KM-6230

1-5-2 Self-diagnosis

(1) Self-diagnostic function

This unit is equipped with a self-diagnostic function. When a problem is detected, copying is disabled and the problem displayed as a code consisting of "C" followed by a number between 001 and 850, indicating the nature of the problem. A message is also displayed requesting the user to call for service.

After removing the problem, the self-diagnostic function can be reset by turning safety switches 1, 2, 3 or 4 off and back on.

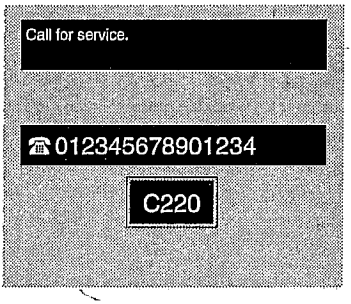


Figure 1-5-3 Service call code display

1-5

(2) Self diagnostic codes

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C001	**Memory PCB communication problem** • Problems with data from memory PCB.	Defective memory PCB.	Replace memory PCB and check for correct operation.
C010	**RAM/ROM problem** • Read and write data does not match.	Defective main PCB.	Replace the main PCB and check for correct operation.
C011	**Backup memory data problem** • Data in the specified area of the backup memory does not match the specified values.	Problem with the backup memory data.	Turn safety switch 1 off and back on and run maintenance item U020 to set the contents of the backup memory data again.
		Defective backup RAM.	If the C011 is displayed after re-setting the backup memory contents, replace the backup RAM.
C021	**Operation unit PCB communication problem** • There is no reply after 20 retries at communication.	Poor contact in the connector terminals.	Check the connection of connectors CN12, CN13 on the main PCB and CN1, CN7 on the operation unit PCB, and the continuity across the connector terminals. Repair or replace if necessary.
		Defective main PCB or operation unit PCB.	Replace the main PCB or operation unit PCB and check for correct operation.
C024	**Printer board* communication problem** • There is no reply after 20 retries at communication.	Poor contact in the connector terminals.	Check the connection of connector CN4 on the main PCB and the connector on the printer board. Repair or replace if necessary.
		Defective main PCB or printer board.	Replace the main PCB or printer board and check for correct operation.

*: Optional

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C026	**Memory PCB communication problem** • There is no reply after five retries at transmitting. • There is no reply after five retries at receiving.	Poor contact in the connector terminals.	Check the connection of connector CN3 on the main PCB and the connector on memory PCB. Repair or replace if necessary.
		Defective main PCB or memory PCB.	Replace the main PCB or memory PCB and check for correct operation.
C032	**Side deck* communication problem** • An error code from the side deck is detected eight times in succession. No communication: there is no reply after 3 retries. Abnormal communication: a communication error (parity or checksum error) is detected five times in succession.	Poor contact in the connector terminals.	Check the connection of connector CN9 on the main PCB and the connector CN3 on the side deck main PCB, and the continuity across the connector terminals. Repair or replace if necessary.
		Defective engine PCB.	Replace the engine PCB and check for correct operation.
		Defective main PCB.	Replace the main PCB and check for correct operation.
		Defective side deck main PCB.	Replace the side deck main PCB and check for correct operation.
C034	**Finisher* communication problem** • Communication errors from the communication microcomputer on the main PCB: No communication: there is no reply after 3 retries. Abnormal communication: a communication error (parity or checksum error) is detected five times in succession.	Poor contact in the connector terminals.	Check the connection of connectors CN10 on the main PCB and CN2 on the finisher main PCB, and the continuity across the connector terminals. Repair or replace if necessary.
		Defective engine PCB.	Replace the engine PCB and check for correct operation.
		Defective main PCB.	Replace the main PCB and check for correct operation.
		Defective finisher main PCB.	Replace the finisher main PCB and check for correct operation.
C035	**Mailbox* communication Problem** Communication errors from the communication microcomputer on the main PCB: No communication: there is no reply after 3 retries. Abnormal communication: a communication error (parity or checksum error) is detected five times in succession.	Poor contact in the connector terminals.	Check the connection of connectors CN10 on the main PCB and CN1 on the mailbox main PCB, and the continuity across the connector terminals. Repair or replace if necessary.
		Defective engine PCB.	Replace the engine PCB and check for correct operation.
		Defective main PCB.	Replace the main PCB and check for correct operation.
		Defective mailbox main PCB.	Replace the mailbox main PCB and check for correct operation.
C037	**Communication microcomputer problem** • A problem is detected with the communication microcomputer on the main PCB.	Defective main PCB.	Replace the main PCB and check for correct operation.

*: Optional

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C210	**Drive motor problem** • LOCK ALM signal remains high for 1 s, 1 s after the drive motor has turned on.	Defective drive transmission system.	Check if the rollers and gears rotate smoothly. If not, grease the bushings and gears. Check for broken gears and replace if any.
C220	**Paper feed motor problem** • LOCK ALM signal remains high for 1 s, 1 s after the paper feed motor has turned on.	Poor contact in the paper feed motor connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective paper feed motor rotation control circuit.	Replace the paper feed motor.
		Defective drive transmission system.	Check if the rollers and gears rotate smoothly. If not, grease the bushings and gears. Check for broken gears and replace if any.
C230	**Large paper deck right lift motor problem** When the large paper deck of the copier is closed, large paper deck level switch 1 does not turn on within 30 s of the large paper deck right lift motor turning on. During copying, large paper deck level switch 1 does not turn on within 200 ms of the large paper deck right lift motor turning on.	Broken gear or coupling of the large paper deck right lift motor.	Replace the large paper deck right lift motor.
		Defective large paper deck right lift motor.	Check for continuity across the coil. If none, replace the large paper deck right lift motor.
		Poor contact in the large paper deck right lift motor connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective large paper deck level switch 1.	Check if CN9-B3 on the engine PCB goes low when large paper deck level switch 1 is turned on. If not, replace large paper deck level switch 1.
		Poor contact in the large paper deck level switch 1 connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
C231	**Large paper deck left lift motor problem** When the large paper deck of the copier is closed, large paper deck level switch 2 does not turn on within 30 s of the large paper deck left lift motor turning on. During copying, large paper deck level switch 2 does not turn on within 200 ms of the large paper deck left lift motor turning on.	Broken gear or coupling of the large paper deck left lift motor.	Replace the large paper deck left lift motor.
		Defective large paper deck left lift motor.	Check for continuity across the coil. If none, replace the large paper deck left lift motor.
		Poor contact in the large paper deck left lift motor connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C038	**Hard disk problem** The hard disk cannot be accessed.	Poor contact in the connector terminals.	Check the connection of connectors CN3 on the main PCB and the connector on the memory PCB, and the continuity across the connector terminals. Repair or replace if necessary.
			Check the connection of connectors CN8 on the power source PCB and the hard disk connector, and the continuity across the connector terminals. Repair or replace if necessary.
		Defective hard disk.	Replace the hard disk and check for correct operation.
		Defective main PCB.	Replace the main PCB and check for correct operation.
C039	**DIMM problem** The DIMM on the memory PCB does not operate correctly.	DIMM installed incorrectly.	Check if the DIMM is inserted into the socket on the memory PCB correctly.
		Defective DIMM.	Replace the DIMM and check for correct operation.
C104	**Optical system problem** • After AGC, correct input is not obtained at CCD.	Insufficient exposure lamp luminosity.	Replace the exposure lamp or inverter PCB.
		Defective main PCB.	Replace the mainPCB.
		Incorrect shading position.	Adjust the position of the contact glass (shading plate). If the problem still occurs, replace the scanner home position switch.
		CCD PCB output problem.	Replace the ISU.
C200	**Image forming motor problem** • LOCK ALM signal remains high for 1 s, 1 s after the drive motor has turned on.	Poor contact in the image forming motor connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective image forming motor rotation control circuit.	Replace the image forming motor.
		Defective drive transmission system.	Check if the rollers and gears rotate smoothly. If not, grease the bushings and gears. Check for broken gears and replace if any.
C210	**Drive motor problem** • LOCK ALM signal remains high for 1 s, 1 s after the drive motor has turned on.	Poor contact in the drive motor connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective drive motor rotation control circuit.	Replace the drive motor.

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C310	**Scanner carriage problem** • The home position is not correct when the power is turned on or at the start of copying using the bypass table.	Defective scanner home position switch.	Replace the scanner home position switch.
		Defective main PCB or scanner motor PCB.	Replace the main PCB or scanner motor PCB and check for correct operation.
		Defective scanner motor.	Replace the scanner motor.
C400	**Polygon motor synchronization problem** • The polygon motor does not reach the stable speed within 15 s of the polygon motor remote signal turning on.	Poor contact in the polygon motor connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective polygon motor.	Replace the LSU.
		Defective power source PCB.	Check if 24 V DC is supplied to CN16-5 on the engine PCB. If not, replace the power source PCB.
		Defective engine PCB.	Check if 24 V DC is output from CN15-1 on the engine PCB. If not, replace the engine PCB.
C401	**Polygon motor steady-state problem** • The polygon motor rotation is not stable for 600 ms after the polygon motor rotation has been stabilized.	Poor contact in the polygon motor connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective polygon motor.	Replace the LSU.
		Defective power source PCB.	Check if 24 V DC is supplied to CN16-5 on the engine PCB. If not, replace the power source PCB.
		Defective engine PCB.	Check if 24 V DC is output from CN15-1 on the engine PCB. If not, replace the engine PCB.
C420	**BD steady-state problem** • The VTC detects a BD error for 600 ms after the polygon motor rotation has been stabilized.	Defective laser diode.	Replace the LSU.
		Defective polygon motor.	Replace the LSU.
		Defective main PCB.	Replace the main PCB.
C510	**Main charger problem** • MC ALM signal is detected continuously for 400 ms when MC REM signal is turned on.	Defective high-voltage transformer PCB.	Replace the high-voltage transformer PCB.
		Leakage during main charging.	Check and clean the main charger assembly.

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C231	**Large paper deck left lift motor problem** When the large paper deck of the copier is closed, large paper deck level switch 2 does not turn on within 30 s of the large paper deck left lift motor turning on. During copying, large paper deck level switch 2 does not turn on within 200 ms of the large paper deck left lift motor turning on.	Defective large paper deck level switch 2.	Check if CN9-B6 on the engine PCB goes low when large paper deck level switch 2 is turned on. If not, replace large paper deck level switch 2.
		Poor contact in the large paper deck level switch 2 connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
C242	**Upper lift motor problem** • When the upper cassette is inserted, the upper lift limit switch does not turn on within 4.5 s of the upper lift motor turning on. • During copying, the upper lift limit switch does not turn on within 200 ms of the upper lift motor turning on.	Broken gears or couplings of the upper lift motor.	Replace the upper lift motor.
		Defective upper lift motor.	Check for continuity across the coil. If none, replace the upper lift motor.
		Poor contact in the upper lift motor connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective upper lift limit switch.	Check if CN8-9 on the engine PCB goes low when the upper lift limit switch is turned on. If not, replace the upper lift limit switch.
		Poor contact in the upper lift limit switch connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
C243	**Lower lift motor problem** • When the lower cassette is inserted, the lower lift limit switch does not turn on within 4.5 s of the lower lift motor turning on. • During copying, the lower lift limit switch does not turn on within 200 ms of the lower lift motor turning on.	Broken gears or couplings of the lower lift motor.	Replace the lower lift motor.
		Defective lower lift motor.	Check for continuity across the coil. If none, replace the lower lift motor.
		Poor contact in the lower lift motor connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective lower lift limit switch.	Check if CN8-10 on the engine PCB goes low when the lower lift limit switch is turned on. If not, replace the lower lift limit switch.
		Poor contact in the lower lift limit switch connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
C310	**Scanner carriage problem** • The home position is not correct when the power is turned on or at the start of copying using the bypass table.	Poor contact in the connector terminals.	Check the connection of connector CN14 on the main PCB and the continuity across the connector terminals. Repair or replace if necessary.

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C610	**Broken fixing heater wire** • The fixing temperature does not increase for 40 s after the fixing heaters have been turned on for warming up. • The fixing temperature remains below 50°C/122°F for 10 s continuously after the fixing heaters have been turned on during stabilization.	Fixing unit heater M or S installed incorrectly.	Check and reinstall if necessary.
		Broken fixing unit heater M or S wire.	Check for continuity. If none, replace the fixing unit heater M or S.
C620	**Abnormally low fixing unit thermistor temperature** • The fixing temperature remains below 120°C/248°F for 10 s.	Poor contact in the fixing unit thermistor connector terminals.	Check the connection of connector CN5-12 on the engine PCB and the continuity across the connector terminals. Repair or replace if necessary.
		Broken fixing unit thermistor wire.	Measure the resistance. If it is ∞ Ω, replace the fixing unit thermistor.
		Fixing unit thermistor installed incorrectly.	Check and reinstall if necessary.
		Fixing unit thermostat triggered.	Check for continuity. If none, replace the fixing unit thermostat.
		Fixing unit heater M or S installed incorrectly.	Check and reinstall if necessary.
		Broken fixing unit heater M or S wire.	Check for continuity. If none, replace the fixing unit heater M or S.
C630	**Abnormally high fixing unit thermistor temperature** • The fixing temperature exceeds 230°C/446°F for 10 s. • The fixing unit high temperature detection circuit on the engine PCB detects an abnormally high temperature.	Shorted fixing unit thermistor.	Measure the resistance. If it is 0 Ω, replace the fixing unit thermistor.
		Broken fixing unit heater control circuit on the power source PCB.	Replace the power source PCB.
C640	**Zero-crossing signal problem** • The main PCB does not detect the zero-crossing signal (Z CROSS SIG) for the time specified below. At power-on: 3 s Others: 5 s	Poor contact in the connector terminals.	Check the connection of connectors CN5-5 on the main PCB and CN2-7 on the power source PCB, and the continuity across the connector terminals. Repair or replace if necessary.
		Defective power source PCB.	Check if the zero-crossing signal is output from CN2-7 on the power source PCB. If not, replace the power source PCB.
		Defective main PCB.	Replace the main PCB if C640 is detected while CN2-7 on the power source PCB outputs the zero-crossing signal.
C650	**Broken fixing unit thermistor wire** The fixing temperature remains at 0°C/32°F for 30 s continuously when the fixing heater is on.	Poor contact in the fixing unit thermistor connector terminals.	Check the connection of connector CN5-12 on the engine PCB and the continuity across the connector terminals. Repair or replace if necessary.

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C511	**Transfer charger belt high-voltage problem** • TB ALM signal is detected continuously for 400 ms when TB REM signal is turned on.	Defective transfer charger belt bias PCB.	Replace the high-voltage transformer PCB.
		Leakage during transfer charger belt.	Check and clean the transfer charger belt.
C550	**Drum surface potential sensor problem 1** The sensor output is 0.5 V or less when MC REM signal is turned on.	Poor contact in the drum surface potential sensor connector theminals.	Check the connection of connector CN7 on the engine PCB and the continuity across the connector terminals. Repair or replace if necessary.
		Defective drum surface potential sensor.	Check if 24 V DC is output from CN7-8 on the engine PCB. If it is, replace the drum surface potential sensor.
		Defective engine PCB.	Check if 24 V DC is output from CN7-8 on the engine PCB. If not, replace the engine PCB.
		Defective power source PCB.	Check if 24 V DC is supplied to CN10-5 on the engine PCB. If not, replace the power source PCB.
C551	**Drum surface potential sensor problem 2** The sensor output is 4.5 V or more when the MC REM signal is turned on.	Defective drum surface potential sensor.	Replace the drum surface potential sensor.
C560	**Potential problem 1** Maximizing the grid output cannot set the potential.	Deteriorated main charger.	Check the main charger wire and replace it if necessary.
		Grid or main charger shield is dirty.	Clean the grid or main charger shield if necessary.
		Defective high voltage transformer PCB.	Replace the high voltage transformer PCB.
		Defective engine PCB.	Replace the engine PCB.
C561	**Potential problem 2** Minimizing the grid output cannot set the potential.	Defective high voltage transformer PCB.	Replace the high voltage transformer PCB.
C610	**Broken fixing heater wire** • The fixing temperature does not increase for 40 s after the fixing heaters have been turned on for warming up. • The fixing temperature remains below 50°C/122°F for 10 s continuously after the fixing heaters have been turned on during stabilization.	Poor contact in the fixing unit thermistor connector terminals.	Check the connection of connector CN5-12 on the engine PCB and the continuity across the connector terminals. Repair or replace if necessary.
		Fixing unit thermistor installed incorrectly.	Check and reinstall if necessary.
		Fixing unit thermostat triggered.	Check for continuity. If none, replace the fixing unit thermostat.

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C750	**Toner hopper problem** Toner level is not detected when toner empty is detected.	Defective toner level sensor.	Replace the toner level sensor.
		Poor contact in the toner level sensor connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
C801	**Finisher* paper conveying motor problem** • The paper conveying motor lockup signal is detected for 0.5 s or longer.	The paper conveying motor connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		The paper conveying motor malfunctions.	Replace the paper conveying motor and check for correct operation.
		Defective finisher main PCB.	Replace the finisher main PCB and check for correct operation.
C803	**Finisher* paper conveying belt problem** • An on-to-off or off-to-on state change of the paper conveying belt home position sensor is not detected within 2 s of the paper conveying belt clutch turning on.	The paper conveying belt is out of phase.	Adjust the paper conveying belt so that it is in phase and check for correct operation.
		The paper conveying belt clutch malfunctions.	Replace the paper conveying belt clutch and check for correct operation.
		The paper conveying belt home position sensor malfunctions.	Replace the paper conveying belt home position sensor and check for correct operation.
		The paper conveying belt home position sensor connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		The internal tray is incorrectly inserted.	Check whether the internal tray unit or front cover catches are damaged.
C814	**Finisher* tray elevation motor problem** • The sort tray is not detected in the home position within 30 s of the start of the tray elevation motor rotation.	The tray elevation motor connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		The tray elevation motor malfunctions.	Replace the tray elevation motor and check for correct operation.
		Defective finisher main PCB.	Replace the finisher main PCB and check for correct operation.

*: Optional

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C650	**Broken fixing unit thermistor wire** The fixing temperature remains at 0°C/32°F for 30 s continuously when the fixing heater is on.	Broken fixing unit thermistor wire.	Measure the resistance. If it is ∞ Ω, replace the fixing unit thermistor.
C710	**Toner sensor problem** • The sensor output voltage is outside the range of 0.5 to 4.5 V during copying or in maintenance item U130. • The toner sensor control voltage cannot be set within the range in maintenance item U130.	Defective toner sensor.	Replace the toner sensor.
		Poor contact in the toner sensor connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Developer problem.	Replace the developer.
C720	**Broken drum thermistor wire** The drum thermistor input voltage is 4.5 V or more when the front cover is closed.	Broken drum thermistor wire.	Measure the resistance. If it is ∞ Ω, replace the drum thermistor.
		Poor contact in the drum thermistor connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
C721	**Shorted drum thermistor** The drum thermistor input voltage is 1.2 V or less when the front cover is closed.	Broken drum thermistor wire.	Measure the resistance. If it is 0 Ω, replace the drum thermistor.
		Defective main PCB.	Replace the main PCB and check for correct operation.
C722	**Broken drum heater wire** The drum temperature does not change within 5 minutes of the drum heater turning on.	Broken drum heater wire.	Check for continuity within the drum heater. If none, replace the drum heater.
		Poor contact in the drum heater connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective power source PCB.	Check if the drum heater turns on when CN16-9 on the engine PCB goes low. If not, replace the power source PCB.
C730	**Broken external temperature thermistor wire** • The input voltage is above 4.5 V.	Poor contact in the humidity sensor PCB connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective external temperature thermistor.	Replace the humidity sensor PCB.
C731	**Short-circuited external temperature thermistor** • The input voltage is below 0.5 V.	Poor contact in the humidity sensor PCB connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective external temperature thermistor.	Replace the humidity sensor PCB.

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C822	**Finisher* rear stapler problem** • The rear stapler home position sensor does not change state from non-detection to detection within 0.2 s of the start of rear stapler motor counterclockwise (forward) rotation. • During initialization, the rear stapler home position sensor does not change state from non-detection to detection within 0.6 s of the start of rear stapler motor clockwise (reverse) rotation.	The rear stapler connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		The rear stapler malfunctions. a) The rear stapler is blocked with a staple. b) The rear stapler is broken.	a) Remove the rear stapler cartridge, and check the cartridge and the stapling section of the stapler. b) Replace the rear stapler and check for correct operation.
		Defective finisher main PCB.	Replace the finisher main PCB and check for correct operation.
C830	**Booklet stitcher* shutter unit error**	A shutter unit error is detected.	See the booklet stitcher service manual.
C831	**Booklet stitcher* paper ejection motor problem**	A problem is detected with the paper ejection motor.	See the booklet stitcher service manual.
C832	**Booklet stitcher* elevation motor problem**	A problem is detected with the elevation motor.	See the booklet stitcher service manual.
C833	**Booklet stitcher* jog motor problem**	A problem is detected with the jog motor.	See the booklet stitcher service manual.
C834	**Booklet stitcher* staple motor problem**	A problem is detected with the staple motor.	See the booklet stitcher service manual.
C835	**Booklet stitcher* stapler unit shift motor problem**	A problem is detected with the stapler unit shift motor.	See the booklet stitcher service manual.
C836	**Booklet stitcher* stack level detection sensor problem**	A problem is detected with the stack level detection sensor.	See the booklet stitcher service manual.
C837	**Booklet stitcher* punch motor problem**	A problem is detected with the punch motor.	See the booklet stitcher service manual.
C838	**Booklet stitcher* punch shift motor problem**	A problem is detected with the punch shift motor.	See the booklet stitcher service manual.
C839	**Booklet stitcher* swing motor problem**	A problem is detected with the swing motor.	See the booklet stitcher service manual.
C840	**Booklet stitcher* backup RAM data problem**	A backup RAM data error is detected.	See the booklet stitcher service manual.

*: Optional

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C817	**Finisher* front jogger motor problem** • While the front jogger is not detected in the home position, the front jogger home position sensor does not detect the jogger within 1.5 s of the start of front jogger motor clockwise rotation. • After the front jogger is detected in the home position, the front jogger home position sensor still detects the jogger within 0.5 s of the start of front jogger motor counterclockwise rotation.	The front jogger motor connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		The front jogger motor malfunctions.	Replace the front jogger motor and check for correct operation.
		The front jogger motor home position sensor connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		The front jogger motor home position sensor malfunctions.	Replace the front jogger home position sensor and check for correct operation.
		Defective finisher main PCB.	Replace the finisher main PCB and check for correct operation.
C818	**Finisher* rear jogger motor problem** • While the rear jogger is not detected in the home position, the rear jogger home position sensor does not detect the jogger within 1.5 s of the start of rear jogger motor clockwise rotation. • After the rear jogger is detected in the home position, the rear jogger home position sensor still detects the jogger within 0.5 s of the start of rear jogger motor counterclockwise rotation.	The rear jogger motor connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		The rear jogger motor malfunctions.	Replace the rear jogger motor and check for correct operation.
		The rear jogger motor home position sensor connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		The rear jogger motor home position sensor malfunctions.	Replace the rear jogger home position sensor and check for correct operation.
		Defective finisher main PCB.	Replace the finisher main PCB and check for correct operation.
C821	**Finisher* front stapler problem** • The front stapler home position sensor does not change state from non-detection to detection within 0.2 s of the start of front stapler motor counterclockwise (forward) rotation. • During initialization, the front stapler home position sensor does not change state from non-detection to detection within 0.6 s of the start of front stapler motor clockwise (reverse) rotation.	The front stapler connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		The front stapler malfunctions. a) The front stapler is blocked with a staple. b) The front stapler is broken.	a) Remove the front stapler cartridge, and check the cartridge and the stapling section of the stapler. b) Replace the front stapler and check for correct operation.
		Defective finisher main PCB.	Replace the finisher main PCB and check for correct operation.

*: Optional

1-5-3 Image formation problems

(1) No image appears (entirely white).



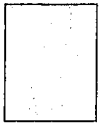
See page 1-5-37

(2) No image appears (entirely black).



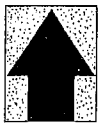
See page 1-5-37

(3) Image is too light.



See page 1-5-38

(4) Background is visible.



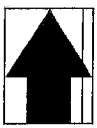
See page 1-5-38

(5) A white line appears longitudinally.



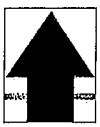
See page 1-5-38

(6) A black line appears longitudinally.



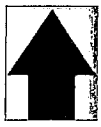
See page 1-5-39

(7) A black line appears laterally.



See page 1-5-39

(8) One side of the copy image is darker than the other.



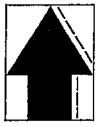
See page 1-5-39

(9) Black dots appear on the image.



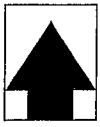
See page 1-5-40

(10) Image is blurred.



See page 1-5-40

(11) The leading edge of the image is consistently misaligned with the original.



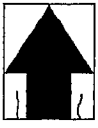
See page 1-5-40

(12) The leading edge of the image is sporadically misaligned with the original.



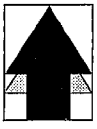
See page 1-5-41

(13) Paper creases.



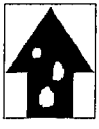
See page 1-5-41

(14) Offset occurs.



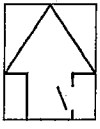
See page 1-5-41

(15) Image is partly missing.



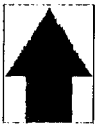
See page 1-5-42

(16) Fixing is poor.



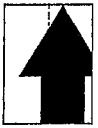
See page 1-5-42

(17) Image is out of focus.



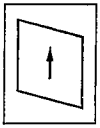
See page 1-5-42

(18) Image center does not align with the original center.



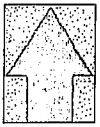
See page 1-5-42

(19) Image is not square.



See page 1-5-43

(20) Image contrast is low (carrier scattering).



See page 1-5-43

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C841	**Booklet stitcher* punch unit backup RAM data problem**	An error is detected in the punch unit backup RAM data.	See the booklet stitcher service manual.
C842	**Booklet stitcher* positioning plate motor problem**	A problem is detected with the saddle positioning plate motor.	See the booklet stitcher service manual.
C843	**Booklet stitcher* folding motor problem**	A problem is detected with the saddle folding motor.	See the booklet stitcher service manual.
C844	**Booklet stitcher* guide motor problem**	A problem is detected with the saddle guide motor.	See the booklet stitcher service manual.
C845	**Booklet stitcher* jog motor problem**	A problem is detected with the saddle jog motor.	See the booklet stitcher service manual.
C846	**Booklet stitcher* rear staple motor problem**	A problem is detected with the saddle rear staple motor.	See the booklet stitcher service manual.
C847	**Booklet stitcher* front staple motor problem**	A problem is detected with the saddle front staple motor.	See the booklet stitcher service manual.
C848	**Booklet stitcher* thrust motor problem**	A problem is detected with the saddle thrust motor.	See the booklet stitcher service manual.
C849	**Booklet stitcher* communication error**	A communication error is detected in the saddle.	See the booklet stitcher service manual.
C850	**Mailbox* drive motor problem** • While the mailbox drive motor is driving, synchronization signals do not synchronize continually for 464 ms (motor lockup).	Defective mailbox drive motor or mailbox main PCB.	Run a simulation of the mailbox (See the mailbox service manual). If there is any problem, replace the mailbox drive motor or the mailbox main PCB and check for correct operation.

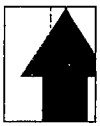
*: Optional

(21) When the large paper deck is used, the center of the original image and that of the copy image do not align.



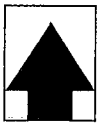
See page 1-5-43

(22) There is a regular error between the centers of the original and copy image when the SRDF is used.



See page 1-5-44

(23) There is a regular error between the leading edges of the original and copy image when the SRDF is used.



See page 1-5-44

(2) Maintenance mode item list

Section	Item No.	Maintenance item contents	Initial setting*
General	U000	Outputting an own-status report	—
	U001	Exiting the maintenance mode	—
	U003	Setting the service telephone number	**********
	U004	Setting the machine number	000000
	U005	Copying without paper	—
	U008	Outputting and setting the machine information	—
	U019	Displaying the ROM version	—
Initialization	U020	Initializing all data	—
	U021	Initializing memories	—
	U022	Initializing backup data	—
	U024	Formatting the HDD	—
Drive, paper feed, paper conveying and cooling system	U030	Checking motor operation	—
	U031	Checking switches for paper conveying	—
	U032	Checking clutch operation	—
	U033	Checking solenoid operation	—
	U034	Adjusting the print start timing Adjusting leading edge registration Adjusting leading edge registration (second face) Adjusting the center line of image printing	 0 0 0
	U035	Setting folio size Length Width	 330 210
	U036	Setting envelope size Length Width	 242 162
	U037	Checking fan motor operation Optical section fan motor Cooling fan motor Fixing unit fan motor Main charger fan motor LSU fan motor Duplex fan motor Eject fan motor Blow fan motors 1 and 2	 — — — — — — — —
	U050	Setting the switchback drive Setting duplex forwarding clutch-off timing Setting duplex forwarding clutch-off timing (for 11" × 17" copy paper) Setting duplex reversing clutch-on timing Setting duplex reversing clutch-off timing	 100 75 50 120
	U051	Adjusting the amount of slack in the paper before registration Cassette feed Bypass feed Duplex feed	 +10 –10 +10
	U053	Performing fine adjustment of the motor speed Drive motor/paper conveying motor	 5/5
Optical	U060	Adjusting the scanner input properties Text/text and photo/photo mode	 12
	U061	Turning the exposure lamp on	—
	U063	Adjusting the shading position	0
	U065	Adjusting the scanner magnification Main scanning direction/auxiliary scanning direction	 0/0
	U066	Adjusting the scanner leading edge registration	–2
	U067	Adjusting the scanner center line	–2
	U070	Adjusting the DF magnification	–10

* Initial setting for executing maintenance item U020

Section	Item No.	Maintenance item contents	Initial setting*
Optical	U071	Adjusting the DF scanning timing Adjusting the DF leading edge registration Adjusting the DF trailing edge registration	 10 – 15
	U072	Adjusting the DF center line Center line for the simplex copy mode Center line for the front face in duplex copy mode Center line for the reverse face in duplex copy mode	 – 8 – 8 – 7
	U073	Checking scanner operation	—
	U074	Adjusting the DF automatically	—
	U080	Adjusting exposure in toner economy mode	– 6
	U088	Setting the input filter (moiré reduction mode)	OFF
	U089	Outputting a PG pattern	—
	U091	Checking shading	—
	U092	Adjusting the scanner automatically	—
	U093	Setting the exposure density gradient Text/text and photo/photo mode	 0
	U099	Checking and setting the original size detection sensor	170/50/0/0
High voltage	U100	Setting the surface potential	160
	U101	Setting high voltages Transfer voltage	 150/150
	U102	Setting the cleaning interval for the transfer charger	3
	U110	Checking/clearing the drum count	0
	U111	Checking/clearing the drum drive time	—
Developing	U130	Initial setting for the developer	—
	U131	Setting the toner sensor control voltage	128
	U132	Replenishing toner forcibly	—
	U135	Checking toner motor operation	—
	U136	Turning the toner level detection function on/off	ON
	U137	Checking the toner level detection sensor	—
	U155	Displaying the toner sensor output	—
	U156	Changing the toner control level Toner control level Toner empty level Toner control reference voltage for initial developer setting	 128 30 102
	U157	Checking/clearing the developing drive time	0
	U158	Checking/clearing the developing count	0
Fixing and cleaning	U160	Applying toner to the cleaning blade	—
	U161	Setting the fixing control temperature Normal stabilization control temperature Primary stabilization temperature Secondary stabilization temperature Aging time after secondary stabilization	 185 165 185 90
	U162	Stabilizing fixing forcibly	—
	U194	Setting the fixing web drive	30
	U196	Turning the fixing heater on	—
	U198	Setting the fixing phase control	ON (inch) OFF (metric)
Operation panel and support equipment	U200	Turning all LEDs on	—
	U201	Initializing the touch panel	—
	U202	Setting the MMD host monitoring system	—
	U203	Operating DF separately	—
	U204	Setting the presence or absence of a key card or key counter	OFF
	U206	Setting the presence or absence of the coin vender	OFF

* Initial setting for executing maintenance item U020

Section	Item No.	Maintenance item contents	Initial setting*
Operation panel and support equipment	U208	Setting the deck lift operation	Side
	U209	Setting date and time	—
	U238	Checking the operation of the mailbox solenoids and motors	—
	U239	Checking the mailbox switches	—
	U240	Checking the operation of the finisher	—
	U241	Checking the finisher switches	—
	U243	Checking the operation of the DF motors, clutches and solenoids	—
	U244	Checking the DF switches	—
	U245	Checking messages	—
	U247	Checking the operation of the side deck	—
	U248	Setting the paper eject device • Adjustment of the amount of slack in the paper in punch mode • Punch limit • Punch-hole scrap count • Booklet stitcher stapling position adjustment • Mailbox operation check	0 75000 0 0 1
Mode setting	U250	Setting the maintenance cycle	300
	U251	Checking/clearing the maintenance count	0
	U252	Setting the destination	INCH
	U253	Switching between double and single counts	Double
	U254	Turning auto start function on/off	ON
	U255	Setting auto clear time	90
	U256	Turning auto preheat/energy saver function on/off	ON
	U258	Switching copy operation at toner empty detection Number of copies after turning off of the toner level sensor before indicating toner empty Copy operation after toner empty detection	1000 Single, 5
	U260	Changing the copy count timing	EJECT
	U263	Setting DF copy ejection orientation	Face down
	U264	Setting date display order	Month-day-year (inch) Day-month-year (metric)
	U265	Setting OEM purchaser code	0
	U266	Setting the number of days after which to automatically delete documents	7
	U330	Sets the number of copies for switching the copy eject tray in the finisher	100
	U331	Switching the paper ejection mode	Face Up
	U332	Setting the size conversion factor	—
	U333	Setting the number of digits of ID-code	7 dignits (inch) 4 dignits (metric)
	U334	Setting the ejection method in the booklet sticher	1 BIN
	U335	Setting the drum heater control	ON 1
	U336	Setting the HDD type	0
	U337	Setting the paper size for the side deck	—
	U338	Setting the transmission capacity limit for e-mail	Little
	U340	Setting the job build mode	NOMAL
	U343	Switching between duplex/simplex copy mode	OFF
	U344	Setting preheat/energy saver mode	enagy star
	U345	Setting the value for maintenance due indication	0
	U347	Setting auto cassette size detection	ON (inch) OFF (metric)
	U348	Setting the copy density adjustment range	Special Area
	U350	Setting the ID-code error output	OFF

* Initial setting for executing maintenance item U020

Section	Item No.	Maintenance item contents	Initial setting*
Mode setting	U402	Adjusting margins in image printing	23/30/28/40/44
	U403	Adjusting margins for reading an original on the contact glass	4/6/6/6
	U404	Adjusting margins for DF original reading	4/8/4/6
	U407	Adjusting the printing timing for the original on the contact glass	0
Others	U901	Checking/clearing copy counts by paper feed locations	0
	U903	Checking/clearing the paper jam counts	0/0
	U904	Checking/clearing the service call counts	0/0
	U905	Checking/clearing counts by optional devices	0/0
	U906	Resetting partial operation control	—
	U907	Checking and resetting the count value on each ejection location	0/0/0
	U908	Checking the count value of the electronic counter	0
	U909	Checking/clearing the fixing web count	0
	U910	Clearing the black ratio data	—
	U911	Checking/clearing copy counts by paper sizes	0
	U990	Checking/clearing the time for the exposure lamp to light	0
	U991	Checking/clearing the scanner count	0
	U992	Checking/clearing the printer count	0

* Initial setting for executing maintenance item U020

(3) Contents of maintenance mode items

<table>
<tr><th>Maintenance item No.</th><th>Description</th></tr>
<tr><td>U000</td><td>
Outputting an own-status report

Description
Outputs lists of the current settings of the maintenance modes, and paper jam and service call occurrences.

Purpose
To check the current setting of the maintenance modes, or paper jam or service call occurrences.

Before initializing or replacing the backup RAM, output a list of the current settings of the maintenance modes to reenter the settings after initialization or replacement.

Method
① Press the start key. The screen for selecting an item is displayed.

② Select the item to be output. The selected item is displayed in reverse.
<table>
<tr><th>Display</th><th>Output list</th></tr>
<tr><td>MAINTENANCE</td><td>List of the current settings of the maintenance modes</td></tr>
<tr><td>JAM</td><td>List of the paper jam occurrences</td></tr>
<tr><td>SERVICE CALL</td><td>List of the service call occurrences</td></tr>
</table>
③ Press the start key or the interrupt key. The interrupt copy mode is entered and a list is output.
When A4/11" × 8½" paper is available, a report of this size is output. If not, specify the paper feed location.

When output is complete, the screen for selecting an item is displayed.

Completion
Press the stop/clear key at the screen for selecting an item. The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U001</td><td>
Exiting the maintenance mode

Description
Exits the maintenance mode and return to the normal copy mode.

Purpose
To exit the maintenance mode.

Method
Press the start key. The normal copy mode is entered.
</td></tr>
<tr><td>U003</td><td>
Setting the service telephone number

Description
Sets the telephone number to be displayed when a service call code is detected.

Purpose
To set the telephone number to call service when installing the machine.

Method
Press the start key. The currently set telephone number is displayed.

Setting
① Enter a telephone number (up to 15 digit) using the numeric keys.
To enter symbols such as hyphens and parentheses, select as required from the symbols displayed on the touch panel as shown below. To move the cursor, press either of the arrows in the bottom row.
<table>
<tr><td>*</td><td>#</td></tr>
<tr><td>(</td><td>)</td></tr>
<tr><td>—</td><td>(Space)</td></tr>
<tr><td>←</td><td>→</td></tr>
</table>
② Press the start key. The phone number is set, and the screen for selecting a maintenance item No. is displayed.

Completion
To exit the maintenance mode without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

Maintenance item No.	Description
U004	**Setting the machine number** **Description** Displays and changes the machine number. **Purpose** To check or set the machine number. **Method** Press the start key. The currently set machine number is displayed. **Setting** ① Enter the last six digits of the machine number using the numeric key. Do not enter the first two digits, 3 and 7. ② Press the start key. The machine number is set. **Completion** To exit the maintenance mode without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item No. is displayed.
U005	**Copying without paper** **Description** Simulates the copy operation without paper feed. **Purpose** To check the overall operation of the machine. **Method** ① Press the start key. The screen for selecting an item is displayed. ② Select the item to be operated. The selected item is displayed in reverse. Display: PPC — Operation: Only the copier operates. Display: PPC + DF — Operation: Both the copier and SRDF operate (continuous operation). ③ Press the interrupt key. The copy mode screen is displayed. ④ Set the operation conditions required on the copy mode screen. Changes in the following settings can be made. • Paper feed locations • Magnifications • Simplex or duplex copy modes • Number of copies: In simplex copy mode, continuous copying is performed when set to 999; in duplex copy mode, continuous copying is performed regardless of the setting. • Copy density • Keys on the operation panel other than the energy saver key ⑤ To control the paper feed pulley, remove all the paper in the cassettes, or the cassettes. With the paper present, the paper feed pulley does not operate. ⑥ Press the start key. The operation starts. Copy operation is simulated without paper under the set conditions. When operation is complete, the screen for selecting an item is displayed. ⑦ To stop continuous operation, press the stop/clear key. **Completion** Press the stop/clear key at the screen for selecting an item. The screen for selecting a maintenance item No. is displayed.

Maintenance Item No.	Description
U008	**Outputting and setting the machine information** **Description** Outputs the machine information report and sets the machine installation date. **Purpose** To save the data of the machine installation date and total counter value when installing the machine. **Start** Press the start key. The screen for selecting an item is displayed. Display: OUT PUT — Operation: Outputs the machine information report. Display: SET UP — Operation: Sets the machine installation date. **Method to output the machine information report** ① Select the item for outputting the machine information report. ② Press the start key to output the report. **Method to set the machine installation date** ① Select the item for setting the machine installation date. ② Press the start key to save the data of the installation date and total counter value at the time of installation. ③ Press the stop/clear key to return to the screen for selecting an item. **Completion** Press the stop/clear key at the screen for selecting an item. The screen for selecting a maintenance item No. is displayed.
U019	**Displaying the ROM version** **Description** Displays the part number of the ROM fitted to each PCB. **Purpose** To check the part number or to decide if the ROM version is new from the last digit of the number. **Method** ① Press the start key. The last six digits of the part number indicating the ROM version are displayed. Display: MAIN — Description: Main-Engine ROM Display: MMI — Description: Scanner MMI Display: FONT — Description: Font ROM Display: MEM1 — Description: Memory copy ROM IC **Completion** Press the stop/clear key. The screen for selecting a maintenance item No. is displayed.
U020	**Initializing all data** **Description** Initializes all the backup RAM on the main PCB to return to the original settings. **Purpose** Used when replacing the backup RAM on the main PCB. **Method** ① Press the start key. The screen for executing is displayed. ② Press EXECUTE on the touch panel. It is displayed in reverse. ③ Press the start key. All data in the backup RAM is initialized, and the original settings for USA models are set. When initialization is complete, the machine automatically returns to the same status as when the main switch is turned on. **Completion** To exit the maintenance mode without executing initialization, press the stop/clear key. The screen for selecting a maintenance item No. is displayed.

Maintenance item No.	Description
U021	**Initializing memories** **Description** Initializes the setting data other than that for adjustments due to variations between respective machines, i.e., settings for counters, service call code detection and modes. As a result, initializes the backup RAM according to the specifications depending on the destination selected in U252. **Purpose** Used to return the machine settings to the factory settings. **Method** ① Press the start key. The screen for executing is displayed. ② Press EXECUTE on the touch panel. It is displayed in reverse. ③ Press the start key. All data other than that for adjustments due to variations between machines is initialized. When initialization is complete, the machine automatically returns to the same status as when the main switch is turned on. **Completion** To exit the maintenance mode without executing initialization, press the stop/clear key. The screen for selecting a maintenance item No. is displayed.
U022	**Initializing backup data** **Description** Initializes only the data set for the optical section. **Purpose** To be executed after replacing the scanner unit. **Method** ① Press the start key. The screen for executing is displayed. ② Press SCANNER on the touch panel. EXECUTE is displayed. ③ Press EXECUTE on the touch panel. It is displayed in reverse. ④ Press the start key. The data for the optical section (U060 to 067, U088 to 099, U403 and U991) is initialized. **Completion** To exit the maintenance mode, press the stop/clear key. The screen for selecting a maintenance item No. is displayed.
U024	**Formatting the HDD** **Description** Formats the HDD. **Purpose** Used to initialize the HDD when it is replaced in the field. **Method** ① Press the start key. The screen for executing is displayed. ② Press EXECUTE on the touch panel. It is displayed in reverse. ③ Press the start key. The initialization of the HDD starts. The progress of the initialization is indicated in percentage (0 to 100%). When initialization is complete, the result is displayed. ④ Press the stop/clear key. The screen for selecting a maintenance item No. is displayed. **Completion** To exit the maintenance mode without executing initialization, press the stop/clear key. The screen for selecting a maintenance item No. is displayed.

Maintenance Item No.	Description
U030	**Checking motor operation** **Description** Drives each motor. **Purpose** To check the operation of each motor. **Method** ① Press the start key. The screen for selecting an item is displayed. ② Select the motor to be operated. The selected item is displayed in reverse and the operation starts. **Display** / **Operation** MAIN MOTOR: The drive motor operates and developing bias is applied. The paper conveying motor operates. FEED MOTOR: The paper feed motor operates. ③ To stop operation, press the stop/clear key. **Completion** Press the stop key after operation stops. The screen for selecting a maintenance item No. is displayed.
U031	**Checking switches for paper conveying** **Description** Displays the on-off status of each paper detection switch on the paper path. **Purpose** To check if the switches for paper conveying operate correctly. **Method** ① Press the start key. A list of the switches, the on-off status of which can be checked, are displayed. ② Turn each switch on and off manually to check the status. When the on-status of a switch is detected, that switch is displayed in reverse. **Display** / **Switches** FEEDA SW: Paper feed switch 1 (PFSW1) FEEDB SW: Paper feed switch 2 (PFSW2) FEEDC SW: Paper feed switch 3 (PFSW3) FEEDD SW: Paper feed switch 4 (PFSW4) FEEDE SW: Paper feed switch 5 (PFSW5) FEED SW: Feed switch (FSW) R SW: Registration switch (RSW) EJE SW: Eject switch (ESW) BRA SW: Feedshift switch (FSSW) REV SW: Switchback eject switch (SBESW) BRA3 SW: Duplex feedshift switch (DUPFSSW) DUP PESW: Duplex jam detection switch (DUPJSW) DUP1 SW: Duplex paper conveying switch 1 (DUPPCSW1) DUP2 SW: Duplex paper conveying switch 2 (DUPPCSW2) DUP3 SW: Duplex eject switch (DUPESW) **Completion** Press the stop/clear key. The screen for selecting a maintenance item No. is displayed.

Maintenance Item No.	Description
U032	**Checking clutch operation** **Description** Turns each clutch on. **Purpose** To check the operation of each clutch. **Method** ① Press the start key. The screen for selecting an item is displayed. ② Select the clutch to be operated. The selected item is displayed in reverse, and the clutch turns on for 1 s.

Display	Clutches
SB FEED	Bypass paper feed clutch (BYPPFCL)
SB LIFT	Bypass lift clutch (BYPLCL)
PF D	Upper paper feed clutch (PFCL-U)
PF E	Lower paper feed clutch (PFCL-L)
LCF BCL	Large paper deck conveying clutch (LPDCCL)
LCF P1CL	Large paper deck paper feed clutch 1 (LPDPFCL1)
LCF P2CL	Large paper deck paper feed clutch 2 (LPDPFCL2)
FEED B	Feed clutch 2 (FCL2)
FEED C	Feed clutch 3 (FCL3)
FEED D	Feed clutch 4 (FCL4)
FEED E	Feed clutch 5 (FCL5)
FEED	Feed clutch 1 (FCL1)

▲ ▼

Display	Clutches
REGIST	Registration clutch (RCL)
DUP FWD	Duplex forwarding clutch (DUPFWDCL)
DUP REV	Duplex reversing clutch (DUPREVCL)
TC BELT	Transfer charger belt release clutch (TCBRCL)

③ To turn each clutch on while a motor is driving, press the interrupt key before selecting the clutch. The drive motor, paper feed motor and paper conveying motor turn on, and the selected clutch remains on until the selected item is pressed.

If the upper or lower paper feed clutch is turned on while a motor is driving, paper is conveyed by the rotation of the paper feed pulley, resulting in a paper jam. Be sure to remove the paper cassettes before turning either of these clutches on.

④ To stop the motor drive, press the interrupt copy key.

Completion
Press the stop/clear key. The screen for selecting a maintenance item No. is displayed.

U033	**Checking solenoid operation** **Description** Turns each solenoid on. **Purpose** To check the operation of each solenoid. **Method** ① Press the start key. The screen for selecting an item is displayed. ② Select the solenoid to be operated. The selected item is displayed in reverse, and the solenoid turns on for 1 s.

Maintenance Item No.	Description
U033	

Display	Solenoids
BRANCH	Feedshift solenoid (FSSOL)
DUP FS	Duplex eject switching solenoid (DUPESSOL)
DUP PR	Duplex pressure release solenoid (DUPPRSOL)
FIX WEB	Fixing web solenoid (FWEBSOL)
MSW OFF	The main switch turns off.

MSW OFF is selected when the operation of the main switch is checked in auto shutoff mode.

Completion
Press the stop/clear key. The screen for selecting a maintenance item No. is displayed.

U034 — **Adjusting the print start timing**

Adjustment
See pages 1-6-17 and 19.

U035 — **Setting folio size**

Description
Changes the image area for copying onto folio size paper.

Purpose
To prevent the image at the trailing edge, or right or left side of the paper from not being copied by setting the actual size of the folio paper used.

Method
Press the start key. The screen for selecting an item is displayed.

Setting
① Select the item to be set. The selected item is displayed in reverse, and the current setting is displayed in the adjustment window.

② Change the setting using the Up/Down keys.

Display	Setting	Setting range	Initial setting
LENGTH DATA	Length	330 to 356 mm	330
WIDTH DATA	Width	220 to 220 mm	210

③ Press the start key. The value is set.

Completion
Press the stop/clear key. The screen for selecting a maintenance item No. is displayed.

U036 — **Setting envelope size**

Description
Changes the image area for printing onto an envelope when the optional printer unit is installed.

Purpose
To prevent the image at the trailing edge, or right or left side of the paper from not being printed by setting the actual size of the envelop used.

Method
Press the start key. The screen for selecting an item is displayed.

Setting
① Select the item to be set. The selected item is displayed in reverse, and the current setting is displayed in the adjustment window.

② Change the setting using the Up/Down keys.

Display	Setting	Setting range	Initial setting
LENGTH DATA	Length	162 to 242 mm	242
WIDTH DATA	Width	98 to 162 mm	162

③ Press the start key. The value is set.

Completion
Press the stop/clear key. The screen for selecting a maintenance item No. is displayed.

<table>
<tr><th>Maintenance Item No.</th><th>Description</th></tr>
<tr><td>U037</td><td>
Checking fan motor operation
Description
Energizes fan motors to turn them on.
Purpose
To check the operation of each fan motor.
Method
① Press the start key. The screen for selecting an item is displayed.
② Select the fan motor to be driven.
The selected fan motor is displayed in reverse, and operation starts.
<table>
<tr><th>Display</th><th>Fan motor</th></tr>
<tr><td>SCANNER</td><td>Optical section fan motor</td></tr>
<tr><td>COOL</td><td>Cooling fan motor</td></tr>
<tr><td>FIXING</td><td>Fixing unit fan motor</td></tr>
<tr><td>MC.</td><td>Main charger fan motor</td></tr>
<tr><td>LSU</td><td>LSU fan motor</td></tr>
<tr><td>DUPLEX</td><td>Duplex fan motor</td></tr>
<tr><td>EJECT</td><td>Eject fan motor</td></tr>
<tr><td>BLOW</td><td>Blow fan motors 1 and 2</td></tr>
</table>
③ To stop operation, press the stop/clear key.
Completion
Press the stop/clear key.
The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U050</td><td>
Setting the switchback drive
Adjustment
See page 1-6-68.
</td></tr>
<tr><td>U051</td><td>
Adjusting the amount of slack in the paper before registration
Adjustment
See page 1-6-21.
</td></tr>
</table>

Maintenance Item No.	Description
U053	**Performing fine adjustment of the motor speed**

Description
Performs fine adjustment of the speeds of the drive motor and paper conveying motor.

Purpose
Used to adjust the speed of the respective motors when the magnification in the auxiliary scanning direction is not correct after the motor is replaced.

Method
Press the start key. The screen for selecting an item is displayed.

Setting
① Select the item to be set. The selected item is displayed in reverse, and the current setting is displayed in the adjustment window.

② Change the setting using the Up/Down keys.

Display	Description	Setting range	Initial setting
MAIN MOTOR	Drive motor speed adjustment	0 to 14	5
CONV MOTOR	Paper conveying motor speed adjustment	0 to 14	5

Increasing the setting makes the motor speed faster and the image longer, and decreasing it makes the speed slower and the image shorter.

When the speed of a motor is changed, that of the other motor will also change to the same value.

③ Press the start key. The value is set.

Interrupt copy mode
While this maintenance item is being performed, a VTC pattern shown below is output in interrupt copy mode.

Correct values for an A3/11" x 17" output are:

Ⓐ = 150 mm

Ⓑ = 300 mm

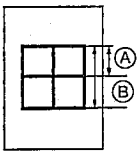


Figure 1-4-3

Adjustment
① Output an A3/11" x 17" VTC pattern in interrupt mode.

② Measure Ⓐ and Ⓑ on the VTC pattern (Figure 1-4-3), and perform the following adjustments if they are different from the correct sizes:

Ⓐ: Drive motor adjustment

Ⓑ: Paper conveying motor adjustment

Completion
Press the stop/clear key. The screen for selecting a maintenance item No. is displayed.

<table>
<tr><th>Maintenance item No.</th><th>Description</th></tr>
<tr><td>U060</td><td>
Adjusting the scanner input properties
Description
Adjusts the image scanning density in text, text and photo, or photo mode.
Purpose
Used when the entire image appears too dark or light in the specified mode.
Method
Press the start key. The screen for selecting an item is displayed.
Setting
① Change the setting using the Up/Down keys.
<table>
<tr><th>Display</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>IN γ adj:00</td><td>1 to 23</td><td>12</td></tr>
</table>
Increasing the setting makes the density lower, and decreasing it makes the density higher.
② Press the start key. The value is set.
Interrupt copy mode
While this maintenance item is being performed, copying from an original can be made in interrupt copy mode.
Completion
Press the stop/clear key. The screen for selecting a maintenance item No. is displayed.
Supplement
The following settings are also reset to the initial values by performing this maintenance item:
• Exposure density gradient set in maintenance mode (U093)
• Auto and manual exposure set in the copy default item of the copier management mode
</td></tr>
<tr><td>U061</td><td>
Turning the exposure lamp on
Description
Turns the exposure lamp on.
Purpose
To check the exposure lamp.
Method
① Press the start key. The screen for selecting an item is displayed.
② Press the start key. The exposure lamp lights.
③ To turn the exposure lamp off, press the stop/clear key.
Completion
Press the stop/clear key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U063</td><td>
Adjusting the shading position
Description
Changes the shading position.
Purpose
Used when white lines continue to appear longitudinally on the image after the shading plate is cleaned. This is due to flaws or stains inside the shading plate. To prevent this problem, the shading position should be changed so that shading is possible without being affected by the flaws or stains.
Method
① Press the start key. The screen for adjustment is displayed.
② Change the setting using the Up/Down keys.
<table>
<tr><th>Description</th><th>Setting range</th><th>Initial setting</th><th>Change in value per step</th></tr>
<tr><td>Shading position</td><td>–8 to +2</td><td>0</td><td>0.17 mm</td></tr>
</table>
Increasing the setting moves the shading position toward the machine right, and decreasing it moves the position toward the machine left.
③ Press the start key. The value is set.
Interrupt copy mode
While this maintenance item is being performed, copying from an original can be made in interrupt copy mode.
Completion
Press the stop/clear key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

Maintenance Item No.	Description
U065	**Adjusting the scanner magnification** **Adjustment** See pages 1-6-35 and 36.
U066	**Adjusting the scanner leading edge registration** **Adjustment** See page 1-6-38.
U067	**Adjusting the scanner center line** **Adjustment** See page 1-6-37.
U070	**Adjusting the DF magnification** **Adjustment** See page 1-6-70.
U071	**Adjusting the DF scanning timing** **Adjustment** See pages 1-6-72 and 73.
U072	**Adjusting the DF center line** **Adjustment** See page 1-6-71.
U073	**Checking scanner operation** **Description** Simulates the scanner operation under arbitrary conditions. **Purpose** To check scanner operation. **Method** ① Press the start key. The screen for selecting an item is displayed. ② Select the item to be changed. The selected item is displayed in reverse. ③ Change the setting using the Up/Down keys.

Display	Operating conditions	Setting range
ZOOM	ZOOM Magnification	25 to 400%
SIZE	Original size	See below.
LAMP	LAMP on and off of the exposure lamp	0 (off) or 1 (on)

Original sizes for each setting in SIZE

Setting	Original size	Setting	Original size
8	A4	42	A5R
9	B5	47	Folio
18	11" × 8½"	52	11" × 17"
36	A3	53	11" × 15"
39	B4	55	8½" × 14"
40	A4R	56	8½" × 11"
41	B5R	58	5½" × 8½"

④ Press the start key. Scanning starts under the selected conditions.

⑤ To stop operation, press the stop/clear key.

Completion
Press the stop/clear key when scanning stops. The screen for selecting a maintenance item No. is displayed.

Maintenance Item No.	Description
U074	**Adjusting the DF automatically** **Description** Makes auto adjustments for the DF scanning section given below using the specified original. • Adjusting the DF magnification (U070) • Adjusting the DF scanning timing (U071) • Adjusting the DF center line (U072) • Adjusting margins for DF original reading (U404) When this maintenance item is performed, the settings in U070, U071, U072 and U404 are also changed. **Purpose** Used to make auto adjustments for the DF scanning section. **Method** ① Place the specified original (P/N:2AC68241) on the DF. ② Press the start key. Auto adjustment starts. When adjustment is complete, each adjusted value is displayed.

Display	Description
CONVEY SPEED	DF magnification in the auxiliary scanning direction
LEAD EDGE ADJ	DF leading edge registration
TRAIL EDGE ADJ	DF trailing edge registration
ADJUST DATA ┬ DATA (simplex)	DF original center line
├DATA (duplex, front)	
└DATA (duplex, back)	
DF A MARGIN.	DF scanning margin (A side)
DF B MARGIN.	DF scanning margin (B side)
DF C MARGIN.	DF scanning margin (C side)
DF D MARGIN.	DF scanning margin (D side)

If a problem occurs during auto adjustment, an error code is displayed and operation stops. Should this happen, determine the details of the problem and either repeat the procedure from the beginning, or adjust the remaining items manually by running the corresponding maintenance items.

Completion

Press the stop/clear key after auto adjustment is complete. The screen for selecting a maintenance item is displayed.

If the stop/clear key is pressed during auto adjustment, adjustment stops and no settings are changed.

Maintenance Item No.	Description
U080	**Adjusting exposure in toner economy mode** **Description** Adjusts the image density in the eco-print mode. **Purpose** To increase or decrease the image density in the eco-print mode. **Method** Press the start key. The screen for execution is displayed. **Setting** ① Adjust the preset value using the Up/Down keys. * Since this value is related to the automatic exposure adjustment in the copy initial setting mode, ensure that the exposure step of the automatic exposure is at the center before adjusting. Display: Exposure in toner economy mode; Setting range: –12 to 0; Initial value: –6 ② Press the start key. The setting is set, and the screen for maintenance item No. is displayed. **Completion** Press the stop/clear key when scanning stops. The screen for selecting a maintenance item No. is displayed.
U088	**Setting the input filter (moiré reduction mode)** **Description** Turns moiré reduction mode on and off by switching the input filter on and off. **Purpose** Used to prevent regular density unevenness (moiré) on halftone image areas of the copy image in text mode and text and photo mode. Such moiré is more likely to appear when an enlargement or reduction copy is made in text mode from an original containing large halftone image areas. **Method** Press the start key. The screen for selecting an item is displayed. **Setting** ① Select ON or OFF. The selected item is displayed in reverse. Display: ON — Description: Moiré reduction mode Display: OFF — Description: Normal copy mode Initial setting: OFF If moiré on the copy image is significant, change the setting to ON. Note that when the moiré reduction mode is turned on, the resolution may be slightly reduced. ② Press the start key. The value is set. The screen for selecting a maintenance item No. is displayed. **Completion** To exit the maintenance mode without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item No. is displayed.

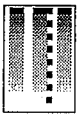
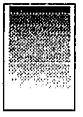
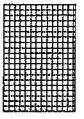
Maintenance item No.	Description
U089	**Outputting a PG pattern**

Description
Selects and outputs the PG pattern created in the copier.

Purpose
When performing respective image printing adjustments, used to check the machine status apart from that of the scanner with a non-scanned output PG pattern.

Method
① Press the start key. The screen for selecting an item is displayed.

② Select the PG pattern to be output.

Display	PG pattern to be output	Purpose
GRAYSCALE		To check the laser scanner unit engine output characteristics.
MONO-LEVEL		To check the drum quality.
256-LEVEL		To check resolution reproducibility in printing.
1 DOT-LINE		To check fine line reproducibility. To adjust the position of the laser scanner unit (lateral squareness)

③ To change the output conditions for MONO-LEVEL, change the setting using The Up/Down keys.

Description	Setting range	Initial setting
Output conditions for MONO-LEVEL	0 to 255	0

Increasing the setting makes the density higher, and decreasing it makes the density lower. Entirely white paper is output when the setting is 0, and entirely black paper is output when it is 255.

④ Press the interrupt key. The screen for copy mode is displayed.

⑤ Press the start key. A PG pattern is output.

Completion
Press the stop/clear key at the screen for selecting an item. The screen for selecting a maintenance item No. is displayed.

Maintenance Item No.	Description
U091	**Checking shading**

Description
Performs scanning under the same conditions as before and after shading is performed, displaying the original scanning values at nine points of the contact glass on the touch panel.

Purpose
To check the change in original scanning values before and after shading. The results may be used to decide the causes for fixing unevenness (uneven density) of the gray area of an image: either due to optical (shading or CCD) or other problems.

Also to check the causes for a white or black line appearing longitudinally.

Method
① Press the start key. The screen for selecting an item is displayed.

② Select the item to be operated. The selected item is displayed in reverse.

Display	Operation
SHD BEFORE	Performs scanning before shading and displays the result.
SHD AFTER	Performs scanning after shading and displays the result.

③ Press the start key. Operation starts.

Scanning is performed under the selected conditions and the result is displayed.

When scanning is performed before shading, the scan value at the machine center should be slightly different from those at the machine front and rear. When scanning is performed after shading, there should be no difference between respective values. Any differences between the values at machine front and rear indicates that scanner problem causes the fixing unevenness.

If the displayed results indicate no shading problems, the fixing unevenness (uneven copy density) is caused by factors other than in the scanner section (shading or CCD).

If a black line appears, the cause may assumed to be based on the results of the scanning operation before shading: if a white line appears, they may be assumed based on the results of the scanning operation after shading. Note that depending on the thickness and location of the black or white line, it may not be possible to use this method to determine the cause. This is because the displayed values obtained from scanning at the limit of nine points are insufficient to provide significant information.

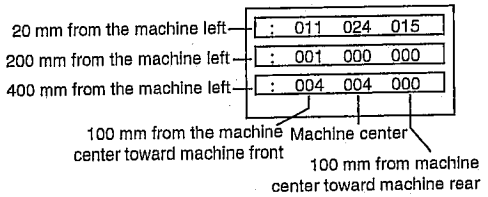


Figure 1-4-4

④ Press the stop/clear key. The screen for selecting an item is displayed.

Completion
Press the stop/clear key. The screen for entering a maintenance item is displayed.

Maintenance item No.	Description
U092	**Adjusting the scanner automatically** **Description** Makes auto scanner adjustments in the order below using the specified original. • Adjusting the scanner center line (U067) • Adjusting the scanner magnification in the main scanning direction (U065) • Adjusting the scanner leading edge registration (U066) • Adjusting scanner magnification in the auxiliary direction (U065) • Adjusting margins for reading an original on the contact glass (U403) When this maintenance item is performed, the settings in U065, U066 and U067 are also changed. **Purpose** Used to make respective auto adjustments for the scanner. **Method** ① Place the specified original (P/N: 2AC68241) on the contact glass. ② Press the start key. The screen for executing is displayed. ③ Press the start key. Auto adjustment starts. When adjustment is complete, each adjusted value is displayed.

Display	Description
SCAN CENTER ADJ	Scanner center line
MAIN SCAN ADJ	Scanner magnification in the main scanning direction
SCAN TIMING ADJ	Scanner leading registration
SUB SCAN ADJ	Scanner magnification in the auxiliary direction
SCAN A MARGIN	Scanner reading margin (A side)
SCAN B MARGIN	Scanner reading margin (B side)
SCAN C MARGIN	Scanner reading margin (C side)
SCAN D MARGIN	Scanner reading margin (D side)

If a problem occurs during auto adjustment, an error code is displayed and operation stops. Should this happen, determine the details of the problem and either repeat the procedure from the beginning, or adjust the remaining items manually by running the corresponding maintenance items.

Completion

Press the stop/clear key after auto adjustment is complete. The screen for selecting a maintenance item is displayed.

If the stop/clear key is pressed during auto adjustment, adjustment stops and no settings are changed.

Maintenance item No.	Description
U093	**Setting the exposure density gradient**

Description
Changes the exposure density gradient in manual density mode, depending on respective image modes (text, text and photo, photo).

Purpose
To set how the image density is altered by a change of one step in the manual density adjustment. Also used to make copy image darker or lighter.

Start
① Press the start key. The screen for selecting an item is displayed.
② Select the image mode to be adjusted. The screen for the selected item is displayed.

Display	Description
TEXT	Density in text mode
MIXED	Density in text and photo mode
PHOTO	Density in photo mode

Setting
① Select the item to be adjusted. The selected item is displayed in reverse and the current setting is displayed in the adjustment window.
② Adjust the setting using the Up/Down keys.

Display	Description	Setting range	Initial setting
DARKER	Change in density when manual density is set dark	0 to 3	0
LIGHTER	Change in density when manual density is set light	0 to 3	0

Increasing the setting makes the change in density larger, and decreasing it makes the change smaller.

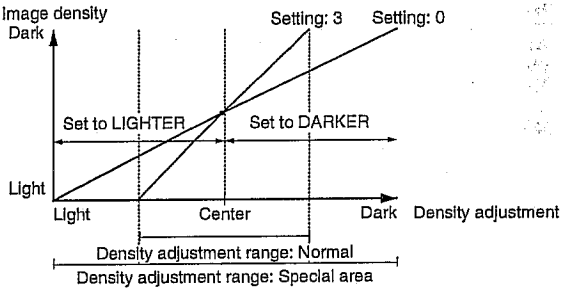


Figure 1-4-5 Exposure density gradient

③ Press the start key. The value is set.
④ To return to the screen for selecting an item, press the stop/clear key.

Interrupt copy mode
While this maintenance item is being performed, copying from an original can be made in interrupt copy mode.

Completion
Press the stop/clear key at the screen for selecting an item. The screen for selecting a maintenance item No. is displayed.

Maintenance Item No.	Description
U099	**Checking and setting the original size detection sensor**

Description
Checks the operation of the original size detection sensor and sets the sensing threshold value.

Purpose
To adjust the sensitiveness of the sensor and size judgement time if the original size detection sensor malfunctions frequently due to incident light or the like.

Start
① Press the start key. The screen for selecting an item is displayed.

② Select an item.

* The screen for executing each item is displayed.

Display	Description
DATA	Displaying detection sensor transmission data
B/W LEVEL	Setting detection sensor threshold value
	Setting original size judgment time

Method to display the data for the sensor
① Press the start key. The detection sensor transmission data is displayed.

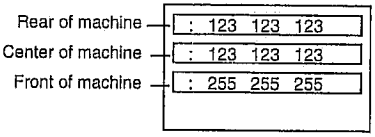


Figure 1-4-6

② To return to the screen for selecting an item, press the stop/clear key.

Setting
① Select an item to be set.

Display	Description
LEVEL	Detection sensor threshold value
WAIT TIME	Original size judgment time*
ORIGINAL AREA	Original size detection position display (mm)
SIZE	Detected original size display

* Time from activation of the original detection switch (ODSW) to original size judgment

Method to set the detection threshold value
① Adjust the preset value using the Up/Down keys.

* A larger value increases the sensor sensitivity, and a smaller value decreases it.

② Press the start key. The value is set.

③ To return to the screen for selecting an item, press the stop/clear key.

Method to set the original size judgment time
① Adjust the preset value using the Up/Down keys.

* A larger value increases the original size judgment time, and a smaller value decreases it.

② Press the start key. The value is set.

③ To return to the screen for selecting an item, press the stop/clear key.

Completion
Press the stop/clear key at the screen for selecting an item. The screen for maintenance item No. is displayed.

Maintenance item No.	Description
U100	**Setting the surface potential** **Description** Changes the surface potential by changing the grid control voltage. Also performs main charging. **Purpose** To set the surface potential or check main charging. Also used when reentering data after replacing the backup RAM or initializing the set data. **Start** Press the start key. The screen for selecting an item is displayed.

Display	Description
DSP DATA	Changing the grid control voltage
MC ON	Turning the main charger on
MC ON/OFF	Turning the main charger on and off
LASER ON/OFF	Turning the main charger on and the laser scanner unit on and off

Method for main charger output

① Select the main charger output on the screen for selecting an item: select one from MC ON, MC ON/OFF or LASER ON/OFF on the touch panel. The selected operation starts.

② To stop operation, press the stop/clear key.

Setting the grid control voltage

① Press the DSP DATA on the touch panel of the screen for selecting an item.

② Change the setting using the Up/Down keys.

Description	Setting range	Initial setting
Grid control voltage	77 to 230	160

Increasing the setting makes the surface potential higher, and decreasing it makes the potential lower.

Change in value per step: approximately 3.6 V

③ Press the start key. The value is set.

Interrupt copy mode

While this maintenance item is being performed, copying from an original can be made in interrupt copy mode.

Completion

Press the stop/clear key at the screen for selecting an item when main charger output stops. The screen for selecting a maintenance item No. is displayed.

Maintenance Item No.	Description
U101	**Setting high voltages** **Description** Changes the transfer voltage by changing the transfer control voltage. Also checks the transfer output voltage. **Purpose** To check and change high voltages other than the main charger voltage. **Start** ① Press the start key. The screen for selecting an item is displayed. ② Select an item to be set or checked. The screen for the selected item is displayed. Display: TC SET — Description: Setting and checking the transfer voltage **Setting the developing bias** ① Select the item to be adjusted. The selected item is displayed in reverse, and the current setting is displayed in the adjustment window. ② Change the setting using the Up/Down keys. CONT DATA — Transfer output voltage for simplex copying (onto paper from the cassette) — 0 to 255 — 150 CONT DATA2 — Transfer output voltage for duplex copying (onto the second face) — 0 to 255 — 150 TC ON — Outputting the transfer voltage — — — — Increasing the setting makes the transfer voltage higher, and decreasing it makes the voltage lower. Press the TC ON on the touch panel The currently set transfer voltage is output. To stop the transfer voltage output, press the stop/clear key. ③ Press the start key. The value is set. ④ To return to the screen for selecting in item, press the stop/clear key. **Interrupt copy mode** While this maintenance item is being performed, copying from an original can be made in interrupt copy mode. **Completion** Press the stop/clear key. The screen for selecting a maintenance item No. is displayed.
U102	**Setting the cleaning interval for the charger** **Description** Executes a cleaning operation for the charger and changes the intervals at which the charger is cleaned. **Purpose** To check the cleaning operation for the charger. Also to change the intervals for the operation. Making the intervals longer decreases the stand-by time when starting copying. **Method** ① Press the start key. The screen for selecting an item is displayed. ② To execute the cleaning operation, press TEST RUN. The cleaning operation for the transfer charger is executed once. **Setting** ① Change the setting using the Up/Down keys. Description: Charger cleaning operation intervals — Setting range: 0 to 20 — Initial setting: 3 — Change in value per step: 1000 copies When set to 3, the charger is cleaned every 3000 copies (3 by 1000) counted after the main switch is turned on. When set to 0, the charger is not cleaned. ② Press the start key. The value is set. **Completion** Press the stop/clear key. The screen for selecting a maintenance item No. is displayed.

Maintenance Item No.	Description
U110	**Checking/clearing the drum count** **Description** Displays the drum counts for checking or clearing the figure, which is used as a reference when correcting the main charger potential output. **Purpose** To check the drum status. Also used to clear the count after replacing the drum during regular maintenance. Since the count was cleared before shipping, do not clear it when installing. **Method** Press the start key. The drum counter count is displayed. **Clearing** ① Press CLEAR on the touch panel. ② Press the start key. The count is cleared, and the screen for selecting a maintenance item No. is displayed. **Setting** ① Enter a six-digit count using the numeric keys. ② Press the start key. The count is set, and the screen for selecting a maintenance No. is displayed. **Completion** To exit the maintenance mode without changing the count, press the stop/clear key. The screen for selecting a maintenance item No. is displayed.
U130	**Initial setting for the developer** **Description** Automatically sets the toner sensor control voltage and toner control level for the installed developer. **Purpose** To set the initial settings for the developer when installing the machine or replacing the developer. **Method** ① Press the start key. The screen for executing is displayed. ② Press the start key. The initial settings for the developer is set, and the result is displayed. Display / Description: CONTROL — Toner sensor control voltage; FIRST TARGET — Toner control reference voltage; HUMID — Absolute humidity The toner sensor output value is displayed on the right side of the screen. **Supplement** The following data is also renewed or cleared by performing this maintenance item: • Renewing the toner sensor control voltage (U131) • Renewing the toner control reference voltage (U156) • Clearing the developing drive time (U157) • Clearing the developing count (U158) • Resetting the toner feed start level and toner empty detection **Completion** After initial setting is complete, press the stop/clear key. The screen for selecting a maintenance item No. is displayed.

Maintenance item No.	Description
U131	**Setting the toner sensor control voltage** **Description** Displays or changes the toner sensor control voltage automatically set in maintenance item U130. **Purpose** To check the automatically set toner sensor control voltage. Also to change the toner density if an image is too dark or light. **Method** Press the start key. The current setting for the toner sensor control voltage is displayed. **Setting** ① Change the setting using the Up/Down keys. Description: Toner sensor control voltage; Setting range: 0 to 255; Initial setting: 128 Increasing the setting makes the density higher, and decreasing it makes the density lower. Increasing the setting too high may result in toner scattering. ② Press the start key. The value is set. **Completion** Press the stop/clear key. The screen for selecting a maintenance item is displayed.
U132	**Replenishing toner forcibly** **Description** Replenishes toner forcibly until the toner sensor output value reaches the toner control level. **Purpose** Used when the toner empty is detected frequently. **Method** ① Press the start key. The screen for executing is displayed. ② Press the start key. Operation starts, and the current data is displayed. Toner is replenished until the toner sensor output value reaches the toner control level. To stop operation, press the start/clear key. Display: TARGET (NOW) — Description: Current toner control level Display: CONTROL (NOW) — Description: Current toner sensor control voltage Display: HUMID — Description: Absolute humidity The current toner sensor output value is displayed on the right side of the screen. **Completion** Press the stop/clear key when toner replenishment stops. The screen for selecting a maintenance item No. is displayed.
U135	**Checking toner motor operation** **Description** Drives the toner feed motor or toner agitation motor. **Purpose** To check the operation of the toner feed motor or toner agitation motor. **Caution** Note that driving either of the motors unnecessarily long may cause a toner jam, resulting in machine lockup. Be sure to drive each motor for just several seconds. **Method** ① Press the start key. The screen for selecting an item is displayed. ② Select the motor to be driven. The selected motor is displayed in reverse, and operation starts. Description: MOTOR 1 — Operation: Toner feed motor drive Description: MOTOR 2 — Operation: Toner agitation motor drive ③ To stop operation, press the stop clear key. **Completion** Press the stop/clear key when operation stops. The screen for selecting a maintenance item No. is displayed.

Maintenance Item No.	Description
U136	**Turning the toner level detection function on/off** **Description** Turning the control based on the toner level sensor output on/off. **Purpose** To enable copying using the toner in the developing section after the toner level in the toner hopper decreases, by turning the control function off **Method** Press the start key. **Setting** ① Press ON or OFF to change the operation. Display: ON — Controls based on the detection by the toner sensor detection sensor. Display: OFF — Ignores the detection by the toner level detection sensor. Initial setting: ON ② Press the start key. The setting is set , and the screen for entering a maintenance item is displayed. **Completion** To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item No. is displayed.
U137	**Checking the toner level detection sensor** **Description** Displays the detection status of the toner level detection sensor and toner hopper lockup detection sensor. **Purpose** To check the toner level in the toner hopper. **Method** ① Press the start key. The detected status of the sensor is displayed. Display: TE SW — Toner level detection sensor (toner level in the toner hopper) When there is toner or if the sensor connector is disconnected, on is detected , and the corresponding display is displayed in reverse. **Completion** Press the stop clear key. The screen for selecting a maintenance item No. is displayed.
U155	**Displaying the toner sensor output** **Description** Displays the toner sensor output value , and related data. **Purpose** To check the toner sensor output value. **Method** ① Press the start key. The screen for executing is displayed. ② Press the start key. The current data is displayed. Display: TARGET (NOW) — Current toner control level (corrected value for humidity and drive time) Display: CONTROL (NOW) — Current toner sensor control voltage Display: HUMID — Absolute humidity The current toner sensor output value is displayed on the right side of the screen. **Completion** Press the stop/clear key. The screen for selecting a maintenance item No. is displayed.

Maintenance item No.	Description
U156	**Changing the toner control level**

Description
Changes the toner control reference voltage set in maintenance item U130 or the toner control level or the toner empty level to be determined by the difference from the toner control level. The setting for this maintenance item does not need to be changed.

Purpose
To check the toner feed start level and toner empty level.

Method
Press the start key. The screen for selecting an item is displayed.

Display	Description
TARGET	Toner control level
EMPTY	Difference between the toner control level and toner empty level
FIRST TARGET	Toner control reference voltage for initial developer setting

Setting for the toner control level
① Press TARGET.
② Change the setting using the Up/Down key.

Description	Setting range	Initial setting
Toner control level	0 to 255	128

Increasing the setting makes the toner density lower.
③ Press the start key. The value is set.

Setting for the toner empty level
① Press EMPTY.
② Change the setting using the Up/Down key.

Description	Setting range	Initial setting
Difference between the toner control level and the toner empty level	0 to 255	30

Increasing the setting makes the toner empty level higher: the toner density is lower when the toner empty is detected.
③ Press the start key. The value is set.

Setting for the toner control refernce voltage
① Press FIRST TARGET.
② Change the setting using the Up/Down key.

Description	Setting range	Initial setting
Toner control reference voltage	0 to 255	102

③ Press the start key. The value is set.

Completion
Press the stop/clear key. The screen for selecting maintenance item No. is displayed.

Maintenance Item No.	Description
U157	**Checking/clearing the developing drive time** **Description** Checks or clears the developing drive time, which is used as a reference when correcting the toner control. It is automatically cleared when U130 is executed. **Purpose** To check the developing drive time after replacing the developer. **Method** Press the start key. The developing drive time is displayed in minutes. **Clearing** ① Press CLEAR on the touch panel. ② Press the start key. The count is set, and the screen for selecting a maintenance item No. is displayed. **Setting** ① Enter a five-digit drive time (in minutes) using the numeric keys. ② Press the start key. The time is set, and the screen for selecting a maintenance No. is displayed. **Completion** To exit the maintenance mode without changing the time, press the stop/clear key. The screen for selecting a maintenance item No. is displayed.
U158	**Checking/clearing the developing count** **Description** Checks or clears the developing count, which is used as a reference when correcting the toner control. It is automatically cleared when U130 is executed. **Purpose** To check the developing count after replacing the developer. **Method** Press the start key. The developing count is displayed. **Clearing** ① Press CLEAR on the touch panel. ② Press the start key. The count is set, and the screen for selecting a maintenance item No. is displayed. **Setting** ① Enter a six-digit count using the numeric keys. ② Press the start key. The count is set, and the screen for selecting a maintenance No. is displayed. **Completion** To exit the maintenance mode without changing the count, press the stop/clear key. The screen for selecting a maintenance item No. is displayed.
U160	**Applying toner to the cleaning blade** **Description** Applies toner to the cleaning blade. **Purpose** To apply toner to the drum to coat the cleaning blade. To be executed when replacing or cleaning the cleaning blade or the drum. **Method** ① Press the start key. The screen for executing is displayed. ② Press the start key. Operation starts. When the operation is complete, the screen for selecting a maintenance item No. is displayed after open and close the front cover. **Completion** To exit this maintenance item without performing operation, press the stop/clear key. The screen for selecting a maintenance item No. is displayed.

Maintenance item No.	Description
U161	**Setting the fixing control temperature** **Description** Changes the fixing control temperature. **Purpose** Normally no change is necessary. However, can be used to prevent curled or creased paper, or solve a fixing problem on thick paper. Also used to output a test pattern for measuring fixing pressure. **Method** Press the start key. The screen for selecting an item is displayed. **Setting** ① Select the item to be set. The selected item is displayed in reverse, and the current setting is displayed in the adjustment window. ② Change the setting using the Up/Down key. The respective temperatures are to be set such that CONTROL TEMP ≥ SECOND ≥ TEMPFIRST TEMP. ③ Press the start key. The value is set. **Completion** Press the stop/clear key. The screen for selecting maintenance item No. is displayed.
U162	**Stabilizing fixing forcibly** **Description** Stops the stabilization fixing drive forcibly, regardless of fixing temperature. **Purpose** To forcibly stabilize the machine before the fixing section reaches stabilization temperature. **Method** ① Press the start key. The screen for executing is displayed. ② Press the start key. The forced stabilization mode is entered, and stabilization operation stops. The screen for selecting a maintenance item No. is displayed. To exit the forced stabilization mode, turn the power off and on. **Completion** To exit this maintenance item without executing forced fixing stabilization, press the stop clear key.

Display	Description	Setting range	Initial setting
CONTROL TEMP	Normal stabilization fixing temperature	170 to 200 (°C)	185
FIRST TEMP	Primary stabilization fixing temperature	140 to 200 (°C)	165
SECOND TEMP	Secondary stabilization fixing temperature	170 to 200 (°C)	185
RUNNING TIME	Aging time after secondary stabilization	0 to 180 (s)	90

Maintenance item No.	Description
U194	**Setting the fixing web drive** **Description** Sets the interval (number of copies) for turning on the fixing web solenoid. **Purpose** To be executed when the cleaning felt becomes extremely soiled. **Method** ① Press the start key. The screen for executing is displayed. ② Input numbers using Up/Down keys (setting range is 1 to 40). Initial setting:30 ③ Press the start key. The setting is set. **Completion** To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item No. is displayed.
U196	**Turning the fixing heater on** **Description** Turns the fixing heater on. **Purpose** To check fixing heaters M or S. **Method** ① Press the start key. The screen for selecting an item is displayed. ② Select the heater to be turned on. The selected heater turns on for 3 s and then turns off. Display: MAIN — Description: Fixing heater M (H1) Display: SUB — Description: Fixing heater S (H2) **Completion** Press the stop/clear key when fixing motors M and S are off. The screen for selecting the maintenance item No. is displayed.

<table>
<tr><th>Maintenance item No.</th><th>Description</th></tr>
<tr><td>U198</td><td>
Setting the fixing phase control

Description
Sets the use of fixing phase control to reduce electrical noise generated by the copier.

Purpose
Normally no change is necessary. If electrical noise generated by the copier causes flickering of the lights around the copier, select fixing phase control to reduces the noise.

Method
Press the start key.

Setting
① Press ON or OFF to change operation.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>ON</td><td>Fixing phase control present</td></tr>
<tr><td>OFF</td><td>Fixing phase control absent</td></tr>
</table>
Initial setting: ON for metric and OFF for inch models
② Press the start key. The setting is set. The screen for selecting a maintenance item No. is displayed.

Completion
To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U200</td><td>
Turning all LEDs on

Description
Turns all the LEDs on the operation panel on.

Purpose
To check if all the LEDs on the operation panel light

Method
Press the start key. All the LEDs on the operation panel light.

Completion
Press the stop/clear key or wait for 10 s. The LEDs turns off, and the screen for selecting a maintenance mode is displayed.
</td></tr>
<tr><td>U201</td><td>
Initializing the touch panel

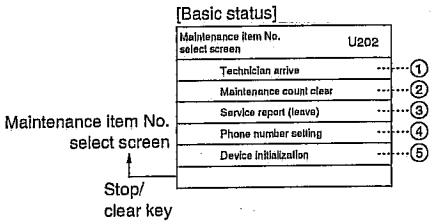
Description
Automatically correct the positions of the X- and Y-axes of the touch panel.

Purpose
To automatically correct the display positions on the touch panel after it is replaced.

Method
① Press the start key. The screen for executing is displayed, and the + key displayed at the upper left of the touch panel flashes.
② Press on the center of the + key. The + key on lower right flashes.
③ Press the center of the flashing +. Initialization of the touch panel is complete, and the screen for selecting a maintenance item No. is displayed.

Completion
To exit this maintenance item without initializing, press the stop/clear key. The screen for selecting a maintenance mode No. is displayed.
</td></tr>
</table>

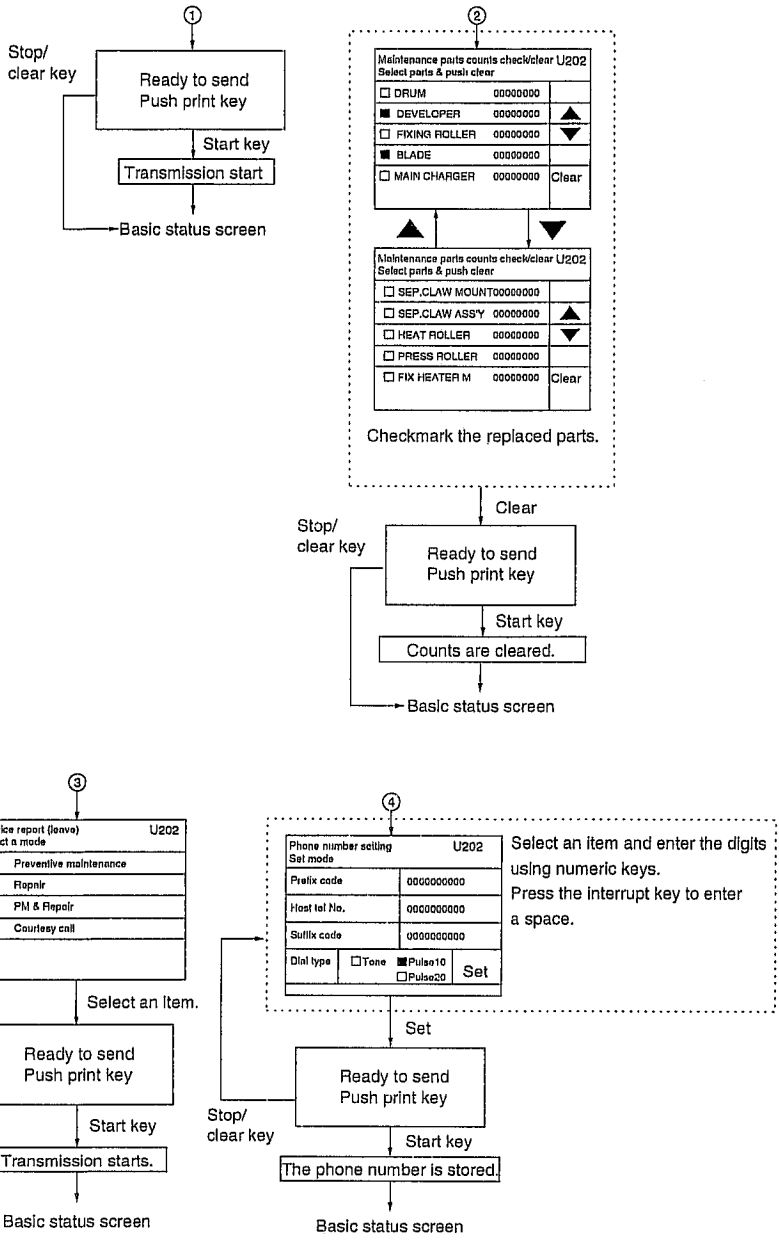
Maintenance Item No.	Description
U202	**Setting the MMD host monitoring system** **Description** Initializes or operates the MMD host monitoring system. **Purpose** Used when setting up the machine or during regular maintenance or repair. **Method** ① Press the start key. The basic status screen is displayed. ② Operates the device following the instructions on the touch panel. **Completion** Press the stop/clear key on the basic screen. The screen for selecting a maintenance item No. is displayed.



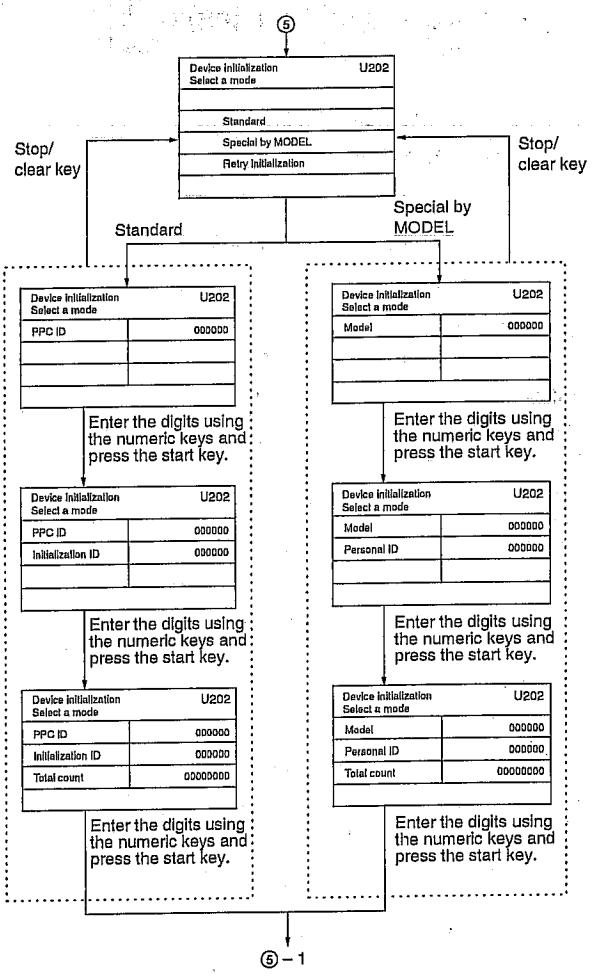
- To initialize the MMD host monitoring system, run the following modes in order:
  - Phone number setting ④
  - Device initialization ⑤

- During regular maintenance or service
  - Technician arrive ①
  - Maintenance count clear ②
  - Service report (leave) ③

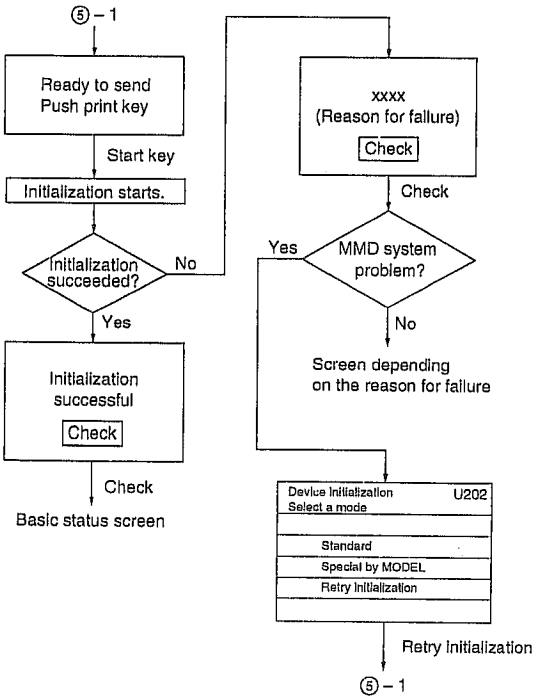
Maintenance item No.	Description



Maintenance Item No.	Description



Maintenance item No.	Description



<table>
<tr><th>Maintenance Item No.</th><th>Description</th></tr>
<tr><td>U203</td><td>
Operating DF separately

Description
Simulates the original conveying operation separately in the SRDF.

Purpose
To check the SRDF.

Method
① Press the start key. The screen for selecting an item is displayed.
② Set the magnification to between 25 and 200% using the Up/Down keys.
③ Place an original in the SRDF if running this simulation with paper.
④ Select the item to be operated. The selected item is displayed in reverse and operation starts.
<table>
<tr><th>Display</th><th>Operation</th></tr>
<tr><td>ADF MODE</td><td>With paper, single-sided original</td></tr>
<tr><td>RADF MODE</td><td>With paper, double-sided original</td></tr>
<tr><td>ADF MODE (NON-PAPER)</td><td>Without paper, single-sided original (continuous operation)</td></tr>
<tr><td>RADF MODE (NON-PAPER)</td><td>Without paper, double-sided original (continuous operation)</td></tr>
</table>
⑤ To stop continuous operation, press the stop/clear key.

Completion
Press the stop/clear key when the operation stops. The screen for selecting the maintenance item No. is displayed.
</td></tr>
<tr><td>U204</td><td>
Setting the presence or absence of a key card or key counter

Description
Sets the presence or absence of the optional key card or key counter.

Purpose
A key card is not available for metric models. The setting for the HECON key card, which is supported by inch-specification machines, is not necessary in this maintenance item.

Method
Press the start key.

Setting
① Select the optional counter to be installed. The selected counter is displayed in reverse.
Pressing the reversed item again resets the selection.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>KEY CARD</td><td>The key card is installed.</td></tr>
<tr><td>KEY COUNTER</td><td>The key counter is installed.</td></tr>
</table>
② Press the start key. The screen for selecting a maintenance item No. is displayed.

Completion
To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U206</td><td>
Setting the presence or absence of the coin vender

Description
Sets the presence or absence of the optional coin vender. Also sets the details for coin vender operation, such as mode and unit price.

This is an optional device which is currently supported only by Japanese specification machines, so no setting is necessary.
</td></tr>
</table>

Maintenance Item No.	Description
U208	**Setting the deck lift operation** **Description** Sets the operation of the side deck lift motor for when paper in the optional side deck is exhausted. **Purpose** To be set according to the paper loading method. **Method** Press the start key. The screen for selecting an item is displayed. **Setting the paper loading method** ① Select the method to load paper at the screen for selecting an item. Display: Side Feed — Description: Load paper through the right cover. Display: Upper Feed — Description: Load paper through the upper cover. Initial setting: Side Feed ② Press the start key. The setting is set. The screen for selecting a maintenance item No. is displayed. **Completion** To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item No. is displayed.
U209	**Setting date and time** **Description** Sets the real time clock. **Purpose** To set the date and time after initializing data. **Method** ① Press the start key. The screen for executing is displayed. The current setting for the year is displayed. ② Set the year (last two digits of the year) using the numeric or Up/Down keys and press the start key. For years 2000 to 2009, enter only the last digit. The current setting for the month is displayed. ③ Set the month using the numeric or Up/Down keys and press the start key. The current setting for the date is displayed. ④ Set the date using the numeric or Up/Down keys and press the start key. The current setting for the day of the week is displayed. ⑤ Set the day of the week using the numeric or Up/Down keys and press the start key. The current time setting for hours is displayed. Setting: 1 — Description: Monday Setting: 2 — Description: Tuesday Setting: 3 — Description: Wednesday Setting: 4 — Description: Thursday Setting: 5 — Description: Friday Setting: 6 — Description: Saturday Setting: 7 — Description: Sunday ⑥ Set the time (hours, 0 to 23) using the numeric or Up/Down keys and press the start key. The current time setting for minutes is displayed. ⑦ Set the minutes using the numeric or Up/Down keys and press the start key. Setting is complete, and the screen for selecting a maintenance item No. is displayed. **Supplement** To return to the last screen, press the stop/clear key while setting. **Completion** To stop this maintenance item without changing the current setting, press the stop/clear key at the screen for the year setting. The screen for selecting a maintenance item No. is displayed.

Maintenance Item No.	Description
U238	**Checking the operation of the mailbox solenoids and motors** **Description** Turns the optional mailbox solenoids or motors. **Purpose** To check the operation of the optional mailbox solenoids and motors. **Method** ① Press the start key. The screen for selecting an item is displayed. ② Select the item to be operated. The selected item is displayed in reverse, and operation starts. Operation stops when the selected item is pressed. **Completion** Press the stop/clear key when operation stops. The screen for selecting a maintenance item No. is displayed.
U239	**Checking the mailbox switches** **Description** Displays the status of the respective switches on the optional mailbox **Purpose** To check if respective switches on the optional mailbox operate correctly. **Start** ① Press the start key. ② Turn the respective switches on manually. The on-status of a switch is displayed in reverse. **Completion** Press the stop/clear key when operation stops. The screen for selecting a maintenance item No. is displayed.

Display	Solenoids and motors
F MOT	Paper conveying motor (PCM)
SOL B	Feedshift solenoid 1 (FSSOL1)
SOL 1	Mail tray feedshift solenoid 1 (MTFSSOL1)
SOL 2	Mail tray feedshift solenoid 2 (MTFSSOL2)
SOL 3	Mail tray feedshift solenoid 3 (MTFSSOL3)
SOL 4	Mail tray feedshift solenoid 4 (MTFSSOL4)
SOL 5	Mail tray feedshift solenoid 5 (MTFSSOL5)
SOL 6	Mail tray feedshift solenoid 6 (MTFSSOL6)

Display	Switches
OVF 1	Mail tray overflow switch 1 (MTOFSW1)
OVF 2	Mail tray overflow switch 2 (MTOFSW2)
OVF 3	Mail tray overflow switch 3 (MTOFSW3)
OVF 4	Mail tray overflow switch 4 (MTOFSW4)
OVF 5	Mail tray overflow switch 5 (MTOFSW5)
OVF 6	Mail tray overflow switch 6 (MTOFSW6)
OVF 7	Mail tray overflow switch 7 (MTOFSW7)
FEED	Mailbox paper entry switch (MBPESW)
EJECT	Mail tray eject sensor (MTES)

Maintenance item No.	Description
U240	**Checking the operation of the Finisher** **Description** Turns the optional finisher cluches or solenoids. **Purpose** To check the operation of the optional finisher cluches and solenoids. **Start** ① Press the start key. The screen for selecting an item is displayed. ② Select an item. The screen for executing each item is displayed.

Display	Description
CL, SOL TEST	Checks operation of cluches and motors.
JOGGER TEST	Checks jogging and stapling operations.

Method to check the operation of cluches and motors

① Select the item to be operated. The selected item is displayed in reverse, and the motor or solenoid turns on for 0.5 s.

Display	Clutches and solenoids
HBCL	Paper conveying belt clutch (PCBCL)
PYSL	Paper shift solenoid (PSSOL)
PSL1	Paddle solenoid 1 (PDSOL1)
PSL2	Paddle solenoid 2 (PDSOL2)
PSL3	Paddle solenoid 3 (PDSOL3)
BSL1	Feedshift solenoid 1 (FSSOL1)
BSL2	Feedshift solenoid 2 (FSSOL2)
PCL	Paddle clutch (PDCL)
PNSL OFF	Paper shift solenoid (PSSOL) OFF
PNSL ON	Paper shift solenoid (PSSOL) ON
PNCL	Punch clutch (PCL)
KYSL	Trailing edge press solenoid (TEPSOL)

▲ ▼

Display	Clutches and solenoids
PCSL	Pressure switching solenoid (PSWSOL)
DCSL	Drive switching solenoid (DSSOL)
PGSL	Paper entry guide solenoid (PEGSOL)

② To turn each clutch or solenoid on while the motor is driving, press the interrupt key before selecting the clutch or solenoid.

The drive motor turns on, and the selected clutch or solenoid remains on until the selected item is pressed again.

③ To stop the motor drive, press the interrupt key.

④ To return to the screen for selecting an item, press the stop/clear key after the motor stops.

Method to check the jogging and the stapling

① Select the item to be operated.

② To turn each clutch or solenoid on while the motor is driving, press the interrupt key before selecting the clutch or solenoid.

Display	Description
JOGGER	Operation of jogging
STAPLE	Operation of stapling

Completion

Press the stop/clear key. The screen for selecting a maintenance item No. is displayed.

Maintenance Item No.	Description
U241	**Checking the finisher switches** **Description** Displays the status of the respective switches on the optional finisher. **Purpose** To check if respective switches on the optional finisher operate correctly. **Start** ① Press the start key. ② Turn the respective switches on manually. The on-status of a switch is displayed in reverse.

Display	Swithes
KOS	Trailing edge press detection sensor (TEPDS)
PS 3	Eject switch (ESW)
FJHS	Front jogger home position sensor (FJHPS)
PS 2	Internal tray wheel sensor (ITWS)
DS	Front cover switch (FCSW)
SS	Joint switch (JSW)
RJHS	Rear jogger home position sensor (RJHPS)
FSES	Front stapler empty sensor (STES)
FSPS	Front stapler self-priming sensor (STSPS)
RSES	Rear stapler empty sensor (STES)
RSPS	Rear stapler self-priming sensor (STSPS)
US	Upper cover switch (UCSW)

▲ ▼

Display	Swithes
FSTHS	Front stapler home position sensor (STHPS)
RSTHS	Rear stapler home position sensor (STHPS)
FCES	Front stapler cortridge sensor (STCS)
RCES	Rear stapler cartridge sensor (STCS)
SKS 1	Tray stock sensor A (TSSA)
PS 1	Paper entry sensor (PES)
HBH S	Paper conveying belt home position sensor (PCBHPS)
SKS 2	Tray stock sensor B (TSSB)
PS 4	Tray midpoint sensor (TMS)
SKS 4	Tray lower limit sensor (TLLS)
PKS	Scrap hole-punch sensor (PDTS)
SKS 3	Tray upper limit sensor (TULS)

Completion
Press the stop/clear key when operation stops. The screen for selecting a maintenance item No. is displayed.

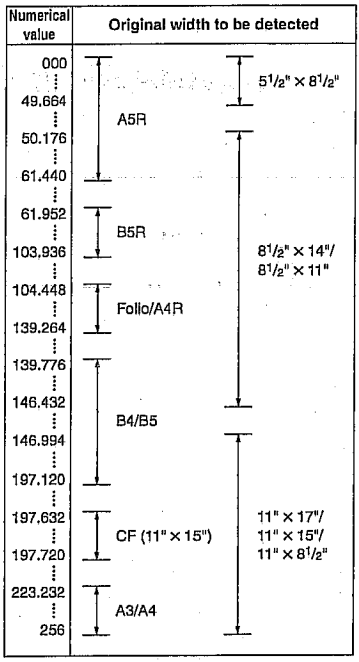
Maintenance item No.	Description
U243	**Checking the operation of the DF motors, clutches and solenoids** **Description** Turns the SRDF motors, clutches or solenoids on. **Purpose** To check the operation of the SRDF motors, clutches and solenoids. **Method** ① Press the start key. The screen for selecting an item is displayed. ② Select the item to be operated. The selected item is displayed in reverse, and operation starts. ③ To turn each motor off, press the stop/clear key. **Completion** Press the stop/clear key when operation stops. The screen for selecting a maintenance item No. is displayed.
U244	**Checking the DF switches** **Description** Displays the status of the respective switches on the SRDF. **Purpose** To check if respective switches on the SRDF operate correctly. **Start** ① Press the start key. The screen for selecting an item is displayed. ② Select the type of switches (SW or VR) to be checked. The screen for executing is displayed. **Method for the on/off switches** ① Turn the respective switches on and off manually to check the status. If the on-status of a switch is detected, the corresponding switch is displayed in reverse. ② To return to the screen for selecting an item, press the stop/clear key. **Method for the volume switch** ① Move the original insertion guides to check the detection status of the original size width switch. As shown on the next page, the detected original width is displayed as a numerical value with the decimals omitted.

Display	Motors, clutches and solenoids	Operation
F MOTOR	Original feed motor (OFM)	In operation
C MOTOR	Original paper conveying motor (OCM)	In operation
FEED CL	Original feed clutch (OFCL)	On for 0.5 s
EJ JCT SL	Eject feedshift solenoid (EFSSOL)	On for 0.5 s
REV JCT SL	Switchback feedshift solenoid (SBFSSOL)	On for 0.5 s
FEED SL	Original feed solenoid (OFSOL)	On and off
REVPRS SL	Switchback pressure solenoid (SBPSOL)	On and off

Display	Type of switches
SW	On/off switches
VR	Volume switch

Display	Switches
SET SW	Original set switch (OSSW)
FEED SW	Original feed switch (OFSW)
REV SW	Original switchback switch (OSBSW)
TMG SW	DF timing switch (DFTSW)
SZ A SW	Original size length switch (OSLSW)

Maintenance Item No.	Description
U244	



For example, if any value between 105 and 139 is displayed when the original insertion guides are adjusted for A4R paper, it indicates that the original width is detected correctly.

② To return to the screen for selecting an item, press the stop/clear key.

Completion

Press the stop/clear key at the screen for selecting an item. The screen for selecting a maintenance item No. is displayed.

<table>
<tr><th>Maintenance Item No.</th><th>Description</th></tr>
<tr><td>U245</td><td>
Checking messages
Description
Displays a list of messages on the touch panel of the operation panel.
Purpose
To check the messages to be displayed.
Method
① Press the start key.
② Change the screen using the Up/Down keys to display each message one at a time.
Completion
Press the stop/clear key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U247</td><td>
Checking the operation of the side deck motors and clutches
Description
Turns on motors and clutches of the optional side deck.
Purpose
To check the operation of motors and clutches of the optional side desk devices.
Start
① Press the start key. The screen for selecting an item is displayed.
Method
① Press the item to be operated. The selected item is displayed in reverse and operation starts.
<table>
<tr><th>Display</th><th>Motors and solenoids</th></tr>
<tr><td>SDECK MOT</td><td>Side deck drive motor (SDDM)</td></tr>
<tr><td>SDECK FAN</td><td>Separation fan motor (SFM) and Suction fan motor (IFM)</td></tr>
<tr><td>SDECK LIFT</td><td>Side deck lift motor (SDLM)</td></tr>
<tr><td>SDECK CVCL</td><td>Side deck paper conveying clutch (SDCCL)</td></tr>
<tr><td>LDECK FDCL</td><td>Side deck paper feed clutch (SDPFCL)</td></tr>
</table>
To stop the side deck lift motor, press the stop/clear key.
If this maintenance item is executed with the upper cover of the side deck open, detection of the upper limit is not possible and thus the side deck lift motor overruns.
Completion
Press the stop/clear key at the screen for selecting an item. The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U248</td><td>
Setting the paper eject device
Description
Adjusts the amount of slack in the paper for the optional finisher in punch mode when it is attached. Also sets the punch limit and displays and clears the punch-hole scrap count. Check the operation of the mail box when the optional mail box is attached. Adjusts the booklet stapling position for each paper size when the optional booklet stitcher is attached.
Purpose
• Adjustment of the amount of slack in the paper in punch mode
Adjusts the amount of slack in the paper while in the punch section if, in punch mode, paper jams or is Z-folded frequently due to too much slack in the paper, or, the position of punch holes varies due to too little slack in the paper.
• Punch limit setting
Sets the punch limit to notify the user of the time to collect punch-hole scrap.
• Punch-hole scrap count display (clearing)
Used to manually clear the punch-hole scrap count if a message requiring collection of punch-hole scrap is shown on the touch panel after collection. If punch-hole scrap is collected with the copier power turned off, the punch-hole scrap count is not cleared and consequently this problem occurs.
• Booklet stapling position adjustment
Adjusts the booklet stapling position in the stitching mode if the position is not proper.
• Mailbox operation check
Check the operation after installing the mailbox.
</td></tr>
</table>

Maintenance item No.	Description
U248	**Start** Press the start key. The screen for selecting an item is displayed.

Display	Description
PUNCH TIMING	Adjustment of the amount of slack in the paper in punch mode
PUNCH LIMIT	Punch limit/punch-hole scrap count
SADDLE ADJUST	Booklet stapling position adjustment
MAIL BOX TEST	Mailbox operation check

Setting the amount of slack in the paper

① Select PUNCH TIMING on the screen for selecting an item.

② Change the setting using the Up/Down keys.

Description	Setting range	Initial setting
Amount of slack in the paper	–15 to +15	0

If the position of punch holes varies, increase the setting to make the amount of slack larger.
If paper jams or is Z-folded frequently, decrease the setting to make the amount of slack smaller.
Changing the value by 1 changes the amount of slack by 1.25 mm.

③ Press the start key. The value is set.

④ To return to the screen for selecting an item, press the stop/clear key.

Setting the punch limit or displaying the punch-hole scrap count

① Select PUNCH LIMIT on the screen for selecting an item.

② Select the item to be set.

③ Change the setting using the numeric keys or the Up/Down keys.

To clear the punch-hole scrap count, press the all clear/reset key.

Display	Description	Setting range	Initial setting
PUNCH LIMIT	Punch limit (maximum number of punching times)	0 to 999000	75000
PUNCH CNT	Punch-hole scrap count (current number of punching times)	0 to 999999	—

PUNCH LIMIT can be changed in increments of 1000 times.

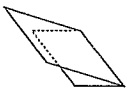
When the punch-hole scrap count reaches the punch limit, "Check punch waste tank." is displayed on the touch panel.

④ Press the start key. The value is set.

⑤ To return to the screen for selecting an item, press the stop/clear key.

Maintenance item No.	Description
U248	**Setting the booklet stapling position** ① Select SADDLE ADJUST on the screen for selecting an item. ② Select the size to be set. ③ Adjust the preset value using the Up/Down keys.

Display	Description	Setting range	Initial setting	Chang in value per step
A4R	Adjustment of booklet stapling position for A4R size	–125 to +125	0	0.25 mm
B4R	Adjustment of booklet stapling position for B4R size	–125 to +125	0	0.25 mm
A3R	Adjustment of booklet stapling position for A3R size	–125 to +125	0	0.25 mm

Left stapling	Right stapling	Adjustment method
		Proper
 Upper side is longer.	 Lower side is longer.	Increase the preset value.
 Lower side is longer.	 Upper side is longer.	Decrease the preset value.

④ Press the start key. The value is set.

⑤ To return to the screen for selecting an item, press the stop/clear key.

Method to check the operation of mailbox

① Select MAILBOX TEST on the screen for selecting an item.

② Select the eject bin using Up/Down keys (setting range is 1 to 7).
Initial setting: 1

③ Press the interrupt key. The screen for copy mode is displayed.

④ Press the start key to make test copies.

⑤ To return to the screen for selecting an item, press the stop/clear key after press the interrupt key.

Completion

Press the stop/clear key at the screen for selecting an item. The screen for selecting a maintenance item No. is displayed.

Maintenance item No.	Description
U250	**Setting the maintenance cycle** **Description** Displays and changes the maintenance cycle. **Purpose** To check and change the maintenance cycle. **Method** Press the start key. The current setting is displayed as follows: Maintenance cycle (number of copies) = setting × 1000 **Setting** ① Change the setting using the Up/Down keys. For example, when set to 120, the maintenance cycle is set to 120000. Pressing the Up key when set to 600 rolls over the setting to 0. ② Press the start key. The value is set , and the screen for selecting a maintenance item No. is displayed. **Completion** To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting an item is displayed.
U251	**Checking/clearing the maintenance count** **Description** Displays, clears and changes the maintenance count. **Purpose** To check the maintenance count. Also to clear the count during maintenance service. **Method** Press the start key. The maintenance count is displayed. **Clearing** ① Press CLEAR on the touch panel. ② Press the start key. The count is set, and the screen for selecting a maintenance item is displayed. **Setting** ① Enter a six-digit count using the numeric key. ② Press the start key. The count is set , and the screen for selecting a maintenance item is displayed. **Completion** To exit this maintenance item without changing the count, press the stop/clear key. The screen for entering a maintenance item No. is displayed.

Description	Setting range	Initial setting	Change in value per step
Maintenance cycle	0 to 600	300	1000 (copies)

Maintenance item No.	Description
U252	**Setting the destination**

Description
Switches the operations and screens of machines according to the respective destinations.

Purpose
To be executed after replacing the backup RAM on the main PCB or initializing the backup RAM by running maintenance item U020, in order to return the setting to the value before replacement or initialization.

Method
Press the start key. The screen for entering an item is displayed.

Setting
① Select the destination. The selected item is displayed in reverse.

Display	Description
JAPAN METRIC	Metric (Japan) models
INCH	Inch models
EUROPE METRIC	Metric (Europe) models
ASIA PACIFIC	Metric (Asia Pacific) models

② Press the start key. The value is set, and the screen for selecting a maintenance item No. is displayed.

Completion
To exit this maintenance item without changing the count, press the stop/clear key. The screen for entering a maintenance item No. is displayed.

Supplement
The specified initial settings are provided according to the destinations in the maintenance items below. To change the initial settings in those items, be sure to run maintenance item U021 after changing the destination.

• Initial setting according to the destinations

Maintenance item No.	Title	Japan	Inch	Europe Metric, Asia Pacific
198	Setting the fixing phase control	ON	OFF	ON
253	Switching between double and single counts	SINGLE COUNT	DOUBLE COUNT	DOUBLE COUNT
255	Setting auto clear time	120 s	90 s	90 s
347	Setting auto cassette size detection	ON	ON	OFF
348	Setting copy density adjustment range	NORMAL	SPECIAL AREA	SPECIAL AREA

Maintenance item No.	Description
U253	**Switching between double and single counts** **Description** Switches the count system for the total count and other counts. **Purpose** According to user (copy service provider) request, select if A3/11" x 17" paper is to be counted as one sheet (single count) or two sheets (double count). **Method** Press the start key. The screen for selecting an item is displayed. **Setting** ① Select double or single count. Display: DOUBLE COUNT — Description: Double count for A3/11" × 17" paper only Display: SINGLE COUNT — Description: Single count for all size paper Initial setting: DOUBLE COUNT ② Press the start key. The value is set, and the screen for selecting an maintenance item No. is displayed. **Completion** To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting an maintenance item No. is displayed.
U254	**Turning auto start function on/off** **Description** Selects if the auto start function is turned on. **Purpose** Normally no change is necessary. If incorrect operation occurs, turn the function off: this may solve the problem. **Method** Press the start key. The screen for entering an item is displayed. **Setting** ① Select either ON or OFF. The selected item is displayed in reverse. Display: ON — Description: Auto start function on Display: OFF — Description: Auto start function off Initial setting: ON ② Press the start key. The setting is set. The screen for selecting a maintenance item is displayed. **Completion** To exit this maintenance item without changing the current setting, press the stop clear key. The screen for selecting a maintenance item No. is displayed.

Maintenance Item No.	Description
U255	**Setting auto clear time** **Description** Sets the time to return to initial settings after copying is complete. **Purpose** To be set according to frequency of use. Set to a comparatively long time for continuous copying at the same settings, and a comparatively short time for frequent copying at various settings. **Method** Press the start key. The value is set. Current settings are displayed. **Setting** ① Change the setting using the Up/Down key. Description: Auto clear time; Setting range: 0 to 270; Initial setting: 90 The setting can be changed by 30 s per step. Pressing the Up key when set to 270 rolls over the setting to 0. When set to 0, the auto clear function is cancelled. ② Press the start key. The value is set. The screen for selecting a maintenance item is displayed. **Completion** To exit this maintenance item without changing the current setting, press the stop clear key. The screen for selecting a maintenance item No. is displayed.
U256	**Turning auto preheat/energy saver function on/off** **Description** Selects if the auto preheat/energy saver function is turned on. When set to ON, the time to enter preheat/energy saver mode can be changed in copy management mode. **Purpose** According to user request, to set the preheat time to save energy, or enable copying promptly without the recovery time from preheat mode. **Method** Press the start key. The setting is set. The screen for selecting an item is displayed. **Setting** ① Select ON or OFF. The selected item is displayed in reverse. Display: ON — Description: Auto preheat/energy saver function on Display: OFF — Description: Auto preheat/energy saver function off Initial setting: ON ② Press the start key. The setting is set. The screen for selecting a maintenance item is displayed. When change from OFF to ON, the initial value of 15 min. is set. **Completion** To exit this maintenance item without changing the current setting, press the stop clear key. The screen for selecting a maintenance item No. is displayed.

Maintenance item No.	Description
U258	**Switching copy operation at toner empty detection**

Description
Selects if continuous copying is enabled after toner empty is detected, and sets the number of copies that can be made after the detection.

Start
① Press the start key. The screen for selecting an item is displayed.
② Select an item. The screen for executing each item is displayed.

Display	Description
EMPTY COUNT	Number of copies to be made after turning off of the toner level sensor before indicating toner empty
EMPTY MODE	Copy operation after toner empty detection

Setting the number of copies after turning off of the tonaer level sensor before indicating toner empty
① Set the number of copies that can be made using the Up/Down keys.

Description	Setting range	Initial setting
Number of copies after turning off of the toner level sensor before indicating toner empty	600 to 1000 (copies)	1000

The setting can be changed by 200 copies per step.
② Press the start key. The setting is set , and the screen for entering a maintenance item No. is displayed.

Setting the copy operation after toner empty detection
① Select single or continuous copying. The selected item is displayed in reverse.

Display	Description
SINGLE MODE	Enables only single copying.
CONTINUE MODE	Enables single and continuous copying.

Initial setting: SINGLE MODE
② Set the number of copies that can be made using the Up/Down keys.

Description	Setting range	Initial setting
Number of copies after toner empty detection	0 to 200 (copies)	5

The setting can be changed by 5 copies per step.
When set to 0, the number of copies is not limited regardless of the setting for single or continuous copying.
③ Press the start key. The setting is set , and the screen for entering a maintenance item No. is displayed.

Completion
To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item is displayed.

Maintenance item No.	Description
U260	**Changing the copy count timing** **Description** Changes the copy count timing for the total counter and other counters. **Purpose** To be set according to user (copy service provider) request. If a paper jam occurs frequently in the finisher when the number of copies is counted at the time of paper ejection, copies are provided without copy counts. The copy service provider cannot charge for such copying. To prevent this, the copy timing should be made earlier. If a paper jam occurs frequently in the paper conveying or fixing sections when the number of copies is counted before the paper reaches those sections, copying is charged without a copy being made. To prevent this, the copy timing should be made later. **Method** Press the start key. The screen for selecting an item is displayed. **Setting** ① Select the copy count timing. Display: COUNT:FEED — Description: When secondary paper feed starts. Display: COUNT:EJECT — Description: When the paper is ejected. Initial setting: EJECT ② Press the start key. The setting is set , and the screen for entering a maintenance item No. is displayed. **Completion** To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item is displayed.
U263	**Setting DF copy ejection orientation** **Description** Sets the copy paper ejection orientation in DF copying. **Purpose** To set face up ejection to eject the same order as the originals when using special papers such as tracing paper and film as copy medium. **Method** Press the start key. The screen for selecting an item is displayed. **Setting** ① Select an ejection orientation. Display: FACE-DOWN (NORMAL) — Description: Face down ejection. Display: FACE-UP (SPEED) — Description: Face up ejection with bitmap copy. Display: FACE-UP (MEMORY) — Description: Face up ejection with memory copy. Initial setting: Face down ② Press the start key. The setting is set , and the screen for entering a maintenance item No. is displayed. **Completion** To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item is displayed.

Maintenance item No.	Description
U264	**Setting date display order** **Description** Sets the order of year, month, and day for output on a list and the like. **Purpose** Selects the order according to user request. **Method** Press the start key. The screen for selecting an item is displayed. **Setting** ① Select the order of display. Display / Description: YEAR-MONTH-DATE / Year - month - day; MONTH-DATE-YEAR / Month - day - year; DATE-MONTH-YEAR / Day - month - year Initial setting: inch: Month - day - year metric: Day - month - year ② Press the start key. The setting is set , and the screen for entering a maintenance item No. is displayed. **Completion** To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item is displayed.
U265	**Setting OEM purchaser code** **Description** Sets the OEM purchaser code. **Purpose** Sets the code when replacing the main PCB and the like. **Method** Press the start key. **Setting** ① Use the numeric keys or Up/Down keys to adjust the preset value. ② Press the start key. The count is set , and the screen for selecting a maintenance item is displayed. **Completion** To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item is displayed.
U266	**Setting the number of days after which to automatically delete documents** **Description** Sets the number of days to save documents on the HDD before automatically deleting. **Purpose** To change the number of days to retain data that is saved within the auto-delete area of the HDD before automatically deleting. **Method** Press the start key. **Setting** ① Change the setting using Up/Down key. Description: Number of days after which to automatically delete documents / Setting range: 0 to 7 (days) / Initial value: 7 When set to 0, data will not be deleted automatically. ② Press the start key. The setting is set, and the screen for entering a maintenance item No. is displayed. **Completion** To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item is displayed.

<table>
<tr><th>Maintenance Item No.</th><th>Description</th></tr>
<tr><td>U330</td><td>
Sets the number of copies for switching the copy eject tray in the finisher
Description
Sets the number of copies at which the copy eject tray will switch from the sub tray to the main tray.
Purpose
Selects the value according to user request.
Method
Press the start key. The screen for adjustment is displayed.
Setting
① Use the numeric keys or Up/Down keys to adjust the preset value.
<table>
<tr><th>Description</th><th>Setting range</th><th>Initial value</th></tr>
<tr><td>Number of copies to be ejected on the sub tray</td><td>1 to 100 (sheets)</td><td>100</td></tr>
</table>
The copy eject tray is switched from the sub tray to the main tray when the number of copies ejected to the sub tray exceeds the preset value.
② Press the start key. The setting is set , and the screen for entering a maintenance item No. is displayed.
Completion
To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item is displayed.
</td></tr>
<tr><td>U331</td><td>
Switching the paper ejection mode
Description
Sets whether to eject copied sheets with the printed face facing up or down.
Purpose
To be set according to frequency of use:set to the more frequently used more..
Method
Press the start key. The screen for selecting an item is displayed.
Setting
① Select the ejection mode.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Face Up</td><td>Face-up ejection</td></tr>
<tr><td>Face Down</td><td>Face-down ejection</td></tr>
</table>
② Press the start key. The setting is set.
Completion
To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item is displayed.
</td></tr>
</table>

Maintenance Item No.	Description
U332	**Setting the size conversion factor**

Description

Sets the factor for converting each paper size into A4. The black ratio is converted for the A4 size using the factor set in this maintenance item. Values set are displayed in the user simulation.

Purpose

To set the factor to convert the black ratio of each paper size for A4 size.

Method

① Press the start key. The screen for selecting an item is displayed.

② Select the paper size.

③ Change the setting using Up/Down keys.

The size conversion factor can be set separately for the copier mode (COPY) and the printer mode (PRI) at the screen for setting the size conversion factor.

Metric models

Display	Description	Setting range	Initial setting	
			COPY	PRI
A3	Size conversion factor for A3	0.0 to 3.0	2.0	2.0
B4	Size conversion factor for B4	0.0 to 3.0	1.5	1.5
A4	Size conversion factor for A4	0.0 to 3.0	1.0	1.0
B5	Size conversion factor for B5	0.0 to 3.0	0.7	0.7
A5	Size conversion factor for A5	0.0 to 3.0	0.5	0.5
B6	Size conversion factor for B6	0.0 to 3.0	0.4	0.4
A6	Size conversion factor for A6	0.0 to 3.0	0.3	0.3
POST	Size conversion factor for postcard	0.0 to 3.0	0.3	0.6
FOL	Size conversion factor for folio	0.0 to 3.0	1.0	1.0
ECT	Size conversion factor for non-standard sizes	0.0 to 3.0	1.0	1.0

Inch models

Display	Description	Setting range	Initial setting	
			COPY	PRI
11 × 17	Size conversion factor for 11" × 17"	0.0 to 3.0	2.0	2.0
8.5 × 14	Size conversion factor for 8.5" × 14"	0.0 to 3.0	1.5	1.5
8.5 × 11	Size conversion factor for 8.5" × 11"	0.0 to 3.0	1.0	1.0
8.5 × 5.5	Size conversion factor for 8.5" × 5.5"	0.0 to 3.0	0.5	0.5
ECT	Size conversion factor for non-standard sizes	0.0 to 3.0	1.0	1.0

④ Press the start key. The setting is set.

Completion

To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item is displayed.

<table>
<tr><th>Maintenance item No.</th><th>Description</th></tr>
<tr><td>U333</td><td>
Setting the number of digits of ID-code
Description
Sets the number of digits of ID-code.
Purpose
Sets the number of digits according to user request.
Method
Press the start key. The screen for selecting an item is displayed.
Setting
① Select the number of digits.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>4 digits</td><td>The number of digits of ID-code is 4.</td></tr>
<tr><td>7 digits</td><td>The number of digits of ID-code is 7.</td></tr>
</table>
Initial setting: 4 digits for inch models
7 digits for metric models
② Press the start key. The setting is set , and the screen for entering a maintenance item No. is displayed.
Completion
To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item is displayed.
</td></tr>
<tr><td>U334</td><td>
Setting the ejection method in the booklet stitcher
Description
Sets whether or not the eject bin in use is switched to the other bin when the bin in use in the booklet stitcher overflows.
Purpose
To be set to use a different bin for paper ejection without interrupting copying operation when the currently used bin overflows.
Method
Press the start key. The screen for selecting an item is displayed.
Setting
① Select an ejection method.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>2 BIN</td><td>The eject bin is switched when a bin overflows.</td></tr>
<tr><td>1 BIN</td><td>The eject bin is not switched even when a bin overflows.</td></tr>
</table>
Initial setting: 1 BIN
② Press the start key. The setting is set , and the screen for entering a maintenance item No. is displayed.
Completion
To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item is displayed.
</td></tr>
</table>

Maintenance item No.	Description
U335	**Setting the drum heater control** **Description** Sets the controlling method for the drum heater. **Purpose** To change the controlling method for the drum heater according to the machine installation environment. **Method** Press the start key. The screen for selecting an item appears. **Setting** ① Select the controlling method for the drum heater. Display / Description ON 1 — Turns on and off the drum heater under high temperature and high humidity conditions, except for when the front cover is open. ON 2 — Turns on and off the drum heater under high temperature and high humidity conditions. ON 3 — Always turns on and off the drum heater, except for when the front cover is open. OFF — The drum heater is not turned on. Initial setting: ON 1 When the drum heater is turned on and off, diagnostic detection for a break or short circuit in the drum thermistor wire (C720 and C721) as well as a break in the drum heater wire (C722) will be performed. ② Press the start key. The setting is set. **Completion** To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item No. is displayed.
U336	**Setting the HDD type** **Description** Sets the manufacturer and type of the HDD. **Purpose** To set data according to the manufacturer and type of the new HDD after replacement. **Method** ① Press the start key. The screen for making a setting appears. ② Change the setting using the Up/Down keys. Display / Description / Setting range / Initial setting DATA / HDD type / 0 to 255 / 0 Since the HDD type of all the recommended HDDs is 0, the setting for this maintenance item does not need to be changed. ③ Press the start key. The value is set. **Completion** To exit this maintenance mode without changing the current setting, press the stop/clear key. The screen for selecting an maintenance item No. is displayed.

Maintenance item No.	Description
U337	**Setting the paper size for the side deck** **Description** Sets the paper size for the optional side deck. This maintenance item is applied to only Japanese specification machines, so no setting is necessary.
U338	**Setting the transmission capacity limit for e-mail** **Description** Sets the limit for transmittable data amount (number of originals) for the e-mail capability of the scanner. **Purpose** To be set according to the network environment and needs of the user. **Method** Press the start key. The screen for selecting an item is displayed. **Setting** ① Select the transmission capacity. The selected item is displayed in reverse. Display: Little / Medium / Large / Unlimited Description: Small capacity / Medium capacity / Large capacity / Unlimited capacity Initial setting: Little ② Press the start key. The setting is set, and the screen for entering a maintenance item No. is displayed. **Completion** To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item is displayed.
U340	**Setting the job build mode** **Description** Switches between the multiple menu display and simple menu display for the job build function. **Purpose** To change the number of selection items for the job build function. **Method** Press the start key. The screen for selecting an item is displayed. **Setting** ① Select SIMPLE MODE or NOMAL MODE. Display: SIMPLE MODE / NOMAL MODE Description: Selection from 3 items (simple menu) / Selection from 9 items (multiple menu) Initial setting: NOMAL MODE ② Press the start key. The setting is set, and the screen for entering a maintenance item No. is displayed.

Maintenance Item No.	Description
U343	**Switching between duplex/simplex copy mode** **Description** Switches the initial setting between duplex and simplex copy. **Purpose** To be set according to frequency of use: set to the more frequently used mode. **Method** Press the start key. The screen for selecting an item is displayed. **Setting** ① Select ON or OFF. Display: ON = Duplex copy; OFF = Simplex copy Initial setting: OFF ② Press the start key. The setting is set, and the screen for entering a maintenance item No. is displayed. **Completion** To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item is displayed.
U344	**Setting preheat/energy saver mode** **Description** Changes the control mode for preheat/energy saver, and sets the silent mode (low noise mode). **Purpose** According to user request, selects which has priority, recovery time from preheat or energy saving. Also sets polygon motor noise elimination in preheat. **Method** Press the start key. The screen for selecting an item is displayed. **Setting** ① Select control mode. INSTANT READY: Without decreasing the fixing control temperature, the display on the operation panel is turned off. ENERGY STAR: The fixing control temperature is decreased by 20°C/68°F and the copier is forcibly stabilized 30 s after exiting preheat mode. E 2000: The fixing control temperature is decreased by 25°C/77°F. SILENT MDOE: ON: Polygon motor off/OFF: Normal Initial setting: Energy Star applied ③ Press the start key. The setting is set, and the screen for entering a maintenance item No. is displayed. **Completion** To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item is displayed.

Maintenance item No.	Description
U345	**Setting the value for maintenance due indication** **Description** Sets when to display a message notifying that the time for maintenance is about to be reached, by setting the number of copies that can be made before the current maintenance cycle ends. When the difference between the number of copies of the maintenance cycle and that of the maintenance count reaches the set value, the message is displayed. **Purpose** To change the time to display the maintenance due indication. **Method** Press the start key. The current setting is displayed. **Setting** ① Change the setting using the numeric or Up/Down keys. Description: Display period for the next maintenance (remaining count before the end of the maintenance cycle) — Setting range: 0 to 9999 Initial setting: 0 ② Press the start key. The setting is set, and the screen for entering a maintenance item No. is displayed. **Completion** To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item is displayed.
U347	**Setting auto cassette size detection** **Description** Turning the auto cassette size detection function on/off. **Purpose** To be used when turning the auto paper size (in the cassettes) detection off and making copies onto only the specified size paper. **Method** Press the start key. The screen for selecting an item is displayed. **Setting** ① Select ON or OFF. ON: Detects the paper sizes in the cassettes automatically. OFF: Does not detect the paper sizes in the cassettes automatically. Initial setting: ON for inch and OFF for metric models ② Press the start key. The setting is set, and the screen for entering a maintenance item No. is displayed. **Completion** To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item is displayed.

Maintenance item No.	Description
U348	**Setting the copy density adjustment range** **Description** Selects the adjustment range for copy density from NORMAL and SPECIAL AREA (for wider range). **Purpose** To change the setting according to user request. When especially dark or light density is requested, set to SPECIAL AREA. **Method** Press the start key. The screen for selecting an item is displayed. **Setting** ① Select the density range. Display: SPECIAL AREA — Description: 25 steps (enlargement mode) Display: NORMAL — Description: 13 steps Initial setting: SPECIAL AREA ② Press the start key. The setting is set, and the screen for entering a maintenance item No. is displayed. **Completion** To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item is displayed.
U350	**Setting the ID-code error output** **Description** Sets whether or not an error report is output when an ID-code error occurs. **Purpose** According to user request, changes the setting. **Method** Press the start key. The screen for selecting an item is displayed. **Setting** ① Select ON or OFF. * The selected item is highlighted. Display: ON — Description: Error report is output. Display: OFF — Description: Error report is not output. Initial setting: OFF ② Press the start key. The setting is set, and the screen for entering a maintenance item No. is displayed. **Completion** To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item is displayed.
U402	**Adjusting margins for image printing** **Adjustment** See page 1-6-20.
U403	**Adjusting margins for reading an original on the contact glass** **Adjustment** See page 1-6-39.
U404	**Adjusting margins for DF original reading** **Adjustment** See page 1-6-74.
U407	**Adjusting the printing timing for the original on the contact glass** **Adjustment** See page 1-6-18.

Maintenance item No.	Description
U901	**Checking/clearing copy counts by paper feed locations** **Description** Displays or clears copy counts by paper feed locations. **Purpose** To check the time to replace consumable parts. Also to clear the counts after replacing the consumable parts. **Method** ① Press the start key. The counts by paper feed locations are displayed. ② Change the screen using the Up/Down keys. Display / Paper feed locations BYPASS: Bypass table LCF: Large paper deck CASS-C: Copier upper cassette CASS-D: Copier lower cassette DUPLEX: Duplex unit S-DECK: Side deck When an optional side deck is not installed, the corresponding count is not displayed. **Clearing** ① Select the count to be cleared. The selected item is displayed in reverse. To clear the counts for all paper feed locations, press ALL on the touch panel. ② Press the start key. The setting is set, and the screen for entering a maintenance item No. is displayed. **Completion** To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item is displayed.
U903	**Checking/clearing the paper jam counts** **Description** Displays or clears the jam counts by jam locations. **Purpose** To check the paper jam status. Also to clear the jam counts after replacing consumable parts. **Start** Press the start key. The screen for selecting an item is displayed. Display / Description COUNT: Displaying or clearing the jam counts TOTAL COUNT: Displaying the total jam counts **Method to display/clear the jam counts** ① Press COUNT. The jam count is displayed by jam codes. ② Change the screen using the Up/Down keys. Press ALL on the touch panel, and press the start key. The count is cleared, and the screen for selecting an item is displayed. **Method to display the total jam counts** ① Press TOTAL COUNT. The total jam count is displayed by jam codes. ② Changes the screen using the Up/Down keys. The total jam count cannot be cleared. Press the stop/clear key, and the screen for selecting an item is displayed. **Completion** To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item is displayed.

Maintenance item No.	Description
U904	**Checking/clearing the service call counts** **Description** Displays or clears the service call code counts by types. **Purpose** To check the service call code status by types. Also to clear the service call code counts after replacing consumable parts. **Start** Press the start key. The screen for selecting an item is displayed. Display: COUNT — Description: Displaying or clearing the service call counts Display: TOTAL COUNT — Description: Displaying the total service call counts **Method to display/clear the service call counts** ① Press the start key. The service call count is displayed by service call codes. ② Change the screen using the Up/Down keys. Press ALL on the touch panel, and press the start key. The count is cleared, and the screen for selecting an item is displayed. Service call counts cannot be cleared individually. **Method to display the total service call counts** ① Press TOTAL COUNT. The total service call count is displayed by service call codes. ② Changes the screen using the Up/Down keys. The total service call count cannot be cleared. Press the stop/clear key, and the screen for selecting an item is displayed. **Completion** To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item is displayed.
U905	**Checking/clearing counts by optional devices** **Description** Displays or clears the counts by optional devices. **Purpose** To check the use of the SRDF, finisher and booklet sitcher. Also to clear the counts after replacing consumable parts. **Method** ① Press the start key. The screen for selecting an item is displayed. ② Select the device, the count of which is to be checked. The count of the selected device is displayed. • SRDF (DF) Display: CHANGE — Description: Original replacement count Display: ADF — Description: No. of single-sided originals that has passed through the DF in ADF mode Display: RADF — Description: No. of double-side originals that has passed through the DF in RADF mode • Finisher (SORTER) Display: COPY COUNT — Description: No. of copies that has passed Display: STAPLE — Description: Frequency the stapler has been activated Display: PUNCH — Description: Frequency the punch has been activated Display: STACKER — Description: Frequency the stacker has been activated Display: SADDLE — Description: Frequency the booklet stitcher has been activated **Clearing** ① Select the item to be cleared. The selected item is displayed in reverse. ② Press the start key. The count is cleared. ③ To return to the screen for entering an item, press the stop/clear key. **Completion** Press the stop/clear key at the screen for selecting an item. The screen for selecting a maintenance item is displayed.

Maintenance Item No.	Description
U906	**Resetting partial operation control** **Description** Resets the service call code for partial operation control. **Purpose** To be reset after partial operation is performed due to problems in the cassettes or other sections below, and the related parts are serviced. The following sections can be the subject of the partial operation: Large paper deck Copier cassettes HDD Scanner Side deck* Finisher* Mailbox* *opition **Method** ① Press the start key. ② Press RESET on the touch panel. ③ Press the start key to reset partial operation control. The maintenance mode is exited, and the machine returns to the same status when the main switch is turned on.
U907	**Checking and resetting the count value on each ejection location** **Description** Displays and resets the count value of ejected sheets on each ejection location. **Purpose** Checks the replacement period for maintenance parts. Also resets the count value after replacing the maintenance parts. **Method** Press the start key. * The count value on each ejection location is displayed **Display** / **Description** STRAIGHT / Straight ejection count SWITCH BACK / Reversed ejection count AUTO DUPLEX / Duplex tray ejection count **Clearing** ① Select the item for which the count value is to be reset. * The selected item is highlighted. * To reset the count values for all ejection locations, press ALL on the touch panel. ② Press the start key. The count is cleared. **Completion** To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item is displayed.

Maintenance Item No.	Description
U908	**Checking the count value of the electronic counter** **Description** Displays the count value of the electronic counter. **Purpose** Checks the value for maintenance work. **Method** Press the start key. * The count value of the total counter is displayed. Display: COUNT — Description: Count value of electronic counter **Clearing** The count value cannot be changed or cleared. **Completion** To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item is displayed.
U909	**Checking/clearing the fixing web count** **Description** Displays and clears the count of the cleaning felt operation. **Purpose** To clear the fixing web counts after replacing the cleaning felt during maintenance or for other reasons. **Method** Press the start key. The fixing web count is displayed. **Clearing** ① Press CLEAR on the touch panel. ② Press the start key. The count is set, and the screen for selecting a maintenance item is displayed. **Setting** ① Enter a six-digit numerical value using the numeric keys. ② Press the start key. The count is set, and the screen for selecting a maintenance item is displayed. **Completion** To exit this maintenance item without changing the count, press the stop/clear key. The screen for selecting a maintenance item is displayed.
U910	**Clearing the black ratio data** **Description** Clears the accumulated black ratio data for A4 sheets. **Purpose** To clear data as required at times such as during maintenance service. **Method** ① Press the start key. ② Press RESET on the touch panel. ③ Press the start key. The accumulated black ratio data is cleared, and the screen for selecting a maintenance item is displayed. **Completion** To exit this maintenance item without clearing the data, press the stop/clear key. The screen for selecting a maintenance item is displayed.

Maintenance item No.	Description
U911	**Checking/clearing copy counts by paper sizes** **Description** Displays and clears the paper feed counts by paper sizes. **Purpose** To check or clear the counts after replacing consumable parts. **Method** ① Press the start key, and the screen for sthe paper feed counts by paper size is displayed. ② Select a paper size or ALL on the touch panel. ③ Press the start key. The count is cleared. **Completion** To exit this maintenance item without changing the count, press the stop/clear key. The screen for selecting a maintenance item is displayed.
U990	**Checking/clearing the time for the exposure lamp to light** **Description** Displays, clears or changes the accumulated time for the exposure lamp to light. **Purpose** To check duration of use of the exposure lamp. Also to clear the accumulated time for the lamp after replacement. **Method** Press the start key. The accumulated time of illumination for the exposure lamp is displayed in minutes. **Clearing** ① Press CLEAR on the touch panel. ② Press the start key. The accumulated time is cleared, and the screen for selecting a maintenance item No. is displayed. **Completion** To exit this maintenance item without changing the accumulated time, press the stop/clear key. The screen for selecting a maintenance item is displayed.
U991	**Checking/clearing the scanner count** **Description** Displays or clears the scanner operation count. **Purpose** To check the status of use of the scanner. Also used to clear the scanner count after replacing consumable parts in the scanner. **Method** Press the start key. The count of scanner operation is displayed. Each scan is counted as one regardless of the paper size. **Clearing** ① Press CLEAR on the touch panel. ② Press the start key. The count is cleared. The screen for selecting a maintenance item No. is displayed. **Completion** To exit this maintenance item without changing the current setting, press the stop/clear key. The screen for selecting a maintenance item No. is displayed.

Maintenance item No.	Description
U992	**Checking/clearing the printer count** **Description** Displays, clears or changes the print count of the printer when the optional printer unit is installed. **Purpose** To check the frequency of use of the printer. **Method** Press the start key. The printer count is displayed. **Clearing** ① Press CLEAR on the touch panel. ② Press the start key. The count is set, and the screen for selecting a maintenance item is displayed. **Setting** ① Enter a six-digit numerical value using the numeric keys. ② Press the start key. The count is set, and the screen for selecting a maintenance item is displayed. **Completion** To exit this maintenance item without changing the count, press the stop/clear key. The screen for selecting a maintenance item is displayed.