RICOH	Technical Bulletin	No. RTB-001
SUBJECT: Process Control Adjustment		DATE:November 30, '95 PAGE: 1 of 5
PREPARED BY: N. Kaiya CHECKED BY: M. Iwasa	FROM: 2nd Technical Support Section	
CLASSIFICATION: ☐ Action Required ■ Revision of service manual ☐ Troubleshooting ☐ Information only ☐ Retrofit Information ☐ Other		MODEL: PDC10E

We received some reports from the field that SC870~873 is indicated while performing TD check at installation. With such machines, the LD control data (SPD 315~318) is set to a high level on the production line. We investigated and concluded that this high LD control data itself is not a problem since copy quality is good and process control is stable. However, with such machines, problems such as mentioned before may occur when the current process control adjustment procedure is followed.

In order to solve the problem in the field and also to simplify the process control adjustment procedure, we have made the following changes. The new procedure is applicable to all of the NC8115 models.

Vmin Check for Model A105

It is not necessary to perform the Vmin check (SPD480). Instead, perform the self check (SPD525). This is because the LD power - ID sensor output curve is not stable in highlight areas and a Vmin check is likely to fail. The original intention of the Vmin check was to obtain an accurate Vtc based on the actual drum and ID sensor in use. However, based on our investigation, the difference in check results coming from different drums or ID sensors is quite small. Therefore, the process control will properly function with the Vmin set at the factory.

Service Manual Correction

1. Replace page 5-45 of the Service Manual with page 3/5 of this RTB.
2. Replace pages 5-46 to 5-51 of the Service Manual with pages 4/5 to 5/5 of this RTB.

TD Check for Model A105 - LD value setting

It is not necessary to change the LD value (SPD315 - 318) in the TD check procedure. Use the factory setting (at installation) or the previously used data (from the second TD check). The current adjustment procedure is designed to start with a low LD value, and to gradually increase it to find the suitable value. However, for machines which have the LD value set to a higher value in the production, abnormal Vsp may be detected if the LD value is set to level 4. With the new procedure, the adjustment will start with the factory set data (or the previously used data) and it will be easier to find the suitable LD value.

Service Manual Correction

1. Skip the last item in the step A-3 of the TD check procedure for all colors (page 5-52 of the Service Manual).
2. Do not change the values in SPD 315'318 in step A-3 of the TD check procedure for 1 to 3 colors (pages 5-97,98 of the Service Manual).

TD Check for Model A105 - VL1

It is not necessary to perform the LD power control data adjustment using the VL1 value. This is because the machines which have high LD power value may have high VL1 value which may be out of the OK range.

Service Manual Correction

1. Remove steps C-7 to C-33 in the TD Check Procedure for All Colors (pages 5-66 to 5-71).
2. Remove steps C-7 to C-33 in the TD Check Procedures for 1 to 3 colors (pages 5-112 to 5-117).

PROCESS CONTROL ADJUSTMENT CHART FOR MODEL A105

The following table indicates the tasks required, and their order, when you replace or clean the OPC drums, developers, development unit(s), ID sensor(s), and/or when installing a new machine.

● : For all four colors (4C) ▲: Only for the relevant colors (1 to 3C) —: Don't do it

Maintenance items / Necessary tasks, in order		OPC drum replacement		Developer replacement	
		4 drums	1 to 3 drum(s)	4 colors	1 to 3 color(s)
1	Developer replacement (including dev. roller cleaning)	●	▲ ( )	●	▲ ( )
2	ID sensor cleaning	●	▲ ( )	●	▲ ( )
3	Drum replacement	●	▲ ( )	—	—
4	Self check 1 to 4	●	▲ ( )	—	—
5	TD check - All Colors	●	—	●	—
	TD check - 1 to 3 color(s)	—	▲ ( )	—	▲ ( )
	TD check - Manual	—	—	—	—

Maintenance items / Necessary tasks, in order		Development unit replacement	ID sensor		New machine installation
			Replaced	Cleaned	
1	Developer replacement (including dev. roller cleaning)	▲ ( )	▲ ( )	—	●
2	ID sensor cleaning	▲ ( )	▲ ( )	▲ ( )	●
3	Drum replacement	—	▲ ( )	—	—
4	Self check 1 to 4	—	▲ ( )	—	—
5	TD check - All Colors	—	—	—	●
	TD check - 1 to 3 color(s)	▲ ( )	▲ ( )	—	—
	TD check - Manual	—	—	▲ ( )	—

NOTE:

- Whenever OPC drums are replaced, replace the relevant color developers for the drums as a set.
- Do the necessary tasks from top to bottom, in order.
- When two or more maintenance items are done at one time, combine the necessary jobs for those maintenance items. Write the color symbols of each relevant color in the space provided in brackets ( ).
- TD check for all colors includes that for 1 to 3 colors or manual TD check. If both of these cases are marked, do only the TD check for all colors.

SELF CHECK (1 to 4 Colors) FOR MODEL A105

CAUTION: Only change the data and perform the maintenance for the relevant colors.

NOTE: The self check (1 to 4 colors) procedure should be performed,
1. when the drum(s) (1 to 4 colors) are replaced.
2. when the ID sensor(s) (1 to 4 colors) are replaced.
From the following steps, only perform the maintenance for the relevant colors.

1. When the relevant drums or "the ID sensors and the drums" are replaced, clean the relevant development rollers and ID sensors, and replace the relevant developer.

2. Only set the SPD for the relevant color as follows:

   - SPD#190 to H (SC#840 ~ #843 off mode)
   - SPD#611 ~ #614 to 32 (ID Sensor LED Data)
     (SPD#611: Bk, #612: M, #613: Y, #614: C)
   - SPD#110 ~ #113 (Pointer data monitor/change) to 22
     (SPD#110: Bk, #111: M, #112: Y, #113: C)
   - SPD#115 ~ #118 (Pointer lower limit data monitor/change) to 18
     (SPD#115: Bk, #116: M, #117: Y, #118: C)

3. Make 5 copies of the C-4 chart on A3/11" x 17" size or A4/8 1/2" x11" paper.
   (Do not make these copies in a continuous copy run. Make 5 single-copy runs.)

NOTE: If it is a solid copy, set the relevant charge corona unit in position.

4. Perform the relevant self check (SPD #525).

   - Key an appropriate value into SPD#525, referring to the following notes:
   - Press the Enter key while pressing the Start key to start.

NOTE: Select relevant colors for the self check by changing the value of SPD#525 from "15" to another setting (1 to 15).

1: Bk	4: Y	7: Bk+M+Y	10: M+C	13: Bk+Y+C
2: M	5: Bk+Y	8: C	11: Bk+M+C	14: M+Y+C
3: Bk+M	6: M+Y	9: Bk+C	12: Y+C	15: Bk+M+Y+C (all colors)

5. After the copier stops, press the Clear key on the SP panel once.
6. Set SPD#190 to L (SC#840 ~ #843 detection).
7. Exit from the SPD mode.
8. Perform the TD check.

RICOH	Technical Bulletin	No. RTB-002

SUBJECT: Exposure Glass Removal	DATE:November 30, '95 PAGE: 1 of 2
PREPARED BY: N. Kaiya CHECKED BY: M. Iwasa	FROM: 2nd Technical Support Section

CLASSIFICATION:		MODEL:
☐ Action Required	■ Revision of service manual	PDC10E (-27 machines only)
☐ Troubleshooting	☐ Information only	
☐ Retrofit Information	☐ Other	

To comply with the CE mark standards, the edges of the exposure glass have been covered with copper plates. These plates will reduce the amount of electrical noise emitted from the copier.

Due to this modification, the exposure glass removal procedure has been changed as follows.

1. Remove the top left cover (4 screws).
2. Remove the screw covers (6 pcs.) from the right, left, and front scales.
3. Remove the right [A] and the left scale [B] (2 screws each).
4. Open the front covers and remove the toner tank unit (2 screws).
5. Remove the operation panel (5 screws and 2 connectors).
6. Remove the front scale [C] (2 screws).
7. Remove the right spacer [D](8 screws).
8. Remove the front spacer [E](4 screws).
9. Remove the exposure glass [F](2 screws).

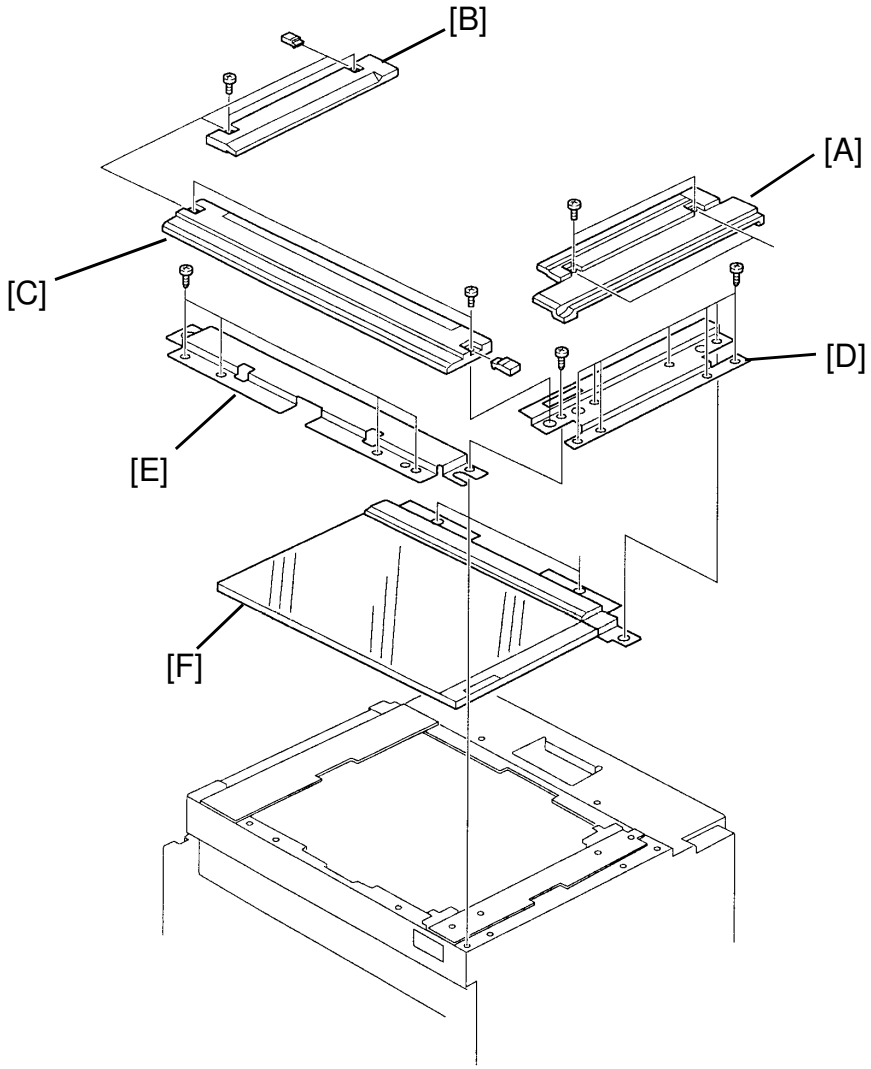
NOTE:

1. The front scale is clamped to the exposure glass, so when reinstalling the exposure glass make sure that the front scale clamp is properly set on the glass.

2. The right spacer, the front spacer, and the exposure glass are secured with M3x4 screws. Make sure not to use longer screws, since scanner movement may be obstructed.

Cut-in serial number

This modification has been implemented from the following serial number.
A3585090014


[B]
[A]
[C]
[D]
[E]
[F]

RICOH	Technical Bulletin	No. RTB-003
SUBJECT: Interface Kit Type B CE Mark Compliance		DATE: December 31, '95 PAGE: 1 of 5
PREPARED BY: N. Kaiya CHECKED BY:	FROM: 2nd Technical Support Section	
CLASSIFICATION: ☐ Action Required ☐ Troubleshooting ☐ Retrofit Information	■ Revision of service manual ☐ Information only ☐ Other	MODEL: Interface Kit Type B for PDC - 10E

To comply with the CE mark standards, the following modifications have been made to the Interface Kit Type B.

<Ferrite Core>

Two ferrite cores are packed with the kit. Please refer to the attached installation procedure of the interface kit for where to use these ferrite cores.

<CE Mark>

The CE mark is printed on the carton box. Please check this CE mark to distinguish new kits from old kits, since there is no serial number for this kit.

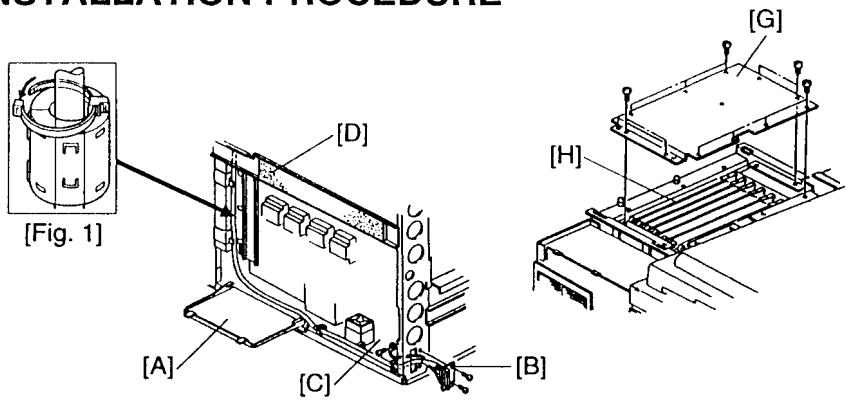
A5838521A

CONTROLLER INTERFACE KIT TYPE-B (Machine Code: A583-03)

INSTALLATION PROCEDURE For Machine Code: A105

NOTE: THE CONTROLLER INTERFACE KIT MUST BE INSTALLED BY A CUSTOMER SERVICE REPRESENTATIVE WHO HAS COMPLETED THE TRAINING COURSES ON THE BASE COPIER AND THE CONTROLLER.

INSTALLATION PROCEDURE



[Fig. 1]

⚠ CAUTION

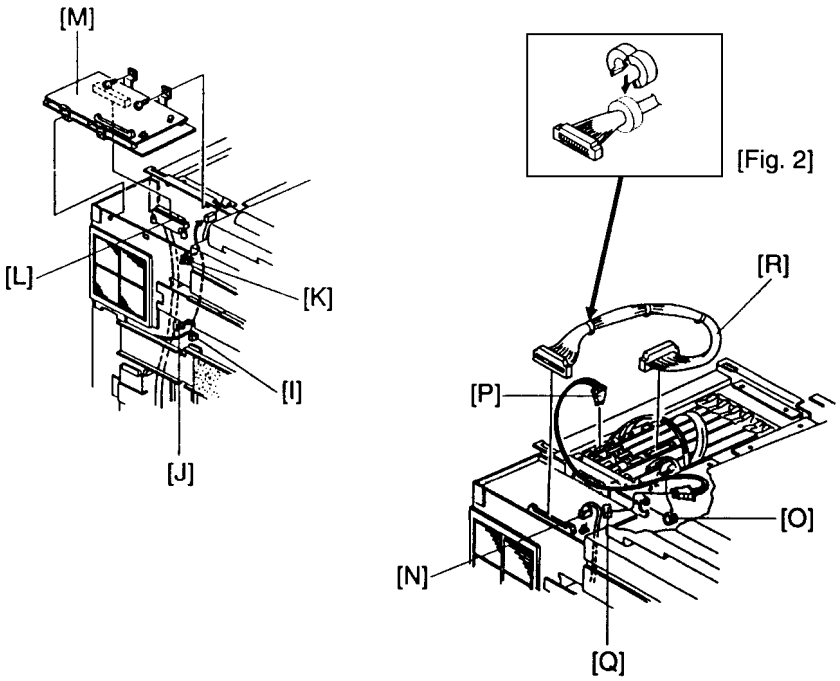
Turn off the copiers main switch and unplug the machine before starting the following procedure.

1. Remove the right upper cover (3 screws), the left cover (4 screws), the rear left cover (5 screws), and the rear right cover (4 screws).
2. Remove the interface cover from the left cover.
3. Open the process control board bracket [A] (2 screws).
4. Route the controller interface harness [B] as shown in the diagram (2 screws - M4 x 6).
5. Secure the grounding wire [C] to the rear frame (M4 x 8).
6. Remove the cooling fan bracket [D] and route the controller interface harness upwards.
7. Install the gray ferrite core around the controller interface harness and secure the core with the harness band as shown [Fig. 1].
8. Remove the PCB cover [G] (11 screws) .
9. Flip the white hooks on the side of the System Control Board [H] and remove the board (3 optical fiber connectors and 1 connector).
10. Replace the 5 ROMs on the System Control Board (IC145, 146, 147, 148, and 149). See the below table.

Location	P/N
IC145	A1055532
IC146	A1055530
IC147	A1055503
IC148	A1055529
IC149	A1055531

NOTE: If the suffix of the copier ROM chips are later than ROM chip P/Ns in the kit, leave the chips as they are.

11. Reinstall the System Control Board [H].

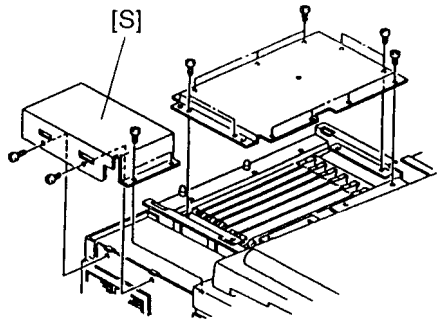


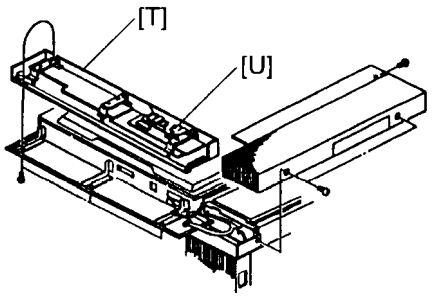
12. Take the DC harness connector (4p) [I] from the clamp [J].

    NOTE: The harness connector [I] has 2 brown wires and one red wire and it is coiled around the clamp [J].

13. Route the DC harness [I] up through the connector clamp [K].
14. Connect the interface harness [L] to CN102 on the interface board [M] and secure it (2 screws).
15. Install the interface board assembly [M] on the main frame (2 screws - M4 x 6).
16. Connect the DC harness [N] to CN103 on the interface board.
17. Remove the bushing [O] from the right rear upper side of the main frame.
18. Connect the fiber optics cable [P] to CN108 on the system Control Board and to CN101 [Q] on the interface board through the bushing [O].
19. Connect the interface harness [R] to CN125 on the System Control Board and to CN100 on the interface board through the bushing [O].
20. Install the white ferrite core around the interface harness [R]. (See [Fig. 2])

    NOTE: Ensure the ferrite core is placed on the harness so that it will be enclosed by the reinstalled interface board cover.





21. Install the interface board cover [S] (4 screws - M4 x 6) and the PCB cover (11 screws).

    NOTE: Do not cut the dc harness with the cover.

22. Remove the toner tank (2 screws).
23. Remove the operation panel [T] (3 screws and 3 connectors).
24. Replace the 6 ROMs (IC31, 32, 33, 34, 35 and 36) on the ROM board [U]. (This board is connected to the Operation Panel Control Board [T]). See the below table.

Location	LT Version	A4 Version
IC31	A1055544	A1055542
IC32	A1055545	A1055543
IC33	A1055546	A1055546
IC34	A1055547	A1055547
IC35	A1055548	A1055548
IC36	A1055549	A1055549

    NOTE: If the suffix of the copier ROM chips are later than ROM chip P/Ns in the kit, leave the chips as they are.

25. Re-assemble the machine.
26. Connect to the Fiery controller to the controller interface connector with the cable provided from EFI.
27. Adjust the γ correction data for printer and check the controller function according to the service manuals.

REVISED ON OCTOBER 31, '96

RICOH

Technical Bulletin No. RTB-004

SUBJECT: Standardization of Toner and Developer	DATE: Sept. 30, '96 PAGE: 1 of 1
PREPARED BY: N. Kaiva CHECKED BY: T. Inoue	FROM: 1st Field Information Dept. QAC

CLASSIFICATION:

- ☐ Action Required
- ☐ Troubleshooting
- ☐ Retrofit Information
- ☐ Revision of service manual
- ■ Information only
- ☐ Other

MODEL: PDC - 10E

The toner for PDC - 10E has been standardized with those developed for the new product, Lily.

The new toner is compatible with the current toner. The mixture of new and current toner has no effect on performance or copy quality.

For the product name of the new toner, please refer to the table below.

Ricoh

toner	black	RICOH COLOR TONER TYPE F BLACK
	yellow	RICOH COLOR TONER TYPE F YELLOW
	magenta	RICOH COLOR TONER TYPE F MAGENTA
	cyan	RICOH COLOR TONER TYPE F CYAN

Model: PDC-10E	Date: 15-May-98	No: 5
Subject: Standardization of Toner	Prepared by: N.Kaiya	
From: QAC Field Information Dept.		

Classification:

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

The toner for PDC-10E has been standardized with those developed for Lily.

The new toner is compatible with the current toner. Mixing new and current toner will have no effect on performance or copy quality.

For the product name of the new toner, please refer to the following table.

Brand	Naming
Ricoh	Ricoh Color Toner Type J Black
	Ricoh Color Toner Type J Yellow
	Ricoh Color Toner Type J Magenta
	Ricoh Color Toner Type J Cyan