RICOH

Technical Bulletin

Reissued: 16-Dec-08

Model: T-G1s	Date: 03-Sep-07	No.: RJ015001a

Subject: Firmware Release History Network I/F GX3	Prepared by: Y.Murata
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 ( )	

This RTB has been issued to announce the firmware release information for the <u>firmware update for Network I/F GX3a</u>

Version	Program No.	Effective Date
2.2.0	***J5170017C***	***November 2008 production***
2.1.0	J5170017A	1st mass production (August, 2007)

Version	Symptom Corrected
2.2.0	***Symptom corrected:*** ***The job in progress stops if print jobs are sent simultaneously from a large number of PCs.***
2.1.0	1st mass production

RICOH

Reissued: 14-May-08

Model: T-G1s	Date: 05-Nov-07	No.: RJ015002a

RTB Reissue

The items in bold italics have been corrected or added.

Subject: Firmware Release History(Controller)		Prepared by: Y.Murata
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 ( )	

This RTB has been issued to announce the firmware release information for the **Controller.**

Version	Program No.	Effective Date
1.09	*J0155625D*	*March 2008 production*
1.07	J0155625C	1st mass production (November,2007)

Version	Symptom Corrected

1.09	*Specification changed:*
	1. The following SCs were added:
	    SC976 (Printer head error at arrival).
	    SC977 (Printer head error occurs at running).
	2. New display languages were added to the firmware update utility (Russian, Polish, Czek, Hungarian, Finnish).
	
	Symptom corrected:
	1. If the envelope lever is changed to the "envelope" position while the printer is in Energy Saver mode, and a job is then performed using paper other than envelopes, the machine is unable to detect the difference in paper type (no error is triggered).
	2. The image appears faint. This is because in rare cases, the printer does not perform capping (one type of printer head maintenance), which causes the printer head to dry up.
	3. If the width of the paper is 220mm or more, and the image begins within a certain distance from the left side of the leading edge, the image along the right edge of the paper is sometimes missing.
	4. If the printer has not yet printed anything onto the paper when one of the following errors occurs, the printer will now continue the job starting from that sheet after the error is cleared.
	    – Ink End condition
	    – Paper misfeed
	    – Temperature outside allowable range

1.07	1st mass production

Model: T-G1s/T-G1W/T-MF1	Date: 3-Dec-07	No.: RJ015003

Subject: SC 979	Prepared by: Y. Murata
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

SC979 occurs while SP5007 (washing) is being performed.

CAUSE

In both cases below, the machine judges that there might be air bubbles in the ink supply path. If washing is then performed, the machine triggers SC979 in order to prevent any mechanical failures or image problems.

1. The interval between the most recent print job and the previous print job is one month or more. This is true even if the machine power has been ON the entire time.

2. The machine has detected the Ink End condition mechanically (the amount of ink in the head tank does not increase when the ink pump is rotating).

SOLUTION

If SC979 occurs, leave the machine alone for 24 hours with the main power ON.

Model: T-G1s / T-G1W	Date: 6-Dec-07	No.: RJ015004

Subject: Service Manual Revision	Prepared by: G. Hirao
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 changes were made to the Service Manual (Ink Collector Unit yield, pg. 285)

● **Correct** the following items in the table.

The yield information for the ink collector units were changed as follows.

| Type	APV	Expected Replacement Period	Yield of Ink Collector Unit
J015	500	32 months or more	16K prints
J016	1,000	22 months or more	22K prints

Conditions: 3P/J, 5% A4 chart, target PV

Note: Although the Ink Collector Unit was provided as a service part for the predecessor model, for these models it will be provided as a consumable (supply product).

Model: T-G1s		Date: 15-May-08	No.: RJ015005

Subject: "Nozzle cover and plate cleaning"	Prepared by: Y.Murata
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 ( )		☒ Tier2

Symptom

・One or more of the print nozzles gets clogged.
・The carriage scratches the edge of the paper or paper stack.
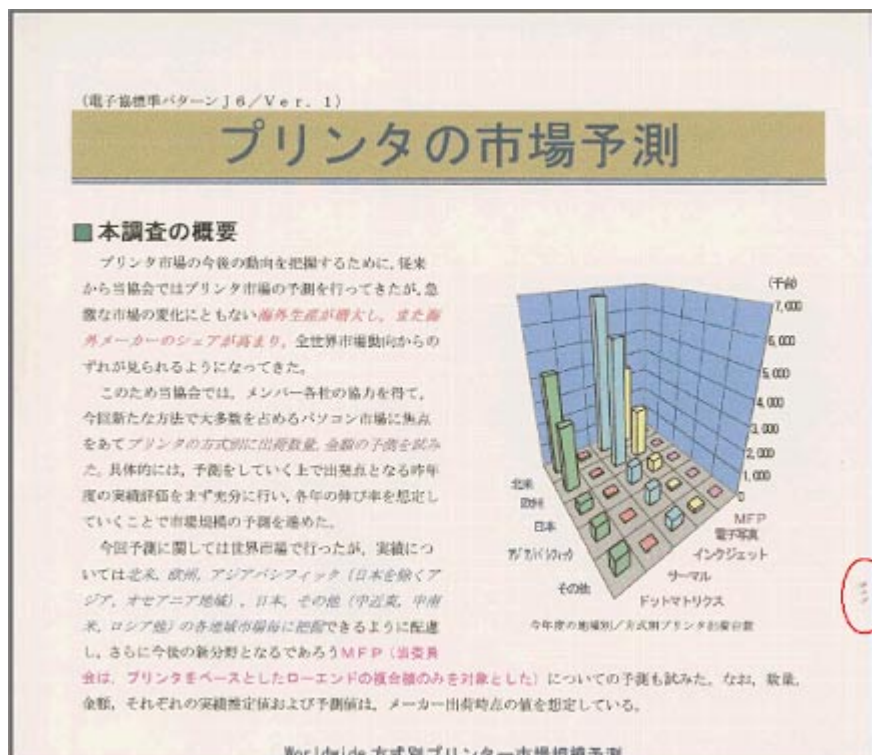
Edge of the paper is scratched

Edge of the paper stack is scratched

Cause

Paper dust or ink builds up on the nozzle cover and then scratches the paper/stack.

Solution

Clean the nozzle cover and nozzle plate.
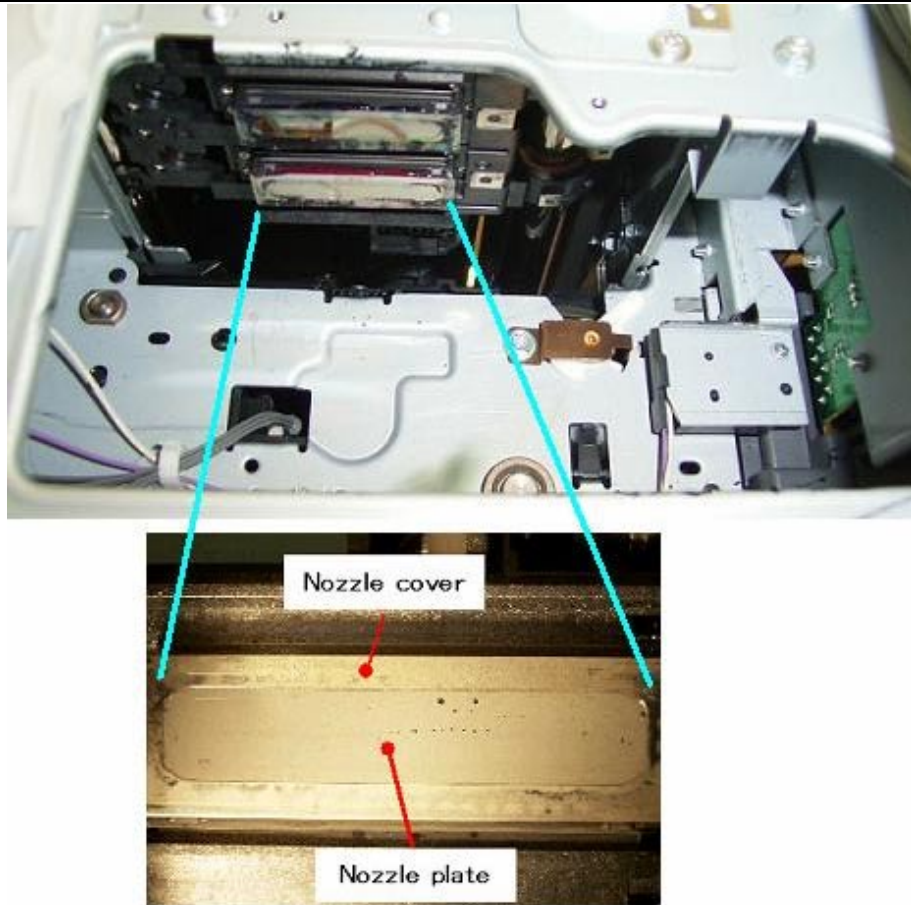
Procedure:
1. Turn off the machine main power.
2. Remove the maintenance unit.
   Note: For the procedure, see the Toscana-P1 Service Manual (pg. 64), Toscana-C1 Service Manual (pg. 94), or Toscana-P1 s/W Service Manual (pg. 99).

3. Return the carriage to its home position.
   Note: You will then see the nozzle cover and nozzle plate.

Model: T-G1s	Date: 15-May-08	No.: RJ015005

4. Clean each side of the nozzle twice with a slightly damp cloth.
   Important: Move the cloth back and forth along the surface.
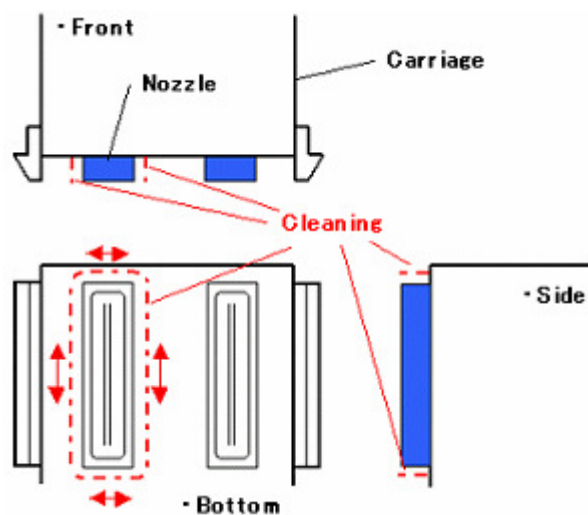
5. Wipe another damp cloth **once** along the surface of the nozzle plate.
   Important: Do not wipe the cloth back and forth.
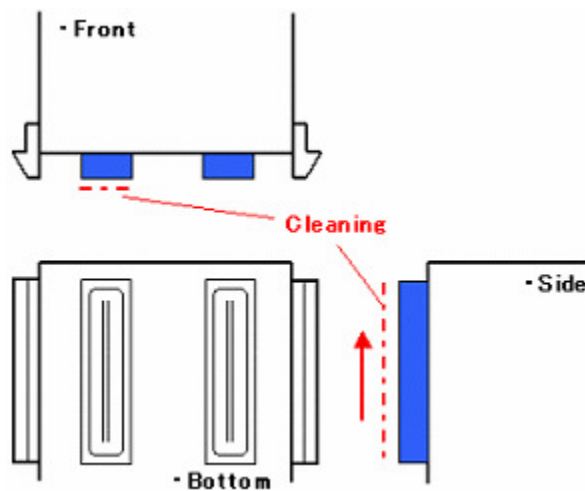
6. Reattach the maintenance unit.
7. Turn on the machine main power.
8. Do Head Flushing, and then print out the "Nozzle Check".
9. If the Nozzle Check shows any problems, do the Head Cleaning three times. If this does not solve the symptom, do Head Flushing once.

Model: T-G1s	Date: 21-May-08	No.: RJ015006

Subject: SC976/977	Prepared by: Y. Murata
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 (Added the SCs)		

The following SC descriptions were added to the SP Tables:

976	A	Printer head error (Arrival Failure)	
		Printer head error is detected at arrival.	• Printer head defective.
977	A	Printer head error (Running Failure)	
		Printer head error is detected at running.	• Printer head defective.

Action:

Dispose of the machine. (the printer head cannot be replaced.)

Note: This change was applied from the following versions:

- T-G1s: From v1.09 or later (March 2008 production)

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Reissued: 24-Jul-08

Model: T-G1s	Date: 05-Nov-07	No.: RJ015002b

RTB Reissue

The items in bold italics have been corrected or added.

Subject: Firmware Release History(Controller)		Prepared by: M.Matsuda
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 ( )	

This RTB has been issued to announce the firmware release information for the
Controller.

Version	Program No.	Effective Date
1.13	*J0155625E*	*August 2008 production*
1.09	J0155625D	March 2008 production
1.07	J0155625C	1st mass production (November,2007)

Version	Symptom Corrected
1.13	*Symptom corrected:* *1. Sometimes, the machine incorrectly detects a new (supported) ink cartridge as an unsupported type.* *2. If printing is initiated using an unsupported ink cartridge, the machine displays a message that prompts the operator to replace the cartridge.* *Other changes:* *Automatic maintenance was optimized so as to eliminate unnecessary maintenance, and therefore reduce the amount of ink consumed.*

Reissued: 24-Jul-08

Model: T-G1s	Date: 05-Nov-07	No.: RJ015002b

Version	Symptom Corrected

1.09	Specification changed:
	1. The following SCs were added:
	   SC976 (Printer head error at arrival).
	   SC977 (Printer head error occurs at running).
	2. New display languages were added to the firmware update utility (Russian, Polish, Czek, Hungarian, Finnish).
	
	Symptom corrected:
	1. If the envelope lever is changed to the "envelope" position while the printer is in Energy Saver mode, and a job is then performed using paper other than envelopes, the machine is unable to detect the difference in paper type (no error is triggered).
	2. The image appears faint. This is because in rare cases, the printer does not perform capping (one type of printer head maintenance), which causes the printer head to dry up.
	3. If the width of the paper is 220mm or more, and the image begins within a certain distance from the left side of the leading edge, the image along the right edge of the paper is sometimes missing.
	4. If the printer has not yet printed anything onto the paper when one of the following errors occurs, the printer will now continue the job starting from that sheet once the error is cleared.
	   – Ink End condition
	   – Paper misfeed
	   – Temperature outside allowable range

1.07	1st mass production

RICOH

Technical Bulletin

Model: All GelSprinter models	Date: 26-Aug-08	No.: RJ007024

Subject: GJ analysis tool	Prepared by: Y.Murata
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 ( )		☐ Tier2

Important Information about a New GJ Analysis Tool

- When a problem occurs in the field, please use the GJ analysis tool available from the Firmware Download Center. The tool is available for all GelSprinter products.

  Model list:

  G500/G700/G7500
  GX3000/GX3050N/GX5050N
  GX2500/GX7000
  GX3000S/GX3000SF/GX3050SFN

- Please use this tool to provide information for problem analysis, instead of the SMC report.

Model: T-G1s	Date: 22-Sep-08	No.: RJ015007

Subject: Ink yield improvment firmware	Prepared by: Y.Murata	
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 (Notice)		☒ Tier2

Important Note about Ink Yield Improvement Firmware

- With the firmware version 1.13 or later, the ink yield is increased by about 5% (conditions: APV: 750, 5% chart, air release filling: 2 times/month).

   Note: Actual ink yield varies depending on such factors as APV, coverage, color ratio, p/j, printing mode, manual cleaning counts, automatic maintenance counts (see Appendix 1), and monthly air release filling counts (see Appendix 2).

Important: If the machine performs air release filling ten or more times a month, there is probably something wrong with the printer head (normal: about twice a month). In such cases, replace the plotter unit (T-MF1 only) or swap the machine.

- The increase in yield was accomplished through the following changes:

   - When air is detected, the machine checks to see if the pressure inside the head tank is still negative. Only if negative pressure has been lost, air release filling is performed. (Previously, the machine performed air release filling without checking the pressure directly). As a result, the average number of times air release filling is performed was reduced from about twice a month to once a month.
   - Air detection is performed when the machine is turned ON, just before printing if the machine has not been used in over 5 hours, and after printing during automatic cleaning or ink filling. It takes an average of 7 seconds to check the negative pressure status for each printer head. However, the frequency of air release filling will decrease, so there will be no change in the overall maintenance time.

Model: T-G1s	Date: 22-Sep-08	No.: RJ015007

Cut-in Serial Numbers
TBA.

Model Code	Cut-in serial number
J015-17	R18YMMxxxxx
J015-22	R19YMMxxxxx
J015-27	R20MMxxxxxx

Appendix 1
◆ Types of automatic and manual maintenance

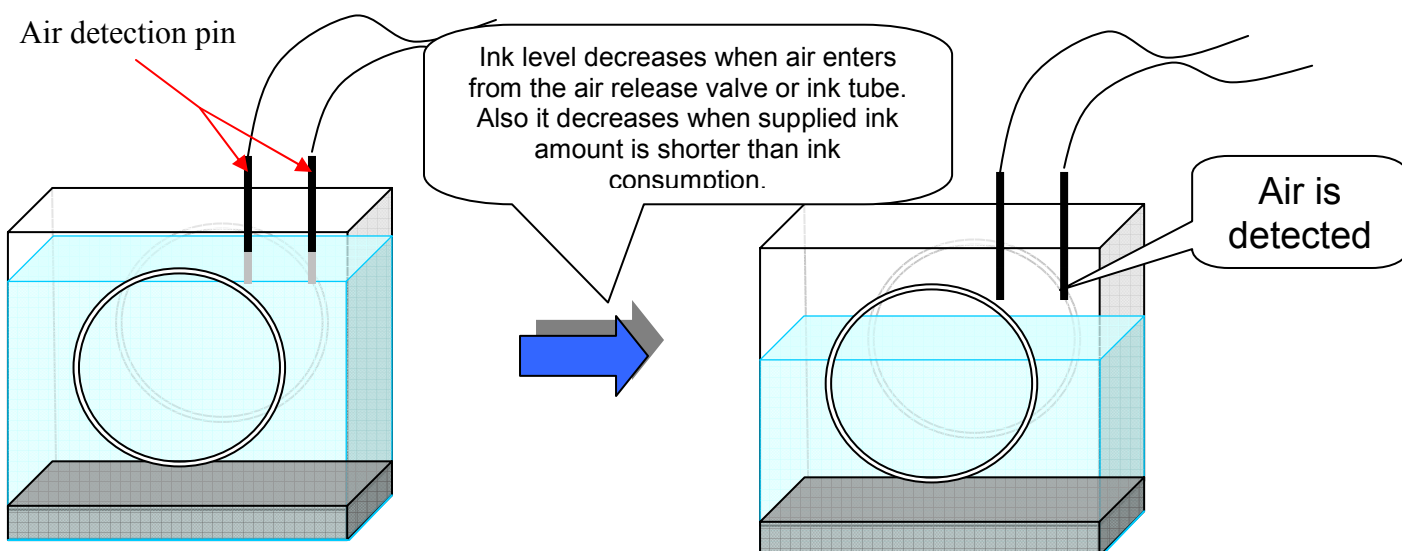|		Type	Objective	Timing	Amount of Ink Consumption
1	Automatic	Pre Print 1	Prevent Head Dried	Every printing Job	0.05 pages
2		Pre Print 2		Every 336 pages printing	12 pages
3		Pre Print 3		10 hrs after last printing Job	1.2 pages
4		Pre Print 4		1 week after last printing Job	12 pages
5		Pre Print 5	Refresh Ink Tube	30 days after last printing Job	134 pages
6		Pre Print 6	Refresh Head Tank	Every 15 days	55 pages
7	Manual	Cleaning	Remove Blockage from head	when it is neseccary	12 pages
8		Flushing	Remove Blockage from head	when it is neseccary	85 pages

With the modified firmware, this becomes once every 30 days.

Appendix 2

◆ Explanation of air release filling:

- In order to eject the ink properly from the print head, it is necessary to maintain negative pressure (with respect to the surrounding air) inside the head tank. If negative pressure is lost, the ink can leak out from the nozzle and adversely affect the image quality. If this occurs, the negative pressure must be re-established. This process is known as "air release filling".

- When the surface of the liquid dips below the detection pins (see the diagram below), the machine will perform air release filling. This is because if this happens, negative pressure may have been lost. To perform air release filling, the air release valve is opened (which re-calibrates the internal pressure), ink is poured into the ink head, and ink is sucked out by the suction cap with the air release valve closed. Therefore, to perform this process, the machine consumes ink.

< Schematic view of head tank >

Air detection pin

Ink level decreases when air enters from the air release valve or ink tube. Also it decreases when supplied ink amount is shorter than ink consumption.

Air is detected

Reissued: 16-Dec-08

Model: T-G1s	Date: 05-Nov-07	No.: RJ015002c

RTB Reissue

The items in bold italics have been corrected or added.

Subject: Firmware Release History(Controller)		Prepared by: Y.Murata
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 ( )	

This RTB has been issued to announce the firmware release information for the
Controller.

Version	Program No.	Effective Date
1.14	*J0155625F*	*November 2008 production*
1.13	J0155625E	August 2008 production
1.09	J0155625D	March 2008 production
1.07	J0155625C	1st mass production (November, 2007)

Version	Symptom Corrected
1.14	*Symptom corrected:* *1. The wrong message is displayed when the machine detects temperature conditions outside the specification limits.* *Note: If this is detected when the machine power is turned on, the machine will wait until the temperature is within normal limits before any operations can be performed.*
1.13	Symptom corrected: 1. Sometimes, the machine misdetects a new (supported) ink cartridge as an unsupported type. 2. If printing is initiated using an unsupported ink cartridge, the machine displays a message that prompts the operator to replace the cartridge. Other changes: Automatic maintenance was optimized so as to eliminate unnecessary maintenance, and therefore reduce the amount of ink consumed.

RICOH

Model: T-G1s		Date: 05-Nov-07	No.: RJ015002c

Version	Symptom Corrected

1.09	Specification changed:
	1. The following SCs were added:
	SC976 (Printer head error at arrival).
	SC977 (Printer head error occurs at running).
	2. New display languages were added to the firmware update utility (Russian, Polish, Czek, Hungarian, Finnish).
	
	Symptom corrected:
	1. If the envelope lever is changed to the "envelope" position while the printer is in Energy Saver mode, and a job is then performed using paper other than envelopes, the machine is unable to detect the difference in paper type (no error is triggered).
	2. The image appears faint. This is because in rare cases, the printer does not perform capping (one type of printer head maintenance), which causes the printer head to dry up.
	3. If the width of the paper is 220mm or more, and the image begins within a certain distance from the left side of the leading edge, the image along the right edge of the paper is sometimes missing.
	4. If the printer has not yet printed anything onto the paper when one of the following errors occurs, the printer will now continue the job starting from that sheet once the error is cleared.
	   – Ink End condition
	   – Paper misfeed
	   – Temperature outside allowable range

1.07	1st mass production

| Model: T-G1s	Date: 23-Jan-09	No.: RJ015008a

RTB REISSUE

The items in **bold italics** were corrected.

Subject: Ink mist	Prepared by: Y. Murata
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

1) Carriage jam (operation panel display: "Remove Misfeed Top Cover")
2) White lines or banding

| Inside the machine	Vertical encoder sheet	Horizontal encoder sheet
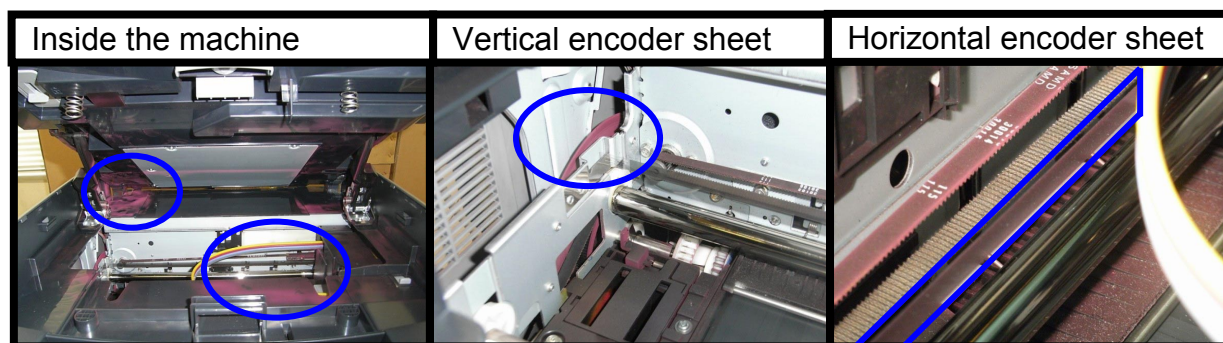
Note:

- The model in the photos is the T-MF1.
- The ink mist (see CAUSE below) has no effect on the function of the belts.
- In the photos above, the ink mist looks magenta when attached to a dark surface, and black when attached to a light surface. However, the actual amount of ink mist released is the same for each ink color.

CAUSE

Normally, a small amount of ink mist is discharged from the nozzles. When it does, air streams or the electrical charge on the transport belt can sometimes redirect the mist. As a result, this mist does not hit the target area (on the paper). This symptom is noticeable when printed under the conditions listed below.

- High print volume
- Low P/J
- High Quality Mode is used
- Paper with a high surface resistance is used, such as recycled paper
- The envelope lever is in the envelope position when printing onto plain paper

Main ink drop

Printer head

Ink mist
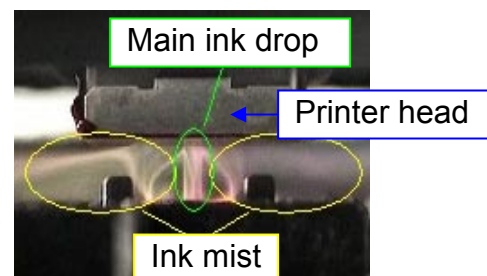
Model: T-G1s	Date: 23-Jan-09	No.: RJ015008a

WORKAROUND

1) Clean the horizontal encoder sheet and vertical encoder sheet.
2) Perform head cleaning.
3) Set the envelope lever to the standard position when printing onto standard/plain paper.
4) If the customer is only using paper with a high surface resistance, set ***bit 6 of bit SW8*** to a value of 1 (default: 0).

Model: T-G1s	Date: 2-Mar-09	No.: RJ015009

Subject: "SC999 at instllaition only"	Prepared by: Y.Yoshida
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 ( )		☒ Tier2

Symptom

SC999 (motor lock) may occur on some machines at installation.

Cause

On the production line for the maintenance unit stepping motor (third vendor), the adhesive-drying step was skipped in some cases. As a result, the adhesive inside the motor could not vaporize correctly, causing the gear to stick to the shaft.

Note: As described above, this occurrence of SC999 is caused by a motor rotation failure. It is not related to SC999 caused by ink clogging.

Solution

If the symptom is reported, advise the customer to turn the machine main power OFF/ON five times. **If this does not clear the SC**, release the motor lock manually. **See the procedure below**

1. Remove the maintenance unit.
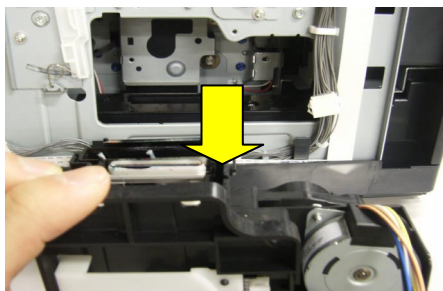
2. Turn the motor shaft manually in the direction of the arrow until the motor lock is released.

Model: T-G1s	Date: 2-Mar-09	No.: RJ015009

Potentially Affected S/N:

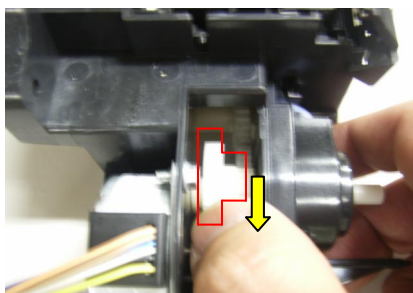| Product Code	Model name	S/N
J01517	GX2500-NA(R18)	R1887700001~R1887700113
J01517	GX2500-NA(R18)	R1887800001~R1887800138
J01517	GX2500-NA(R18)	R1887900001~R1887900267
J01517	GX2500-NA(R18)	R1888000001~R1888000300
J01517	GX2500-NA(R18)	R1888100007~R1888100007
J01517	GX2500-NA(R18)	R1888100054~R1888100054
J01517	GX2500-NA(R18)	R1888100057~R1888100061
J01517	GX2500-NA(R18)	R1888100064~R1888100083
J01522	GX2500-EU(R19)	R1987700001~R1987700005
J01522	GX2500-EU(R19)	R1987800001~R1987800220
J01522	GX2500-EU(R19)	R1987900001~R1987900010
J01522	GX2500-EU(R19)	R1988000001~R1988000010
J01527	GX2500-EU(R20)	R2087700001~R2087700400
J01527	GX2500-EU(R20)	R2087800001~R2087801200
J01527	GX2500-EU(R20)	R2087900001~R2087900300
J01527	GX2500-EU(R20)	R2088000001~R2088000600

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Model: T-G1s	Date: 05-Nov-07	No.: RJ015002d

RTB Reissue

The items in bold italics have been corrected or added.

Subject: Firmware Release History(Controller)		Prepared by: J. Mochizuki
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 ( )		

This RTB has been issued to announce the firmware release information for the **Controller.**

Version	Program No.	Effective Date
1.15	*J0155625G*	*April 2009 production*
1.14	J0155625F	November 2008 production
1.13	J0155625E	August 2008 production
1.09	J0155625D	March 2008 production
1.07	J0155625C	1st mass production (November, 2007)

Version	Symptom Corrected
1.15	*Symptom corrected:* *When a print job is canceled, occasionally "Printing" status remains in the job history, whether the job has successfully been canceled or not.*
1.14	Symptom corrected: 1. The wrong message is displayed when the machine detects temperature conditions outside specification limits. Note: If this is detected when the machine power is turned on, the machine will wait until the temperature is within normal limits before any operations can be performed.
1.13	Symptom corrected: 1. Sometimes, the machine misdetects a new (supported) ink cartridge as an unsupported type. 2. If printing is initiated using an unsupported ink cartridge, the machine displays a message that prompts the operator to replace the cartridge. Other changes: Automatic maintenance was optimized so as to eliminate unnecessary maintenance, and therefore reduce the amount of ink consumed.

RICOH **T**echnical **B**ulletin

Reissued: 03-Jun-09

Model: T-G1s		Date: 05-Nov-07	No.: RJ015002d

Version	Symptom Corrected

1.09	Specification changed:
	1. The following SCs were added:
	   SC976 (Printer head error at arrival).
	   SC977 (Printer head error occurs at running).
	2. New display languages were added to the firmware update utility (Russian, Polish, Czek, Hungarian, Finnish).
	
	Symptom corrected:
	1. If the envelope lever is changed to the "envelope" position while the printer is in Energy Saver mode, and a job is then performed using paper other than envelopes, the machine is unable to detect the difference in paper type (no error is triggered).
	2. The image appears faint. This is because in rare cases, the printer does not perform capping (one type of printer head maintenance), which causes the printer head to dry up.
	3. If the width of the paper is 220mm or more, and the image begins within a certain distance from the left side of the leading edge, the image along the right edge of the paper is sometimes missing.
	4. If the printer has not yet printed anything onto the paper when one of the following errors occurs, the printer will now continue the job starting from that sheet once the error is cleared.
	   – Ink End condition
	   – Paper misfeed
	   – Temperature outside allowable range

1.07	1st mass production

Technical **B**ulletin

Model: T-G1s	Date: 6-Aug-09	No.: RJ015010

Subject: NV-RAM cannot be replaced	Prepared by: Y. Murata
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 ( )		☒ Tier2

Important Note Regarding the NV-RAM on GelSprinter Models

● On GelSprinter models, the NV-RAM on the main board **cannot be replaced individually** in the field. If the NV-RAM is defective, **replace the entire printer.**

　Reasons:
1) The "Plug and Play" setting cannot be set in the field (this can only be done at the factory).
2) "Print Head Ranks" cannot be set in the field.
3) The machine serial number cannot be set to an 11-digit value (there is a 10-digit maximum).

● If you replace the NV-RAM individually, the following will occur:
➢ The print quality will worsen.
➢ Only 10 of the 11 digits in the machine serial number can be input.
➢ The Japanese model name will appear on the System Summary Sheet.

Model: T-G1s	Date: 08-Dec-09	No.: RJ015011

Subject: SC 990	Prepared by: J. Mochizuki
From: 2nd Overseas Tech Support Sec. 2nd PQM Dept	

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

SYMPTOM

SC990 is displayed and the machine is unable to operate.

CAUSE

1. Ink dries and sticks to the inside of the suction tube of the maintenance unit, causing an ink suction failure.
2. Ink builds up on the rim of the suction cap because of an insufficient ink flow inside the suction tube. This can disrupt the air-tight connection with the print head.

Though there are some other minor causes, the above two comprise more than 80% of all SC990-triggered reports.

SOLUTION

Production line:
The maintenance unit has been modified.
A tube used in the maintenance unit has been changed from a silicone type to an Elastomer type, which dramatically reduces the risk of ink blockage following a prolonged period of non-use.
The part numbers of the maintenance units have been changed as follows:

Model Code	Old Part Number	New Part Number
J015	J0150411	J0070413

In the field:
1. Cycle power off/on.
2. If the problem is not resolved, install the modified maintenance unit.

CUT-IN SERIAL NUMBERS

Model Code	Machine Cut-in S/N
J015-17	R1898200001
J015-22	R1998400001
J015-27	R2098400001

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Reissued: 15-Feb-10

Model: T-G1s	Date: 05-Nov-07	No.: RJ015002e

RTB Reissue

The items in bold italics have been corrected or added.

Subject: Firmware Release History(Controller)		Prepared by: J. Mochizuki
From: 2nd Overseas Tech Support Sec., 2nd PQM Dept.		
Classification:	☐ Troubleshooting ☐ Part information ☐ Action required ☐ Mechanical ☐ Electrical ☐ Service manual revision ☐ Paper path ☐ Transmit/receive ☐ Retrofit information ☐ Product Safety ☒ Other ( )	

This RTB has been issued to announce the firmware release information for the **Controller.**

Version	Program No.	Effective Date
1.16	*J0155625H*	*March 2010 production*
1.15	J0155625G	April 2009 production
1.14	J0155625F	November 2008 production
1.13	J0155625E	August 2008 production
1.09	J0155625D	March 2008 production
1.07	J0155625C	1st mass production (November, 2007)

Version	Symptom Corrected
1.16	*Symptoms Corrected:* *1. Occasionally, belt charge leakage was mis-detected displaying SC993 in very high humidity condition. To prevent this, the condition of the charge leakage detection has been changed.* *2. Russian cannot be selected when updating firmware.* *3. The version number before updating is displayed on screen after completing the firmware update.*
1.15	Symptom corrected: When a print job is canceled, occasionally "Printing" status remains in the job history regardless if the job has successfully been canceled or not.
1.14	Symptom corrected: 1. The wrong message is displayed when the machine detects temperature conditions outside specification limits. Note: If this is detected when the machine power is turned on, the machine will wait until the temperature is within normal limits before any operations can be performed.
1.13	Symptom corrected: 1. Sometimes, the machine misdetects a new (supported) ink cartridge as an unsupported type. 2. If printing is initiated using an unsupported ink cartridge, the machine displays a message that prompts the operator to replace the cartridge. Other changes:

Model: T-G1s	Date: 05-Nov-07	No.: RJ015002e

Version	Symptom Corrected
	Automatic maintenance was optimized so as to eliminate unnecessary maintenance, and therefore reduce the amount of ink consumed.

1.09	Specification changed:
	 1. The following SCs were added:
	     SC976 (Printer head error at arrival).
	     SC977 (Printer head error occurs at running).
	 2. New display languages were added to the firmware update utility (Russian, Polish, Czek, Hungarian, Finnish).
	
	 Symptom corrected:
	 1. If the envelope lever is changed to the "envelope" position while the printer is in Energy Saver mode, and a job is then performed using paper other than envelopes, the machine is unable to detect the difference in paper type (no error is triggered).
	 2. The image appears faint. This is because in rare cases, the printer does not perform capping (one type of printer head maintenance), which causes the printer head to dry up.
	 3. If the width of the paper is 220mm or more, and the image begins within a certain distance from the left side of the leading edge, the image along the right edge of the paper is sometimes missing.
	 4. If the printer has not yet printed anything onto the paper when one of the following errors occurs, the printer will now continue the job starting from that sheet once the error is cleared.
	    – Ink End condition
	    – Paper misfeed
	    – Temperature outside allowable range

1.07	1st mass production

Model: T-G1s	Date: 03-Sep-07	No.: RJ015001b

RTB Reissue

The items in bold italics have been added.

Subject: Firmware Release History Network I/F GX3	Prepared by: J.Mochizuki
From: 2nd Overseas Tech Support Sec., 2nd PQM Dept.	

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

This RTB has been issued to announce the firmware release information for the <u>firmware update for Network I/F GX3a</u>

Version	Program No.	Effective Date
2.2.4	***J5120017E_J5170017E***	***December 2010 production***
2.2.2	J5120017D_J5170017D	March 2010 production
2.2.0	J5170017C	November 2008 production
2.1.0	J5170017A	1st mass production (August, 2007)

Version	Symptom Corrected
2.2.4	***Symptom corrected:*** 1. ***If the printer receives an SNMP message with an IP Address length descriptor field describing the IP Address as being more than 516 bytes (instead of the standardized 4 bytes described in RFC1155 and RFC1902), the printer will lose network connectivity until rebooted. This loss of network connectivity only occurred if the printer's SNMP setting was "Active" and if the default Community Name was being used.*** 2. ***If a DHCP offer's Lease Time or Server Identifier is not exactly 4 bytes (as defined by RFC2132), the printer will lose network connectivity until rebooted. This loss of network connectivity only occurred if the printer's "DNS Server" setting was manually specified (not determined by DHCP).*** 3. ***The printer will lose connectivity with the network when trying to resolve a hostname with a DNS server if the reply sent by the DNS server contains an RDLENGTH that does not accurately describe the length of the contents of the RDATA field (in contrast to what has been standardized by RFC1035). This loss of network connectivity only occurred if the printer's DHCP setting was "Active".*** ***Other changes:*** 1. ***Any time the ethernet link goes down > up, the printer will send a gratuitous ARP.*** 2. ***Using BitSw 1-5, the printer can be configured to send a Gratuitous ARP every 60 seconds.*** - ***BitSw 1-5 = 0 (default): Inactive*** - ***BitSw 1-5 = 1: Active*** 3. ***New sections named "Ethernet Link Log" and "Ethernet Link Count" will***

Model: T-G1s		Date: 03-Sep-07	No.: RJ015001b

Version	Symptom Corrected
	be added to the "Service Summary" and "System Summary". - ***The "Ethernet Link Log" will record instances (in the form of dates) of the ethernet link going down > up.*** - ***The "Ethernet Link Count" will record the number of times the ethernet link goes down > up***
2.2.2	Specification change: 1. Wording change (in the CSV file attached to the counter notification mail): "Level Color" was changed to "Economy Color" 　[1]「Counter: Level Color」⇒「Counter: Economy Color」 　[2]「Level Color Coverage」⇒「Economy Color Coverage」
2.2.0	Symptom corrected: The job in progress stops if print jobs are sent simultaneously from a large number of PCs.
2.1.0	1st mass production

Reissued: 04-Oct-11

Model: T-G1s	Date: 03-Sep-07	No.: RJ015001c

RTB Reissue

The items in bold italics have been added.

Subject: Firmware Release History Network I/F GX3	Prepared by: J.Mochizuki
From: MFP/Printer Tech Service Dept., 3rd Tech Service Sect.	

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

This RTB has been issued to announce the firmware release information for the <u>firmware update for Network I/F GX3a</u>

Version	Program No.	Effective Date
2.2.5	*J5120017F_J5170017F*	*December 2011 production*
2.2.4	J5120017E_J5170017E	December 2010 production
2.2.2	J5120017D_J5170017D	March 2010 production
2.2.0	J5170017C	November 2008 production
2.1.0	J5170017A	1st mass production (August, 2007)

Version	Symptom Corrected
2.2.5	*Symptom corrected:* *The printer is unable to renew an IP address lease with DHCP. This resulted in the printer losing connectivity with the network as soon as the lease expired.*
2.2.4	Symptom corrected: 1. If the printer receives an SNMP message with an IP Address length descriptor field describing the IP Address as being more than 516 bytes (instead of the standardized 4 bytes described in RFC1155 and RFC1902), the printer will lose network connectivity until rebooted. This loss of network connectivity only occurred if the printer's SNMP setting was "Active" and if the default Community Name was being used. 2. If a DHCP offer's Lease Time or Server Identifier is not exactly 4 bytes (as defined by RFC2132), the printer will lose network connectivity until rebooted. This loss of network connectivity only occurred if the printer's "DNS Server" setting was manually specified (not determined by DHCP). 3. The printer will lose connectivity with the network when trying to resolve a hostname with a DNS server if the reply sent by the DNS server contains an RDLENGTH that does not accurately describe the length of the contents of the RDATA field (in contrast to what has been standardized by RFC1035). This loss of network connectivity only occurred if the printer's DHCP setting was "Active". Other changes: 1. Any time the ethernet link goes down > up, the printer will send a gratuitous ARP. 2. Using BitSw 1-5, the printer can be configured to send a Gratuitous ARP

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Model: T-G1s	Date: 03-Sep-07	No.: RJ015001c

Version	Symptom Corrected

	every 60 seconds.
	 - BitSw 1-5 = 0 (default): Inactive
	 - BitSw 1-5 = 1: Active
	 3. New sections named "Ethernet Link Log" and "Ethernet Link Count" will be added to the "Service Summary" and "System Summary".
	     - The "Ethernet Link Log" will record instances (in the form of dates) of the ethernet link going down > up.
	     - The "Ethernet Link Count" will record the number of times the ethernet link goes down > up

2.2.2	Specification change:
	 1. Wording change (in the CSV file attached to the counter notification mail): "Level Color" was changed to "Economy Color"
	     [1]「Counter: Level Color」⇒「Counter: Economy Color」
	     [2]「Level Color Coverage」⇒「Economy Color Coverage」

2.2.0	Symptom corrected: The job in progress stops if print jobs are sent simultaneously from a large number of PCs.
2.1.0	1st mass production

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Model: T-G1s	Date: 05-Nov-07	No.: RJ015002f

RTB Reissue

The items in bold italics have been corrected or added.

Subject: Firmware Release History(Controller)	Prepared by: J. Mochizuki
From: 3rd Tech Service Sect., MFP/Printer Tech Service Dept.	

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

This RTB has been issued to announce the firmware release information for the
Controller.

Version	Program No.	Effective Date
1.17	*J0155625J*	*March 2012 production*
1.16	J0155625H	March 2010 production
1.15	J0155625G	April 2009 production
1.14	J0155625F	November 2008 production
1.13	J0155625E	August 2008 production
1.09	J0155625D	March 2008 production
1.07	J0155625C	1st mass production (November, 2007)

Version	Symptom Corrected
1.17	*Symptom corrected:* *1. Images are printed out blank or partially blank if the transport belt is smudged with ink (since this results in a paper width misdetection).* *2. (For service only) 11th digit of dummy serial number could not be input with SP5300.* *Other changes:* *Less ink is consumed when the ink cartridge is replaced, due to modifications made to the head maintenance control.*
1.16	Symptoms Corrected: 1. Rarely belt charge leakage was mis-detected displaying SC993 in very high humidity condition. To prevent this, the condition of the charge leakage detection has been changed. 2. Russian cannot be selected when updating firmware. 3. The version number before updating is displayed on screen after completing the firmware update
1.15	Symptom corrected: When a print job is canceled, occasionally "Printing" status remains in the job history regardless if the job has successfully been canceled or not.
1.14	Symptom corrected: 1. The wrong message is displayed when the machine detects temperature conditions outside specification limits.

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Reissued: 21-May-12

Model: T-G1s		Date: 05-Nov-07	No.: RJ015002f

Version	Symptom Corrected
	Note: If this is detected when the machine power is turned on, the machine will wait until the temperature is within normal limits before any operations can be performed.
1.13	Symptom corrected: 1. Sometimes, the machine misdetects a new (supported) ink cartridge as an unsupported type. 2. If printing is initiated using an unsupported ink cartridge, the machine displays a message that prompts the operator to replace the cartridge. Other changes: Automatic maintenance was optimized so as to eliminate unnecessary maintenance, and therefore reduce the amount of ink consumed.

1.09	Specification changed:
	1. The following SCs were added:
	SC976 (Printer head error at arrival).
	SC977 (Printer head error occurs at running).
	2. New display languages were added to the firmware update utility (Russian, Polish, Czek, Hungarian, Finnish).
	
	Symptom corrected:
	1. If the envelope lever is changed to the "envelope" position while the printer is in Energy Saver mode, and a job is then performed using paper other than envelopes, the machine is unable to detect the difference in paper type (no error is triggered).
	2. The image appears faint. This is because in rare cases, the printer does not perform capping (one type of printer head maintenance), which causes the printer head to dry up.
	3. If the width of the paper is 220mm or more, and the image begins within a certain distance from the left side of the leading edge, the image along the right edge of the paper is sometimes missing.
	4. If the printer has not yet printed anything onto the paper when one of the following errors occurs, the printer will now continue the job starting from that sheet once the error is cleared.
	   – Ink End condition
	   – Paper misfeed
	   – Temperature outside allowable range

1.07	1st mass production