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PREPARED BY: H. Kokubo CHECKED BY:	FROM: Copier Technical Support Section	
CLASSIFICATION: ☐ Action Required ☐ Troubleshooting ☐ Retrofit Information	☐ Revision of service manual ■ Information only ☐ Other	MODEL: F5 (Gestetner 25101/ Nashuatec 53101)

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1. UNIQUE FUNCTIONS OF THE FINISHER VERSION MODEL

The major differences between the sorter version and finisher version of the F5 are as follows:

1. Permits the installation of the optional finisher (with the original recirculating motion of the RDH).

2. Permits the installation of the optional key counter bracket and printer connector unit.

3. New or modified user and service tools.

4. Advanced cover and chaptering modes.

5. Enables the use of the normal accounting mode and of the security accounting mode.

6. Satisfies the German electromagnetic field interference standard (VDE 243).

2. FUNCTIONAL DETAILS

2.1 COPY MODES

There are two copy modes: sort and stack. In the stack mode copies of the same page are grouped together. When this mode is selected with user tool number 10, the originals set in the stack original feed table of the RDH are copied just like with the sorter or sorter/stapler version machine. The originals are fed and returned to the table just once (ADF mode).

On the other hand, in the sort mode the copies are assembled as sets in sequential order. This mode is always selected when originals are set in the stack feed table of the RDH, except when the stack mode is selected. In this mode, the RDH performs the original recirculating motion (RDH mode).

The following explains the differences in original and copy paper motions when simplex or duplex copies are made from the simplex or duplex originals in the sort mode:

1. Simplex original to simplex copy mode

One original feeding cycle makes one set of copies. To make more sets of copies, originals recirculate in the RDH accordingly. (Copies are always collated into sets.)

When copy delivery to the finisher is selected, the copies are inverted in the finisher in order to stack the copies with the image side down on the shift tray. The copies are stacked in page order.

When one original is set in the stack original feed table, the original is recirculated once, as usual. Then, the machine detects that only one original has been set. The original is again fed from the table, then the machine enters the original non-recirculating mode (ADF mode) to complete copying. The original stays on the exposure glass until the copy run finishes.

2. Simplex originals to duplex copy mode

In case of the other RDH and finisher systems, usually two cycles of the simplex original feeding makes one set of duplex copies. The first cycle of the original feeding is to make copies of the odd pages of originals. The copies are stacked in the duplex tray. Then, for the second original feeding, the even pages of originals are copied onto the reverse sides of the copies from the duplex tray. This motion is repeated until all the desired sets of copies are completed.

For this copier, the alternate paper feeding system is used to speed up the simplex to duplex copy job. The first original feeding is just like the other RDH and finisher systems. The odd pages of originals are copied and the copies are stacked in the duplex tray. However, the second original feeding and the following steps are different.

Unlike the other RDH and finisher systems, from the second original feeding, both the odd and even pages of originals are copied in one original feeding cycle. (This means that originals are copied in sequential order.) The alternate paper feeding system allows this.

When the odd page of originals is copied, paper is fed from the normal paper tray. The copy is stacked in the duplex tray. When the next original (the even page of originals) is copied, the copy, which was made and stacked in the duplex tray during the previous cycle of the original feeding, is fed from the duplex tray. The original image is copied onto the reverse side of the copy then the copy is delivered. The copier repeats feeding the paper from the normal paper tray and from the duplex tray alternately. This is called the alternate paper feeding. For more details, refer to the "Alternate Paper Feeding Timing Chart".

The copier repeats the above motion until the desired sets of copies are completed. (During the final original feeding cycle, only the even pages of originals are copied and all the copies in the duplex tray are fed out.) As a result, the copier can complete the copy job in the same number of original feeding cycles as the desired number of copies, plus one. On the other hand, in the other RDH and finisher systems, the original feeding cycle is repeated twice the desired number of copy sets.

The duplex copies are automatically delivered to the finisher shift tray, not to the copier copy tray. The copies are stacked in page order on the tray without the inversion of copies unlike the simplex original to simplex copy mode.

NOTE: When the simplex originals to duplex copy mode is selected, if a margin of 15 mm or more is entered in the margin adjustment mode, the copying speed is set at 61 cpm, whatever size of original or copy paper is used. Copies are made using the OPC segment for A3 size copy. (The images of 3 originals are produced for one rotation of the OPC belt.) If the difference in the selected margin between the front and reverse side of the copy image is 15 mm or greater, e.g. 5 mm margin at the left on the front side and 10 mm margin at the right on the reverse side, the copying speed is also set at 61 cpm.

This is because the originals copied on the front and reverse side are alternately copied due to the alternate paper feeding system. As the margin can be adjusted by changing the original flash (exposing) timing, the original stop on the exposure glass must correspond to the adjusted flash timing. (If a margin is created at the left, the flash timing is advanced. If a margin is created at the right, it is delayed.) When the margin is created on the front and rear of copies separately, two different flash timings alternate with each other. If the difference in the flash timing between two originals becomes greater, i.e. 15 mm or more in the margin, the original transportation cannot correspond to the alternate two different flash timings due to the limit of the original transportation speed.

For example, if a margin is created at the left on the front side of copies, after an original for which no margin is created, the original which has the margin must be transported to the exposure glass faster than usual in order to catch up with the advanced flash timing. If the margin is 15 mm or greater, the original cannot catch up with the advanced flash timing.

This copier has one more copying speed: 81 cpm. However, this is not used in case of a slow down in the margin adjustment mode. To enable 81 cpm, the copy mode for B4 size paper (B4 size copy mode), where the images of 4 originals are produced for one rotation of the OPC belt, must be used. In the A4 size copy mode three originals are fed into the RDH from the stack original feed tray before the first original is flashed. For the B4 size copy mode, it is two originals. Due to this, the original transport speed in the B4 size copy mode is almost the same as that in the A4 size copy mode, even though the copying speed of the B4 size copy mode is 81 cpm. Therefore, even if A4 size copies are made using the B4 size copy mode, there is not enough margin in the original transportation speed.

3. Duplex original to duplex copies mode

The front side of originals is copied during one cycle of original feeding. The copies are stacked in the duplex tray. At the same time the originals are inverted and returned onto the original table. Due to this, the reverse side of the originals is copied during the next cycle of the original feeding. The images are copied on the reverse side of the copies from the duplex tray and the duplex copies are automatically delivered to the finisher shift tray, not to the copier copy tray. The copies are stacked in page order on the tray without the inversion of copies as in the simplex originals to duplex copy mode.

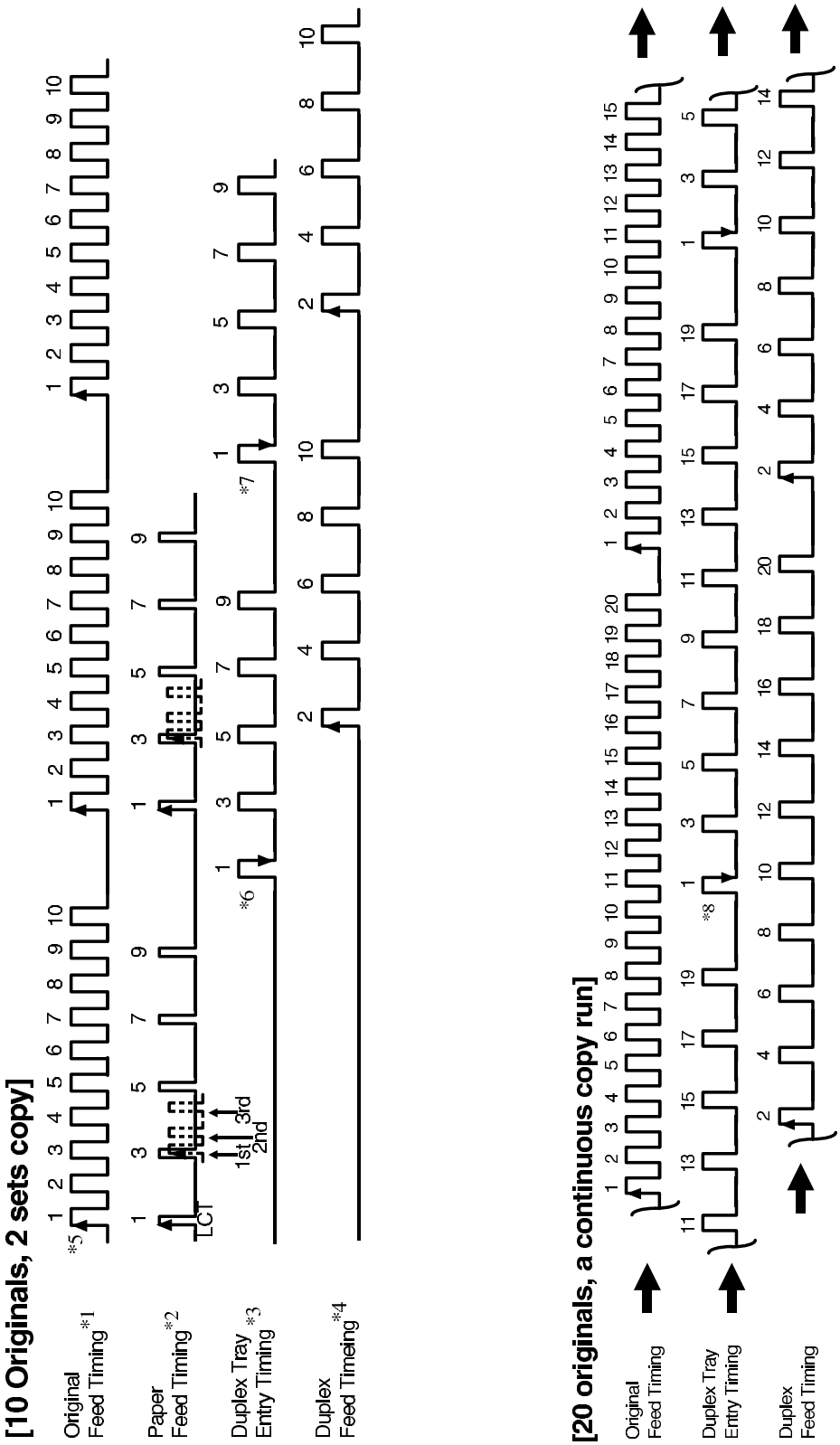
To make more sets of copies, the above motion is repeated. (Copies are always collated into sets.) This means that the original feeding cycle is repeated twice the desired number of copy sets.

4. Duplex original to simplex copies mode

One cycle of original feeding makes one set of copies. For each original feeding, the front side image is copied and the copy is stacked in the duplex tray. Then the original is inverted in the RDH and the reverse side image is copied onto the copy from the duplex tray. After the images on both sides of the original are copied, the original returns to the original table. To make more sets of copies, originals recirculate in the RDH accordingly. (Copies are always collated into sets.)

When copy delivery to the finisher is selected, the copies are inverted in the finisher in order to stack the copies with the image side down on the shift tray. The copies are stacked in page order.

2.2 ALTERNATE PAPER FEEDING TIMING CHART



*1 to *8 on the charts in the previous page show the key points for understanding the alternate paper feeding. Refer to the explanation below for each key point. The timing charts are based in the following copy mode conditions:

Upper One: Two sets of copies are made from 10 originals in the simplex original to duplex copy mode.

Lower One: A large number of copy sets are made from 20 originals in the simplex original to duplex copy mode. The timing chart shows only part of the copy run.

***1:** "Original Feeding Timing" shows when each original feed starts from the stack original feed table. The numbers 1 to 10 identify the originals. The chart means that the 10 originals are recirculated three times.

***2:** "Paper Feed Timing" shows the timing when each paper is fed from the LCT. The numbers correspond to the number of the original which will be copied on the front side of the paper.

The chart shows only odd number because the even numbered originals are copied on the reverse side of the paper.

The paper feed start timing is different when paper is fed from the LCT, 1st tray, 2nd tray, and 3rd tray. This is because paper transportation takes more time depending on where the paper feed starts and where images are transferred to the paper. The time for the LCT is the longest and that for the 3rd tray is the shortest. If the paper is fed from a station other than the LCT, the paper for the first original starts being fed as shown in the dotted lines. The following paper feed intervals are the same as that for the LCT.

***3:** "Duplex Tray Entry Timing" shows when the paper activates the duplex entrance junction sensor and is delivered to the duplex tray. The number on top of each entry timing corresponds to the number of the original which has been copied on the front side of the paper.

***4:** "Duplex Feed Timing" shows when the paper for each original is fed from the duplex tray. The number on top of each duplex feed timing correspond to the number of the original which will be copied on the reverse side of the paper.

As the timing chart shows, during the first original feed cycle only the odd numbered originals are copied onto the paper fed from the paper tray. During the 2nd cycle the odd numbered originals are copied as in the first cycle, and also even numbered originals are copied onto the paper fed from the duplex tray. Copying for the front and reverse sides is done alternately in this period. (This is the alternate paper feeding.) For the 3rd original feed cycle (i.e. the last original feed cycle) only the even numbered originals are copied onto the paper from the duplex tray, completing the copy run (two sets of five duplex copies are completed).

***5:** When the LCT is used the original to be copied starts being fed from the stack original feed table and the paper for it starts being fed from the LCT right away.

During the first original feeding cycle, the 2nd original (and also the following even numbered originals) is just fed and returned without being copied. During the 2nd cycle, all originals are copied. Finally during the last original feed cycle, only the even numbered originals are copied.

***6:** The copy of the first original enters the duplex tray just after the 10th (last) original starts being fed and before the first original starts being fed for the 2nd feed cycle. This duplex tray entry timing for the first copy does not depend on the paper being fed from the LCT, first tray, 2nd tray, or 3rd tray. This is because the time for the paper to enter the duplex tray after images are transferred to the paper is constant no matter where paper is fed from.

Just after the 3rd paper has entered the duplex tray, the paper which first entered in the duplex tray starts being fed from the duplex tray in order to match with the copying for the 2nd original during the 2nd feeding cycle.

***7:'** The 2nd copy of the first original enters the duplex tray just before the first original starts being fed for the last original feed cycle. When this happens, the last copy in the duplex tray just starts being fed. This means that

a) when the first copy made during the next original feed cycle enters the duplex tray and
b) if the number of originals is 10 or less (as in this case) then
c) the duplex tray is empty even in the alternate paper feeding motion.

***8:** The lower timing chart shows simplex original to duplex copying using 20 originals. There are copies remaining in the duplex tray (approximately 6 copies in this case) when the first copy made during the next original feed cycle enters the duplex tray.

This chart also shows that the copy of the first original enters the duplex tray just after the 10th original starts being fed, as in the upper timing chart.

2.3 ACCOUNTING MODES

There are two types of accounting mode: security accounting mode and (normal) accounting mode. In the normal accounting mode, all of the operators can use the user access code mode in user tool number 9. In the security accounting mode, only key operators whose user access codes are registered by their service representative can use all the user access code mode. (For the user access code mode, refer to the operating instructions.)

1. How to enter the copy mode in the accounting mode
Enter one of user access codes by pressing the Number keys.

2. How to leave the copy mode in the accounting mode
Press the Clear/Stop key while pressing the Clear Modes key.

3. How to set the accounting modes

1. Normal Accounting Mode
Press the "Access Code" key in service tool 2-08. Then enter appropriate user access codes with user tool number 9.

2. Security Accounting Mode
(1) Be sure that the "Free Use" key is selected with service tool 2-08. Then enter an appropriate user access code with user tool number 9. The user access codes entered in this condition will be the codes for the key operator.

(2) Press the "Access Code/Super User Mode" key with service tool 2-08. Then return to the normal screen.

(3) Enter appropriate user access codes with user tool number 9. This will be the codes for normal operator.

4. How to enter the copy mode in the accounting mode for servicing

The accounting mode is canceled when DIP switch 101- 2 on the main control board is ON. Note that DIP switch 101-2 is commonly used to enable accessing the service tool password "999900." DIP switch 101, 102, and 103 on the main control board must be kept at the initial setting, except 101-1 and 101-2 which have the same functions as the sorter and sorter stapler versions.

CAUTION: When the main control board is replaced with a new one, all data in user tool number 9 must be cleared in order to reset RAM on the main control board and start up the use of the user access code mode. (This is the same as the data in service tools 3-01 to 3-07. All data must be cleared when the main control board is replaced.)

2.4 COVER SHEET AND CHAPTERING MODES

The following are different from the cover sheet and chaptering modes of the sorter stapler version model. They are features unique to the finisher version model.

1. With user tool number 8 " Select Special Tray," the 1st paper tray can be designated as only for the cover sheet, and one of the 1st, 2nd and 3rd paper tray can be designated as only for the slip sheet for the chaptering mode. Two paper trays can be designated separately for the cover and slip sheets at the same time.

When no paper tray is designated, the paper in the 1st paper tray is automatically used for the cover and slip sheets, just like in the sorter stapler version model.

2. In the chaptering mode with the simplex originals to duplex copies mode, the original designated as the first page of each chapter is automatically copied onto the front side of the copy. For example, when the 4th original is designated, the reverse side of the 2nd copy will be blank and the 4th original is copied onto the front side of the 3rd copy.

In this mode, users can select to have the designated original copied onto special paper (slip sheet) or normal paper.

3. When the back cover is selected in the cover mode, it can be selected with user tool number 10 "User Utility/Reverse Back Cover Sheet." In this case, the setting decides if the image of the back cover faces inside of the copy set (normal) or outside.

4. In the chaptering mode, up to 15 originals can be designated by pressing the "Next" key, although for the sorter stapler version model, up to 10 can be.

5. Even in the duplex copy mode, the copy for the original which is designated as the cover and slip sheets does not enter the duplex tray. This is to enable the use of copy paper up to 163 g/m^2 of paper weight. It is usually up to 120 g/m^2 for duplex copies. Therefore, the cover and slip sheets have images only on one side. Refer to the following explanation for understanding how this is done. (In the chaptering mode with the simplex originals to duplex copies mode, if the copy for the designated original to normal paper is selected, the copy will enter the duplex tray and have images on both sides as usual.)

1. How the copies are collated into sets in the duplex copy mode with the cover or chaptering mode

In the simplex originals to duplex copy mode, the original next to the designated one is copied on the front of the copy next to the cover or slip sheet, resulting in having the reverse side of the cover and slip sheets blank. In the duplex original to duplex copy mode, the reverse side of the designated original is <u>not</u> copied, resulting in having the reverse side of the cover and slip sheets blank. (Therefore, the reverse side of the designated original should be blank.)

In the simplex or duplex original to duplex copy mode, the duplex copies are automatically delivered to the finisher shift tray, not to the copier copy tray. The copies are stacked in page order on the shift tray without being inverted. However, as the copy image on the cover and slip sheets is made while the reverse side copies are made, in order not to enter the cover and slip sheets into the duplex tray, only the cover and slip sheets are inverted in the finisher to stack all copies in page order.

2. How the designated original is copied in the duplex original to duplex copy mode

In the duplex original to duplex copy mode, although the original designated with the cover or chaptering mode is always copied on the front side of the cover or slip sheet, it is copied during the second original feeding cycle, not during the first one. This is because the cover or slip sheet must enter the duplex tray if the designated original is copied during the first original feeding cycle. To allow this, the original recirculating motion in this mode is different from that in the duplex original to duplex copy mode without the cover or chaptering mode, as follows:

1. During the 1st Original Feeding Cycle: The front side of the originals set in the RDH is copied as usual. However, the designated original is not copied during this cycle. Before the designated original feeds out to the stack feed table, it is not inverted. As a result, the front side (image side) of the designated original only faces the direction of the reverse side of the other originals and stacked in the stack feed table.

2. During the 2nd and the Following Original Feeding Cycle: During the 2nd cycle, the reverse side of the originals is copied. The designated original is copied during this cycle. The completed duplex copies are delivered to the shift tray. As the copy image on the cover or slip sheet is made while the reverse side of the other originals is copied, only the cover or slip sheet is inverted in the finisher to stack all copies in page order.

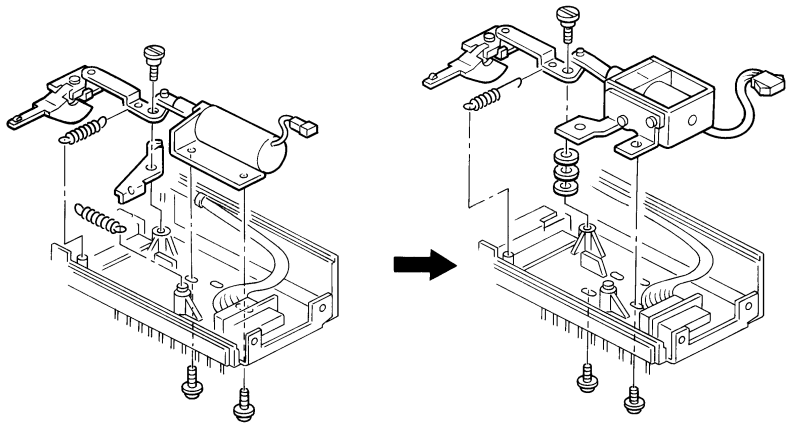
For the following cycles, both sides of the originals, including the designated original, are copied as usual in the duplex original to duplex copy mode until all the desired copy sets complete. Even during this period, only the cover or slip sheet is inverted in the finisher to stack all copies in page order.

3. During the Last Original Feeding Cycle: After completing the copy run, one more original feeding is done. This is to return the designated original, which had been made side down during the first original feeding cycle, into the original setting. (The designated original is inverted before it feeds out to the stack feed tray, and the other originals are not.)

As a result, the original feeding is twice the desired number of copy sets plus, one.

2.5 DIFFERENCES IN MECHANISM BETWEEN THE ADF AND RDH

[ADF Type]



[RDH Type]

1. Recycle Arm Solenoid

The ADF feeds originals just once for each copy job. On the other hand, the RDH recirculates originals according to the desired copy set number. Due to this, in the RDH, the recycle arm is repeatedly placed on the original stack and repeatedly returned for each copy set. If the existing type of the solenoid is used, it will malfunction due to heat generated by the repeated on and off operation.

To cope with this, a new solenoid has been used to operate the recycle arm. It is a two-way solenoid, which is the same as the one used for the finisher junction gate, and once the position of the solenoid plunger is changed according to the signal from the CPU, this solenoid keeps its position until a different signal is generated. This works using a permanent magnet installed in the solenoid.

2. Original Transport Drive Motor

There are three dc motors (#AX060027) to drive the original transport rollers. In the RDH, the motors have been changed to more durable ones. There is a groove for an E-ring in the shaft of the existing motor, but the motor for the RDH (#59365501) does not have such a groove.

3. Instruction Decal

There is a decal (#AA000114), which instructs how originals are set, in the stack original feed table. There is no problem with the ADF system, but it has been found that electrostatic charges are generated in the decal due to the recirculating motion of originals. As a result, the bottom original stacked in the original table tends to stick to the decal and misfeed.

To cope with this situation, the decal has been moved to the right end of the original table cover.

3. NEW SELF-DIAGNOSTICS FOR THE FINISHER

The following Error reset status codes have been added for the finisher self-diagnostics:

NOTE: There are two types of self-diagnostics: one is "Service call" and the other is "Error reset." A Service call occurs when a problem that may cause serious damage to the machine is detected.

Classification	Status Code	Item	Symptom	Possible Cause	Remarks
Finisher	SC93	Wait/busy signal error	A wait or busy signal from the finisher stays generated for more than 25 seconds.	Defective finisher or inverter control board.	Service call indication appears in the operation display when these symptoms are detected.
	SC94	Signal transmission error from the finisher	After the copier CPU sends a status request signal to the finisher, there is no response signal from the finisher for more than 10 seconds.	Optics fiber cable disconnected, or defective copier main, finisher, or inverter control board.	
	SC95	Motor drive error 1	A status that the finisher cannot make copies in both shift tray and staple modes due to a defective motor is detected.	Defective inverter or finisher transport motor, shift tray lift motor, exit drive motor, stopper drive motor, or their related sensor.	
	SC96	Motor drive error 2	A status that the finisher cannot make copies in shift tray mode due to a defective shift motor is detected.	Defective shift motor or shift tray half turn sensor.	
	SC97	Motor drive error 3	A status that the finisher cannot make copies in staple mode due to a defective motor is detected.	Defective jogger, stapler drive, staple, stack feed-out, or inverter stopper drive motor, or their related sensor.	

4. MAIN CONTROL BOARD DIP SWITCH SETTING

As the main control board has been changed, the new one has three dipswitches. Each function is as follows:

Dipswitch No.	Function at ON	Function at OFF	Default Setting
DPS101-1	Allows the use of the service tool access code which is entered with service tool "1-02."	Disables the service tool access code which is entered with service tool "1-02."	OFF
DPS101-2	1) Allows the use of the initial service tool access code: 99900. 2) Allows the operation of the copier without entering any user codes, even in the normal and security accounting modes.	1) Disables the initial service tool access code: 99900. 2) Allows the selection of the normal and security accounting modes with service tool "2-08."	OFF
DPS101-3	Not used.	Not used.	OFF
DPS102-1	Japanese version (destination identification).	Overseas version.	ON
DPS102-2	Not used.	Not used.	OFF
DPS102-3	Not used.	Not used.	OFF
DPS103-1	Production use only. (Must be ON.)	Production use only. (Must be ON.)	ON
DPS103-2	Production use only. (Must be OFF)	Production use only. (Must be OFF)	OFF
DPS103-3	Not used.	Not used.	OFF

5. MEAN POWER CONSUMPTION DATA

	Mean Power Consumption		
	Copier only	Copier + LCT	Copier + LCT + Finisher
During copying	3.10 kW (380 V) 3.27 kW (400 V) 3.43 kW (415 V)	3.12 kW (380 V) 3.28 kW (400 V) 3.44 kW (415 V)	3.45 kW (380 V) 3.60 kW (400 V) 3.70 kW (415 V)
During warm-up	2.32 kW (380 V) 2.46 kW (400 V) 2.61 kW (415 V)	2.33 kW (380 V) 2.48 kW (400 V) 2.62 kW (415 V)	2.40 kW (380 V) 2.55 kW (400 V) 2.69 kW (415 V)
During stand-by (Fusing Lamp OFF)	0.25 kW (380 V) 0.25 kW (400 V) 0.25 kW (415 V)	0.26 kW (380 V) 0.26 kW (400 V) 0.26 kW (415 V)	0.32 kW (380 V) 0.32 kW (400 V) 0.32 kW (415 V)
Main switch OFF (During first 30min.)	0.11 kW (380 V) 0.12 kW (400 V) 0.13 kW (415 V)	0.11 kW (380 V) 0.12 kW (400 V) 0.13 kW (415 V)	0.11 kW (380 V) 0.12 kW (400 V) 0.13 kW (415 V)
Main switch OFF (After 30 min.)	0.07 kW (380 V) 0.07 kW (400 V) 0.07 kW (415 V)	0.07 kW (380 V) 0.07 kW (400 V) 0.07 kW (415 V)	0.07 kW (380 V) 0.07 kW (400 V) 0.07 kW (415 V)

NOTE: The mean power consumption data for the "Copier only" and "Copier + LCT" are the same as those of the sorter version machine.

6. USER TOOLS

The following are the new user tools for the finisher version model:

1. User Tools Unique for the Finisher Version

Item (Menu No.)	Description
Disable Display **(6)**	1) The option installation (system setup) function has been moved to service tool 1-08. 2) The "Staple" key used for the sorter stapler version model has been removed. 3) The other functions are the same.
Disable Unit **(7)**	A "Finisher" key for disabling the finisher has been added instead of the "Sorter 1 to 3" keys.
Select Special Tray **(8)**	The 1st paper tray can be designated as only for cover sheets. One of the 1st, 2nd, and 3rd paper trays can be separately designated as only for slip sheets. The designated paper tray will also have the same features as the special tray that is set with service tool 2-12. Menu number 8 "Sorter Stack Face Up/Down" used in the sorter stapler version has been removed. (The "Select face up/down in stack mode" has been added to user tool number 10 "User Utility" instead.)
User Access Code **(9)**	When the accounting mode (the "access code" key) or security accounting mode (the "Access Code/Super User Mode" key) is selected with service tool 2-08, the following are available with this function: 1) Up to 500 user codes can be registered. 2) The registered user codes can be changed or deleted. 3) The number of copies made using each user code can be displayed. The data can also be printed if the optional printer and printer connector unit are installed. **NOTE:** The DIP switch setting (the printer side) is different from that for the F200. The data bit length for the F200 is 7-bit, and that for the F5 is 8-bit. 4) When the security accounting mode is selected, selected only key operators can use the above features. Other operators can only check the number of copies made using their own user codes. For understanding how to use this mode, refer to the operating instructions.
User Utility **(10)**	Some functions in the service tools have become available in the user tools. In addition, some new functions have been added. For details, refer to the "User Utility Table" below.

2. User Utility Table (User Tool No. 10)

Item	Description
Select the finisher mode	The sort or stack mode can be selected. (Default: Sort)
Staple in stack mode	Stapling with the stack mode is available. (Default: No, not effective) This function is the same as service tool utility (4-05) 13-5-9.
Auto tray switching	This function is the same as service tool 2-10. The title has been changed from "Limitless Paper Feed." (Default: Yes, the default has been changed from that for the sorter stapler version.)
3-side full image copy	A new key, beside the Check modes key, to select the 3-side full image copy mode can be used. This function is the same as service tool utility (4-05) 7-5-0. The title has been changed from "No Erase Copy." (Default: No) The 3-side full image mode is selected at power on when "Yes" is selected with service tool 2-09 "3-side Full Image"
Select count up or down mode	Adding each copy or subtracting each copy for the copy number counter can be selected. This function is the same as service tool 2-01. (Default: Up)
Display the number of originals	The number of originals copied in the stack original feed mode is displayed in the message area after copying. This function is the same as service tool 2-11 "Original Count Display." (Default: No)
Exit originals to tray	A new key, beside the Check modes key, to select the original tray exit mode can be used. This function is the same as service tool utility (4-05) 4-1. (Default: No)
Select face up/down in stack mode	Copies made in the stack mode can be delivered face up (image side up) to the shift tray. This function is the same as user tool number 8 "Sorter Stack Face Up/Down" used in the sorter stapler version. (Default: No)
Reverse back cover sheet	This is a new function. When the back cover is selected in the cover mode, users can select to have the image of the back cover face inside of the copy set or outside. (Default: Yes, It faces outside.)
Copy onto slip sheets	This is a new function. When copies are made in the chaptering mode, users can be select to have the image of the designated original copied on the slip sheet or not. (Default: Yes)

NOTE: For functions which can be set with both the user utility and service tools, if the data is changed with one, the data in the other will be changed automatically.

7. SERVICE TOOLS

The following are the new service tools for the finisher version model:

1. Service Tools Unique for the Finisher Version

Item (Menu No.)	Description
1 System Set-up	
Option Installation **(1-08)**	The option installation (system setup) function, which is in user tool number 6 "Disable display" for the sorter stapler version, has been moved. To install the LCT, finisher, and key counter, this function must be used.
2 User Functions	
Maximum Copy Number **(2-06)**	The maximum copy set number can be changed within a range of 1 to 9999. (Default: 9999) The selection of the maximum copy set number for the sort mode has been removed because this is only for the ADF and sorter system.
Staple Copy Limit **(2-07)**	The maximum staple capacity in the staple mode can be changed within a range of 40 to 50 sheets. (Default: 50) The "sorter bin copy limit" function used in this position of the sorter and sorter stapler versions has been removed.
Free/User Access Code Operation **(2-08)**	This is a new function. The accounting mode and security accounting mode can be set. Press the "Access Code" key for the accounting mode and the "Access Code/Super User Mode" key for the security accounting mode. Press "Free Use" key to cancel these mode. (Default: Free Use) For the accounting and security accounting modes, refer to the "2.2 ACCOUNTING MODES." The "dual sort" function used in this position of the sorter and sorter stapler versions has been removed.
3 Data Logging	
Duplex/ Finishing Copies **(3-02)**	The number of sheets entered into the finisher is displayed by paper size, instead of that for the sorter. The number of the sheet entered into the duplex tray is also displayed as in the sorter and sorter stapler versions.
Supply Yield/Forming **(3-04)**	In addition, the number of used staple is displayed. (In sorter stapler version, it was displayed separately for the 1st, 2nd, and 3rd sorters.)
RDH/Finisher Misfeeds **(3-06)**	Paper misfeeds in the finisher is accumulated and displayed by location and type: Inverter On Check, Inverter Off Check, and Finisher On check, instead of that for the sorter. Original misfeeds in the RDH is also accumulated and displayed as in the sorter and sorter stapler versions.

Item (Menu No.)	Description
4 Process Control	
Utility **(4-05)**	Some new functions have been added. For details, refer to the "Utility Modes Unique for the Finisher Version" below.
5 System Test	
Set Staple Position **(5-07**)	This is a new function. The staple positions on the copy paper can be adjusted by following the instructions on the screen.
6 Print Out **(6)**	This is a new function. The following data can be printed If the optional printer and printer connector unit are installed. **NOTE:** (1) A printer with a standard RS232C interface is required. Use the printer with functions as follows: Mode: Asynchronous Data format: Start/Stop/Data bit: 1 bit each Data bit length: 8 bits Parity permission: With Parity setting: Even parity Baud rate setting: 1,200 bps Connector: 25 pins, D-connector (2) If a Seiko printer DPU-411 is used, the dip switch settings are as follows (note that the setting of DIP02 SW1 is different from that for the F200. The data bit length for the F200 is 7 bits, and that for the F5 is 8 bits): SW1 to 8 of DIP01: OFF/OFF/OFF/ON/ON/OFF/ON/ON SW1 to 6 of DIP02: **ON**/OFF/OFF/OFF/ON/ON (3) This function can be used without the optional printer connector unit if the interface board (P/N A112 5060), harness between the interface board and printer (P/N A531 5420), harness between the main control board and interface board (P/N A112 7120), and 2 connector joint studs (P/N 1102 4139) are available, so that the printer can be connected to CN101 on the main control board. The parts will be included in the copier from the June '93 production. (For details, refer to MB no. 5.)
	Process Control: Data for service tool 4-01 to 4-03.
	Copies: Data for service tool 3-01 to 3-04.
	Misfeeds: Data for service tool 3-05 and 3-06.
	Service Calls: Data for service tool 3-07.
	Operation Time: Data for service tool 3-08.
	System Setup: Data for user tool no. 2, 3, 4, 6, 7, 8, 10, service tool 1-01 to 1-08, 2-01 to 2-16, 4-04, 4-05, 5-02, 5-03, 5-07.
	All Items: All data for the above items.

2. Utility Modes Unique for the Finisher Version

Mode No. / Set No. of Mode No. 5	6	7	8	9	10	11	12	13	14
0 to 7									
8									
9									
10	6-5-10	7-5-10	8-5-10	9-5-10		11-5-10			
11									
12									
13									
14									
15									

NOTE: (1) "6-5-10" means that mode number 6, which can be turned ON or OFF, is ON when mode number 5, which can be set at 0 to 15, is set at 10.

(2) The utility modes common with the sorter and sorter stapler versions are not listed.

(3) Utility 2-10 "Duplex Speed-up Mode" is still valid when the stack mode, not sort mode, is selected.

(4) Utility 1-8, 1-9, 2-8, 2-9, 7-5-9, and14-5-9 are not valid for the finisher version.

6-5-10: Automatic Staple Mode Selection
Users can select to have the auto staple mode (1 upper staple) or shift tray ON mode selected when the Finishing key in the free operator screen is selected. (Default: OFF, The shift tray ON mode is selected.)

7-5-10: Reverse Back Cover Sheet
This mode is the same as that in the user tool number 10 "User Utility."

8-5-10: Copy onto Slip Sheet
This mode is the same as that in the user tool number 10 "User Utility."

9-5-10: Manual Staple Mode
Enables the use of the manual staple mode when originals are set in the single original feed mode or on the exposure glass. For understanding how to use the manual staple mode, refer to the operating instructions. (Default: OFF, The manual staple is not effective.)

11-5-10: Automatic Paper Feed Out in Manual Staple Mode
While copies are made in the manual staple mode, when this mode is selected and the number of the copies stacked in the staple tray of the finisher exceeds the stack capacity set with service tool 2-07, the copies are automatically fed out from the jogger tray. (Default: OFF, This mode is not effective and the copies are stacked in the jogger tray until the "#" key is pressed.)

3. Utility Mode Comparison Table of the Sorter, Sorter/Stapler, and Finisher Versions

Mode No.	Set No.	Mode Name	Default Setting for Each Mode No.		
			Sorter	Sorter/Stapler	Finisher
1	8	Original Count Indication	0	0	0 NOTE: "1-8" and "1-9" are not effective.
	9	Combination of "1-8" and "1-10"			
	10	Disables Paper Near-end Indication			
	12	Clears All Stored User Programs			
2	8	Continues Duplex Copying	10	10	10 NOTE: 1) "2-8" and "2-9" are not effective. 2) "2-10" is effective in the stack mode only.
	9	Combination of "2-8" and "2-10"			
	10	Duplex Speed-up Mode			
3	8	Paper Size Erase Mode	0	0	0
4	1	Original Tray Exit Mode	0	0	0
5	0	SADF 50 cpm	0	0	0
	1	SADF 34 cpm			
	2	SADF 25 cpm			
	3	SADF 20 cpm			

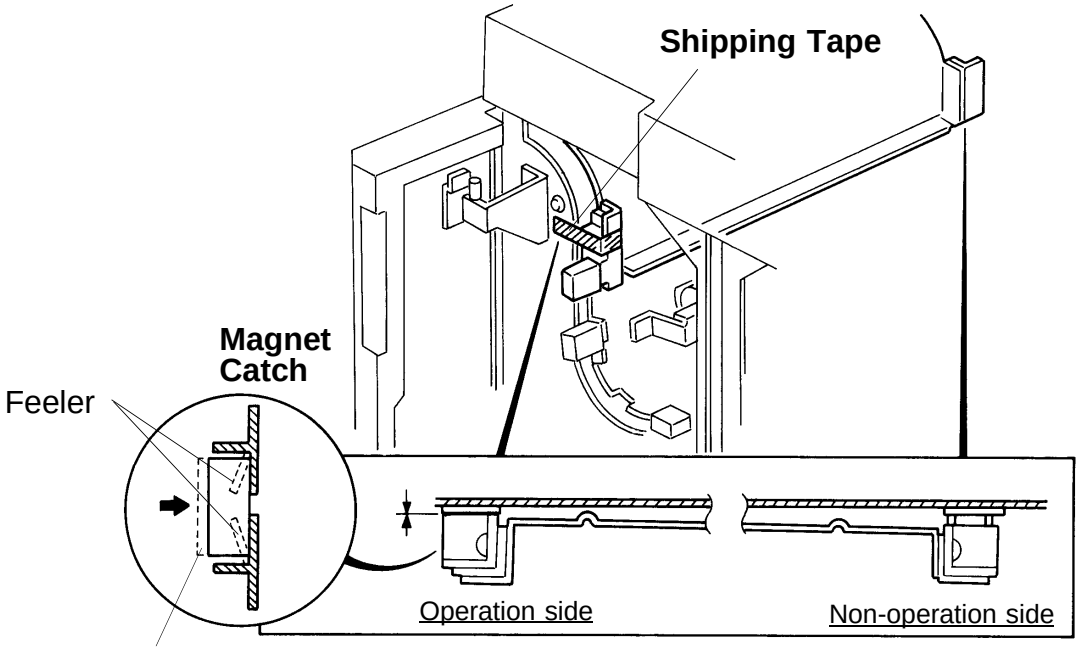
Mode No. (6 to 14)	Setting of Mode No. 5	Mode Name	Default Setting for Each Mode No.		
			Sorter	Sorter/Stapler	Finisher
6	0 to 7	Automatic Sort Selection	ON	ON	OFF
7		No Erase Copy Mode	OFF	OFF	OFF
8		Not used	Must be OFF	Must be OFF	Must be OFF
9		Not used	Must be OFF	Must be OFF	Must be OFF
10		Not used	Must be OFF	Must be OFF	Must be OFF
11		Automatic Dual Sort Mode	OFF	Not valid	Not valid
12		Not used	Must be OFF	Must be OFF	Must be OFF
13		Margin Adjustment Present Memory	OFF	OFF	OFF
14		Not used	Must be OFF	Must be OFF	Must be OFF

Mode No. (6 to 14)	Setting of Mode No. 5	Mode Name	Default Setting for Each Mode No.		
			Sorter	Sorter/Stapler	Finisher
6	8	Fusing Jam Indication	OFF	OFF	OFF
7		Automatic APS Selection	ON	ON	ON
8		Not used	Must be OFF	Must be OFF	Must be OFF
9		Not used	Must be OFF	Must be OFF	Must be OFF
10		Disable Flash Life Notice	OFF	OFF	OFF
11		Fusing Rush Current Prevention	ON	ON	ON
12		Sorter/Sorter-stapler System Switching	ON (Must be OFF to use the sorter)	ON	Not valid
13		Not used	Must be OFF	Must be OFF	Must be OFF
14		Valid Pre-heat Key	OFF	OFF	OFF
6	9	A3 Double Copy Count	OFF: Double Count Mode	OFF: Double Count Mode	OFF:Double Count Mode
7		Pause Stapling	Not valid	ON	Not valid
8		Duplex Tray Maximum Limit	OFF: 40 (A3)/ 80(A4)	OFF: 40 (A3)/ 80(A4)	OFF: 40 (A3)/ 80(A4)
9		Automatic Staple Mode Selection	Not valid	OFF	Not valid
10		Valid 8 1/2"x13" key	ON	ON	ON
11		Not used	Must be OFF	Must be OFF	Must be OFF
12		Disable Cover/Chaptering Modes	Not valid	OFF	OFF
13		Stapling with Stack mode	Not valid	OFF	OFF
14		Sort Copies in Reverse Order	Not valid	OFF	Not valid
6	10	Automatic Staple Mode Selection	Not valid	Not valid	OFF
7		Reverse Back Cover Sheet	Not valid	Not valid	ON
8		Copy onto Slip Sheet	Not valid	Not valid	ON
9		Manual Staple Mode	Not valid	Not valid	OFF
10		Not used	Must be OFF	Must be OFF	Must be OFF
11		Automatic Paper Feed Out in Manual Staple Mode	Not valid	Not valid	OFF
12		Not used	Must be OFF	Must be OFF	Must be OFF
13		Not used	Must be OFF	Must be OFF	Must be OFF
14		Not used	Must be OFF	Must be OFF	Must be OFF

RICOH	Technical Bulletin	No. RTB-032
SUBJECT: Jams at the Finisher Entrance (R5 Jams)		DATE: Feb. 15, '95 PAGE: 1 of 2
PREPARED BY: H. Kokubo CHECKED BY: S. Hamano	FROM: 2nd Technical Support Section	
CLASSIFICATION: ☐ Action Required ■ Troubleshooting ☐ Retrofit Information ☐ Revision of service manual ☐ Information only ☐ Other		MODEL: F5 (Ricoh FT9101/ nashuatec 53101/ Gestetner 25101)

SYMPTOM

Paper misfeeds frequently occur at the finisher entrance area. (Jam location "R5" is indicated.) At other times, paper skew may occur at this area.

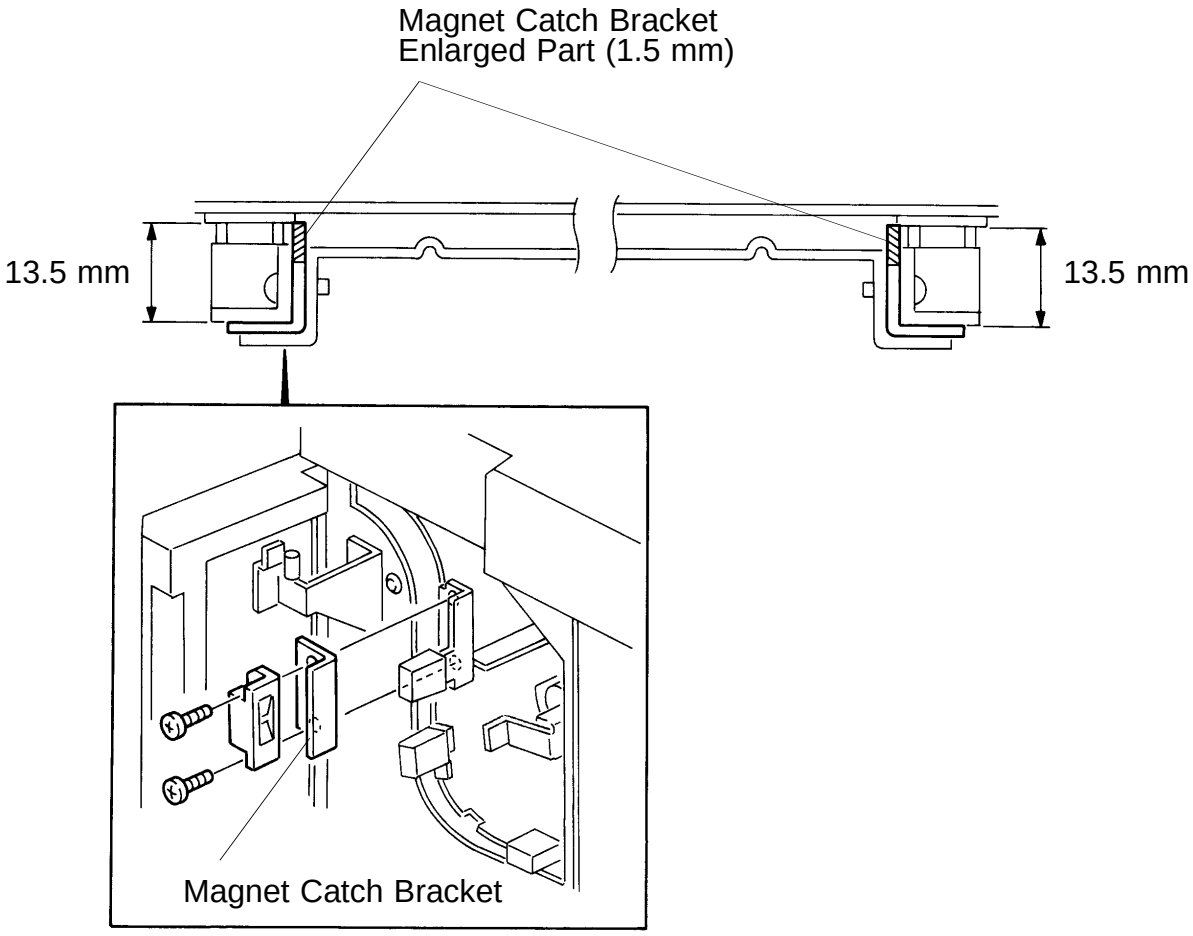


CAUSE

The clearance is too small for paper to pass between the upper and lower entrance paper guide plates (the curved paper guide plates).

Normally, there is a gap between the upper and lower guide plates because of the magnet catches on both operation and non-operation sides. The magnet catch is composed of a plastic case and a magnet sandwiched between two metal plates. The metal plates and magnet are pushed up by the two feelers which are parts of the plastic case. (See the above illustration.)

For shipment and storage, the magnet catch on the operation side is taped at the factory. Due to this, the metal plates remain under pressure and the feelers are deformed during shipment and storage. As a result, when the tape is removed at installation, the feelers cannot push up the metal plates and magnet as shown above. If the metal plates are not pushed up, the proper gap is not created between the upper and lower entrance paper guide plates on the operation side, causing paper jams or skew.



SOLUTION

If this problem is found, replace the magnet catch (P/N - AG07 0004). The magnet catches used for the finisher right and left front doors are the same type as this, so you can use one of these. (The defective magnet catch can be used on one of the doors, which do not have this problem.)

From the January 1995 production, a cushion has been used between the paper guide plates with the shipping tape to prevent the feelers of the magnet catch from being deformed.

As a permanent solution, the magnet catch brackets (P/N - A461 2145) will be enlarged (the shaded area in the illustration) to ensure the correct gap between the paper guide plates. The new part number and cut-in serial number will be informed by a Modification Bulletin.