

[10] TROUBLESHOOTING SD-2260

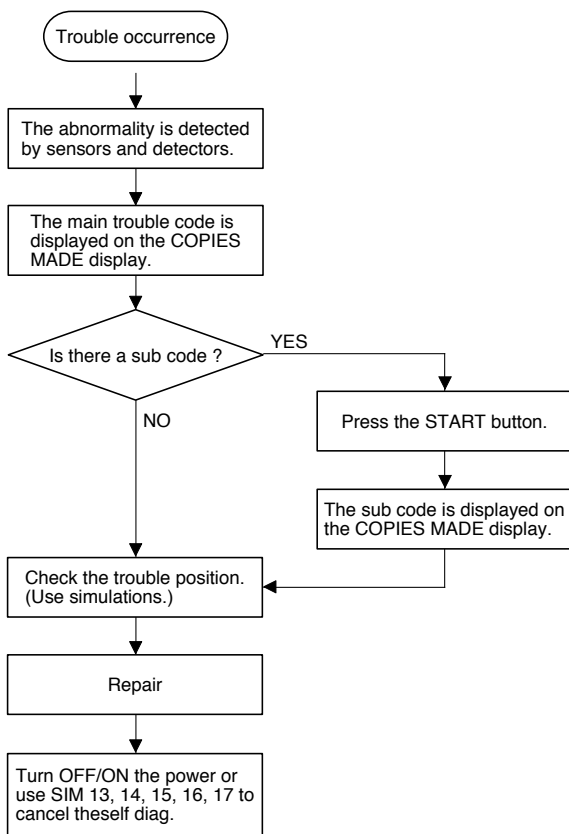
1. Self diagnostics

A. Outline and purpose

This machine is provided with the self diagnostic function. When a trouble occurs, it is detected by sensors and the trouble content is informed to the customer and the serviceman to realize the following items.

- 1) Safety (The machine is stopped simultaneously when a trouble occurs.)
- 2) Damage to the machine is suppressed to minimum. (The machine is stopped simultaneously when a trouble occurs.)
- 3) The trouble code is displayed to identify the trouble position quickly, shortening the recovery time, improving repair efficiency and allowing preliminary arrangement of necessary parts.

B. Self diagnostics operation flowchart.



C. Self diagnostics display and resolutions

When the self diagnostics display (trouble code display) is made, repair the trouble position and cancel the display in the following procedure.

Self diagnostics display (Trouble code display) content	Trouble display cancel method
U1	SIM13
U2	SIM16
F3	SIM15
PF	SIM17
H3/H4	SIM14
CH/PC	Canceled with the trouble is removed.
Other than the above	Power Off → ON

D. Contents which are not displayed in case of trouble

The trouble displays for the following troubles are not made. However, the trouble contents can be checked with SIM 22-3 or 23-3.

F2-32, F1-10, U4/2/3/9, U5 (all), F3 (all), L8-1/2

F2-31, 37 (Displayed when SIM 26-6 is set to 1, 4, 5 (Japan/USA spec.), or 10 (Other AB series 200V)).

In case of the above trouble, the copy density is forcibly decreased to inform that there is an abnormality in the image forming section. These are not displayed simultaneously with the occurrence of the trouble, but stored in the memory as well as the other trouble contents.

E. Relationship between trouble messages and trouble codes

When a trouble occurs in the machine, a trouble message may be displayed instead of a trouble code.

In that case, the content is stored with the trouble code, not with the trouble message.

The table below shows the relationship between the trouble messages and the trouble codes.

Trouble message	Trouble code (SIM22-3 display)		Remark
	Main code	Sub code	
Remove the staple unit and check it.	F1	10	SF-S53 only
Copying is allowed. (Contact the dealer. Code: F2)	F2	31 37	Refer the table * 1
The duplex copying function is troubled.	U4	2 3 9	
The document feeder is troubled. Press [CA] to cancel the job. The document feeder is troubled. Use the document table.	U5	All	
Use another tray. Tray kk is troubled.	F3	All	kk : Tray No.
Use another tray. The side cassette is troubled.	F3	42	
The sorter is troubled. Press [CA] to cancel the job.	F1	All	Other than SF-S55
The auto exposure function (AE) is troubled. Manually adjust the copy density.	L8	1 2	

* 1

Trouble code	SIM 26-6 set value	Destination		
F2-31, 37	1	USA (SEC)	The trouble code is displayed and the machine is stopped. (Copying is inhibited.)	
	4/5	JAPAN		
	10	AB series (200V series)		
		2	CANADA (SECL)	Copying is allowed but the copy density is decreased. (The trouble sub code is not displayed.)
		3	Inch series (Other)	
		6	EUROPE (SEEG)	
		7	UK (SUK)	
		8	AUSTRALIA (SCA)	
		9	AB series (Other)	
F2-32	No conditions	All destinations	Copying is performed, but copy density decreased.	

F. Details

Main code	Section	Sub code	Description	
C2	High voltage unit	00	Content	Transfer charger unit trouble
			Detail	1) Transfer charger unit output short (output defect) (The trouble signal is detected.)
			Cause	1) Transfer charger unit output short 2) High voltage unit defect 3) SIM 8-6 adjustment defect 4) Overvoltage
			Remedy	1) Check for transfer charger unit output short. 2) Check the high voltage unit trouble signal. 3) Check and adjust the transfer charger unit voltage. 4) Turn OFF/ON the power to clear the self diag (trouble code) display.
C3		00	Content	Separation charger unit trouble
			Detail	1) Separation charger unit output short (output defect) (The trouble signal is detected.)
			Cause	1) Separation charger unit output short 2) High voltage unit defect 3) SIM 8-7 adjustment defect 4) Overvoltage
			Remedy	1) Check for separation charger unit output short. 2) Check the high voltage unit trouble signal. 3) Check and adjust the separation charger unit voltage. 4) Turn OFF/ON the power to clear the self diag (trouble code) display.
CC	Document size detection (Japan only)		Content	Document size detection trouble
			Detail	1) At adjustment of sensor detection level (SIM 41-1), the sensor output is abnormal. There is no difference between the sensor output level without document and that with document.
			Cause	1) Document size sensor defect (light emitting section, light receiving section) 2) Main control PWB defect
			Remedy	1) Check the document size sensor operation with SIM 1-2/3. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
EE	Developing	EU	Content	Toner concentration sensor trouble (undertoner)
			Details	1) When the toner concentration initial setting is made with SIM 25-2, toner concentration sensor output level 3.3V or above is detected.
			Cause	1) Toner concentration sensor defect 2) Main control PWB defect
			Remedy	1) Execute SIM 25-1 to check the toner concentration sensor output level. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
		EL	Content	Toner concentration sensor trouble (overtoner)
			Detail	1) When the toner concentration initial setting is made with SIM 25-2, toner concentration sensor output level 1.45V or below is detected.
			Cause	1) Toner concentration sensor defect 2) Main control PWB defect
			Remedy	1) Execute SIM 25-1 to check the toner concentration sensor output level. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.

Main code	Section	Sub code	Description	
F1	Sorter (SF-S53)	00	Content	Data communication trouble between the main control PWB and the sorter control PWB.
			Detail	1) Serial communication parity, framing, overrun error (judged by the CPU)
			Cause	1) Main control PWB defect 2) Sorter control PWB defect
			Remedy	1) Check the data communication line between the main control PWB and the sorter control PWB. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
		02	Content	Paper transport mechanism (motor, etc.) trouble
			Detail	1) Transport motor rotation abnormality 2) Transport motor rotation sensor signal abnormality
			Cause	1) Transport motor defect 2) Transport motor rotation sensor defect 3) Paper transport mechanism section defect 4) Sorter control PWB defect
			Remedy	1) Check the transport motor rotation sensor signal. 2) Check the transport motor control signal. 3) Turn OFF/ON the power to clear the self diag (trouble code) display.
		03	Content	Guide bar mechanism section (drive motor, etc.) trouble
			Detail	1) Guide bar drive mechanism section (motor, etc.) lock 2) Guide bar home position sensor signal abnormality
			Cause	1) Guide bar drive motor defect 2) Guide bar home position sensor defect 3) Guide bar drive mechanism section defect 4) Sorter control PWB defect
			Remedy	1) Check the guide bar drive motor rotation sensor signal. 2) Check the guide bar drive motor control signal. 3) Turn OFF/ON the power to clear the self diag (trouble code) display.
		06	Content	Bin shift mechanism section (drive motor, etc.) trouble
			Detail	1) Bin shift mechanism section, drive motor rotation abnormality 2) Bin shift motor rotation sensor signal abnormality
			Cause	1) Bin shift motor defect 2) Bin shift motor rotation sensor defect 3) Bin shift mechanism defect 4) Sorter control PWB defect
			Remedy	1) Check the bin shift motor rotation sensor signal. 2) Check the bin shift motor control signal. 3) Turn OFF/ON the power to clear the self diag (trouble code) display.
		08	Content	Stapler slide mechanism (drive motor, etc.) trouble
			Detail	1) Stapler slide mechanism (motor, etc.) lock 2) Stapler home position sensor signal abnormality

Main code	Section	Sub code	Description		
F1	Sorter (SF-S53)	08	Remedy	1) Stapler slide motor defect 2) Stapler home position sensor defect 3) Stapler slide mechanism defect 4) Sorter control PWB defect	
			Remedy	1) Check the stapler slide motor rotation sensor signal. 2) Check the stapler slide motor control signal. 3) Turn OFF/ON the power to clear the self diag (trouble code) display.	
		10	Content	Stapler mechanism trouble	
			Detail	1) Stapler mechanism (motor, etc.) lock 2) Stapler related sensor signal abnormality	
			Cause	1) Stapler motor defect 2) Stapler related sensor defect 3) Stapler mechanism defect 4) Sorter control PWB defect	
			Remedy	1) Check the stapler related sensor signal. 2) Check the stapler motor control signal. 3) Turn OFF/ON the power to clear the self diag (trouble code) display.	
		Sorter (SF-S55)	70	Content	Data communication trouble
				Detail	Data communication trouble between the sorter (Control PWB) and the copier (main control PWB)
	Cause			1) Sorter control PWB trouble 2) Main control PWB trouble 3) Sorter-copier cable disconnection	
	Remedy			Turn OFF and ON the power to clear the diag. (trouble code).	
	80		Content	Defect of the power in the sorter (+24V)	
			Detail	1) Power of +24V is not supplied to the sorter control PWB.	
			Cause	1) The breaker is shut off. 2) The detection circuit of +24V is defective.	
			Remedy	1) Check the +24V line in the sorter control PWB. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.	
81	Content		Paper transport mechanism (motor, etc.) trouble		
	Detail		1) The rotation sensor output signal is not detected within 250msec after the transport motor ON signal is outputted. 2) The transport guide sensor signal is not detected within 2 sec after the transport guide operation is started. 3) The transport guide home position sensor signal is not detected within 2 sec after the transport guide operation is started.		
	Cause	1) Transport motor defect 2) Transport motor rotation sensor defect 3) Transport guide sensor defect 4) Transport guide home position sensor defect 5) Paper transport mechanism defect 6) Sorter control PWB defect			
	Remedy	1) Check the sorter transport motor, the transport guide, and the sensor operations with SIM 3-1/2. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.			

Main code	Section	Sub code	Description	
F1	Sorter (SF-S55)	83	Content	Paper push bar mechanism (motor, etc.) trouble
			Detail	1) The push bar home position sensor signal is not detected within 2 sec after the initializing operation is started. 2) The push bar does not complete its operation within 2 sec after starting the operation.
			Cause	1) Push bar motor defect 2) Push bar home position sensor defect 3) Circuit breaker operation 4) Paper push bar mechanism defect 5) Sorter control PWB defect
			Remedy	1) Check the sorter push bar motor and sensor operations with SIM 3-1/2. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
		84	Content	Guide plate mechanism (motor, etc.) trouble
			Detail	1) Guide plate home position sensor signal is not detected within 2 sec after starting the initializing operation. 2) The guide plate does not complete the operation within 2 sec after starting.
			Cause	1) Guide plate motor defect 2) Guide plate home position sensor defect 3) Guide plate mechanism defect 4) Circuit breaker operation 5) Sorter control PWB defect
			Remedy	1) Check the guide plate motor and sensor operations with SIM 3-1/2. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
		85	Content	Multi guide mechanism (motor, etc.) trouble
			Detail	1) The multi guide home position sensor signal is not detected within 2 sec after starting initializing operation. 2) The multi guide does not complete its operation within 2 sec after starting.
			Cause	1) Multi guide motor defect 2) Multi guide home position sensor defect 3) Multi guide mechanism defect 4) Circuit breaker operation 5) Sorter control PWB defect
			Remedy	1) Check the multi guide motor and sensor operations with SIM 3-1/2. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
		86	Content	Guide mechanism (motor, etc.) trouble
			Detail	1) The guide bar home position sensor is not detected within 2 sec after starting the initializing operation. 2) The guide bar does not complete its operation within * 2 (5) sec after starting. * (The judgement condition differs depending on the operation mode.)
			Cause	1) Guide bar motor defect 2) Guide bar mechanism defect 3) Guide bar mechanism defect 4) Circuit breaker operation 5) Sorter control PWB defect

Main code	Section	Sub code	Description	
F1	Sorter (SF-S55)	86	Remedy	1) Check the guide bar motor and sensor operations with SIM 3-1/2. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
			87	Content
		Detail		1) The stapler shift home position sensor signal is not detected within 1 sec after starting the initializing operation. 2) The stapler shift home position sensor signal does not change its polarity within 1 sec after starting the stapler shift operation. 3) The rotation sensor output signal is not detected within 250msec after the stapler shift motor ON signal is outputted.
		Cause		1) Stapler shift motor defect 2) Stapler shift home position sensor defect 3) Stapler shift mechanism defect 4) Circuit breaker operation 5) Sorter control PWB defect
		Remedy		1) Check the stapler shift motor and sensor operations with SIM 3-1/2. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
		88	Content	Staple slide mechanism (motor, etc.) trouble
			Detail	1) The stapler slide home position sensor signal is not detected within 5 sec after starting the initializing operation.
			Cause	1) Stapler slide motor defect 2) Stapler slide home position sensor defect 3) Staple slide mechanism defect 4) Circuit breaker operation 5) Sorter control PWB defect
			Remedy	1) Check the stapler slide motor and sensor operations with SIM 3-1/2. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
		89	Content	Bin shift mechanism (motor, etc.) trouble
			Detail	1) The lead cam home position sensor signal is not detected within 2 sec after the bin shift motor ON signal is outputted. 2) The guide bar does not complete the operation within * 20 (2) sec after starting the operation. * (The judgement condition differs depending on the operation mode.) 3) The rotation sensor output signal is not detected within 250msec after the bin shift motor ON signal is outputted.
			Cause	1) Bin shift motor defect 2) Lead cam home position sensor defect 3) Bin shift mechanism defect 4) Circuit breaker operation 5) Sorter control PWB defect
			Remedy	1) Check the bin shift motor and sensor operations with SIM 3-1/2. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
		91	Content	Bin upper paper sensor (bin center) trouble
			Detail	1) Sensor output abnormality in the sensor detection level adjustment
			Cause	1) Bin upper paper sensor (bin center) defect 2) Sorter control PWB defect
Remedy	1) Check the sensor output with SIM 3-2. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.			

Main code	Section	Sub code	Description	
F1	Sorter (SF-S55)	92	Content	Bin upper paper sensor (in front of the bin) trouble
			Detail	1) The sensor output abnormality in the sensor detection level adjustment
			Cause	1) Bin upper paper sensor (in front of the bin) defect 2) Sorter control PWB defect
			Remedy	1) Check the sensor output with SIM 3-2. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
		93	Content	Paper sensor trouble in the stapler
			Detail	1) Sensor output abnormality in the sensor detection level adjustment
			Cause	1) Paper sensor defect in the stapler 2) Sorter control PWB defect
			Remedy	1) Check the sensor output with SIM 3-2. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
F2	Image forming section	00	Content	Toner concentration sensor trouble
			Detail	1) The toner concentration sensor output is not in the range of 0.7 ~ 4.6V.
			Cause	1) Toner concentration sensor defect 2) Toner concentration sensor dirt 3) Main charger grid voltage adjustment defect 4) Developer defect 5) Toner concentration defect 6) Developing unit defect (doctor gap, MG roller main pole position) 7) Main control PWB defect 8) Developing unit connector contact defect
			Remedy	1) Check the toner concentration sensor output with SIM 25-1. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
		31	Content	OPC drum surface detection trouble
			Detail	1) The image density sensor output is not within the range of 2.8 ~ 4.65V when the OPC drum surface is measured.
			Cause	1) Image density sensor defect 2) Image density sensor dirt 3) OPC drum cleaning defect 4) Developing bias voltage adjustment defect 5) Blank lamp defect 6) Main control PWB defect 7) OPC drum defect 8) Image density sensor adjustment defect
			Remedy	1) Check the set values of the process section and the defective positions with SIM 44-7, and -9. 2) Turn OFF/ON the power to clear the self diag (trouble code) display. 3) Adjust the image density sensor output level with SIM 44-3.
		32	Content	OPC drum mark detection trouble
			Detail	1) The OPC drum mark is not detected.

Main code	Section	Sub code	Description			
F2	Image forming section	32	Cause	1) OPC drum mark sensor defect 2) OPC drum mark sensor dirt 3) OPC drum mark sensor cleaning defect 4) Blank lamp defect 5) Main control PWB defect 6) OPC drum defect 7) OPC drum mark sensor adjustment defect		
			Remedy	1) Check the set values of the process section and defective positions with SIM 44-7, and -9. 2) Turn OFF/ON the power to clear the self diag (trouble code) display. 3) Adjust the OPC drum mark sensor output level with SIM 44-2.		
		37	Content	OPC drum mark sensor gain adjustment trouble		
			Detail	1) The OPC drum mark sensor output is not within the range of 2.6 ~ 4.1V.		
			Cause	1) OPC drum mark sensor defect 2) OPC drum mark sensor defect 3) OPC drum mark sensor cleaning defect 4) Blank lamp defect 5) Main control PWB defect 6) OPC drum defect		
			Remedy	1) Check the set values of the process section and defective positions with SIM 44-7, and -9. 2) Turn OFF/ON the power to clear the self diag (trouble code) display. 3) Adjust the OPC drum mark sensor output level with SIM 44-2.		
		F3	Manual paper feed tray section	00	Content	Manual paper feed tray paper size detection trouble
					Detail	1) The sensor output is abnormal in the sensor detection level adjustment (SIM 40-2).
Cause	1) Manual paper fed tray paper size sensor defect 2) Main control PWB defect					
Remedy	1) Check the manual paper feed tray paper size sensor operation with SIM 40-1. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.					
No. 1 tray section	11		Content	Paper feed tray motor PT disc sensor trouble		
			Detail	1) The paper tray motor rotation sensor output signal is not detected within 100msec after the paper tray motor ON signal is outputted.		
			Cause	1) Paper tray motor rotation sensor defect 2) Paper tray motor defect 3) Paper tray mechanism section defect 4) Main control PWB defect		
			Remedy	1) Check the paper tray operation with SIM 6-3. 2) Clear the self diag with SIM 15.		
	12		Content	Paper tray lift-up trouble		
			Detail	1) The paper upper limit sensor ON signal is not detected within 12 sec after the paper tray motor lift-up signal is outputted. 2) The paper lower limit sensor OFF signal is not detected within 1.0 sec after the paper tray motor lift-up signal is outputted.		

Main code	Section	Sub code	Description	
F3	No. 1 tray section	12	Cause	1) Paper tray upper limit sensor defect 2) Paper tray lower limit sensor defect 3) Paper tray motor defect 4) Paper tray mechanism section defect 5) Main control PWB defect
			Remedy	1) Check the paper tray operation with SIM 6-3. 2) Clear the self diag with SIM 15.
		13	Content	Paper tray lift down trouble
			Detail	1) The paper lower limit sensor ON signal is not detected within 12 sec after the paper tray motor lift-down signal is outputted. 2) The paper upper limit sensor OFF signal is not detected within 1.0 sec after the paper tray motor lift-down signal is outputted.
			Cause	1) Paper tray upper limit sensor defect 2) Paper tray lower limit sensor defect 3) Paper tray motor defect 4) Paper tray mechanism section defect 5) Main control PWB defect
			Remedy	1) Check the paper tray operation with SIM 6-3. 2) Clear the self diag with SIM 15.
	No. 2 paper tray section	21	Content	Paper feed tray motor PT disc sensor trouble
			Detail	1) The paper tray motor rotation sensor output signal is not detected within 200msec after the paper tray motor ON signal is outputted.
			Cause	1) Paper tray motor rotation sensor defect 2) Paper tray motor defect 3) Paper tray mechanism section defect 4) Main control PWB defect
			Remedy	1) Check the paper tray operation with SIM 6-3. 2) Clear the self diag with SIM 15.
		22	Content	Paper tray lift-up trouble
			Detail	1) The paper upper limit sensor ON signal is not detected within 12 sec after the paper tray motor lift-up signal is outputted. 2) The paper lower limit sensor OFF signal is not detected within 1.0 sec after the paper tray motor lift-up signal is outputted.
Cause			1) Paper tray upper limit sensor defect 2) Paper tray lower limit sensor defect 3) Paper tray motor defect 4) Paper tray mechanism section defect 5) Main control PWB defect	
Remedy			1) Check the paper tray operation with SIM 6-3. 2) Clear the self diag with SIM 15.	
23		Content	Paper tray lift down trouble	
		Detail	1) The paper lower limit sensor ON signal is not detected within 12 sec after the paper tray motor lift-down signal is outputted. 2) The paper upper limit sensor OFF signal is not detected within 1.0 sec after the paper tray motor lift-down signal is outputted.	

Main code	Section	Sub code	Description	
F3	No. 2 paper tray section	23	Cause	1) Paper tray upper limit sensor defect 2) Paper tray lower limit sensor defect 3) Paper tray motor defect 4) Paper tray mechanism section defect 5) Main control PWB defect
			Remedy	1) Check the paper tray operation with SIM 6-3. 2) Clear the self diag with SIM 15.
	No. 3 paper tray section	31	Content	Paper feed tray motor PT disc sensor trouble
			Detail	1) The paper tray motor rotation sensor output signal is not detected within 200msec after the paper tray motor ON signal is outputted.
			Cause	1) Paper tray motor rotation sensor defect 2) Paper tray motor defect 3) Paper tray mechanism section defect 4) Main control PWB defect
			Remedy	1) Check the paper tray operation with SIM 6-3. 2) Clear the self diag with SIM 15.
		32	Content	Paper tray lift-up trouble
			Detail	1) The paper upper limit sensor ON signal is not detected within 12 sec after the paper tray motor lift-up signal is outputted. 2) The paper lower limit sensor OFF signal is not detected within 1.0 sec after the paper tray motor lift-up signal is outputted.
			Cause	1) Paper tray upper limit sensor defect 2) Paper tray lower limit sensor defect 3) Paper tray motor defect 4) Paper tray mechanism section defect 5) Main control PWB defect
			Remedy	1) Check the paper tray operation with SIM 6-3. 2) Clear the self diag with SIM 15.
			33	Content
		Detail		1) The paper lower limit sensor ON signal is not detected within 12 sec after the paper tray motor lift-down signal is outputted. 2) The paper upper limit sensor OFF signal is not detected within 1.0 sec after the paper tray motor lift-down signal is outputted.
		Cause		1) Paper tray upper limit sensor defect 2) Paper tray lower limit sensor defect 3) Paper tray motor defect 4) Paper tray mechanism section defect 5) Main control PWB defect
		Remedy		1) Check the paper tray operation with SIM 6-3. 2) Clear the self diag with SIM 15.
Paper cassette section	42	Content	Paper cassette lift-up trouble	
		Detail	1) The upper limit sensor (CLUD) signal is not detected within 10sec after the lift plate starts lift-up operation from the lowest position (with paper empty). 2) The upper sensor (CLUD) signal is not detected within 4 sec after the lift-up operation is started in copying (with paper).	

Main code	Section	Sub code	Description	
F3	Paper cassette section	42	Cause	1) Paper cassette section sensor defect 2) Paper cassette lift motor defect 3) Main control PWB defect
			Remedy	1) The paper cassette section sensor operation is checked with SIM 30-2. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
L1	Optical section	00	Content	Scanner unit feed trouble
			Detail	The scanner unit does not complete feeding within 6 sec.
			Cause	1) Scanner motor control circuit defect 2) Main control PWB defect 3) Scanner unit drive section defect 4) Scanner motor unit defect
			Remedy	1) Check the scanner unit operation with SIM 1-1. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
L2		00	Content	Resist roller operation trouble
			Detail	The RRC ON (RRC in) signal from the mirror motor control PWB is not detected in the main control PWB during execution of SIM 7-2, 3, and 7.
			Cause	1) Scanner motor control circuit defect 2) Main control PWB defect
			Remedy	1) Perform copying and check the RRC ON (RRC in) signal. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
L3		00	Content	Scanner unit return trouble
			Detail	The scanner unit does not complete scanning (the home position is not detected) in the initial operation or within 3.5 sec after scanning.
			Cause	1) Scanner motor control PWB defect 2) Main control PWB defect 3) Scanner unit drive section defect 4) Scanner motor unit defect
			Remedy	1) Check the operation of the scanner unit with SIM 1-1. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
L4	Drive section	01	Content	OPC drum drive section lock
			Detail	The specified rpm is not detected within 1 sec after the OPC drum drive motor ON command is issued.
			Cause	1) OPC drum motor control circuit defect 2) Main control PWB defect 3) OPC drum drive section mechanism defect (lock, etc.) 4) OPC drum drive motor unit defect
			Remedy	1) Check for normal rotation of the OPC drum with SIM 25-1. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
		02	Content	Drive section lock
			Detail	The specified rpm is not detected within 1 sec after the main motor ON command is issued.
			Cause	1) Main motor control PWB defect 2) Main control PWB defect 3) Drive section mechanism defect (lock, etc.) 4) Main motor unit defect

Main code	Section	Sub code	Description	
L4	Drive section	02	Remedy	1) Check for normal operation of the main motor with SIM 6-1. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
	Fusing section	03	Content	Fusing drive section (motor, etc.) trouble
			Detail	1) The specified rpm is not detected for 1 sec during output of the fusing drive motor ON signal. (During rotation)
			Cause	1) Fusing drive motor defect 2) Fusing mechanism defect 3) Main control PWB defect
			Remedy	1) Check for normal operation of the fusing drive motor with SIM 6-1. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
	Suction motor (suction)	21	Content	Suction motor (suction) lock
			Detail	The specified rpm is not detected within 1 sec after the suction motor ON command is issued.
			Cause	1) Suction motor control circuit defect 2) Main control PWB defect 3) Suction motor duct clogging (lock, etc.) 4) Suction motor defect
			Remedy	1) Check for normal rotation of the blower motor with SIM 6-2. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
	Blower motor (exhaust)	22	Content	Blower motor (exhaust) lock
			Detail	The specified rpm is not detected within 1 sec after the blower motor ON command is issued.
			Cause	1) Blower motor control circuit defect 2) Main control PWB defect 3) Blower motor duct clogging (lock, etc.) 4) Blower motor defect
			Remedy	1) Check for normal rotation of the blower motor with SIM 6-2. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
	Duplex section	23	Content	Duplex (blower, suction) motor trouble
			Detail	1) The specified rpm is not detected for 1 sec during output of the duplex (blower, suction) motor ON signal.
			Cause	1) Duplex (blower, suction) motor trouble 2) Main control PWB defect
Remedy			1) Check for normal rotation of the blower motor with SIM 6-2. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.	
L5	Optical section	00	Content	Lens, No. 4/5 mirror feed trouble, initial operation trouble
			Detail	1) The lens and No. 4/5 mirror do not move to the specified positions within 12.5 sec after the drive signals are outputted. (Home position or specified copy magnification ratio positions)
			Cause	1) Mirror motor control circuit defect 2) Main control PWB defect 3) Lens or No. 4/5 mirror motor defect 4) Lens or No. 4/5 mirror drive system defect
			Remedy	1) Check the operations of the lens unit and No. 4/5 mirror unit with SIM 1-3. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.

Main code	Section	Sub code	Description	
L8	Power section	01	Content	Zero cross pulse (FW) trouble
			Detail	1) Zero cross pulse (FW) is not outputted. 2) Zero cross pulse (FW) output level abnormality The Zero cross pulse (FW) is not detected.
			Cause	1) DC power unit defect 2) Main control PWB defect
			Remedy	1) Check the zero cross pulse (FW) waveform with an oscilloscope. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
		02	Content	Zero cross pulse (FW) trouble
			Detail	1) The zero cross pulse (FW) frequency is not within the specified range. 50Hz (46.15 ~ 53.3Hz), 60Hz (55.59 ~ 64.86Hz)
			Cause	1) DC power unit defect 2) Main control PWB defect 3) AC power abnormality
			Remedy	1) Check the zero cross pulse (FW) waveform with an oscilloscope. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
	Optical section	03	Content	AE sensor trouble
			Detail	1) The Ae sensor output level change is not detected when the copy lamp voltage is changed during execution of SIM 47.
Cause			1) AC power unit defect 2) Main control PWB defect 3) AE sensor defect 4) Copy lamp defect	
Remedy			1) Check the copy lamp voltage and the AE sensor output during execution of SIM 47. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.	
H2	Fusing section	00	Content	Thermistor trouble
			Detail	1) The thermistor is open. (The thermistor input pin voltage of 4.5V or above is detected.)
			Cause	1) Thermistor defect 2) Main control PWB defect 3) AE sensor defect 4) Copy lamp defect
			Remedy	1) Check the thermistor line. 2) Check the line between the thermistor and the main control PWB. 3) Turn OFF/ON the power to clear the self diag (trouble code) display.
H3	Fusing section	00	Content	Fusing section abnormally high temperature
			Detail	1) The heat roller temperature exceeds 228 C. (The thermistor input pin voltage of 1.3V or below is detected.)
			Cause	1) Thermistor defect 2) Main control PWB defect 3) AC power PWB defect 4) Fusing section connector improper connection 5) Fusing section connector SW defect

Main code	Section	Sub code	Description	
H3	Fusing section	00	Remedy	1) Check the thermistor and its input circuit. 2) Check the heater lamp ON signal and the drive circuit with SIM 5-2. 3) Clear the self diag with SIM 14.
H4		00	Content	Fusing section abnormally low temperature
			Detail	1) The fusing section does not reach the specified temperature (SIM 43-1) within 10 min (Japan 15A specifications) after the power relay is turned ON. (The thermistor input pin voltage of 1.84V or above is detected.)
			Cause	1) Thermistor defect 2) Main control PWB defect 3) AC power PWB defect
			Remedy	1) Check the thermistor and its input circuit. 2) Check the heater lamp ON signal and the drive circuit with SIM 5-2. 3) Clear the self diag with SIM 14.
U0	Main control PWB, operation PWB	00	Content	Data communication trouble between the main control PWB and the operation PWB (Judged on the main control PWB side)
			Detail	1) Serial communication parity, framing, overrun errors (Judged by the CPU)
			Cause	1) PWB (RDH,finisher, operation, auditor, mirror motor) defect on the slave side 2) Main control PWB defect
			Remedy	1) Check the data communication line between the main control PWB and each slave PWB. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
U1	Main control PWB	01	Content	SRAM backup memory 1 voltage fall
			Detail	1) The SRAM backup memory 1 voltage of 2.2V or below is detected.
			Remedy	1) Follow the battery replacement procedure. 2) Clear the self diag with SIM 13.
	(Option memory PWB)	02	Content	SRAM backup mattery 2 voltage fall
			Detail	The SRAM backup memory 2 voltage of 2.2V or below is detected.
			Remedy	1) Follow the battery replacement procedure. 2) Clear the self diag with SIM 13.
	Main control PWB + (option memory PWB)	03	Content	SRAM backup battery 1 and 2 voltage fall
			Detail	The SRAM backup mattery 1 and 2 voltage of 2.2V or below is detected.
			Remedy	1) Follow the battery replacement procedure. 2) Clear the self diag with SIM 13.
U2	Main control PWB	01	Content	Memory sum check error
			Detail	The SRAM memory data and the EEPROM memory data are disturbed. (In case of this trouble, the SRAM data and the EEPROM data are not reliable.)
			Cause	1) Main control PWB defect
			Remedy	1) Follow the U2 trouble countermeasure procedure. 2) Clear the self diag with SIM 16.

Main code	Section	Sub code	Description	
U3	Optical section	00	Content	Data communication trouble between the main control PWB and the mirror motor PWB
			Detail	1) Serial communication parity, framing, overrun errors (Judged by the CPU)
			Cause	1) Main control PWB defect 2) Mirror motor PWB defect
			Remedy	1) Check the data communication line between the main control PWB and each mirror motor PWB. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
		20	Content	Mirror motor rotary encoder output signal trouble
			Detail	1) The mirror motor rotary encoder output signal is not detected after 100msec from when the mirror motor ON signal is outputted.
			Cause	1) Main control PWB defect 2) Mirror motor PWB defect 3) Mirror motor drive section lock 4) Mirror motor defect
			Remedy	1) Check the mirror motor rotary encoder output signal with SIM 1-1. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
		21	Content	Scanner unit home position trouble
			Detail	1) The scanner unit detects the mirror home position sensor OFF when scanning is started. 2) The mirror home position sensor ON is detected (scanner home position sensor output signal is not detected normally) at the timing of the scanner unit return.
			Cause	1) Main control PWB defect 2) Mirror motor PWB defect 3) Mirror motor drive section level 4) Mirror motor defect 5) Mirror home position sensor defect
			Remedy	1) Check the scanner unit home position sensor output signal with SIM 1-2. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
		23	Content	Scanner unit initial operation trouble
			Detail	1) It takes 5 sec or more to initialize the scanner unit.
			Cause	1) Main control PWB defect 2) Mirror motor PWB defect 3) Mirror motor drive section lock 4) Mirror motor defect 5) Mirror home position sensor defect
			Remedy	1) Check the initializing operation with SIM 1-1. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
26	Content	Mirror motor drive power voltage fall		
	Detail	1) The mirror motor drive voltage of 26V or below is detected.		

Main code	Section	Sub code	Description			
U3	Optical section	26	Cause	1) Mirror motor PWB defect 2) Mirror motor drive section lock 3) Mirror motor defect 4) DC power PWB defect		
			Remedy	1) Check the mirror motor drive power voltage. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.		
		41	Content	Lens shift operation trouble		
			Detail	1) The lens home position sensor output polarity change is not detected even though the lens motor drive pulse is outputted for the max. shift amount + 100 steps in initializing. 2) The lens home position sensor output polarity change is not detected even though the lens drive pulse is outputted in the lens shift operation.		
			Cause	1) Mirror motor PWB defect 2) Lens home position sensor defect 3) Lens motor drive section lock 4) Lens motor defect		
			Remedy	1) Check the lens shift operation with SIM 1-3. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.		
		42	Content	No. 4/5 mirror shift operation trouble		
			Detail	1) The lens home position sensor output polarity change is not detected even though the No. 4/5 mirror motor drive pulse is outputted for the max. shift amount + 100 steps in initializing. 2) The No. 4.5 mirror home position sensor output polarity change is not detected even though the lens drive pulse is outputted in the lens shift operation.		
			Content	1) Mirror motor PWB defect 2) No. 4/5 mirror home position sensor defect 3) No. 4/5 mirror motor drive section lock 4) No. 4/5 mirror motor defect		
			Detail	1) Check the No. 4/5 mirror shift operation with SIM 1-3. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.		
		U4	Duplex section	02	Content	Paper width direction alignment plate operation trouble
					Detail	1) The paper width direction alignment plate home position is not detected within 5 sec.
Cause	1) Paper width direction alignment plate home position sensor defect 2) Paper width direction alignment plate drive motor defect 3) Paper width direction alignment plate drive section defect 4) Main control PWB defect					
Remedy	1) Check the paper width direction alignment plate home position sensor output. 2) Check the paper width direction alignment plate drive circuit and mechanism. 3) Turn OFF/ON the power to clear the self diag (trouble code) display.					
03	Content			Paper transport direction alignment plate operation trouble		
	Detail			1) The paper transport direction alignment plate home position is not detected within 5 sec.		

Main code	Section	Sub code	Description			
U4	Duplex section	03	Cause	1) Paper transport direction alignment plate home position sensor defect 2) Paper transport direction alignment plate drive motor defect 3) Paper transport direction alignment plate drive section defect 4) Main control PWB defect		
			Remedy	1) Check the paper transport direction alignment plate home position sensor output. 2) Check the paper transport direction alignment plate drive circuit and mechanism. 3) Turn OFF/ON the power to clear the self diag (trouble code) display.		
		09	Content	Duplex blower valve trouble		
			Detail	1) The blower valve home position sensor signal is not detected within 2.5 sec after the blower valve ON signal is outputted.		
			Cause	1) Blower valve motor defect 2) Blower valve mechanism defect 3) Main control PWB defect 4) Blower valve home position sensor defect		
			Remedy	1) Check the operation of the duplex blower valve with SIM 30-1, 6-2. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.		
		U5	RADF section	00	Content	Data communication trouble between the main control PWB and the RADF control PWB
					Detail	1) Serial communication parity, framing, overrun error (Judged by the CPU.)
Cause	1) Main control PWB defect 2) RADF control PWB defect					
Remedy	1) Check the data communication line between the main control PWB and the RADF control PWB. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.					
01	Content			RADF resist sensor trouble		
	Detail			1) RADF resist sensor output voltage defect		
	Cause			1) RADF resist sensor defect 2) RADF control PWB defect		
	Remedy			1) Check the RADF resist sensor output voltage. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.		
02	Content			RADF paper exit, reverse sensor trouble		
	Detail			RADF paper exit, reverse sensor output voltage defect		
	Cause			1) RADF paper exit sensor, reverse sensor defect 2) RADF control PWB defect		
	Remedy			1) Check the RADF paper exit, reverse sensor output. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.		
03	Content			RADF timing sensor trouble		
	Detail			1) RADF timing sensor output voltage defect		
	Cause			1) RADF timing sensor defect 2) RADF control PWB defect		
	Remedy			1) Check the RADF timing sensor output voltage. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.		

Main code	Section	Sub code	Description	
U5	RADF section	05	Content	RADF document width sensor trouble
			Detail	1) RADF document width sensor output voltage defect
			Cause	1) RADF document width sensor defect 2) RADF control PWB defect
			Remedy	1) Check the RADF document width sensor output voltage. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
		11	Content	RADF paper feed motor trouble
			Detail	1) The paper feed motor rotation sensor (DFMRS) signal polarity change is not detected for 200 msec even though the paper feed motor ON signal is issued.
			Cause	1) RADF control PWB defect 2) RADF paper feed motor defect 3) RADF paper feed mechanism defect 4) RADF paper feed motor rotation sensor defect
			Remedy	1) Check the RADF operation with SIM 2-1, 2, 3. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
		12	Content	RADF transport motor trouble
			Detail	1) The transport motor rotation sensor (DTMRS2) signal polarity change is not detected for 200 msec after the transport motor ON signal is issued.
			Cause	1) RADF control PWB defect 2) RADF transport motor defect 3) RADF transport mechanism defect 4) RADF transport motor rotation sensor defect
			Remedy	1) Check the RADF operation with SIM 2-1, 2, 3. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
		13	Content	RADF paper exit trouble
			Detail	1) The paper exit motor rotation sensor (DEMRS) signal polarity change is not detected for 200 msec after the RADF paper exit motor ON signal is issued.
			Cause	1) RADF control PWB defect 2) RADF paper exit motor defect 3) RADF paper exit mechanism defect 4) RADF paper exit motor rotation sensor defect
			Remedy	1) Check the operation of the RADF with SIM 2-1, 2, 3. 2) Turn OFF/ON the power to clear the self diag (trouble code) display.
U7	MODEM I/F	00	Content	Data communication trouble between the copier and the host computer
			Cause	1) Main control PWB defect 2) MODEM I/F defect 3) MODEM communication circuit defect 4) Host computer defect 5) MODEM defect
			Remedy	1) If the trouble cause is not detected promptly, cancel copy inhibition at the communication trouble with SIM 27-1. 2) Replace the defective parts. 3) Turn OFF/ON the power to clear the self diag (trouble code) display.

Main code	Section	Sub code	Description	
U8	Expansion memory (main control PWB)	00	Content	Expansion memory installation trouble
			Detail	1) Improper contact between the expansion memory and the main control PWB 2) Improper setting of SIM 26-3
			Cause	1) Expansion memory defect 2) Improper contact of the expansion memory socket and plug 3) Main control PWB defect 4) There is no expansion memory installed though SIM 26-3 (expansion memory) is set to "YES."
			Remedy	1) SIM 26-3 improper setting 2) Check the contact of the expansion memory socket and plug. 3) Turn OFF/ON the power to clear the self diag (trouble code) display.
		01	Content	Expansion memory initializing trouble
			Detail	When the expansion memory is installed and SIM 26-3 is set to "YES," initializing operation is not performed. Or initializing operation is not performed even though the key operation of initializing is made.
			Cause	1) Expansion memory defect 2) Expansion memory socket, plug contact defect 3) Main control PWB defect 4) Initializing operation is not performed even though SIM 26-3 is set to "YES."
			Remedy	1) Check SIM 26-3 setting and perform initializing. 2) Check contacts of the expansion memory socket and plug. 3) Turn OFF/ON the power to clear the self diag (trouble code) display.
CH	Cabinet SW	Light	Content	The cabinet open/close SW is not closed.
			Detail	1) The cabinet open/close SW does not detect open.
			Detail	1) The cabinet open/close SW is not closed. 2) Cabinet open/close SW defect 3) Main control PWB defect 4) DC power defect (fuse F709)
			Remedy	When the trouble is removed, the self diag display is automatically cleared.
		Blink	Content	Developing unit not detected
			Detail	1) The developing unit is not detected.
			Cause	1) The developing unit is not installed. 2) Developing unit connector defect 3) Main control PWB defect
			Remedy	When the trouble is removed, the self diag display is automatically cleared.
—	Auditor		Content	Card-type counter card is not inserted.
			Detail	1) The card-type counter card is not detected.
			Cause	1) The card-type counter card (SF-EA11) is not inserted. 3) Card counter (SF-EA11) defect 4) Main control PWB defect
			Remedy	When the trouble is removed, the self diag display is automatically cleared.

Main code	Section	Sub code	Description	
PF			Content	The copy inhibition command is issued from the host computer.
			Detail	
			Cause	1) The copy inhibition command is issued from the host computer. 2) Main control PWB defect
			Remedy	1) Cancel the copy inhibition command of the host computer. 2) Set SIM 27-1 to ignore the command from the host computer.