit tray setting is not the same for all individual jobs.</td><td>October, 2002</td></tr>
<tr><td>G0775623F
<<I>></td><td>B1.23</td><td>3D1F</td><td>• The target PM intervals for SP7-803 (PM counter) have been changed as follows on the China model only (G060-69).
※ PCU:
SP7-803-1 PCU [K] Target sheets: 25000
SP7-803-2, 3, 4 PCU [CMY] Target sheets: 25000
SP7-803-17 PCU [K] Target revolutions: 137669
SP7-803-18, 19, 20 PCU [CMY] Target revolutions: 147953

※ Development unit:
SP7-803-5 Dev [K] Target sheets: 50000
SP7-803-6, 7, 8 Dev [CMY] Target sheets: 50000
SP7-803-21 Dev [K] Target revolutions: 538051
SP7-803-22, 23, 24 Dev [CMY] Target revolutions: 586693

※ Fusing unit:
SP7-803-15 Fusing, Target sheets: 50000</td><td>November, 2002</td></tr>
</table>

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002m

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			SP7-803-26 Fusing, Target revolutions: 4651000 • The target no. of revolutions for Fusing near end for SP-7-905-7 has been changed as follows for the China model only (G060-69). ※ Fusing: Alert SP7-905-7 Fusing near end, Target revolutions: 4418000	
G0775623G <<I>>	B1.24	514B	• Supports 2-level European cabinet paper feeder: Firmware modified so that if the destination code is set to Europe, the paper will be exited from the lower position whenever the Finisher and feed station other than the paper feed unit is installed (EU cabinet feeder is the same height as a 2-level PFU, i.e. requires lower-position exit).	December, 2002
G0775623H	B1.25	094B	• Fusing belt rotation timing (warm-up) and lamp off timing (job end) have been changed to prevent unnecessary occurrences of SC543 (heating roller fusing lamp overheat). • Occurrence conditions for SC552 changed from 150sec → 210sec to prevent unnecessary occurrences. The following has been fixed: • Fusing jam misdetection with left door closed due to vibration of fusing exit sensor feeler.	March, 2003
G0775623J	B1.26	4ED0	The following have been fixed. • "Copying" displayed for about 30 seconds before copying begins • Color drum lock at first color print following a 3-hour interval when energy saver is disabled.	April, 2003
G0775623K <<L>>	B1.27	3CE1	• The calculation method for average image (pixel) coverage ratios in SP7-908 and SP7-833 has been optimized. • The following have been fixed: - The second page is not transported to the Finisher stapling tray with duplex printing and mixed paper size stapling jobs. - The machine freezes when the paper height sensor detects paper jam following jam recovery.	April, 2004

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002m

<table>
<tr>
<td>G0775623L
<<M>></td>
<td>B1.28</td>
<td>2714</td>
<td>
• SP2-399-001 (Trans_Cur_Chg) has been added. To activate this function, it is necessary to use controller firmware version 2.22 or newer for G060, or CF system firmware version 1.12 or newer for G060+G570.
<table>
<tr><td>399</td><td colspan="4">[Trans_Cur_Chg] Transfer current change</td></tr>
<tr><td></td><td>1</td><td>Trans_Cur_Chg</td><td>*</td><td>Perform the following to allow the machine to detect the new unit (Transfer Roller Type).
[0 or 1/ <u>0</u> / -]
0: Transfer Brush Type, 1: Transfer Roller Type</td></tr>
</table>
Note: The transfer unit has been modified from a transfer brush to a transfer roller system in order to further improve the accuracy of color line positioning. In accordance with this change, this SP mode setting should be done at transfer unit (Transfer roller type) installation.
</td>
<td>July, 2004</td>
</tr>
</table>

NOTE: 1. Engine main firmware version B1.11G has been implemented from September 25th production run. The machines with Ver. B1.11F or older have been reworked in local: However, some machines have been released to the market without modification. So, please make sure that the version of the engine main firmware is “B1.11G” at installation or next visit. If not, please update it to “B1.11G” or later.

NOTE: 2. G060-17 models – Engine main firmware version B1.17C was applied to the production line on February 18th, 2002, and most machines with Ver. B1.15E have been reworked locally: However, some of these machines have been released to the market without modification. Therefore please update the engine firmware to ver B1.17C or newer on G060-17 machines in the following serial number range: P60112xxxxx - P60201xxxxx.

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002m

2. Engine MUSIC

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605612B	1.04	-	Firmware installed from the first mass production run.	July
G0775624 <<B>>	1.06	62FD	The firmware header has been corrected to allow the MUSIC firmware to be updated using the IC card.	March, 2002
G0775624A <<D>>	1.07	6576	The firmware header has been corrected for Japanese models only.	May, 2002

3. Controller Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605910G G0605911G	2.00	-	Firmware installed from the first mass production run.	July
G0605910H G0605911H	2.01	-	• "Asia" has been added to the destination code.	July
G0775910 G0775911	2.04	-	• The counter click up specification has been changed as follows: **Old specification:** Machine counts a page up as black or color based on the color data sent from the application. Therefore if a document from the PC contains blank (but defined) spaces highlighted in red, e.g., the controller interprets this as color data and counts it as a color print. **New specification:** The machine counts up the page as B/W or color based on the CMYK data, i.e. the actual toner colors used to develop the image, regardless of the actual color data from the application. • To meet the CPU specification change from 250MHz to 300MHz. • Color profile of the PCL driver has been changed to Ver. 1.1.2a. The following problem has been corrected: When designating the Finisher shift tray 1 for paper output tray as default, paper is not fed out to shift tray 1.	August Local Modification (See **NOTE. 1.**)
G0775910A G0775911A	2.05	13D2 7709	• The following problem has been corrected. 1. B&W prints cannot be made if color toner is empty. 2. HDD format cannot be done when SC860 is detected.	

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002m

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			• CRD version of PS3 has been updated to Ver. 1.2.1. • Presentation color profile version of PCL has been updated to Ver. 1.2.1. (Photographic color profile stays the same as Ver. 1.1.2a.)	
G0775910A G0775911A	2.05A	28E0 176D	The following problem has been fixed. (This problem occurs only when selecting German language.) When selecting the meter click mode and printing the counter sheet from the user program mode, the message of “Color” and “Black” is printed in the other way around.	October ’01 Local Modification (See **NOTE. 2.**)
G0775910B G0775911B	2.06	A556 B965	The following problem has been fixed. • When all memory clear (SP5-801-001 or 002) is done, the destination code is cleared to “0 (Japan)”. Since Japanese fonts are not stored for the messages, strange characters appear. • When printing A3+ (12”x18”) size documents, the image is not shift to center, causing a big white margin at the trailing edge.	October, ‘01
G0775910B G0775911B <<A>>	2.07	-	• PS configuration page printing is now limited to plain or recycled paper (previously, it could be printed out onto any paper type). • The following has been fixed: Selecting a custom paper size in the PCL may, in rare cases, cause the PC to freeze.	
G0775910C G0775911C <<A>>	2.08	-	The following has been fixed: If the output tray becomes full while the machine is receiving print job data in Series Print mode, following tray-full recovery, the remaining pages may be printed out in the wrong order. See RTB RGene010 for details on Series Print mode.	
G0775910D G0775911D <<A>>	2.11	CCB1 2519	• Letterhead Mode has been added (see RTB #006 for details). • The following has been fixed: Paper is not punched at the designated position in Series Print mode (see RTB RGene010 for details on Series Print mode).	January, 2002
G0775910E G0775911E <<B>>	2.12	-	• The following has been fixed: While downloading PS fonts to a machine with the HDD option installed, the correct PS serial number cannot be output.	
G0775910F G0775911F <<B>>	2.13	412E C03D	• Euro fonts PC858, ISO8859-15, L9, PS Math and MC Text are now supported. PS performance improvement. • RMS is supported with the use of the customized controller (field monitoring machines only). • A new Coverage Counter has been added to SP7-908-1 to -8 (SP7-908-5 to –8 are the same as SP7-833-11 to -14). With this new counter, B/W pages that follow color pages in ACS will be counted as B/W, and the CMY counters will not count up. To activate this function, it is necessary to use the 8kB NVRAM on the BCU board and engine firmware version B1.17C or	March, 2002

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002m

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			newer. • The following have been fixed: ※ When the undefined command, "<ESC>&k#w", is received, it appears on the output as a character string [e.g. as "<ESC>&k6w"]. ※ If Job Reset is selected while the first page of a multiple-page document is being processed, the panel continues to display “Printing”. ※ AutoContinue timer bug. ※ The Punch Counter counts up by 2 for every sheet punched when using the function in Duplex Mode.	
G0775910G G0775911G <<D>>	2.14	AB1E 2573	• The following have been fixed: ※ PCL - Modified the dither size for when the UDFP command is used (GFPR# RE02030021) - Modified so that some characters in symbol sets MS Text and Windows Baltic (19L) will appear exactly as they do with HP printers. ※ PS - The margin for Custom size has been changed from 12 to 11 points to expand the maximum printing area. - Modified the dither setting for when the DeviceGray command is used. • Change in Specification: ※ Supports the Status Readback function of the PCL5e. ※ When the machine has no HDD option, the PCL HDD Directory List (and font source) will not be printed on the PCL Configuration Page.	June, 2002
G0775910H G0775911H <<E>>	2.16	F270 7677	• The printing speed of a PS job slows down after a PS3 job is reset.	July, 2002
G0775910J G0775911J <<G>>	2.17	9A5A BDF1	• When paper size error occurs using PCL printing, the printer error message of SNM for Client is not displayed on the PC.	September, 2002
G0775910K G0775911K <<G>>	2.18	2A77 4BAB	• The following have been fixed: PCL - Slow Printing from AutoCAD.(GFPR# RC02070001) ※ PS - Euro symbol is not printed.(GFPR# RC02040005) Please refer to RTB #RGENE011 which will be issued soon, for the procedure of how to fix this issue.	October, 2002

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002m

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			- PS print file is printed as text.(GFPR# RE02040013)	
G0775910L G0775911L <<H>>	2.19	1421 2E85	• The following have been fixed: ※ After using User Tool on operation panel, PCL print jobs may keep showing "Printing..." on operation panel. ※ Form Lines value (under PCL Menu) change after reboot the Machine. (GFPR# RA02090003) ※ PCL - Response to PJL INFO CONFIG command does not include serial number. - The print may stop during the processing of the file when using "INFICO". (GFPR# RE02090012) - The work area of RAM is reduced whenever fonts that have been downloaded to HDD are used. ※ PS - 16bit color blend data does not print correctly. (TechMail#RE0200414) - Slow Printing from AutoCAD. (GFPR# RC02070001) - Printing may not work correctly when a protocol other than EtherTalk is used on Macintosh 8.x/9.x.(TechMail#UK020107) - The printer controller locks-up when printing from Unix Acrobat. - Lines may be printed on the blank of page. - The error log is not described in Configuration page when the punch error occurred. - When data is sent that outputs 3 hole punch to the European model (which supports 2&4 hole punch), output has 2 hole punch. (Now output has no punch). - Printing on envelope may not work correctly. ※ PJL - Response to PJL INFO CONFIG command does not include serial number.	December, 2002
G0775910M G0775911M <<J>>	2.20	-	• The following have been fixed: ※ PCL - The following problems with the CAD print file were fixed. 1) Modified the available pen number from 8 to 256 when BitSw #3-3 is ON. (GFPR# RE02030003) 2) The "null" character is ignored when it is included in HP/GL2 data. (GFPR# RE02050016) 3) The status flag for the bold selection command is refreshed when the bold selection	-

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002m

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			command In HP/GL2 data is selected. (GFPR# RE02050016) - Supports mixed binding orientations with duplex jobs using cover sheets. (GFPR# RC02080003) - When using the "PageLength" command, duplex print does not work. (GFPR#RC02120014) -The downloaded PCL Barcode fonts are not printed correctly on the PCL font list. (GFPR#RC03010004) - The Barcodes are printed with shift. (GFPR#RE03010016) - Selecting HDD font may reduce available memory. - Supported SAP Barcode & OCR printing. ※ PS - PS error occurs when unknown media type is specified. (GFPR# RE03010003) - The default setting of mainframe System/Resolution is "1200 x 600dpi".	
G0775910N G0775911N <<J>>	2.21	3BC5 18E2	• Change in specification - Changing Adobe PostScript 3 Logo in PS config page to red.	April, 2003
G0775910P G0775911P <<M>>	***2.22***	***2A90 434B***	• ***SP2-399-001 (Trans_Cur_Chg) has been added. To activate this function, it is necessary to use Engine firmware version 1.28 or newer.*** 399 **[Trans_Cur_Chg] Transfer current change** 1 **Trans_Cur_Chg** * Perform the following to allow the machine to detect the new unit (Transfer Roller Type). [0 or 1/ 0 / -] 0: Transfer Brush Type, **1: Transfer Roller Type** ***Note: The transfer unit has been modified from a transfer brush to a transfer roller system in order to further improve the accuracy of color line positioning. In accordance with this change, this SP mode setting should be done at transfer unit (Transfer roller type) installation.***	***July, 2004***

NOTE: 1. The Meter Click counter specification has been changed from the controller firmware (Ver. 2.04). The machines with Ver. 2.01 or older have been reworked in local. However, some machines have been released to the market without

modification. So, please make sure that the version of the engine main firmware is "2.04" or later at installation or next visit. If not, please update it to the latest firmware.

NOTE: 2. Messages "Color" and "Black" in the meter click counter is reversibly displayed on the screen and print out only when German language is selected. The machines with Ver. 2.05 or older have been reworked in local. However, some machines have been released to the market without modification. If the machine is set to German language, please make sure that the version of the engine main firmware is "2.05A" or later at installation or next visit. If not, please update it to the latest firmware.

4. NIB Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605920J	1.72.1	B453	Firmware installed from the first mass production run.	July
G0605920K	1.74	3355	The followings have been corrected: • When the job is canceled, the lpr connection is terminated and a blank space is displayed in the syslog. Instead of the blank space, "Lost connection" is displayed. • When 50 or more lpq/lprm commands are sent, the lpd process cannot be completed properly and the job is not printed out. • If DHCP is ON and TCP/IP is OFF, the current device name (RNPXXXXXX) in SmartNetMonitor is not displayed. • NIB stops printing if several prints jobs are continuously sent to the NIB via the IPP port (SmartNetMonitor for Client), and a print job sent via the standard IPP port may be canceled.	July
G0605920L	1.75.1	64F4	The followings have been corrected: Nothing was displayed even though the "prnlog 0" command was done in telnet.	September (Local modification for –17 model)
G0605920M <<C>>	1.78	AB29	• If an undefined remote printer number is input in the Netware configuration page, communication between the NIB and Netware Server will be cut off. • No error message is displayed in Netscape Navigator even when an incorrect URL is input in the address bar. • Up to 32 characters can be input in the NetBEUI configuration screen Comment box, even though specification is 31 characters maximum. • If Trap is selected for the Access Type in the SNMP Configuration screen during the snmpd process, communication may be cut off.	January, 2002

Reissued: 30-Jul-04

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002m

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			• The NIB does not respond to the "lprm –" command (root directory) from a FreeBSD host computer. • TCP Ports 11021 and 11023 (Design use) have been closed. • There were two error messages displayed when no files were available for download using FTP. The two messages were merged to "550: No such file or directory". • PS status can be displayed in STAT command using ftpd/ rshd/ telnetd/ lpd. • During a given FTP login session, the NIB counts up every user command issued as a new session. • The length of the login user name can be up to 64 characters when using FTP.	
G0605920N <<D>>	1.81	8FA3	• The following have been fixed: ※ Cannot connect to Novell NDS (GFPR# RC02010007). ※ Two or more print queues can be attached to a single printer object (TechMail RC010430). ※ The controller freezes if it is disconnected while the data which generates the Readback command is being printed out with ftp/rsh. ※ The controller freezes when it cannot find the file specified for rcp transmission. ※ The parameters of sysLocation and sysContact cannot be set correctly using the snmp command with telnet. ※ The Fax Management Tool cannot be used for a while after any of the NIB setting(s) are changed. • Change in Specification: ※ SNMP vulnerability - SNMP security vulnerabilities reported by CERT on Feb.12, 2002 has been resolved and tested using the PROTOS c06-snmpv1 test suite. **CERT** :http://www.cert.org/advisories/CA-2002-03.html **PROTOS c06-snmpv1 test suite :**http://www.ee.oulu.fi/research/ouspg/protos/testing/c06/snmpv1/ ※ TCP ports for disabled services (e.g. FTP) were open. ※ An unnecessary TCP port was open.	June, 2002

Reissued: 30-Jul-04

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002m

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605920P <<G>>	1.82	384B	• HTTP and telnet protocols can be opened/closed using telnet. NOTE: After making the setting to disable HTTP, you cannot access the target device through a web browser. If your want to change this settings, please use telnet to open HTTP. When telnet port is disabled, you have to do clear the network settings (SP5-801-11) to open the telnet protocol. • Changed the default setting of DHCP to ON. NOTE: There is no change when updating the firmware. This feature is for the factory default. • It does not work in a UNIX environment even if the install Script in the controller is downloaded.	October, 2002
G0605920Q <<J>>	1.83	E5D7	• The following have been fixed: - Access Mask does not work.	July, 2003

Model: Model-J	Date: 2-Aug-04	No.: RG060028

Subject: Transfer unit installation(Transfer roller type)	Prepared by: H.Taguchi
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 ( )		

The transfer unit has been modified from a transfer brush to a transfer roller system in order to further improve the accuracy of color line positioning. In accordance with this change, the following firmware update and SP mode setting should be performed at transfer unit installation.

- Model J-P1b, Model J-P1CF -

1. Update to the following firmware.

Model:	Code:	Engine Firmware:	System Firmware:
Model J-P1b	G060	B1.28 or newer	2.22 or newer
Model J-P1CF	G060 + G570	B1.28 or newer	1.12 or newer

2. Do the following to allow the machine to detect the new unit.
   1. Access SP2-399-001 [Trans_Cur_Chg] and select “1”.
   2. Select "OK".
   3. Exit SP mode and turn the main switch Off/On.

Number:	Description:	Default Setting:	Adjustable Range:
SP2-399-001	Trans_Cur_Chg	0	0: Transfer Brush Type **1: Transfer Roller Type**

- Model J-P1c -

In accordance with this change, two types of firmware for have been released as follows.

- B1.28: This is for the old transfer unit (Transfer brush type)
- **C1.28: This is for the new transfer unit (Transfer roller type)**

1. Update to the following firmware (SP mode setting is automatically performed).

Model:	Code:	Engine Firmware:	System Firmware:
Model J-P1c	G082	C1.28 or newer	(Unnecessary)

- The firmware for models J-P1c and J-P1b are different (ex. **C**1.28 vs. **B**1.28).
- If installing the new transfer unit on a J-P1c machine with Engine **B1.28 or newer** already installed, and you wish to update to a C-version firmware with the same numeric name (e.g. from B**1.28** → C**1.28**), please be sure to 1) first downgrade to B1.27 and then 2) install **C1.28 or newer**. This is because it is not possible to directly update a Bxxx version to a Cxxx version with the same numeric name.

Reissued: 1-Sep-04

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002n

RTB Reissue

Subject: Firmware Modification			Prepared by: H. Taguchi
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 ( )		

This bulletin explains the firmware modification history for the Model-J (details begin on page 2).

	BCU		Controller		
Firmware Type	**Main**	**Music**	**Controller**		**NIB**
			1	2	
Remarks	(see Note below)	(see Note below)	File Name G0775910#.bin # : suffix	File Name G0775911#.bin # : suffix	(see Note below)

Note: The Main, Music and NIB firmware are used for both the G060 printer and G060/G570 CF Expander.

RTB Revision List

Issue Date	Control Symbol	Revised contents
09-Jan-02	-	First edition
24-Jan-02	<<A>>	Engine Main: 1.11G -> 1.11H -> 1.15E Controller: 2.06 -> 2.07 -> 2.08 -> 2.11
7-Mar-02	<<B>>	Engine Main: 1.15E -> 1.17C Engine MUSIC: 1.04 -> 1.06 Controller: 2.11 -> 2.12 -> 2.13
15-Apr-02	<<C>>	NIB: 1.75.1 -> 1.78
28-Jun-02	<<D>>	Engine: 1.17C -> 1.18 -> 1.18B Engine MUSIC: 1.06 -> 1.07 Controller: 2.13 -> 2.14 NIB: 1.78 -> 1.81
18-Jul-02	<<E>>	Controller: 2.14 -> 2.16
6-Sep-02	<<F>>	Engine: 1.18B -> 1.19
1-Nov-02	<<G>>	Engine: 1.19 -> 1.21 -> 1.22 Controller: 2.16 -> 2.17 -> 2.18 NIB: 1.81 -> 1.82
31-Jan-03	<<H>>	Controller: 2.18 -> 2.19
7-Feb-03	<<I>>	Engine: 1.22 -> 1.23 -> 1.24
30-Jul-03	<<J>>	Controller: 2.19 -> 2.20 -> 2.21 NIB: 1.82 -> 1.83
29-Aug-03	<<K>>	Engine: 1.24 -> 1.25 -> 1.26
8-Apr-04	<<L>>	Engine: 1.26 → 1.27
30-July-04	<<M>>	Engine: 1.27 → 1.28 Controller: 2.21 → 2.22
26-Aug-04	***<<N>>***	***Engine: 1.28 → 1.29***

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002n

[Modification History]

2004. Engine Main Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0775611	B1.10	-	Firmware installed from the first mass production run.	July
G0775611D	B1.11A	-	Charge and development bias applied during the toner end recovery mode has been changed to optimize the drum cleaning function.	August
G0775611E	B1.11B	-	The frequency to control the color drum motor has been optimized so that the motor starts smoothly rotating.	August
G0775611G	B1.11D	-	The following specification change has been applied: The yield target of PCUs has been changed from 100KP to 50KP.	-
G0775611H	B1.11F	-	The following problem has been fixed. • The machine suddenly keeps running due to memory overflow. • SC670 when the machine starts waking up from the energy saver mode	-
G0775611J	B1.11G	45A0	The following problem has been fixed. Black developer initialization fails because toner is mistakenly supplied due to software bug, causing SC370 (Developer Initialization Error – Black). This happens when performing only the black developer initialization. (If performing the developer initialization for black and other color(s) simultaneously, this problem does not occur.) If the main switch is tuned off and on, the SC code is reset and the machine re-starts the developer initialization. In the worst case, toner flows out from development unit (the entrance area where toner is supplied) to the inside of machine.	September Local Modification (See **NOTE. 1**.)
G0775621 <<A>>	B1.11H	-	A fusing clutch has been added to maximize the life of the fusing unit and oil supply unit. This firmware version was temporarily installed in production machines to keep the clutch constantly moving, until the clutch control program could be added to the next version (1.15E). **NOTE:** Therefore this version has <u>not</u> been released.	
G0775621A <<A>>	B1.15E	171C	• Fusing clutch control has been added to start/stop the clutch. • The following has been corrected: ※ When a paper jam occurs midway through a staple job, job recovery may re-start the job from the 1st page instead. • Over-occurrence of the following SC codes (due to software bugs) has been fixed: ※ SC220/230 at the start of a job ※ SC544/554 during warm-up under low-temp conditions in 62.5mm/sec mode.	December, 2001

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002n

<table>
<tr><th>P/N</th><th>Version</th><th>Check Sum</th><th>Contents of Modification</th><th>Cut-in Month</th></tr>
<tr><td></td><td></td><td></td><td>
• SP1-916 (Idling mode) has been added.
<table>
<tr><td>916</td><td colspan="4">[Idling Mode]</td></tr>
<tr><td></td><td>1</td><td>Mode Set</td><td>*</td><td>Enables or disables fusing unit idling performed after the machine reaches the Ready condition. Idling is performed for the time specified in SP1-916-2.
[0 or 1/ <u>0</u> / -] DFU
0: OFF, 1: ON</td></tr>
<tr><td></td><td>2</td><td>Idling Time</td><td></td><td>Specifies the time for fusing unit idling.
[10 to 120 / <u>30</u> / 10 sec/step] DFU</td></tr>
<tr><td></td><td>3</td><td>Pre-Job Mode</td><td></td><td>Enables or disables the 4-second fusing unit idling performed at the start of a print job.
[0 or 1/ <u>0</u> / -] DFU
0: OFF, 1: ON</td></tr>
</table>
</td><td></td></tr>
<tr><td>G0775623
<<B>></td><td>B1.17C</td><td>169B</td><td>
• To optimize the amount of oil supplied to the fusing belt in OHP mode, the number of supply cycles during idling has been reduced to 1.
• SP1-996-6 (OHP Pre-Job mode) has been added.
<table>
<tr><td>996</td><td colspan="4">[OHP/TH Fusing]</td></tr>
<tr><td></td><td>6</td><td>Pre-Job Mode</td><td>*</td><td>Enables or disables the 30-second fusing unit idling performed at the start of an OHP print job. When enabled, idling is performed even if the machine is at the Ready condition.
[0 or 1/ <u>0</u> / -]
0: OFF, 1: ON</td></tr>
</table>
• A new Coverage Counter has been added to SP7-908-1 to –8 (SP7-908-5 to –8 are the same as SP7-833-11 to –14). With this new counter, B/W pages that follow color pages in ACS will be counted as B/W, and the CMY counters will not count up. To activate this function, it is necessary to use the 8kB NVRAM on the BCU board and controller firmware version 2.13 or newer.
• The machine automatically detects whether a 4kB or 8kB NVRAM is installed on the BCU board.
• A grid pattern has been added to SP mode copy images. To activate this, it is necessary to use system firmware ver1.07 or newer (for the CF expander only).
</td><td>March, 2002 (See NOTE. 2.)</td></tr>
</table>

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002n

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			• The following have been corrected: ※ SC240 misdetection. ※ When the K toner cartridge is replaced, the "previous PM counter" values for CMY are all overwritten to the previous value for K toner (SP7-906-23 to –25). ※ If machine enters Energy Saver 1 Mode then cools down for more than 1 minute, it will not display "Ready" after recovery warm-up (only for G060-17 models). ※ When a B/W job is performed, the coverage counters (SP7-833-1 to –4) for CMY are not set to 0 as they should be, i.e. the values from the previous job remain.	
G0775623A <<D>>	B1.18	F284	• The following have been corrected: ※ Main scan magnification error (see RTB #RG060015 for details; to be released soon). ※ SC471 caused by stop timing error for transfer belt contact motor. ※ SC545 in fusing phase control mode. ※ SC543 **NOTE:** This version has <u>not</u> been released (see "side effect" below).	May, 2002
G0775623B <<D>>	B1.18B	D7B1	• The following have been corrected: ※ SC230 at automatic line position adjustment ***(see RTB #RG570004 for details; to be released soon)***. ※ Side effect for B1.18 SC545 modification (only for G060-17 models): The machine does not display "Ready" after recovery warm-up from Energy Saver 1 Mode in phase control mode (see RTB #RG060013 for details; to be released soon).	Middle of June, 2002
G0775623C <<F>>	B1.19	BB39	• The following have been corrected: ※ When SP1-916-1 is set to 1, the machine may not reach the Ready condition after the main SW is turned on in low-temp, low-humidity environments. ※ Upgrade error recovery cannot be performed with version 4 of the BCU ASIC (Gate Array PCI).	August, 2002
G0775623D <<G>>	B1.21	3F29	• The following have been corrected: ※ SC220-4 for machines with LD unit E-MAC2 installed. • Destination code for China added.	September, 2002

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002n

<table>
<tr><th>P/N</th><th>Version</th><th>Check Sum</th><th>Contents of Modification</th><th>Cut-in Month</th></tr>
<tr><td></td><td></td><td></td><td>
• New SP mode added: SP3-922 (OPU_Refresh2). To activate this function, it is necessary to use controller firmware version 2.17 and CF system firmware version 1.10 or newer.
<table>
<tr><td>922</td><td colspan="4">[OPU_Refresh2]</td></tr>
<tr><td></td><td>1</td><td>Mode_Set</td><td>*</td><td>Enables or disables the filming removal mode (CMY), which forcibly creates a temporary 15mm-wide toner line on the drum surface by applying the development bias and turning on the development clutch at the end of a job.
[0 to 2/ <u>0</u> / -]
0: Disabled
1: Performed at end of job only when ave. pixel cov. ratio of previous job is low.
2: Performed at end of every job</td></tr>
<tr><td></td><td>2</td><td>Bias_Set</td><td>*</td><td>Development bias setting for filming removal mode (CMY)
[100 to 400/ <u>200</u> / 10] DFU
0: OFF, 1: ON</td></tr>
</table>
</td><td></td></tr>
<tr><td>G0775623E
<<G>></td><td>B1.22</td><td>CCAA</td><td>
• The following has been corrected:
※ Paper jam with Series Printing when the exit tray setting is not the same for all individual jobs.
</td><td>October, 2002</td></tr>
<tr><td>G0775623F
<<I>></td><td>B1.23</td><td>3D1F</td><td>
• The target PM intervals for SP7-803 (PM counter) have been changed as follows on the China model only (G060-69).
※ PCU:
SP7-803-1 PCU [K] Target sheets: 25000
SP7-803-2, 3, 4 PCU [CMY] Target sheets: 25000
SP7-803-17 PCU [K] Target revolutions: 137669
SP7-803-18, 19, 20 PCU [CMY] Target revolutions: 147953

※ Development unit:
SP7-803-5 Dev [K] Target sheets: 50000
SP7-803-6, 7, 8 Dev [CMY] Target sheets: 50000
SP7-803-21 Dev [K] Target revolutions: 538051
SP7-803-22, 23, 24 Dev [CMY] Target revolutions: 586693

※ Fusing unit:
</td><td>November, 2002</td></tr>
</table>

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002n

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			SP7-803-15 Fusing, Target sheets: 50000 SP7-803-26 Fusing, Target revolutions: 4651000 • The target no. of revolutions for Fusing near end for SP-7-905-7 has been changed as follows for the China model only (G060-69). ※ Fusing: Alert SP7-905-7 Fusing near end, Target revolutions: 4418000	
G0775623G <<I>>	B1.24	514B	• Supports 2-level European cabinet paper feeder: Firmware modified so that if the destination code is set to Europe, the paper will be exited from the lower position whenever the Finisher and feed station other than the paper feed unit is installed (EU cabinet feeder is the same height as a 2-level PFU, i.e. requires lower-position exit).	December, 2002
G0775623H	B1.25	094B	• Fusing belt rotation timing (warm-up) and lamp off timing (job end) have been changed to prevent unnecessary occurrences of SC543 (heating roller fusing lamp overheat). • Occurrence conditions for SC552 changed from 150sec → 210sec to prevent unnecessary occurrences. The following has been fixed: • Fusing jam misdetection with left door closed due to vibration of fusing exit sensor feeler.	March, 2003
G0775623J	B1.26	4ED0	The following have been fixed. • "Copying" displayed for about 30 seconds before copying begins • Color drum lock at first color print following a 3-hour interval when energy saver is disabled.	April, 2003
G0775623K <<L>>	B1.27	3CE1	• The calculation method for average image (pixel) coverage ratios in SP7-908 and SP7-833 has been optimized. • The following have been fixed: - The second page is not transported to the Finisher stapling tray with duplex printing and mixed paper size stapling jobs. - The machine freezes when the paper height sensor detects paper jam following jam recovery.	April, 2004
G0775623L <<M>>	B1.28	2714	• SP2-399-001 (Trans_Cur_Chg) has been added. To activate this function, it is necessary to use controller firmware version 2.22 or newer for G060, or CF system firmware version 1.12 or newer for G060+G570.	***July, 2004***

399	**[Trans_Cur_Chg] Transfer current change**			
	1	**Trans_Cur_Chg**	*	Perform the following to allow the machine to detect the new unit (Transfer Roller Type). [0 or 1/ 0 / -] 0: Transfer Brush Type, **1: Transfer Roller Type**

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002n

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			Note: The transfer unit has been modified form a transfer brush to a transfer roller system in order to further improve the accuracy of color line positioning. In accordance with this change, this SP mode setting should be performed at transfer unit (Transfer roller type) installation.	
G0775623M <<N>>	***B1.29***	***2D69***	***Other changes:*** • ***Decreased the amount of toner used for SP3-922-001 (OPU_Refresh2).*** • ***SP3-922-002 is now non-adjustable (=fixed at "200").*** ***Note: To apply these changes, you need to use controller firmware version 2.22 or newer for G060, or CF system firmware version 1.12 or newer for G060+G570.***	***August, 2004***

NOTE: 1. Engine main firmware version B1.11G has been implemented from September 25th production run. The machines with Ver. B1.11F or older have been reworked in local: However, some machines have been released to the market without modification. So, please make sure that the version of the engine main firmware is "B1.11G" at installation or next visit. If not, please update it to "B1.11G" or later.

NOTE: 2. G060-17 models – Engine main firmware version B1.17C was applied to the production line on February 18th, 2002, and most machines with Ver. B1.15E have been reworked locally: However, some of these machines have been released to the market without modification. Therefore please update the engine firmware to ver B1.17C or newer on G060-17 machines in the following serial number range: P60112xxxxx - P60201xxxxx.

2. Engine MUSIC

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605612B	1.04	-	Firmware installed from the first mass production run.	July
G0775624 <<B>>	1.06	62FD	The firmware header has been corrected to allow the MUSIC firmware to be updated using the IC card.	March, 2002
G0775624A	1.07	6576	The firmware header has been corrected for Japanese models only.	May, 2002

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002n

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
<<D>>				

3. Controller Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605910G G0605911G	2.00	-	Firmware installed from the first mass production run.	July
G0605910H G0605911H	2.01	-	• "Asia" has been added to the destination code.	July
G0775910 G0775911	2.04	-	• The counter click up specification has been changed as follows: **Old specification:** Machine counts a page up as black or color based on the color data sent from the application. Therefore if a document from the PC contains blank (but defined) spaces highlighted in red, e.g., the controller interprets this as color data and counts it as a color print. **New specification:** The machine counts up the page as B/W or color based on the CMYK data, i.e. the actual toner colors used to develop the image, regardless of the actual color data from the application. • To meet the CPU specification change from 250MHz to 300MHz. • Color profile of the PCL driver has been changed to Ver. 1.1.2a. The following problem has been corrected: When designating the Finisher shift tray 1 for paper output tray as default, paper is not fed out to shift tray 1.	August Local Modification (See **NOTE. 1.**)
G0775910A G0775911A	2.05	13D2 7709	• The following problem has been corrected. 1. B&W prints cannot be made if color toner is empty. 2. HDD format cannot be done when SC860 is detected. • CRD version of PS3 has been updated to Ver. 1.2.1. • Presentation color profile version of PCL has been updated to Ver. 1.2.1. (Photographic color profile stays the same as Ver. 1.1.2a.)	
G0775910A	2.05A	28E0	The following problem has been fixed. (This problem occurs only when selecting German	October '01

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002n

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0775911A		176D	language.) When selecting the meter click mode and printing the counter sheet from the user program mode, the message of “Color” and “Black” is printed in the other way around.	Local Modification (See **NOTE**. **2.**)
G0775910B G0775911B	2.06	A556 B965	The following problem has been fixed. • When all memory clear (SP5-801-001 or 002) is done, the destination code is cleared to “0 (Japan)”. Since Japanese fonts are not stored for the messages, strange characters appear. • When printing A3+ (12”x18”) size documents, the image is not shift to center, causing a big white margin at the trailing edge.	October, ‘01
G0775910B G0775911B <<A>>	2.07	-	• PS configuration page printing is now limited to plain or recycled paper (previously, it could be printed out onto any paper type). • The following has been fixed: Selecting a custom paper size in the PCL may, in rare cases, cause the PC to freeze.	
G0775910C G0775911C <<A>>	2.08	-	The following has been fixed: If the output tray becomes full while the machine is receiving print job data in Series Print mode, following tray-full recovery, the remaining pages may be printed out in the wrong order. See RTB RGene010 for details on Series Print mode.	
G0775910D G0775911D <<A>>	2.11	CCB1 2519	• Letterhead Mode has been added (see RTB #006 for details). • The following has been fixed: Paper is not punched at the designated position in Series Print mode (see RTB RGene010 for details on Series Print mode).	January, 2002
G0775910E G0775911E <<B>>	2.12	-	• The following has been fixed: While downloading PS fonts to a machine with the HDD option installed, the correct PS serial number cannot be output.	
G0775910F G0775911F <<B>>	2.13	412E C03D	• Euro fonts PC858, ISO8859-15, L9, PS Math and MC Text are now supported. PS performance improvement. • RMS is supported with the use of the customized controller (field monitoring machines only). • A new Coverage Counter has been added to SP7-908-1 to -8 (SP7-908-5 to –8 are the same as SP7-833-11 to -14). With this new counter, B/W pages that follow color pages in ACS will be counted as B/W, and the CMY counters will not count up. To activate this function, it is necessary to use the 8kB NVRAM on the BCU board and engine firmware version B1.17C or newer. • The following have been fixed: ※ When the undefined command, "<ESC>&k#w", is received, it appears on the output as a character string [e.g. as "<ESC>&k6w"].	March, 2002

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002n

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			※ If Job Reset is selected while the first page of a multiple-page document is being processed, the panel continues to display "Printing". ※ AutoContinue timer bug. ※ The Punch Counter counts up by 2 for every sheet punched when using the function in Duplex Mode.	
G0775910G G0775911G <<D>>	2.14	AB1E 2573	• The following have been fixed: ※ PCL - Modified the dither size for when the UDFP command is used (GFPR# RE02030021) - Modified so that some characters in symbol sets MS Text and Windows Baltic (19L) will appear exactly as they do with HP printers. ※ PS - The margin for Custom size has been changed from 12 to 11 points to expand the maximum printing area. - Modified the dither setting for when the DeviceGray command is used. • Change in Specification: ※ Supports the Status Readback function of the PCL5e. ※ When the machine has no HDD option, the PCL HDD Directory List (and font source) will not be printed on the PCL Configuration Page.	June, 2002
G0775910H G0775911H <<E>>	2.16	F270 7677	• The printing speed of a PS job slows down after a PS3 job is reset.	July, 2002
G0775910J G0775911J <<G>>	2.17	9A5A BDF1	• When paper size error occurs using PCL printing, the printer error message of SNM for Client is not displayed on the PC.	September, 2002
G0775910K G0775911K <<G>>	2.18	2A77 4BAB	• The following have been fixed: PCL - Slow Printing from AutoCAD.(GFPR# RC02070001) ※ PS - Euro symbol is not printed.(GFPR# RC02040005) Please refer to RTB #RGENE011 which will be issued soon, for the procedure of how to fix this issue. - PS print file is printed as text.(GFPR# RE02040013)	October, 2002

Reissued: 1-Sep-04

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002n

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0775910L G0775911L <<H>>	2.19	1421 2E85	• The following have been fixed: ※ After using User Tool on operation panel, PCL print jobs may keep showing "Printing..." on operation panel. ※ Form Lines value (under PCL Menu) change after reboot the Machine. (GFPR# RA02090003) ※ PCL - Response to PJL INFO CONFIG command does not include serial number. - The print may stop during the processing of the file when using "INFICO". (GFPR# RE02090012) - The work area of RAM is reduced whenever fonts that have been downloaded to HDD are used. ※ PS - 16bit color blend data does not print correctly. (TechMail#RE0200414) - Slow Printing from AutoCAD. (GFPR# RC02070001) - Printing may not work correctly when a protocol other than EtherTalk is used on Macintosh 8.x/9.x.(TechMail#UK020107) - The printer controller locks-up when printing from Unix Acrobat. - Lines may be printed on the blank of page. - The error log is not described in Configuration page when the punch error occurred. - When data is sent that outputs 3 hole punch to the European model (which supports 2&4 hole punch), output has 2 hole punch. (Now output has no punch). - Printing on envelope may not work correctly. ※ PJL - Response to PJL INFO CONFIG command does not include serial number.	December, 2002
G0775910M G0775911M <<J>>	2.20	-	• The following have been fixed: ※ PCL - The following problems with the CAD print file were fixed. 1) Modified the available pen number from 8 to 256 when BitSw #3-3 is ON. (GFPR# RE02030003) 2) The "null" character is ignored when it is included in HP/GL2 data. (GFPR# RE02050016) 3) The status flag for the bold selection command is refreshed when the bold selection command In HP/GL2 data is selected. (GFPR# RE02050016) - Supports mixed binding orientations with duplex jobs using cover sheets. (GFPR# RC02080003) - When using the "PageLength" command, duplex print does not work.	-

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002n

<table>
<tr><th>P/N</th><th>Version</th><th>Check Sum</th><th>Contents of Modification</th><th>Cut-in Month</th></tr>
<tr><td></td><td></td><td></td><td>(GFPR#RC02120014)
-The downloaded PCL Barcode fonts are not printed correctly on the PCL font list.
(GFPR#RC03010004)
- The Barcodes are printed with shift. (GFPR#RE03010016)
- Selecting HDD font may reduce available memory.
- Supported SAP Barcode & OCR printing.
※ PS
- PS error occurs when unknown media type is specified. (GFPR# RE03010003)
- The default setting of mainframe System/Resolution is "1200 x 600dpi".</td><td></td></tr>
<tr><td>G0775910N
G0775911N
<<J>></td><td>2.21</td><td>3BC5
18E2</td><td>• Change in specification
- Changing Adobe PostScript 3 Logo in PS config page to red.</td><td>April, 2003</td></tr>
<tr><td>G0775910P
G0775911P
<<M>></td><td>2.22</td><td>2A90
434B</td><td>• SP2-399-001 (Trans_Cur_Chg) has been added. To activate this function, it is necessary to use Engine firmware version 1.28 or newer.
<table><tr><td>399</td><td colspan="4">[Trans_Cur_Chg] Transfer current change</td></tr><tr><td></td><td>1</td><td>Trans_Cur_Chg</td><td>*</td><td>Perform the following to allow the machine to detect the new unit (Transfer Roller Type).
[0 or 1/ 0 / -]
0: Transfer Brush Type, 1: Transfer Roller Type</td></tr></table>Note: The transfer unit has been modified form a transfer brush to a transfer roller system in order to further improve the accuracy of color line positioning. In accordance with this change, this SP mode setting should be performed at transfer unit (Transfer roller type) installation.</td><td>July, 2004</td></tr>
</table>

NOTE: 1. The Meter Click counter specification has been changed from the controller firmware (Ver. 2.04). The machines with Ver. 2.01 or older have been reworked in local. However, some machines have been released to the market without modification. So, please make sure that the version of the engine main firmware is “2.04” or later at installation or next visit. If not, please update it to the latest firmware.

NOTE: 2. Messages “Color” and “Black” in the meter click counter is reversibly displayed on the screen and print out only when German language is selected. The machines with Ver. 2.05 or older have been reworked in local. However, some

machines have been released to the market without modification. If the machine is set to German language, please make sure that the version of the engine main firmware is "2.05A" or later at installation or next visit. If not, please update it to the latest firmware.

4. NIB Firmware

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
G0605920J	1.72.1	B453	Firmware installed from the first mass production run.	July
G0605920K	1.74	3355	The followings have been corrected: • When the job is canceled, the lpr connection is terminated and a blank space is displayed in the syslog. Instead of the blank space, "Lost connection" is displayed. • When 50 or more lpq/lprm commands are sent, the lpd process cannot be completed properly and the job is not printed out. • If DHCP is ON and TCP/IP is OFF, the current device name (RNPXXXXXX) in SmartNetMonitor is not displayed. • NIB stops printing if several prints jobs are continuously sent to the NIB via the IPP port (SmartNetMonitor for Client), and a print job sent via the standard IPP port may be canceled.	July
G0605920L	1.75.1	64F4	The followings have been corrected: Nothing was displayed even though the "prnlog 0" command was done in telnet.	September (Local modification for –17 model)
G0605920M <<C>>	1.78	AB29	• If an undefined remote printer number is input in the Netware configuration page, communication between the NIB and Netware Server will be cut off. • No error message is displayed in Netscape Navigator even when an incorrect URL is input in the address bar. • Up to 32 characters can be input in the NetBEUI configuration screen Comment box, even though specification is 31 characters maximum. • If Trap is selected for the Access Type in the SNMP Configuration screen during the snmpd process, communication may be cut off. • The NIB does not respond to the "lprm –" command (root directory) from a FreeBSD host computer. • TCP Ports 11021 and 11023 (Design use) have been closed. • There were two error messages displayed when no files were available for download using FTP. The two messages were merged to "550: No such file or directory".	January, 2002

Model: Model-J P1b	Date: 9-Jan-02	No.: RG060002n

P/N	Version	Check Sum	Contents of Modification	Cut-in Month
			• PS status can be displayed in STAT command using ftpd/ rshd/ telnetd/ lpd. • During a given FTP login session, the NIB counts up every user command issued as a new session. • The length of the login user name can be up to 64 characters when using FTP.	
G0605920N <<D>>	1.81	8FA3	• The following have been fixed: ※ Cannot connect to Novell NDS (GFPR# RC02010007). ※ Two or more print queues can be attached to a single printer object (TechMail RC010430). ※ The controller freezes if it is disconnected while the data which generates the Readback command is being printed out with ftp/rsh. ※ The controller freezes when it cannot find the file specified for rcp transmission. ※ The parameters of sysLocation and sysContact cannot be set correctly using the snmp command with telnet. ※ The Fax Management Tool cannot be used for a while after any of the NIB setting(s) are changed. • Change in Specification: ※ SNMP vulnerability - SNMP security vulnerabilities reported by CERT on Feb.12, 2002 has been resolved and tested using the PROTOS c06-snmpv1 test suite. **CERT** :http://www.cert.org/advisories/CA-2002-03.html **PROTOS c06-snmpv1 test suite :**http://www.ee.oulu.fi/research/ouspg/protos/testing/c06/snmpv1/ ※ TCP ports for disabled services (e.g. FTP) were open. ※ An unnecessary TCP port was open.	June, 2002
G0605920P <<G>>	1.82	384B	• HTTP and telnet protocols can be opened/closed using telnet. NOTE: After making the setting to disable HTTP, you cannot access the target device through a web browser. If your want to change this settings, please use telnet to open HTTP. When telnet port is disabled, you have to do clear the network settings (SP5-801-11) to open the telnet protocol. • Changed the default setting of DHCP to ON. NOTE: There is no change when updating the firmware. This feature is for the factory default. • It does not work in a UNIX environment even if the install Script in the controller is downloaded.	October, 2002
G0605920Q <<J>>	1.83	E5D7	• The following have been fixed: - Access Mask does not work.	July, 2003

Reissued: 1-Sep-04

Model: Model-J	Date: 12-Feb-04	No.: G060027a

RTB Correction

The items in bold italics have been corrected or added.

Subject: Cold offset (Poor fusing)			Prepared by: H.Taguchi
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 ( )		

SYMPTOM

Cold offset (poor fusing) may occur when:

- The machine is turned on or recovers from Energy Save mode under low-temperature conditions, **AND**
- The paper in the tray is near the maximum weight for plain paper (example: 100g/28lb), **AND**
- Copies are taken in B/W mode (185 mm/sec).

Note:

- The offset usually occurs between the 2nd and 5th copy, then gets better and finally disappears at about the 15th copy.
- It does not occur in Color mode or with paper 80g/24lb or less.

CAUSE

Under the conditions listed above, heat is not distributed evenly across the surface of the fusing belt.

ACTION IN THE FIELD

Try troubleshooting #1 below. Then if necessary, try #2 and then #3.

Preparation: Update the engine firmware B1.25 or later.

1. ***Use the "Special Paper" setting for the target tray***

   - ***UP mode → System Setting → Tray Paper Setting → Paper Type (select "Special Paper" for the target tray)***
     Note: This will increase the fusing temperature 10 degrees for the target tray.
   - ***When you print out, use the "Paper Type: Special Paper" setting in the driver.***
   - ***To improve it more, set SP1-916-03 to a value of 1.***
     Note: This will enable Pre-job mode for trays that use "Special Paper."

Model: Model-J	Date: 12-Feb-04	No.: G060027a

2. Increase the threshold of SP1-912-2

- ***Set SP1-912-2 to a value of 22°C.***
  Note: This increases the threshold for low-temperature correction.

SP Mode	Default	Change to
SP1-912-2	17°C	22°C

3. Enable idling mode.

- ***Set SP1-916-1 to a value of 1.***
  Note: This will enable idling mode.

SP Mode	Default	Change to
SP1-916-1	0: OFF	1: ON

Important: Please advise customers that when idling mode is enabled, the warm-up time is increased by 30 seconds.

- ***To improve it more, set SP1-916-2 to a value of 80sec.***
  Note: This increases the idling time.

Model: Model-J	Date: 15-Sep-04	No.: RG060029

Subject: Springs on rollers in the transfer unit come off	Prepared by: H.Taguchi
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 ( )		

SYMPTOM

The springs for the transfer unit rollers come loose during transport.

Note: Transfer unit P/N: G0773842.

CAUSE

Vibration during transport makes the springs come loose.

SOLUTION

Production:
Two stoppers were added to the unit (see the photo below).
Note: New transfer units have a yellow circle on the outer box.

In the Field:
When you install the new units (=units with stoppers):
- Remove the two stoppers before you install the new transfer unit.
  - Remove the wires at the four ends of the stoppers
  - Remove the four red tags

When you install old units (=units without the stoppers):
- Check the springs for the transfer unit rollers.
  - If they came loose, check the transfer belt for damage.
  - If the belt is damaged, replace the belt. If it is not damaged, just re-set the springs.

Model: Model-J	Date: 16-Sep-04	No.: RG060030

Subject: Dirty background/Black line	Prepared by: H.Taguchi
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 ( )		

SYMPTOM

Dirty background or dirty lines may occur if the machine prints out mainly low-coverage images.

CAUSE

If the machine prints out mainly low-coverage images, the friction between the OPC and cleaning blade increases and wears down the OPC.

SOLUTION

1. Upgrade the firmware to these versions:

Model:	Code:	Engine Firmware:	System Firmware:
Model J-P1b	G060	**B1.29 or newer**	**2.22 or newer**
Model J-P1CF	G060 + G570	**B1.29 or newer**	**1.12 or newer**

2. Do the following procedure:
   1. Set **SP3-922-001** [OPU_Refresh2] to a value of "**1**" or "**2**".
   2. Select "OK".
   3. Exit SP mode and turn the main switch Off/On.

Number:	Description:	Default Setting:	Adjustable Range:
SP3-922-001	OPU_Refresh2	0	0: Disabled 1: Performed at the end of the job only if the average pixel coverage ratio of the previous job was low. 2: Performed at the end of every job.

Note: This SP mode was added from Engine firmware B1.21. Then, from Engine firmware B1.29, the amount of toner consumption with settings "1" and "2" was optimized.

Model: Model-J	Date: 21-Apr-05	No.: RG060031

Subject: White spot and Development gamma error	Prepared by: H.Taguchi
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
	☐ Product Safety	☐ Other ( )	

SYMPTOM

- White spots
- SC386, SC387, SC388, SC389
- Toner leaks from the toner supply window

CAUSE

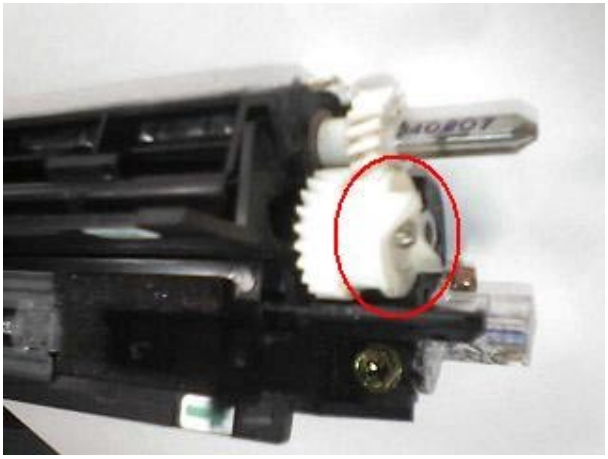
When the development unit is installed, it is not pushed all the way inside the machine. As a result, the mainframe drive gear does not engage with the development unit gear correctly.

SOLUTION

Production/Service Parts

The length of Gear:Joint:Drive:Z18 was increased (see photo and P/N below).

In the Field

1) When you install the development unit:
   Make sure to push it all the way inside the machine so that the **mainframe gear engages with the development unit gear**.

2) If the symptom is reported:
   Replace the Gear:Joint:Drive:Z18 with **AB014277**.