

[10] SELF DIAG MESSAGE AND TROUBLESHOOTING

1. Outline

When a trouble occurs in the machine or when the life of a consumable part is nearly expired or when the life is expired, the machine detects and displays it on the display section or notifies to the user or the serviceman by voice messages.

This allows the user and the serviceman to take the suitable action. In case of a trouble, this feature notifies the occurrence of a trouble and stops the machine to minimize the damage.

2. Function and purpose

- 1) Securing safety. (The machine is stopped on detection of a trouble.)
- 2) The damage to the machine is minimized. (The machine is stopped on detection of a trouble.)
- 3) By displaying the trouble content, the trouble position can be quickly identified. (This allows to perform an accurate repair, improving the repair efficiency.)
- 4) Preliminary warning of running out of consumable parts allows to arrange for new parts in advance of running out. (This avoids stopping of the machine due to running out the a consumable part.)

3. Self diag message kinds

The self diag messages are classified as shown in the table below.

Class 1	User	Warning of troubles which can be recovered by the user. (Paper jam, consumable part life expiration, etc.)
	Serviceman	Warning of troubles which can be recovered only by a serviceman. (Motor trouble, maintenance, etc.)
	Other	—
Class 2	Warning	Warning to the user, not a machine trouble (Preliminary warning of life expiration of a consumable part, etc.)
	Trouble	Warning of a machine trouble. The machine is stopped.
	Other	—

4. Self diag operation

A. Self diag operation and related work flow

The machine always monitors its own state.

When the machine recognizes a trouble, it stops the operation and displays the trouble message.

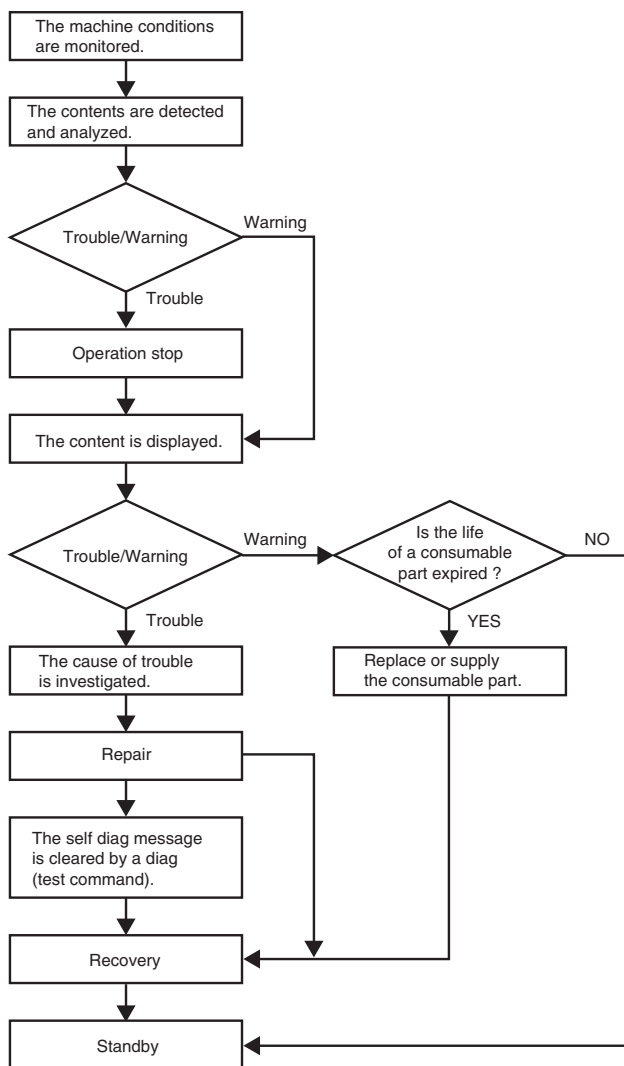
A warning message is displayed when a consumable part life is nearly expired or is expired.

When a warning message is displayed, the machine may be or may not be stopped.

The trouble messages and the warning messages are displayed by the LCD.

Some trouble messages are automatically cleared when the trouble is repaired. Some other troubles must be cleared by a simulation.

Some warning messages of consumable parts are automatically cleared when the trouble is repaired. Some other warning messages must be cleared by a simulation.



5. List

Main code	Sub code	Title (Content)	Section	Operation mode	Remedy	NOTE
A0	0	ROM trouble (PCU MAIN PWB)	PCU MAIN PWB	When POWER ON	Power OFF/ON	
C1	10	Main charger trouble (BLACK)	Image process	Warm-up / Initialize	Power Source-ON	
	11	Main charger trouble (CYAN)	Image process	Warm-up / Initialize	Power Source-ON	
	12	Main charger trouble (MAGENTA)	Image process	Warm-up / Initialize	Power Source-ON	
	13	Main charger trouble (YELLOW)	Image process	Warm-up / Initialize	Power Source-ON	
EE	EL	Toner concentration reference control level setup trouble (Overtoner)	Image process (Developing)	SIM 25-2	Power Source-ON	
	EU	Toner concentration reference control level setup trouble (Undertoner)	Image process (Developing)	SIM 25-2	Power source-ON	
E7	10	Shading trouble (Black correction)	Scanner (reading) /ICU SCAN PWB	Warm-up / Initialize	Power source-ON	
	11	Shading trouble (White correction)	Scanner (reading) /ICU SCAN PWB	Warm-up / Initialize	Power source-ON	
	20	Laser beam sensor trouble (BLACK)	Scanner (writing)	All modes	Power source-ON	
	21	Laser beam sensor trouble (CYAN)	Scanner (writing)	All modes	Power source-ON	
	22	Laser beam sensor trouble (MAGENTA)	Scanner (writing)	All modes	Power source-ON	
	23	Laser beam sensor trouble (YELLOW)	Scanner (writing)	All modes	Power source-ON	
	24	Laser beam detection trouble (BLACK)	Scanner (writing)	All modes	Power source-ON	
	25	Laser beam detection trouble (CYAN)	Scanner (writing)	All modes	Power source-ON	
	26	(Laser beam detection trouble (MAGENTA)	Scanner (writing)	All modes	Power source-ON	
	27	Laser beam detection trouble (YELLOW)	Scanner (writing)	All modes	Power source-ON	
	30	ICU PWB FLASH ROM trouble	ICU MAIN PWB	Warm-up / Initialize	Power source-ON	
90	ICU MAIN PWB - PCU MAIN PWB communication trouble (PCU side detection)	ICU MAIN PWB / PCU MAIN PWB	All modes	Power source-ON		
E8	0	ICU MAIN PWB - PCU MAIN PWB communication trouble (PCU side detection)	ICU MAIN PWB / PCU MAIN PWB	All modes	Power source-ON	
	1	ICU MAIN PWB - PCU MAIN PWB communication trouble (PCU side detection)	ICU MAIN PWB / PCU MAIN PWB	All modes	Power source-ON	
F1	0	Communication trouble between PCU MAIN PWB - Finisher control PWB (Detected by PCU MAIN PWB)	PCU MAIN PWB / Finisher control PWB	When power ON / initial operation	Power OFF/ON	
	2	Finisher paper exit/reversing motor trouble (Finisher side detection)	Finisher paper exit	When power ON / initial operation	Power OFF/ON	
	10	Finisher staple trouble (Finisher side detection)	Finisher stapler	When stapling	Power OFF/ON	
	11	Finisher bundle process trouble (Finisher side detection)	Finisher paper exit	When power ON / initial operation	Power OFF/ON	
	15	Finisher tray lift trouble (Finisher side detection)	Finisher tray lift	All modes	Power OFF/ON	
	19	Finisher alignment trouble (Front side) (Finisher side detection)	Finisher alignment	When POWER ON	Power OFF/ON	
	20	Finisher alignment trouble (Rear side) (Finisher side detection)	Finisher alignment	When POWER ON	Power OFF/ON	

Main code	Sub code	Title (Content)	Section	Operation mode	Remedy	NOTE
F1	70	PCU PWB - sorter control PWB communication trouble (PCU detection)	Sorter / PCU MAIN PWB	Warm-up / Initialize	Power source-ON	
	80	Sorter power abnormality (Sorter side detection)	Sorter	All modes	Power source-ON	
	81	Sorter transport motor trouble (Sorter side detection)	Sorter	Sort/group operation mode	Power source-ON	
	83	Sorter push bar motor trouble (Sorter side detection)	Sorter	Initializing	Power source-ON	
	87	Sorter staple unit oscillation motor trouble (Sorter side detection)	Sorter	Initializing	Power source-ON	
	89	Sorter bin shift motor trouble (Sorter side detection)	Sorter	Sort / Group operation mode	Power source-ON	
	91	Bin paper sensor auto adjustment trouble (Sorter side detection)	Sorter	Sort/group operation mode	Power source-ON	
	94	Sorter staple key trouble	Sorter	Staple	Power source-ON	
F2	40	Toner concentration sensor trouble (BLACK)	Developing	All modes	Power source-ON	
	41	Toner concentration sensor trouble (CYAN)	Developing	All modes	Power source-ON	
	42	Toner concentration sensor trouble (MAGENTA)	Developing	All modes	Power source-ON	
	43	Toner concentration sensor trouble (YELLOW)	Developing	All modes	Power source-ON	
	44	Image density sensor trouble (BLACK) (Transfer belt surface reflection abnormality)	Image process (Transfer)	Image density correction	Power source-ON	Print is disabled in USA. For the other destinations, print is enabled. However, the print density must be forcibly decreased.
	45	Image density sensor trouble (COLOR) (Calibration plate reflection abnormality)	Image process (Transfer)	Image density correction	Power source-ON	Print is disabled in USA. For the other destinations, print is enabled. However, the print density must be forcibly decreased.
	50	Drum marking detection trouble (BLACK)	Image process (OPC drum)	OPC drum rotation	Power source-ON	The error code is stored in the trouble memory (print enabled).
	51	Drum marking detection trouble (CYAN)	Image process (OPC drum)	OPC drum rotation	Power source-ON	The error code is stored in the trouble memory (print enabled).
	52	Drum marking detection trouble (MAGENTA)	Image process (OPC drum)	OPC drum rotation	Power source-ON	The error code is stored in the trouble memory (print enabled).
	53	Drum marking detection trouble (YELLOW)	Image process (OPC drum)	OPC drum rotation	Power source-ON	The error code is stored in the trouble memory (print enabled).
	54	Drum marking sensor gain adjustment error (BLACK)	Image process (OPC drum)	Image density correction	Power source-ON	Print is disabled in USA. For the other destinations, print is enabled. However, the print density must be forcibly decreased.
	55	Drum marking sensor gain adjustment error (CYAN)	Image process (OPC drum)	Image density correction	Power source-ON	Print is disabled in USA. For the other destinations, print is enabled. However, the print density must be forcibly decreased.
	56	Drum marking sensor gain adjustment error (MAGENTA)	Image process (OPC drum)	Image density correction	Power source-ON	Print is disabled in USA. For the other destinations, print is enabled. However, the print density must be forcibly decreased.
	57	Drum marking sensor gain adjustment error (YELLOW)	Image process (OPC drum)	Image density correction	Power source-ON	Print is disabled in USA. For the other destinations, print is enabled. However, the print density must be forcibly decreased.
	58	Process humidity sensor trouble	Image process (Transfer)	All modes	Power source-ON	The error code is stored in the trouble memory (print enabled).
	63	Temperature sensor trouble (Image process)	Image process	All modes	Power source-ON	The error code is stored in the trouble memory (print enabled).
78	Trouble of image density sensor for registration (Transfer belt surface reflection ratio abnormality)	Image process	All modes	Power source-ON		

Main code	Sub code	Title (Content)	Section	Operation mode	Remedy	NOTE
F2	80	Half tone correction (1st patch) trouble (BLACK)	Image process	Image density correction	Power source-ON	
	81	Half tone correction (1st patch) trouble (CYAN)	Image process	Image density correction	Power source-ON	
	82	Half tone correction (1st patch) trouble (MAGENTA)	Image process	Image density correction	Power source-ON	
	83	Half tone correction (1st patch) trouble (YELLOW)	Image process	Image density correction	Power source-ON	
	84	Half tone correction (2nd patch) trouble (BLACK)	Image process	Image density correction	Power source-ON	
	85	Half tone correction (2nd) patch trouble (CYAN)	Image process	Image density correction	Power source-ON	
	86	Half tone correction (2nd) patch trouble (MAGENTA)	Image process	Image density correction	Power source-ON	
	87	Half tone correction (2nd) patch trouble (YELLOW)	Image process	Image density correction	Power source-ON	
	90	Half tone correction trouble	Image process	Image density correction	Power source-ON	
F3	12	Lift-up trouble (Paper 1)	Paper tray 1	Paper tray lift up	Power source-ON	
	22	Lift-up trouble (Paper 2)	Paper tray 2	Paper tray lift up	Power source-ON	
	32	Lift-up trouble (Paper 3)	Paper tray 3	Paper tray lift up	Power source-ON	
	42	Lift-up trouble (Paper 4)	Paper tray 4	Paper tray lift up	Power source-ON	
F9	0	ICU PWB - printer controller communication trouble (ICU detection)	ICU IMAGE PWB / PRINTER CONTROLLER	Warm-up / Printing	Power source-ON	
H2	0	Fusing main temperature sensor (upper) (Thermistor) open / Fusing unit not-installed (THS1)	Fusing	All modes	Power Source-ON	
	1	Fusing main temperature sensor (lower) (Thermistor) open / Fusing unit not-installed (THS2)	Fusing	All modes	Power Source-ON	
	2	Fusing sub temperature sensor (upper) (Thermistor) open / Fusing unit not-installed (THS3)	Fusing	All modes	Power Source-ON	
	3	Fusing sub temperature sensor (lower) (Thermistor) open / Fusing unit not-installed (THS4)	Fusing	All modes	Power Source-ON	
H3	0	Fusing section high temperature trouble (THS1)	Fusing	All modes	SIM 14	
	1	Fusing section high temperature trouble (THS2)	Fusing	All modes	SIM 14	
	2	Fusing section high temperature trouble (THS3)	Fusing	All modes	SIM 14	
	3	Fusing section high temperature trouble (THS4)	Fusing	All modes	SIM 14	
H4	0	Fusing section (upper) low temperature trouble (HL1)	Fusing	All modes	SIM 14	
	1	Fusing section (lower) low temperature trouble (HL2)	Fusing	All modes	SIM 14	
H5	1	Paper jam in the fusing/paper exit section	Fusing	Copy / Print	SIM 14	
H6	0	Fusing oil empty (Oil sensor trouble)	Fusing	All modes	Power Source-ON	
H7	0	AC input voltage (HLV) trouble	Power source	All modes	Power Source-ON	
L1	0	Scanner feed trouble	Scanner (reading)	Initialize / Copy	Power Source-ON	
L3	0	Scanner return trouble	Scanner (reading)	Initialize / Copy	Power Source-ON	

Main code	Sub code	Title (Content)	Section	Operation mode	Remedy	NOTE
L4	3	Fusing motor trouble	Fusing	Warm-up / Copy/ Print	Power Source-ON	
	4	Developing motor trouble (BLACK)	Developing drive	Warm-up / Copy/ Print	Power Source-ON	
	5	Developing motor trouble (COLOR)	Developing drive	Warm-up / Copy / Print	Power Source-ON	
	6	Transfer belt lift trouble	Image process (Transfer)	Color / Monochrome copy (print) mode select	Power Source-ON	
	32	DC power cooling fan trouble	Power source	All modes	Power Source-ON	
L6	10	Scanner (writing) motor lock detection (BLACK)	Scanner (writing)	All modes	Power Source-ON	
	11	Scanner (writing) motor lock detection (CYAN)	Scanner (writing)	All modes	Power Source-ON	
	12	Scanner (writing) motor lock detection (MAGENTA)	Scanner (writing)	All modes	Power Source-ON	
	13	Scanner (writing) motor lock detection (YELLOW)	Scanner (writing)	All modes	Power Source-ON	
L8	1	Power full wave signal (FWS) trouble	Power source	All modes	Power Source-ON	
	2	Power full wave signal (FWS) width trouble	Power source	All modes	Power Source-ON	
PF	0	RIC copy inhibit signal reception	PCU PWB	RIC communication	SIM 17	
U0	0	Operation control PWB - PCU MAIN PWB communication trouble (OPE/PCU detection)	Operation PWB/ PCU MAIN PWB	All modes	Power Source-ON	
	80	PCU MAIN PWB - PCU SUB PWB communication trouble (PCU detection)	PCU SUB PWB/ PCU MAIN PWB	All modes	Power Source-ON	
U2	0	EEPROM read/write error (PCU MAIN PWB)	PCU PWB	Warm-up	SIM 16	
	11	Counter data (EEPROM) check sum error (PCU MAIN PWB)	PCU PWB	All modes	SIM 16	
	12	Setup/Adjustment value data (EEPROM) check sum error (PCU MAIN PWB)	PCU PWB	All modes	SIM 16	
	20	EEPROM read/write error (ICU MAIN PWB)	ICU PWB	Warm-up	SIM 16	
	21	Counter (EEPROM) check sum error (ICU MAIN PWB)	ICU PWB	All modes	SIM 16	
	22	Setup, adjustment value (EEPROM) check sum error (ICU MAIN PWB)	ICU PWB	All modes	SIM 16	
	30	Manufacturing No. data (ICU MAIN PWB / PCU MAIN PWB) discrepancy	ICU PWB / PCU PWB	All modes	SIM 16	
U4	0	PCU MAIN PWB - ADU communication trouble / Discrepancy of the model	PCU PWB / Duplex control PWB	Warm-up / Initialize	Power Source-ON	
	2	ADU Alignment plate operation trouble	Duplex	Initialize/ Duplex copy (print)	Power Source-ON	
	12	ADU transport motor trouble	Duplex	Duplex copy (print)	Power Source-ON	
U5	0	PCU MAIN PWB - RADF communication trouble	PCU PWB / RADF control PWB	Warm-up / Initialize	Power Source-ON	
	1	RADF resist sensor trouble	RADF	RADF	Power Source-ON	
	2	RADF exit sensor trouble	RADF	RADF	Power Source-ON	
	3	RADF timing sensor trouble	RADF	RADF	Power Source-ON	
	11	RADF paper feed motor trouble	RADF	RADF	Power Source-ON	

Main code	Sub code	Title (Content)	Section	Operation mode	Remedy	NOTE
U6	9	Large capacity tray (LCC) lift motor trouble	Large capacity tray	Paper feed	SIM 15	
	20	PCU MAIN PWB - Large capacity tray (LCC) communication trouble / Discrepancy of the model	Large capacity tray control PWB / PCU MAIN PWB	Warm-up / Initialize	Power Source-ON	
	21	Large capacity tray (LCC) transport motor trouble	Large capacity tray	Paper feed	Power Source-ON	
	22	Large capacity tray (LCC) 24V power trouble	Large capacity tray	All modes	Power Source-ON	
	51	LCC non-compatible trouble	Large capacity tray	All modes	Power Source-ON	
U7	0	RIC communication trouble	PCU PWB	RIC communication	Power Source-ON	
UC	0	ICU SCAN PWB - CPT PWB communication trouble	ICU SCAN PWB / CPT PWB	Copy	Power Source-ON	
	1	CPT board program trouble	CPT PWB	Warm-up / Initialize	Power Source-ON	
	2	CPT board ASIC trouble	CPT PWB	Warm-up / Initialize	Power Source-ON	
	3	CPT board ROM trouble	CPT PWB	Warm-up / Initialize	Power Source-ON	
	4	CPT board RAM trouble	CPT PWB	Warm-up / Initialize	Power Source-ON	
	5	CPT board model code data trouble	ICU MAIN PWB / CPT PWB	Warm-up / Initialize	Power Source-ON	

6. Details

Main code	Sub code	Title	ROM trouble (PCU MAIN PWB)	
			Display	Lamp
A0	0	Phenomena	Display	Lamp
				Message
			Detail	Mismatch between ROM and PCU MAIN PWB (mismatch in signal levels)
			Section	PCU MAIN PWB
			Operation mode	Power ON
		Note		
		Case 1	Trouble position/ cause	ROM trouble/Improper ROM insertion
			Remedy	(Check) (Repair) Replace the PCU MAIN PWB ROM. (After work)
		Case 2	Trouble position/ cause	PCU MAIN PWB trouble
			Remedy	(Check) (Repair) Replace the PCU MAIN PWB. / Power OFF-ON (After work) Reenter the set values and the adjustment values.

Main code	Sub code	Title	Main charger trouble (BLACK)	
			Display	Lamp
C1	10	Phenomena	Display	Lamp
				Message
			Detail	In warm-up, the image density sensor detects the transfer belt surface and its output exceeds the specified level.
			Section	Image process
			Operation mode	Warm-up / Initialize
		Note		
		Case 1	Trouble position / cause	Main charger output trouble (Toner is attached to the transfer drum due to an abnormal output of the main charger in warm-up.)
			Remedy	(Check) Main charger contact check / Main charger unit check / High voltage PWB, high voltage interface PWB check / Main charger output voltage check (Repair) Main charger unit replacement / High power PWB, high voltage interface PWB replacement / Main charger output voltage adjustment (SIM 8-2) / Power Source-ON (After-work) Execute image density correction (SIM 44-6). / Execute half tone density correction (SIM 44-26).

Main code	Sub code	Title	Main charger trouble (BLACK)		
C1	10	Case 2	Trouble position/cause	Image density sensor trouble	
			Remedy	(Check) Image density sensor check (dirt, output) / Image density sensor calibration plate check / Image density sensor calibration plate switch operation check	
				(Repair) Image density sensor cleaning, replacement / Image density sensor calibration plate cleaning, replacement / Image density sensor calibration plate switch solenoid replacement / Power Source-ON	
				(After-work) Execute ADJ M6.	
			Case 3	Trouble position/cause	Transfer belt trouble (dirt, scratches)
				Remedy	(Check) Toner dispersion from transfer belt cleaner, OPC drum unit, developing unit
		(Repair) Transfer belt cleaning, replacement / Transfer belt cleaner replacement / OPC drum unit, developing unit cleaning / Power Source-ON			
		(After-work)			
		Case 4	Trouble position/cause	PCU MAIN PWB trouble	
			Remedy	(Check)	
				(Repair) PCU MAIN PWB replacement / Power Source-ON	
		(After-work) Re-enter the setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)			
		Case 5	Trouble position/cause	PCU SUB PWB trouble	
			Remedy	(Check) Check the PCU SUB PWB image density sensor circuit.	
				(Repair) PCU SUB PWB replacement / Power Source-ON	
(After-work)					

Main code	Sub code	Title	Main charger trouble (CYAN)	
C1	11	Phenomena	Display	Lamp Message
			Detail	In warm-up, the image density sensor detects the transfer belt surface and its output exceeds the specified level.
			Section	Image process
			Operation mode	Warm-up / Initialize
			Note	
			Case 1	Trouble position/cause
		Remedy		(Check) Main charger contact check / Main charger unit check / High voltage PWB, high voltage interface PWB check / Main charger output voltage check
				(Repair) Main charger unit replacement / High power PWB, high voltage interface PWB replacement / Main charger output voltage adjustment (SIM 8-2) / Power Source-ON
		(After-work) Execute image density correction (SIM 44-6). / Execute half tone density correction (SIM 44-26).		
		Case 2	Trouble position/cause	Image density sensor trouble
			Remedy	(Check) Image density sensor check (dirt, output) / Image density sensor calibration plate check / Image density sensor calibration plate switch operation check
		(Repair) Image density sensor cleaning, replacement / Image density sensor calibration plate cleaning, replacement / Image density sensor calibration plate switch solenoid replacement / Power Source-ON		
		(After-work) Execute ADJ M6.		

Main code	Sub code	Title	Main charger trouble (CYAN)		
C1	11	Case 3	Trouble position/cause	Transfer belt trouble (dirt, scratches)	
			Remedy	(Check) Toner dispersion from transfer belt cleaner, OPC drum unit, developing unit	
				(Repair) Transfer belt cleaning, replacement / Transfer belt cleaner replacement / OPC drum unit, developing unit cleaning / Power Source-ON	
				(After-work)	
			Case 4	Trouble position/cause	PCU MAIN PWB trouble
				Remedy	(Check)
		(Repair) PCU MAIN PWB replacement / Power Source-ON			
		(After-work) Re-enter the setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)			
		Case 5	Trouble position/cause	PCU SUB PWB trouble	
			Remedy	(Check) Check the PCU SUB PWB image density sensor circuit.	
				(Repair) PCU SUB PWB replacement / Power Source-ON	
				(After-work)	

Main code	Sub code	Title	Main charger trouble (MAGENTA)	
C1	12	Phenomena	Display	Lamp
				Message
			Detail	In warm-up, the image density sensor detects the transfer belt surface and its output exceeds the specified level.
			Section	Image process
			Operation mode	Warm-up / Initialize
			Note	

Main code	Sub code	Title	Main charger trouble (MAGENTA)		
C1	12	Case 1	Trouble position/cause	Main charger output trouble (Toner is attached to the transfer drum due to an abnormal output of the main charger in warm-up.)	
			Remedy	(Check) Main charger contact check / Main charger unit check / High voltage PWB, high voltage interface PWB check / Main charger output voltage check	
				(Repair) Main charger unit replacement / High power PWB, high voltage interface PWB replacement / Main charger output voltage adjustment (SIM 8-2) / Power Source-ON	
				(After-work) Execute image density correction (SIM 44-6). / Execute half tone density correction (SIM 44-26).	
			Case 2	Trouble position/cause	Image density sensor trouble
				Remedy	(Check) Image density sensor check (dirt, output) / Image density sensor calibration plate check / Image density sensor calibration plate switch operation check
		(Repair) Image density sensor cleaning, replacement / Image density sensor calibration plate cleaning, replacement / Image density sensor calibration plate switch solenoid replacement / Power Source-ON			
		(After-work) Execute ADJ M6.			
		Case 3	Trouble position/cause	Transfer belt trouble (dirt, scratches)	
			Remedy	(Check) Toner dispersion from transfer belt cleaner, OPC drum unit, developing unit	
		(Repair) Transfer belt cleaning, replacement / Transfer belt cleaner replacement / OPC drum unit, developing unit cleaning / Power Source-ON			
		(After-work)			

Main code	Sub code	Title	Main charger trouble (MAGENTA)	
C1	12	Case 4	Trouble position/ cause	PCU MAIN PWB trouble
			Remedy	(Check) (Repair) PCU MAIN PWB replacement / Power Source-ON (After-work) Re-enter the setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)
			Trouble position/ cause	PCU SUB PWB trouble
		Case 5	Remedy	(Check) Check the PCU SUB PWB image density sensor circuit. (Repair) PCU SUB PWB replacement / Power Source-ON (After-work)
			Trouble position/ cause	
			Remedy	

Main code	Sub code	Title	Main charger trouble (YELLOW)	
C1	13	Phenomena	Display	Lamp Message
			Detail	In warm-up, the image density sensor detects the transfer belt surface and its output exceeds the specified level.
			Section	Image process
			Operation mode	Warm-up / Initialize
			Note	
			Case 1	Trouble position/ cause
		Remedy		(Check) Main charger contact check / Main charger unit check / High voltage PWB, high voltage interface PWB check / Main charger output voltage check (Repair) Main charger unit replacement / High power PWB, high voltage interface PWB replacement / Main charger output voltage adjustment (SIM 8-2) / Power Source-ON (After-work) Execute image density correction (SIM 44-6). / Execute half tone density correction (SIM 44-26).

Main code	Sub code	Title	Main charger trouble (YELLOW)		
C1	13	Case 2	Trouble position/ cause	Image density sensor trouble	
			Remedy	(Check) Image density sensor check (dirt, output) / Image density sensor calibration plate check / Image density sensor calibration plate switch operation check (Repair) Image density sensor cleaning, replacement / Image density sensor calibration plate cleaning, replacement / Image density sensor calibration plate switch solenoid replacement / Power Source-ON (After-work) Execute ADJ M6.	
			Case 3	Trouble position/ cause	Transfer belt trouble (dirt, scratches)
				Remedy	(Check) Toner dispersion from transfer belt cleaner, OPC drum unit, developing unit (Repair) Transfer belt cleaning, replacement / Transfer belt cleaner replacement / OPC drum unit, developing unit cleaning / Power Source-ON (After-work)
			Case 4	Trouble position/ cause	PCU MAIN PWB trouble
				Remedy	(Check) (Repair) PCU MAIN PWB replacement / Power Source-ON (After-work) Re-enter the setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)
		Case 5	Trouble position/ cause	PCU SUB PWB trouble	
			Remedy	(Check) Check the PCU SUB PWB image density sensor circuit. (Repair) PCU SUB PWB replacement / Power Source-ON (After-work)	

Main code	Sub code	Title	Toner concentration reference control level setup trouble (Overtoner)	
			EE	EL
		Phenomena	Display	Lamp
				Message
			Detail	When setting the toner concentration reference control level, the toner concentration sensor output is not within the specified range. (The output level is 77 or less.)
			Section	Image process (Developing)
			Operation mode	SIM 25-2
			Note	
		Case 1	Trouble position/cause	Toner density sensor trouble / Toner density sensor signal line connection trouble
			Remedy	(Check) Check the toner concentration output level with SIM 25-2. (Repair) Toner concentration sensor replacement (Developing unit replacement) / Power Source-ON (After-work) Execute ADJ M3.
		Case 2	Trouble position/cause	Process control PWB trouble
			Remedy	(Check) (Repair) Process control PWB replacement / Power Source-ON (After-work)
		Case 3	Trouble position/cause	PCU MAIN PWB trouble
			Remedy	(Check) (Repair) PCU MAIN PWB replacement / Power Source-ON (After-work) Re-enter the setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)

Main code	Sub code	Title	Toner concentration reference control level setup trouble (Undertoner)	
			EE	EU
		Phenomena	Display	Lamp
				Message
			Detail	When setting the toner concentration reference control level, the toner concentration sensor output is not within the specified range. (The output level is 179 or above.)
			Section	Image process (Developing)
			Operation mode	SIM 25-2
			Note	
		Case 1	Trouble position/cause	Toner density sensor trouble / Toner density sensor signal line connection trouble
			Remedy	(Check) Check the toner concentration output level with SIM 25-2. (Repair) Toner concentration sensor replacement (Developing unit replacement) / Power Source-ON (After-work) Execute ADJ M3.
		Case 2	Trouble position/cause	Process control PWB trouble
			Remedy	(Check) Check the toner concentration sensor output level with SIM 25-2. (Repair) Process control PWB replacement / Power Source-ON (After-work)
		Case 3	Trouble position/cause	PCU MAIN PWB trouble
			Remedy	(Check) Check the toner concentration sensor output level with SIM 25-2. (Repair) PCU MAIN PWB replacement / Power Source-ON (After-work) Re-enter the setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)

Main code	Sub code	Title	Shading trouble (Black correction)	
E7	10	Phenomena	Display	Lamp Message
			Detail	In shading correction, the CCD black reading level is abnormal (with the scanner lamp OFF).
			Section	Scanner (reading) / ICU SCAN PWB
			Operation mode	Warm-up / Initialize
			Note	
			Case 1	Trouble position/cause
			Remedy	(Check) Check connection of the flat cable between the CCD unit and the ICU SCAN PWB. (Repair) Replace the flat cable between the CCD unit and the ICU SCAN PWB. / Power Source-ON (After-work)
		Case 2	Trouble position/cause	CCD unit trouble
			Remedy	(Check) Check the CCD black offset level (SIM 46-6). / Check the shading correction result (SIM 63-1). (Repair) Replace the CCD unit. / Power Source-ON (After-work) Adjust ADJM17-ADJ1.
		Case 3	Trouble position/cause	ICU SCAN PWB, ICU IMAGE PWB, ICU MAIN PWB trouble
			Remedy	(Check) (Repair) Replace ICU SCAN PWB, ICU IMAGE PWB, ICU MAIN PWB. / Power Source-ON (After-work) Adjust ADJM9/M10/M12/M13/M14/M15/M17. / Re-enter setup values and adjustment values. (Install the EEPROM of the defective ICU MAIN PWB to a new ICU MAIN PWB.)

Main code	Sub code	Title	Shading trouble (White correction)	
E7	11	Phenomena	Display	Lamp Message
			Detail	In shading correction, the CCD white reading level is abnormal (with the scanner lamp OFF).
			Section	Scanner (reading) / ICU SCAN PWB
			Operation mode	Warm-up / Initialize
			Note	

Main code	Sub code	Title	Shading trouble (White correction)		
E7	11	Case 1	Trouble position/cause	Bad connection of the flat cable between the CCD unit and the ICU SCAN PWB.	
			Remedy	(Check) Check connection of the flat cable between the CCD unit and the ICU SCAN PWB. (Repair) Replace the flat cable between the CCD unit and the ICU SCAN PWB. / Power Source-ON (After-work)	
			Case 2	Trouble position/cause	CCD unit trouble
				Remedy	(Check) CCD black offset level check (SIM 46-6) (Repair) Replace the CCD unit. / Power Source-ON (After-work) Adjust ADJM17-ADJ1.
			Case 3	Trouble position/cause	ICU SCAN PWB, ICU IMAGE PWB, ICU MAIN PWB trouble
			Remedy	(Check) (Repair) ICU SCAN PWB, ICU IMAGE PWB, ICU MAIN PWB. / Power Source-ON (After-work) Adjust ADJM9/M10/M12/M13/M14/M15/M17. / Re-enter setup values and adjustment values. (Install the EEPROM of the defective ICU MAIN PWB to a new ICU MAIN PWB.)	
		Case 4	Trouble position/cause	Scanner section dirt (Shading sheet trouble (dirt, scratch)/Lens dirt/Mirror dirt/Reflector dirt)	
			Remedy	(Check) Scanner section dirt check (Repair) Clean the scanner section (shading sheet/lens/CCD/mirror/reflector). / Power Source-ON (After-work)	
		Case 5	Trouble position/cause	Scanner lamp insufficient light quantity (Scanner lamp trouble/scanner lamp control PWB trouble)	
			Remedy	(Check) Check the scanner lamp applying voltage (62.3V). (Repair) Replace the scanner lamp. / Replace the scanner lamp control PWB. / Power Source-ON (After-work) Adjust ADJM17-ADJ1.	

Main code	Sub code	Title	Laser beam sensor trouble (BLACK)	
			Display	Lamp
E7	20	Phenomena	Display	Message
			Detail	The laser beam sensor cannot detect laser beam. (The sensor signal does not change.)
			Section	Scanner (writing)
			Operation mode	All modes
			Note	
			Case 1	Trouble position/cause
		Remedy	(Check) Check connection between the ICU MAIN PWB and the scanner (writing) unit.	
			(Repair) Replace the cable and the connector between the ICU MAIN PWB and the scanner (writing) unit. / Power Source-ON	
			(After-work)	
		Case 2	Trouble position/cause	Scanner (writing) unit trouble (Scanner (writing) motor trouble / Laser beam sensor trouble / Optical system dirt)
			Remedy	(Check) Check the scanner (writing) unit operation. (SIM 61-1)
				(Repair) Replace the scanner (writing) unit. / Power Source-ON
		(After-work) Adjust ADJM7/ADJM9/ADJM10.		
		Case 3	Trouble position/cause	ICU MAIN PWB trouble
			Remedy	(Check)
				(Repair) Replace the ICU MAIN PWB. / Power Source-ON
		(After-work) Adjust ADJM9/M10/M12/M13/M14/M15/M17. / Re-enter setup values and adjustment values. (Install the EEPROM of the defective ICU MAIN PWB to a new ICU MAIN PWB.)		
		Case 4	Trouble position/cause	Scanner (writing) unit power line (24V/5V) trouble
			Remedy	(Check) Check the door switch (DSWF). / Check the fuse (F706).
				(Repair) Replace the door switch (DSWF). / Replace the fuse (F706). / Power Source-ON
		(After-work)		

Main code	Sub code	Title	Laser beam sensor trouble (CYAN)	
			Display	Lamp
E7	21	Phenomena	Display	Message
			Detail	The laser beam sensor cannot detect laser beam. (The sensor signal does not change.)
			Section	Scanner (writing)
			Operation mode	All modes
			Note	
			Case 1	Trouble position/cause
		Remedy		(Check) Check connection between the ICU MAIN PWB and the scanner (writing) unit.
				(Repair) Replace the cable and the connector between the ICU MAIN PWB and the scanner (writing) unit. / Power Source-ON
		(After-work)		
		Case 2	Trouble position/cause	Scanner (writing) unit trouble (Scanner (writing) motor trouble/Laser beam sensor trouble/Optical system dirt)
			Remedy	(Check) Check the scanner (writing) unit operation. (SIM 61-1)
				(Repair) Replace the scanner (writing) unit. / Power Source-ON
		(After-work) Adjust ADJM7/ADJM9/ADJM10.		
		Case 3	Trouble position/cause	ICU MAIN PWB trouble
			Remedy	(Check)
				(Repair) Replace the ICU MAIN PWB. / Power Source-ON
		(After-work) Adjust ADJM9/M10/M12/M13/M14/M15/M17. / Re-enter setup values and adjustment values. (Install the EEPROM of the defective ICU MAIN PWB to a new ICU MAIN PWB.)		
		Case 4	Trouble position/cause	Scanner (writing) unit power line (24V/5V) trouble
			Remedy	(Check) Check the door switch (DSWF). / Check the fuse (F706).
				(Repair) Replace the door switch (DSWF). / Replace the fuse (F706). / Power Source-ON
		(After-work)		

Main code	Sub code	Title	Laser beam sensor trouble (MAGENTA)	
			Display	Lamp
E7	22	Phenomena	Display	Message
			Detail	The laser beam sensor cannot detect laser beam. (The sensor signal does not change.)
			Section	Scanner (writing)
			Operation mode	All modes
			Note	
			Case 1	Trouble position/cause
		Remedy	(Check) Check connection between the ICU MAIN PWB and the scanner (writing) unit.	
			(Repair) Replace the cable and the connector between the ICU MAIN PWB and the scanner (writing) unit. / Power Source-ON	
			(After-work)	
		Case 2	Trouble position/cause	Scanner (writing) unit trouble (Scanner (writing) motor trouble / Laser beam sensor trouble / Optical system dirt)
			Remedy	(Check) Check the scanner (writing) unit operation. (SIM 61-1)
				(Repair) Replace the scanner (writing) unit. / Power Source-ON
		(After-work) Adjust ADJM7/ADJM9/ADJM10.		
		Case 3	Trouble position/cause	ICU MAIN PWB trouble
			Remedy	(Check)
				(Repair) Replace the ICU MAIN PWB. / Power Source-ON
		(After-work) Adjust ADJM9/M10/M12/M13/M14/M15/M17. / Re-enter setup values and adjustment values. (Install the EEPROM of the defective ICU MAIN PWB to a new ICU MAIN PWB.)		
		Case 4	Trouble position/cause	Scanner (writing) unit power line (24V/5V) trouble
			Remedy	(Check) Check the door switch (DSWF). / Check the fuse (F706).
				(Repair) Replace the door switch (DSWF). / Replace the fuse (F706). / Power Source-ON
				(After-work)

Main code	Sub code	Title	Laser beam sensor trouble (YELLOW)	
			Display	Lamp
E7	23	Phenomena	Display	Message
			Detail	The laser beam sensor cannot detect laser beam. (The sensor signal does not change.)
			Section	Scanner (writing)
			Operation mode	All modes
			Note	
			Case 1	Trouble position/cause
		Remedy	(Check) Check connection between the ICU MAIN PWB and the scanner (writing) unit.	
			(Repair) Replace the cable and the connector between the ICU MAIN PWB and the scanner (writing) unit. / Power Source-ON	
			(After-work)	
		Case 2	Trouble position/cause	Scanner (writing) unit trouble (Scanner (writing) motor trouble / Laser beam sensor trouble / Optical system dirt)
			Remedy	(Check) Check the scanner (writing) unit operation. (SIM 61-1)
				(Repair) Replace the scanner (writing) unit. / Power Source-ON
		(After-work) Adjust ADJM7/ADJM9/ADJM10.		
		Case 3	Trouble position/cause	ICU MAIN PWB trouble
			Remedy	(Check)
				(Repair) Replace the ICU MAIN PWB. / Power Source-ON
		(After-work) Adjust ADJM9/M10/M12/M13/M14/M15/M17. / Re-enter setup values and adjustment values. (Install the EEPROM of the defective ICU MAIN PWB to a new ICU MAIN PWB.)		
		Case 4	Trouble position/cause	Scanner (writing) unit power line (24V/5V) trouble
			Remedy	(Check) Check the door switch (DSWF). / Check the fuse (F706).
				(Repair) Replace the door switch (DSWF). / Replace the fuse (F706). / Power Source-ON
				(After-work)

Main code	Sub code	Title	Laser beam detection trouble (BLACK)	
			Display	Lamp
E7	24	Phenomena	Display	Lamp
				Message
			Detail	The laser beam sensor cannot detect laser beam. (The sensor signal does not change.)
			Section	Scanner (writing)
			Operation mode	All modes
			Note	
		Case 1	Trouble position/cause	Bad connection of the signal line between the ICU MAIN PWB and the scanner (writing) unit.
			Remedy	(Check) Check connection between the ICU MAIN PWB and the scanner (writing) unit.
				(Repair) Replace the cable and the connector between the ICU MAIN PWB and the scanner (writing) unit. / Power Source-ON
		(After-work)		
		Case 2	Trouble position/cause	Scanner (writing) unit trouble (Scanner (writing) motor trouble / Laser beam sensor trouble / Optical system dirt)
			Remedy	(Check)
				(Repair) Replace the scanner (writing) unit. / Power Source-ON
		(After-work) Adjust ADJM7/ADJM9/ADJM10.		
		Case 3	Trouble position/cause	ICU MAIN PWB trouble
			Remedy	(Check)
				(Repair) Replace the ICU MAIN PWB. / Power Source-ON
		(After-work) Adjust ADJM9/M10/M12/M13/M14/M15/M17. / Re-enter setup values and adjustment values. (Install the EEPROM of the defective ICU MAIN PWB to a new ICU MAIN PWB.)		
		Case 4	Trouble position/cause	Scanner (writing) unit power line (24V/5V) trouble
			Remedy	(Check) Check the door switch (DSWF). / Check the fuse (F706).
				(Repair) Replace the door switch (DSWF). / Replace the fuse (F706). / Power Source-ON
(After-work)				

Main code	Sub code	Title	Laser beam detection trouble (CYAN)	
			Display	Lamp
E7	25	Phenomena	Display	Lamp
				Message
			Detail	The laser beam sensor cannot detect laser beam. (The sensor signal does not change.)
			Section	Scanner (writing)
			Operation mode	All modes
			Note	
		Case 1	Trouble position/cause	Bad connection of the signal line between the ICU MAIN PWB and the scanner (writing) unit.
			Remedy	(Check) Check connection between the ICU MAIN PWB and the scanner (writing) unit.
				(Repair) Replace the cable and the connector between the ICU MAIN PWB and the scanner (writing) unit. / Power Source-ON
		(After-work)		
		Case 2	Trouble position/cause	Scanner (writing) unit trouble (Scanner (writing) motor trouble / Laser beam sensor trouble / Optical system dirt)
			Remedy	(Check)
				(Repair) Replace the scanner (writing) unit. / Power Source-ON
		(After-work) Adjust ADJM7/ADJM9/ADJM10.		
		Case 3	Trouble position/cause	ICU MAIN PWB trouble
			Remedy	(Check)
				(Repair) Replace the ICU MAIN PWB. / Power Source-ON
		(After-work) Adjust ADJM9/M10/M12/M13/M14/M15/M17. / Re-enter setup values and adjustment values. (Install the EEPROM of the defective ICU MAIN PWB to a new ICU MAIN PWB.)		
		Case 4	Trouble position/cause	Scanner (writing) unit power line (24V/5V) trouble
			Remedy	(Check) Check the door switch (DSWF). / Check the fuse (F706).
				(Repair) Replace the door switch (DSWF). / Replace the fuse (F706). / Power Source-ON
(After-work)				

Main code	Sub code	Title	Laser beam detection trouble (MAGENTA)	
			Display	Lamp
E7	26	Phenomena	Display	Lamp
				Message
			Detail	The laser beam sensor cannot detect laser beam. (The sensor signal does not change.)
			Section	Scanner (writing)
			Operation mode	All modes
			Note	
		Case 1	Trouble position/cause	Bad connection of the signal line between the ICU MAIN PWB and the scanner (writing) unit.
			Remedy	(Check) Check connection between the ICU MAIN PWB and the scanner (writing) unit.
				(Repair) Replace the cable and the connector between the ICU MAIN PWB and the scanner (writing) unit. / Power Source-ON
		(After-work)		
		Case 2	Trouble position/cause	Scanner (writing) unit trouble (Scanner (writing) motor trouble / Laser beam sensor trouble / Optical system dirt)
			Remedy	(Check)
				(Repair) Replace the scanner (writing) unit. / Power Source-ON
		(After-work) Adjust ADJM7/ADJM9/ADJM10.		
		Case 3	Trouble position/cause	ICU MAIN PWB trouble
			Remedy	(Check)
				(Repair) Replace the ICU MAIN PWB. / Power Source-ON
		(After-work) Adjust ADJM9/M10/M12/M13/M14/M15/M17. / Re-enter setup values and adjustment values. (Install the EEPROM of the defective ICU MAIN PWB to a new ICU MAIN PWB.)		
		Case 4	Trouble position/cause	Scanner (writing) unit power line (24V/5V) trouble
			Remedy	(Check) Check the door switch (DSWF). / Check the fuse (F706).
				(Repair) Replace the door switch (DSWF). / Replace the fuse (F706). / Power Source-ON
(After-work)				

Main code	Sub code	Title	Laser beam detection trouble (YELLOW)	
			Display	Lamp
E7	27	Phenomena	Display	Lamp
				Message
			Detail	The laser beam sensor cannot detect laser beam. (The sensor signal does not change.)
			Section	Scanner (writing)
			Operation mode	All modes
			Note	
		Case 1	Trouble position/cause	Bad connection of the signal line between the ICU MAIN PWB and the scanner (writing) unit.
			Remedy	(Check) Check connection between the ICU MAIN PWB and the scanner (writing) unit.
				(Repair) Replace the cable and the connector between the ICU MAIN PWB and the scanner (writing) unit. / Power Source-ON
		(After-work)		
		Case 2	Trouble position/cause	Scanner (writing) unit trouble (Scanner (writing) motor trouble / Laser beam sensor trouble / Optical system dirt)
			Remedy	(Check)
				(Repair) Replace the scanner (writing) unit. / Power Source-ON
		(After-work) Adjust ADJM7/ADJM9/ADJM10.		
		Case 3	Trouble position/cause	ICU MAIN PWB trouble
			Remedy	(Check)
				(Repair) Replace the ICU MAIN PWB. / Power Source-ON
		(After-work) Adjust ADJM9/M10/M12/M13/M14/M15/M17. / Re-enter setup values and adjustment values. (Install the EEPROM of the defective ICU MAIN PWB to a new ICU MAIN PWB.)		
		Case 4	Trouble position/cause	Scanner (writing) unit power line (24V/5V) trouble
			Remedy	(Check) Check the door switch (DSWF). / Check the fuse (F706).
				(Repair) Replace the door switch (DSWF). / Replace the fuse (F706). / Power Source-ON
(After-work)				

Main code	Sub code	Title	ICU PWB FLASH ROM trouble			
E7	30	Phenomena	Display	Lamp		
				Message		
			Detail	After turning ON the power, consistency of the ICU MAIN PWB and the ROM (FLASH ROM) is checked and no consistency is found.		
			Section	ICU MAIN PWB		
			Operation mode	Warm-up / Initialize		
			Note			
			Case 1	Trouble position/ cause	ICU MAIN PWB trouble / ICU MAIN PWB ROM (FLASH ROM) trouble	
				Remedy	(Check)	
					(Repair) Replace the ICU MAIN PWB. / Replace the ICU MAIN PWB ROM (FLASH ROM). / Power Source-ON	
					(After-work) Adjust ADJM9/M10/M12/M13/M14/M15/M17. / Re-enter setup values and adjustment values. (Install the EEPROM of the defective ICU MAIN PWB to a new ICU MAIN PWB.)	

Main code	Sub code	Title	ICU MAIN PWB - PCU MAIN PWB communication trouble (PCU side detection)			
E7	90	Phenomena	Display	Lamp		
				Message		
			Detail	Caused by line noise on the data line (Hardware trouble)		
			Section	ICU MAIN PWB / PCU MAIN PWB		
			Operation mode	All modes		
			Note			
			Case 1	Trouble position/ cause	PCU MAIN PWB / ICU MAIN PWB signal line connection trouble	
				Remedy	(Check) Check connection of the signal line between the PCU MAIN PWB and the ICU MAIN PWB.	
					(Repair) Repair or replace the cable and the connector between the PCU MAIN PWB and the ICU MAIN PWB. / Power Source-ON	
					(After-work)	

Main code	Sub code	Title	ICU MAIN PWB - PCU MAIN PWB communication trouble (PCU side detection)		
E7	90	Case 2	Trouble position/ cause	PCU MAIN PWB trouble	
			Remedy	(Check)	
				(Repair) Replace the PCU MAIN PWB. / Power Source-ON	
				(After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)	
			Case 3	Trouble position/ cause	ICU MAIN PWB trouble
				Remedy	(Check)
				(Repair) ICU MAIN PWB / Power Source-ON	
				(After-work) Adjust ADJM9/M10/M12/M13/M14/M15/M17. / Re-enter setup values and adjustment values. (Install the EEPROM of the defective ICU MAIN PWB to a new ICU MAIN PWB.)	

Main code	Sub code	Title	ICU MAIN PWB - PCU MAIN PWB communication trouble (PCU side detection)			
E8	0	Phenomena	Display	Lamp		
				Message		
			Detail	No response from ICU PWB for PCU PWB command (Caused by Hardware trouble)		
			Section	ICU MAIN PWB / PCU MAIN PWB		
			Operation mode	All modes		
			Note			
			Case 1	Trouble position/ cause	PCU MAIN PWB / ICU MAIN PWB signal line connection trouble	
				Remedy	(Check) Check connection of the signal line between the PCU MAIN PWB and the ICU MAIN PWB.	
					(Repair) Repair or replace the cable and the connector between the PCU MAIN PWB and the ICU MAIN PWB. / Power Source-ON	
					(After-work)	

Main code	Sub code	Title	ICU MAIN PWB - PCU MAIN PWB communication trouble (PCU side detection)	
E8	0	Case 2	Trouble position/cause	PCU MAIN PWB trouble
			Remedy	(Check)
				(Repair) Replace the PCU MAIN PWB. / Power Source-ON
		(After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)		
		Case 3	Trouble position/cause	ICU MAIN PWB trouble
			Remedy	(Check)
(Repair) ICU MAIN PWB / Power Source-ON				
(After-work) Adjust ADJM9/M10/M12/M13/M14/M15/M17. / Re-enter setup values and adjustment values. (Install the EEPROM of the defective ICU MAIN PWB to a new ICU MAIN PWB.)				

Main code	Sub code	Title	ICU MAIN PWB - PCU MAIN PWB communication trouble (PCU side detection)	
E8	1	Case 2	Trouble position/cause	PCU MAIN PWB trouble
			Remedy	(Check)
				(Repair) Replace the PCU MAIN PWB. / Power Source-ON
		(After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)		
		Case 3	Trouble position/cause	ICU MAIN PWB trouble
			Remedy	(Check)
(Repair) ICU MAIN PWB / Power Source-ON				
(After-work) Adjust ADJM9/M10/M12/M13/M14/M15/M17. / Re-enter setup values and adjustment values. (Install the EEPROM of the defective ICU MAIN PWB to a new ICU MAIN PWB.)				

Main code	Sub code	Title	ICU MAIN PWB - PCU MAIN PWB communication trouble (PCU side detection)	
E8	1	Phenomena	Display	Lamp Message
			Detail	No response from ICU PWB for PCU PWB command (Caused by software trouble)
			Section	ICU MAIN PWB / PCU MAIN PWB
			Operation mode	All modes
			Note	
			Case 1	Trouble position/cause
		Remedy		(Check) Check connection of the signal line between the PCU MAIN PWB and the ICU MAIN PWB.
				(Repair) Repair or replace the cable and the connector between the PCU MAIN PWB and the ICU MAIN PWB. / Power Source-ON
				(After-work)

Main code	Sub code	Title	Communication trouble between PCU MAIN PWB - Finisher control PWB (Detected by PCU MAIN PWB)	
F1	0	Phenomena	Display	Lamp Message
			Detail	Communication test error after turning on the power or canceling the simulation
			Section	PCU MAIN PWB/Finisher control PWB
			Operation mode	When power ON/Initializing
			Note	
			Case 1	Trouble position/cause
		Remedy		(Check) Check the signal line connection between the PCU MAIN PWB and the finisher control PWB
				(Repair) Repair or replace the connector and the cable between the PCU MAIN PWB and the finisher control PWB/Power OFF-ON.
				(After work)

Main code	Sub code	Title	Communication trouble between PCU MAIN PWB - Finisher control PWB (Detected by PCU MAIN PWB)	
F1	0	Case 2	Trouble position/ cause	Finisher control PWB error
			Remedy	(Check)
				(Repair) Replace the finisher control PWB./Power OFF-ON
		(After work) Make various adjustments related to the finisher electric section. (Install the EEPROM of the defective finisher control PWB to a new finisher control PWB.)		
		Case 3	Trouble position/ cause	PCU MAIN PWB trouble
			Remedy	(Check)
(Repair) Replace the PCU MAIN PWB. / Power OFF-ON				
(After work) Reenter the set values and the adjustment values. (Install the EEPROM on the defective PCU MAIN PWB to a new PCU MAIN PWB.)				

Main code	Sub code	Title	Finisher paper exit/reversing motor trouble (Finisher side detection)	
F1	2	Phenomena	Display	Lamp
				Message
			Detail	In the initial operation, the motor rotation sensor output signal is not recognized within the specified time after output of the finisher paper exit motor / reversing motor ON signal.
			Section	Finisher paper exit
			Operation mode	Power ON/ Initial operation
			Note	
		Case 1	Trouble position/ cause	Paper exit motor trouble / Reversing motor trouble / Paper exit motor rotation sensor trouble / Reversing motor rotation sensor trouble
			Remedy	(Check) Check the paper exit motor / reversing motor / Reversing motor rotation sensor / paper exit motor rotation sensor operations. (SIM 3-1/2)
				(Repair) Replace the paper exit motor. / Replace the paper exit motor rotation sensor. / Power OFF-ON
				(After work)

Main code	Sub code	Title	Finisher paper exit/reversing motor trouble (Finisher side detection)	
F1	2	Case 2	Trouble position/ cause	Paper exit mechanism section trouble
			Remedy	(Check) Check the paper exit mechanism section operation. (SIM 3-1/2)
				(Repair) Replace or repair parts of the paper exit mechanism section. / Power OFF-ON
		(After work)		
		Case 3	Trouble position/ cause	Finisher control PWB trouble
			Remedy	(Check) Check the finisher control PWB operation. (SIM 3-1/2)
(Repair) Replace the finisher control PWB. / Power OFF-ON				
(After work) Make various adjustments related to the finisher electric section. (Install the EEPROM of the defective finisher control PWB to a new finisher control PWB.)				

Main code	Sub code	Title	Finisher staple trouble (Finisher side detection)	
F1	10	Phenomena	Display	Lamp
				Message
			Detail	The staple home position sensor signal OFF is not recognized within the specified time after output of the staple motor ON signal. / Though the staple home position sensor OFF signal is recognized after output of the staple motor ON signal, but the staple home position sensor ON signal is not recognized within the specified time.
			Section	Finisher stapler
			Operation mode	Stapling
			Note	
		Case 1	Trouble position/ cause	Staple motor trouble / Staple home position sensor trouble
			Remedy	(Check) Check the operation of the staple motor/staple home position sensor. (SIM 3-1/2)
				(Repair) Replace the staple motor. / Replace the staple home position sensor. / Power OFF-ON
				(After work)

Main code	Sub code	Title	Finisher staple trouble (Finisher side detection)	
F1	10	Case 2	Trouble position/ cause	Staple unit mechanism section trouble
			Remedy	(Check) Check the staple unit mechanism section operation. (SIM 3-1/2)
				(Repair) Replace or repair the staple unit. / Power OFF-ON
				(After work)
		Case 3	Trouble position/ cause	Finisher control PWB trouble
			Remedy	(Check) (SIM3-1/2) Check the finisher control PWB operation. (SIM 3-1/2)
(Repair) Replace the finisher control PWB. / Power OFF-ON				
(After work) Make various adjustments related to the finisher electric section. (Install the EEPROM of the defective finisher control PWB to a new finisher control PWB.)				

Main code	Sub code	Title	Finisher bundle process trouble (Finisher side detection)	
F1	11	Case 2	Trouble position/ cause	Return roller mechanism section trouble
			Remedy	(Check) Return roller mechanism section (SIM 3-1/2)
				(Repair) Repair the return roller mechanism section. / Power OFF-ON
				(After work)
		Case 3	Trouble position/ cause	Finisher control PWB trouble
			Remedy	(Check) Check the finisher control PWB operation. (SIM 3-1/2)
(Repair) Replace the finisher control PWB. / Power OFF-ON				
(After work) Make various adjustments related to the finisher electric section. (Install the EEPROM of the defective finisher control PWB to a new finisher control PWB.)				

Main code	Sub code	Title	Finisher bundle process trouble (Finisher side detection)		
F1	11	Phenomena	Display	Lamp Message	
			Detail	In the initial operation, the return roller home position sensor signal ON is not recognized within the specified time after starting rotation of the return roller. / In the initial operation, the bundle exit belt home position sensor OFF is not recognized within the specified time after starting bundle exit operation. / In the initial operation, the bundle exit belt home position sensor signal ON is not recognized within the specified time after starting bundle exit operation.	
			Section	Finisher paper exit	
			Operation mode	Power ON / Initial operation	
			Note		
			Case 1	Trouble position/ cause	Bundle process motor trouble / Return roller home position sensor trouble
				Remedy	(Check) Check operations of the bundle process motor/return roller home position sensor. (SIM 3-1/2)
		(Repair) Replace the bundle process motor. / Replace the return roller home position sensor. / Power OFF-ON			
		(After work)			

Main code	Sub code	Title	Finisher tray lift trouble (Finisher side detection)		
F1	15	Phenomena	Display	Lamp Message	
			Detail	In the tray lift up operation, the tray upper limit sensor ON is recognized. / The specified number or more of the tray lift motor rotation sensor signals are not recognized within the specified time after starting rotation of the tray lift motor. / The tray paper height sensor ON is not recognized within the specified time after starting the tray lift up operation. / The tray paper height sensor OFF is not recognized within the specified time after starting the tray lift down operation.	
			Section	Finisher tray lift	
			Operation mode	All modes	
			Note		
			Case 1	Trouble position/ cause	Tray lift mechanism section trouble
				Remedy	(Check) Check the tray lift mechanism section. (SIM 3-1/2)
		(Repair) Repair the tray lift mechanism section. / Power OFF-ON			
		(After work)			

Main code	Sub code	Title	Finisher tray lift trouble (Finisher side detection)		
F1	15	Case 2	Trouble position/cause	Tray lift motor trouble / Tray upper limit sensor trouble / Tray lift motor rotation sensor trouble / Tray height sensor trouble	
			Remedy	(Check) Check the operations of the tray lift motor / tray upper limit sensor / tray lift motor rotation sensor / tray height sensor. (SIM 3-1/2)	
				(Repair) Replace the tray lift motor. / Replace the tray upper limit sensor. / Replace the tray lift motor rotation sensor. / Replace the tray height sensor.	
				(After work)	
			Case 3	Trouble position/cause	Finisher control PWB trouble
				Remedy	(Check) Check the operation of the finisher control PWB. (SIM 3-1/2)
		(Repair) Replace the finisher control PWB. / Power OFF-ON			
		(After work) Make various adjustments related to the finisher electric section. (Install the EEPROM of the defective finisher control PWB to a new finisher control PWB.)			

Main code	Sub code	Title	Finisher alignment trouble (Front side) (Finisher side detection)		
F1	19	Phenomena	Display	Lamp Message	
			Detail	In the initial operation, the alignment plate home position sensor signal OFF is not recognized within the specified time after starting rotation of the alignment motor. / In the initial operation, the alignment plate home position sensor signal ON is not recognized within the specified time after starting rotation of the alignment motor.	
				Section	Finisher alignment
				Operation mode	Power ON
				Note	
			Case 1	Trouble position/cause	Alignment mechanism section trouble (Front side)
				Remedy	(Check) Check the alignment mechanism section. (Front side) (SIM 3-1/2)
		(Repair) Repair the alignment mechanism section (Front side). / Power OFF-ON (After work)			

Main code	Sub code	Title	Finisher alignment trouble (Front side) (Finisher side detection)	
F1	19	Case 2	Trouble position/cause	Alignment motor trouble / Alignment plate home position sensor trouble (Front side)
			Remedy	(Check) Check the operations of the alignment motor/alignment plate home position sensor (Front side). (SIM 3-1/2)
				(Repair) Replace the alignment motor. / Replace the alignment plate home position sensor. (Front side)
				(After work)
		Case 3	Trouble position/cause	Finisher control PWB trouble
			Remedy	(Check) Check the finisher control PWB operation. (SIM 3-1/2)
(Repair) Replace the finisher control PWB. / Power OFF-ON				
(After work) Make various adjustments related to the finisher electric section. (Install the EEPROM of the defective finisher control PWB to a new finisher control PWB.)				

Main code	Sub code	Title	Finisher alignment trouble (Rear side) (Finisher side detection)		
F1	20	Phenomena	Display	Lamp Message	
			Detail	In the initial operation, the alignment plate home position sensor signal OFF is not recognized within the specified time after starting rotation of the alignment motor. / In the initial operation, the alignment plate home position sensor signal ON is not recognized within the specified time after starting rotation of the alignment motor. (Rear side)	
				Section	Finisher alignment
				Operation mode	Power ON
				Note	
			Case 1	Trouble position/cause	Alignment mechanism section trouble (Rear side)
				Remedy	(Check) Check the alignment mechanism section (Rear side). (SIM 3-1/2)
		(Repair) Repair the alignment mechanism section (Rear side). / Power OFF-ON (After work)			

Main code	Sub code	Title	Finisher alignment trouble (Rear side) (Finisher side detection)	
F1	20	Case 2	Trouble position/cause	Alignment motor trouble / Alignment plate home position sensor trouble (Rear side)
			Remedy	(Check) Check the operations of the alignment motor/alignment plate home position sensor (Rear side). (SIM 3-1/2) (Repair) Replace the alignment motor. / Replace the alignment plate home position sensor (Rear side). (After work)
		Case 3	Trouble position/cause	Finisher control PWB trouble
			Remedy	(Check) Check the finisher control PWB operation. (SIM 3-1/2) (Repair) Replace the finisher control PWB. / Power OFF-ON (After work) Make various adjustments related to the finisher electric section. (Install the EEPROM of the defective finisher control PWB to a new finisher control PWB.)

Main code	Sub code	Title	PCU PWB - sorter control PWB communication trouble (PCU detection)	
F1	70	Phenomena	Display	Lamp Message
			Detail	Communication test error after turning ON the power or canceling a simulation.
			Section	Sorter / PCU MAIN PWB
			Operation mode	Warm-up / Initialize
			Note	
		Case 1	Trouble position/cause	PCU MAIN PWB - Sorter signal line connection trouble
			Remedy	(Check) Check connection of the signal line between the PCU MAIN PWB and the sorter. (Repair) Repair or replace the cable and the connector between the PCU MAIN PWB and the ICU MAIN PWB. / Power Source-ON (After-work)
		Case 2	Trouble position/cause	Sorter control PWB trouble
			Remedy	(Check) (Repair) Replace the sorter control PWB. / Power Source-ON (After-work)

Main code	Sub code	Title	PCU PWB - sorter control PWB communication trouble (PCU detection)	
F1	70	Case 3	Trouble position/cause	PCU MAIN PWB trouble
			Remedy	(Check) (Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)

Main code	Sub code	Title	Sorter power abnormality (Sorter side detection)	
F1	80	Phenomena	Display	Lamp Message
			Detail	Sorter control PWB +24V power abnormality (Low voltage)
			Section	Sorter
			Operation mode	All modes
			Note	
		Case 1	Trouble position/cause	Bad connection between the DC main PWB and the sorter control PWB.
			Remedy	(Check) Check connection between the DC main PWB and the sorter control PWB. (Repair) Repair or replace the harness and the connector between the DC main PWB and the sorter control PWB. / Power Source-ON (After-work)
		Case 2	Trouble position/cause	Sorter control PWB trouble
			Remedy	(Check) Check the power source in the sorter control PWB. (SIM 3-2) (Repair) Replace the sorter control PWB. / Power Source-ON (After-work)

Main code	Sub code	Title	Sorter transport motor trouble (Sorter side detection)		
			Display	Lamp	
F1	81	Phenomena	Display	Lamp	
				Message	
			Detail	The motor rotation sensor output signal is not recognized within the specified time after outputting the sorter transport motor ON signal. / The transport guide sensor signal is not recognized within the specified time after outputting the transport guide ON signal.	
			Section	Sorter	
			Operation mode	Sort/group operation mode	
			Note		
			Case 1	Trouble position/ cause	Transport motor trouble / Transport motor rotation sensor trouble
				Remedy	(Check) "Check operations of the transport motor, the transport guide, and the sensor. (SIM 3-1/2)" (Repair) Replace the transport motor. / Replace the transport motor rotation sensor. / Power Source-ON (After-work)
			Case 2	Trouble position/ cause	"Transport guide sensor trouble, transport guide home position sensor trouble"
				Remedy	(Check) Check operations of the transport guide sensor and the transport guide home position sensor. (SIM 3-1/2) (Repair) Replace the transport guide sensor. / Replace the transport guide home position sensor. / Power Source-ON (After-work)
		Case 3	Trouble position/ cause	Paper transport mechanism section trouble	
			Remedy	(Check) Check operations of the paper transport mechanism section. (SIM 3-1/2) (Repair) Repair or replace the parts of the paper transport mechanism section. / Power Source-ON (After-work)	
		Case 4	Trouble position/ cause	Sorter control PWB trouble.	
			Remedy	(Check) Check operations of the sorter control PWB. (SIM 3-1/2) (Repair) Replace the sorter control PWB. / Power Source-ON (After-work)	

Main code	Sub code	Title	Sorter push bar motor trouble (Sorter side detection)		
			Display	Lamp	
F1	83	Phenomena	Display	Lamp	
				Message	
			Detail	The push bar sensor signal is not recognized within 2sec from start of initializing. / The push bar does not complete its operation within 2sec from start of operation.	
			Section	Sorter	
			Operation mode	Initializing	
			Note		
			Case 1	Trouble position/ cause	Push bar motor trouble / Push bar home position sensor trouble
				Remedy	(Check) Check operations of the push bar motor and the push bar home position sensor. (SIM 3-1/2) (Repair) Replace the push bar motor. / Replace the push bar home position sensor. / Power Source-ON (After-work)
			Case 2	Trouble position/ cause	Circuit breaker operation
				Remedy	(Check) Check the cause of an overcurrent. (Repair) Reset the circuit breaker. / Power Source-ON (After-work)
		Case 3	Trouble position/ cause	Paper push bar mechanism section trouble	
			Remedy	(Check) Check operations of the paper push bar mechanism section. (SIM3-1/2) (Repair) Repair or replace the parts in the paper push bar mechanism section. / Power Source-ON (After-work)	
		Case 4	Trouble position/ cause	Sorter control PWB trouble.	
			Remedy	(Check) Check operations of the sorter control PWB. (SIM3-1/2) (Repair) Replace the sorter control PWB. / Power Source-ON (After-work)	

Main code	Sub code	Title	Sorter staple unit oscillation motor trouble (Sorter side detection)		
F1	87	Phenomena	Display	Lamp Message	
			Detail	The stapler shift home position sensor signal is not recognized within 1sec from start of initializing. / The stapler shift home position sensor signal polarity change is not recognized within 1sec from start of stapler shift operation. / The rotation sensor output signal is not recognized within 0.25sec from output of the stapler shift motor ON signal.	
			Section	Sorter	
			Operation mode	Initializing	
			Note		
			Case 1	Trouble position/ cause	Stapler shift motor trouble / Stapler shift home position sensor trouble
				Remedy	(Check) Check operations of the stapler shift motor/ stapler shift home position sensor. (SIM3-1/2)
					(Repair) Replace the stapler shift motor. / Replace the stapler shift home position sensor. / Power Source-ON (After-work)
			Case 2	Trouble position/ cause	Staple shift mechanism section trouble
				Remedy	(Check) Check operations of the staple shift mechanism section. (SIM3-1/2)
		(Repair) Repair or replace the parts of the staple shift mechanism section. / Power Source-ON (After-work)			
		Case 3	Trouble position/ cause	Circuit breaker operation	
			Remedy	(Check) Check the cause of an overcurrent. (Repair) Reset the circuit breaker. / Power Source-ON (After-work)	
		Case 4	Trouble position/ cause	Sorter control PWB trouble.	
			Remedy	(Check) Check operations of the sorter control PWB. (SIM3-1/2)	
				(Repair) Replace the sorter control PWB. / Power Source-ON (After-work)	

Main code	Sub code	Title	Sorter bin shift motor trouble (Sorter side detection)		
F1	89	Phenomena	Display	Lamp Message	
			Detail	The lead cam position sensor signal is not recognized within the specified time after outputting the bin shift motor ON signal. / The guide bar home position is not recognized within the specified time after start of the guide bar operation. / The rotation sensor output signal is not recognized within the specified time after outputting the bin shift motor ON signal.	
			Section	Sorter	
			Operation mode	Sort/Group operation mode	
			Note		
			Case 1	Trouble position/ cause	Bin shift motor trouble / Lead cam position sensor
				Remedy	(Check) Check operations of the bin shift motor / lead cam home position sensor. (SIM3-1/2)
					(Repair) Replace the bin shift motor. / Replace the lead cam position sensor. / Power Source-ON (After-work)
			Case 2	Trouble position/ cause	Bin shift mechanism section trouble
				Remedy	(Check) Check operations of the bin shift mechanism section. (SIM 3-1/2)
		(Repair) Repair or replace the parts in the bin shift mechanism section. / Power Source-ON (After-work)			
		Case 3	Trouble position/ cause	Circuit breaker operation	
			Remedy	(Check) Check the cause of an overcurrent. (Repair) Reset the circuit breaker. / Power Source-ON (After-work)	
		Case 4	Trouble position/ cause	Sorter control PWB trouble.	
			Remedy	(Check) Check operations of the sorter control PWB. (SIM3-1/2) (Repair) Replace the sorter control PWB. / Power Source-ON (After-work)	

Main code	Sub code	Title	Bin paper sensor auto adjustment trouble (Sorter side detection)			
F1	91	Phenomena	Display	Lamp		
				Message		
			Detail	Sensor output abnormality in sensor detection level adjustment		
				Section	Sorter	
			Operation mode	sort/group operation mode		
			Note			
			Case 1	Trouble position/cause	Bin paper sensor trouble	
					Remedy	(Check) Check operations of bin paper sensor. (SIM3-1/2) (Repair) Replace or adjust the bin paper sensor. / Power Source-ON (After-work)
				Case 2	Trouble position/cause	Sorter control PWB trouble.
						Remedy

Main code	Sub code	Title	Sorter staple key trouble			
F1	94	Phenomena	Display	Lamp		
				Message		
			Detail	The continuous ON state of the manual staple key is recognized after 5 sec of starting copying.		
				Section	Sorter	
			Operation mode	Staple		
			Note			
			Case 1	Trouble position/cause	Staple key trouble	
					Remedy	(Check) Staple key operation check (SIM 3-2) (Repair) Staple key replacement/Power OFF/ON (After-work)
				Case 2	Trouble position/cause	Sorter control PWB trouble.
						Remedy

Main code	Sub code	Title	Toner concentration sensor trouble (BLACK)			
F2	40	Phenomena	Display	Lamp		
				Message		
			Detail	Toner density sensor output line open		
				Section	Developing	
			Operation mode	All modes		
			Note			
			Case 1	Trouble position/cause	Bad connection of the toner density sensor, the process control PWB, and the PCU MAIN PWB	
					Remedy	(Check) Check connections of the toner density sensor, the process control PWB, and the PCU MAIN PWB. (Repair) Replace the toner density sensor. / Power Source-ON (After-work)
				Case 2	Trouble position/cause	Process control PWB trouble
						Remedy
			Case 3	Trouble position/cause	PCU MAIN PWB trouble	
					Remedy	(Check) Check the toner density sensor output level with SIM 25-1. (Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)

Main code	Sub code	Title	Toner concentration sensor trouble (CYAN)		
			Display	Lamp	
F2	41	Phenomena	Display	Lamp	
				Message	
			Detail	Toner density sensor output line open	
			Section	Developing	
			Operation mode	All modes	
			Note		
		Case 1	Trouble position/cause	Bad connection of the toner density sensor, the process control PWB, and the PCU MAIN PWB	
			Remedy	(Check) Check connections of the toner density sensor, the process control PWB, and the PCU MAIN PWB. (Repair) Replace the toner density sensor. / Power Source-ON (After-work)	
			Case 2	Trouble position/cause	Process control PWB trouble
				Remedy	(Check) Check the toner density sensor output level with SIM 25-1. (Repair) Replace the process control PWB. / Power Source-ON (After-work)
		Case 3	Trouble position/cause	PCU MAIN PWB trouble	
			Remedy	(Check) Check the toner density sensor output level with SIM 25-1. (Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)	

Main code	Sub code	Title	Toner concentration sensor trouble (MAGENTA)		
			Display	Lamp	
F2	42	Phenomena	Display	Lamp	
				Message	
			Detail	Toner density sensor output line open	
			Section	Developing	
			Operation mode	All modes	
			Note		
		Case 1	Trouble position/cause	Bad connection of the toner density sensor, the process control PWB, and the PCU MAIN PWB	
			Remedy	(Check) Check connections of the toner density sensor, the process control PWB, and the PCU MAIN PWB. (Repair) Replace the toner density sensor. / Power Source-ON (After-work)	
			Case 2	Trouble position/cause	Process control PWB trouble
				Remedy	(Check) Check the toner density sensor output level with SIM 25-1. (Repair) Replace the process control PWB. / Power Source-ON (After-work)
		Case 3	Trouble position/cause	PCU MAIN PWB trouble	
			Remedy	(Check) Check the toner density sensor output level with SIM 25-1. (Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)	

Main code	Sub code	Title	Toner concentration sensor trouble (YELLOW)		
F2	43	Phenomena	Display	Lamp	
				Message	
			Detail	Toner density sensor output line open	
			Section	Developing	
			Operation mode	All modes	
			Note		
		Case 1	Trouble position/cause	Bad connection of the toner density sensor, the process control PWB, and the PCU MAIN PWB	
			Remedy	(Check) Check connections of the toner density sensor, the process control PWB, and the PCU MAIN PWB. (Repair) Replace the toner density sensor. / Power Source-ON (After-work)	
			Case 2	Trouble position/cause	Process control PWB trouble
				Remedy	(Check) Check the toner density sensor output level with SIM 25-1. (Repair) Replace the process control PWB. / Power Source-ON (After-work)
		Case 3	Trouble position/cause	PCU MAIN PWB trouble	
			Remedy	(Check) Check the toner density sensor output level with SIM 25-1. (Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)	

Main code	Sub code	Title	Image density sensor trouble (BLACK) (Transfer belt surface reflection abnormality)				
F2	44	Phenomena	Display	Lamp			
				Message			
			Detail	In the image density correction, the transfer belt surface is read by the image density sensor and the sensor gain is adjusted so that the output becomes a fixed value. However, the output of the specified range cannot be obtained even though the sensor gain is changed.			
				Section	Image process (Transfer)		
				Operation mode	Image density correction		
				Note	Print is disabled in USA. For the other destinations, print is enabled. However, the print density must be forcibly decreased.		
			Case 1	Trouble position/cause	Image density sensor trouble		
				Remedy	(Check) Check the image density sensor (dirt, output) (SIM44-2) / Check the image density sensor calibration plate. / Check the operation of the image density sensor calibration plate switching. (Repair) Clean or replace the image density sensor. / Clean or replace the image density sensor calibration plate. / Replace the image density sensor calibration plate switch solenoid. / Power Source-ON (After-work) Adjust ADJ M6		
					Case 2	Trouble position/cause	Transfer belt trouble (dirt, scratch)
						Remedy	(Check) Toner dispersion from the transfer belt, the OPC drum unit, and the developing unit (Repair) Clean or replace the transfer belt. / Replace the transfer belt cleaner. / Clean the OPC drum and the developing unit. / Power Source-ON (After-work)
			Case 3	Trouble position/cause	PCU SUB PWB trouble		
				Remedy	(Check) Check the PCU SUM PWB image density sensor circuit. (Repair) PCU SUB PWB replacement / Power Source-ON (After-work)		

Main code	Sub code	Title	Image density sensor trouble (COLOR) (Calibration plate reflection abnormality)		
F2	45	Phenomena	Display	Lamp	
				Message	
			Detail	In the image density correction, the calibration plate is read by the image density sensor and the sensor gain is adjusted so that the output becomes a fixed value. However, the output of the specified range cannot be obtained even though the sensor gain is changed.	
				Section	Image process (Transfer)
				Operation mode	Image density correction
				Note	Print is disabled in USA. For the other destinations, print is enabled. However, the print density must be forcibly decreased.
			Case 1	Trouble position/ cause	Image density sensor trouble
				Remedy	(Check) Check the image density sensor (dirt, output) (SIM44-2) / Check the image density sensor calibration plate. / Check the operation of the image density sensor calibration plate switching. (Repair) Clean or replace the image density sensor. / Clean or replace the image density sensor calibration plate. / Replace the image density sensor calibration plate switch solenoid. / Power Source-ON (After-work) Adjust ADJ M6
			Case 2	Trouble position/ cause	Calibration plate trouble (dirt, scratch)
				Remedy	(Check) Toner dispersion from the transfer belt, the OPC drum unit, and the developing unit (Repair) Clean or replace the calibration plate. / Replace the transfer belt cleaner. / Clean the OPC drum and the developing unit. / Power Source-ON (After-work)
		PCU SUB PWB trouble			
		Case 3	Trouble position/ cause	PCU SUB PWB trouble	
			Remedy	(Check) Check the PCU SUM PWB image density sensor circuit. (Repair) PCU SUB PWB replacement / Power Source-ON (After-work)	

Main code	Sub code	Title	Drum marking detection trouble (BLACK)		
F2	50	Phenomena	Display	Lamp	
				Message	
			Detail	The drum marking is not recognized. / The size and the number of drum markings are not specified ones.	
				Section	Image process (OPC drum)
				Operation mode	OPC drum rotation
				Note	The error code is stored in the trouble memory (print enabled).
			Case 1	Trouble position/ cause	Drum marking sensor trouble (dirt, output)
				Remedy	(Check) Drum marking sensor output check (SIM44-2) (Repair) Clean or replace the drum marking sensor. / Power Source-ON (After-work)
			Case 2	Trouble position/ cause	Bad connection of the signal line of PCU MAIN PWB / process control PWB / drum marking sensor.
		Remedy		(Check) Check connection of the signal line of PCU MAIN PWB / process control PWB / drum marking sensor. (Repair) Repair or replace the cable and the connector between PCU MAIN PWB / Process control PWB / Drum marking sensor. / Power Source-ON (After-work)	
		Case 3	Trouble position/ cause	PCU MAIN PWB trouble	
			Remedy	(Check) (Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)	

Main code	Sub code	Title	Drum marking detection trouble (BLACK)	
F2	50	Case 4	Trouble position/cause	OPC drum surface dirt, scratch / A different type of OPC drum is installed.
			Remedy	(Check) Check dirt and scratches on the OPC drum surface, and the type of OPC drum. (Repair) Clean the OPC drum surface. / Replace the OPC drum. / Power Source-ON (After-work) Refer to the requirement item 2 of maintenance servicing and consumable parts replacement.

Main code	Sub code	Title	Drum marking detection trouble (CYAN)	
F2	51	Phenomena	Display	Lamp Message
			Detail	The drum marking is not recognized. / The size and the number of drum markings are not specified ones.
			Section	Image process (OPC drum)
			Operation mode	OPC drum rotation
			Note	The error code is stored in the trouble memory (print enabled).
		Case 1	Trouble position/cause	Drum marking sensor trouble (dirt, output)
			Remedy	(Check) Drum marking sensor output check (SIM44-2) (Repair) Clean or replace the drum marking sensor. / Power Source-ON (After-work)
		Case 2	Trouble position/cause	Bad connection of the signal line of PCU MAIN PWB / process control PWB / drum marking sensor.
			Remedy	(Check) Check connection of the signal line of PCU MAIN PWB / process control PWB / drum marking sensor. (Repair) Repair or replace the cable and the connector between PCU MAIN PWB / Process control PWB / Drum marking sensor. / Power Source-ON (After-work)

Main code	Sub code	Title	Drum marking detection trouble (CYAN)	
F2	51	Case 3	Trouble position/cause	PCU MAIN PWB trouble
			Remedy	(Check) (Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)
		Case 4	Trouble position/cause	OPC drum surface dirt, scratch / A different type of OPC drum is installed.
			Remedy	(Check) Check dirt and scratches on the OPC drum surface, and the type of OPC drum. (Repair) Clean the OPC drum surface. / Replace the OPC drum. / Power Source-ON (After-work) Refer to the requirement item 2 of maintenance servicing and consumable parts replacement.

Main code	Sub code	Title	Drum marking detection trouble (MAGENTA)	
F2	52	Phenomena	Display	Lamp Message
			Detail	The drum marking is not recognized. / The size and the number of drum markings are not specified ones.
			Section	Image process (OPC drum)
			Operation mode	OPC drum rotation
			Note	The error code is stored in the trouble memory (print enabled).
		Case 1	Trouble position/cause	Drum marking sensor trouble (dirt, output)
			Remedy	(Check) Drum marking sensor output check (SIM44-2) (Repair) Clean or replace the drum marking sensor. / Power Source-ON (After-work)

Main code	Sub code	Title	Drum marking detection trouble (MAGENTA)		
F2	52	Case 2	Trouble position/cause	Bad connection of the signal line of PCU MAIN PWB / process control PWB / drum marking sensor.	
			Remedy	(Check) Check connection of the signal line of PCU MAIN PWB / process control PWB / drum marking sensor.	
				(Repair) Repair or replace the cable and the connector between PCU MAIN PWB / Process control PWB / Drum marking sensor. / Power Source-ON	
				(After-work)	
			Case 3	Trouble position/cause	PCU MAIN PWB trouble
				Remedy	(Check)
		(Repair) Replace the PCU MAIN PWB. / Power Source-ON			
		Case 4	Trouble position/cause	OPC drum surface dirt, scratch / A different type of OPC drum is installed.	
			Remedy	(Check) Check dirt and scratches on the OPC drum surface, and the type of OPC drum.	
				(Repair) Clean the OPC drum surface. / Replace the OPC drum. / Power Source-ON	
					(After-work) Refer to the requirement item 2 of maintenance servicing and consumable parts replacement.

Main code	Sub code	Title	Drum marking detection trouble (YELLOW)		
F2	53	Phenomena	Display	Lamp	
				Message	
			Detail	The drum marking is not recognized. / The size and the number of drum markings are not specified ones.	
				Section	Image process (OPC drum)
			Operation mode	OPC drum rotation	
			Note	The error code is stored in the trouble memory (print enabled).	

Main code	Sub code	Title	Drum marking detection trouble (YELLOW)		
F2	53	Case 1	Trouble position/cause	Drum marking sensor trouble (dirt, output)	
			Remedy	(Check) Drum marking sensor output check (SIM44-2)	
				(Repair) Clean or replace the drum marking sensor. / Power Source-ON	
				(After-work)	
			Case 2	Trouble position/cause	Bad connection of the signal line of PCU MAIN PWB / process control PWB / drum marking sensor.
				Remedy	(Check) Check connection of the signal line of PCU MAIN PWB / process control PWB / drum marking sensor.
		(Repair) Repair or replace the cable and the connector between PCU MAIN PWB / Process control PWB / Drum marking sensor. / Power Source-ON			
		Case 3	Trouble position/cause	PCU MAIN PWB trouble	
			Remedy	(Check)	
				(Repair) Replace the PCU MAIN PWB. / Power Source-ON	
		Case 4	Trouble position/cause	OPC drum surface dirt, scratch / A different type of OPC drum is installed.	
			Remedy	(Check) Check dirt and scratches on the OPC drum surface, and the type of OPC drum.	
				(Repair) Clean the OPC drum surface. / Replace the OPC drum. / Power Source-ON	
					(After-work) Refer to the requirement item 2 of maintenance servicing and consumable parts replacement.

Main code	Sub code	Title	Drum marking sensor gain adjustment error (BLACK)			
F2	54	Phenomena	Display	Lamp		
				Message		
			Detail	In the image density correction, the drum surface area is read by the drum marking sensor and the sensor gain is adjusted so that the output becomes a fixed value. However, the output of the specified range cannot be obtained even though the sensor gain is changed.		
			Section	Image process (OPC drum)		
			Operation mode	Image density correction		
			Note	Print is disabled in USA. For the other destinations, print is enabled. However, the print density must be forcibly decreased.		
			Case 1	Trouble position/ cause	Drum marking sensor trouble (dirt, output)	
				Remedy	(Check) Drum marking sensor output check (SIM44-2)	
					(Repair) Clean or replace the drum marking sensor. / Power Source-ON	
			Case 2	Trouble position/ cause	Bad connection of the signal line between PCU MAIN PWB / Process control PWB / Drum marking sensor	
		Remedy		(Check) Check connection of the signal line between PCU MAIN PWB / Process control PWB / Drum marking sensor.		
				(Repair) Repair or replacement of the cable and the connector between the PCU MAIN PWB / Process control PWB / Drum marking sensor. / Power Source-ON		
		Case 3	Trouble position/ cause	PCU MAIN PWB trouble		
			Remedy	(Check)		
				(Repair) Replace the PCU MAIN PWB. / Power Source-ON		
				(After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)		

Main code	Sub code	Title	Drum marking sensor gain adjustment error (BLACK)	
F2	54	Case 4	Trouble position/ cause	OPC drum surface dirt, scratch / A different type of OPC drum is installed.
			Remedy	(Check) Check dirt and scratches on the OPC drum surface, and the type of OPC drum.
				(Repair) Clean the OPC drum surface. / Replace the OPC drum. / Power Source-ON
		(After-work) Refer to the requirement item 2 of maintenance servicing and consumable parts replacement.		

Main code	Sub code	Title	Drum marking sensor gain adjustment error (CYAN)			
F2	55	Phenomena	Display	Lamp		
				Message		
			Detail	In the image density correction, the drum surface area is read by the drum marking sensor and the sensor gain is adjusted so that the output becomes a fixed value. However, the output of the specified range cannot be obtained even though the sensor gain is changed.		
			Section	Image process (OPC drum)		
			Operation mode	Image density correction		
			Note	Print is disabled in USA. For the other destinations, print is enabled. However, the print density must be forcibly decreased.		
			Case 1	Trouble position/ cause	Drum marking sensor trouble (dirt, output)	
				Remedy	(Check) Drum marking sensor output check (SIM44-2)	
					(Repair) Clean or replace the drum marking sensor. / Power Source-ON	
			Case 1	Trouble position/ cause	Drum marking sensor trouble (dirt, output)	
		Remedy		(Check) Drum marking sensor output check (SIM44-2)		
				(Repair) Clean or replace the drum marking sensor. / Power Source-ON		
				(After-work)		

Main code	Sub code	Title	Drum marking sensor gain adjustment error (CYAN)	
F2	55	Case 2	Trouble position/ cause	Bad connection of the signal line between PCU MAIN PWB / Process control PWB / Drum marking sensor
			Remedy	(Check) Check connection of the signal line between PCU MAIN PWB / Process control PWB / Drum marking sensor.
				(Repair) Repair or replacement of the cable and the connector between the PCU MAIN PWB / Process control PWB / Drum marking sensor. / Power Source-ON
				(After-work)
		Case 3	Trouble position/ cause	PCU MAIN PWB trouble
			Remedy	(Check)
				(Repair) Replace the PCU MAIN PWB. / Power Source-ON
				(After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)
		Case 4	Trouble position/ cause	OPC drum surface dirt, scratch / A different type of OPC drum is installed.
			Remedy	(Check) Check dirt and scratches on the OPC drum surface, and the type of OPC drum.
				(Repair) Clean the OPC drum surface. / Replace the OPC drum. / Power Source-ON
				(After-work) Refer to the requirement item 2 of maintenance servicing and consumable parts replacement.

Main code	Sub code	Title	Drum marking sensor gain adjustment error (MAGENTA)		
F2	56	Phenomena	Display	Lamp	
				Message	
			Detail	In the image density correction, the drum surface area is read by the drum marking sensor and the sensor gain is adjusted so that the output becomes a fixed value. However, the output of the specified range cannot be obtained even though the sensor gain is changed.	
				Section	Image process (OPC drum)
				Operation mode	Image density correction
			Note	Print is disabled in USA. For the other destinations, print is enabled. However, the print density must be forcibly decreased.	
			Case 1	Trouble position/ cause	Drum marking sensor trouble (dirt, output)
				Remedy	(Check) Drum marking sensor output check (SIM44-2)
					(Repair) Clean or replace the drum marking sensor. / Power Source-ON
					(After-work)
		Case 2	Trouble position/ cause	Bad connection of the signal line between PCU MAIN PWB / Process control PWB / Drum marking sensor	
			Remedy	(Check) Check connection of the signal line between PCU MAIN PWB / Process control PWB / Drum marking sensor.	
				(Repair) Repair or replacement of the cable and the connector between the PCU MAIN PWB / Process control PWB / Drum marking sensor. / Power Source-ON	
				(After-work)	
		Case 3	Trouble position/ cause	PCU MAIN PWB trouble	
			Remedy	(Check)	
				(Repair) Replace the PCU MAIN PWB. / Power Source-ON	
				(After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)	

Main code	Sub code	Title	Drum marking sensor gain adjustment error (MAGENTA)	
F2	56	Case 4	Trouble position/cause	OPC drum surface dirt, scratch / A different type of OPC drum is installed.
			Remedy	(Check) Check dirt and scratches on the OPC drum surface, and the type of OPC drum. (Repair) Clean the OPC drum surface. / Replace the OPC drum. / Power Source-ON (After-work) Refer to the requirement item 2 of maintenance servicing and consumable parts replacement.

Main code	Sub code	Title	Drum marking sensor gain adjustment error (YELLOW)	
F2	57	Phenomena	Display	Lamp Message
			Detail	In the image density correction, the drum surface area is read by the drum marking sensor and the sensor gain is adjusted so that the output becomes a fixed value. However, the output of the specified range cannot be obtained even though the sensor gain is changed.
			Section	Image process (OPC drum)
			Operation mode	Image density correction
			Note	Print is disabled in USA. For the other destinations, print is enabled. However, the print density must be forcibly decreased.
		Case 1	Trouble position/cause	Drum marking sensor trouble (dirt, output)
			Remedy	(Check) Drum marking sensor output check (SIM44-2) (Repair) Clean or replace the drum marking sensor. / Power Source-ON (After-work)

Main code	Sub code	Title	Drum marking sensor gain adjustment error (YELLOW)	
F2	57	Case 2	Trouble position/cause	Bad connection of the signal line between PCU MAIN PWB / Process control PWB / Drum marking sensor
			Remedy	(Check) Check connection of the signal line between PCU MAIN PWB / Process control PWB / Drum marking sensor. (Repair) Repair or replacement of the cable and the connector between the PCU MAIN PWB / Process control PWB / Drum marking sensor. / Power Source-ON (After-work)
		Case 3	Trouble position/cause	PCU MAIN PWB trouble
			Remedy	(Check) (Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)
		Case 4	Trouble position/cause	OPC drum surface dirt, scratch / A different type of OPC drum is installed.
			Remedy	(Check) Check dirt and scratches on the OPC drum surface, and the type of OPC drum. (Repair) Clean the OPC drum surface. / Replace the OPC drum. / Power Source-ON (After-work) Refer to the requirement item 2 of maintenance servicing and consumable parts replacement.

Main code	Sub code	Title	Process humidity sensor trouble	
F2	58	Phenomena	Display	Lamp Message
			Detail	Process humidity sensor output line open
			Section	Image process (Transfer)
			Operation mode	All modes
			Note	The error code is stored in the trouble memory (print enabled).

Main code	Sub code	Title	Process humidity sensor trouble	
F2	58	Case 1	Trouble position/ cause	Bad connection between the image density sensor and the PCU SUB PWB.
			Remedy	(Check) Check connection of the humidity sensor and the PCU SUB PWB. (Repair) Replace the humidity sensor. / Power Source-ON (After-work) Adjust ADJ M6
		Case 2	Trouble position/ cause	PCU SUB PWB trouble
			Remedy	(Check) Check the PCU SUB PWB humidity sensor circuit. (Repair) PCU SUB PWB replacement / Power Source-ON (After-work)

Main code	Sub code	Title	Temperature sensor trouble (Image process)	
F2	63	Phenomena	Display	Lamp Message
			Detail	Temperature sensor (image process) output line open
			Section	Image process
			Operation mode	All modes
			Note	The error code is stored in the trouble memory (print enabled).
			Case 1	Trouble position/ cause
			Remedy	(Check) Check connection of the temperature sensor, the process control PWB, and the PCU MAIN PWB. (Repair) Replace the temperature sensor (process control PWB). / Power Source-ON (After-work)
		Case 2	Trouble position/ cause	PCU MAIN PWB trouble
			Remedy	(Check) Check the output level of the PCU MAIN PWB humidity sensor. (Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)

Main code	Sub code	Title	Trouble of image density sensor for registration (Transfer belt surface reflection ratio abnormality)		
F2	78	Phenomena	Display	Lamp Message	
			Detail	Before starting registration, the transfer belt surface is scanned with the image density sensor to adjust the sensor gain so that the output becomes a fixed value. However, when the sensor gain is changed, the value is not within the specified range.	
			Section	Image process	
			Operation mode	All modes	
			Note		
			Case 1	Trouble position/ cause	Image density sensor trouble, disconnection of the harness between the PCU PWB and the image density sensor, dirt on the image density sensor.
				Remedy	(Check) / (Repair) When "Error" occurs in the gain adjustment of SIM 44-2: Check the sensor and the harness. (After-work)
			Case 2	Trouble position/ cause	Calibration plate solenoid operation trouble
				Remedy	(Check) / (Repair) Check the calibration plate solenoid operation. (After-work)
			Case 3	Trouble position/ cause	Insufficient cleaning of the transfer belt.
			Remedy	(Check) / (Repair) Check the transfer belt surface. (After-work)	

Main code	Sub code	Title	Half tone correction (1st patch) trouble (BLACK)		
F2	80	Phenomena	Display	Lamp Message	
			Detail	In half tone image density correction, the toner patch density is abnormally low or high.	
			Section	Image process	
			Operation mode	Image density correction	
			Note		
			Case 1	Trouble position/ cause	Image density sensor trouble
				Remedy	(Check) Check the image density sensor (dirt, output). (SIM44-2) (Repair) Clean or replace the image density sensor. / Power Source-ON (After-work) Adjust ADJ M6

Main code	Sub code	Title	Half tone correction (1st patch) trouble (BLACK)	
F2	80	Case 2	Trouble position/cause	Transfer belt trouble (dirt, scratch)
			Remedy	(Check) Toner dispersion from transfer belt cleaner, OPC drum unit, developing unit
				(Repair) Transfer belt cleaning, replacement / Transfer belt cleaner replacement / OPC drum unit, developing unit cleaning / Power Source-ON
		(After-work)		
		Case 3	Trouble position/cause	PCU SUB PWB trouble
			Remedy	(Check) Check the PCU SUB PWB humidity sensor circuit.
				(Repair) PCU SUB PWB replacement / Power Source-ON
		(After-work)		
		Case 4	Trouble position/cause	PCU MAIN PWB trouble
			Remedy	(Check)
				(Repair) Replace the PCU MAIN PWB. / Power Source-ON
		(After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)		
		Case 5	Trouble position/cause	Main charger output trouble
			Remedy	(Check) Main charger contact check / Main charger unit check / High voltage power PWB, high voltage interface PWB check / Main charger output voltage check
				(Repair) Main charger unit replacement / High voltage power PWB, high voltage interface PWB replacement / Main charger output voltage adjustment (SIM 8-2) / Power Source-ON
(After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).				

Main code	Sub code	Title	Half tone correction (1st patch) trouble (BLACK)	
F2	80	Case 6	Trouble position/cause	Developing bias output trouble
			Remedy	(Check) Developing bias contact check / High voltage PWB check / Developing bias voltage check
				(Repair) High voltage power PWB replacement / Developing bias output voltage adjustment (SIM8-1) / Power Source-ON
		(After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).		
		Case 7	Trouble position/cause	Transfer trouble
			Remedy	(Check) Transfer roller check / High voltage power PWB check / Transfer voltage check
				(Repair) Transfer roller replacement / High voltage power PWB replacement / Transfer output voltage adjustment (SIM 8-6) / Power Source-ON
		(After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).		
		Case 8	Trouble position/cause	Scanner (writing) unit trouble (Scanner (writing) motor trouble / Laser beam sensor trouble / Internal optical system dirt)
			Remedy	(Check) Check the operation of the scanner (writing) unit. (SIM 61-1)
				(Repair) Replace the scanner (writing) unit. / Power Source-ON
		(After-work) Adjust ADJM7/ADJM9/ADJM10		

Main code	Sub code	Title	Half tone correction (1st patch) trouble (CYAN)	
			Display	Lamp
F2	81	Phenomena		Message
			Detail	In half tone image density correction, the toner patch density is abnormally low or high.
			Section	Image process
			Operation mode	Image density correction
			Note	
			Case 1	Trouble position/ cause
			Remedy	(Check) Check the image density sensor (dirt, output). (SIM44-2) (Repair) Clean or replace the image density sensor. / Power Source-ON (After-work) Adjust ADJ M6
		Case 2	Trouble position/ cause	Transfer belt trouble (dirt, scratch)
			Remedy	(Check) Toner dispersion from transfer belt cleaner, OPC drum unit, developing unit (Repair) Transfer belt cleaning, replacement / Transfer belt cleaner replacement / OPC drum unit, developing unit cleaning / Power Source-ON (After-work)
		Case 3	Trouble position/ cause	PCU SUB PWB trouble
			Remedy	(Check) Check the PCU SUB PWB humidity sensor circuit. (Repair) PCU SUB PWB replacement / Power Source-ON (After-work)
		Case 4	Trouble position/ cause	PCU MAIN PWB trouble
			Remedy	(Check) (Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)

Main code	Sub code	Title	Half tone correction (1st patch) trouble (CYAN)		
			Trouble position/ cause	Main charger output trouble	
F2	81	Case 5			
			Remedy	(Check) Main charger contact check / Main charger unit check / High voltage power PWB, high voltage interface PWB check / Main charger output voltage check (Repair) Main charger unit replacement / High voltage power PWB, high voltage interface PWB replacement / Main charger output voltage adjustment (SIM 8-2) / Power Source-ON (After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).	
			Case 6	Trouble position/ cause	Developing bias output trouble
				Remedy	(Check) Developing bias contact check / High voltage PWB check / Developing bias voltage check (Repair) High voltage power PWB replacement / Developing bias output voltage adjustment (SIM8-1) / Power Source-ON (After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).
			Case 7	Trouble position/ cause	Transfer trouble
				Remedy	(Check) Transfer roller check / High voltage power PWB check / Transfer voltage check (Repair) Transfer roller replacement / High voltage power PWB replacement / Transfer output voltage adjustment (SIM 8-6) / Power Source-ON (After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).

Main code	Sub code	Title	Half tone correction (1st patch) trouble (CYAN)	
F2	81	Case 8	Trouble position/ cause	Scanner (writing) unit trouble (Scanner (writing) motor trouble / Laser beam sensor trouble / Internal optical system dirt)
			Remedy	(Check) Check the operation of the scanner (writing) unit. (SIM 61-1) (Repair) Replace the scanner (writing) unit. / Power Source-ON (After-work) Adjust ADJM7/ADJM9/ADJM10

Main code	Sub code	Title	Half tone correction (1st patch) trouble (MAGENTA)	
F2	82	Phenomena	Display	Lamp Message
			Detail	In half tone image density correction, the toner patch density is abnormally low or high.
			Section	Image process
			Operation mode	Image density correction
			Note	
		Case 1	Trouble position/ cause	Image density sensor trouble
			Remedy	(Check) Check the image density sensor (dirt, output). (SIM44-2) (Repair) Clean or replace the image density sensor. / Power Source-ON (After-work) Adjust ADJ M6
		Case 2	Trouble position/ cause	Transfer belt trouble (dirt, scratch)
			Remedy	(Check) Toner dispersion from transfer belt cleaner, OPC drum unit, developing unit (Repair) Transfer belt cleaning, replacement / Transfer belt cleaner replacement / OPC drum unit, developing unit cleaning / Power Source-ON (After-work)
		Case 3	Trouble position/ cause	PCU SUB PWB trouble
			Remedy	(Check) Check the PCU SUB PWB humidity sensor circuit. (Repair) PCU SUB PWB replacement / Power Source-ON (After-work)

Main code	Sub code	Title	Half tone correction (1st patch) trouble (MAGENTA)	
F2	82	Case 4	Trouble position/ cause	PCU MAIN PWB trouble
			Remedy	(Check) (Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)
		Case 5	Trouble position/ cause	Main charger output trouble
			Remedy	(Check) Main charger contact check / Main charger unit check / High voltage power PWB, high voltage interface PWB check / Main charger output voltage check (Repair) Main charger unit replacement / High voltage power PWB, high voltage interface PWB replacement / Main charger output voltage adjustment (SIM 8-2) / Power Source-ON (After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).
		Case 6	Trouble position/ cause	Developing bias output trouble
			Remedy	(Check) Developing bias contact check / High voltage PWB check / Developing bias voltage check (Repair) High voltage power PWB replacement / Developing bias output voltage adjustment (SIM8-1) / Power Source-ON (After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).

Main code	Sub code	Title	Half tone correction (1st patch) trouble (MAGENTA)	
F2	82	Case 7	Trouble position/ cause	Transfer trouble
			Remedy	(Check) Transfer roller check / High voltage power PWB check / Transfer voltage check (Repair) Transfer roller replacement / High voltage power PWB replacement / Transfer output voltage adjustment (SIM 8-6) / Power Source-ON (After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).
		Case 8	Trouble position/ cause	Scanner (writing) unit trouble (Scanner (writing) motor trouble / Laser beam sensor trouble / Internal optical system dirt)
			Remedy	(Check) Check the operation of the scanner (writing) unit. (SIM 61-1) (Repair) Replace the scanner (writing) unit. / Power Source-ON (After-work) Adjust ADJM7/ADJM9/ADJM10

Main code	Sub code	Title	Half tone correction (1st patch) trouble (YELLOW)	
F2	83	Phenomena	Display	Lamp Message
			Detail	In half tone image density correction, the toner patch density is abnormally low or high.
			Section	Image process
			Operation mode	Image density correction
			Note	
		Case 1	Trouble position/ cause	Image density sensor trouble
			Remedy	(Check) Check the image density sensor (dirt, output). (SIM44-2) (Repair) Clean or replace the image density sensor. / Power Source-ON (After-work) Adjust ADJ M6

Main code	Sub code	Title	Half tone correction (1st patch) trouble (YELLOW)	
F2	83	Case 2	Trouble position/ cause	Transfer belt trouble (dirt, scratch)
			Remedy	(Check) Toner dispersion from transfer belt cleaner, OPC drum unit, developing unit (Repair) Transfer belt cleaning, replacement / Transfer belt cleaner replacement / OPC drum unit, developing unit cleaning / Power Source-ON (After-work)
		Case 3	Trouble position/ cause	PCU SUB PWB trouble
			Remedy	(Check) Check the PCU SUB PWB humidity sensor circuit. (Repair) PCU SUB PWB replacement / Power Source-ON (After-work)
		Case 4	Trouble position/ cause	PCU MAIN PWB trouble
			Remedy	(Check) (Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB.)
		Case 5	Trouble position/ cause	Main charger output trouble
			Remedy	(Check) Main charger contact check / Main charger unit check / High voltage power PWB, high voltage interface PWB check / Main charger output voltage check (Repair) Main charger unit replacement / High voltage power PWB, high voltage interface PWB replacement / Main charger output voltage adjustment (SIM 8-2) / Power Source-ON (After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).

Main code	Sub code	Title	Half tone correction (1st patch) trouble (YELLOW)	
F2	83	Case 6	Trouble position/ cause	Developing bias output trouble
			Remedy	(Check) Developing bias contact check / High voltage PWB check / Developing bias voltage check
				(Repair) High voltage power PWB replacement / Developing bias output voltage adjustment (SIM8-1) / Power Source-ON
				(After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).
		Case 7	Trouble position/ cause	Transfer trouble
			Remedy	(Check) Transfer roller check / High voltage power PWB check / Transfer voltage check
				(Repair) Transfer roller replacement / High voltage power PWB replacement / Transfer output voltage adjustment (SIM 8-6) / Power Source-ON
				(After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).
		Case 8	Trouble position/ cause	Scanner (writing) unit trouble (Scanner (writing) motor trouble / Laser beam sensor trouble / Internal optical system dirt)
			Remedy	(Check) Check the operation of the scanner (writing) unit. (SIM 61-1)
				(Repair) Replace the scanner (writing) unit. / Power Source-ON

Main code	Sub code	Title	Half tone correction (2nd patch) trouble (BLACK)		
F2	84	Phenomena	Display	Lamp Message	
			Detail	In the half toner image density correction, the toner patch densities at the boundary sections of the low density area, the medium density area, and the high density area are abnormally different from each other.	
			Section	Image process	
			Operation mode	Image density correction	
			Note		
			Case 1	Trouble position/ cause	Image density sensor trouble
				Remedy	(Check) Check the image density sensor (dirt, output). (SIM44-2)
		(Repair) Clean or replace the image density sensor. / Power Source-ON			
		(After-work) Adjust ADJ M6			
		Case 2	Trouble position/ cause	Transfer belt trouble (dirt, scratch)	
			Remedy	(Check) Toner dispersion from transfer belt cleaner, OPC drum unit, developing unit	
				(Repair) Transfer belt cleaning, replacement / Transfer belt cleaner replacement / OPC drum unit, developing unit cleaning / Power Source-ON	
		(After-work)			
		Case 3	Trouble position/ cause	PCU SUB PWB trouble	
			Remedy	(Check) Check the PCU SUB PWB humidity sensor circuit.	
				(Repair) PCU SUB PWB replacement / Power Source-ON	
		(After-work)			
		Case 4	Trouble position/ cause	PCU MAIN PWB trouble	
			Remedy	(Check)	
				(Repair) Replace the PCU MAIN PWB. / Power Source-ON	
(After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)					

Main code	Sub code	Title	Half tone correction (2nd patch) trouble (BLACK)	
F2	84	Case 5	Trouble position/ cause	Main charger output trouble
			Remedy	(Check) Main charger contact check / Main charger unit check / High voltage power PWB, high voltage interface PWB check / Main charger output voltage check (Repair) Main charger unit replacement / High voltage power PWB, high voltage interface PWB replacement / Main charger output voltage adjustment (SIM 8-2) / Power Source-ON (After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).
		Case 6	Trouble position/ cause	Developing bias output trouble
			Remedy	(Check) Developing bias contact check / High voltage PWB check / Developing bias voltage check (Repair) High voltage power PWB replacement / Developing bias output voltage adjustment (SIM8-1) / Power Source-ON (After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).
		Case 7	Trouble position/ cause	Transfer trouble
			Remedy	(Check) Transfer roller check / High voltage power PWB check / Transfer voltage check (Repair) Transfer roller replacement / High voltage power PWB replacement / Transfer output voltage adjustment (SIM 8-6) / Power Source-ON (After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).

Main code	Sub code	Title	Half tone correction (2nd patch) trouble (BLACK)	
F2	84	Case 8	Trouble position/ cause	Scanner (writing) unit trouble (Scanner (writing) motor trouble / Laser beam sensor trouble / Internal optical system dirt)
			Remedy	(Check) Check the operation of the scanner (writing) unit. (SIM 61-1) (Repair) Replace the scanner (writing) unit. / Power Source-ON (After-work) Adjust ADJM7/ADJM9/ADJM10

Main code	Sub code	Title	Half tone correction (2nd) patch trouble (CYAN)	
F2	85	Phenomena	Display	Lamp Message
			Detail	In the half toner image density correction, the toner patch densities at the boundary sections of the low density area, the medium density area, and the high density area are abnormally different from each other.
			Section	Image process
			Operation mode	Image density correction
			Note	
		Case 1	Trouble position/ cause	Image density sensor trouble
			Remedy	(Check) Check the image density sensor (dirt, output). (SIM44-2) (Repair) Clean or replace the image density sensor. / Power Source-ON (After-work) Adjust ADJ M6
		Case 2	Trouble position/ cause	Transfer belt trouble (dirt, scratch)
			Remedy	(Check) Toner dispersion from transfer belt cleaner, OPC drum unit, developing unit (Repair) Transfer belt cleaning, replacement / Transfer belt cleaner replacement / OPC drum unit, developing unit cleaning / Power Source-ON (After-work)
		Case 3	Trouble position/ cause	PCU SUB PWB trouble
			Remedy	(Check) Check the PCU SUB PWB humidity sensor circuit. (Repair) PCU SUB PWB replacement / Power Source-ON (After-work)

Main code	Sub code	Title	Half tone correction (2nd) patch trouble (CYAN)	
F2	85	Case 4	Trouble position/cause	PCU MAIN PWB trouble
			Remedy	(Check) (Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)
			Trouble position/cause	Main charger output trouble
		Case 5	Remedy	(Check) Main charger contact check / Main charger unit check / High voltage power PWB, high voltage interface PWB check / Main charger output voltage check (Repair) Main charger unit replacement / High voltage power PWB, high voltage interface PWB replacement / Main charger output voltage adjustment (SIM 8-2) / Power Source-ON (After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).
			Trouble position/cause	Developing bias output trouble
			Remedy	(Check) Developing bias contact check / High voltage PWB check / Developing bias voltage check (Repair) High voltage power PWB replacement / Developing bias output voltage adjustment (SIM8-1) / Power Source-ON (After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).
		Case 6	Trouble position/cause	Developing bias output trouble
			Remedy	(Check) Developing bias contact check / High voltage PWB check / Developing bias voltage check (Repair) High voltage power PWB replacement / Developing bias output voltage adjustment (SIM8-1) / Power Source-ON (After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).
			Trouble position/cause	Developing bias output trouble

Main code	Sub code	Title	Half tone correction (2nd) patch trouble (CYAN)	
F2	85	Case 7	Trouble position/cause	Transfer trouble
			Remedy	(Check) Transfer roller check / High voltage power PWB check / Transfer voltage check (Repair) Transfer roller replacement / High voltage power PWB replacement / Transfer output voltage adjustment (SIM 8-6) / Power Source-ON (After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).
			Trouble position/cause	Scanner (writing) unit trouble (Scanner (writing) motor trouble / Laser beam sensor trouble / Internal optical system dirt)
			Remedy	(Check) Check the operation of the scanner (writing) unit. (SIM 61-1) (Repair) Replace the scanner (writing) unit. / Power Source-ON (After-work) Adjust ADJM7/ADJM9/ADJM10
			Trouble position/cause	Scanner (writing) unit trouble (Scanner (writing) motor trouble / Laser beam sensor trouble / Internal optical system dirt)
			Remedy	(Check) Check the operation of the scanner (writing) unit. (SIM 61-1) (Repair) Replace the scanner (writing) unit. / Power Source-ON (After-work) Adjust ADJM7/ADJM9/ADJM10
		Case 8	Trouble position/cause	Scanner (writing) unit trouble (Scanner (writing) motor trouble / Laser beam sensor trouble / Internal optical system dirt)
			Remedy	(Check) Check the operation of the scanner (writing) unit. (SIM 61-1) (Repair) Replace the scanner (writing) unit. / Power Source-ON (After-work) Adjust ADJM7/ADJM9/ADJM10
			Trouble position/cause	Scanner (writing) unit trouble (Scanner (writing) motor trouble / Laser beam sensor trouble / Internal optical system dirt)
			Remedy	(Check) Check the operation of the scanner (writing) unit. (SIM 61-1) (Repair) Replace the scanner (writing) unit. / Power Source-ON (After-work) Adjust ADJM7/ADJM9/ADJM10
			Trouble position/cause	Scanner (writing) unit trouble (Scanner (writing) motor trouble / Laser beam sensor trouble / Internal optical system dirt)
			Remedy	(Check) Check the operation of the scanner (writing) unit. (SIM 61-1) (Repair) Replace the scanner (writing) unit. / Power Source-ON (After-work) Adjust ADJM7/ADJM9/ADJM10

Main code	Sub code	Title	Half tone correction (2nd) patch trouble (MAGENTA)		
F2	86	Phenomena	Display	Lamp Message	
			Detail	In the half toner image density correction, the toner patch densities at the boundary sections of the low density area, the medium density area, and the high density area are abnormally different from each other.	
			Section	Image process	
			Operation mode	Image density correction	
			Note		
			Case 1	Trouble position/cause	Image density sensor trouble
				Remedy	(Check) Check the image density sensor (dirt, output). (SIM44-2) (Repair) Clean or replace the image density sensor. / Power Source-ON (After-work) Adjust ADJ M6
			Case 2	Trouble position/cause	Image density sensor trouble
				Remedy	(Check) Check the image density sensor (dirt, output). (SIM44-2) (Repair) Clean or replace the image density sensor. / Power Source-ON (After-work) Adjust ADJ M6

Main code	Sub code	Title	Half tone correction (2nd) patch trouble (MAGENTA)	
F2	86	Case 2	Trouble position/cause	Transfer belt trouble (dirt, scratch)
			Remedy	(Check) Toner dispersion from transfer belt cleaner, OPC drum unit, developing unit
				(Repair) Transfer belt cleaning, replacement / Transfer belt cleaner replacement / OPC drum unit, developing unit cleaning / Power Source-ON
		Case 3	Trouble position/cause	PCU SUB PWB trouble
			Remedy	(Check) Check the PCU SUB PWB humidity sensor circuit.
				(Repair) PCU SUB PWB replacement / Power Source-ON
		(After-work)		
		Case 4	Trouble position/cause	PCU MAIN PWB trouble
			Remedy	(Check)
				(Repair) Replace the PCU MAIN PWB. / Power Source-ON
		(After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)		
		Case 5	Trouble position/cause	Main charger output trouble
			Remedy	(Check) Main charger contact check / Main charger unit check / High voltage power PWB, high voltage interface PWB check / Main charger output voltage check
				(Repair) Main charger unit replacement / High voltage power PWB, high voltage interface PWB replacement / Main charger output voltage adjustment (SIM 8-2) / Power Source-ON
		(After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).		

Main code	Sub code	Title	Half tone correction (2nd) patch trouble (MAGENTA)	
F2	86	Case 6	Trouble position/cause	Developing bias output trouble
			Remedy	(Check) Developing bias contact check / High voltage PWB check / Developing bias voltage check
				(Repair) High voltage power PWB replacement / Developing bias output voltage adjustment (SIM8-1) / Power Source-ON
		(After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).		
		Case 7	Trouble position/cause	Transfer trouble
			Remedy	(Check) Transfer roller check / High voltage power PWB check / Transfer voltage check
				(Repair) Transfer roller replacement / High voltage power PWB replacement / Transfer output voltage adjustment (SIM 8-6) / Power Source-ON
		(After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).		
		Case 8	Trouble position/cause	Scanner (writing) unit trouble (Scanner (writing) motor trouble / Laser beam sensor trouble / Internal optical system dirt)
			Remedy	(Check) Check the operation of the scanner (writing) unit. (SIM 61-1)
				(Repair) Replace the scanner (writing) unit. / Power Source-ON
		(After-work) Adjust ADJM7/ADJM9/ADJM10		

Main code	Sub code	Title	Half tone correction (2nd) patch trouble (YELLOW)	
F2	87	Phenomena	Display	Lamp Message
			Detail	In the half toner image density correction, the toner patch densities at the boundary sections of the low density area, the medium density area, and the high density area are abnormally different from each other.
			Section	Image process
			Operation mode	Image density correction
			Note	

Main code	Sub code	Title	Half tone correction (2nd) patch trouble (YELLOW)	
F2	87	Case 1	Trouble position/ cause	Image density sensor trouble
			Remedy	(Check) Check the image density sensor (dirt, output). (SIM44-2)
				(Repair) Clean or replace the image density sensor. / Power Source-ON
		(After-work) Adjust ADJ M6		
		Case 2	Trouble position/ cause	Transfer belt trouble (dirt, scratch)
			Remedy	(Check) Toner dispersion from transfer belt cleaner, OPC drum unit, developing unit
				(Repair) Transfer belt cleaning, replacement / Transfer belt cleaner replacement / OPC drum unit, developing unit cleaning / Power Source-ON
		(After-work)		
		Case 3	Trouble position/ cause	PCU SUB PWB trouble
			Remedy	(Check) Check the PCU SUB PWB humidity sensor circuit.
				(Repair) PCU SUB PWB replacement / Power Source-ON
				(After-work)
		(Check)		
		Case 4	Trouble position/ cause	PCU MAIN PWB trouble
			Remedy	(Repair) Replace the PCU MAIN PWB. / Power Source-ON
				(After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)

Main code	Sub code	Title	Half tone correction (2nd) patch trouble (YELLOW)			
F2	87	Case 5	Trouble position/ cause	Main charger output trouble		
			Remedy	(Check) Main charger contact check / Main charger unit check / High voltage power PWB, high voltage interface PWB check / Main charger output voltage check		
				(Repair) Main charger unit replacement / High voltage power PWB, high voltage interface PWB replacement / Main charger output voltage adjustment (SIM 8-2) / Power Source-ON		
				(After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).		
				Case 6	Trouble position/ cause	Developing bias output trouble
					Remedy	(Check) Developing bias contact check / High voltage PWB check / Developing bias voltage check
		(Repair) High voltage power PWB replacement / Developing bias output voltage adjustment (SIM8-1) / Power Source-ON				
		(After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).				
		Case 7	Trouble position/ cause	Transfer trouble		
			Remedy	(Check) Transfer roller check / High voltage power PWB check / Transfer voltage check		
				(Repair) Transfer roller replacement / High voltage power PWB replacement / Transfer output voltage adjustment (SIM 8-6) / Power Source-ON		
		(After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).				

Main code	Sub code	Title	Half tone correction (2nd) patch trouble (YELLOW)	
F2	87	Case 8	Trouble position/ cause	Scanner (writing) unit trouble (Scanner (writing) motor trouble / Laser beam sensor trouble / Internal optical system dirt)
			Remedy	(Check) Check the operation of the scanner (writing) unit. (SIM 61-1) (Repair) Replace the scanner (writing) unit. / Power Source-ON (After-work) Adjust ADJM7/ADJM9/ADJM10

Main code	Sub code	Title	Half tone correction trouble	
F2	90	Phenomena	Display	Lamp Message
			Detail	The max. value of the difference (between colors) between the half tone correction value and the previous correction value exceeds the specified level.
			Section	Image process
			Operation mode	Image density correction
			Note	
		Case 1	Trouble position/ cause	Image density sensor trouble
			Remedy	(Check) Check the image density sensor (dirt, output) (SIM44-2) / Check the image density sensor calibration plate. / Check the operation of the image density sensor calibration plate switching. (Repair) Clean or replace the image density sensor. / Clean or replace the image density sensor calibration plate. / Replace the image density sensor calibration plate switch solenoid. / Power Source-ON (After-work) Adjust ADJ M6
		Case 2	Trouble position/ cause	Transfer belt trouble (dirt, scratch)
			Remedy	(Check) Toner dispersion from the transfer belt, the OPC drum unit, and the developing unit (Repair) Clean or replace the transfer belt. / Replace the transfer belt cleaner. / Clean the OPC drum and the developing unit. / Power Source-ON (After-work)

Main code	Sub code	Title	Half tone correction trouble	
F2	90	Case 3	Trouble position/ cause	PCU SUB PWB trouble
			Remedy	(Check) Check the PCU SUB PWB image density sensor circuit. (Repair) PCU SUB PWB replacement / Power Source-ON (After-work)
		Case 4	Trouble position/ cause	PCU MAIN PWB trouble
			Remedy	(Check) (Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)
		Case 5	Trouble position/ cause	Main charger output trouble
			Remedy	(Check) Main charger contact check / Main charger unit check / High voltage power PWB, high voltage interface PWB check / Main charger output voltage check (Repair) Main charger unit replacement / High voltage power PWB, high voltage interface PWB replacement / Main charger output voltage adjustment (SIM 8-2) / Power Source-ON (After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).
		Case 6	Trouble position/ cause	Developing bias output trouble
			Remedy	(Check) Developing bias contact check / High voltage PWB check / Developing bias voltage check (Repair) High voltage power PWB replacement / Developing bias output voltage adjustment (SIM8-1) / Power Source-ON (After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).

Main code	Sub code	Title	Half tone correction trouble	
F2	90	Case 7	Trouble position/cause	Transfer trouble
			Remedy	(Check) Transfer roller check / High voltage power PWB check / Transfer voltage check
				(Repair) Transfer roller replacement / High voltage power PWB replacement / Transfer output voltage adjustment (SIM 8-6) / Power Source-ON
				(After-work) Execute the image density correction (SIM 44-6). / Execute the half tone density correction (SIM 44-26).
		Case 8	Trouble position/cause	Scanner (writing) unit trouble (Scanner (writing) motor trouble / Laser beam sensor trouble / Internal optical system dirt)
			Remedy	(Check) Check the operation of the scanner (writing) unit. (SIM 61-1)
				(Repair) Replace the scanner (writing) unit. / Power Source-ON
				(After-work) Adjust ADJM7/ADJM9/ADJM10

Main code	Sub code	Title	Lift up trouble (Paper 1)		
F3	12	Phenomena	Display	Lamp Message	
			Detail	Lifting is not completed (LUD1) is not turned ON within the specified time after turning ON the lift motor.	
			Section	Paper tray 1	
			Operation mode	Paper tray lift up	
			Note		
			Case 1	Trouble position/cause	LUD1 detector trouble
				Remedy	(Check) Check operation of the LUD1 detector (SIM 30-2).
		(Repair) Replace the LUD1 detector. / Power Source-ON (After-work)			
		Case 2	Trouble position/cause	Lift mechanism (motor, etc.) trouble	
			Remedy	(Check) Check operations of the lift mechanism section (motor, etc.).	
				(Repair) Replace the e lift unit. / Power Source-ON (After-work)	

Main code	Sub code	Title	Lift up trouble (Paper 1)	
F3	12	Case 3	Trouble position/cause	Bad connection between the PCU MAIN PWB and the lift unit.
			Remedy	(Check) Check connection between the PCU MAIN PWB and the lift unit.
				(Repair) Repair or replace the connector and cables of the PCU MAIN PWB and the lift unit. / Power Source-ON (After-work)
		Case 4	Trouble position/cause	PCU MAIN PWB trouble
			Remedy	(Check)
				(Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)

Main code	Sub code	Title	Lift up trouble (Paper 2)		
F3	22	Phenomena	Display	Lamp Message	
			Detail	Lifting is not completed (LUD2) is not turned ON within the specified time after turning ON the lift motor.	
			Section	Paper tray 2	
			Operation mode	Paper tray lift up	
			Note		
			Case 1	Trouble position/cause	LUD2 detector trouble
				Remedy	(Check) Check operation of the LUD2 detector (SIM 30-2).
		(Repair) Replace the LUD2 detector. / Power Source-ON (After-work)			
		Case 2	Trouble position/cause	Lift mechanism (motor, etc.) trouble	
			Remedy	(Check) Check operations of the lift mechanism section (motor, etc.).	
				(Repair) replace the e lift unit. / Power Source-ON (After-work)	

Main code	Sub code	Title	Lift up trouble (Paper 2)	
F3	22	Case 3	Trouble position/cause	Bad connection between the PCU MAIN PWB and the lift unit.
			Remedy	(Check) Check connection between the PCU MAIN PWB and the lift unit.
				(Repair) Repair or replace the connector and cables of the PCU MAIN PWB and the lift unit. / Power Source-ON
				(After-work)
		Case 4	Trouble position/cause	PCU MAIN PWB trouble
			Remedy	(Check)
				(Repair) Replace the PCU MAIN PWB. / Power Source-ON
				(After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)

Main code	Sub code	Title	Lift up trouble (Paper 3)	
F3	32	Case 3	Trouble position/cause	Bad connection between the PCU MAIN PWB and the lift unit.
			Remedy	(Check) Check connection between the PCU MAIN PWB and the lift unit.
				(Repair) Repair or replace the connector and cables of the PCU MAIN PWB and the lift unit. / Power Source-ON
				(After-work)
		Case 4	Trouble position/cause	PCU MAIN PWB trouble
			Remedy	(Check)
				(Repair) Replace the PCU MAIN PWB. / Power Source-ON
				(After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)

Main code	Sub code	Title	Lift up trouble (Paper 3)	
F3	32	Phenomena	Display	Lamp
				Message
			Detail	Lifting is not completed (LUD3) is not turned ON within the specified time after turning ON the lift motor.
			Section	Paper tray 3
			Operation mode	Paper tray lift up
			Note	
		Case 1	Trouble position/cause	LUD3 detector trouble
			Remedy	(Check) Check operation of the LUD3 detector (SIM 30-2).
				(Repair) Replace the LUD3 detector. / Power Source-ON
				(After-work)
		Case 2	Trouble position/cause	Lift mechanism (motor, etc.) trouble
			Remedy	(Check) Check operations of the lift mechanism section (motor, etc.).
				(Repair) replace the e lift unit. / Power Source-ON
				(After-work)

Main code	Sub code	Title	Lift up trouble (Paper 4)	
F3	42	Phenomena	Display	Lamp
				Message
			Detail	Lifting is not completed (LUD4) is not turned ON within the specified time after turning ON the lift motor.
			Section	Paper tray 4
			Operation mode	Paper tray lift up
			Note	
		Case 1	Trouble position/cause	LUD4 detector trouble
			Remedy	(Check) Check operation of the LUD4 detector (SIM 30-2).
				(Repair) Replace the LUD4 detector. / Power Source-ON
				(After-work)
		Case 2	Trouble position/cause	Lift mechanism (motor, etc.) trouble
			Remedy	(Check) Check operations of the lift mechanism section (motor, etc.).
				(Repair) replace the e lift unit. / Power Source-ON
				(After-work)

Main code	Sub code	Title	Lift up trouble (Paper 4)	
F3	42	Case 3	Trouble position/cause	Bad connection between the PCU MAIN PWB and the lift unit.
			Remedy	(Check) Check connection between the PCU MAIN PWB and the lift unit.
				(Repair) Repair or replace the connector and cables of the PCU MAIN PWB and the lift unit. / Power Source-ON
				(After-work)
		Case 4	Trouble position/cause	PCU MAIN PWB trouble
			Remedy	(Check)
(Repair) Replace the PCU MAIN PWB. / Power Source-ON				
(After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)				

Main code	Sub code	Title	ICU PWB - printer controller communication trouble (ICU detection)	
F9	0	Phenomena	Display	Lamp
				Message
			Detail	Communication (protocol, data) error
			Section	ICU IMAGE PWB / PRINTER CONTROLLER
			Operation mode	Warm-up / Printing
			Note	
			Case 1	Trouble position/cause
		Remedy		(Check) Check the printer I/F PWB.
				(Repair) Replace the printer I/F PWB. / Power Source-ON
		(After-work)		
		Case 2	Trouble position/cause	Bad connection of the signal line between the printer controller and the ICU image PWB.
			Remedy	(Check) Check the signal line between the printer controller and the ICU image PWB.
				(Repair) Repair or replace the cable and the connector between the printer controller and the ICU image PWB. / Power Source-ON
				(After-work)

Main code	Sub code	Title	ICU PWB - printer controller communication trouble (ICU detection)	
F9	0	Case 3	Trouble position/cause	ICU IMAGE PWB trouble
			Remedy	(Check)
				(Repair) ICU IMAGE PWB replacement / Power Source-ON
				(After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)
		Case 4	Trouble position/cause	Printer controller trouble
			Remedy	(Check) Check the printer controller.
				(Repair) Repair or replace the printer controller. / Power Source-ON
				(After-work)

Main code	Sub code	Title	Fusing main temperature sensor (upper) (Thermistor) open / Fusing unit not-installed (THS1)		
H2	0	Phenomena	Display	Lamp	
				Message	
			Detail	Fusing main temperature sensor (upper) (Thermistor) output line open (A voltage of 4.6V or above is detected.) / The fusing unit is not installed.	
				Section	Fusing
				Operation mode	All modes
			Note		
			Case 1	Trouble position/cause	Fusing main temperature sensor (upper) (Thermistor) output line open trouble
				Remedy	(Check) Bad connection between the fusing main temperature sensor (upper) (Thermistor) and the PCU SUB PWB
					(Repair) Check connection of the fusing main temperature sensor (upper) (Thermistor) and the PCU SUB PWB. / Power Source-ON
		(After-work) Repair or replace the harness and connector between the fusing main temperature sensor (upper) (Thermistor) and the PCU SUB PWB.			

Main code	Sub code	Title	Fusing main temperature sensor (upper) (Thermistor) open / Fusing unit not-installed (THS1)	
H2	0	Case 2	Trouble position/ cause	PCU SUB PWB trouble
			Remedy	(Check) Check the PCU SUB PWB fusing temperature sensor circuit. (Repair) PCU SUB PWB replacement / Power Source-ON (After-work)

Main code	Sub code	Title	Fusing main temperature sensor (lower) (Thermistor) open / Fusing unit not-installed (THS2)	
H2	1	Phenomena	Display	Lamp Message
			Detail	Fusing main temperature sensor (lower) (Thermistor) output line open (A voltage of 4.6V or above is detected.) / The fusing unit is not installed.
			Section	Fusing
			Operation mode	All modes
			Note	
		Case 1	Trouble position/ cause	Fusing main temperature sensor (lower) (Thermistor) output line open trouble
			Remedy	(Check) Bad connection between the fusing main temperature sensor (lower) (Thermistor) and the PCU SUB PWB (Repair) Check connection of the fusing main temperature sensor (lower) (Thermistor) and the PCU SUB PWB. / Power Source-ON (After-work) Repair or replace the harness and connector between the fusing main temperature sensor (lower) (Thermistor) and the PCU SUB PWB.
		Case 2	Trouble position/ cause	PCU SUB PWB trouble
			Remedy	(Check) Check the PCU SUB PWB fusing temperature sensor circuit. (Repair) PCU SUB PWB replacement / Power Source-ON (After-work)

Main code	Sub code	Title	Fusing sub temperature sensor (upper) (Thermistor) open / Fusing unit not-installed (THS3)	
H2	2	Phenomena	Display	Lamp Message
			Detail	Fusing sub temperature sensor (upper) (Thermistor) output line open (A voltage of 4.6V or above is detected.) / The fusing unit is not installed.
			Section	Fusing
			Operation mode	All modes
			Note	
		Case 1	Trouble position/ cause	Fusing sub temperature sensor (upper) (Thermistor) output line open trouble
			Remedy	(Check) Bad connection between the fusing sub temperature sensor (upper) (Thermistor) and the PCU SUB PWB (Repair) Check connection of the fusing sub temperature sensor (upper) (Thermistor) and the PCU SUB PWB. / Power Source-ON (After-work) Repair or replace the harness and connector between the fusing sub temperature sensor (upper) (Thermistor) and the PCU SUB PWB.
		Case 2	Trouble position/ cause	PCU SUB PWB trouble
			Remedy	(Check) Check the PCU SUB PWB fusing temperature sensor circuit. (Repair) PCU SUB PWB replacement / Power Source-ON (After-work)

Main code	Sub code	Title	Fusing sub temperature sensor (lower) (Thermistor) open / Fusing unit not-installed (THS4)	
H2	3	Phenomena	Display	Lamp Message
			Detail	Fusing main temperature sensor (lower) (Thermistor) output line open (A voltage of 4.6V or above is detected.) / The fusing unit is not installed.
			Section	Fusing
			Operation mode	All modes
			Note	

Main code	Sub code	Title	Fusing sub temperature sensor (lower) (Thermistor) open / Fusing unit not-installed (THS4)	
H2	3	Case 1	Trouble position/ cause	Fusing main temperature sensor (lower) (Thermistor) output line open trouble
			Remedy	(Check) Bad connection between the fusing main temperature sensor (lower) (Thermistor) and the PCU SUB PWB (Repair) Check connection of the fusing main temperature sensor (lower) (Thermistor) and the PCU SUB PWB. / Power Source-ON (After-work) Repair or replace the harness and connector between the fusing main temperature sensor (lower) (Thermistor) and the PCU SUB PWB.
		Case 2	Trouble position/ cause	PCU SUB PWB trouble
			Remedy	(Check) Check the PCU SUB PWB fusing temperature sensor circuit. (Repair) PCU SUB PWB replacement / Power Source-ON (After-work)

Main code	Sub code	Title	Fusing section high temperature trouble (THS1)	
H3	0	Phenomena	Display	Lamp Message
			Detail	The fusing temperature rises above 220°C. (The temperature sensor (Thermistor) voltage of 0.85V or less is detected.)
			Section	Fusing
			Operation mode	All modes
			Note	
		Case 1	Trouble position/ cause	Temperature sensor (Thermistor) trouble
			Remedy	(Check) Check for dirt on the temperature sensor (Thermistor). (Repair) Clean or replace the temperature sensor (Thermistor). / SIM 14 (After-work)
		Case 2	Trouble position/ cause	PCU SUB PWB trouble
			Remedy	(Check) Check the PCU SUB PWB fusing temperature sensor circuit. (Repair) PCU SUB PWB replacement / SIM 14 (After-work)

Main code	Sub code	Title	Fusing section high temperature trouble (THS1)	
H3	0	Case 3	Trouble position/ cause	Heater lamp control PWB (AC SUB PWB) trouble
			Remedy	(Check) Check the operation of the heater lamp. (SIM 5-2) (Repair) Replace the heater lamp control PWB (AC SUB PWB). / SIM 14 (After-work)

Main code	Sub code	Title	Fusing section high temperature trouble (THS2)	
H3	1	Phenomena	Display	Lamp Message
			Detail	The fusing temperature rises above 220°C. (The temperature sensor (Thermistor) voltage of 0.85V or less is detected.)
			Section	Fusing
			Operation mode	All modes
			Note	
		Case 1	Trouble position/ cause	Temperature sensor (Thermistor) trouble
			Remedy	(Check) Check for dirt on the temperature sensor (Thermistor). (Repair) Clean or replace the temperature sensor (Thermistor). / SIM 14 (After-work)
		Case 2	Trouble position/ cause	PCU SUB PWB trouble
			Remedy	(Check) Check the PCU SUB PWB fusing temperature sensor circuit. (Repair) PCU SUB PWB replacement / SIM 14 (After-work)
		Case 3	Trouble position/ cause	Heater lamp control PWB (AC SUB PWB) trouble
			Remedy	(Check) Check the operation of the heater lamp. (SIM 5-2) (Repair) Replace the heater lamp control PWB (AC SUB PWB). / SIM 14 (After-work)

Main code	Sub code	Title	Fusing section high temperature trouble (THS3)		
H3	2	Phenomena	Display	Lamp	
				Message	
			Detail	The fusing temperature rises above 220°C. (The temperature sensor (Thermistor) voltage of 0.85V or less is detected.)	
			Section	Fusing	
			Operation mode	All modes	
			Note		
			Case 1	Trouble position/cause	Temperature sensor (Thermistor) trouble
				Remedy	(Check) Check for dirt on the temperature sensor (Thermistor). (Repair) Clean or replace the temperature sensor (Thermistor). / SIM 14 (After-work)
			Case 2	Trouble position/cause	PCU SUB PWB trouble
				Remedy	(Check) Check the PCU SUB PWB fusing temperature sensor circuit. (Repair) PCU SUB PWB replacement / SIM 14 (After-work)
		Case 3	Trouble position/cause	Heater lamp control PWB (AC SUB PWB) trouble	
			Remedy	(Check) Check the operation of the heater lamp. (SIM 5-2) (Repair) Replace the heater lamp control PWB (AC SUB PWB). / SIM 14 (After-work)	

Main code	Sub code	Title	Fusing section high temperature trouble (THS4)		
H3	3	Phenomena	Display	Lamp	
				Message	
			Detail	The fusing temperature rises above 220°C. (The temperature sensor (Thermistor) voltage of 0.85V or less is detected.)	
			Section	Fusing	
			Operation mode	All modes	
			Note		
			Case 1	Trouble position/cause	Temperature sensor (Thermistor) trouble
				Remedy	(Check) Check for dirt on the temperature sensor (Thermistor). (Repair) Clean or replace the temperature sensor (Thermistor). / SIM 14 (After-work)

Main code	Sub code	Title	Fusing section high temperature trouble (THS4)		
H3	3	Case 2	Trouble position/cause	PCU SUB PWB trouble	
			Remedy	(Check) Check the PCU SUB PWB fusing temperature sensor circuit. (Repair) PCU SUB PWB replacement / SIM 14 (After-work)	
			Case 3	Trouble position/cause	Heater lamp control PWB (AC SUB PWB) trouble
			Remedy	(Check) Check the operation of the heater lamp. (SIM 5-2) (Repair) Replace the heater lamp control PWB (AC SUB PWB). / SIM 14 (After-work)	

Main code	Sub code	Title	Fusing section (upper) low temperature trouble (HL1)		
H4	0	Phenomena	Display	Lamp	
				Message	
			Detail	The specified temperature is not reached within the specified time (5 min) after starting warm-up.	
			Section	Fusing	
			Operation mode	All modes	
			Note		
			Case 1	Trouble position/cause	Temperature sensor (Thermistor) trouble
				Remedy	(Check) Check for dirt on the temperature sensor (Thermistor). (Repair) Clean or replace the temperature sensor (Thermistor). / SIM 14 (After-work)
			Case 2	Trouble position/cause	PCU SUB PWB trouble
				Remedy	(Check) Check the PCU SUB PWB fusing temperature sensor circuit. (Repair) PCU SUB PWB replacement / SIM 14 (After-work)
		Case 3	Trouble position/cause	Heater lamp control PWB (AC SUB PWB) trouble	
			Remedy	(Check) Check the operation of the heater lamp. (SIM 5-2) (Repair) Replace the heater lamp control PWB (AC SUB PWB). / SIM 14 (After-work)	

Main code	Sub code	Title	Fusing section (upper) low temperature trouble (HL1)	
H4	0	Case 4	Trouble position/cause	AC main power PWB trouble
			Remedy	(Check) Check the operation of the heater lamp. (SIM 5-2).
				(Repair) AC main power PWB replacement / SIM 14 (After-work)
		Case 5	Trouble position/cause	Interlock switch (door) trouble
			Remedy	(Check) Check the interlock switch (door).
				(Repair) Replace the interlock switch (door). / SIM 14 (After-work)
		Case 6	Trouble position/cause	Thermostat operation or trouble
			Remedy	(Check) Check the thermostat contact.
				(Repair) Reset or replace the thermostat. / SIM 14 (After-work)
		Case 7	Trouble position/cause	Heater lamp trouble
			Remedy	(Check) Check the operation of the heater lamp. (SIM5-2)
				(Repair) Replace the heater lamp. / SIM 14 (After-work)

Main code	Sub code	Title	Fusing section (lower) low temperature trouble (HL2)	
H4	1	Phenomena	Display	Lamp Message
			Detail	The specified temperature is not reached within the specified time (5 min) after starting warm-up.
			Section	Fusing
			Operation mode	All modes
			Note	
			Case 1	Trouble position/cause
		Remedy		(Check) Check for dirt on the temperature sensor (Thermistor).
				(Repair) Clean or replace the temperature sensor (Thermistor). / SIM 14 (After-work)

Main code	Sub code	Title	Fusing section (lower) low temperature trouble (HL2)	
H4	1	Case 2	Trouble position/cause	PCU SUB PWB trouble
			Remedy	(Check) Check the PCU SUB PWB fusing temperature sensor circuit.
				(Repair) PCU SUB PWB replacement / SIM 14 (After-work)
		Case 3	Trouble position/cause	Heater lamp control PWB (AC SUB PWB) trouble
			Remedy	(Check) Check the operation of the heater lamp. (SIM 5-2)
				(Repair) Replace the heater lamp control PWB (AC SUB PWB). / SIM 14 (After-work)
		Case 4	Trouble position/cause	AC main power PWB trouble
			Remedy	(Check) Check the operation of the heater lamp. (SIM 5-2).
				(Repair) AC main power PWB replacement / SIM 14 (After-work)
		Case 5	Trouble position/cause	Interlock switch (door) trouble
			Remedy	(Check) Check the interlock switch (door).
				(Repair) Replace the interlock switch (door). / SIM 14 (After-work)
		Case 6	Trouble position/cause	Thermostat operation or trouble
			Remedy	(Check) Check the thermostat contact.
(Repair) Reset or replace the thermostat. / SIM 14 (After-work)				
Case 7	Trouble position/cause	Heater lamp trouble		
	Remedy	(Check) Check the operation of the heater lamp. (SIM5-2)		
		(Repair) Replace the heater lamp. / SIM 14 (After-work)		

Main code	Sub code	Title	Paper jam in the fusing/paper exit section	
			Display	Lamp
H5	1	Phenomena	Display	Lamp
				Message
			Detail	POD/DPID do not detect 3 sheets of paper continuously.
			Section	Fusing
			Operation mode	Copy / Print
			Note	
		Case 1	Trouble position/ cause	Paper remaining in the fusing section
			Remedy	(Check) Check for remaining paper.
				(Repair) Remove remaining paper. / SIM 14 (After-work)
		Case 2	Trouble position/ cause	POD/DPID detector trouble
			Remedy	(Check) Check operations of POD/DPID detectors. (SIM 30-1) (Repair) Replace the POD/DPID detectors. / SIM 14 (After-work)
		Case 3	Trouble position/ cause	Fusing unit installation trouble
			Remedy	(Check) Check installation of the fusing unit. (Repair) Install the fusing unit properly. / SIM 14 (After-work)
		Case 4	Trouble position/ cause	Fusing unit installation trouble
			Remedy	(Check) (Repair) SIM 14 (After-work)
		Case 5	Trouble position/ cause	PCU SUB PWB trouble
			Remedy	(Check) Check the PCU SUB PWB fusing temperature sensor circuit. (Repair) PCU SUB PWB replacement / SIM 14 (After-work)
		Case 6	Trouble position/ cause	PCU MAIN PWB trouble
			Remedy	(Check) (Repair) Replace the PCU MAIN PWB. / SIM 14 (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)

Main code	Sub code	Title	Fusing oil empty (Oil sensor trouble)	
			Display	Lamp
H6	0	Phenomena	Display	Lamp
				Message
			Detail	Fusing oil empty is detected.
			Section	Fusing
			Operation mode	All modes
			Note	
		Case 1	Trouble position/ cause	Insufficient remaining quantity of fusing oil
			Remedy	(Check) Check the remaining quantity of fusing oil. (Repair) Supply fusing oil. / Power Source-ON (After-work)
		Case 2	Trouble position/ cause	Fusing oil sensor trouble
			Remedy	(Check) Check operation of the fusing oil sensor. (SIM30-1) (Repair) Replace the fusing oil sensor. / Power Source-ON (After-work)
		Case 3	Trouble position/ cause	PCU SUB PWB trouble
			Remedy	(Check) Check the PCU SUB PWB fusing oil sensor circuit. (Repair) PCU SUB PWB replacement / Power Source-ON (After-work)

Main code	Sub code	Title	AC input voltage (HLV) trouble	
			Display	Lamp
H7	0	Phenomena	Display	Lamp
				Message
			Detail	An AC input voltage of 0.5V or less or 4.0V or above is detected more than 50 times repeatedly in sampling. (Sampling interval: 10msec)
			Section	Power source
			Operation mode	All modes
			Note	
		Case 1	Trouble position/ cause	DC SUB power PWB trouble
			Remedy	(Check) Check the DC SUB power PWB HLV signal circuit. (Repair) DC SUB power PWB replacement / Power Source-ON (After-work)

Main code	Sub code	Title	AC input voltage (HLV) trouble	
H7	0	Case 2	Trouble position/ cause	PCU SUB PWB trouble
			Remedy	(Check) Check the PCU SUB PWB HLV signal circuit. (Repair) PCU SUB PWB replacement / Power Source-ON (After-work)

Main code	Sub code	Title	Scanner feed trouble	
L1	0	Case 4	Trouble position/ cause	PCU MAIN PWB trouble
			Remedy	(Check) (Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)

Main code	Sub code	Title	Scanner feed trouble	
L1	0	Phenomena	Display	Lamp Message
			Detail	Scanner feed is not completed within the specified time. (The scanner home position sensor (MHPS) does not turn OFF within the specified time after outputting the scanner motor ON (feeding start) signal.)
			Section	Scanner (reading)
			Operation mode	Initialize / Copy
			Note	
		Case 1	Trouble position/ cause	Scanner home position sensor (MHPS) trouble
			Remedy	(Check) Check the scanner home position sensor (MHPS) operation. (SIM 1-1/1-2) (Repair) Replace the scanner home position sensor (MHPS). / Power Source-ON (After-work)
		Case 2	Trouble position/ cause	Scanner motor trouble / Scanner motor control PWB trouble
			Remedy	(Check) Check the scanner motor. / Check the scanner motor control PWB. (SIM 1-1) (Repair) Replace the scanner motor. / Replace the scanner motor control PWB. / Power Source-ON (After-work)
		Case 3	Trouble position/ cause	Scanner mechanism section trouble
			Remedy	(Check) Check the scanner mechanism section. (Repair) "Repair the scanner mechanism section (scanner driver wire, drive pulley, etc.)." / Power Source-ON (After-work)

Main code	Sub code	Title	Scanner return trouble	
L3	0	Phenomena	Display	Lamp Message
			Detail	Scanner feed is not completed within the specified time. (The scanner home position sensor (MHPS) does not turn OFF within the specified time after outputting the scanner motor ON (feeding start) signal.)
			Section	Scanner (reading)
			Operation mode	Initialize / Copy
			Note	
		Case 1	Trouble position/ cause	Scanner home position sensor (MHPS) trouble
			Remedy	(Check) Check the scanner home position sensor (MHPS) operation. (SIM 1-1/1-2) (Repair) Replace the scanner home position sensor (MHPS). / Power Source-ON (After-work)
		Case 2	Trouble position/ cause	Scanner motor trouble / Scanner motor control PWB trouble
			Remedy	(Check) Check the scanner motor. / Check the scanner motor control PWB. (SIM 1-1) (Repair) Replace the scanner motor. / Replace the scanner motor control PWB. / Power Source-ON (After-work)

Main code	Sub code	Title	Scanner return trouble	
L3	0	Case 3	Trouble position/ cause	Scanner mechanism section trouble
			Remedy	(Check) Check the scanner mechanism section. (Repair) Repair the scanner mechanism section (scanner driver wire, drive pulley, etc.). / Power Source-ON (After-work)
		Case 4	Trouble position/ cause	PCU MAIN PWB trouble
			Remedy	(Check) (Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)

Main code	Sub code	Title	Fusing motor trouble	
L4	3	Phenomena	Display	Lamp Message
			Detail	The motor lock signal is detected for 3.5sec during rotation of the fusing motor.
			Section	Paper feed
			Operation mode	Paper feed
			Note	
		Case 1	Trouble position/ cause	Fusing motor trouble
			Remedy	(Check) Check the fusing motor operation. (SIM 6-1) (Repair) Replace the fusing motor. / Power Source-ON (After-work)
		Case 2	Trouble position/ cause	PCU MAIN PWB trouble
			Remedy	(Check) (Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)

Main code	Sub code	Title	Fusing motor trouble	
L4	3	Case 3	Trouble position/ cause	Fusing mechanism section trouble.
			Remedy	(Check) Check the loads in the fusing mechanism section. (Repair) Repair or replace parts in the fusing mechanism section. / Power Source-ON (After-work)

Main code	Sub code	Title	Developing motor trouble (BLACK)	
L4	4	Phenomena	Display	Lamp Message
			Detail	The motor lock signal is detected for 3.5sec during rotation of the developing motor.
			Section	Developing drive
			Operation mode	Warm-up / Copy / Print
			Note	
		Case 1	Trouble position/ cause	Developing motor trouble
			Remedy	(Check) Check the developing motor operation (SIM 25-1). (Repair) Replace the developing motor. / Power Source-ON (After-work)
		Case 2	Trouble position/ cause	Developing mechanism section trouble
			Remedy	(Check) Check the loads of the developing mechanism section. (Repair) Repair or replace the parts in the developing mechanism section. / Power Source-ON (After-work)
		Case 3	Trouble position/ cause	PCU MAIN PWB trouble
			Remedy	(Check) (Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)

Main code	Sub code	Title	Developing motor trouble (COLOR)	
L4	5	Phenomena	Display	Lamp Message
			Detail	The motor lock signal is detected for 3.5sec during rotation of the developing motor.
			Section	Developing drive
			Operation mode	Warm-up / Copy / Print
			Note	
		Case 1	Trouble position/ cause	Developing motor trouble
			Remedy	(Check) Check the developing motor operation (SIM 25-1). (Repair) Replace the developing motor. / Power Source-ON (After-work)
		Case 2	Trouble position/ cause	Developing mechanism section trouble
			Remedy	(Check) Check the loads of the developing mechanism section. (Repair) Repair or replace the parts in the developing mechanism section. / Power Source-ON (After-work)
		Case 3	Trouble position/ cause	PCU MAIN PWB trouble
			Remedy	(Check) (Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)
		Case 4	Trouble position/ cause	Developing motor power line trouble
			Remedy	(Check) Check the fuse (F707). (Repair) Replace the fuse (F707). / Power Source-ON (After-work)

Main code	Sub code	Title	Transfer belt lift trouble	
L4	6	Phenomena	Display	Lamp Message
			Detail	The transfer unit home position sensor (BLLD) ON/OFF is not detected (kept ON or OFF) when the transfer unit is lifted up and down.
			Section	Image process (Transfer)
			Operation mode	Color/Monochrome copy (print) mode select
			Note	
		Case 1	Trouble position/ cause	Transfer belt lift motor trouble
			Remedy	(Check) Check the transfer belt lift motor. (SIM 6-1) (Repair) Replace the transfer belt lift motor. / Power Source-ON (After-work)
		Case 2	Trouble position/ cause	Transfer unit home position sensor (BLUD) trouble
			Remedy	(Check) Check the transfer unit home position sensor (BLUD) operation. (SIM 30-1) (Repair) Replace the transfer unit home position sensor (BLUD). / Power Source-ON (After-work)
		Case 3	Trouble position/ cause	Transfer unit lift mechanism section trouble
			Remedy	(Check) Check the transfer unit lift mechanism section. (Repair) Repair the transfer unit lift mechanism or replace the parts. / Power Source-ON (After-work)
		Case 4	Trouble position/ cause	PCU SUB PWB trouble
			Remedy	(Check) PCU SUB PWB transfer lift motor circuit check. (Repair) PCU SUB PWB replacement / Power Source-ON (After-work)

Main code	Sub code	Title	DC power cooling fan trouble		
L4	32	Phenomena	Display	Lamp Message	
			Detail	Sampling is made 35 times at an interval of 100ms from rotation of the DC power cooling fan motor, and all the trouble signals are at HIGH level.	
			Section	Power source	
			Operation mode	All modes	
			Note		
			Case 1	Trouble position/ cause	DC power cooling fan motor trouble
		Remedy	(Check) Check the DC power cooling fan motor operations. (SIM 6-2)		
			(Repair) Replace the DC power cooling fan motor.		
			(After-work)		
		Case 2	Trouble position/ cause	Harness connection trouble between the PCU MAIN PWB and the DC power cooling fan motor. Control circuit trouble	
			Remedy	(Check) Check the harness and the connector between the PCU MAIN PWB and the DC power cooling fan motor.	
				(Repair) Replace the PCU MAIN PWB or the DC power cooling fan motor.	
(After-work)					

Main code	Sub code	Title	Scanner (writing) motor lock detection (BLACK)	
L6	10	Phenomena	Display	Lamp Message
			Detail	Scanner (writing) unit (LSU) polygon motor lock signal detection trouble (The lock signal is not detected for 10 sec after turning on the polygon motor.)
			Section	Scanner (writing)
			Operation mode	All modes
			Note	
			Case 1	Trouble position/ cause
		Remedy	(Check) Scanner (writing) unit (LSU) operation check (SIM 61-1)	
			(Repair) Replace the scanner (writing) unit (LSU). / Power Source-ON	
			(After-work) Adjust ADJM7/ADJM9/ADJM10	

Main code	Sub code	Title	Scanner (writing) motor lock detection (BLACK)	
L6	10	Case 2	Trouble position/ cause	ICU MAIN PWB trouble
			Remedy	(Check)
				(Repair) ICUMAIN PWB replacement / Power Source-ON
(After-work) Adjust ADJM9/M10/M12/M13/M14/M15/M17. / Re-enter setup values and adjustment values. (Install the EEPROM of the defective ICU MAIN PWB to a new ICU MAIN PWB.)				

Main code	Sub code	Title	Scanner (writing) motor lock detection (CYAN)	
L6	11	Phenomena	Display	Lamp Message
			Detail	Scanner (writing) unit (LSU) polygon motor lock signal detection trouble (The lock signal is not detected for 10 sec after turning on the polygon motor.)
			Section	Scanner (writing)
			Operation mode	All modes
			Note	
			Case 1	Trouble position/ cause
		Remedy	(Check) Scanner (writing) unit (LSU) operation check (SIM 61-1)	
			(Repair) Replace the scanner (writing) unit (LSU). / Power Source-ON	
			(After-work) Adjust ADJM7/ADJM9/ADJM10	
		Case 2	Trouble position/ cause	ICU MAIN PWB trouble
			Remedy	(Check)
				(Repair) ICUMAIN PWB replacement / Power Source-ON
(After-work) Adjust ADJM9/M10/M12/M13/M14/M15/M17. / Re-enter setup values and adjustment values. (Install the EEPROM of the defective ICU MAIN PWB to a new ICU MAIN PWB.)				

Main code	Sub code	Title	Scanner (writing) motor lock detection (MAGENTA)		
L6	12	Phenomena	Display	Lamp	
				Message	
			Detail	Scanner (writing) unit (LSU) polygon motor lock signal detection trouble (The lock signal is not detected for 10 sec after turning on the polygon motor.)	
			Section	Scanner (writing)	
			Operation mode	All modes	
			Note		
		Case 1	Trouble position/ cause	Scanner (writing) unit (LSU) trouble	
			Remedy	(Check) Scanner (writing) unit (LSU) operation check (SIM 61-1)	
				(Repair) Replace the scanner (writing) unit (LSU). / Power Source-ON	
				(After-work) Adjust ADJM7/ADJM9/ADJM10	
			Case 2	Trouble position/ cause	ICU MAIN PWB trouble
				Remedy	(Check)
		(Repair) ICUMAIN PWB replacement / Power Source-ON (After-work) Adjust ADJM9/M10/M12/M13/M14/M15/M17. / Re-enter setup values and adjustment values. (Install the EEPROM of the defective ICU MAIN PWB to a new ICU MAIN PWB.)			

Main code	Sub code	Title	Scanner (writing) motor lock detection (YELLOW)	
L6	13	Phenomena	Display	Lamp
				Message
			Detail	Scanner (writing) unit (LSU) polygon motor lock signal detection trouble (The lock signal is not detected for 10 sec after turning on the polygon motor.)
			Section	Scanner (writing)
			Operation mode	All modes
			Note	
		Case 1	Trouble position/ cause	Scanner (writing) unit (LSU) trouble
			Remedy	(Check) Scanner (writing) unit (LSU) operation check (SIM 61-1)
				(Repair) Replace the scanner (writing) unit (LSU). / Power Source-ON
				(After-work) Adjust ADJM7/ADJM9/ADJM10

Main code	Sub code	Title	Scanner (writing) motor lock detection (YELLOW)	
L6	13	Case 2	Trouble position/ cause	ICU MAIN PWB trouble
			Remedy	(Check)
				(Repair) ICUMAIN PWB replacement / Power Source-ON
				(After-work) Adjust ADJM9/M10/M12/M13/M14/M15/M17. / Re-enter setup values and adjustment values. (Install the EEPROM of the defective ICU MAIN PWB to a new ICU MAIN PWB.)

Main code	Sub code	Title	Power full wave signal (FWS) trouble	
L8	1	Phenomena	Display	Lamp
				Message
			Detail	The power full wave signal (FWS) is not detected. / AC power waveform distortion, noise
			Section	Power source
			Operation mode	All modes
			Note	
		Case 1	Trouble position/ cause	Fusing oil collection pipe section short connector trouble
			Remedy	(Check) Check the fusing oil collection pipe section short connector.
				(Repair) Replace the fusing oil collection pipe section short connector. / Power Source-ON (After-work)
		Case 2	Trouble position/ cause	PCU SUB PWB trouble
			Remedy	(Check) Check the power full wave signal (FWS) circuit. (Repair) PCU SUB PWB replacement / Power Source-ON (After-work)
		Case 3	Trouble position/ cause	PCU MAIN PWB trouble
			Remedy	(Check) Check the power full wave signal (FWS) circuit. (Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)

Main code	Sub code	Title	Power full wave signal (FWS) trouble	
L8	1	Case 4	Trouble position/cause	DC SUB power PWB trouble
			Remedy	(Check) Check the power full wave signal (FWS) circuit. (Repair) DC SUB power PWB replacement / Power Source-ON (After-work)

Main code	Sub code	Title	Power full wave signal (FWS) width trouble	
L8	2	Case 4	Trouble position/cause	PCU SUB PWB trouble
			Remedy	(Check) Check the power full wave signal (FWS) circuit. (Repair) PCU SUB PWB replacement / Power Source-ON (After-work)

Main code	Sub code	Title	Power full wave signal (FWS) width trouble	
L8	2	Phenomena	Display	Lamp Message
			Detail	The power full wave signal (FWS) is not detected. / AC power waveform distortion, noise (When the detection cycle is judged as 69Hz or more or 42.5Hz or less.)
			Section	Power source
			Operation mode	All modes
			Note	
		Case 1	Trouble position/cause	Fusing oil collection pipe section short connector trouble
			Remedy	(Check) Check the fusing oil collection pipe section short connector. (Repair) Replace the fusing oil collection pipe section short connector. / Power Source-ON (After-work)
		Case 2	Trouble position/cause	PCU SUB PWB trouble
			Remedy	(Check) Check the power full wave signal (FWS) circuit. (Repair) PCU SUB PWB replacement / Power Source-ON (After-work)
		Case 3	Trouble position/cause	PCU MAIN PWB trouble
			Remedy	(Check) Check the power full wave signal (FWS) circuit. (Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)

Main code	Sub code	Title	RIC copy inhibit signal reception	
PF	0	Phenomena	Display	Lamp Message
			Detail	The RIC copy inhibit command is received through RIC I/F from the host.
			Section	PCU PWB
			Operation mode	RIC communication
			Note	
		Case 1	Trouble position/cause	The copy inhibit command is received from the host.
			Remedy	(Check) (Repair) Use SIM 27-1 to ignore the copy inhibit command. / SIM 17 (After-work)
		Case 2	Trouble position/cause	PCU MAIN PWB trouble
			Remedy	(Check) RIC I/F circuit check (Repair) Replace the PCU MAIN PWB. / SIM 17 (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)

Main code	Sub code	Title	Operation control PWB - PCU MAIN PWB communication trouble (OPE/PCU detection)	
U0	0	Phenomena	Display	Lamp Message
			Detail	Communication (protocol, data) error
			Section	Operation PWB / PCU MAIN PWB
			Operation mode	All modes
			Note	

Main code	Sub code	Title	Operation control PWB - PCU MAIN PWB communication trouble (OPE/PCU detection)	
U0	0	Case 1	Trouble position/cause	Bad connection of the signal line between the PCU MAIN PWB and the operation control PWB
			Remedy	(Check) Check the signal line between the PCU MAIN PWB and the operation control PWB. (Repair) Repair or replace the cable and the connector between the PCU MAIN PWB and the operation control PWB. / Power Source-ON (After-work)
		Case 2	Trouble position/cause	PCU MAIN PWB trouble
			Remedy	(Check) (Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)
		Case 3	Trouble position/cause	Operation control PWB trouble
			Remedy	(Check) (Repair) Operation control PWB replacement / Power Source-ON (After-work)

Main code	Sub code	Title	PCU MAIN PWB - PCU SUB PWB communication trouble (PCU detection)	
U0	80	Phenomena	Display	Lamp Message
			Detail	Communication (protocol, data) error
			Section	PCU SUB PWB / PCU MAIN PWB
			Operation mode	All modes
			Note	
		Case 1	Trouble position/cause	Bad connection of the signal line between the PCU MAIN PWB and the PCU SUB PWB.
			Remedy	(Check) Check connection of the signal line between the PCU MAIN PWB and the PCU SUB PWB. (Repair) Repair or replace the cable and the connector of the PCU MAIN PWB and the PCU SUB PWB. / Power Source-ON (After-work)

Main code	Sub code	Title	PCU MAIN PWB - PCU SUB PWB communication trouble (PCU detection)	
U0	80	Case 2	Trouble position/cause	PCU MAIN PWB trouble
			Remedy	(Check) (Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)
		Case 3	Trouble position/cause	PCU SUB PWB trouble
			Remedy	(Check) (Repair) PCU SUB PWB replacement / Power Source-ON (After-work)

Main code	Sub code	Title	EEPROM read/write error (PCU MAIN PWB)	
U2	0	Phenomena	Display	Lamp Message
			Detail	EEPROM read/write error
			Section	PCU PWB
			Operation mode	Warm-up
			Note	
		Case 1	Trouble position/cause	EEPROM trouble
			Remedy	(Check) (Repair) Replace the EEPROM. / SIM 16 (After-work)
		Case 2	Trouble position/cause	PCU MAIN PWB trouble
			Remedy	(Check) (Repair) Replace the PCU MAIN PWB. / SIM 16 (After-work) Re-enter the set values and the adjustment values.

Main code	Sub code	Title	Counter data (EEPROM) check sum error (PCU MAIN PWB)	
U2	11	Phenomena	Display	Lamp Message
			Detail	Counter data area check sum error
			Section	PCU PWB
			Operation mode	All modes
			Note	

Main code	Sub code	Title	Counter data (EEPROM) check sum error (PCU MAIN PWB)	
U2	11	Case 1	Trouble position/ cause	EEPROM trouble
			Remedy	(Check)
				(Repair) Replace the EEPROM. / SIM 16
		(After-work)		
		Case 2	Trouble position/ cause	PCU MAIN PWB trouble
			Remedy	(Check)
(Repair) Replace the PCU MAIN PWB. / SIM 16				
(After-work) Re-enter the set values and the adjustment values.				

Main code	Sub code	Title	Setup/adjustment value data (EEPROM) check sum error (PCU MAIN PWB)		
U2	12	Phenomena	Display	Lamp	
				Message	
			Detail	Setup/adjustment data area check sum error	
				Section	PCU PWB
			Operation mode	All modes	
			Note		
		Case 1	Trouble position/ cause	EEPROM trouble	
			Remedy	(Check)	
				(Repair) Replace the EEPROM. / SIM 16	
		(After-work)			
		Case 2	Trouble position/ cause	PCU MAIN PWB trouble	
			Remedy	(Check)	
				(Repair) Replace the PCU MAIN PWB. / SIM 16	
		(After-work) Re-enter the set values and the adjustment values.			

Main code	Sub code	Title	EEPROM read/write error (ICU MAIN PWB)		
U2	20	Phenomena	Display	Lamp	
				Message	
			Detail	EEPROM read/write error	
				Section	ICU PWB
			Operation mode	Warm-up	
			Note		
		Case 1	Trouble position/ cause	EEPROM trouble	
			Remedy	(Check)	
				(Repair) Replace the EEPROM. / SIM 16	
(After-work)					

Main code	Sub code	Title	EEPROM read/write error (ICU MAIN PWB)	
U2	20	Case 2	Trouble position/ cause	ICU MAIN PWB trouble
			Remedy	(Check)
		(Repair) ICU MAIN PWB replacement / SIM 16		
		(After-work) Adjust ADJM9/M10/M12/M13/M14/M15/M17. / Re-enter setup values and adjustment values. (Install the EEPROM of the defective ICU MAIN PWB to a new ICU MAIN PWB.)		

Main code	Sub code	Title	Counter (EEPROM) check sum error (ICU MAIN PWB)		
U2	21	Phenomena	Display	Lamp	
				Message	
			Detail	Counter data area check sum error	
				Section	ICU PWB
			Operation mode	All modes	
			Note		
		Case 1	Trouble position/ cause	EEPROM trouble	
			Remedy	(Check)	
				(Repair) Replace the EEPROM. / SIM 16	
		(After-work)			
		Case 2	Trouble position/ cause	ICU MAIN PWB trouble	
			Remedy	(Check)	
				(Repair) ICU MAIN PWB replacement / SIM 16	
		(After-work) Adjust ADJM9/M10/M12/M13/M14/M15/M17. / Re-enter setup values and adjustment values. (Install the EEPROM of the defective ICU MAIN PWB to a new ICU MAIN PWB.)			

Main code	Sub code	Title	Setup, adjustment value (EEPROM) check sum error (ICU MAIN PWB)		
U2	22	Phenomena	Display	Lamp	
				Message	
			Detail	Setup/adjustment data area check sum error	
				Section	ICU PWB
			Operation mode	All modes	
			Note		
		Case 1	Trouble position/ cause	EEPROM trouble	
			Remedy	(Check)	
				(Repair) Replace the EEPROM. / SIM 16	
(After-work)					

Main code	Sub code	Title	Setup, adjustment value (EEPROM) check sum error (ICU MAIN PWB)	
U2	22	Case 2	Trouble position/ cause	ICU MAIN PWB trouble
			Remedy	(Check) (Repair) ICU MAIN PWB replacement / SIM 16 (After-work) Adjust ADJM9/M10/M12/M13/M14/M15/M17. / Re-enter setup values and adjustment values. (Install the EEPROM of the defective ICU MAIN PWB to a new ICU MAIN PWB.)

Main code	Sub code	Title	Manufacturing No. data (ICU MAIN PWB / PCU MAIN PWB) discrepancy	
U2	30	Phenomena	Display	Lamp Message
			Detail	The serial No. data stored in the ICU MAIN PWB (EEPROM) and that in the PCU MAIN PWB (EEPROM) do not coincide.
			Section	ICU PWB / PCU PWB
			Operation mode	All modes
			Note	
		Case 1	Trouble position/ cause	When replacing the ICU MAIN PWB or the PCU MAIN PWB, the serial No. data is not entered.
			Remedy	(Check) (Repair) Enter the correct serial No. data to the ICU MAIN PWB and the PCU MAIN PWB (EEPROM). / SIM 16 (After-work)

Main code	Sub code	Title	PCU MAIN PWB - ADU communication trouble / Discrepancy of the model	
U4	0	Phenomena	Display	Lamp Message
			Detail	Communication test error in warm-up / Discrepancy of the model
			Section	PCU PWB / Duplex control PWB
			Operation mode	Warm-up / Initialize
			Note	

Main code	Sub code	Title	PCU MAIN PWB - ADU communication trouble / Discrepancy of the model	
U4	0	Case 1	Trouble position/ cause	Bad connection of the signal line between the PCU MAIN PWB and the ADU control PWB.
			Remedy	(Check) Check connection of the signal line between the PCU MAIN PWB and the ADU control PWB. (Repair) Repair or replace the cable and the connector between the PCU MAIN PWB and the ADU control PWB. / Power Source-ON (After-work)
		Case 2	Trouble position/ cause	PCU MAIN PWB trouble
			Remedy	(Check) (Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)
		Case 3	Trouble position/ cause	ADU control PWB trouble
			Remedy	(Check) (Repair) ADU control PWB replacement / Power Source-ON (After-work)

Main code	Sub code	Title	ADU alignment plate operation trouble	
U4	2	Phenomena	Display	Lamp Message
			Detail	The home position sensor (DPHPS) detects the home position sensor for 1sec or more after starting separating operation of the alignment plate from the home position. / The home position is not detected within 5sec after starting returning operation to the home position.
			Section	Duplex
			Operation mode	Initialize / Duplex copy (print)
			Note	

Main code	Sub code	Title	ADU alignment plate operation trouble		
U4	2	Case 1	Trouble position/cause	Alignment home position sensor (DPHPS) trouble	
			Remedy	(Check) Check the alignment home position sensor (DPHPS) operation. (SIM9-1/2/4)	
				(Repair) Replace the alignment home position sensor (DPHPS). / Power Source-ON	
				(After-work)	
			Case 2	Trouble position/cause	Duplex alignment motor trouble.
				Remedy	(Check) Check the duplex alignment motor operation. (SIM9-1/2/4)
		(Repair) Replace the duplex alignment motor. / Power Source-ON			
		(After-work)			
		Case 3	Trouble position/cause	Duplex mechanism section trouble	
			Remedy	(Check) Check the duplex mechanism section operation. (SIM9-1/2/4)	
				(Repair) Repair or replace the duplex mechanism section. / Power Source-ON	
		(After-work)			
		Case 4	Trouble position/cause	PCU MAIN PWB trouble	
			Remedy	(Check)	
				(Repair) Replace the PCU MAIN PWB. / Power Source-ON	
		(After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)			
		Case 5	Trouble position/cause	ADU control PWB trouble	
			Remedy	(Check)	
				(Repair) ADU control PWB replacement / Power Source-ON	
		(After-work)			

Main code	Sub code	Title	ADU transport motor trouble		
U4	12	Phenomena	Display	Lamp Message	
			Detail	The motor rotation sensor (RE) signal cycle becomes 50msec or more after 1sec from turning ON the ADU transport motor. / The motor rotation sensor (RE) signal is detected more than 100 times during 100msec after 5sec from turning OFF the ADU transport motor.	
			Section	Duplex	
			Operation mode	Duplex copy (print)	
			Note		
			Case 1	Trouble position/cause	Duplex transport motor trouble
				Remedy	(Check) Check the duplex transport motor operation. (SIM9-1/2/4)
					(Repair) Replace the duplex transport motor. / Power Source-ON
		(After-work)			
		Case 2	Trouble position/cause	Duplex transport motor rotation sensor (DMRE) trouble	
			Remedy	(Check) Duplex transport motor rotation sensor (DMRE) operation check (SIM 9-1/2/4)	
				(Repair) Replace the duplex transport motor rotation sensor (DMRE). / Power Source-ON	
		(After-work)			
		Case 3	Trouble position/cause	Duplex mechanism section trouble	
			Remedy	(Check) Duplex mechanism section operation check (SIM9-1/2/4)	
				(Repair) Repair or replace the duplex mechanism section. / Power Source-ON	
		(After-work)			
		Case 4	Trouble position/cause	ADU control PWB trouble	
			Remedy	(Check)	
				(Repair) ADU control PWB replacement / Power Source-ON	
(After-work)					

Main code	Sub code	Title	PCU MAIN PWB - RADF communication trouble	
U5	0	Phenomena	Display	Lamp
				Message
			Detail	Communication test error in warm-up
			Section	PCU PWB / RADF control PWB
			Operation mode	Warm-up / Initialize
			Note	
	Case 1	Trouble position/cause	Bad connection of the signal line between the PCU MAIN PWB and the RADF control PWB.	
		Remedy	(Check) Check connection of the signal line between the PCU MAIN PWB and the RADF control PWB.	
			(Repair) Repair or replace the cable and the connector between the PCU MAIN PWB and the RADF control PWB. / Power Source-ON (After-work)	
		Case 2	Trouble position/cause	PCU MAIN PWB trouble
			Remedy	(Check)
				(Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)
	Case 3	Trouble position/cause	RADF control PWB trouble	
		Remedy	(Check) (Repair) RADF control PWB replacement / Power Source-ON (After-work)	

Main code	Sub code	Title	RADF resist sensor trouble	
U5	1	Phenomena	Display	Lamp
				Message
			Detail	RADF resist sensor detection trouble
			Section	RADF
			Operation mode	RADF
			Note	
	Case 1	Trouble position/cause	RADF resist sensor trouble	
		Remedy	(Check) Check operation of the RADF resist sensor. (SIM 2-2)	
			(Repair) Replace the RADF resist sensor. / Power Source-ON	
			(After-work)	

Main code	Sub code	Title	RADF resist sensor trouble	
U5	1	Case 2	Trouble position/cause	RADF control PWB trouble
			Remedy	(Check)
				(Repair) RADF control PWB replacement / Power Source-ON
				(After-work)

Main code	Sub code	Title	RADF exit sensor trouble	
U5	2	Phenomena	Display	Lamp
				Message
			Detail	RADF paper exit sensor detection trouble
			Section	RADF
			Operation mode	RADF
			Note	
	Case 1	Trouble position/cause	RADF paper exit sensor trouble	
		Remedy	(Check) Check the RADF paper exit sensor operation. (SIM 2-2)	
			(Repair) Replace the RADF paper exit sensor. / Power Source-ON	
			(After-work)	
	Case 2	Trouble position/cause	RADF control PWB trouble	
		Remedy	(Check)	
			(Repair) RADF control PWB replacement / Power Source-ON (After-work)	

Main code	Sub code	Title	RADF timing sensor trouble	
U5	3	Phenomena	Display	Lamp
				Message
			Detail	RADF timing sensor detection trouble
			Section	RADF
			Operation mode	RADF
			Note	
	Case 1	Trouble position/cause	RADF timing sensor trouble	
		Remedy	(Check) Check the RADF timing sensor operation. (SIM 2-2)	
			(Repair) Replace the RADF timing sensor. / Power Source-ON	
			(After-work)	

Main code	Sub code	Title	RADF timing sensor trouble	
U5	3	Case 2	Trouble position/ cause	RADF control PWB trouble
			Remedy	(Check) (Repair) RADF control PWB replacement / Power Source-ON (After-work)

Main code	Sub code	Title	RADF paper feed motor trouble	
U5	11	Phenomena	Display	Lamp Message
			Detail	RADF paper feed motor lock / Motor rpm abnormality / Overcurrent to the motor
			Section	RADF
			Operation mode	RADF
			Note	
			Case 1	Trouble position/ cause
			Remedy	(Check) Check the RADF paper feed motor operation. (SIM2-1/2/3) (Repair) Replace the RADF paper feed motor. / Power Source-ON (After-work)
		Case 2	Trouble position/ cause	RADF control PWB trouble
			Remedy	(Check) (Repair) RADF control PWB replacement / Power Source-ON (After-work)

Main code	Sub code	Title	Large capacity tray (LCC) lift motor trouble	
U6	9	Phenomena	Display	Lamp Message
			Detail	The rotation sensor output signal does not change when the lift motor is turned ON. / The rotation sensor output signal changes after turning OFF the lift motor.
			Section	Large capacity tray
			Operation mode	Paper feed
			Note	
			Case 1	Trouble position/ cause
			Remedy	(Check) Check the lift motor rotation sensor operation. (Repair) Replace the lift motor rotation sensor. / SIM 15 (After-work)

Main code	Sub code	Title	Large capacity tray (LCC) lift motor trouble	
U6	9	Case 2	Trouble position/ cause	"Lift mechanism (motor, etc.) trouble"
			Remedy	(Check) "Check the lift mechanism (motor, etc.) operation. (SIM4-3)" (Repair) Replace the lift unit (lift motor). / SIM 15 (After-work)
		Case 3	Trouble position/ cause	Large capacity tray (LCC) control PWB trouble
			Remedy	(Check) (Repair) Replace the large capacity tray (LCC) control PWB. / SIM 15 (After-work)
		Case 4	Trouble position/ cause	PCU MAIN PWB trouble
			Remedy	(Check) (Repair) Replace the PCU MAIN PWB. / SIM 15 (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)

Main code	Sub code	Title	PCU MAIN PWB - Large capacity tray (LCC) communication trouble / Discrepancy of the model	
U6	20	Phenomena	Display	Lamp Message
			Detail	Communication test error in warm-up / Discrepancy of the model
			Section	Large capacity tray control PWB / PCU MAIN PWB
			Operation mode	Warm-up / Initialize
			Note	
			Case 1	Trouble position/ cause
			Remedy	(Check) Check connection of the signal line between the PCU MAIN PWB and the large capacity tray (LCC) control PWB. (Repair) Repair or replace the cable and the connector between the PCU MAIN PWB and the large capacity tray (LCC) control PWB. / Power Source-ON (After-work)

Main code	Sub code	Title	PCU MAIN PWB - Large capacity tray (LCC) communication trouble / Discrepancy of the model	
U6	20	Case 2	Trouble position/ cause	PCU MAIN PWB trouble
			Remedy	(Check) (Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)
		Case 3	Trouble position/ cause	Large capacity tray (LCC) control PWB trouble
			Remedy	(Check) (Repair) Large capacity tray (LCC) control PWB replacement / Power Source-ON (After-work)

Main code	Sub code	Title	Large capacity tray (LCC) transport motor trouble	
U6	21	Phenomena	Display	Lamp Message
			Detail	The rotation sensor output signal does not change when the transport motor is turned ON. / The rotation sensor output signal changes after turning OFF the transport motor.
			Section	Large capacity tray
			Operation mode	Paper feed
			Note	
		Case 1	Trouble position/ cause	Transport motor trouble
			Remedy	(Check) Check the transport motor operation. (SIM 4-3) (Repair) Replace the transport motor. / Power Source-ON (After-work)
Case 2	Trouble position/ cause	Transport mechanism section trouble		
	Remedy	(Check) Check the transport mechanism section operation. (SIM 4-3) (Repair) Repair or replace the transport mechanism section. / Power Source-ON (After-work)		

Main code	Sub code	Title	Large capacity tray (LCC) transport motor trouble	
U6	21	Case 3	Trouble position/ cause	Large capacity tray (LCC) control PWB trouble
			Remedy	(Check) (Repair) Large capacity tray (LCC) control PWB replacement / Power Source-ON (After-work)

Main code	Sub code	Title	Large capacity tray (LCC) 24V power trouble	
U6	22	Phenomena	Display	Lamp Message
			Detail	DC24V power is not supplied to the large capacity tray (LCC).
			Section	Large capacity tray
			Operation mode	All modes
			Note	
		Case 1	Trouble position/ cause	Bad connection between the DC MAIN power PWB and the large capacity tray (LCC)
			Remedy	(Check) Check connection between the fuse (F708), the DC MAIN power PWB and the large capacity tray (LCC). (Repair) Replace the fuse (F708). Repair or replace the wire and the connector between the DC MAIN power PWB and the large capacity tray (LCC) control PWB. / Power Source-ON (After-work)
Case 2	Trouble position/ cause	Large capacity tray (LCC) control PWB trouble		
	Remedy	(Check) (Repair) Large capacity tray (LCC) control PWB replacement / Power Source-ON (After-work)		

Main code	Sub code	Title	LCC non-compatible trouble	
U6	51	Phenomena	Display	Lamp Message
			Detail	Detection of LCC connection incompatible with the AR-C330.
			Section	Large capacity tray
			Operation mode	All modes
			Note	
		Case 1	Trouble position/ cause	Detection of the AR-LC2(N), etc. incompatible with the AR-C330.
			Remedy	(Check) (Repair) Connect the AR-LC9. (After-work)

Main code	Sub code	Title	RIC communication trouble		
U7	0	Phenomena	Display	Lamp	
				Message	
			Detail	Communication test error in warm-up	
			Section	PCU PWB	
			Operation mode	RIC communication	
			Note		
			Case 1	Trouble position/ cause	Bad connection of the signal line between the PCU MAIN PWB and the RIC I/F.
				Remedy	(Check) Check connection of the signal line between the PCU MAIN PWB and the RIC I/F. (Repair) Repair or replace the cable and the connector between the PCU MAIN PWB and the RIC I/F / Power Source-ON (After-work)
			Case 2	Trouble position/ cause	PCU MAIN PWB trouble
				Remedy	(Check) (Repair) Replace the PCU MAIN PWB. / Power Source-ON (After-work) Re-enter setup values and adjustment values. (Install the EEPROM of the defective PCU MAIN PWB to a new PCU MAIN PWB.)

Main code	Sub code	Title	ICU SCAN PWB - CPT PWB communication trouble		
UC	0	Phenomena	Display	Lamp	
				Message	
			Detail		
			Section	ICU SCAN PWB / CPT PWB	
			Operation mode	Copy	
			Note		
			Case 1	Trouble position/ cause	CPT PWB trouble
				Remedy	(Check) CPT PWB connector check (Repair) CPT PWB replacement / Power Source-ON (After-work)
			Case 2	Trouble position/ cause	ICU SCAN PWB trouble
				Remedy	(Check) ICU SCAN PWB connector check (Repair) ICU SCAN PWB replacement / Power Source-ON (After-work)

Main code	Sub code	Title	CPT board program trouble		
UC	1	Phenomena	Display	Lamp	
				Message	
			Detail	CPT PWB program hung up	
			Section	CPT PWB	
			Operation mode	Warm-up / Initialize	
			Note		
			Case 1	Trouble position/ cause	CPT PWB trouble
				Remedy	(Check) If the trouble cannot be canceled by turning ON/OFF the power repeatedly, replace the CPT PWB. (Repair) CPT PWB replacement / Power Source-ON (After-work)

Main code	Sub code	Title	CPT board ASIC trouble		
UC	2	Phenomena	Display	Lamp	
				Message	
			Detail	Gate array abnormality on the CPT PWB	
			Section	CPT PWB	
			Operation mode	Warm-up / Initialize	
			Note		
			Case 1	Trouble position/ cause	CPT PWB trouble
				Remedy	(Check) If the trouble cannot be canceled by turning ON/OFF the power repeatedly, replace the CPT PWB. (Repair) CPT PWB replacement / Power Source-ON (After-work)

Main code	Sub code	Title	CPT board ROM trouble		
UC	3	Phenomena	Display	Lamp	
				Message	
			Detail	CPT PWB ROM abnormality	
			Section	CPT PWB	
			Operation mode	Warm-up / Initialize	
			Note		
			Case 1	Trouble position/ cause	CPT PWB trouble
				Remedy	(Check) (Repair) CPT PWB replacement / Power Source-ON (After-work)

Main code	Sub code	Title	CPT board RAM trouble		
UC	4	Phenomena	Display	Lamp	
				Message	
			Detail	CPT PWB RAM abnormality	
			Section	CPT PWB	
			Operation mode	Warm-up / Initialize	
			Note		
			Case 1	Trouble position/ cause	CPT PWB trouble
					Remedy
					(Repair) CPT PWB replacement / Power Source-ON
					(After-work)

Main code	Sub code	Title	CPT board model code data trouble		
UC	5	Phenomena	Display	Lamp	
				Message	
			Detail	The model code data sent from the CPU PWB to the ICU SCAN PWB is abnormal.	
			Section	ICU MAIN PWB / CPT PWB	
			Operation mode	Warm-up / Initialize	
			Note		
			Case 1	Trouble position/ cause	CPT PWB trouble
					Remedy
					(Repair) CPT PWB replacement / Power Source-ON
					(After-work)