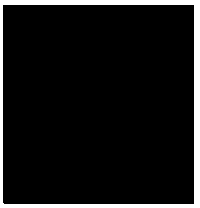
TROUBLESHOOTING



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1. INTRODUCTION

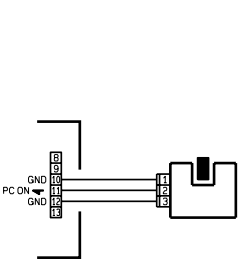
- Information required for troubleshooting and steps that must be performed are described in this chapter.

1-1. Checking the electrical components

- If a paper misfeed or malfunction occurs, perform the following operation to check the condition of the electrical components.

(1) Sensor

Step	Check	Result	Action
1	Does the input signal of the master board change (H→L, L→H) when the sensor light is interrupted?	NO	Replace the sensor.
		YES	Replace the control board.



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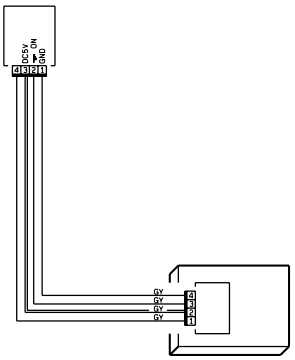

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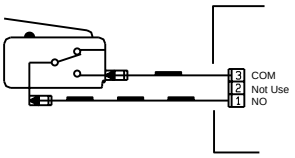
(2) Switch

Step	Check	Result	Action
1	Does the input signal (NO) of the master board change from L to H when the switch is turned on?	NO	Replace the switch.
		YES	Replace the control board.



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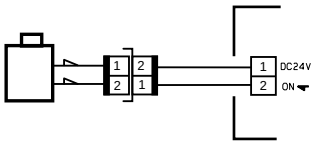
(3) Solenoid

Step	Check	Result	Action
1	Does the output signal of the master board change from H to L when the solenoid is turned on?	NO	Replace the control board.
		YES	Replace the solenoid.



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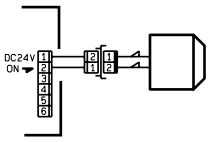
(4) Clutch

Step	Check	Result	Action
1	Does the output signal of the master board change from H to L when the clutch is activated?	NO	Replace the control board.
		YES	Replace the clutch.



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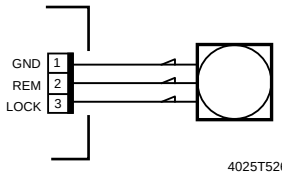
(5) Motor

Step	Check	Result	Action
1	Does the LOCK signal switch to H when the machine goes into standby?	NO	Replace the control board. Replace the motor.
2	Does the REM signal of the master board change from H to L when the motor is turned on?	YES	Replace the motor.
		NO	Replace the control board.



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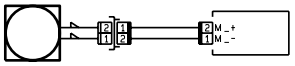
Step	Check	Result	Action
1	Does the input signal of the master board change from H to L when the motor is turned on?(The input signal differs depending on the rotation direction.)	YES	Replace the motor.
		NO	Replace the control board.



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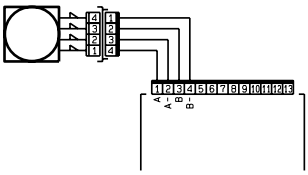
Step	Check	Result	Action
1	Are the relay connector of the motor and the print jack on the master board correctly connected?	YES	Replace the motor or the control board.
		NO	Connect the connector or the print jack.



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1-2. I/O CHECK

(1) Check Procedure

To allow sensors to be checked for operation easily and safely, data applied to the IC on the board can be checked on the panel with the copier in the standby state (including a misfeed, malfunction, and closure failure condition).

<Electrical Components Check Procedure Through Input Data Check>

Example

When a paper misfeed occurs in the paper take-up section of the copier, the 2nd Drawer Paper Take-Up Sensor is considered to be responsible for it.

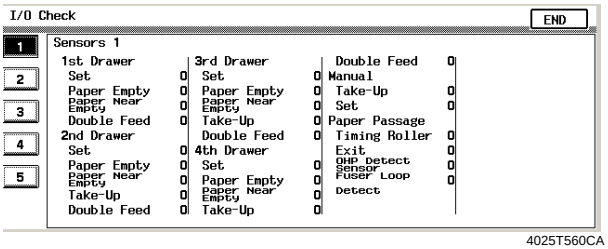
<Procedure>

1. Remove the sheet of paper misfeed.
2. From the I/O Check List that follows, check the panel display of the 2nd Drawer Paper Take-Up Sensor. For the 2nd Drawer Paper Take-Up Sensor, you check the data of “Take-Up” of “2nd Drawer.”
3. Call the Tech. Rep. mode to the screen.
4. Select “State Confirm” → “I/O Check” and then select the screen that contains “Take-Up” under “2nd Drawer.” For “Take-Up” under “2nd Drawer,” select “1” on the left-hand side of the screen.
5. Check that the data for “Take-Up” under “2nd Drawer” is “0” (sensor blocked).
6. Move the actuator to unblock the 2nd Drawer Paper Take-Up Sensor.
7. Check that the data for “Take-Up” under “2nd Drawer” changes from “0” to “1” on the screen.
8. If the input data is “0,” change the sensor.

(2) I/O Check List

<I/O Check Screens>

- These are only typical screens which may be different from what are shown on each individual copier.



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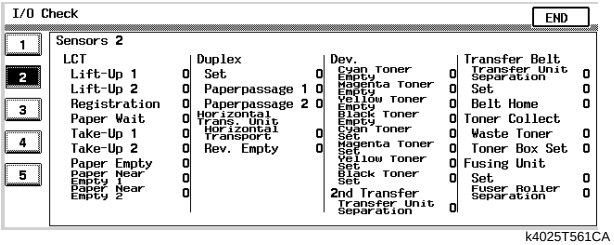

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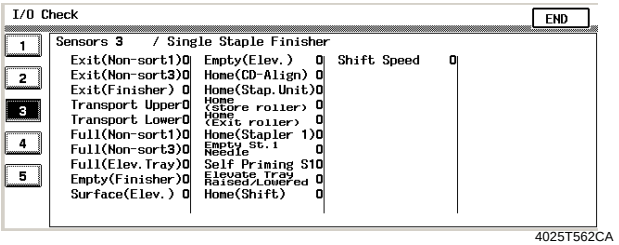

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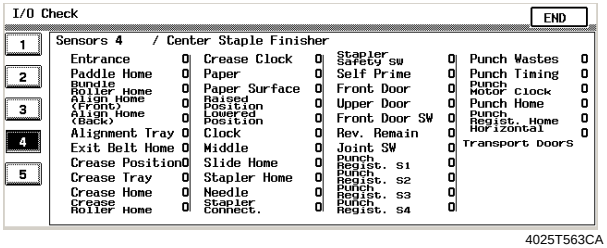

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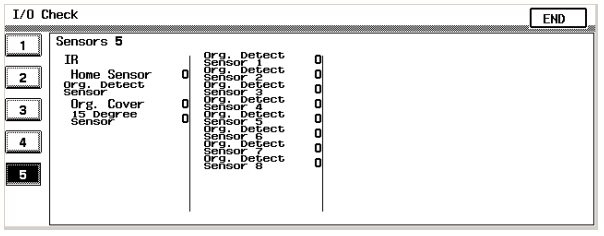

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<I/O Check List>

Symbol	Panel Display		Part/Signal Name	Operation Characteristics/Panel Display		Input Board	CN/PJ No.
				1	0		
PC3	1st Drawer	Set	1st Drawer Set Sensor	In position	Out of position	IO Board (PWB-IO)	PJ18IO-6B
PC6		Paper Empty	1st Drawer Paper Empty Sensor	Paper not present	Paper present		PJ11IO-3A
PC4		Paper Near Empty	1st Drawer Paper Near-Empty Sensor	Blocked	Unblocked		PJ18IO-3B
PC13		Double Feed	1st Drawer Double Feed Sensor	Paper present	Paper not present		PJ11IO-5B
SW D	2nd Drawer	Set	2nd Drawer Set Switch	In position	Out of position	2nd Drawer Control Board (PWB-A)	PJ3A-4B
PC102		Paper Empty	2nd Drawer Paper Empty Sensor	Paper not present	Paper present		PJ3A-14A
PC103		Paper Near Empty	2nd Drawer Paper Near-Empty Sensor	Blocked	Unblocked		PJ3A-11A
PC101		Take-Up	2nd Drawer Paper Take-Up Sensor	Paper present	Paper not present		PJ3A-5A
PC105		Double Feed	2nd Drawer Double Feed Sensor	Paper present	Paper not present		PJ3A-8A
SW D	3rd Drawer	Set	Drawer Set Switch	In position	Out of position	3rd Drawer Control Board (PWB-A)	PJ3A-4B
PC2		Paper Empty	Drawer Paper Empty Sensor	Paper not present	Paper present		PJ3A-14A
PC3		Paper Near Empty	Drawer Paper Near-Empty Sensor	Blocked	Unblocked		PJ3A-11A
PC1		Take-Up	Drawer Paper Take-Up Sensor	Paper present	Paper not present		PJ3A-5A
PC5		Double Feed	Drawer Double Feed Sensor	Paper present	Paper not present		PJ3A-8A
SW D	4th Drawer	Set	Drawer Set Switch	In position	Out of position	4th Drawer Control Board (PWB-A)	PJ3A-4B
PC2		Paper Empty	Drawer Paper Empty Sensor	Paper not present	Paper present		PJ3A-14A
PC3		Paper Near Empty	Drawer Paper Near-Empty Sensor	Blocked	Unblocked		PJ3A-11A
PC1		Take-Up	Drawer Paper Take-Up Sensor	Paper present	Paper not present		PJ3A-5A
PC5		Double Feed	Drawer Double Feed Sensor	Paper present	Paper not present		PJ3A-8A
PC15	Manual	Take-Up	Manual Feed Paper Take-Up Sensor	Paper present	Paper not present	IO Board (PWB-IO)	PJ10IO-2
PC15		Set	Manual Feed Paper Take-Up Sensor	In position	Out of position		
PC17	Paper Passage	Timing Roller	Synchronizing Roller Sensor	Paper present	Paper not present		PJ3IO-9B
PC10		Exit	Exit Sensor	Paper present	Paper not present		PJ11IO-9A
PC19		OHP Detect Sensor	OHP Detecting Sensor	OHP present	OHP not present		PJ3IO-2B
PC9		Fuser Loop Detect	Fusing Paper Loop Detecting Sensor	Loop present	Loop not present		PJ4IO-14

Symbol	Panel Display		Part/Signal Name	Operation Characteristics/Panel Display		Input Board	CN/PJ No.
				1	0		
LS1	LCT	Lift-Up 1	Lift-Up Sensor 1	At raised position	Not at raised position	LCT Control Board (PWB-A)	CN4A-6
LS2		Lift-Up 2	Lift-Up Sensor 2	At raised position	Not at raised position		CN4A-9
RSEN		Registration	Registration Sensor	Paper present	Paper not present		CN4A-2
S1		Paper Wait	Paper Standby Position Sensor	At standby position	Not at standby position		CN3A-5
PPS0		Take-Up 1	LCT Paper Take-Up Sensor	Paper present	Paper not present		CN4A-11
PPS1		Take-Up 2	Paper Empty Sensor 1	Paper present	Paper not present		CN3A-2
EMP		Paper Empty	Paper Empty Sensor 2	Paper not present	Paper present		CN3A-8
RS1		Paper Near Empty 1	Paper Near Empty Sensor 1	Unblocked	Blocked		CN6A-12
RS2		Paper Near Empty 2	Paper Near Empty Sensor 2	Unblocked	Blocked		CN5A-5
PWB-API2	Duplex	Set	Duplex Unit Door Set Sensor (in PWB-A)	Close	Open	Duplex Control Board	PJ1A-3
PWB-API1		Paper passage 1	Duplex Unit Transport Sensor 1 (in PWB-A)	Paper present	Paper not present		PJ1A-12
PC1		Paper passage 2	Duplex Unit Transport Sensor 2	Paper present	Paper not present		PJ4A-3
PC1	Horizontal Trans. Unit	Horizontal Transport	Paper Sensor	Paper not present	Paper present	Control Board (PWB-A)	PJ15A-4 PJ12-2
PC6		Rev. Empty	Turnover Empty Detecting Sensor	Paper present	Paper not present		PJ15A-12 PJ13-2
PC45	Dev.	Cyan Toner Empty	Toner Near-Empty Sensor PQ C	Toner not present	Toner present	IO Board (PWB-IO)	PJ15IO-1A
PC43		Magenta Toner Empty	Toner Near-Empty Sensor PQ M	Toner not present	Toner present		PJ15IO-3A
PC41		Yellow Toner Empty	Toner Near-Empty Sensor PQ Y	Toner not present	Toner present		PJ15IO-5A
PC47		Black Toner Empty	Toner Near-Empty Sensor PQ Bk	Toner not present	Toner present		PJ15IO-7A
PC50		Cyan Toner Set	TC Set Sensor C	Out of position	In position		PJ15IO-11A
PC49		Magenta Toner Set	TC Set Sensor M	Out of position	In position		PJ15IO-14A
PC48		Yellow Toner Set	TC Set Sensor Y	Out of position	In position		PJ15IO-11B
PC51		Black Toner Set	TC Set Sensor Bk	Out of position	In position		PJ15IO-14B
PC23	2nd Transfer	Transfer Unit Separation	2nd Image Transfer Pressure Position Sensor	Not Retracted	Retracted		PJ3IO-6B
PC28	Transfer Belt	Transfer Unit Separation	1st Image Transfer Retraction Position Sensor	Not Retracted	Retracted		PJ18IO-6A
-		Set	-	In position	Out of position		PJ2IO-3A
PC12		Belt Home	Image Transfer Belt Reference Position Sensor	Unblocked	Blocked		PJ11IO-3B

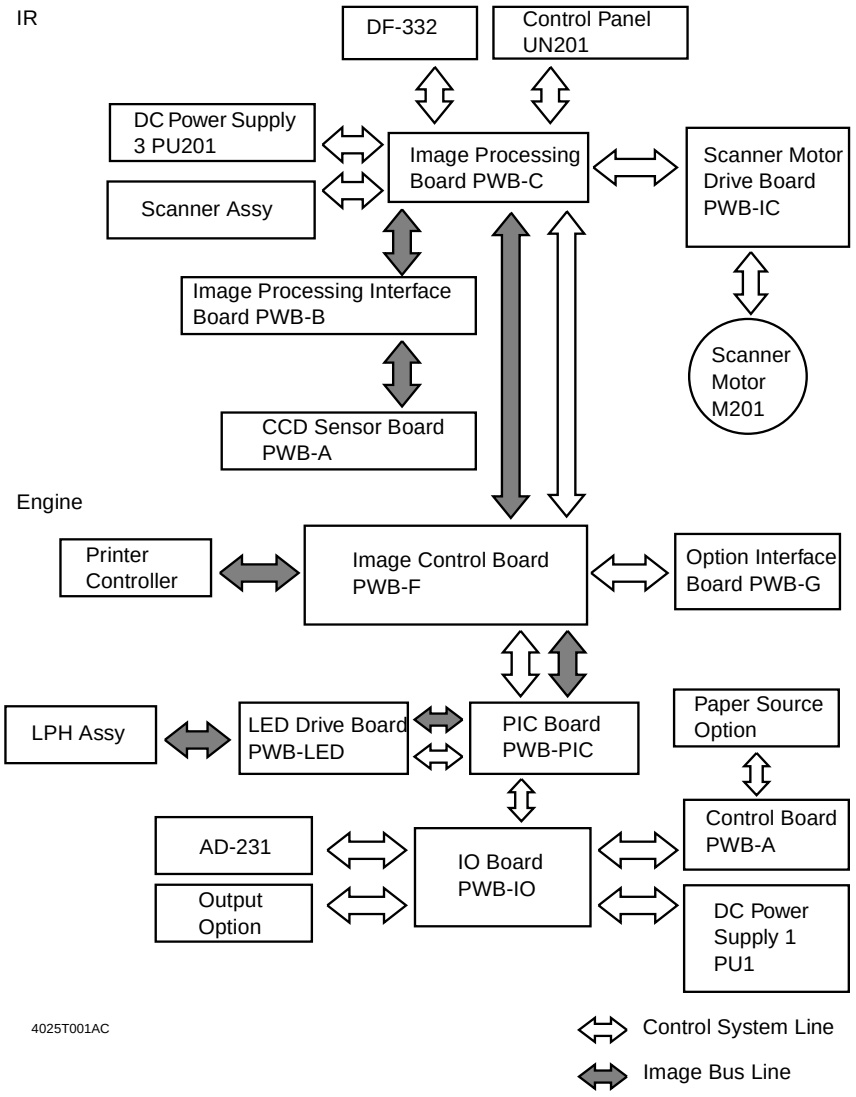
Symbol	Panel Display		Part/Signal Name	Operation Characteristics/Panel Display		Input Board	CN/PJ No.
				1	0		
PC29	Toner Collect	Waste Toner	Waste Toner Full Detecting Sensor	Unblocked	Blocked	IO Board (PWB-IO)	PJ24IO-1B
PC18		Toner Box Set	Waste Toner Bottle Set Sensor	In position	Out of position		PJ24IO-4B
-	Fusing Unit	Set	Fusing Unit	In position	Out of position		PJ4IO-6
PC7		Fuser Roller Separation	Fusing Pressure Position Sensor	Pressed	State other than pressed		PJ4IO-3
PC1	Single Staple Finisher	Exit (Non-sort 1)	See the FS-135 service manual				
PC19		Exit (Non-sort 3)					
PC3		Exit (Finisher)					
PC4		Transport Upper					
PC2		Transport Lower					
PC6		Full (Non-sort 1)					
PC20		Full (Non-sort 3)					
PC7		Full (Elev. Tray)					
PC5		Empty (Finisher)					
PWB-D		Surface (Elev.)					
PC8		Empty (Elev.)					
PC9		Home (CD-Align)					
PC14		Home (Stap. Unit)					
PC12		Home (store roller)					
PC13		Home (Exit roller)					
-		Home (Stapler 1)					
-		Empty St. 1 Needle					
-		Self Priming S1					
S2 S3		Elevate Tray Raised/Lowered					
PC10		Home (Shift)					
PC11		Shift Speed					

Symbol	Panel Display		Part/Signal Name	Operation Characteristics/Panel Display		Input Board	CN/PJ No.
				1	0		
PI1	Center Staple Finisher	Entrance	See the FS-231 service manual				
PI2		Paddle Home					
PI3		Bundle Roller Home					
PI4		Align Home (Front)					
PI5		Align Home (Back)					
PI6		Alignment Tray					
PI7		Exit Belt Home					
PI10		Crease Position					
PI13		Crease Tray					
PI11		Crease Home					
PI12		Crease Roller Home					
PI14		Crease Clock					
PI8		Paper					
PI9		Paper Surface					
PI15		Raised Position					
PI16		Lowered Position					
PI17		Clock					
-		Middle					
PI18		Slide Home					
PI19		Stapler Home					
PI20		Needle					
-		Stapler Connect					
MS3		Stapler Safety SW					
PI21		Self Prime					
PI22		Front Door					
PI23		Upper Door					
MS1		Front Door SW					
-		Rev. Remain					
MS2		Joint SW					

Symbol	Panel Display		Part/Signal Name	Operation Characteristics/Panel Display		Input Board	CN/PJ No.
				1	0		
-	Center Staple Finisher	Punch Regist. S1	See the FS-231 service manual				
-		Punch Regist. S2					
-		Punch Regist. S3					
-		Punch Regist. S4					
-		Punch Wastes					
-		Punch Timing					
PI3P		Punch Motor Clock					
PI1P		Punch Home					
PI2P		Punch Regist. Home					
PC4		Transport Doors					
PC201	IR	Home Sensor	Scanner Home Sensor	At home	Out of home	Image Processing Board (PWB-C)	PJ11C-7
SW201	Org. Detect Sensor	Org. Cover	Size Reset Switch	Lowered	Raised		PJ11C-9
PC202		15 Degree Sensor	Original Cover Detecting Sensor	Less than 15°	15° or more		PJ8C-12B
PC203		Org. Detect Sensor 1	Original Size Detecting Sensor FD1	Original loaded, not mounted	Original not loaded		PJ8C-1A
PC204		Org. Detect Sensor 2	Original Size Detecting Sensor FD2	Original loaded, not mounted	Original not loaded		PJ8C-9A
PC204		Org. Detect Sensor 3	Original Size Detecting Sensor FD2	Original loaded, not mounted	Original not loaded		PJ8C-9A
PC206		Org. Detect Sensor 4	Original Size Detecting Sensor FD3	Original loaded, not mounted	Original not loaded		PJ7C-5
PC206		Org. Detect Sensor 5	Original Size Detecting Sensor FD3	Original loaded, not mounted	Original not loaded		PJ7C-5
PC205		Org. Detect Sensor 6	Original Size Detecting Sensor CD1	Original loaded, not mounted	Original not loaded		PJ11C-5
PC205		Org. Detect Sensor 7	Original Size Detecting Sensor CD1	Original loaded, not mounted	Original not loaded		PJ11C-5
PC207		Org. Detect Sensor 8	Original Size Detecting Sensor CD2	Original loaded, not mounted	Original not loaded		PJ10C-5

1-3. System Control Block Diagram

- Understanding the system control block diagram will help make easier the troubleshooting procedures for paper misfeeds, malfunctions, and image problems.



2. PAPER MISFEED

2-1. Initial Check Items

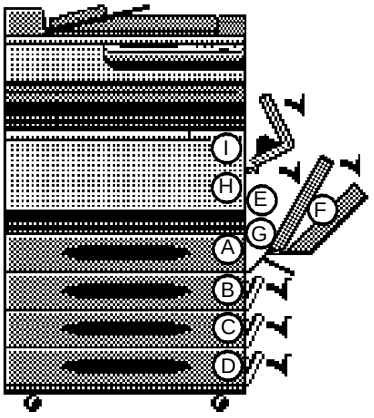
• When a paper misfeed occurs, first make checks of the following initial check items.

Check Item	Action
Does paper meet product specifications?	Change paper.
Is paper curled, wavy, or damp.	Change paper. Instruct user in correct paper storage.
Is a foreign object present along the paper path, or is the paper path deformed or worn?	Clean or change the paper path.
Are the Paper Separator Fingers dirty, deformed, or worn?	Clean or change the defective Paper Separator Finger.
Are rolls/rollers dirty, deformed, or worn?	Clean or change the defective roll/roller.
Are the Edge Guide and Trailing Edge Stop at correct position to accommodate paper?	Set as necessary.
Are actuators found operational as checked for correct operation?	Correct or change the defective actuator.

2-2. Misfeed Display

- When a paper misfeed occurs, the misfeed message, misfeed location, and paper location are displayed on the Touch Panel of the copier.

Misfeed detected
Remove misfeed at ○.



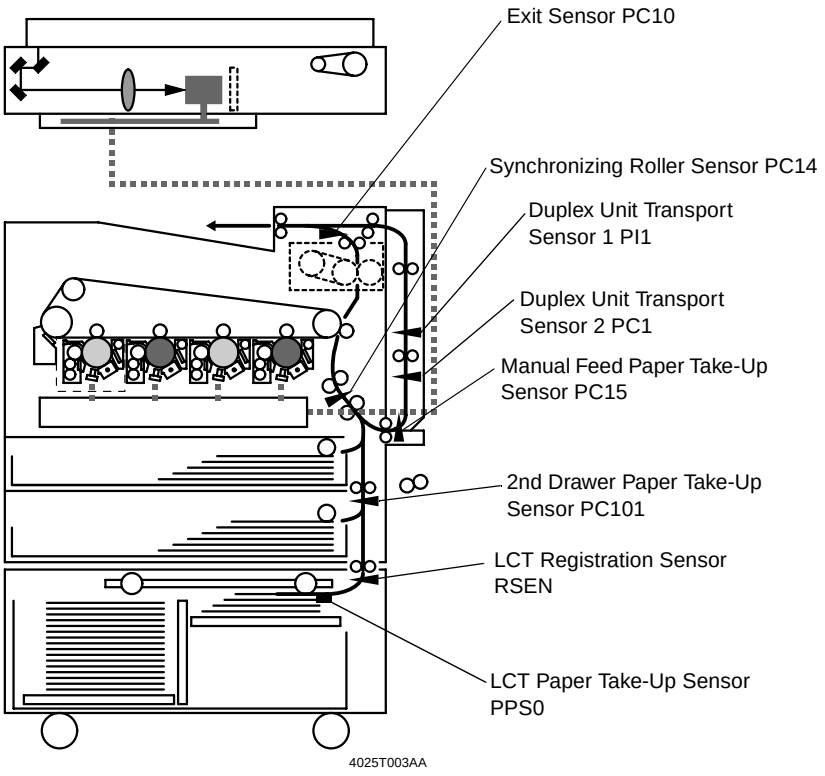
Display	Misfeed Location	Action
A	1st Drawer take-up	☞ T-16
B	2nd Drawer take-up	☞ T-17
C	3rd Drawer take-up	☞ T-18
	LCT take-up	☞ T-19
D	4th Drawer take-up	☞ T-20
	LCT Lift 2 to 1 paper transport	☞ T-21
E	Manual Bypass take-up	☞ T-22
F	Duplex Unit transport	☞ T-27
G	Vertical Transport	☞ T-23
	Duplex Unit take-up	☞ T-26
H	2nd Image Transfer	☞ T-28
I	Fusing/Exit	☞ T-29

<Misfeed Display Resetting Procedure>

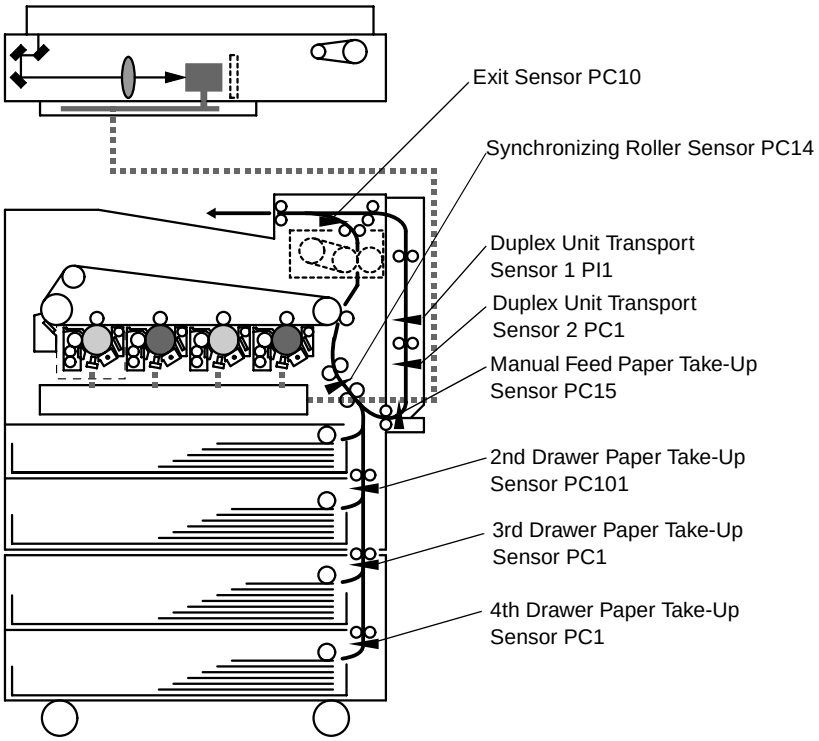
- Open the corresponding door, clear the sheet of paper misfeed, and close the door.

2-3. Misfeed Detecting Sensor Layout

- System Mounted with AD-231 and DB-432



• System Mounted with AD-231 and PF-232



2-4. Misfeed Detection Timing/Troubleshooting Procedures

(1) 1st Drawer Paper Take-Up Misfeed

<Detection Timing>

Type	Description
Paper take-up failure detection	The leading edge of the paper does not block the Synchronizing Roller Sensor (PC14) even after the lapse of a given period of time after the 1st Drawer Paper Take-Up Clutch (CL1) has been energized.
1st Drawer size error detection	The Synchronizing Roller Sensor (PC14) is not unblocked even after the lapse of a given period of time after it has been blocked by the paper.

<Action>

Relevant Electrical Parts	
Synchronizing Roller Sensor (PC14) 1st Drawer Paper Take-Up Clutch (CL1)	IO Board (PWB-IO)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Initial check items	T-12	—	—
2	PC14 I/O check	T-4 to T-10	—	2-I
3	CL1 operation check	T-2	PWB-IO PJ10IO-8 (ON)	8-A
4	Change PWB-IO.	—	—	—

(2) 2nd Drawer Paper Take-Up Misfeed

<Detection Timing>

Type	Description
Paper take-up failure detection	The leading edge of the paper does not block the 2nd Drawer Paper Take-Up Sensor (PC101) even after the lapse of a given period of time after the 2nd Drawer Paper Take-Up Clutch (CL101) has been energized.
2nd Drawer size error detection	The 2nd Drawer Paper Take-Up Sensor (PC101) is not unblocked even after the lapse of a given period of time after it has been blocked by the paper.
Detection of paper left in 2nd Drawer	The 2nd Drawer Paper Take-Up Sensor (PC101) is blocked when the Power Switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

<Action>

Relevant Electrical Parts	
2nd Drawer Take-Up Sensor (PC101) 2nd Drawer Take-Up Clutch (CL101) 2nd Drawer Take-Up Motor (M101)	2nd Drawer Control Board (PWB-A)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Initial check items	T-12	—	—
2	PC101 I/O check	T-4 to T-10	—	6-H
3	CL101 operation check	T-2	PWB-A PJ3A-14B (ON)	5-I
4	M101 operation check	T-3	PWB-A PJ5A-1 to 4 (Pulse Output)	6-G
5	Change PWB-A.	—	—	—

(3) 3rd Drawer Paper Take-Up Misfeed (PF-232)

<Detection Timing>

Type	Description
Paper take-up failure detection	The leading edge of the paper does not block the 3rd Drawer Paper Take-Up Sensor (PC1) even after the lapse of a given period of time after the 3rd Drawer Paper Take-Up Clutch (CL1) has been energized.
3rd Drawer size error detection	The 3rd Drawer Paper Take-Up Sensor (PC1) is not unblocked even after the lapse of a given period of time after it has been blocked by the paper.
Detection of paper left in 3rd Drawer	The 3rd Drawer Paper Take-Up Sensor (PC1) is blocked when the Power Switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

<Action>

Relevant Electrical Parts	
3rd Drawer Take-Up Sensor (PC1) 3rd Drawer Take-Up Clutch (CL1) 3rd Drawer Take-Up Motor (M1)	3rd Drawer Control Board (PWB-A)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Initial check items	T-12	—	—
2	PC1 I/O check	T-4 to T-10	—	2-D
3	CL1 operation check	T-2	PWB-A PJ3A-14B (ON)	2-I
4	M1 operation check	T-3	PWB-A PJ5A-1 to 4 (Pulse Output)	2-A
5	Change PWB-A.	—	—	—

(4) LCT Paper Take-Up Misfeed (DB-432)

<Detection Timing>

Type	Description
LCT paper take-up failure detection	The LCT Exit signal does not turn ON even after the lapse of a given period of time after an LCT paper take-up request has been issued.
	The LCT Registration Sensor (RSEN) is not blocked even after the lapse of a given period of time after an LCT paper take-up request has been issued.
LCT size error detection	The 2nd Drawer Paper Take-Up Sensor (PC101) is not blocked even after the lapse of a given period of time after it has been blocked by the paper.
Detection of paper left in LCT	The LCT Registration Sensor (RSEN) or 2nd Drawer Paper Take-Up Sensor (PC101) is blocked when the Power Switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

<Action>

Relevant Electrical Parts	
LCT Paper Take-Up Sensor (PPS0) LCT Registration Sensor (RSEN) 2nd Drawer Paper Take-Up Sensor (PC101) LCT Paper Take-Up Clutch1 (P1CL) LCT Paper Take-Up Clutch2 (P2CL)	LCT Separator Clutch (BCL) LCT Registration Clutch (RCL) LCT Control Board (PWB-A)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Initial check items	T-12	—	—
2	PPS0 I/O check	T-4 to T-10	—	7-D
3	RSEN I/O check	T-4 to T-10	—	7-E
4	PC101 I/O check	T-4 to T-10	—	6-H (Copier)
5	P1CL operation check	T-2	PWB-A CN7A-8 (ON)	7-B
6	P2CL operation check	T-2	PWB-A CN7A-6 (ON)	7-B
7	BCL operation check	T-2	PWB-A CN7A-2 (ON)	7-C
8	RCL operation check	T-2	PWB-A CN7A-4 (ON)	7-C
9	Change PWB-A.	—	—	—

(5) 4th Drawer Paper Take-Up Misfeed (PF-232)

<Detection Timing>

Type	Description
Paper take-up failure detection	The leading edge of the paper does not block the 4th Drawer Paper Take-Up Sensor (PC1) even after the lapse of a given period of time after the 4th Drawer Paper Take-Up Clutch (CL1) has been energized.
4th Drawer size error detection	The 4th Drawer Paper Take-Up Sensor (PC1) is not unblocked even after the lapse of a given period of time after it has been blocked by the paper.
Detection of paper left in 4th Drawer	The 4th Drawer Paper Take-Up Sensor (PC1) is blocked when the Power Switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

<Action>

Relevant Electrical Parts	
4th Drawer Take-Up Sensor (PC1) 4th Drawer Take-Up Clutch (CL1) 4th Drawer Take-Up Motor (M1)	4th Drawer Control Board (PWB-A)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Initial check items	T-12	—	—
2	PC1 I/O check	T-4 to T-10	—	2-D
3	CL1 operation check	T-2	PWB-A PJ3A-14B (ON)	2-I
4	M1 operation check	T-3	PWB-A PJ5A-1 to 4 (Pulse Output)	2-A
5	Change PWB-A.	—	—	—

(6) LCT Lift 2 to 1 paper transport Misfeed (DB-432)

<Detection Timing>

Type	Description
Lift 2 to 1 misfeed detection	The LCT Paper Take-Up Sensor (PPS0) is not blocked even after the lapse of a given period of time after an LCT paper take-up request has been issued.
	The LCT Registration Sensor (RSEN) is not blocked even after the lapse of a given period of time after an LCT paper take-up request has been issued.
	The Paper Standby Position Sensor (S1) is not blocked even after the lapse of a given period of time after an LCT paper take-up request has been issued.

<Action>

Relevant Electrical Parts	
LCT Paper Take-Up Sensor (PPS0) Paper Standby Position Sensor (S1) LCT Registration Sensor (RSEN) LCT Paper Take-Up Clutch1 (P1CL) LCT Paper Take-Up Clutch2 (P2CL)	LCT Separator Clutch (BCL) LCT Registration Clutch (RCL) LCT Control Board (PWB-A)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Initial check items	T-12	—	—
2	PPS0 I/O check	T-4 to T-10	—	7-D
3	RSEN I/O check	T-4 to T-10	—	7-E
4	S1 I/O check	T-4 to T-10	—	7-G
5	P1CL operation check	T-2	PWB-A CN7A-8 (ON)	7-B
6	P2CL operation check	T-2	PWB-A CN7A-6 (ON)	7-B
7	BCL operation check	T-2	PWB-A CN7A-2 (ON)	7-C
8	RCL operation check	T-2	PWB-A CN7A-4 (ON)	7-C
9	Change PWB-A.	—	—	—

(7) Manual Bypass Take-Up Misfeed

<Detection Timing>

Type	Description
Manual bypass paper take-up failure detection	The Synchronizing Roller Sensor (PC14) is not blocked even after the lapse of a given period of time after the Manual Feed Paper Take-Up Sensor (PC15) has been blocked by the paper.
Manual bypass size error detection	The Synchronizing Roller Sensor (PC14) is not unblocked even after the lapse of a given period of time after it has been blocked by the paper.
Detection of paper left in Manual Bypass Table	The Manual Feed Paper Take-Up Sensor (PC15) is blocked when the Power Switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

<Action>

Relevant Electrical Parts	
Manual Feed Paper Take-Up Sensor (PC15) Synchronizing Roller Sensor (PC14) Manual Feed Paper Take-Up Clutch (CL3)	IO Board (PWB-IO)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Initial check items	T-12	—	—
2	PC15 I/O check	T-4 to T-10	—	1-B
3	PC14 I/O check	T-4 to T-10	—	2-I
4	CL3 operation check	T-2	PWB-IO PJ10IO-1 (ON)	1-A
5	Change PWB-IO.	—	—	—

(8) Vertical Transport Misfeed

<Detection Timing>

Type	Description
Vertical Transport misfeed detection	(Copier) The Synchronizing Roller Sensor (PC14) is not blocked even after the lapse of a given period of time after the 2nd Drawer Paper Take-Up Sensor (PC101) has been blocked by the paper.
	(PF-232) The 2nd Drawer Paper Take-Up Sensor (PC101) is not blocked even after the lapse of a given period of time after the 3rd Drawer Paper Take-Up Sensor (PC1) has been blocked by the paper.
	(PF-232) The 3rd Drawer Paper Take-Up Sensor (PC1) is not blocked even after the lapse of a given period of time after the 4th Drawer Paper Take-Up Sensor (PC1) has been blocked by the paper.
	(DB-432) The 2nd Drawer Paper Take-Up Sensor (PC101) is not blocked even after the lapse of a given period of time after an LCT paper take-up request has been issued.

<Action>

Copier

Relevant Electrical Parts	
2nd Drawer Paper Take-Up Sensor (PC101) Synchronizing Roller Sensor (PC14) 2nd Drawer Paper Take-Up Clutch (CL101) 2nd Drawer Paper Take-Up Motor (M101)	2nd Drawer Control Board (PWB-A)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Initial check items	T-12	—	—
2	PC101 I/O check	T-4 to T-10	—	6-H
3	PC14 I/O check	T-4 to T-10	—	2-I
4	CL101 operation check	T-2	PWB-A PJ13A-14B (ON)	5-I
5	M101 operation check	T-3	PWB-A PJ5A-1 to 4 (Pulse Output)	6-G
6	Change PWB-A.	—	—	—

PF-232

Relevant Electrical Parts	
2nd Drawer Paper Take-Up Sensor (PC101) 3rd Drawer Paper Take-Up Sensor (PC1) 4th Drawer Paper Take-Up Sensor (PC1) 3rd Drawer Paper Take-Up Clutch (CL1) 4th Drawer Paper Take-Up Clutch (CL1)	3rd Drawer Paper Take-Up Motor (M1) 4th Drawer Paper Take-Up Motor (M1) 3rd Drawer Control Board (PWB-A) 4th Drawer Control Board (PWB-A)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Initial check items	T-12	—	—
2	PC101 I/O check	T-4 to T-10	—	6-H (Copier)
3	PC1(3rd Drawer) I/O check	T-4 to T-10	—	2-D
4	PC1(4th Drawer) I/O check	T-4 to T-10	—	2-D
5	CL1(3rd Drawer) operation check	T-2	PWB-A PJ3A-14B (ON)	2-I
6	CL1(4th Drawer) operation check	T-2	PWB-A PJ3A-14B (ON)	2-I
7	M1(3rd Drawer) operation check	T-3	PWB-A PJ5A-1 to 4 (Pulse Output)	2-A
8	M1(4th Drawer) operation check	T-3	PWB-A PJ5A-1 to 4 (Pulse Output)	2-A
9	Change PWB-A (3rd Drawer).	—	—	—
10	Change PWB-A (4th Drawer).	—	—	—

DB-432

Relevant Electrical Parts	
LCT Paper Take-Up Sensor (PPS0) LCT Registration Sensor (RSEN) 2nd Drawer Paper Take-Up Sensor (PC101) LCT Paper Take-Up Clutch1 (P1CL) LCT Paper Take-Up Clutch2 (P2CL)	LCT Separator Clutch (BCL) LCT Registration Clutch (RCL) LCT Control Board (PWB-A)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Initial check items	T-12	—	—
2	PC101 I/O check	T-4 to T-10	—	6-H (Copier)
3	PPS0 I/O check	T-4 to T-10	—	7-D
4	RSEN I/O check	T-4 to T-10	—	7-E
5	P1CL operation check	T-2	PWB-A CN7A-8 (ON)	7-B
6	P2CL operation check	T-2	PWB-A CN7A-6 (ON)	7-B
7	BCL operation check	T-2	PWB-A CN7A-2 (ON)	7-C
8	RCL operation check	T-2	PWB-A CN7A-4 (ON)	7-C
9	Change PWB-A.	—	—	—

(9) Duplex Paper Take-Up Misfeed (AD-231)

<Detection Timing>

Type	Description
Duplex paper take-up misfeed detection	The Synchronizing Roller Sensor (PC14) is not blocked even after the lapse of a given period of time after a Duplex paper take-up sequence has been started.

<Action>

Relevant Electrical Parts	
Synchronizing Roller Sensor (PC14) Duplex Unit Motor (M2)	Duplex Control Board (PWB-A) IO Board (PWB-IO)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Initial check items	T-12	—	—
3	PC14 I/O check	T-4 to T-10	—	2-I (Copier)
4	M2 operation check	T-3	PWB-A PJ2A-1 to 4 (Pulse Output))	2-H
5	Change PWB-A.	—	—	—
6	Change PWB-IO.	—	—	—

(10) Duplex Paper Transport Misfeed (AD-231)

<Detection Timing>

Type	Description
Duplex transport misfeed detection	The Manual Feed Paper Take-Up Sensor (PC15) is not blocked even after the lapse of a given period of time after a Duplex paper take-up sequence has been started.
	The Duplex Unit Transport Sensor 2 (PC1) is not blocked even after the lapse of a given period of time after the Duplex Unit Transport Sensor 1 (PI1) has been blocked by the paper.
Detection of paper left in Duplex	The Duplex Unit Transport Sensor 1 (PI1) or Duplex Unit Transport Sensor 2 (PC1) is blocked when the Power Switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

<Action>

Relevant Electrical Parts	
Manual Feed Paper Take-Up Sensor (PC15) Duplex Unit Transport Sensor 1 (PI1) Duplex Unit Transport Sensor 2 (PC1) Switchback Motor (M1) Duplex Unit Motor (M2)	Duplex Control Board (PWB-A) IO Board (PWB-IO)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Initial check items	T-12	—	—
2	PC15 I/O check	T-4 to T-10	—	1-B (Copier)
3	PI1 I/O check	T-4 to T-10	—	4-H
4	PC1 I/O check	T-4 to T-10	—	2-C
5	M1 operation check	T-3	PWB-A PJ3A-1 to 4 (Pulse Output))	7-D
6	M2 operation check	T-3	PWB-A PJ2A-1 to 4 (Pulse Output))	2-H
7	Change PWB-A.	—	—	—
8	Change PWB-IO.	—	—	—

(11) 2nd Image Transfer Misfeed

<Detection Timing>

Type	Description
2nd Image Transfer misfeed detection	The Synchronizing Roller Sensor (PC14) is not unblocked even after the lapse of a given period of time after it has been blocked by the paper.
	The Exit Sensor (PC10) is not blocked even after the lapse of a given period of time after the Synchronizing Roller Sensor (PC14) has been blocked by the paper.
Detection of paper left at 2nd Image Transfer	The Synchronizing Roller Sensor (PC14) is blocked when the Power Switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.
	The OHP Detecting Sensor (PC19) is blocked when the Power Switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

<Action>

Relevant Electrical Parts	
Synchronizing Roller Sensor (PC14) Exit Sensor (PC10) OHP Detecting Sensor (PC19)	IO Board (PWB-IO)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Initial check items	T-12	—	—
2	PC14 I/O check	T-4 to T-10	—	2-I
3	PC10 I/O check	T-4 to T-10	—	8-F
4	PC19 I/O check	T-4 to T-10	—	2-I
5	Change PWB-IO.	—	—	—

(12) Fusing/Exit Misfeed

<Detection Timing>

Type	Description
Fusing/Exit misfeed detection	The Exit Sensor (PC10) is not unblocked even after the lapse of a given period of time after it has been blocked by the paper.
	The Duplex Unit Transport Sensor 1 (PI1) is not blocked even after the lapse of a given period of time after the Exit Sensor (PC10) has been unblocked by the paper during a switchback sequence.
Detection of paper left at Fusing/Exit	The Exit Sensor (PC10) is blocked when the Power Switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

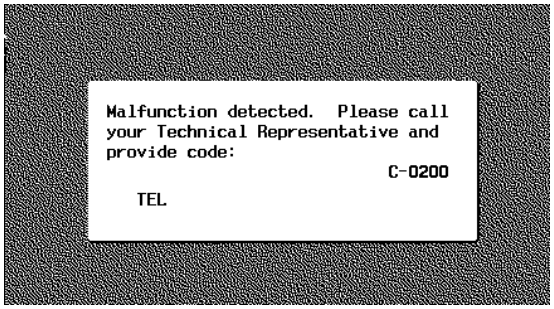
<Action>

Relevant Electrical Parts	
Exit Sensor (PC10) Duplex Unit Transport Sensor 1 (PI1)	IO Board (PWB-IO)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Initial check items	T-12	—	—
2	PC10 I/O check	T-4 to T-10	—	8-F
3	PI1 I/O check	T-4 to T-10	—	4-H (AD-231)
4	Change PWB-IO.	—	—	—

3. MALFUNCTIONS

- The copier's CPU performs a self-diagnostics function that, on detecting a malfunction, gives the corresponding malfunction code and maintenance call mark on the Touch Panel.



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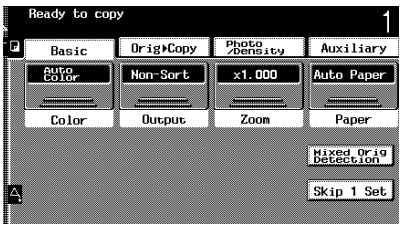
Resetting a Malfunction

- *Press the Trouble Reset Switch on the Tech. Rep. Setting Switches Board to reset the following malfunctions: scanner-related malfunctions, fusing-related malfunctions, exposure lamp-related malfunctions and C3FFF.*
- *For any other malfunctions, open and close the Front Door or turn OFF and ON the Power Switch.*

<Warning>

When a warning condition is detected, the maintenance call mark will be displayed on the Touch Panel. Touching the maintenance call mark will display the corresponding warning code on the State Confirm screen.



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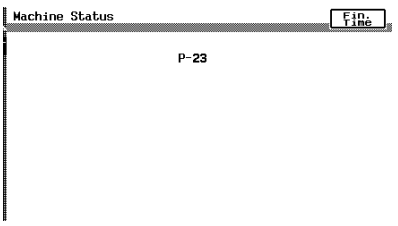

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3-1. Warning Detection Timing and Troubleshooting Procedure

- If an image stabilization or IR-related fault occurs, the corresponding warning code appears.

(1) P-5: AIDC Sensor (Front) failure

(2) P-28 AIDC Sensor (Back) failure

<Detection Timing>

Warning Code	Description
P-5	• The output from the photoreceiver of the AIDC Sensor that takes a reading of a point of a bare surface on the Transfer Belt is 4.5 V or more during an adjustment of the AIDC Sensor. • The output from the photoreceiver of the AIDC Sensor that takes a reading of a point in a toner pattern on the Transfer Belt is 1.0 V or less after the adjustment has been completed.
P-28	

<Action>

Relevant Electrical Parts	
AIDC Sensor 1 (UN20) AIDC Sensor 2 (UN21)	IO Board (PWB-IO) Image Transfer Belt Unit

Step	Action
1	Wipe clean the surface of the Transfer Belt with a soft cloth, if it is dirty.
2	Change the Image Transfer Belt Unit if the Transfer Belt is damaged.
3	Reinstall or reconnect UN20 or UN21 if it is installed or connected improperly.
4	Clean UN20 or UN21 if it is dirty.
5	Open and close the Left Door, run an image stabilization sequence, and select “State Confirm” -> “Level History 1” to check the AIDC value. If the value is 1.0 V or less, change UN20 or UN21.
6	Change PWB-IO.

(3) P-6: Cyan IU failure

(4) P-7: Magenta IU failure

(5) P-8: Yellow IU failure

(6) P-9: Black IU failure

<Detection Timing>

Warning Code	Description
P-6	All density readings taken from the density pattern produced on the Transfer Belt are 0.4 V (AIDC Sensor photoreceiver output) or less during max. density adjustment (Vg/Vb adjustment).
P-7	
P-8	
P-9	

<Action>

Relevant Electrical Parts	
IU (C) IU (M) IU (Y) IU (Bk)	Image Transfer Belt Unit

Step	Action
1	Select “Image Adjust” → “PRT Max Density” and, if the setting value is negative, readjust.
2	Check the drive transmission portion of the IU and correct as necessary.
3	Clean the AIDC Sensor window if dirty.
4	Clean the contact of the IU connector if dirty.
5	Change IU.
6	Change the Image Transfer Belt Unit.

(7) P-21: Color Shift Test Pattern failure

<Detection Timing>

Warning Code	Description
P-21	• The number of points detected in the CD direction is more or less than the specified value during CD registration correction. • The number of points detected in the FD direction is more or less than the specified value during FD registration correction.

<Action>

Relevant Electrical Parts
Image Transfer Belt Unit

Step	Action
1	Wipe clean the surface of the Transfer Belt with a soft cloth, if it is dirty.
2	Change the Image Transfer Belt Unit if the Transfer Belt is damaged.

(8) P-22: Color Shift Adjust failure

<Detection Timing>

Warning Code	Description
P-22	• The color shift amount is greater than the specified range during CD registration correction. • The color shift amount is greater than the specified range during FD registration correction. • The skew correction amount is greater than the specified value.

<Action>

Relevant Electrical Parts	
Regist Sensor 1 (UN20)	Regist Sensor 2 (UN21)

Step	Action
1	Check the LED retraction lever for locked position and, if there is any faulty condition evident, slide out the IU and reinstall it in position.
2	Reinstall or reconnect UN20 or UN21 if it is installed or connected improperly.
3	Check the Vertical Transport Guide for installed position and correct as necessary.

(9) P-23: ATVC(C) failure

(10) P-24: ATVC(M) failure

(11) P-25: ATVC(Y) failure

(12) P-26: ATVC(Bk) failure

(13) P-27: ATVC(2nd) failure

<Detection Timing>

Warning Code	Description
P-23	An abnormal average value is detected during an adjustment of the first image transfer ATVC value of each color.
P-24	
P-25	
P-26	
P-27	An abnormal average value is detected during an adjustment of the second image transfer ATVC value.

<Action>

Relevant Electrical Parts	
High Voltage Unit (Image Transfer, Neutralizing) HV2	IO Board (PWB-IO) Image Transfer Belt Unit

Step	Action
1	Check the contact of the Transfer Belt Unit and that of HV2 for connection and clean or correct the contact as necessary.
2	Change the Image Transfer Belt Unit.
3	Change HV2.
4	Change PWB-IO.

3-2. Malfunction Detection Timing and Troubleshooting Procedure

(1) C0000: Main Motor's failure to turn

(2) C0001: Main Motor Turning at abnormal timing

<Detection Timing>

Malfunction Code	Description
C0000	The Main Motor Lock signal remains HIGH for a predetermined continuous period of time while the Main Motor is turning.
C0001	The Main Motor Lock signal remains LOW for a predetermined continuous period of time while the Main Motor remains stationary.

<Action>

Relevant Electrical Parts	
Main Motor (M13)	IO Board (PWB-IO) DC Power Supply 1 (PU1)

✻ C0000

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Check the M13 connector for proper connection and correct as necessary.	—	—	—
2	Check M13 for proper drive coupling and correct as necessary.	—	—	—
3	Check the PU1 connector for proper connection and correct as necessary.	—	PU1 PJ6 PU1-1 (DC24V)	28-G
4	M13 operation check	T-3	PWB-IO PJ5IO-1A (LOCK) PWB-IO PJ5IO-4A (REM)	35-A
5	Change PWB-IO.	—	—	—
6	Change PU1.	—	—	—

✻ C0001

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	M13 operation check	T-3	PWB-IO PJ5IO-1A (LOCK) PWB-IO PJ5IO-4A (REM)	35-A
2	Change PWB-IO.	—	—	—

(3) C0010: Imaging Unit Motor C's failure to turn

(4) C0011: Imaging Unit C turning at abnormal timing

(5) C0012: Imaging Unit Motor M's failure to turn

(6) C0013: Imaging Unit M turning at abnormal timing

(7) C0014: Imaging Unit Motor Y's failure to turn

(8) C0015: Imaging Unit Y turning at abnormal timing

(9) C0016: Imaging Unit Motor Bk's failure to turn

(10) C0017: Imaging Unit Bk turning at abnormal timing

<Detection Timing>

Malfunction Code	Description
C0010	The Imaging Unit Motor C Lock signal remains HIGH for a predetermined continuous period of time while the Imaging Unit Motor C is turning.
C0011	The Imaging Unit Motor C Lock signal remains LOW for a predetermined continuous period of time while the Imaging Unit Motor C remains stationary.
C0012	The Imaging Unit Motor M Lock signal remains HIGH for a predetermined continuous period of time while the Imaging Unit Motor M is turning.
C0013	The Imaging Unit Motor M Lock signal remains LOW for a predetermined continuous period of time while the Imaging Unit Motor M remains stationary.
C0014	The Imaging Unit Motor Y Lock signal remains HIGH for a predetermined continuous period of time while the Imaging Unit Motor Y is turning.
C0015	The Imaging Unit Motor Y Lock signal remains LOW for a predetermined continuous period of time while the Imaging Unit Motor Y remains stationary.
C0016	The Imaging Unit Motor Bk Lock signal remains HIGH for a predetermined continuous period of time while the Imaging Unit Motor Bk is turning.
C0017	The Imaging Unit Motor Bk Lock signal remains LOW for a predetermined continuous period of time while the Imaging Unit Motor Bk remains stationary.

<Action>

Relevant Electrical Parts	
IU Motor C (M17) IU Motor M (M16) IU Motor Y (M15) IU Motor Bk (M18)	IO Board (PWB-IO) DC Power Supply 1 (PU1)

✻ C0010, C0012, C0014, C0016

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Check the connector of each motor for proper connection and correct as necessary.	—	—	—
2	Check the connector of each motor for proper drive coupling and correct as necessary.	—	—	—
3	Check the PU1 connector for proper connection and correct as necessary.	—	PU1 PJ7PU1-1 (DC24V)	28-G
4	M15 operation check	T-3	PWB-IO PJ17IO-5A (LOCK) PWB-IO PJ17IO-6A (REM)	16-A
5	M16 operation check	T-3	PWB-IO PJ17IO-11A(LOCK) PWB-IO PJ17IO-12A(REM)	17-B
6	M17 operation check	T-3	PWB-IO PJ17IO-5B(LOCK) PWB-IO PJ17IO-6B(REM)	16-C
7	M18 operation check	T-3	PWB-IO PJ17IO-11B(LOCK) PWB-IO PJ17IO-12B(REM)	18-C
8	Change PWB-IO.	—	—	—
9	Change PU1.	—	—	—

✻ C0011, C0013, C0015, C0017

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	M15 operation check	T-3	PWB-IO PJ17IO-5A(LOCK) PWB-IO PJ17IO-6A(REM)	16-A
2	M16 operation check	T-3	PWB-IO PJ17IO-11A(LOCK) PWB-IO PJ17IO-12A(REM)	17-B
3	M17 operation check	T-3	PWB-IO PJ17IO-5B(LOCK) PWB-IO PJ17IO-6B(REM)	16-C
4	M18 operation check	T-3	PWB-IO PJ17IO-11B(LOCK) PWB-IO PJ17IO-12B(REM)	18-C
5	Change PWB-IO.	—	—	—

(11) C0040: Suction Fan Motor's failure to turn

(12) C0043: Cooling Fan Motor 1's failure to turn

(13) C0044: Cooling Fan Motor 3's failure to turn

(14) C0045: Cooling Fan Motor 4/5's failure to turn

(15) C0046: Fusing Cooling Fan Motor's failure to turn

(16) C004C: Ozone Ventilation Fan Motor's failure to turn

(17) C004E: Power Supply Cooling Fan Motor's failure to turn

(18) C004F: Cooling Fan Motor 2's failure to turn

<Detection Timing>

Malfunction Code	Description
C0040	The Fan Lock signal remains HIGH for a predetermined continuous period of time while the Suction Fan Motor is turning.
C0043	The Fan Lock signal remains HIGH for a predetermined continuous period of time while the Cooling Fan Motor 1 is turning.
C0044	The Fan Lock signal remains HIGH for a predetermined continuous period of time while the Cooling Fan Motor 3 is turning.
C0045	The Fan Lock signal remains HIGH for a predetermined continuous period of time while the Cooling Fan Motor 4/5 is turning.
C0046	The Fan Lock signal remains HIGH for a predetermined continuous period of time while the Fusing Cooling Fan Motor is turning.
C004C	The Fan Lock signal remains HIGH for a predetermined continuous period of time while the Ozone Ventilation Fan Motor is turning.
C004E	The Fan Lock signal remains HIGH for a predetermined continuous period of time while the Power Supply Cooling Fan Motor is turning.
C004F	The Fan Lock signal remains HIGH for a predetermined continuous period of time while the Cooling Fan Motor 2 is turning.

<Action>

Relevant Electrical Parts	
Suction Fan Motor (M23) Cooling Fan Motor 1 (M25) Cooling Fan Motor 2 (M26) Cooling Fan Motor 3 (M27) Cooling Fan Motor 4 (M28) Cooling Fan Motor 5 (M29) Fusing Cooling Fan Motor (M24) Ozone Ventilation Fan Motor (M22) Power Supply Cooling Fan Motor (M21)	High Voltage Unit (Developing Bias) HV3 IO Board (PWB-IO) DC Power Supply 1 (PU1) DC Power Supply 2 (PU2)

✻ C0040

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Check the motor connector for proper connection and correct as necessary.	—	—	—
2	Check the fan for possible overload and correct as necessary.	—	—	—
3	M23 operation check	T-3	PWB-IO PJ10IO-13(LOCK) PWB-IO PJ10IO-11(REM)	2-H
4	Change PWB-IO.	—	—	—

✻ C0043

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Check the motor connector for proper connection and correct as necessary.	—	—	—
2	Check the fan for possible overload and correct as necessary.	—	—	—
3	M25 operation check	T-3	PWB-IO PJ6IO-14(LOCK) PWB-IO PJ6IO-12(REM)	35-A
4	Change PWB-IO.	—	—	—

✻ C0044

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Check the motor connector for proper connection and correct as necessary.	—	—	—
2	Check the fan for possible overload and correct as necessary.	—	—	—
3	M27 operation check	T-3	PWB-IO PJ29IO-3(LOCK) PWB-IO PJ29IO-1(REM)	35-B
4	Change PWB-IO.	—	—	—

✻ C0045

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Check the motor connector for proper connection and correct as necessary.	—	—	—
2	Check the fan for possible overload and correct as necessary.	—	—	—
3	M28, M29 operation check	T-3	PJ25IO-4B(LOCK): M28 PJ25IO-2B(REM): M28 PJ25IO-9B(LOCK): M29 PJ25IO-7B(REM): M29	35-B: M28 35-C: M29
4	Change PWB-IO.	—	—	—

✻ C0046

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Check the motor connector for proper connection and correct as necessary.	—	—	—
2	Check the fan for possible overload and correct as necessary.	—	—	—
3	M24 operation check	T-3	PU2 CN2PU2-9(LOCK) PU2 CN2PU2-7(REM)	2-F
4	Change PU2.	—	—	—

✻ C004C

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Check the motor connector for proper connection and correct as necessary.	—	—	—
2	Check the fan for possible overload and correct as necessary.	—	—	—
3	M22 operation check	T-3	PWB-IO PJ23IO-15(LOCK) PWB-IO PJ23IO-14(REM)	19-A
4	Change PWB-IO.	—	—	—
5	Change HV3.	—	—	19-B, C

✻ C004E

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Check the motor connector for proper connection and correct as necessary.	—	—	—
2	Check the fan for possible overload and correct as necessary.	—	—	—
3	M21 operation check	T-3	PU1 PJ12PU1-1(LOCK) PU1 PJ12PU1-3(REM)	29-I
4	Change PU1.	—	—	—

✻ C004F

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Check the motor connector for proper connection and correct as necessary.	—	—	—
2	Check the fan for possible overload and correct as necessary.	—	—	—
3	M26 operation check	T-3	PWB-IO PJ28IO-9(LOCK) PWB-IO PJ28IO-7(REM)	35-B
4	Change PWB-IO.	—	—	—

(19) C0060: Fusing Drive Motor's failure to turn

(20) C0061: Fusing Drive Motor turning at abnormal timing

<Detection Timing>

Malfunction Code	Description
C0060	The Fusing Drive Motor Lock signal remains HIGH for a predetermined continuous period of time while the Fusing Drive Motor is turning.
C0061	The Fusing Drive Motor Lock signal remains LOW for a predetermined continuous period of time while the Fusing Drive Motor remains stationary.

<Action>

Relevant Electrical Parts	
Fusing Drive Motor (M14)	IO Board (PWB-IO) DC Power Supply 1 (PU1)

✻ C0060

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Check the M14 connector for proper connection and correct as necessary.	—	—	—
2	Check the Fusing Unit drive for possible overload and correct as necessary.	—	—	—
3	Check the PU1 connector for proper connection and correct as necessary.	—	PU1 PJ6PU1-1(DC24V)	28-G
4	M14 operation check	T-3	PWB-IO PJ5IO-7A(LOCK) PWB-IO PJ5IO-10A(REM)	2-E
5	Change PWB-IO.	—	—	—
6	Change PU1.	—	—	—

✻ C0061

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	M14 operation check	T-3	PWB-IO PJ5IO-7A(LOCK) PWB-IO PJ5IO-10A(REM)	2-E
2	Change PWB-IO.	—	—	—

(21) C0094: 2nd Image Transfer Roller pressure/retraction failure

<Detection Timing>

Malfunction Code	Description
C0094	• The 2nd Image Transfer Pressure Position Sensor is not activated (retracted position) within 2 sec. after the 2nd Image Transfer Pressure/Retraction Motor has started turning during a sequence of the 2nd Image Transfer Roller's retracting motion. • The 2nd Image Transfer Pressure Position Sensor is not deactivated (pressed position) within 2 sec. after the 2nd Image Transfer Pressure/Retraction Motor has started turning during a sequence of the 2nd Image Transfer Roller's pressing motion.

<Action>

Relevant Electrical Parts	
2nd Image Transfer Pressure Position Sensor (PC23) 2nd Image Transfer Pressure/Retraction Motor (M12)	IO Board (PWB-IO)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Check the M12 connector for proper connection and correct as necessary.	—	—	—
2	PC23 I/O check	T-4 to T-10	—	5-E
3	M12 operation check	T-3	PWB-IO PJ10IO-9(REM)	5-D
4	Change PWB-IO.	—	—	—

(22) C0096: Image Transfer Belt pressure/retraction failure

<Detection Timing>

Malfunction Code	Description
C0096	• The 1st Image Transfer Retraction Position Sensor is not activated (retracted position) within 3 sec. after the 1st Image Transfer Pressure/Retraction Motor has started turning during a sequence of the Transfer Belt's retracting motion. • The 1st Image Transfer Retraction Position Sensor is not deactivated (pressed position) within 1 sec. after the 1st Image Transfer Pressure/Retraction Motor has started turning during a sequence of the Transfer Belt's pressing motion.

<Action>

Relevant Electrical Parts	
1st Image Transfer Retraction Position Sensor (PC28) 1st Image Transfer Pressure/Retraction Motor (M11)	IO Board (PWB-IO)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Check the M11 connector for proper connection and correct as necessary.	—	—	—
2	PC28 I/O check	T-4 to T-10	—	5-E
3	M11 operation check	T-3	PWB-IO PJ16IO-1 to 4 (Pulse Output)	5-D
4	Change PWB-IO.	—	—	—

(23) C0098: Fusing Pressure Roller pressure/retraction failure

<Detection Timing>

Malfunction Code	Description
C0098	• No change is observed in the encoder pulse of the Fusing Pressure/Retraction Motor even after the lapse of 0.5 sec. after the motor has started turning for a sequence of the Fusing Pressure Roller's retracting motion. • No change is observed in the encoder pulse of the Fusing Pressure/Retraction Motor even after the lapse of 0.5 sec. after the motor has started turning for a sequence of the Fusing Pressure Roller's pressing motion. • The Fusing Pressure Position Sensor is not activated (pressed position) even when 21 encoder pulses of the Fusing Pressure/Retraction Motor are counted after the motor has started turning for a sequence of the Fusing Pressure Roller's pressing motion.

<Action>

Relevant Electrical Parts	
Fusing Pressure/Retraction Motor (M8)	IO Board (PWB-IO) Fusing Unit

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Check the M8 connector for proper connection and correct as necessary.	—	—	—
2	M8 operation check	T-3	PWB-IO PJ13IO-4, 5	2-E
3	Change Fusing Unit.	—	—	—
4	Change PWB-IO.	—	—	—

(24) C0200: Cyan PC Drum Charge Corona malfunction

(25) C0202: Magenta PC Drum Charge Corona malfunction

(26) C0204: Yellow PC Drum Charge Corona malfunction

(27) C0206: Black PC Drum Charge Corona malfunction

(28) C0208: PC Drum Charge Corona malfunction

<Detection Timing>

Malfunction Code	Description
C0200	The SCD signal is detected for a continuous 0.7-sec. period when the Cyan PC Drum Charge Corona is automatically energized as the malfunction is reset after C0208 (PC Drum Charge Corona malfunction) has been detected.
C0202	The SCD signal is detected for a continuous 0.7-sec. period when the Magenta PC Drum Charge Corona is automatically energized as the malfunction is reset after C0208 (PC Drum Charge Corona malfunction) has been detected.
C0204	The SCD signal is detected for a continuous 0.7-sec. period when the Yellow PC Drum Charge Corona is automatically energized as the malfunction is reset after C0208 (PC Drum Charge Corona malfunction) has been detected.
C0206	The SCD signal is detected for a continuous 0.7-sec. period when the Black PC Drum Charge Corona is automatically energized as the malfunction is reset after C0208 (PC Drum Charge Corona malfunction) has been detected.
C0208	The SCD signal is detected for a continuous 0.7-sec. period while the PC Drum Charge Corona is being energized.

<Action>

Relevant Electrical Parts	
IU C/M/Y/Bk	High Voltage Unit (PC Drum CH.) HV1 IO Board (PWB-IO)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Check the IU contact and correct or clean as necessary.	—	—	—
2	Check the HV1 contact and correct or clean as necessary.	—	—	—
3	Change IU.	—	—	—
4	Change HV1.	—	—	—
5	Change PWB-IO	—	—	—

(29) C0400: Exposure Lamp's failure to turn ON

(30) C0410: Exposure Lamp turning ON at abnormal timing

<Detection Timing>

Malfunction Code	Description
C0400	The output from the CCD Sensor is a predetermined value or less during CCD Sensor gain adjustment.
C0410	The average output value of the CCD Sensor with the Scanner at its standby position is a predetermined value or more at the end of a scan job.

<Action>

Relevant Electrical Parts	
Scanner Assy Flat Cable	Image Processing Board (PWB-C)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Check the flat cable for proper connection and correct or change as necessary.	—	—	—
2	Change Scanner Assy.	—	—	—
3	Change PWB-C.	—	—	—

(31) C0500: Heating Roller warm-up failure

(32) C0501: Fusing Pressure Roller warm-up failure

(33) C0510: Heating Roller abnormally low temperature

(34) C0511: Fusing Pressure Roller abnormally low temperature

(35) C0520: Heating Roller abnormally high temperature

(36) C0521: Fusing Pressure Roller abnormally high temperature

<Detection Timing>

Malfunction Code	Description
C0500	• The Heating Roller Thermistor does not detect a predetermined temperature within 550 sec. after a warm-up cycle has been started and thus the copier does not complete the warm-up cycle. • The output from the Heating Roller Thermistor does not rise beyond a predetermined level within 30 sec. after the Heating Roller Heater Lamps have lit up.
C0501	• The temperature detected by the Fusing Pressure Roller Thermistor does not reach 100 °C within 230 sec. after a warm-up cycle has been started. • The output from the Heating Roller Thermistor does not rise beyond a predetermined level within 120 sec. after the Fusing Pressure Roller Heater Lamp has lit up.
C0510	• The Heating Roller Thermistor detects 160 °C or less for 1 sec. or more while the copier is in the standby state. • The Heating Roller Thermistor detects 160 °C or less for 1 sec. or more while the copier is in a print cycle. • The Heating Roller Thermistor detects 70 °C or less for 1 sec. or more while the copier is in the Low Power mode.
C0511	• The Fusing Pressure Roller Thermistor detects 100 °C or less for 1 sec. or more while the copier is in the standby state. • The Fusing Pressure Roller Thermistor detects 100 °C or less for 1 sec. or more while the copier is in a print cycle. • The Fusing Pressure Roller Thermistor detects 100 °C or less for 1 sec. or more while the copier is in the Low Power mode.
C0520	The Heating Roller Thermistor detects 220 °C or more for 1 sec. or more.
C0521	The Fusing Pressure Roller Thermistor detects 215 °C or more for 1 sec. or more.

<Action>

Relevant Electrical Parts	
Fusing Unit	DC Power Supply 1 (PU1) IO Board (PWB-IO)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Change PWB-IO.	—	—	—
2	Change Fusing Unit.	—	—	—
3	Change PU1.	—	—	—

(37) C0650: Scanner Home Sensor malfunction

(38) C0660: Scanner overrun failure

<Detection Timing>

Malfunction Code	Description
C0650	• The Scanner Home Sensor is unable to detect a Scanner when the Scanner is at a position to block the sensor. • The Scanner Home Sensor is unable to detect a Scanner despite the fact that the Scanner Motor has been energized to move the Scanner over the maximum traveling distance. • The Scanner Home Sensor detects a Scanner when the Scanner has moved a distance of 5 mm away from the position, at which it blocks the sensor.
C0660	The Scanner Home Sensor detects the Scanner at its home position during a period of time that begins with the time when a prescan command and a scan preparation command are executed and ends when a home return command is executed.

<Action>

Relevant Electrical Parts	
Scanner Home Sensor (PC201) Scanner Motor (M201)	Scanner Motor Drive Board (PWB-IC) Image Processing Board (PWB-C)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Correct or change the Scanner drive (cable, pulley, gear, belt) if it is faulty.	—	—	—
2	Correct the Scanner Motor set screw if loose.	—	—	—
3	Adjust “Top Image” and “FD-Mag.”	D-68	—	—
4	PC201 I/O check	T-4 to T-10	—	26-G
5	Change M201.	—	—	22-G
6	Change PWB-IC.	—	—	—
7	Change PWB-C.	—	—	—

(39) C0F30: Abnormally low toner density detected Cyan ATDC Sensor

(40) C0F31: Abnormally high toner density detected Cyan ATDC Sensor

(41) C0F32: Abnormally low toner density detected Magenta ATDC Sensor

(42) C0F33: Abnormally high toner density detected Magenta ATDC Sensor

(43) C0F34: Abnormally low toner density detected Yellow ATDC Sensor

(44) C0F35: Abnormally high toner density detected Yellow ATDC Sensor

<Detection Timing>

Malfunction Code	Description
C0F30	Toner density that is 3% or more lower than the target level is detected ten consecutive times while the Developing Unit is being energized during a print cycle, ATVC, or image stabilization sequence.
C0F31	Toner density that is 4% or more higher than the target level is detected ten consecutive times while the Developing Unit is being energized during a print cycle, ATVC, or image stabilization sequence.
C0F32	Toner density that is 3% or more lower than the target level is detected ten consecutive times while the Developing Unit is being energized during a print cycle, ATVC, or image stabilization sequence.
C0F33	Toner density that is 4% or more higher than the target level is detected ten consecutive times while the Developing Unit is being energized during a print cycle, ATVC, or image stabilization sequence.
C0F34	Toner density that is 3% or more lower than the target level is detected ten consecutive times while the Developing Unit is being energized during a print cycle, ATVC, or image stabilization sequence.
C0F35	Toner density that is 4% or more higher than the target level is detected ten consecutive times while the Developing Unit is being energized during a print cycle, ATVC, or image stabilization sequence.

<Action>

Relevant Electrical Parts	
ATDC Sensor C (PWB-N3) ATDC Sensor M (PWB-N2) ATDC Sensor Y (PWB-N1)	Toner Replenishing Motor C/Bk (M9) Toner Replenishing Motor Y/M (M10) IO Board (PWB-IO) PIC Board (PWB-PIC) IU C/M/Y

✻ C0F30, C0F32, C0F34

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Perform image troubleshooting procedure if image density is low.	T-91	—	—
2	Clean the ATDC Sensor window on the underside of the IU if dirty.	—	—	—
3	Correct the ATDC Sensor spring moving part if faulty.	—	—	—
4	Clean the ATDC Sensor LED if dirty.	—	—	—
5	Change ATDC Sensor C/M/Y.	—	—	10-B,C,D
6	M9, M10 operation check	T-3	PWB-IO PJ13IO-10 to 13 (Pulse Output): M9 PWB-IO PJ13IO-6 to 9 (Pulse Output): M10	10-A
7	Change IU C/M/Y.	—	—	—
8	Change PWB-IO.	—	—	—
9	Change PWB-PIC.	—	—	—

✻ C0F31, C0F33, C0F35

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Clean the ATDC Sensor window on the underside of the IU if dirty.	—	—	—
2	Clean the ATDC Sensor LED if dirty.	—	—	—
3	Correct the contact and/or wiring of the ATDC Sensor if faulty.	—	—	—
4	Change ATDC Sensor C/M/Y.	—	—	10-B,C,D
5	Change PWB-IO.	—	—	—
6	Change PWB-PIC.	—	—	—

(45) C0F36: Abnormally low toner density detected Cyan ATDC Sensor

(46) C0F37: Abnormally high toner density detected Cyan ATDC Sensor

<Detection Timing>

Malfunction Code	Description
C0F36	Toner density that is 3% or more lower than the target level is detected ten consecutive times while the Developing Unit is being energized during a print cycle, ATVC, or image stabilization sequence.
C0F37	Toner density that is 4% or more higher than the target level is detected ten consecutive times while the Developing Unit is being energized during a print cycle, ATVC, or image stabilization sequence.

<Action>

Relevant Electrical Parts	
IU Bk	Toner Replenishing Motor C/Bk (M9) IO Board (PWB-IO) PIC Board (PWB-PIC)

✻ C0F36

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Perform image troubleshooting procedure if image density is low.	T-91	—	—
2	M9 operation check	T-3	PWB-IO PJ13IO-10 to 13 (Pulse Output)	10-A
3	Change IU Bk.	—	—	—
4	Change PWB-IO.	—	—	—
5	Change PWB-PIC	—	—	—

✻ C0F37

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Correct the ATDC connection on the underside of the IU if faulty.	—	—	—
2	Clean or correct each contact of the IU if faulty.	—	—	—
3	Change IU Bk.	—	—	—
4	Change PWB-IO.	—	—	—
5	Change PWB-PIC	—	—	—

(47) C0F3A: Cyan ATDC Sensor adjustment failure

(48) C0F3B: Magenta ATDC Sensor adjustment failure

(49) C0F3C: Yellow ATDC Sensor adjustment failure

(50) C0F3D: Black ATDC Sensor adjustment failure

<Detection Timing>

Malfunction Code	Description
C0F3A	Cyan ATDC Sensor automatic adjustment does not function properly, failing to adjust to an appropriate value.
C0F3B	Magenta ATDC Sensor automatic adjustment does not function properly, failing to adjust to an appropriate value.
C0F3C	Yellow ATDC Sensor automatic adjustment does not function properly, failing to adjust to an appropriate value.
C0F3D	Black ATDC Sensor automatic adjustment does not function properly, failing to adjust to an appropriate value.

<Action>

Relevant Electrical Parts	
ATDC Sensor C (PWB-N3) ATDC Sensor M (PWB-N2) ATDC Sensor Y (PWB-N1)	Toner Replenishing Motor C/Bk (M9) Toner Replenishing Motor Y/M (M10) IO Board (PWB-IO) PIC Board (PWB-PIC) IU C/M/Y/Bk

✻ C0F3A, C0F3B, C0F3C

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Clean the ATDC Sensor window on the underside of the IU if dirty.	—	—	—
2	Clean the ATDC Sensor LED if dirty.	—	—	—
3	Correct the contact and/or wiring of the ATDC Sensor if faulty.	—	—	—
4	Reinstall IU C/M/Y.	—	—	—
5	M9, M10 operation check	T-3	PWB-IO PJ13IO-10 to 13 (Pulse Output): M9 PWB-IO PJ13IO-6 to 9 (Pulse Output): M10	10-A
6	Change IU C/M/Y.	—	—	—
7	Change PWB-IO.	—	—	—
8	Change PWB-PIC	—	—	—

✻ C0F3D

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Correct the ATDC connection on the underside of the IU if faulty.	—	—	—
2	Clean or correct each contact of the IU if faulty.	—	—	—
3	Change IU Bk.	—	—	—
4	Change PWB-IO.	—	—	—
5	Change PWB-PIC	—	—	—

(51) C1200: Memory mounting failure

<Detection Timing>

Malfunction Code	Description
C1200	The WORK memory or Controller Board are not mounted on the Image Control Board (PWB-F) when the printer controller X3e 31C-M is installed.

<Action>

Relevant Electrical Parts	
Image Control Board (PWB-F)	Controller Board WORK memory (DIMM Board)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Select “Tech. Rep. Mode” → “System Input” → “Peripheral Setting” and check for correct setting.	—	—	—
2	Check that WORK memory is correctly mounted on the Image Control Board (PWB-F).	—	—	—
3	Change WORK memory on the Image Control Board (PWB-F).	—	—	—
4	Change Controller Board on the Image Control Board (PWB-F).	—	—	—
5	Change PWB-F.	—	—	—

(52) C1203: Memory mounting failure

(53) C1204: Memory mounting failure

<Detection Timing>

Malfunction Code	Description
C1203	The FILE memory on the Image Control Board (PWB-F) is faulty.
C1204	The FILE memory on the Image Control Board (PWB-F) is short of capacity

<Action>

Relevant Electrical Parts	
Image Control Board (PWB-F)	FILE memory (DIMM Board)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Check that FILE memory is correctly mounted on the Image Control Board (PWB-F).	—	—	—
2	Change FILE memory on the Image Control Board (PWB-F).	—	—	—
3	Change PWB-F.	—	—	—

(54) C1220: Image Input Time Out

<Detection Timing>

Malfunction Code	Description
C1220	Image data is not input from the Image Processing Board (PWB-C) to the Image Control Board (PWB-F).

<Action>

Relevant Electrical Parts	
Image Control Board (PWB-F)	Image Processing Board (PWB-C)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Select “Tech. Rep. Mode” → “Machine Adjust” → “Memory/ Hard Disk Adjust” → “Memory Bus Check” →”IR →Memory”.	—	—	—
2	Check connection between PWB-F and PWB-C.	—	—	—
3	Change PWB-F.	—	—	—
4	Change PWB-C.	—	—	—

(55) C1229: Image Output Time Out

<Detection Timing>

Malfunction Code	Description
C1229	Image data is not output from the Image Control Board (PWB-F) to the PIC Board (PWB-PIC).

<Action>

Relevant Electrical Parts	
Image Control Board (PWB-F)	PIC Board (PWB-PIC)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Select “Tech. Rep. Mode” → “Machine Adjust” → “Memory/ Hard Disk Adjust” → “Memory Bus Check”→”Memory →PRT”.	—	—	—
2	Check connection between PWB-F and PWB-PIC.	—	—	—
3	Change PWB-F.	—	—	—
4	Change PWB-PIC.	—	—	—

(56) C1240: JBIG Error

(57) C1241: JBIG Error

(58) C1242: JBIG Error

(59) C1243: JBIG Error

<Detection Timing>

Malfunction Code	Description
C1240	Memory of the Image Control Board (PWB-F) is faulty.
C1241	
C1242	
C1243	

<Action>

Relevant Electrical Parts
Image Control Board (PWB-F)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Change PWB-F.	—	—	—

(60) C1261: Memory Board Time Out

(61) C1265: Memory Board Time Out

(62) C1279: Memory Board Time Out

<Detection Timing>

Malfunction Code	Description
C1261	Compression of image data of the Image Control Board (PWB-F) is faulty.
C1265	Decompression of image data of the Image Control Board (PWB-F) is faulty.
C1279	Transfer of image data of the Image Control Board (PWB-F) is faulty.

<Action>

Relevant Electrical Parts
Image Control Board (PWB-F)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Change PWB-F.	—	—	—

(63) C1290: Compress/Expand Time Out

<Detection Timing>

Malfunction Code	Description
C1290	Compression/decompression of image data of the Image Control Board (PWB-F) is faulty when the print controller IP-711 is mounted.

<Action>

Relevant Electrical Parts	
Image Control Board (PWB-F)	Controller Board

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Change Controller Board on the Image Control Board (PWB-F).	—	—	—
2	Change PWB-F.	—	—	—

(64) C12C0: Hard Disk Error

(65) C12CB: Hard Disk Error

<Detection Timing>

Malfunction Code	Description
C12C0	Unable to communicate between the hard disk and Image Control Board (PWB-F).
C12CB	Data transfer from the hard disk is faulty.

<Action>

Relevant Electrical Parts	
Image Control Board (PWB-F)	Hard Disk

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Reinstall the hard disk.	—	—	—
2	Change Hard Disk.	—	—	—
3	Change PWB-F.	—	—	—

(66) C12CC: Hard Disk Error

<Detection Timing>

Malfunction Code	Description
C12CC	Unformatted hard disk is connected.

<Action>

Relevant Electrical Parts	
Image Control Board (PWB-F)	Hard Disk

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Select “Tech. Rep. Mode” → “Machine Adjust” → “Memory/ Hard Disk Adjust” → “Hard Disk Format”	—	—	—
2	Change Hard Disk.	—	—	—
3	Change PWB-F.	—	—	—

(67) C12C1: Hard Disk Error
(68) C12C2: Hard Disk Error
(69) C12C3: Hard Disk Error
(70) C12C4: Hard Disk Error
(71) C12C5: Hard Disk Error
(72) C12C6: Hard Disk Error
(73) C12C7: Hard Disk Error
(74) C12C8: Hard Disk Error
(75) C12C9: Hard Disk Error
(76) C12CA: Hard Disk Error
(77) C12CF: Hard Disk Error

<Detection Timing>

Malfunction Code	Description
C12C1	Hard disk is faulty.
C12C2	
C12C2	
C12C2	
C12C2	
C12C2	
C12C2	
C12C2	
C12C2	
C12C2	
C12C2	A hard disk that falls outside the specifications is connected.

<Action>

Relevant Electrical Parts
Hard Disk

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Change Hard Disk.	—	—	—

(78) C13C8: New Transfer Cleaner Unit resetting failure

(79) C13CA: New Fusing Unit resetting failure

<Detection Timing>

Malfunction Code	Description
C13C8	A new installation is not canceled when a new Transfer Cleaner Unit (Image Transfer Belt Unit) is installed.
C13CA	A new installation is not canceled when a new Fusing Unit is installed.

<Action>

Relevant Electrical Parts
IO Board (PWB-IO)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Reinstall the unit.	—	—	—
2	Change PWB-IO.	—	—	—

(80) C13D1: Cyan IU EEPROM access error

(81) C13D2: Magenta IU EEPROM access error

(82) C13D3: Yellow IU EEPROM access error

(83) C13D4: Black IU EEPROM access error

<Detection Timing>

Malfunction Code	Description
C13D1	Setting 1 “Start Flag” of GA register does not become ready even after the lapse of a predetermined period of time after a cyan IU EEPROM access control has been executed.
C13D2	Setting 1 “Start Flag” of GA register does not become ready even after the lapse of a predetermined period of time after a magenta IU EEPROM access control has been executed.
C13D3	Setting 1 “Start Flag” of GA register does not become ready even after the lapse of a predetermined period of time after a yellow IU EEPROM access control has been executed.
C13D4	Setting 1 “Start Flag” of GA register does not become ready even after the lapse of a predetermined period of time after a black IU EEPROM access control has been executed.

<Action>

Relevant Electrical Parts	
IO Board (PWB-IO)	IU C/M/Y/Bk

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Clean the connection between the IU and copier if dirty.	—	—	—
2	Reinstall IU C/M/Y/Bk.	—	—	—
3	Change IU C/M/Y/Bk.	—	—	—
4	Change PWB-IO.	—	—	—

(84) C13D5: Cyan LPH correction data download failure

(85) C13D6: Magenta LPH correction data download failure

(86) C13D7: Yellow LPH correction data download failure

(87) C13D8: Black LPH correction data download failure

<Detection Timing>

Malfunction Code	Description
C13D5	A fault occurs while the LPH correction data is being downloaded from the Cyan LPH EEPROM to the flash memory on PWB-PIC when power is turned ON.
C13D6	A fault occurs while the LPH correction data is being downloaded from the Magenta LPH EEPROM to the flash memory on PWB-PIC when power is turned ON.
C13D7	A fault occurs while the LPH correction data is being downloaded from the Yellow LPH EEPROM to the flash memory on PWB-PIC when power is turned ON.
C13D8	A fault occurs while the LPH correction data is being downloaded from the Black LPH EEPROM to the flash memory on PWB-PIC when power is turned ON.

<Action>

Relevant Electrical Parts	
LPH C/M/Y/Bk	LED Drive Board (PWB-LED) PIC Board (PWB-PIC) IO Board (PWB-IO)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Correct the harness connection between LPH and PWB-LED if faulty.	—	—	—
2	Correct the harness connection between PWB-LED and PWB-PIC if faulty.	—	—	—
3	Change LPH C/M/Y/Bk.	—	—	—
4	Change PWB-LED.	—	—	—
5	Change PWB-IO.	—	—	—
6	Change PWB-PIC.	—	—	—

(88) C3310: CCD clamp/gain adjustment failure

<Detection Timing>

Malfunction Code	Description
C3310	• The adjustment value is 0 or 255 during a CCD clamp adjustment. • The peak value of the output data is 64 or less during a CCD gain adjustment.

<Action>

Relevant Electrical Parts	
Scanner Assy	CCD Sensor Board (PWB-A) Image Processing Board (PWB-C)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Correct the harness connection between PWB-A and PWB-C if faulty.	—	—	—
2	Check for possible extraneous light and correct as necessary.	—	—	—
3	Clean the lens, mirrors, CCD surface, and shading sheet if dirty.	—	—	—
4	Correct reflective mirror of the Scanner if faulty, or change Scanner.	—	—	—
5	Change PWB-A.	—	—	—
6	Change PWB-C.	—	—	—

(89) C3700: IR Power Supply Cooling Fan Motor turning at abnormal timing

(90) C3710: IR Drive Board Cooling Fan Motor turning at abnormal timing

<Detection Timing>

Malfunction Code	Description
C3700	A Lock signal is detected ten consecutive times when it is monitored at 0.01-sec. intervals during a period of time 2 sec. after the output of a Fan Motor ON signal has been started.
C3710	

<Action>

Relevant Electrical Parts	
IR Power Supply Cooling Fan Motor (M202) IR Drive Board Cooling Fan Motor (M203)	Image Processing Board (PWB-C)

✻ C3700

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	M202 operation check	T-3	PWB-C PJ8C-18B(LOCK) PWB-C PJ8C-17B(REM)	19-G
2	Change PWB-C.	—	—	—

✻ C3710

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	M203 operation check	T-3	PWB-C PJ8C-15B(LOCK) PWB-C PJ8C-14B(REM)	19-H
2	Change PWB-C.	—	—	—

(91) C3FFF: ROM contents fault detected upon start

<Detection Timing>

Malfunction Code	Description
C3FFF	A fault is detected in the contents of ROM of MSC, IR, and PRT when the copier is started.

<Action>

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Check the ROM version.	—	—	—
2	Rewrite firmware using the memory card.	—	—	—

3-3. Power Supply-Related Malfunctions

(1) Copier is not energized at all.

Relevant Electrical Parts	
IO Board (PWB-IO)	DC Power Supply 1 (PU1) DC Power Supply 2 (PU2)

Step	Check Item	WIRING DIAGRAM (Location)	Result	Action
1	Is a power voltage supplied across PJ3PU1-1 and 3 on PU1?	30-H	NO	Check wiring between the wall outlet and PJ3PU1.
2	Are the fuses (F1 and F2) on PU1 conducting?	—	NO	Change PU1.
3	Is a power voltage supplied across CN1PU2-1 and 2 on PU2?	30-F	NO	Change PU1.
4	Is the fuse (F1) on PU2 conducting?	—	NO	Change PU2.
5	Is DC5 V being output from CN2PU2-3 on PU2?	31-F	NO	Change PU2.
6	Is DC5 V being input to PJ15PU1-1 on PU1?	28-F	NO	Change PU2.
7	Is DC5 V being input to PJ1IO-3 on the IO Board?	14-E	NO	Change PU1.
			YES	Change PWB-IO.

(2) Only the Power Supply Cooling Fan rotates.

Relevant Electrical Parts	
PIC Board (PWB-PIC)	DC Power Supply 1 (PU1) DC Power Supply 2 (PU2)

Step	Check Item	WIRING DIAGRAM (Location)	Result	Action
1	Is DC3.3 V being output from PJ9PU1-1 on PU1?	29-F	NO	Change PU1.
2	Is DC5 V being output from CN2PU2-2 on PU2?	31-F	NO	Change PU2.
3	Is DC3.3 V being input to PJ1PIC-1 on PWB-PIC and DC5 V to PJ1PIC-3?	32-C	YES	Change PWB-PIC.
			NO	Check the wiring.

(3) Control panel indicators do not light.

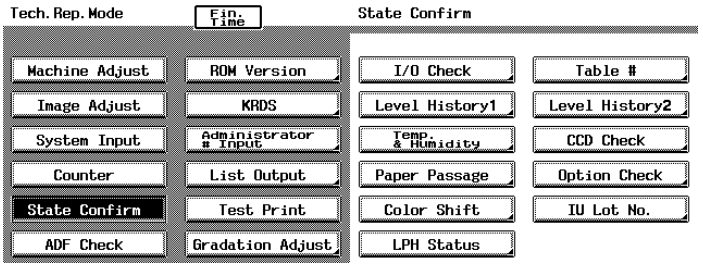
Relevant Electrical Parts	
Image Processing Board (PWB-C) Control Panel (UN201)	DC Power Supply 3 (PU201)

Step	Check Item	WIRING DIAGRAM (Location)	Result	Action
1	Is the I/F cable between the IR and engine connected properly?	—	NO	Reconnect or change the I/F cable.
2	Is a power voltage being applied across CN3PU201-1 and 2 on PU201?	22-H	NO	Check the wiring from the wall outlet to CN3PU201-1/2.
3	Is the fuse (F1) on PU201 conducting?	—	NO	Change PU201.
4	Is DC5.1 V being output from CN2PU201-1 on PU201 and DC24 V from CN2PU201-3?	22-H	NO	Change PU201.
5	Is PJ12C on PWB-C securely connected?	26-E	NO	Reconnect.
6	Is CN12 on UN201 securely connected?	24-F	NO	Reconnect.
			YES	Change UN201. Change PWB-C.

4. IMAGE QUALITY PROBLEMS

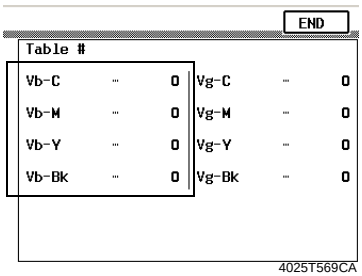
4-1. Descriptions of the “State Confirm” Function of Tech. Rep. Mode Concerning Image Quality Problems

- As part of troubleshooting procedures, the numeric values set for “State Confirm” available from “Tech. Rep. Mode” can be used to isolate the cause of the image problem.



k4025T568CA

(1) Table



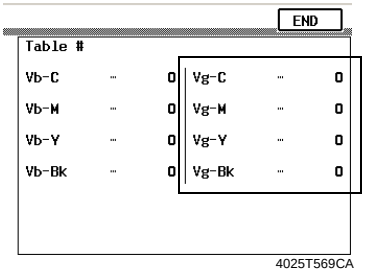
4025T569CA

Vb-C/-M/-Y/-Bk

- Shows the developing bias value of each color of toner when an image is produced.
- Standard values: Around 400 V

✻ A correction is made to make the image lighter when the numeric value is greater.
✻ A correction is made to make the image darker when the numeric value is smaller.

<Relevant Components>
IU, High Voltage Unit (Developing Bias)



4025T569CA

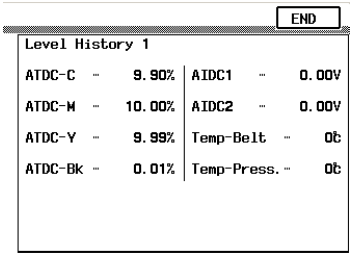
Vg-C/-M/-Y/-Bk

- Shows the grid voltage value of each color of toner when an image is produced.
- Standard values: Around 550 V

✻ A correction is made to make the image lighter when the numeric value is greater.
✻ A correction is made to make the image darker when the numeric value is smaller.

<Relevant Components>
IU, High Voltage Unit (Developing Bias)

(2) Level History 1



4025T570CA

ATDC-C/-M/-Y/-Bk
- Shows the T/C ratio (in 0.01 % increments).
- Standard value: 8 ± –3 %

<Relevant Components>
LPH Unit, ATDC Sensor Bk

ATDC1/2
- Shows the AIDC bare surface output reading taken last (in 0.01 V increments).
- It should normally be around 4.2 V.
- The output range is 0 V to 5 V.

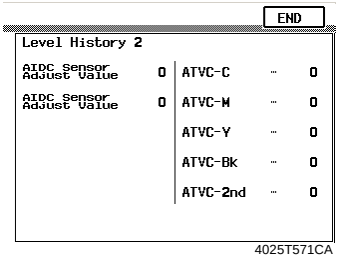
<"Reading taken last" means>
- During the last image stabilization sequence.
- When the Start key is pressed, the output value is displayed while a test print is being produced.

<Relevant Components>
AIDC Sensor, Transfer Belt Unit

Temp-Belt/Press.
- Shows the temperature of the Heating Roller (Temp-Belt) and the Fusing Pressure Roller (Temp-Press.) (in 5 °C increments).

<Relevant Components>
Fusing Unit

(3) Level History 2



4025T571CA

AIDC Sensor Adjust Value
- Shows the AIDC intensity adjustment value.
- It should normally be around 50 and can range from 0 to 255.
- The value becomes greater as the Transfer Belt Unit has been used more.

<Relevant Components>
AIDC Sensor, Transfer Belt Unit

ATVC-C/-M/-Y/-Bk/2nd
- Shows the latest ATVC level (which varies according to the paper type).
- 400 V to 3000 V (ATVC-C/-M/-Y/-Bk)
- 300 V to 5000 V (ATVC-2nd)

<Relevant Components>
Transfer Belt Unit, High Voltage Unit (Image Transfer, Neutralizing)

4-2. Troubleshooting Image Quality Problems

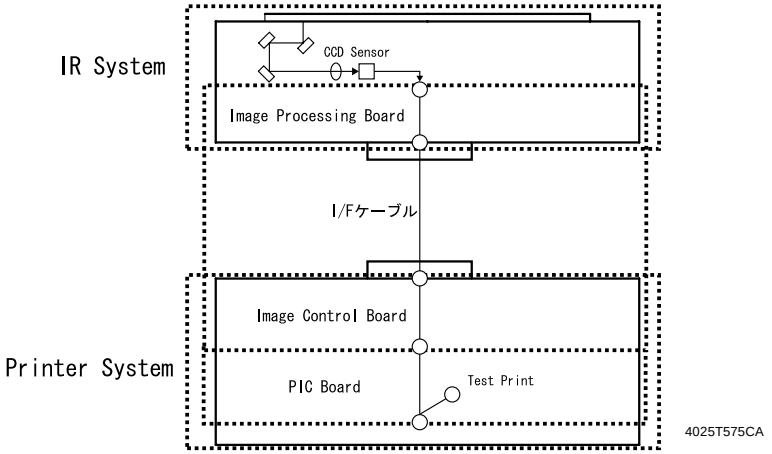
- This chapter is divided into two parts: “Initial Check Items” and “Troubleshooting Procedure by a Particular Image Quality Problem.”
- When an image quality problem occurs, first go through the “Initial Check Items” and, if the cause is yet to be identified, go to “Troubleshooting Procedure by a Particular Image Quality Problem.”

4-3. Initial Check Items

1. Check first to see if image data is properly transmitted between IR and memory, and between memory and printer.

Action	Result	Next Step
Enter the Tech. Rep. Mode, select “Machine Adjust” → “Memory/Hard Disk Adjust” → “Memory Bus Check,” and select and carry out “IR→Memory” and “Memory→PRT” checks.	OK	Initial check item (2)
	NG	☞ T- 58, 59 (action as instructed)

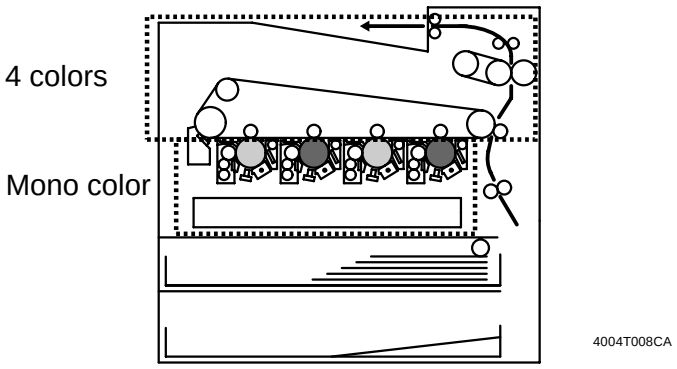
2. Let the copier produce a test print and determine whether the image problem is attributable to the IR or printer system.



- Evaluation Procedure

Image Problem	Action	Result	Cause	Next Step
Lines, bands	From “Tech. Rep. Mode,” select “Test Print” → “Halftone Pattern” → “SINGLE” → “HYPER” → “Gradation” → “C→M→Y→Bk” → “Density 64,” and produce a test print. Is image problem evident?	YES	Printer	Initial check item (3)
		NO	IR	☞ T-75

3. If the printer is responsible for the image problem, let the copier produce a test print and determine whether the image problem occurs in a specific single color or four colors.



• Evaluation Procedure

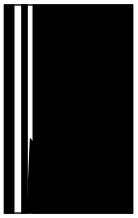
Image Problem	Action	Result		Next Step
Lines, bands	From “Tech. Rep. Mode,” select “Test Print” → “Halftone Pattern” → “SINGLE” → “HYPER”→ “Gradation”→ “C→M→Y→Bk”→ “Density 64,” and produce a test print. Is image problem evident in each of all four colors?	YES	Printer, 4 colors	☞ T-104
		NO	Printer, single color	☞ T-88

4-4. Troubleshooting Procedure by a Particular Image Quality Problem

(1) IR System: white lines in FD, white bands in FD, colored lines in FD, and colored bands in FD

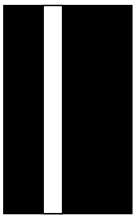
<Typical Faulty Images>

White lines in FD



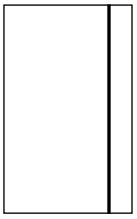
4011T015AA

White bands in FD



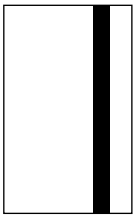
4011T020AA

Color lines in FD



4011T017AA

Color bands in FD



4011T023AA

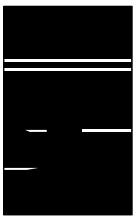
<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
Original	1	Original is damaged or dirty.	YES	Change original.
Original Cover	2	Original Pad is dirty.	YES	Clean.
Original Glass	3	Original Glass is dirty.	YES	Wipe the surface clean with a soft cloth.
Shading sheet	4	Shading sheet is dirty.	YES	Wipe the surface clean with a soft cloth.
Mirror, lens, Exposure Lamp, and reflectors	5	Mirror is dirty.	YES	Clean.
		Lens is dirty.	YES	Clean.
		Exposure Lamp is dirty.	YES	Clean.
		Reflectors are dirty.	YES	Clean.
System Input → Serial # Input (Tech. Rep. Mode)	6	The IR serial number has been correctly entered.	NO	Enter correctly.
Machine Adjust → IR Area → Left Image (Tech. Rep. Mode)	7	The adjustment value for Left Image falls within the specified range.		Readjust.
IR	8	The white lines/bands or colored lines/bands are blurry.	YES	Change Scanner Assy.
	9	The white lines/bands or colored lines/bands are clear and distinct.	YES	Change CCD Unit.

(2) IR System: white lines in CD, white bands in CD, colored lines in CD, and colored bands in CD

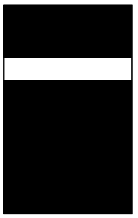
<Typical Faulty Images>

White lines in CD



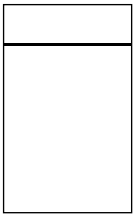
4011T016AA

White bands in CD



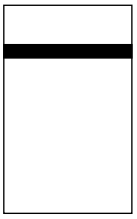
4011T021AA

Color lines in CD



4011T018AA

Color bands in CD



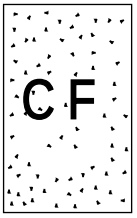
4011T022AA

<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
Original	1	Original is damaged or dirty.	YES	Change original.
Original Cover	2	Original Pad is dirty.	YES	Clean.
Original Glass	3	Original Glass is dirty.	YES	Wipe the surface clean with a soft cloth.
Machine Adjust → IR Area →Top Image (Tech. Rep. Mode)	4	The adjustment value for Top Image falls within the specified range.		Readjust.
	5	The problem has been eliminated through the checks of steps up to 4.	NO	Change Scanner Assy. Change CCD Unit.

(3) IR System: color spots

<Typical Faulty Image>



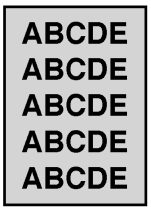
4011T027AA

<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
Original	1	Original is damaged or dirty.	YES	Change original.
Original Cover	2	Original Pad is dirty.	YES	Clean.
Original Glass	3	Original Glass is dirty.	YES	Wipe the surface clean with a soft cloth.
	4	The problem has been eliminated through the checks of steps up to 3.	NO	Change Scanner Assy. Change CCD Unit.

(4) IR System: fog

<Typical Faulty Image>



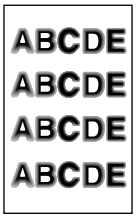
4011T004AA

<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
Original	1	Original is damaged or dirty.	YES	Change original.
Original Cover	2	Original Pad is dirty.	YES	Clean.
	3	Original Cover does not lie flat.	YES	Change Original Cover if it is deformed or hinges are broken.
Original Glass	4	Original Glass is dirty.	YES	Wipe the surface clean with a soft cloth.
Shading sheet	5	Shading sheet is dirty.	YES	Wipe the surface clean with a soft cloth.
Mirror, lens, Exposure Lamp, and reflectors	6	Mirror is dirty.	YES	Clean.
		Lens is dirty.	YES	Clean.
		Exposure Lamp is dirty.	YES	Clean.
		Reflectors are dirty.	YES	Clean.
Photo/Density	7	The problem is eliminated when the image is produced in the Manual exposure setting.	NO	Try another exposure level in Manual.
	8	The problem has been eliminated through the checks of steps up to 7.	NO	Change Scanner Assy. Change CCD Unit.

(5) IR System: blurred image, blotchy image

<Typical Faulty Image>



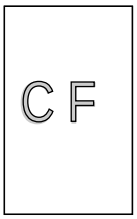
4011T046AA

<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
Original	1	Original does not lie flat.	YES	Change original.
Original Cover	2	Original Cover does not lie flat.	YES	Change Original Cover if it is deformed or hinges are broken.
Original Glass	3	Original Glass tilts.	YES	Position Original Glass correctly. Check original loading position.
IR	4	Scanner is not aligned with the 2nd/3rd Mirrors Carriage.	YES	Perform “Focus Positioning of the Scanner and 2nd/3rd Mirrors Carriage” and “Scanner Position Adjustment.”
	5	The problem has been eliminated through the checks of steps up to 4.	NO	Change Scanner Assy. Change CCD Unit.

(6) IR System: incorrect color image registration, sync shift (lines in CD)

<Typical Faulty Image>



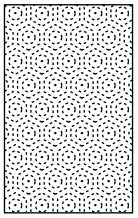
4011T039AA

<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
Original	1	Original does not lie flat.	YES	Change original.
Original Cover	2	Original Cover does not lie flat.	YES	Change Original Cover if it is deformed or hinges are broken.
Slide rails	3	Foreign matter on rails.	YES	Clean and apply lubricant.
Drive Cables	4	Cable kinks or is damaged.	YES	Correct or change.
Scanner Assy	5	Scanner moves smoothly.	NO	Adjust the Scanner Motor timing belt. →Change bushing. →Change Scanner Motor.
	6	The problem has been eliminated through the checks of steps up to 5.	NO	Change CCD Unit.

(7) IR System: moire

<Typical Faulty Image>



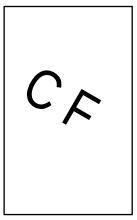
4011T040AA

<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
Original	1	Moire distortions recur even after the orientation of original has been changed.	YES	Change the original mode (select one other than that resulted in moire).
Photo/Density	2	Moire distortions recur even after the original mode has been changed.	YES	Select “Gradation” (mode optimized for gradation) or “Resolution” (that optimized for resolution).
	3	The problem has been elimi-nated through the checks of steps up to 2.	NO	Change the zoom ratio.

(8) IR System: skewed image

<Typical Faulty Image>



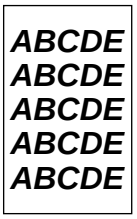
4011T048AA

<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
Original	1	Original is skew.	YES	Reposition original.
Original Glass	2	Original Glass is in positive contact with the flat spring without being tilt.	NO	Reinstall the glass. Check the original loading position.
2nd/3rd Mirrors Carriage	3	Scanner Assy is not properly aligned with 2nd/3rd Mirrors Carriage.	YES	Readjust with the Scanner/ Mirrors Carriage Positioning Jigs.
	4	The problem has been eliminated through the checks of steps up to 3.	NO	Change Scanner Assy. Change CCD Unit.

(9) IR System: distorted image

<Typical Faulty Image>



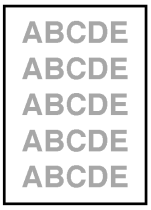
4011T045AA

<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
Installation	1	IR is installed on a level surface if mounted without any rack.	NO	Reinstall.
		Rack is installed on a level surface.	NO	Reinstall.
		Rack is tilt with a lot of play.	YES	Adjust rack leg height.
2nd/3rd Mirrors Carriage	2	Scanner Assy is not properly aligned with 2nd/3rd Mirrors Carriage.	YES	Readjust with the Scanner/ Mirrors Carriage Positioning Jigs.
Scanner Motor	3	Scanner Motor turns smoothly.	NO	Change belt. Change Scanner Motor.
	4	The problem has been eliminated through the checks of steps up to 3.	NO	Change Scanner Assy. Change CCD Unit.

(10) IR System: low image density, rough image

<Typical Faulty Image>



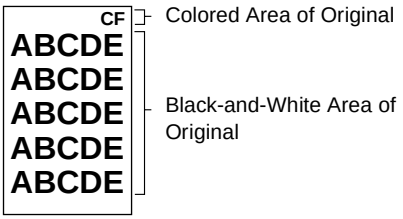
4011T003AA

<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
Original	1	Original sticks to Original Glass.	YES	Reposition original.
Original Glass	2	Original Glass is dirty.	YES	Wipe the surface clean with a soft cloth.
Shading sheet	3	Shading sheet is dirty.	YES	Wipe the surface clean with a soft cloth.
Mirror, lens, Exposure Lamp, and reflectors	4	Mirror is dirty.	YES	Clean.
	5	Lens is dirty.	YES	Clean.
	6	Exposure Lamp is dirty.	YES	Clean.
	7	Reflectors are dirty.	YES	Clean.
	8	The problem has been eliminated through the check of step 7.	NO	Clean Exposure Lamp. →Change Scanner Assy. →Change CCD Unit.

(11) IR System: defective ACS

<Typical Faulty Image>



4011T052AA

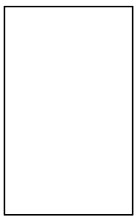
<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
ACS Judgement Level Adjust (User's Choice 2)	1	The problem persists even after the ACS Determination Level Adjust function has been changed.	YES	Change the original loading direction. Make manual settings according to the type of original. (If the original contains a colored area in one of its corners, the copier may fail to properly detect the colored area.)

(12) IR System: blank copy, black copy

<Typical Faulty Images>

Blank copy



4011T036AA

Black copy



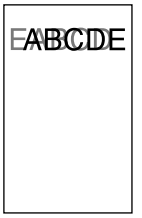
4011T035AA

<Troubleshooting Procedure>

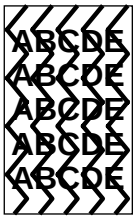
Section	Step	Check Item	Result	Action
Cable connecting IR and printer	1	Connector is connected properly with no pins bent.	NO	Reconnect.
Image Processing Board (PWB-C)	2	Connectors on the Image Processing Board are connected properly.	NO	Reconnect.
CCD Unit	3	Connectors of the CCD Unit are connected properly.	NO	Reconnect.
Test Print (Tech.Rep.Mode)	4	The problem is eliminated as checked with the image on a test pattern produced.	NO	Change I/F connection cable.
Image Processing Board (PWB-C)	5	The problem is eliminated after the I/F connection cable has been changed.	NO	Change Image Processing Board.

(13) IR System: abnormal image

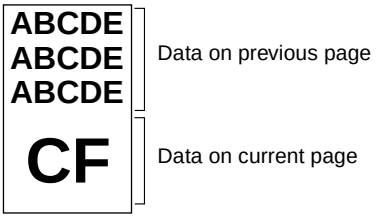
<Typical Faulty Images>



4004T010AB



4011T053AA



4011T063AA

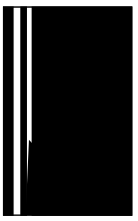
<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
Cable connecting IR and printer	1	Connector is connected properly with no pins bent.	NO	Reconnect.
Connection cable between controller I/F board and Image Control Board (PWB-F)	2	Connector is connected properly with no pins bent.	NO	Reconnect.
Image Processing Board (PWB-C)	3	Connectors on the Image Processing Board are connected properly.	NO	Reconnect.
Image Processing Interface Board (PWB-B)	4	Connectors on the Image Processing Board are connected properly.	NO	Reconnect.
Image Control Board (PWB-F)	5	Data on previous page is mixed with data on current page.	NO	Reinstall expanded memory.
Test Print (Tech.Rep.Mode)	6	The problem is eliminated as checked with the image on a test pattern produced.	NO	Change interface connection cable.
Image Processing Board (PWB-C)	7	The problem is eliminated after the interface connection cable has been changed.	NO	Change Image Processing Board.

(14) Printer Monocolor: white lines in FD, white bands in FD, colored lines in FD, colored bands in FD, white lines in CD, white bands in CD, colored lines in CD, colored bands in CD

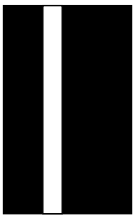
<Typical Faulty Images>

White lines in FD



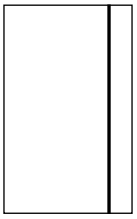
4011T015AA

White bands in FD



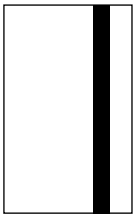
4011T020AA

Colored lines in FD



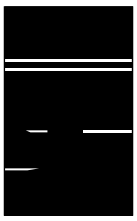
4011T017AA

Colored bands in FD



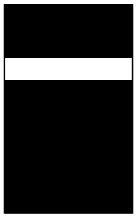
4011T023AA

White lines in CD



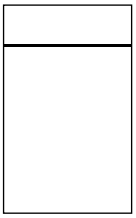
4011T016AA

White bands in CD



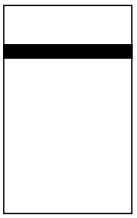
4011T021AA

Colored lines in CD



4011T018AA

Colored bands in CD



4011T022AA

<Troubleshooting Procedure>

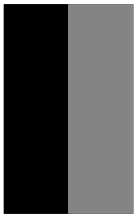
Section	Step	Check Item	Result	Action
Image check	1	A white line or black line in FD is sharp.	YES	Perform LPH Chip Adjust.
			NO	Clean the Comb Electrode by moving the Comb Electrode Cleaning Lever.
IU	2	The surface of the PC Drum is scratched.	YES	Change IU.
LED Assy	3	The surface of the lens array is dirty.	YES	Clean with cleaning jig.
IU	4	Dirty on the outside.	YES	Clean.
	5	Connectors and contact terminals make good connection between each IU and LED Assy.	NO	Clean contact terminals. Reconnect.
	6	Developing bias contact terminal makes good connection.	NO	Clean contact terminal and check terminal position.
	7	The problem has been eliminated through the checks of steps up to 6.	NO	Change IU. →Change Image Transfer Belt Unit. →Change LPH Assy.

(15) Printer Monocolor: uneven density in FD

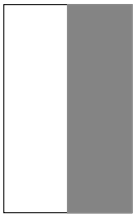
<Typical Faulty Images>



4011T031AA



4011T042AA



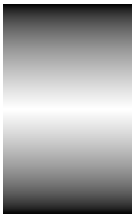
4004T011AA

<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
Image check	1	Uneven density of void area occurs.	YES	Check LPH Unit connector for proper connection. Check the LED Drive Board connectors for proper connection.
High image density original	2	Uneven density in FD occurs at a pitch of 40 mm to 50 mm when a multi-copy cycle is run using an original with high image density (50 % or more).	YES	Feed 10 to 20 blank sheets of paper with no originals placed, as the IU fails to keep up with a high demand for toner.
LPH Assy	3	LED retracting lever is locked in position.	NO	Slide out the IU and reinstall.
IU	4	The surface of the PC Drum is scratched.	YES	Change IU.
	5	Dirty on the outside.	YES	Clean.
LPH Assy	6	LED surface is dirty.	YES	Clean using the LED Cleaning Jig.
Image Transfer Belt Unit	7	Cam gear operates properly.	NO	Change Image Transfer Belt Unit.
	8	The problem has been eliminated through the checks of steps up to 7.	NO	Change IU. →Change Image Transfer Belt Unit. →Change LPH Assy. →Change PIC Board. →Change LED Drive Board →Change LPH Unit. →Change High Voltage Unit (Image Transfer, Neutralizing).

(16) Printer Monocolor: uneven density in CD

<Typical Faulty Images>


4011T032AA

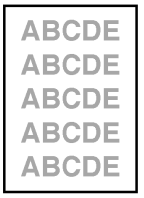

4011T043AA

<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
IU	1	The surface of the PC Drum is scratched.	YES	Change IU.
	2	Dirty on the outside.	YES	Clean.
LPH Assy	3	The surface of the lens array is dirty.	YES	Clean with cleaning jig.
Image Transfer Belt Unit	4	Image Transfer Belt Unit makes positive contact with plates on rails.	NO	Check and correct contacts.
	5	Cam gear operates properly.	NO	Change Image Transfer Belt Unit.
	6	The problem has been eliminated through the checks of steps up to 5.	NO	Change IU. →Change Image Transfer Belt Unit. →Change High Voltage Unit (Developing Bias). →Change High Voltage Unit (Image Transfer, Neutralizing).

(17) Printer Monocolor: low image density

<Typical Faulty Image>



4011T003AA

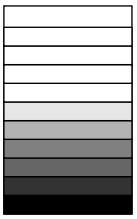
<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
State Confirm → Table # (Tech. Rep. Mode)	1	Check data for Vg and Vb. Color Vb: Around 400 V Vg: Around 550 V Black Vb: Around 400 V Vg: Around 550 V	NO	Go to next step.
State Confirm → Level History 1 (Tech. Rep. Mode)	2	Check ATDC data.	—	Go to next step.
	3	AIDC output value is around 4.5 V.	NO	Clean AIDC Sensor. Check Image Transfer Belt for damage.
Level History data check results	4	Low ATDC and low Vg and Vb	YES	Go to step 8.
	5	Low ATDC and high Vg and Vb	YES	Go to step 14.
	6	ATDC falling within specified range and low Vg and Vb	YES	Go to step 8.
	7	ATDC falling within specified range and high Vg and Vb	YES	Go to step 14.
LPH Assy	8	LED retracting lever is locked in position.	NO	Slide out the IU and reinstall.
IU	9	Dirty on the outside.	YES	Clean.
LPH Assy	10	The surface of the lens array is dirty.	YES	Clean with cleaning jig.
ATDC Sensor window	11	The color ATDC Sensor window on the LED Assy is dirty.	YES	Clean. Change ATDC. Change IU.

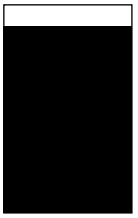
Section	Step	Check Item	Result	Action
Image Transfer Belt Unit	12	Image Transfer Belt Unit makes positive contact with plates on rails.	NO	Check and correct contacts.
	13	Cam gear operates properly.	NO	Change Image Transfer Belt Unit.
Hopper Unit	14	Connectors are loose.	YES	Reconnect.
	15	Gear is cracked.	YES	Change gear.
	16	Toner empty lever and/or detecting switch are defective.	YES	Change Hopper Unit.
Gradation Adjust (Tech. Rep. Mode)	17	"Conv. Value" falls within the specified range as checked through Gradation Adjust. Max: 0 ±100 Highlight = 0 ±60	NO	Go to step 21.
Image Adjust →PRT Max Density (Tech. Rep.Mode)	18	The problem has been eliminated through the adjust of PRT Max.	NO	Go to next step.
Image Adjust →PRT Highlight (Tech. Rep. Mode)	19	The problem has been eliminated through the adjust of PRT Highlight.	NO	Go to next step.
Image Adjust →Stabilizer→ Reset + Stabilizer (Tech. Rep. Mode)	20	After the Reset + Stabilizer sequence has been completed, run Gradation Adjust; if the problem persists, make adjustments of PRT Max Density and PRT Highlight.	NO	Go to next step.
	21	The problem has been eliminated through the checks of steps up to 20.	NO	Change IU. →Change Image Transfer Belt Unit. →Change LPH Assy. →Change PIC Board. →Change LED Drive Board. →Change LPH Unit. →Change High Voltage Unit (Developing Bias). →Change High Voltage Unit (Image Transfer, Neutralizing).

(18) Printer Monocolor: gradation reproduction failure

<Typical Faulty Images>



4011T034AA



4011T029AA

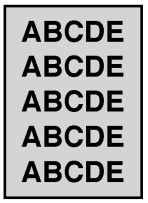
<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
Photo/ Density	1	Original type and screen pattern are selected properly.	NO	Change screen pattern.
LPH Assy	2	LED retracting lever is locked in position.	YES	Slide out the Imaging Unit and reinstall.
IU	3	Dirty on the outside.	YES	Clean.
LPH Assy	4	The surface of the lens array is dirty.	YES	Clean with cleaning jig.
ATDC Sensor window	5	ATDC Sensor window is dirty.	YES	Clean.
State Confirm → Level History 1 (Tech. Rep. Mode)	6	AIDC output value is around 4.2 V.	NO	Clean AIDC Sensor. Check Image Transfer Belt for damage.
Gradation Adjust (Tech. Rep. Mode)	7	“Conv. Value” falls within the specified range as checked through Gradation Adjust. Max: 0 ±100 Highlight = 0 ±60	NO	Go to step 11.
Image Adjust →PRT Max Density (Tech. Rep.Mode)	8	The problem has been eliminated through the adjust of PRT Max.	NO	Go to next step.
Image Adjust →PRT Highlight (Tech. Rep. Mode)	9	The problem has been eliminated through the adjust of PRT Highlight.	NO	Go to next step.

Section	Step	Check Item	Result	Action
Image Adjust →Stabilizer →Reset + Stabilizer (Tech. Rep. Mode)	10	After the Reset + Stabilizer sequence has been completed, run Gradation Adjust; if the problem persists, make adjustments of PRT Max Density and PRT Highlight.	NO	Go to next step.
	11	The problem has been eliminated through the checks of steps up to 10.	NO	Change IU. →Change LPH Assy. →Change PIC Board. →Change LED Drive Board. →Change LPH Unit. →Change High Voltage Unit (Developing Bias). →Change High Voltage Unit (Image Transfer, Neutralizing).

(19) Printer Monocolor: foggy background

<Typical Faulty Image>



4011T004AA

<Troubleshooting Procedure>

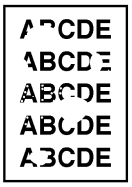
Section	Step	Check Item	Result	Action
State Confirm → Table # (Tech. Rep. Mode)	1	Check data for Vg and Vb. Color Vb: Around 400 V Vg: Around 550 V Black Vb: Around 400 V Vg: Around 550 V	NO	Go to next step.
State Confirm → Level History 1 (Tech. Rep. Mode)	2	Check ATDC data.	—	Go to next step.
	3	AIDC output value is around 4.5 V.	NO	Clean AIDC Sensor. Check Transfer Belt for damage.
Level History data check results	4	Low ATDC and low Vg and Vb	YES	Go to step 8.
	5	Low ATDC and high Vg and Vb	YES	Go to step 12.
	6	ATDC falling within specified range and low Vg and Vb	YES	Go to step 8.
	7	ATDC falling within specified range and high Vg and Vb	YES	Go to step 12.
LPH Assy	8	LED retracting lever is locked in position.	NO	Slide out the IU and reinstall.
IU	9	Dirty on the outside.	YES	Clean.
LPH Assy	10	The surface of the lens array is dirty.	YES	Clean with cleaning jig.
ATDC Sensor window	11	The color ATDC Sensor window on the LED Assy is dirty.	YES	Clean. Change ATDC. Change IU.

Section	Step	Check Item	Result	Action
Image Adjust→Background Voltage Margin (Tech. Rep. Mode)	12	The problem is eliminated after Background Voltage Margin has been adjusted.	NO	Go to next step.
Gradation Adjust (Tech. Rep. Mode)	13	"Conv. Value" falls within the specified range as checked through Gradation Adjust. Max: 0 ±100 Highlight = 0 ±60	NO	Go to step 17.
Image Adjust →PRT Max Density (Tech. Rep.Mode)	14	The problem has been eliminated through the adjust of PRT Max.	NO	Go to next step.
Image Adjust →PRT Highlight (Tech. Rep. Mode)	15	The problem has been eliminated through the adjust of PRT Highlight.	NO	Go to next step.
Image Adjust →Stabilizer →Reset + Stabilizer (Tech. Rep. Mode)	16	After the Reset + Stabilizer sequence has been completed, run Gradation Adjust; if the problem persists, make adjustments of PRT Max Density and PRT Highlight.	NO	Go to next step.
	17	The problem has been eliminated through the checks of steps up to 16.	NO	Change IU. →Change LPH Assy. →Change PIC Board. →Change LED Drive Board. →Change LPH Unit. →Change High Voltage Unit (Developing Bias). →Change High Voltage Unit (Image Transfer, Neutralizing).

(20) Printer Monocolor: void areas, white spots

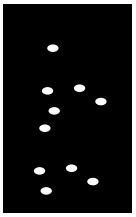
<Typical Faulty Images>

Void areas



4011T008AA

White spots



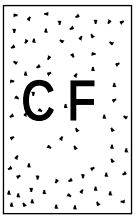
4011T030AA

<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
Image Check	1	There are void areas at the front side or high density section.	YES	☞ T-91
	2	There is void area at the rear side section.	YES	Perform “2nd Transfer Adjust” of “Image Adjust” under Tech. Rep. mode.
IU	3	The surface of the PC Drum is scratched.	YES	Change Imaging Unit.
	4	Dirty on the outside.	YES	Clean.
Hopper Unit	5	Foreign matter or caked toner in the Toner Cartridge.	YES	Remove foreign matter.
	6	The problem has been eliminated through the checks of steps up to 5.	NO	Change IU.

(21) Printer Monocolor: colored spots

<Typical Faulty Image>



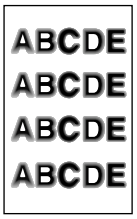
4011T027AA

<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
IU	1	Developing bias contact terminal makes good connection.	NO	Clean contact terminal and check terminal position.
	2	The surface of the PC Drum is scratched.	YES	Change Imaging Unit.
	3	Dirty on the outside.	YES	Clean.
	4	The problem has been eliminated through the checks of steps up to 3.	NO	Change IU.

(22) Printer Monocolor: blurred image

<Typical Faulty Image>



4011T046AA

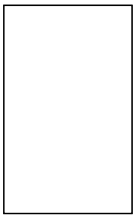
<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
Image Check	1	Image is distorted (stretched or shrunk).	YES	Perform “Zoom for FD.”
LED Assy	2	LED retracting lever is locked in position.	NO	Slide out the IU and reinstall.
	3	The surface of the lens array is dirty.	YES	Clean with cleaning jig.
Imaging Unit	4	Dirty on the outside.	YES	Clean.
	5	The problem has been eliminated through the checks of steps up to 4.	NO	Change IU. →Change LPH Assy. →Change LPH Unit.

(23) Printer Monocolor: blank copy, black copy

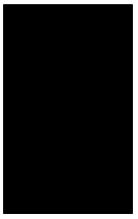
<Typical Faulty Images>

Blank copy



4011T035AA

Black copy



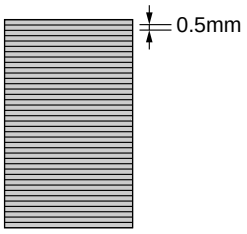
4011T036AA

<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
Image Check	1	A blank copy occurs.	YES	Check LPH Unit connector for proper connection. Check the LED Drive Board connectors for proper connection.
IU	2	Coupling of IU drive mechanism is installed properly.	NO	Check and correct drive transmitting coupling. Change IU.
	3	The PC Drum Charge Corona voltage contact or PC Drum ground contact of the Imaging Unit is connected properly.	NO	Check, clean, or correct the contact.
High Voltage Unit (Image Transfer, Neutralizing)	4	Connector is connected properly.	NO	Reconnect.
	5	The problem has been eliminated through the check of step4.	NO	Change High Voltage Unit (Image Transfer, Neutralizing). →Change PIC Board. →Change LED Drive Board. →Change LPH Unit.

(24) Printer Monocolor: 0.5-mm-pitch uneven image

<Typical Faulty Image>



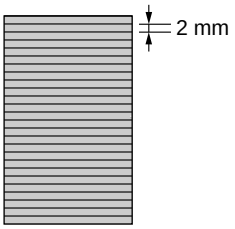
4011T060AA

<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
LPH Assy	1	LED retracting lever is locked in position.	NO	Slide out the IU and reinstall.
			YES	Change IU.

(25) Printer Monocolor: 2-mm-pitch uneven image

<Typical Faulty Image>



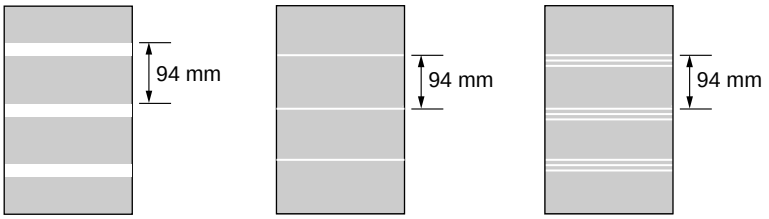
4011T059AA

<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
IU	1	The drive mechanisms for spent toner conveying and IU are dirty.	YES	Clean.
			NO	Change IU.

(26) Printer Monocolor: 94-mm-pitch uneven image

<Typical Faulty Images>



4011T047AD 4011T057AA 4011T058AA

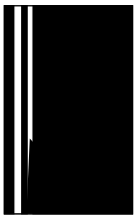
<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
IU	1	The surface of the PC Drum is scratched.	YES	Change IU.
	2	Coupling of IU drive mechanism is installed properly.	NO	Check and correct drive transmitting coupling. Change IU.
	3	There is play in the IU Motor.	YES	Reinstall or change the IU Motor.
Image Transfer Belt Unit	4	Image Transfer Belt Unit drive gear has chipped off.	NO	Correct. Change Image Transfer Belt Unit.
Image Transfer Roller Unit	5	Image Transfer Roller is damaged.	YES	Change Image Transfer Roller Unit.
	6	The problem has been eliminated through the checks of steps up to 5.	NO	Change IU.

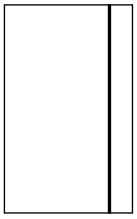
(27) Printer 4-Color: white lines in FD, white bands in FD, colored lines in FD, and colored bands in FD

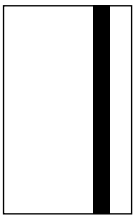
<Typical Faulty Images>

White lines in FD White bands in FD Colored lines in FD Colored bands in FD


4011T015AA


4011T020AA


4011T017AA


4011T023AA

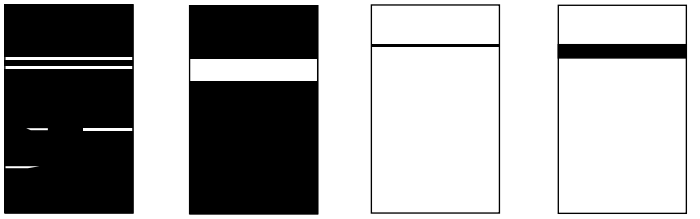
<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
Image Check	1	A white line or colored line in FD.	YES	Clean the Comb Electrode by moving the Comb Electrode Cleaning Lever.
Image Transfer Belt Unit	2	Fingerprints, oil, or other foreign matter is evident on the Image Transfer Belt.	YES	Clean with specified solvent. (See DIS/REASSEMBLY, ADJUSTMENT.)
	3	Image Transfer Belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change Image Transfer Belt Unit if belt is damaged.
	4	Cleaning Blade is not effective in removing toner completely.	YES	Clean Cleaning Blade. change Image Transfer Belt Unit.
Image Transfer Roller Unit	5	Image Transfer Roller is dirty or scratched.	YES	Change Image Transfer Roller Unit.
Paper path	6	There is foreign matter on paper path.	YES	Remove foreign matter.
	7	Image Transfer Paper Separator Fingers are damaged or dirty.	YES	Clean or change.
Paper Dust Remover	8	Paper dust accumulates on Paper Dust Remover.	YES	Clean.
Fusing Unit	9	Fusing Entrance Guide Plate is dirty or damaged.	YES	Clean or change.
	10	Fusing Paper Separator Fingers are dirty.	YES	Clean.
	11	The problem has been eliminated through the checks of steps up to 10.	NO	Change Image Transfer Roller Unit. →Change Image Transfer Belt Unit. →Change PIC Board.

(28) Printer 4-Color: white lines in CD, white bands in CD, colored lines in CD, and colored bands in CD

<Typical Faulty Images>

White lines in CD White bands in CD Colored lines in CD Colored bands in CD



4011T016AA 4011T021AA 4011T018AA 4011T022AA

<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
Image Transfer Belt Unit	1	Fingerprints, oil, or other foreign matter is evident on the Image Transfer Belt.	YES	Clean with specified solvent. (See DIS/REASSEMBLY, ADJUSTMENT.)
	2	Image Transfer Belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change Image Transfer Belt Unit if belt is damaged.
	3	Cleaning Blade is not effective in removing toner completely.	YES	Clean Cleaning Blade. change Image Transfer Belt Unit.
Image Transfer Roller Unit	4	Image Transfer Roller is dirty or scratched.	YES	Change Image Transfer Roller Unit.
Paper path	5	There is foreign matter on paper path.	YES	Remove foreign matter.
	6	Image Transfer Paper Separator Fingers are damaged or dirty.	YES	Clean or change.
Paper Dust Remover	7	Paper dust accumulates on Paper Dust Remover.	YES	Clean.
Fusing Unit	8	Fusing Entrance Guide Plate is dirty or damaged.	YES	Clean or change.
	9	Fusing Paper Separator Fingers are dirty.	YES	Clean.
	10	The problem has been eliminated through the checks of steps up to 9.	NO	Change Image Transfer Roller Unit. →Change Image Transfer Belt Unit. →Change PIC Board.

(29) Printer 4-Color: uneven density in FD

<Typical Faulty Images>



4011T031AA



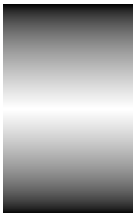
4011T042AA

<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
Image Transfer Belt Unit	1	Fingerprints, oil, or other foreign matter is evident on the Image Transfer Belt.	YES	Clean with specified solvent. (See DIS/REASSEMBLY, ADJUSTMENT.)
	2	Image Transfer Belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change Image Transfer Belt Unit if belt is damaged.
	3	Terminal is dirty.	YES	Clean.
Image Transfer Roller Unit	4	Image Transfer Roller is installed properly.	NO	Reinstall.
	5	Image Transfer Roller is dirty or scratched.	YES	Change Image Transfer Roller Unit.
	6	The problem has been eliminated through the checks of steps up to 5.	NO	Change Image Transfer Roller Unit. Change Image Transfer Belt Unit.

(30) Printer 4-Color: uneven density in CD

<Typical Faulty Images>



4011T032AA



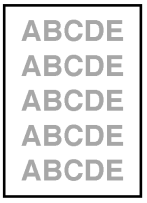
4011T043AA

<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
Image Transfer Belt Unit	1	Fingerprints, oil, or other foreign matter is evident on the Image Transfer Belt.	YES	Clean with specified solvent. (See DIS/REASSEMBLY, ADJUSTMENT.)
	2	Image Transfer Belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change Image Transfer Belt Unit if belt is damaged.
	3	Terminal is dirty.	YES	Clean.
Image Transfer Roller Unit	4	Image Transfer Roller is installed properly.	NO	Reinstall.
	5	Image Transfer Roller is dirty or scratched.	YES	Change Image Transfer Roller Unit.
	6	The problem has been eliminated through the checks of steps up to 5.	NO	Change Image Transfer Roller Unit. →Change Image Transfer Belt Unit. →Change High Voltage Unit (Developing Bias). →Change High Voltage Unit (Image Transfer, Neutralizing).

(31) Printer 4-Color: low image density

<Typical Faulty Image>



4011T003AA

<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
Paper	1	Paper is damp.	YES	Change paper to one just unwrapped from its package. Install Paper Dehumidifying Heater.
Image Transfer Belt Unit	2	Terminal is dirty.	YES	Clean.
Image Transfer Roller Unit	3	Image Transfer Roller is installed properly.	NO	Reinstall.
	4	Image Transfer Roller is dirty or scratched.	YES	Change Image Transfer Roller Unit.
AIDC Sensor	5	Sensor is dirty.	YES	Clean with blower brush.
Gradation Adjust (Tech. Rep. Mode)	6	"Conv. Value" falls within the specified range as checked through Gradation Adjust. Max: 0 ± 100 Highlight = 0 ± 60	NO	Go to step 10.
Image Adjust →PRT Max Density (Tech. Rep.Mode)	7	The problem has been eliminated through the adjust of PRT Max.	NO	Go to next step.
Image Adjust →PRT Highlight (Tech. Rep. Mode)	8	The problem has been eliminated through the adjust of PRT Highlight.	NO	Go to next step.

Section	Step	Check Item	Result	Action
Image Adjust →Stabilizer →Reset + Stabilizer (Tech. Rep. Mode)	9	After the Reset + Stabilizer sequence has been completed, run Gradation Adjust; if the problem persists, make adjustments of PRT Max Density and PRT Highlight.	NO	Go to next step.
	10	The problem has been eliminated through the checks of steps up to 9.	NO	Change Image Transfer Roller Unit. →Change Image Transfer Belt Unit. →Change PIC Board. →Change High Voltage Unit (Developing Bias). →Change High Voltage Unit (Image Transfer, Neutralizing).

(32) Printer 4-Color: poor color reproduction

<Typical Faulty Image>



4011T050AA

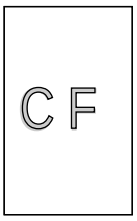
<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
Paper	1	Paper is damp.	YES	Change paper to one just unwrapped from its package. Install Paper Dehumidifying Heater.
Image Transfer Belt Unit	2	Terminal is dirty.	YES	Clean.
Image Transfer Roller Unit	3	Image Transfer Roller is installed properly.	NO	Reinstall.
	4	Image Transfer Roller is dirty or scratched.	YES	Change Image Transfer Roller Unit.
AIDC Sensor	5	Sensor is dirty.	YES	Clean with blower brush.
Gradation Adjust (Tech. Rep. Mode)	6	“Conv. Value” falls within the specified range as checked through Gradation Adjust. Max: 0 ± 100 Highlight = 0 ± 60	NO	Go to step 10.
Image Adjust →PRT Max Density (Tech. Rep.Mode)	7	The problem has been eliminated through the adjust of PRT Max.	NO	Go to next step.
Image Adjust →PRT Highlight (Tech. Rep. Mode)	8	The problem has been eliminated through the adjust of PRT Highlight.	NO	Go to next step.

Section	Step	Check Item	Result	Action
Image Adjust →Stabilizer →Reset + Stabilizer (Tech. Rep. Mode)	9	After the Reset + Stabilizer sequence has been completed, run Gradation Adjust; if the problem persists, make adjustments of PRT Max Density and PRT Highlight.	NO	Go to next step.
	10	The problem has been eliminated through the checks of steps up to 9.	NO	Change Image Transfer Roller Unit. →Change Image Transfer Belt Unit. →Change PIC Board. →Change High Voltage Unit (Developing Bias). →Change High Voltage Unit (Image Transfer, Neutralizing).

(33) Printer 4-Color: incorrect color image registration

<Typical Faulty Image>



4011T049AA

<Troubleshooting Procedure>

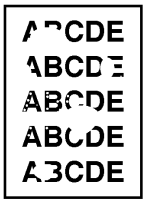
Section	Step	Check Item	Result	Action
Warning display	1	The maintenance call mark is displayed on the panel.	YES	Take action according to the warning code shown on the State Confirm screen.
Machine condition	2	Vibration is given to copier after Power Switch has been turned ON.	YES	Turn OFF and ON Power Switch.
LPH Assy	3	LED retracting lever is locked in position.	NO	Slide out the IU and reinstall.
Image Transfer Belt Unit	4	Fingerprints, oil, or other foreign matter is evident on the Image Transfer Belt.	YES	Clean with specified solvent. (See DIS/REASSEMBLY, ADJUSTMENT.)
	5	Image Transfer Belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change Image Transfer Belt Unit if belt is damaged.
	6	Drive coupling to the copier is dirty.	YES	Clean.
IU	7	The surface of the PC Drum is scratched.	YES	Change IU.
Image Transfer Roller Unit	8	Image Transfer Roller is installed properly.	NO	Reinstall.
	9	Image Transfer Roller is dirty or scratched.	YES	Change Image Transfer Roller Unit.
Machine Adjust →Fuser Speed (Tech. Rep. Mode)	10	Brush effect or blurred image occurs.	NO	Readjust Fuser Speed.

Section	Step	Check Item	Result	Action
Machine Adjust →Color Shift Correction (Tech. Rep. MOde)	11	Check the specific color in which color shift occurs.	YES	Perform “Color Shift Correction.” If color shift is not corrected even with a correction of ± 1 dot, go to next step.
	12	The problem has been eliminated through the checks of steps up to 11.	NO	Change Image Transfer Roller Unit. →Change Image Transfer Belt Unit. →Change PIC Board.

(34) Printer 4-Color: void areas, white spots

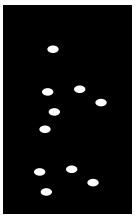
<Typical Faulty Images>

Void areas



4011T008AA

White spots



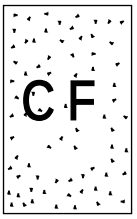
4011T030AA

<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
Image Check	1	There are void areas at the front side or high density section.	YES	☞ T-108
	2	There are void areas in the trailing edge.	YES	Perform “2nd Transfer Adjust” of “Image Adjust” under Tech. Rep. mode.
Transfer Belt Unit	3	Fingerprints, oil, or other foreign matter is evident on the Transfer Belt.	YES	Clean with specified solvent. (See DIS/REASSEMBLY, ADJUSTMENT.)
	4	Transfer Belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change Transfer Belt Unit if belt is damaged.
Transfer Roller Unit	5	Transfer Roller is dirty or scratched.	YES	Change Transfer Roller Unit.
	6	Charge Neutralizing Cloth is not separated and ground terminal is connected properly.	NO	Correct or change.
Paper path	7	There is foreign matter on paper path.	YES	Remove foreign matter.
	8	Pre-Image Transfer Guide Plate is damaged or dirty.	YES	Clean or change.
Paper Dust Remover	9	Paper dust accumulates on Paper Dust Remover.	YES	Clean.
	10	The problem has been eliminated through the checks of steps up to 9.	NO	Change Transfer Roller Unit.

(35) Printer 4-Color: colored spots

<Typical Faulty Image>



4011T027AA

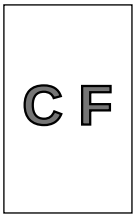
<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
IU	1	The surface of the PC Drum is scratched.	YES	Change IU.
Image Transfer Belt Unit	2	Fingerprints, oil, or other foreign matter is evident on the Image Transfer Belt.	YES	Clean with specified solvent. (See DIS/REASSEMBLY, ADJUSTMENT.)
	3	Image Transfer Belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change Image Transfer Belt Unit if belt is damaged.
Image Transfer Roller Unit	4	Image Transfer Roller is dirty or scratched.	YES	Change Image Transfer Roller Unit.
Paper path	5	There is foreign matter on paper path.	YES	Remove foreign matter.
Paper Dust Remover	6	Paper dust accumulates on Paper Dust Remover.	YES	Clean.
Fusing Unit	7	Fusing Belt is dirty or scratched.	YES	Change Fusing Unit.
	8	The problem has been eliminated through the checks of steps up to 7.	NO	Change Image Transfer Roller Unit. →Change Image Transfer Relt Unit. →Change Fusing Unit.

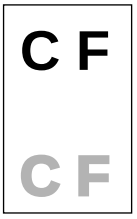
(36) Printer 4-Color: poor fusing performance, offset

<Typical Faulty Images>

Poor fusing performance Offset



4004T002AA



4004T003AA

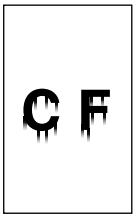
<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
Paper	1	Paper type does not match the setting on the paper type setting dial.	YES	Change the setting of the paper type setting dial.
Machine Adjust →Fuser Temp. (Tech. Rep. Mode)	2	Changing fusing temperature eliminates the problem of poor fusing performance and offset.	NO	Change Fusing Unit.

(37) Printer 4-Color: brush effect, blurred image

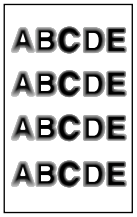
<Typical Faulty Images>

Brush effect



4004T004AA

Blurred image



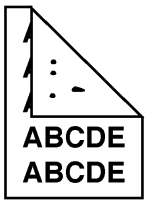
4011T046AA

<Troubleshooting Procedure>

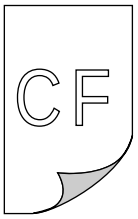
Section	Step	Check Item	Result	Action
Paper	1	Paper is damp.	YES	Change paper to one just unwrapped from its package. Install Paper Dehumidifying Heater.
	2	Paper type does not match the setting on the paper type setting dial.	YES	Change the setting of the paper type setting dial.
Fusing Unit	3	Fusing Entrance Guide Plate is dirty.	YES	Clean.
	4	Fusing Belt is dirty or scratched.	YES	Change Fusing Unit.
Machine Adjust →Fuser Speed (Tech. Rep. Mode)	5	Changing fusing speed eliminates the problem of brush effect and blurred image.	NO	Change Fusing Unit.

(38) Printer 4-Color: back marking

<Typical Faulty Images>



4011T009AA



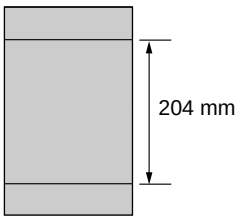
4011T051AA

<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
Image Transfer Roller Unit	1	Image Transfer Roller is scratched or dirty.	YES	Change Image Transfer Roller Unit.
Paper path	2	There is foreign matter on paper path.	YES	Remove foreign matter.
Fusing Unit	3	Fusing Entrance Guide Plate is scratched or dirty.	YES	Clean or change.
	4	Lower Fusing Roller is scratched or dirty.	YES	Change Fusing Unit.
Transfer Belt Unit	5	Fingerprints, oil, or other foreign matter is evident on the Transfer Belt.	YES	Clean with specified solvent. (See DIS/REASSEMBLY, ADJUSTMENT.)
	6	The problem has been eliminated through the checks of steps up to 5.	NO	Change Image Transfer Roller Unit. →Change Image Transfer Belt Unit. →Change Fusing Unit. →Change High Voltage Unit (Image Transfer, Neutralizing).

(39) Printer 4-Color: 204-mm-pitch uneven image

<Typical Faulty Images>



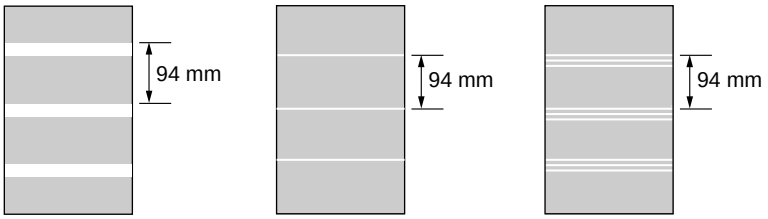
4011T061AB

<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
Fusing Unit	1	The Fusing Belt is scratchy.	YES	Change Fusing Unit.

(40) Printer 4-Color: 94-mm-pitch uneven image

<Typical Faulty Images>



4011T047AD 4011T057AA 4011T058AA

<Troubleshooting Procedure>

Section	Step	Check Item	Result	Action
IU	1	The surface of the PC Drum is scratched.	YES	Change IU.
Image Transfer Belt Unit	2	The Image Transfer Belt Unit drive gear is intact.	NO	Correct. Change Image Transfer Belt Unit.
Image Transfer Roller Unit	3	Image Transfer Roller is damaged.	YES	Change Image Transfer Roller Unit.