RICOH

Technical Bulletin

Model: Fresa	Date: 31-May-99	No.: RG024001

Subject: Service Manual	Prepared by: H. Someya
From: Technical Service Dept., GTS Division	

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

Although the Fresa engine service manual is based on the Fresa Win model, it may also be used for reference regarding the PS model as well. This is due to the fact that nearly all parts for the engine are identical, with a few exceptions such as the operation panel, some exterior parts and some decals.

The differences are described on the following pages.

Model: Fresa	Date: 31-May-99	No.: RG024001

Page 1-1 SPECIFICATIONS

Paper Size
(for NA model)

Standard tray
    Short edge feed:
        12" x 18", 11" x 17", $8_{1/2}$" x 14", Others* (A3, 8" x 13",
        $8_{1/4}$" x 13", $8_{1/2}$" x 13", 13" x 18")
    Long edge feed:
        A4, $8_{1/2}$" x 11", $7_{1/4}$" x $10_{1/2}$", Others* ($5_{1/2}$" x $8_{1/2}$")

By-pass feed tray*
    Short edge feed:
        A3, A6, B4 JIS, 11" x 17", $8_{1/2}$" x 14", 8" x 13",
        $8_{1/4}$" x 13", $8_{1/2}$" x 13", 12" x 18", 13" x 18"
    Long edge feed:
        A4, A5, B5 JIS, $8_{1/2}$" x 11", $5_{1/2}$" x $8_{1/2}$", $7_{1/4}$" x $10_{1/2}$"

* Specify the paper size with the system menu (at the
  operation panel by the user).

Paper Size
(for EU model)

Standard tray
    Short edge feed:
        A3, A5, 12" x 18", $8_{1/2}$" x 13", Others* (B4 JIS,
        11" x 17", $8_{1/2}$" x 14", 8" x 13", $8_{1/4}$" x 13", 13" x 18")
    Long edge feed:
        A4, $8_{1/2}$" x 11", Others* (B5 JIS, $7_{1/4}$" x $10_{1/2}$",
        $5_{1/2}$" x $8_{1/2}$")

By-pass feed tray*
    Short edge feed:
        A3, A6, B4 JIS, B6 JIS, 11" x 17", $8_{1/2}$" x 14", 8" x
    13",
        $8_{1/4}$" x 13", $8_{1/2}$" x 13", 12" x 18", 13" x 18"
    Long edge feed:
        A4, A5, B5 JIS, $8_{1/2}$" x 11", $5_{1/2}$" x $8_{1/2}$", $7_{1/4}$" x $10_{1/2}$"

* Specify the paper size with the system menu (at the
  operation panel by the user).

| Model: Fresa | Date: 31-May-99 | No.: RG024001 |

Page 2-49 Paper size detection

Paper size detection for tray 1 (for North America models)

Dial No.	Paper Size	Sensor Status		
		XNOB2	XNOB1	XNOB0
1	12" x 18" SEF	0	0	0
2	Others	0	1	1
3	7 1/4" x 10 1/2" LEF	0	0	1
4	8 1/2" x 14" SEF	1	0	0
5	8 1/2" x 11" LEF	1	0	1
6	A4 LEF	0	1	0
7	11" x 17" SEF	1	1	0
8	No Cassette	1	1	1

SEF: Short edge feed
LEF: Long edge feed
Others: SEF – A3, 8" x 13", 8 1/4" x 13", 8 1/2" x 13", 13" x 18"
  LEF - 5 1/2" x 8 1/2"

Paper size detection for tray 1 (for Europe models)

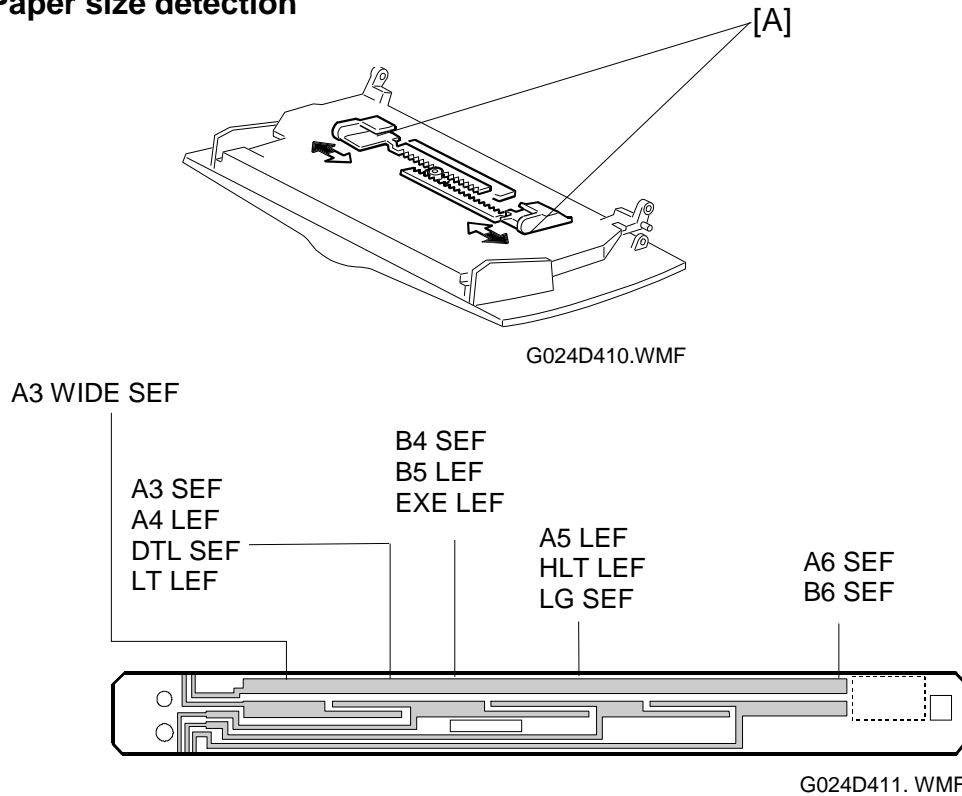| Dial No.	Paper Size	Sensor Status		
		XNOB2	XNOB1	XNOB0
1	12" x 18" SEF	0	0	0
2	Others	0	1	1
3	A5 SEF	0	0	1
4	8 1/2" x 13" SEF	1	0	0
5	8 1/2" x 11" LEF	1	0	1
6	A4 LEF	0	1	0
7	A3 SEF	1	1	0
8	No Cassette	1	1	1

SEF: Short edge feed
LEF: Long edge feed
Others: SEF – B4 JIS, 11" x 17", 8 1/2" x 14", 8" x 13", 8 1/4" x 13", 13" x 18"
  LEF - (B5 JIS, 7 1/4" x 10 1/2", 5 1/2" x 8 1/2"

Page 2-52 Paper size detection

[A]

G024D410.WMF

A3 WIDE SEF

A3 SEF
A4 LEF
DTL SEF
LT LEF

B4 SEF
B5 LEF
EXE LEF

A5 LEF
HLT LEF
LG SEF

A6 SEF
B6 SEF

G024D411. WMF

LEF: Long edge feed   SEF: Short edge feed

An electrode plate is connected to each of the two side fences [A]. The electrode plates short the patterns on the paper size detection board. Paper width is detected from the locations of the shorting.

Paper size detection for the by-pass feed tray

Paper Size	Sensor Status			
	XBIT0	XBIT1	XBIT2	XBIT3
A3 Wide LEF	1	1	1	0
A4 LEF	1	1	0	0
A3 SEF	1	1	0	0
81/2" x 11" LEF	1	1	0	0
11" x 17" SEF	1	1	0	0
71/4" x 101/2" LEF	1	1	0	1
B5 JIS LEF	1	1	0	1
B4 JIS SEF	1	1	0	1
81/2" x 14" SEF	1	0	0	1
51/2" x 81/2" SEF	1	0	0	1
A5 LEF	1	0	0	1
8" x 13" SEF	1	0	0	1
81/4" x 13" SEF	1	0	0	1
81/2" x 13" SEF	1	0	0	1
B6 JIS SEF	0	1	1	1
A6 SEF	0	1	1	1

Model: Fresa	Date: 31-May-99	No.: RG024001

Page 4-1 Entering engine SP mode

To enter engine SP mode, hold down the [Online] [A] and [Menu] [B] keys on the operation panel and turn on the power.

G024C500.WMF

G024C501.WMF
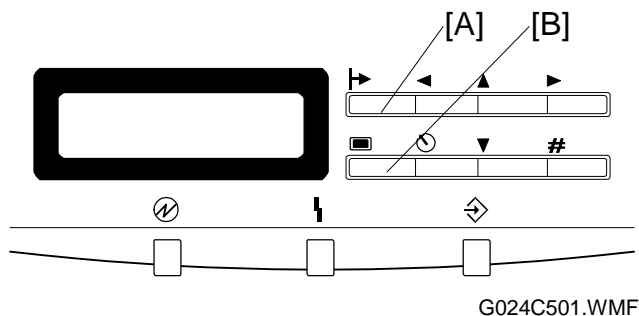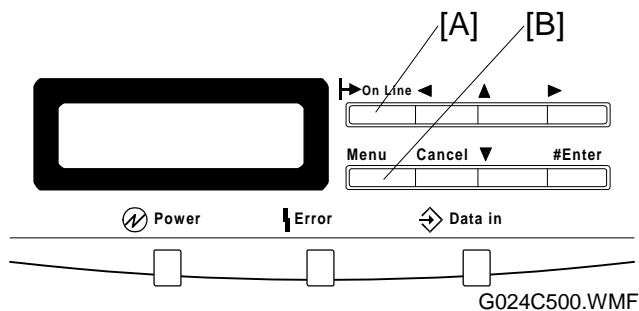
Page 4-2 Key operation

[Cancel] key: Pressing this key moves you to a higher level in the current menu. Before the specified value is confirmed by the [# Enter] key, pressing this key keeps the existing setting.

Page 6-35

CONTROLLER BOARD AND TEMPERATURE/HUMIDITY SENSOR REPLACEMENT

NOTE: Print the "Configuration sheet" prior to removing the controller board as the NV-RAM cannot be exchanged.

[C]

[E]

G024R551.WMF

[A]

[D]

[B]

G024R552.WMF

[F]

G024R553.WMF
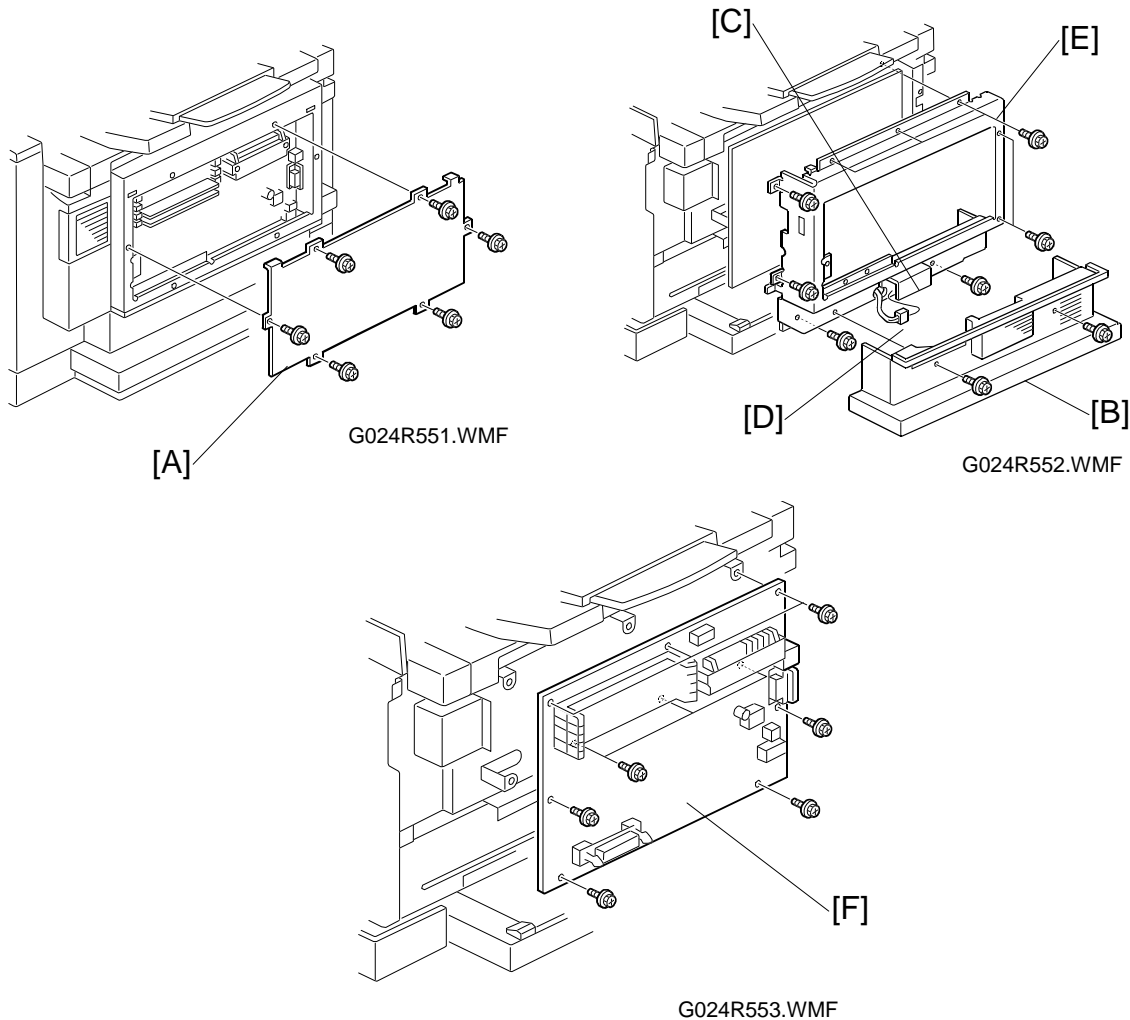
1. Remove the controller cover [A] (12 screws).

2. Remove the tray cover [B] (two screws).

3. Remove the temperature/humidity sensor cover (one screw) and sensor [C], (one screw). Make sure to unplug the connector [D].

4. Remove the controller bracket [E] (5 screws).

5. Remove the controller board [F] (6 screws).

After replacing the controller board, make sure that the brand name (and MAC address if required by the user) stored in the machine is correct.

Model: Fresa		Date: 30-Jun-99	No.: RG024002
Subject: Service Manual		Prepared by: H. Someya	
From: Technical Service Dept., GTS Division			

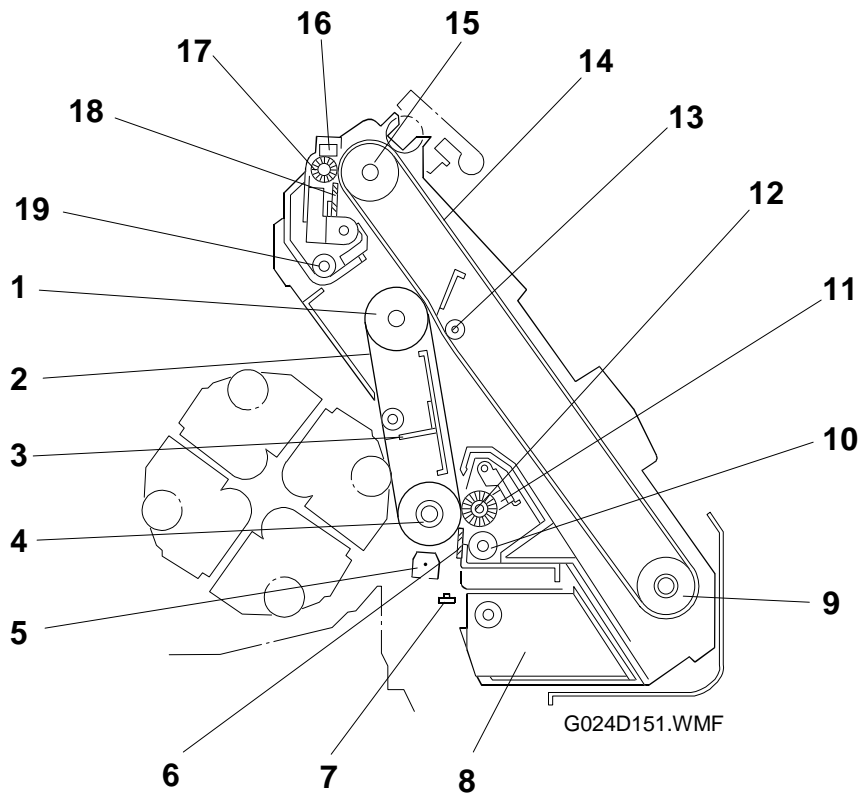| Classification:	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☒ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Other ( )		

Please correct your service manual as follows.

Engine

Page 2-6 PCU Overview

The callouts in the illustration below must be corrected.

G024D151.WMF

| Model: Fresa	Date: 30-Jun-99	No.: RG024002

Page 2-16 Used Toner Tank

Incorrect
The used toner sensor [D] detects when the tank becomes full. After detecting the toner near-end condition, the printer can make 20 additional prints before the machine stops printing.

Correct
The used toner sensor [D] detects when the tank becomes full. After detecting *this* condition, the printer can make 20 additional prints before the machine stops printing.
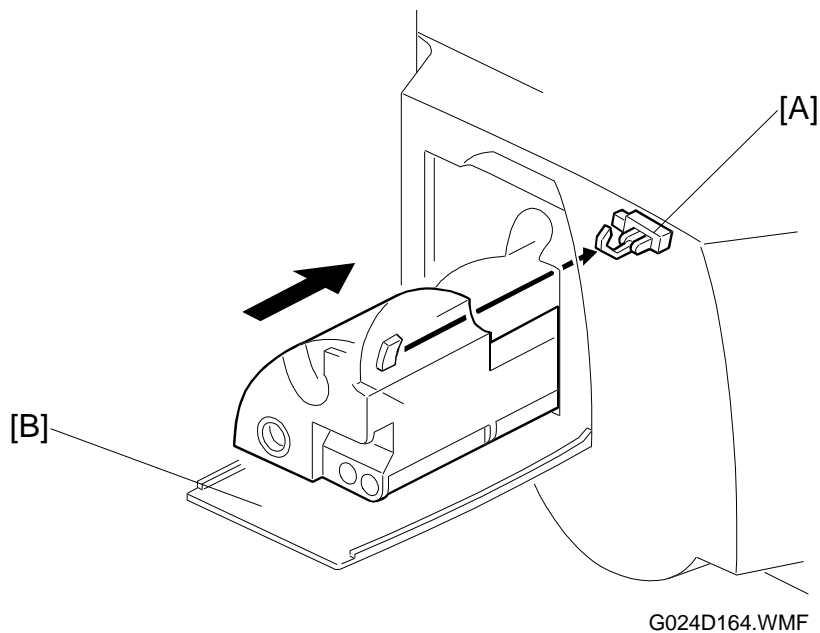
Page 2-32 Development Unit Drive

The callout [A] should be added to the gear.

[B]

[D]

[C]

[A]

[E]
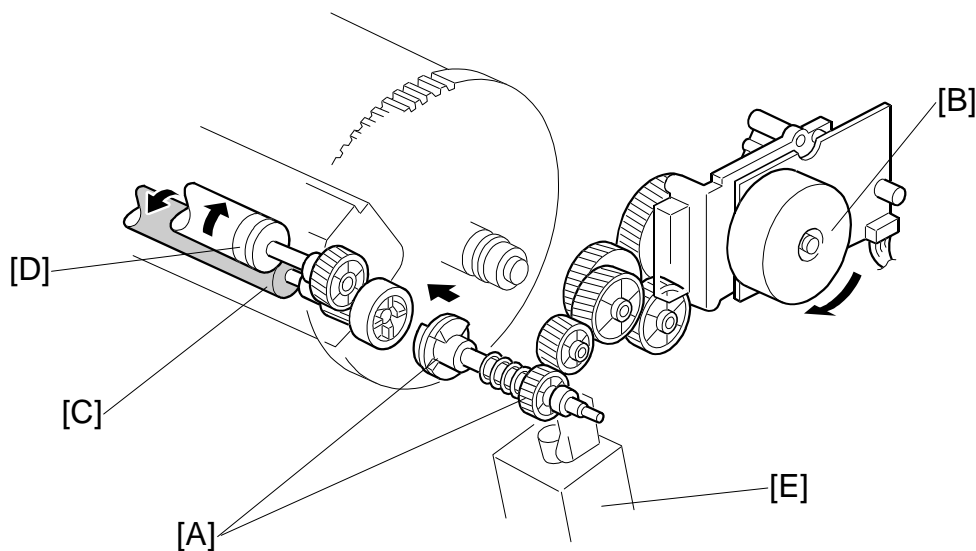
G024D162.WMF

Page 2-36 DTM (Development Toner Magazine) Detection

G024D164.WMF

Incorrect

Installing a toner bottle and closing the front cover [B] automatically initiates the recovery procedure, clearing the error.

Correct

Installing a toner bottle and closing the **DTM cover** [B] automatically initiates the recovery procedure, clearing the error.

The callout [B] should be added.

Page 4-5 Margin (Registration Adjustment)

Minor corrections should be added to step 3 of this procedure (below). Also, the note below should be added.

3. Move to the Adjust menu to adjust the vertical and horizontal registrations. The adjustment range for the horizontal *(Left)* registration is between –2.0 and *+*2.0 mm in units with 0.4 mm increments. The adjustment range for the vertical *(Top)* registration is between –2.5 and *+*2.5 mm in units with increments of 0.5 mm.

NOTE: The LCD panel displays the horizontal registration as "Left" and the vertical registration as "Top".

Page 4-6 Clear Memory

The explanations in the shaded cells below must be corrected.

Layer 1	Layer 2	Layer 3	Layer 4
Maintenance 3:Clear Memory	Clear Memory SC	Clear: SC Press # to clear	Clearing SC
	Clear Memory Jam	Clear: Jam Press # to clear	Clearing Jam
	Clear Memory All **NOTE:** Factory use only.	Clear: All Press # to clear	Clearing All

Page 6-3 Bottom Front Cover

A supplementary explanation should be added to the procedure below.
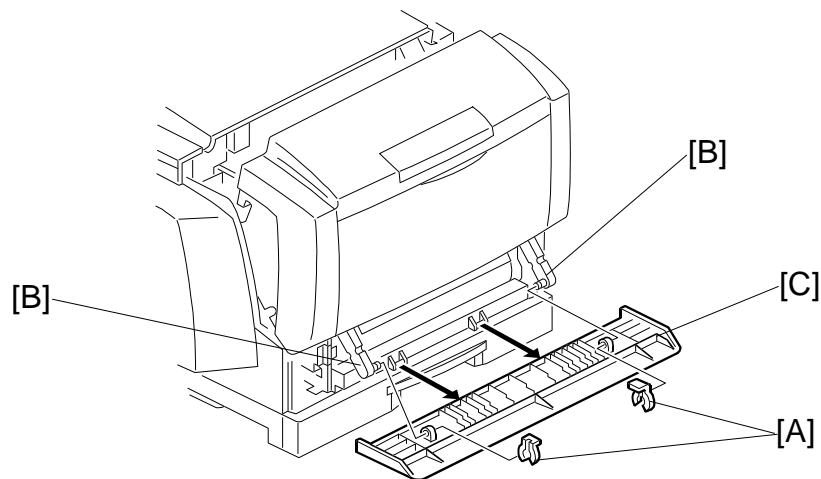
G024R268.WMF

1. Open the front cover half way, and remove the two snap rings [A].

2. Carefully slide the hinge levers [B] out from the bottom front cover [C]. The levers are spring loaded.
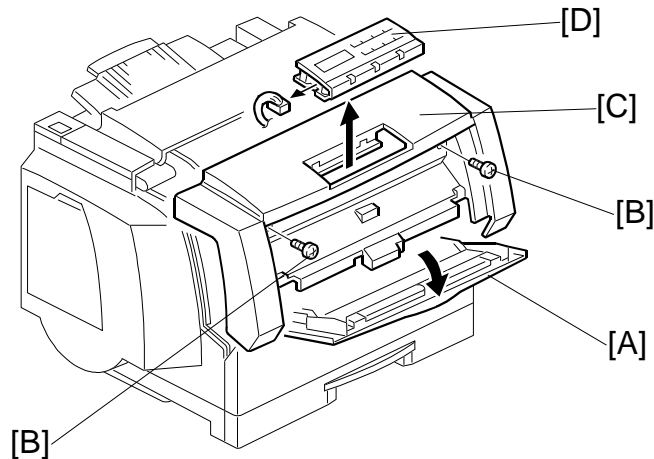
3. Remove the bottom front cover.

Page 6-3 Front Cover and Operation Panel

A supplementary explanation should be added to the procedure below.

G024R153.WMF

1. Open the by-pass tray [A].

2. Remove the two screws [B] and carefully lift the front cover [C] from the printer.

3. Remove the operation panel [D] from the front cover (two hooks). Be sure to unplug the connector from the operation panel.

NOTE: The surface of the operation panel circuit board is not insulated. When turning on the printer while the operation panel is being removed from the front cover, exercise extra caution in order to prevent a short circuit of the board.

Page 6-7 Calibrating the ID Sensor

A supplementary procedure should be added to steps 2 and 3 below.

2. Select "9: ID Sensor PWM" in the engine SP menu. Specify 150 as the PWM value. Press the [Enter] key. An asterisk (*) is then displayed before the value. Press the [Escape] or [Menu] key.

3. Select "7: Process Ctrl" in the engine SP menu. Execute "Color Bias" (this starts the process control for the color development bias settings). Wait until "Finish OK" is displayed. Then press the [Escape] or [Menu] key.
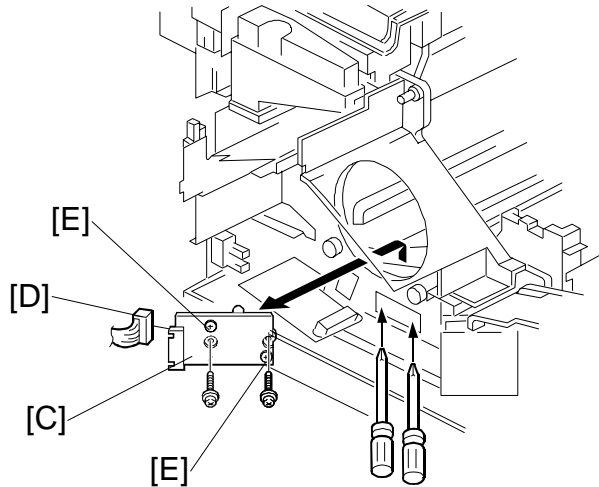
Page 6-18 LD Unit

The callouts of the illustration below must be corrected.

G024R259A.WMF

Page 6-35 Controller Board, Temperature/Humidity Sensor

The explanation in step 2 of the procedure and callout [H] should be corrected.

4. Remove the controller cover [E] (16 screws, including 2 screws around the parallel port).

5. Remove the controller board [F] with the bracket [G] attached to it (6 screws, 1 connector [H]).

6. Remove the bracket [G] and 2 screws from the controller board.
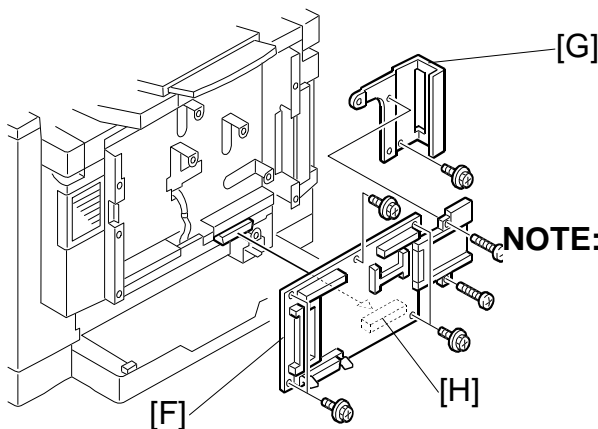
G024R184.WMF
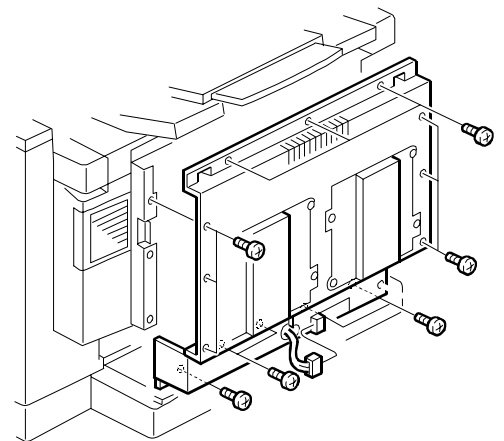
G024R166.WMF

NOTE: To replace the controller boards, remove the NVRAM chip (IC23) on the old board, install it on the new board and finally install the new board itself. The NVRAM chip stores user settings and service records. These settings will be lost if the NVRAM chip is not transferred to the new board.

Page 7-3 SC Error List

The explanation in the shaded cell below should be corrected.

SC No.	Type	Name	Occurrence conditions	Detection conditions	Cause
38	Type 2	Revolver motor error	Movement to the home position took four or more seconds. For black, movement to the home position took one second or longer.		Revolver motor, MCU, or incorrect installation of color development unit.

Controller

Page 8-1 Specifications for Network Interface Board

The explanation for the network cable should be added.

Configuration:	Embedded
LAN Interface:	100BASE-TX/10BASE-T
Frame Type:	Ethernet II (*1), IEEE802.3, IEEE802.2, SNAP
	*1: Only Ethernet II for TCP/IP
Network Cable:	STP (Shielded Twisted Pair) (*2), Category 5
	*2: If UTP (Unshielded Twisted Pair) cable is overused, EMI (Electro-magnetic Interference) is emitted, exceeding the required emission standard. Also, the ferrite core must be properly attached around the STP cable. Refer to the Operating Instructions Manual for details.
Protocol:	TCP/IP, AppleTalk (*3), NetWare
	*3: Only possible when equipped with RICOH-SCRIPT2.
SNMP Support:	IP and IPX SNMP support of MIB-II

Page 8-5 Network Setting Information

The below note should be added.

Since the controller does not support the "Summary Printout" function for the network interface board, check the network setting information by printing out a user mode configuration page.

NOTE: Although NetBEUI parameters are displayed on the various configuration pages, the NetBEUI protocol is not supported by this unit.

Model: Fresa	Date: 31-Aug-99	No.: RG024003

Subject: Gradation Image Printing with PCL Printer	Prepared by: Y. Tamaoka
From: Technical Service Dept., GTS Division	

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

SYMPTOM

When documents containing gradation images are printed with the PCL driver, the gradation may not be smooth and patchy red or green dots may appear, depending on the colors contained in the image and density of the gradation.

"Patchy" dots   Normal

CAUSE

In toner reduction mode, a dither pattern control error occurs when the total index value of CMYK colors exceeds the following value.

Either 170% with 2 colors or 250% in total.

SOLUTION

Use the PS driver instead of the PCL driver

If this is not accepted by the customer, update the controller firmware to the following version or later.

System code : Aug 6 1999

To update the firmware, the "system.sys" and "filesys.sys" files need to be updated.

This version is applied to production from Aug. '99 production onwards.

Note : This problem only occurs when gradation patterns are present in the image.

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PAGE: 1/1

Model: Fresa	Date: 31-Aug-99	No.: RG024004

Subject: Boot ROM recovery mechanism	Prepared by: Y. Tamaoka
From: Technical Service Dept., GTS Division	

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

Although the recovery mechanism on failure of upgrading the boot ROM by using *bootrom.rcy* is explained in the service manual (4.2 BOOT ROM MENU), this recovery mechanism is NOT available for the FresaPS model.

If any failure occurs during upgrading the boot ROM, please try to recover the system by retrying to download the bootcode file named *bootrom.sys* through a PC <u>WITHOUT SWITCHING OFF THE UNIT.</u>

If the unit is not recovered with this retry, then the controller board (G0245321) or Flash DIMM (G0245323) needs to be replaced.

Note: During downloading files to the FresaPS from a PC, the progress is indicated with "=" bars on the LCD of the unit.

Do not switch off the unit until the status returns to "INSTALL: ####" on the LCD.

Technical Bulletin

PAGE: 1/1

Model: Fresa	Date: 30-Sep-99	No.: RG024005

Subject: Engine SP mode menu		Prepared by: Y. Tamaoka
From: Technical Service Dept., GTS Division		

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

"14. Soft Version" is added to Engine SP mode.

However, this is added just for Japanese models in which old mechanical parts were applied to the transfer unit.

So, keep this value at "0" (default), otherwise the back of printouts may become dirty.

Technical Bulletin

Model: Fresa	Date: 15-Oct-99	No.: RG024006

Subject: How to update the printer driver	Prepared by: Y. Tamaoka
From: Technical Service Dept., GTS Division	

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

When updating the printer driver, do the following if the previous version of the driver is installed. Otherwise, the previous version remains in the PC even though it may not function correctly. (See Reference below)

1. Delete the printer icon for the previous version before installing the new one.

   If the previous driver settings are special, it is necessary to write down each setting of the printer properties before deleting the printer icon.

2. Install the new printer driver by using Add Printer in the Printers window.

3. After installation, confirm the version number of the updated files by printing the Test Page.

- Reference -
The following table shows what happens when the new version is installed without deleting the previous version.

| OS	Previous icon status before installation	Type of driver installation	Result	Notes
Windows95	Exists (Typical)	Typical	OK	Both icons work.
	Exists (Typical)	Add Printer	NG	The previous icon doesn't work correctly after the upgrade.
	Deleted	Typical	OK	
	Deleted	Add Printer	OK	
Windows98	Exists (Typical)	Typical	OK	Both icons work.
	Exists (Typical)	Add Printer	NG	The previous icon doesn't work correctly after the upgrade.
	Deleted	Typical	OK	
	Deleted	Add Printer	OK	
Windows NT4.0	Exists(Typical)	Typical	NG	The previous icon doesn't work correctly after the upgrade.
	Exists (Typical)	Add Printer	NG	The previous icon doesn't work correctly after the upgrade.
	Deleted	Typical	OK	
	Deleted	Add Printer	OK	

Technical Bulletin

PAGE: 1/2

Model: Fresa	Date: 15-Oct-99	No.: RG024007

Subject: Driver Update	Prepared by: Y. Tamaoka
From: Technical Service Dept., GTS Division	

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

● The new PS and PCL printer drivers are released. With the new driver, the following items are fixed.

Title1 /Title2	Problem Name	Description	OS
Print Image /PCL driver	Patterned areas in certain colors are not correctly reproduced	Patterned areas in pink are printed with plain red.	Win95/98
Driver setup /PCL driver	Editing the Font Substitution Table	No substitution font appears in the pull down menu for editing fonts in other language versions of Windows than English.	WinNT4.0

● The CRD names on the ColorWise tab of the printer properties for both PS and PCL are renamed as follows:

Old	New CRD
Photos	Images
Text	Text
Illustrations	Graphics
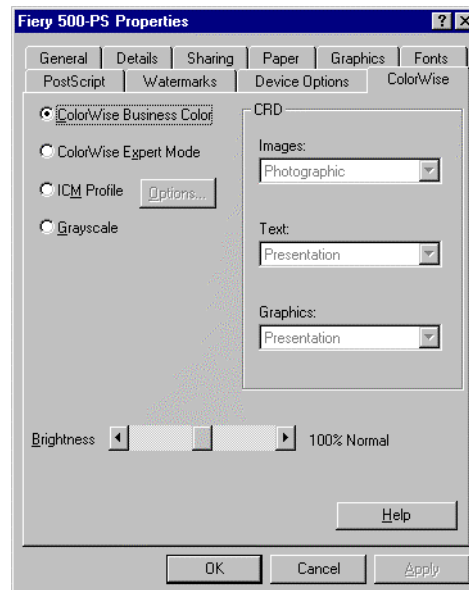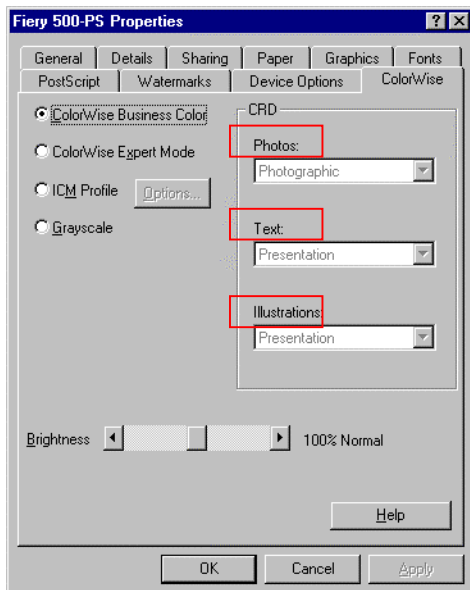
Model: Fresa	Date: 15-Oct-99	No.: RG024007

- The updated files for each driver.

For	Old File Name (Version No.)	New File Name (Version No.)
Windows95/98 PS Driver	EFER5010.DLL (1.71.30)	EFER5010.DLL (1.71.60)
Windows95/98 PCL Driver	EFGNPCLG.DRV (2.0.0065)	EFGNPCLm.DRV (2.0.0069)
	EFGNDLGG.DLL (1.60.80)	EFGNDLGm.DLL (1.61.50)
Windows NT PCL Driver	EFGNPCL9.DLL (2.0.0048)	EFGNPCLm.DLL (2.0.0069)
	EFGNRES9.DLL (1.59.10)	EFGNRESm.DLL (1.61.30)

How to print the Test Page:

1. Select the Setting menu from the Windows Start menu.
2. Select Printers and open the icon for the printer which you have updated.
3. Select Properties from the File menu.
4. Click the Print Test Page button on the General tab.

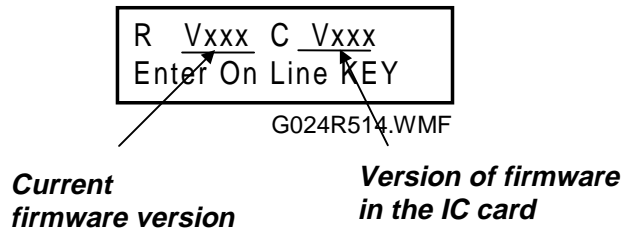The CD-ROM with the new driver is applied to production from October 1999 production onwards.
S/No : P07 9 10 #####

Note: See RG024006 for how to update the printer driver.

Model: Fresa	Date: 31-Oct-99	No.: RG024008

Subject: LCD display when updating engine firmware	Prepared by: Y. Tamaoka
From: Technical Service Dept., GTS Division	

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

The explanation of the versions displayed during engine firmware updating (section 6.5.5) is switched around.

The version at the left side shows the current version and the other is the one in the IC card.

```
R  Vxxx  C  Vxxx
Enter On Line KEY
```

G024R514.WMF

Current firmware version

Version of firmware in the IC card

Model: Fresa	Date: 15-Dec-99	No.: RG024009a

RTB Correction
The items in bold italics have been corrected or added.

Subject: SC27	Prepared by: Y. Tamaoka
From: Technical Services Dept., GTS Division	

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

SC27 is missing from the SC Error List in the Troubleshooting section.

SC No.	Type	Name	Occurrence conditions	Detection conditions	Cause
27	*Type1* *(Note1)*	AC power zero-close detection error	No zero-cross cycle can be detected when turning the fusing lamps on.	No detection in the event of SC or fusing unit absence.	AC power conditions. (Frequency)

Details

> *50Hz AC*
> *The number of zero-cross cycles detected is less than 89 or more than 111 in one second for a continuous 5 seconds.*
> *60Hz AC*
> *The number of zero-cross cycle detected is less than 109 or more than 131 in one second for a continuous 5 seconds.*

Note 1
Releasing the SC error

> *From engine firmware version 2.21 or later, this SC error can be released by switching the machine off and on (Type 2 error).*

Model: Fresa	Date: 15-Dec-99	No.: RG024010

Subject: Banding	Prepared by: Y. Tamaoka
From: Technical Service Dept., GTS Division	

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

SYMPTOM

- 42 mm pitch horizontal banding

- 2 mm pitch vertical banding

CAUSE

- 42mm pitch horizontal banding -

The traces on development roller which have been caused by contacting the development blade during storage. The set-up running at the installation can reduce the traces but it is not enough to completely solve the problem.

- 2mm pitch vertical banding -

Shaving traces on development roller.

SOLUTION

- 42mm pitch horizontal banding -

These traces will fade as sheets are printed, and this symptom will disappear after 300 sheets printing.

Switch the energy saver mode to "level 2" as the machine automatically runs the development roller every 70 minutes. This can help to fade this symptom out earlier.

- 2mm pitch vertical banding -

The condition of shaving the roller has been changed since July 1999.

The DTM's lot # on the DTM development frame: 907009000 or later.

(The DTM's lot # on the carton boxes: 990720 or later)

Model: Fresa		Date: 29-Feb-00	No.: RG024011

Subject: Early problem with Ricoh NIBs when using IE 5.x	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:

When you browse the Pomelo and FresaWIN printers with Microsoft Internet Explorer 5.x (IE 5.x), IE 5.x requires installing a Japanese font even if the HTML does not have a Japanese font.

i.e., if browsing http://*Printer IP Address*/en/cgi-bin/sts_index.cgi, the following message appears:

Maybe the message is different because of a minor variation in the IE version or Windows OS. The above message appears when using IE 5.00.2920.0000 with Windows 2000. In this case, IE requires a Japanese font every time.

IE 5.00.2314.10003 with Windows NT 4.0 is shown below. In this case, IE requires a Japanese font once after browsing the Ricoh NIB (network interface board).
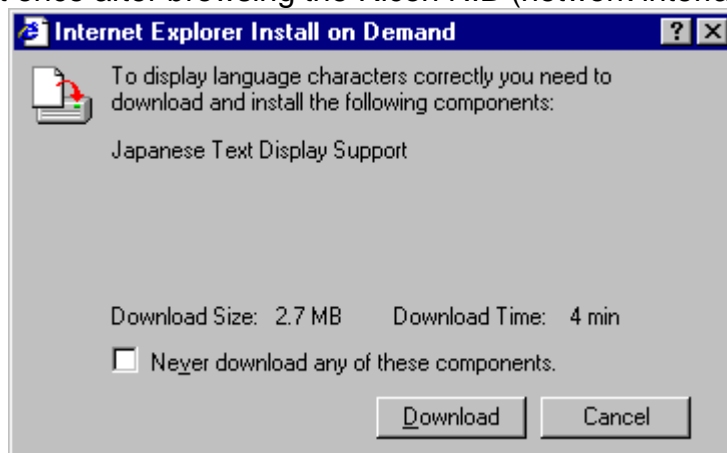
Note: The NIB works properly by canceling messages stating that a Japanese font is required.

Cause:

The HTML in the older version Ricoh NIB has the following line:

```
<META HTTP-EQUIV="content-type" CONTENT="text/html;
CHARSET=x-sjis">
```

This line means that HTML declares this file's code is Japanese. Therefore IE 5.x requires installing a Japanese font even if all HTMLs do not have a Japanese font.

Problem NIB version

The problem Ricoh NIB versions are 3.8.7 or earlier. The latest Ricoh NIB does not include the problem line. The latest one has the following line:

```
<META HTTP-EQUIV="content-type" CONTENT="text/html">
```

Problem printers

This problem only happens with Pomelo and FresaWIN. However, the latest Pomelo and FresaWIN do not have the problem. It depends on the time when the NIB was produced.

Other printers and MFPs, such as Stinger-C, Russian-C/P, and Win-A, do not have this problem because these Ricoh NIB versions are 3.8.8 or later.

Countermeasure 1

First check the Ricoh NIB version by printing the configuration page (Menu button → <Menu> List Print → <List Print> Config. Page). The configuration page shows the Network Version line as follows:

```
Network
      Version   ELAND98 3.7.5 (0003)- 3.60f9
```

This line shows the NIB version is 3.7.5.

If the NIB version is 3.8.7 or earlier, please get the latest Ricoh NIB firmware and install the new one in the NIB.

Countermeasure 2

Install a Japanese font in Windows. There are a few ways to install a Japanese font.
1) If IE 5.x is pre-installed in Windows 2000, the Windows 2000 CD-ROM has Japanese fonts. The customer should insert the CD-ROM and click the OK button.
2) Use Windows update from the Start up Menu in Windows and install a Japanese font.

Model: Fresa	Date: 16-May-00	No.: RG024012

Subject: Additional Engine SP mode		Prepared by: Y. Tamaoka
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 Engine SP mode has been added.

Engine SP 15: BLT-TR BIAS

This mode is for adjusting the primary (belt) transfer bias.

This value can be specified in 100V increments between 800V and 1500V (Default : 800V).

Vertical lines can be printed more sharply by increasing this parameter but white dots may appear in solid image areas. So, this mode should be used only when blurred vertical lines appear.

Layer 1	Layer 2	Layer 3	Layer 4
Maintenance 15:BLT-TR BIAS	BLT-BIAS adj ▲▼ Cyan	cyan ▲▼/# XXXX	
	BLT-BIAS adj ▲▼ Magenta	magenta ▲▼/# XXXX	
	BLT-BIAS adj ▲▼ Yellow	yellow ▲▼/# XXXX	
	BLT-BIAS adj ▲▼ Black	black ▲▼/# XXXX	

This mode is available from version 2.23. (Applied to production from November 1999.)

Model: Fresa	Date: 16-May-00	No.: RG024013

Subject: Engine Firmware Update HIstory		Prepared by: Y.Tamaoka
From: Technical Services Dept., GTS Division		

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

#	Problem improved / modified	Version	ROM Suffix (G0245500)
216-01	No communication with controller while an SC error is issued due to defective transfer roller	2.16	H
216-02	Improved fusing unit control		
216-03	Changed toner near end detection method for black toner		
216-04	The process control counter value was changed for printing images bigger than LT. size		
216-05	Transfer bias applied to the sheets of paper between OHP transparencies in OHP slip mode		
217-01	Changed transfer current value in OHP mode	2.17	J
218-01	Changed transfer current value in OHP mode to optimize with FOLEX	2.18	K
218-02	The Setup status flag is set when a DTM cover sheet is detected		
220-01	SC98 may occur during continuous B/W printing, depending on the timing	2.20	L
220-02	SC28 may occur during continuous color printing, depending on the timing		
220-03	SC41 may occur if paper end is detected and paper is added on the tray during half-speed printing (thick paper or OPC transparency media printing).		

Model: Fresa	Date: 16-May-00	No.: RG024013

#	Problem improved / modified	Version	ROM Suffix (G0245500)
226-01	Correction of the SC105 detection conditions	2.23	N
226-02	Additional SP mode menu for the primary transfer bias "15 BLT-TR BIAS" (Refer to RG024012)		
226-03	A secondary bias control error may happen at initialization		
226-04	Auto pattern printing after PCU replacement	2.26	Q
230-01	Changed the timing for turning on the revolver motor when detecting paper end, as the countermeasure for SC38 detection error	2.30	S
230-02	The K-DTM process control procedure on color DTM replacement has been skipped to prevent thin vertical lines		
230-03	The development roller is rotated twice on DTM replacement to prevent thin vertical lines	2.30	S
230-04	Changed the timing for turning off the charge voltage when printing an image wider than letter size with B/W mode		

Version	Checksum	Applied to production from
2.16	DB60	June 1999
2.17	BD2C	July 1999
2.18	2C2A	September 1999
2.20	86BB	October 1999
2.23	BF75	November 1999
2.26	8DDD	Feb. 2000
2.30	8B1D	Apr. 2000

Model: Fresa	Date: 11-Oct-00	No.: RG024014

Subject: Fusing Unit		Prepared by: Y. Tamaoka
From: Technical Services Dept., GTS Division		

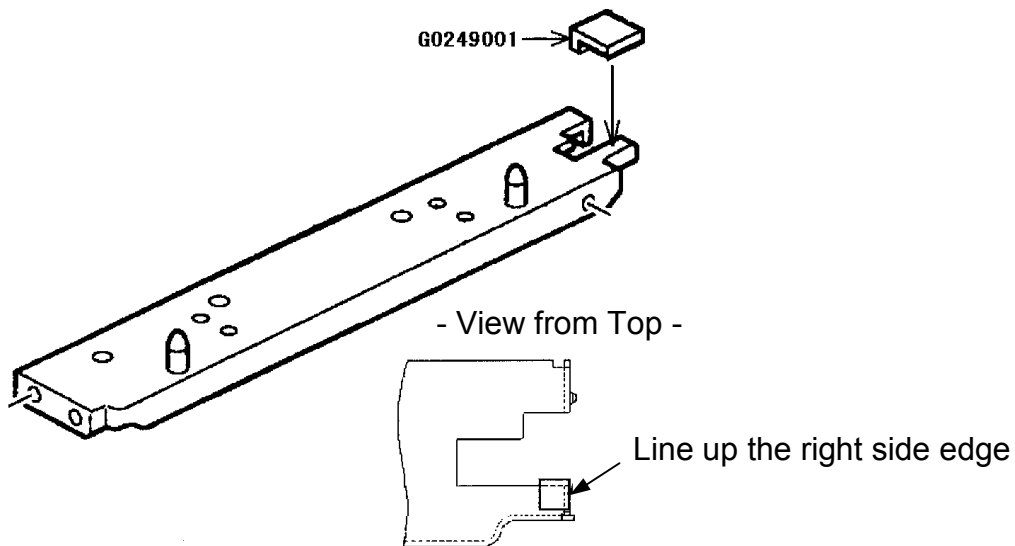| Classification:	☒ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Other ( )		

SYMPTOM

1) Acoustic noise from the upper cover around the fusing unit

2) Tightner Gear Ass'y (G0241808) damaged. (No fusing unit drive)

CAUSE

The thread engagement between the fusing contact/separation gear and the fusing drive gear is too much.

SOLUTION

For the machines produced before January '00,
Put Spacer – Fusing Stay (G0249001) on the Fusing Unit Stay as shown in the illustration below.
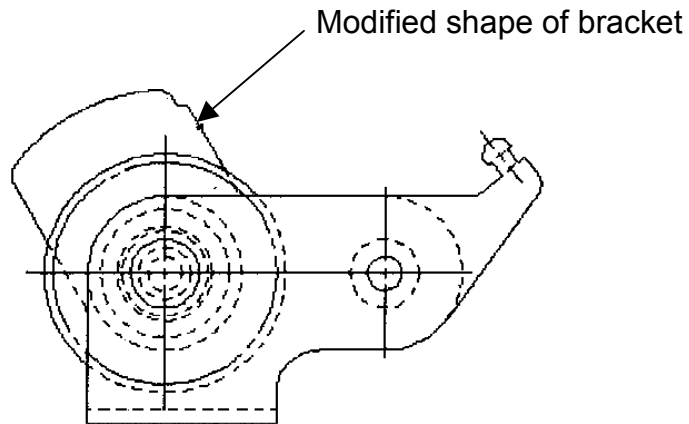

- View from Top -

Line up the right side edge

The following countermeasure was applied to production from January '00.

The shape of the Tightener Gear Ass'y bracket (which contains the contact/separation gear) was changed to prevent excessive thread engagement between gears.

Modified shape of bracket

Model: Fresa	Date: 15-Nov-00	No.: RG024015

Subject: Periodical charger cleaning indication	Prepared by: Y. Tamaoka
From: Technical Services Dept., GTS Division	

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

To ensure that vertical streaks do not appear on print images, the engine and controller firmware were modified. The new versions include a displayed message to customers reminding them to perform periodic charger cleaning. The message is displayed every 5K developments.

For this feature, the "Charger Clean Counter" and "Charger Clean Reset Counter" have been added. These counter values are shown on the Engine Maintenance Sheet.

Controller firmware version: 3.2.0 or later
Engine firmware version: 2.00 or later

IMPORTANT NOTICE Errors and Limitations

	Controller Firmware	
Engine Firmware	Ver. 3.20 or later	Older than ver. 3.20
Ver. 2.00 or later	No error of any kind.	SC error indicated after the first 5K developments. There is no other way to clear this error than to update the controller firmware.
Older than ver. 2.00	No functional error, but no periodical alert is indicated.	No functional error, but no periodical alert is indicated.

When updating the engine firmware to version 2.00 or later, <u>the controller firmware needs to be updated to version 3.20 or later.</u>

To distinguish the service parts containing the different firmware versions, the Printer Controller Board and MCU Board part numbers were changed as follows.

	With older firmware version	With new firmware version
Printer controller board	G0475768	G0475769
MCU board	G0475303	G0475306

* For the controller board, "older version" refers to versions before 3.20, and for the engine, this refers to versions before 2.00.

Model: Fresa	Date: 15-Nov-00	No.: RG024015

Note:
After the engine firmware has been updated with this version, "C v123" is indicated instead of "C v200".

Refer to the attached sheet for the procedure to reset the alert indication and to disable this function.

Applicable Models: G047 and G048.

This firmware change is applied from November 2000 production.

Replacing and Cleaning the Charger

Replacing the Charger

Replace the charger whenever the following message appears on the panel display.

```
IPDL-C
Need Charger
```

For charger replacement procedures, see "Replacing the Charger" in the Printer Reference provided as a PDF file on the CD-ROM.

In the procedure, substitute the following name.

• **[Charger]** ⇒ **[ChangeCharger]**

Cleaning the Charger

⚠ *CAUTION:*

• *When accessing the inside of the machine, do not touch any sections other than those specified in this manual. If you do, it might result in receiving a burn or injury.*

When the following message appears on the panel display, the charger requires cleaning.

```
IPDL-C
CleanCharger
```

1 **Push the front cover release button and open the front cover.**

✸**Important**

❏ Exposing the photoconductor unit to light for too long can reduce its performance. Clean the charger as quickly as possible.

2 **Holding the green inset grips on the photoconductor unit, pull the top side of the unit forward.**

3 **Move the light blue charger cleaner left and right about five to six times, and return it to the left side. Align the arrow on the charger cleaner to the arrow on the photoconductor unit.**

TFWX260E
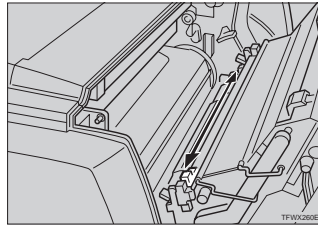
✸**Important**

❏ If the charger cleaner is not returned to the left side, an error message or print problem might occur.

4 **Holding the green inset grips on the photoconductor unit, push the unit back to its original position.**

5 **Close the front cover.**

6 **Press【Menu】.**

The following message appears on the panel display.

```
<Menu>        ▲
IPDL-C Menu   ▼
```

7 **Press【▼】or【▲】to display "Maintenance", and then press 【Enter】.**

```
<Menu>        ▲
Maintenance   ▼
```

8 **Confirm that "1.Reinstall" is displayed, and then press【Enter】.**

```
<Maintenance> ▲
 1.Reinstall  ▼
```

9 **Press 【▼】or 【▲】 to display "Clean Charger", and then press 【Enter】.**

```
<Reinstall>
  Clean Charger
```

10 **Press【Enter】.**

```
<Clean Charger>
  Press # key
```

The counter is cleared and returns to the "Maintenance" menu.

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💡 **Turning off the "Clean Charger" Message**

You can set the "Clean Charger" message not to display by following the steps below.

✐ **Note**

❏ Printouts may appear dirty when you continue using the printer with the charger uncleaned. In this case, clean the charger by following the steps in "Cleaning the Charger".

① Press【**Menu**】.

The following message appears on the panel display.

```
<Menu>        ▲
IPDL-C Menu   ▼
```

② Press【▼】or【▲】to display "Maintenance", and then press【**Enter**】.

```
<Menu>        ▲
Maintenance   ▼
```

③ Press 【▼】 or 【▲】 to display "8.Disp.Cl.Chgr.", and then press 【**Enter**】.

```
<Maintenance> ▲
8.Disp.Cl.Chgr.▼
```

④ Press【▼】or【▲】to display "Off", and then press【**Enter**】.

```
<Disp.Cl.Chgr.>▲
  Off           ▼
```

The "Disp.Cl.Chgr." message is turned off.

⑤ Press【**On Line**】.

The "Ready" message appears on the panel display.

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G0488660 (1/9)

Model: Fresa	Date: 15-Jan-01	No.: RG024016

Subject: Loose screw in the PCU	Prepared by: Y. Tamaoka
From: Technical Service Dept., GTS Division	

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

SYMPTOM

A rattling noise can sometimes be heard from the PCU during printing.

CAUSE

The heat cycle in the machine causes expansion and contraction of the paper transfer cleaning cover. This in turn causes the screws holding the cover to the PCU frame to become loose or fall out. Fallen screws interfere with the rotation of the screening auger.
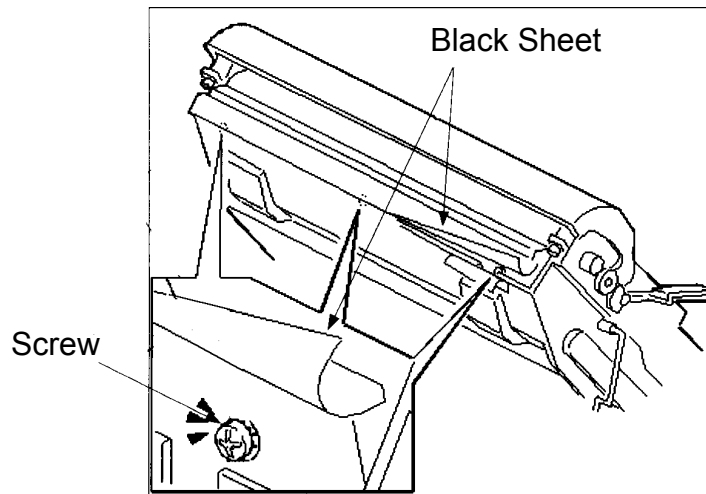
SOLUTION

Secure the cover with the following screws:

Part Number	Description
09513006	Philips Screw With Flat Washer M3X6

This modification was applied to the production line from October 1999.
PCU lot number: 99100001 or later.

Model: Fresa	Date: 15-Jan-01	No.: RG024017

Subject: Vertical white lines		Prepared by: Y. Tamaoka
From: Technical Service Dept., GTS Division		

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

SYMPTOM

Thin white vertical lines appear on prints.

This symptom mainly occurs just after PCU replacement. However, it may also occur during operation when the PCU has not been replaced if the customer continuously prints images with a low solid black ratio (less than 3%).

CAUSE

During process control, lubricant enters the development section (DTM) and causes the toner to coagulate. This causes toner to clog and results in white lines on the printouts.

SOLUTION

= Temporary action =
By printing several solid color patterns, the clogged toner can be removed from the development section.

= Final countermeasure =
The firmware has been changed as follows:
 1. The 4C 60% test pattern is automatically printed to clear the clogged toner.
    (ver 2.26 or later)
 2. The K-DTM process control procedure is not done at color DTM replacement.
    (ver 2.30 or later).
 3. The development roller is rotated twice at DTM replacement (ver 2.30 or later).

Final countermeasure 1 above should be used when the problem occurs just after PCU replacement, whereas countermeasures 2 and 3 are for occurrences without PCU replacement.

Model: Fresa		Date: 12-Mar-01	No.: RG024018

Subject: Periodical charger cleaning indication for G024-57/67	Prepared by: Y. Tamaoka
From: Technical Services Dept., GTS Division	

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

Applicable Products of this Bulletin

Fresa Win (G024-57/67) only.

To ensure that vertical streaks do not appear on prints, the engine and controller firmware have been modified. The new versions include a display message to customers reminding them to perform a periodic charger cleaning. The message is displayed every 5K developments.

For this feature, a "Charger Clean Counter" and "Charger Clean Reset Counter" have been added. These counter values are shown on the Engine Maintenance Sheet.

Controller firmware version: 1.09 or later
Engine firmware version: 3.01 or later

IMPORTANT NOTICE: Errors and Limitations

	Controller Firmware:	
Engine Firmware:	Ver. 1.09 or newer	Older than ver. 1.09
Ver. 3.01 or newer	No errors of any kind.	SC error indicated after the first 5K developments. The only way to clear this condition is to update the controller firmware to ver 1.09 or newer.
Older than ver. 3.01	No functional errors, but no periodic alert is indicated.	No functional error, but no periodical alert is indicated.

● When updating the engine firmware to version 3.01 or newer, <u>the controller firmware needs to be updated to version 1.09 or newer.</u>

● **Do not** use this Engine Firmware version in FresaPS models (G024-17/27). Otherwise, an SC error occurs.

Firmware information
 Engine firmware (version 3.01)
       CheckSum : A563
 Controller firmware (version 1.09)
       CheckSum : 9A0F

Refer to the following table for the additional display items (**#6, 7**) to reset the alert indication and to disable this function.

Maintenance	1.Toner Select	Cyan Magenta Yellow Black	
	2. Toner level		
	3. Menu Reset		
	4. Registration (Only when optional tray is installed.)		
	5. Menu Protect	Off On	It can also be accessed if the **[Enter]**, **[Escape]**, and **[Menu]** keys are pressed in sequence when the printer is on line.
	6. Reinstall	**CleanCharger**	**Press # key**
	7. Disp.Cl.Chgr	**On** **Off**	**Default : On**

Note

The same feature is already available on Fresa Win Plus models. (G047/G048 – 57/67) Refer to RTB RG024015 for the G047/G048 models.

Model: Fresa	Date: 18-May-01	No.: RG024019

Subject: ROM History (FresaWIN RPS2)	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 ( )		

Firmware history for the FresaWIN RPS2.

Suffix G5035908	Version	Check Sum	Production
A	2.61	85E5	April Prod. 2000
B	3.10	34CF	November Prod. 2000
C	3.55	ACA8	June Prod. 2001

Symptom Corrected	
Overflow error in the coordinate variable.	C
An internal error appears when trying to cancel a job using the Reset key.	C
No "Job Resetting..." display.	B
Item header "B" on the RPS2 menu has been omitted: Previous Changed to B. Job Timeout C. Job Timeout C. I/O Timeout D. I/O Timeout --- ---	B
Cannot print out correctly from Acrobat Reader 4.0 when selecting two-byte font download.	A
Improved BG/UCR.	A
Wording change in RPS2 menu. Previous Changed to Bright Vivid Super Bright Super Vivid	A