(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	—
	U002	Setting the factory default data	—
	U003	Setting the service telephone number	—
	U004	Setting the machine number	—
	U005	Copying without paper	—
	U019	Displaying the ROM version	—
Initialization	U020	Initializing all data	—
	U021	Initializing memories	—
	U022	Initializing backup data	—
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 print center line	 – 4 0 0
	U035	Setting folio size Length Width	 330 210
	U036	Setting envelope size Length Width	 242 162
	U051	Adjusting the amount of slack in the paper before registration Drawer feed Bypass feed Duplex feed	 – 20 – 5 – 25
	U052	Adjusting the side margins for duplex copying	0
	U053	Performing fine adjustment of the motor speed Drive motor/paper conveying motor	 8
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

* Initial setting for executing maintenance item U020

Section	Item No.	Maintenance item contents	Initial setting*
Optical	U065	Adjusting the scanner magnification Main scanning direction/auxiliary scanning direction	0
	U066	Adjusting the scanner leading edge registration	0
	U067	Adjusting the scanner center line	0
	U070	Adjusting the DF magnification	0
	U071	Adjusting the DF scanning timing	0
	U072	Adjusting the DF center line	0
	U073	Checking scanner operation	—
	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	—
High voltage	U100	Setting the surface potential	150
	U101	Setting high voltages Developing bias Transfer voltage Separation voltage	220/57 140 100
	U102	Setting the cleaning interval for the transfer charger	1
	U110	Checking/clearing the drum count	—
	U111	Checking/clearing the drum drive time	—
Developing	U130	Initial setting for the developer	—
	U131	Setting the toner sensor control voltage	153
	U132	Replenishing toner forcibly	—
	U133	Collecting the recycled toner	—
	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	—

* Initial setting for executing maintenance item U020

Section	Item No.	Maintenance item contents	Initial setting*
Developing	U156	Changing the toner control level Toner feed start level Toner empty level	 114 20
	U157	Checking/clearing the developing drive time	—
	U158	Checking/clearing the developing count	—
Fixing and cleaning	U160	Applying toner to the cleaning blade	—
	U161	Setting the fixing control temperature	42ppm | 52ppm
		Normal stabilization control temperature Primary stabilization temperature Secondary stabilization temperature Aging time after secondary stabilization	180 | 190 175 | 175 180 | 190 60 | 120
	U162	Stabilizing fixing forcibly	—
	U196	Turning the fixing heater on	—
	U198	Setting the fixing phase control	ON
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	 —
	U206	Setting the presence or absence of the coin vender	OFF
	U209	Setting date and time	—
	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 large paper deck and paper feed desk	 —
	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	 0 75000 — 0
Mode setting	U250	Setting the maintenance cycle	150
	U251	Checking/clearing the maintenance count	—
	U252	Setting the destination	—
	U253	Switching between double and single counts	SINGLE COUNT

* Initial setting for executing maintenance item U020

Section	Item No.	Maintenance item contents	Initial setting*
Mode setting	U254	Turning auto start function on/off	ON
	U255	Setting auto clear time	120
	U256	Turning auto preheat/energy saver function on/off	ON
	U258	Switching copy operation at toner empty detection	SINGLE MODE, 0
	U260	Changing the copy count timing	EJECT
	U263	Setting DF copy ejection orientation	FACE-DOWN
	U264	Setting date display order	—
	U265	Setting OEM purchaser code	—
	U330	Sets the number of copies for switching the copy eject tray in the finisher	100
	U333	Setting the number of digits of ID-code	4 digits
	U334	Setting the ejection method in the saddle finisher	2 BIN
	U343	Switching between duplex/simplex copy mode	OFF
	U344	Setting preheat/energy saver mode	Energy Star applied
	U345	Setting the value for maintenance due indication	0
	U347	Setting auto drawer size detection	ON
	U348	Setting the copy density adjustment range	NORMAL
	U350	Setting the ID-code error output	ON
Image processing	U402	Adjusting margins in image printing	—
	U403	Adjusting margins for reading an original on the contact glass	—
	U404	Adjusting margins for DF original reading	—
Others	U901	Checking/clearing copy counts by paper feed locations	—
	U904	Checking/clearing the service call counts	—
	U905	Checking/clearing counts by optional devices	—
	U906	Resetting partial operation control	—
	U907	Checking and resetting the count value on each ejection location	—
	U908	Checking the count value of the electronic counter	—
	U990	Checking/clearing the time for the exposure lamp to light	—
	U992	Checking/clearing the printer count	—

* 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 print 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 print key. The interrupt copy mode is entered and a list is output.

When A4/11" × 8$^{1}/_{2}$" 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>
</table>

<table>
<tr><th>Maintenance item No.</th><th>Description</th></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 print key. The normal copy mode is entered.
</td></tr>
<tr><td>U002</td><td>
Setting the factory default data

Description
Restores the machine conditions to the factory default settings. Also an OEM purchaser code can be input.

Purpose
To reset the values such as an electronic counter. Also to move the mirror frame of the scanner to the position for transport (position in which the frame can be fixed).

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

Method
① Select a mode.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>MODE1(ALL)</td><td>Normal factory default settings.</td></tr>
<tr><td>MODE2(SELECT)</td><td>Factory default settings except for language*.</td></tr>
</table>
② Use the numeric keys or Up/Down keys to input the OEM code.
③ Press the print key.

* The maintenance No. selection screen will appear again.

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
U003	**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 print 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. * | # (|) — | (Space) ← | → ② Press the print 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.

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 print 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 print 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.

Maintenance item No.	Description
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 print 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** PPC — Only the copier operates. PPC + DF — 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 drawers, or the drawers. With the paper present, the paper feed pulley does not operate. ⑥ Press the print 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.

<table>
<tr><th>Maintenance item No.</th><th>Description</th></tr>
<tr><td>U019</td><td>
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 print key. The last six digits of the part number indicating the ROM version are displayed.

② Change the screen using The Up/Down keys.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>MAIN</td><td>Main ROM IC</td></tr>
<tr><td>ENGINE</td><td>Engine ROM IC</td></tr>
<tr><td>MMI</td><td>Operation ROM IC</td></tr>
<tr><td>FONT</td><td>Font ROM IC</td></tr>
<tr><td>SCANNER</td><td>Scanner ROM IC</td></tr>
<tr><td>MEM1</td><td>Memory copy ROM IC</td></tr>
<tr><td>MEM2*</td><td>Memory copy ROM IC</td></tr>
</table>
* 42 ppm: optional
52 ppm: standard

Completion
Press the stop/clear key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U020</td><td>
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 print key. The screen for executing is displayed.

② Press EXECUTE on the touch panel. It is displayed in reverse.

③ Press the print key. All data in the backup RAM is initialized, and the original settings for Japan specifications 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.
</td></tr>
</table>

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 print key. The screen for executing is displayed. ② Press EXECUTE on the touch panel. It is displayed in reverse. ③ Press the print 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.

3-2 (2A3/4/E)-2 14 1/1/32, 3:41

Maintenance item No.	Description
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 print 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 print key. The data for the optical section (U060 to 099, U403, U404 and U990) is initialized. **Completion** To exit the maintenance mode, 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 print 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. CONV MOTOR — 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.

Maintenance item No.	Description
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 print 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
FEED1 SW	Paper feed switch 1 (PFSW1)
FEED2 SW	Paper feed switch 2 (PFSW2)
FEED3 SW	Paper feed switch 3 (PFSW3)
FEED4 SW	Paper feed switch 4 (PFSW4)
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)
DUP PESW	Stock switch (STKSW)
DUP1 SW	Duplex registration switch (DUPRSW)
DUP2 SW	Duplex paper conveying switch (DUPPCSW)
DUP3 SW	Duplex eject switch (DUPESW)

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>U032</td><td>
Checking clutch operation

Description
Turns each clutch on.

Purpose
To check the operation of each clutch.

Method
① Press the print 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.
<table>
<tr><th>Display</th><th>Clutches</th></tr>
<tr><td>SB FEED</td><td>Bypass paper feed clutch (BYPPFCL)</td></tr>
<tr><td>F FEED</td><td>Upper paper feed clutch (PFCL-U)</td></tr>
<tr><td>S FEED</td><td>Lower paper feed clutch (PFCL-L)</td></tr>
<tr><td>FEED L</td><td>Feed clutch 5 (FCL5)</td></tr>
<tr><td>FEED H</td><td>Feed clutch 4 (FCL4)</td></tr>
<tr><td>FEED 1</td><td>Feed clutch 1 (FCL1)</td></tr>
<tr><td>FEED 2</td><td>Feed clutch 2 (FCL2)</td></tr>
<tr><td>FEED 3</td><td>Feed clutch 3 (FCL3)</td></tr>
<tr><td>REGIST</td><td>Registration clutch (RCL)</td></tr>
<tr><td>EJECT SP</td><td>Eject speed switching clutch (ESCL)</td></tr>
</table>
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 stop/clear key 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 drawers 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.
</td></tr>
</table>

<table>
<tr><th>Maintenance item No.</th><th>Description</th></tr>
<tr><td>U033</td><td>
Checking solenoid operation

Description
Turns each solenoid on.

Purpose
To check the operation of each solenoid.

Method
① Press the print 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.
<table>
<tr><th>Display</th><th>Solenoids</th></tr>
<tr><td>SB LIFT
BRANCH
END PRE
TRAY FEE</td><td>Bypass solenoid (BYPSOL)
Feedshift solenoid (FSSOL)
Duplex paper tapping solenoid (DUPPTSOL)
Duplex forwarding solenoid (DUPFWDSOL)</td></tr>
<tr><td>TRAY CHG</td><td>Switchback feedshift solenoid (SBFSSOL)</td></tr>
<tr><td>MSW OFF</td><td>The main switch turns off.</td></tr>
</table>
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.
</td></tr>
<tr><td>U034</td><td>
Adjusting the print start timing

Adjustment
See pages 3-3-18 and 19.
</td></tr>
</table>

<table>
<tr><th>Maintenance item No.</th><th>Description</th></tr>
<tr><td>U035</td><td>
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 print 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.
<table>
<tr><th>Display</th><th>Setting</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>LENGTH DATA</td><td>Length</td><td>330 to 356 mm</td><td>330</td></tr>
<tr><td>WIDTH DATA</td><td>Width</td><td>220 to 220 mm</td><td>210</td></tr>
</table>
③ Press the print key. The value is set.

Completion
Press the stop/clear key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U036</td><td>
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 print 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.
<table>
<tr><th>Display</th><th>Setting</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>LENGTH DATA</td><td>Length</td><td>162 to 242 mm</td><td>242</td></tr>
<tr><td>WIDTH DATA</td><td>Width</td><td>98 to 162 mm</td><td>162</td></tr>
</table>
③ Press the print key. The value is set.

Completion
Press the stop/clear key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

Maintenance item No.	Description
U051	**Adjusting the amount of slack in the paper before registration** **Adjustment** See page 3-3-22.
U052	**Adjusting the side margins for duplex copying** **Adjustment** See page 3-3-88.
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 print 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	8
CONV MOTOR	Paper conveying motor speed adjustment	0 to 14	8

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

③ Press the print 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

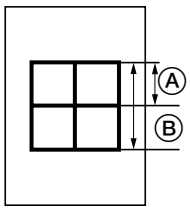


Figure 3-2-3

<table>
<tr><th>Maintenance item No.</th><th>Description</th></tr>
<tr><td>U053</td><td>Adjustment
① Output an A3/11" × 17" VTC pattern in interrupt mode.
② Measure Ⓐ and Ⓑ on the VTC pattern (Figure 3-2-3), 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.</td></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 print 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.
<table>
<tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>TEXT γ adj</td><td>Density in text mode</td><td>0 to 23</td><td>12</td></tr>
<tr><td>MIX γ adj</td><td>Density in text and photo mode</td><td>0 to 23</td><td>12</td></tr>
<tr><td>PHOTO γ adj</td><td>Density in photo mode</td><td>0 to 23</td><td>12</td></tr>
</table>
Increasing the setting makes the density lower, and decreasing it makes the density higher.
③ Press the print 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>
</table>

<table>
<tr><th>Maintenance item No.</th><th>Description</th></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 print key. The screen for selecting an item is displayed.
② Press the print 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 print 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>–2 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 print 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 3-3-36 and 37.
U066	**Adjusting the scanner leading edge registration** **Adjustment** See page 3-3-39.
U067	**Adjusting the scanner center line** **Adjustment** See page 3-3-38.
U070	**Adjusting the DF magnification** **Adjustment** See page 3-3-96.
U071	**Adjusting the DF scanning timing** **Adjustment** See page 3-3-98.
U072	**Adjusting the DF center line** **Adjustment** See page 3-3-97.

Maintenance item No.	Description
U073	**Checking scanner operation**

Description
Simulates the scanner operation under arbitrary conditions.

Purpose
To check scanner operation.

Method
① Press the print 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" × 8 1/2"	52	11" × 17"
36	A3	53	11" × 15"
39	B4	55	8 1/2" × 14"
40	A4R	56	8 1/2" × 11"
41	B5R	58	5 1/2" × 8 1/2"

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

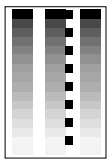
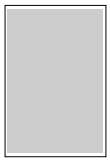
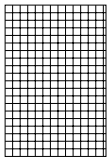
⑤ To stop operation, press the stop/clear key.

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

Maintenance item No.	Description
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 print 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** | **Setting range** | **Initial value** Exposure in toner economy mode | 0 to –12 | –6 ② Press the print 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.

Maintenance item No.	Description
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 print key. The screen for selecting an item is displayed. **Setting** ① Select ON or OFF. The selected item is displayed in reverse. **Display** / **Description**: ON — Moiré reduction mode; OFF — 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 print 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 print 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)

<table>
<tr><th>Maintenance item No.</th><th>Description</th></tr>
<tr><td>U089</td><td>
③ To change the output conditions for MONO-LEVEL, change the setting using The Up/Down keys.
<table>
<tr><th>Description</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>Output conditions for MONO-LEVEL</td><td>0 to 255</td><td>0</td></tr>
</table>
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 print 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.
</td></tr>
</table>

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.

Maintenance item No.	Description
U091	**Method** ① Press the print 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 print 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.

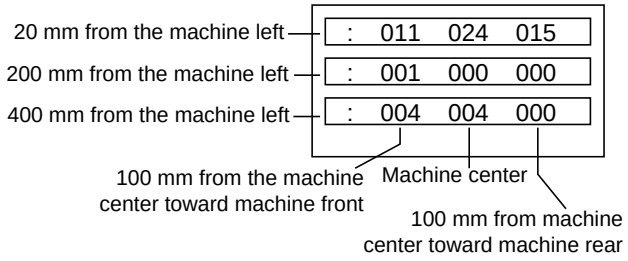


Figure 3-2-4

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.

<table>
<tr><th>Maintenance item No.</th><th>Description</th></tr>
<tr><td>U092</td><td>
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)

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: 2AC68240) on the contact glass.
② Press the print key. The screen for executing is displayed.
③ Press the print key. Auto adjustment starts. When adjustment is complete, each adjusted value is displayed.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>SCAN CENTER ADJ</td><td>Scanner center line</td></tr>
<tr><td>MAIN SCAN ADJ</td><td>Scanner magnification in the main scanning direction</td></tr>
<tr><td>SCAN TIMING ADJ</td><td>Scanner leading registration</td></tr>
<tr><td>SUB SCAN ADJ</td><td>Scanner magnification in the auxiliary direction</td></tr>
</table>
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.
</td></tr>
</table>

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 print 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.

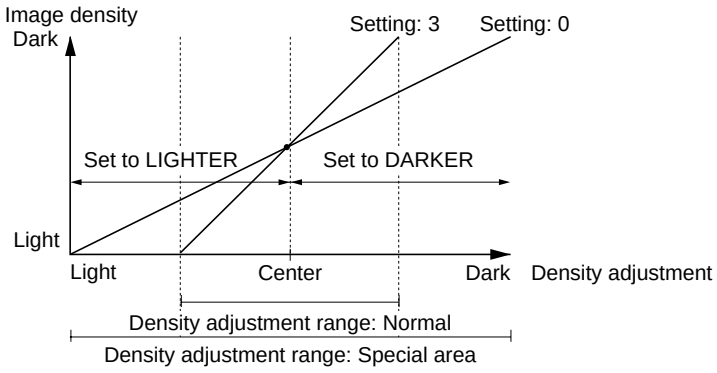


Figure 3-2-5 Exposure density gradient

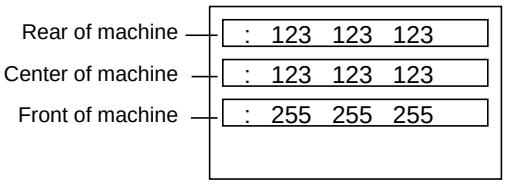
<table>
<tr><th>Maintenance item No.</th><th>Description</th></tr>
<tr><td>U093</td><td>③ Press the print key. The value is set.
④ To return to the screen for selecting an item, press the stop/clear key.
Interrupt copy mode
While this maintenance item is being performed, copying from an original can 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.</td></tr>
<tr><td>U099</td><td>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 print key. The screen for selecting an item is displayed.
② Select an item.
* The screen for executing each item is displayed.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>DATA</td><td>Displaying detection sensor transmission data</td></tr>
<tr><td>B/W LEVEL</td><td>Setting detection sensor threshold value
Setting original size judgment time</td></tr>
</table>
Method to display the data for the sensor
① Press the print key. The detection sensor transmission data is displayed.


Figure 3-2-6
② To return to the screen for selecting an item, press the stop/clear key.</td></tr>
</table>

Maintenance item No.	Description
U099	**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 print 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 print 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 print key. The screen for selecting an item is displayed.

Display	Description
MC 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 MC 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	0 to 255	150

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 print 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 developing bias voltage, transfer voltage and separation voltage by changing the developing bias control voltage, transfer control voltage and separation 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 print 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	Description
DEV BIAS SET	Setting the developing bias
TC SET	Setting and checking the transfer voltage
AC SET	Setting the separation 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.

Display	Operation	Setting range	Initial setting
DB DATA	Developing bias control voltage during image formation	0 to 255	220
DB DATA2	Developing bias control voltage during no image formation	0 to 255	57

Increasing the setting makes the developing bias higher, and decreasing it makes the bias lower.

③ Press the print key. The value is set.

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

Maintenance item No.	Description
U101	**Setting the transfer voltage** ① Change the setting using the Up/Down keys.

Display	Operation	Setting range	Initial setting
TC DATA	Transfer control voltage	0 to 255	140

Increasing the setting makes the transfer voltage higher, and decreasing it makes the voltage lower.

② Press the print key. The value is set.

③ To check the transfer voltage output, press the TC ON on the touch panel. The currently set transfer voltage is output.

④ To stop the transfer voltage output, press the stop/clear key.

⑤ To return to the screen for selecting an item, press the stop/clear key after the transfer voltage output is stopped.

Setting the separation voltage

① Change the setting using the Up/Down keys.

Display	Description	Setting range	Initial setting
AC DATA	Separation control voltage	0 to 255	100

Increasing the setting makes the separation voltage higher, and decreasing it makes the voltage lower.

② Press the print key. The value is set.

③ 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. The screen for selecting a maintenance item No. is displayed.

Maintenance item No.	Description
U102	**Setting the cleaning interval for the transfer charger**

Description
Executes a cleaning operation for the transfer charger and changes the intervals at which the transfer charger is cleaned.

Purpose
To check the cleaning operation for the transfer 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 print 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	Setting range	Initial setting	Change in value per step
Transfer charger cleaning operation intervals	0 to 20	1	1000 copies

When set to 3, the transfer charger is cleaned every 3000 copies (3 by 1000) counted after the main switch is turned on. When set to 0, the transfer charger is not cleaned.

② Press the print 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 print key. The drum counter count is displayed. **Clearing** ① Press CLEAR on the touch panel. ② Press the print 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 print 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.

Maintenance item No.	Description
U111	**Checking/clearing the drum drive time** **Description** Displays the drum drive time for checking or clearing a figure, which is used as a reference when correcting the high voltage based on time. **Purpose** To check the drum status. Also used to clear the drive time after replacing the drum. **Method** Press the print key. The drum drive time is displayed in minutes. **Clearing** ① Press CLEAR on the touch panel. ② Press the print key. The time is cleared, 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 print key. The time is set, and the screen for selecting a maintenance No. is displayed. **Completion** To exit this maintenance item without changing the time, 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>U130</td><td>
Initial setting for the developer

Description
Automatically sets the toner sensor control voltage and toner feed start 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 print key. The screen for executing is displayed.
② Press the print key. The initial settings for the developer is set, and the result is displayed.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>CONTROL</td><td>Toner sensor control voltage</td></tr>
<tr><td>TARGET</td><td>Toner feed start level</td></tr>
<tr><td>HUMID</td><td>Absolute humidity</td></tr>
</table>
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 feed start level (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.
</td></tr>
</table>

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 print key. The current setting for the toner sensor control voltage is displayed. **Setting** ① Change the setting using the Up/Down keys. **Description** / **Setting range** / **Initial setting** Toner sensor control voltage / 0 to 255 / 153 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 print key. The value is set. **Completion** 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>U132</td><td>
Replenishing toner forcibly

Description
Replenishes toner forcibly until the toner sensor output value reaches the toner feed start level.

Purpose
Used when the toner empty is detected frequently.

Method
① Press the print key. The screen for executing is displayed.
② Press the print key. Operation starts, and the current data is displayed.

Toner is replenished until the toner sensor output value reaches the toner feed start level.

To stop operation, press the start/clear key.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>TARGET (NOW)</td><td>Current toner feed start level</td></tr>
<tr><td>CONTROL (NOW)</td><td>Current toner sensor control voltage</td></tr>
<tr><td>HUMID</td><td>Absolute humidity</td></tr>
</table>
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.
</td></tr>
<tr><td>U133</td><td>
Collecting the recycled toner

Description
Transfers residual toner in the cleaning section, toner main hopper and toner sub hopper to the developing unit.

Purpose
To dispose of residual toner inside the machine when the developer is replaced. Be sure to run this maintenance item before replacing the developer. Failing to do so could lead to toner scattering.

There is no need to run this maintenance item if the developer is to be loaded for the first time in such occasion as machine installation.
</td></tr>
</table>

<table>
<tr><th>Maintenance item No.</th><th>Description</th></tr>
<tr><td>U133</td><td>Method
① Press the print key. The screen for executing is displayed.
② Press ON on the touch panel. The selected item is displayed in reverse.
③ Press the print key. The toner recycle motor turn on and recycled toner collection is performed for approximately 5 minutes. The ON display on the touch panel flashes during the operation and returns to the normal state when it ends.
To interrupt 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.</td></tr>
<tr><td>U135</td><td>Checking toner motor operation
Description
Drives the toner feed motor or toner recycle motor.
Purpose
To check the operation of the toner feed motor or toner recycle 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 print 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.
<table><tr><th>Description</th><th>Operation</th></tr><tr><td>MOTOR 1</td><td>Toner feed motor drive</td></tr><tr><td>MOTOR 2</td><td>Toner recycle motor drive</td></tr></table>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.</td></tr>
</table>

<table>
<tr><th>Maintenance item No.</th><th>Description</th></tr>
<tr><td>U136</td><td>
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 print key.

Setting
① Press ON or OFF to change the operation.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>ON</td><td>Controls based on the detection by the toner sensor detection sensor.</td></tr>
<tr><td>OFF</td><td>Ignores the detection by the toner level detection sensor.</td></tr>
</table>
Initial setting: ON
② Press the print 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.
</td></tr>
<tr><td>U137</td><td>
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 and recycle toner level in the toner hopper.

Method
① Press the print key. The detected status of the each sensor is displayed.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>TE1 SW</td><td>Toner level detection sensor (toner level in the toner hopper)</td></tr>
<tr><td>TE2 SW</td><td>Toner hopper lockup detection sensor (recycle toner level)</td></tr>
</table>
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.
</td></tr>
</table>

Maintenance item No.	Description
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 print key. The screen for executing is displayed. ② Press the print key. The current data is displayed. **Display** / **Description** TARGET (NOW) — Current toner feed level (corrected value for humidity and drive time) CONTROL (NOW) — Current toner sensor control voltage 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 feed start level set in maintenance item U130 or the toner empty level to be determined by the difference from the toner feed start level.

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 feed start level
EMPTY	Difference between the toner feed start level and toner empty level

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

Description	Setting range	Initial setting
Toner feed start level	0 to 255	114

Increasing the setting makes the toner density lower.
③ Press the print 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 feed start level and the toner empty level	0 to 255	20

Increasing the setting makes the toner empty level higher: the toner density is lower when the toner empty is detected.
③ Press the print 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 print key. The developing drive time is displayed in minutes. **Clearing** ① Press CLEAR on the touch panel. ② Press the print 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 print 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 print key. The developing count is displayed. **Clearing** ① Press CLEAR on the touch panel. ② Press the print 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 print 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.

Maintenance item No.	Description
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 print key. The screen for executing is displayed. ② Press the print key. Operation starts. When the operation is complete, the screen for selecting a maintenance item No. is displayed. **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 print 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.

Display	Description	Setting range	Initial setting	
			42 ppm	52 ppm
CONTROL TEMP	Normal stabilization fixing temperature	100 to 200 (°C)	180	190
FIRST TEMP	Primary stabilization fixing temperature	100 to 200 (°C)	175	175
SECOND TEMP	Secondary stabilization fixing temperature	100 to 200 (°C)	180	190
RUNNING TIME	Aging time after secondary stabilization	0 to 120 (s)	60	120

The respective temperatures are to be set such that CONTROL TEMP ≥ SECOND ≥ TEMPFIRST TEMP.

③ Press the print key. The value is set.

Interrupt copy mode
While this maintenance item is being performed, a test pattern for measuring fixing pressure is output in interrupt copy mode (see page 3-3-79).

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

<table>
<tr><th>Maintenance item No.</th><th>Description</th></tr>
<tr><td>U162</td><td>
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 print key. The screen for executing is displayed.
② Press the print 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.
</td></tr>
<tr><td>U196</td><td>
Turning the fixing heater on

Description
Turns the fixing heater on.

Purpose
To check fixing heaters M or S.

Method
① Press the print 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.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>MAIN</td><td>Fixing heater M (H1)</td></tr>
<tr><td>SUB</td><td>Fixing heater S (H2)</td></tr>
</table>
Completion
Press the stop/clear key when fixing motors M and S are off. The screen for selecting the maintenance item No. is displayed.
</td></tr>
</table>

<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 print 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 specifications
② Press the print 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 print 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>
</table>

Maintenance item No.	Description
U201	**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 print 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.

Maintenance item No.	Description
U202	**Setting the MMD host monitoring system**

Description
Initializes or operates the MMD host monitoring system*

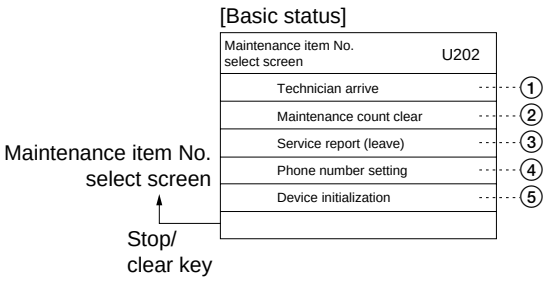
* Optional for 120 V specifications only.

Purpose
Used when setting up the machine or during regular maintenance or repair.

Method
① Press the print key. The basic status screen is displayed.

② Operates the device following the instructions on the touch panel.

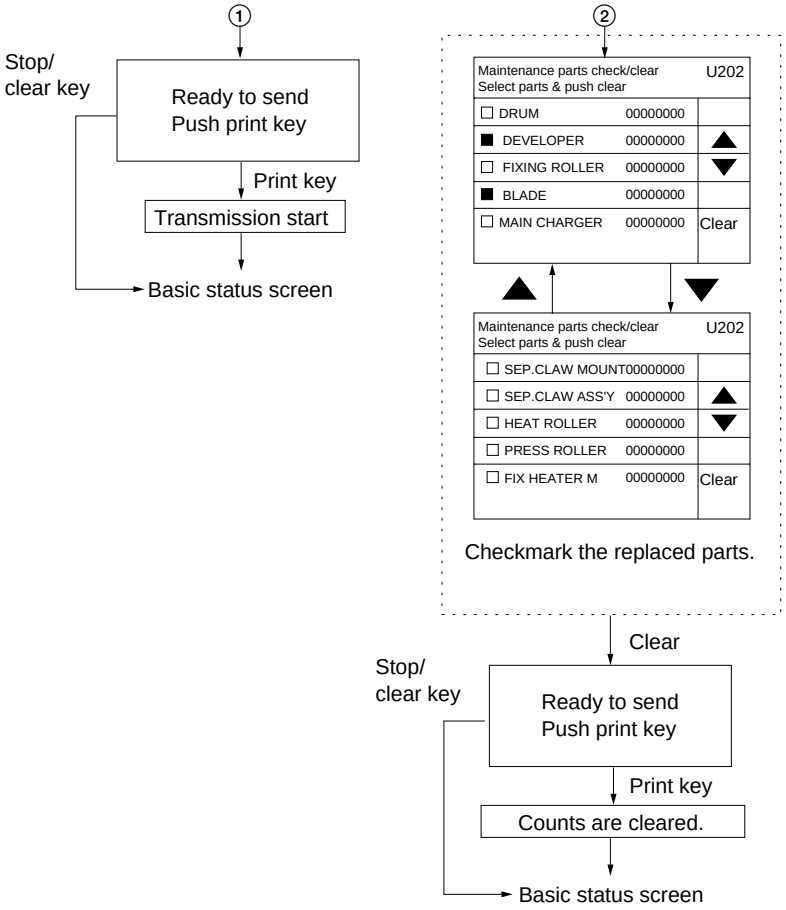
Completion
Press the stop/clear key on the basic screen. The screen for selecting a maintenance item No. is displayed.



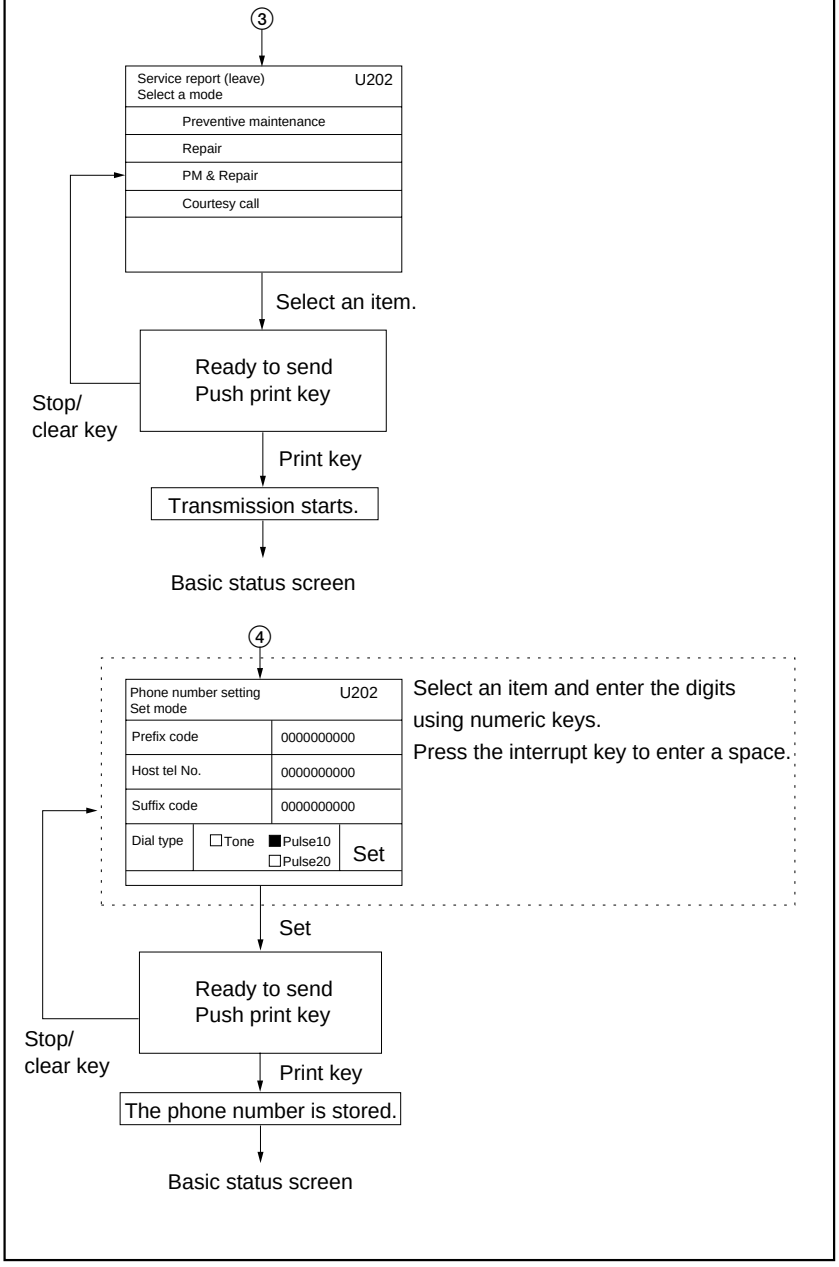
• To initialize the MMD host monitoring system, run the following modes in order:
· Phone number setting ④
· Device initialization ⑤

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

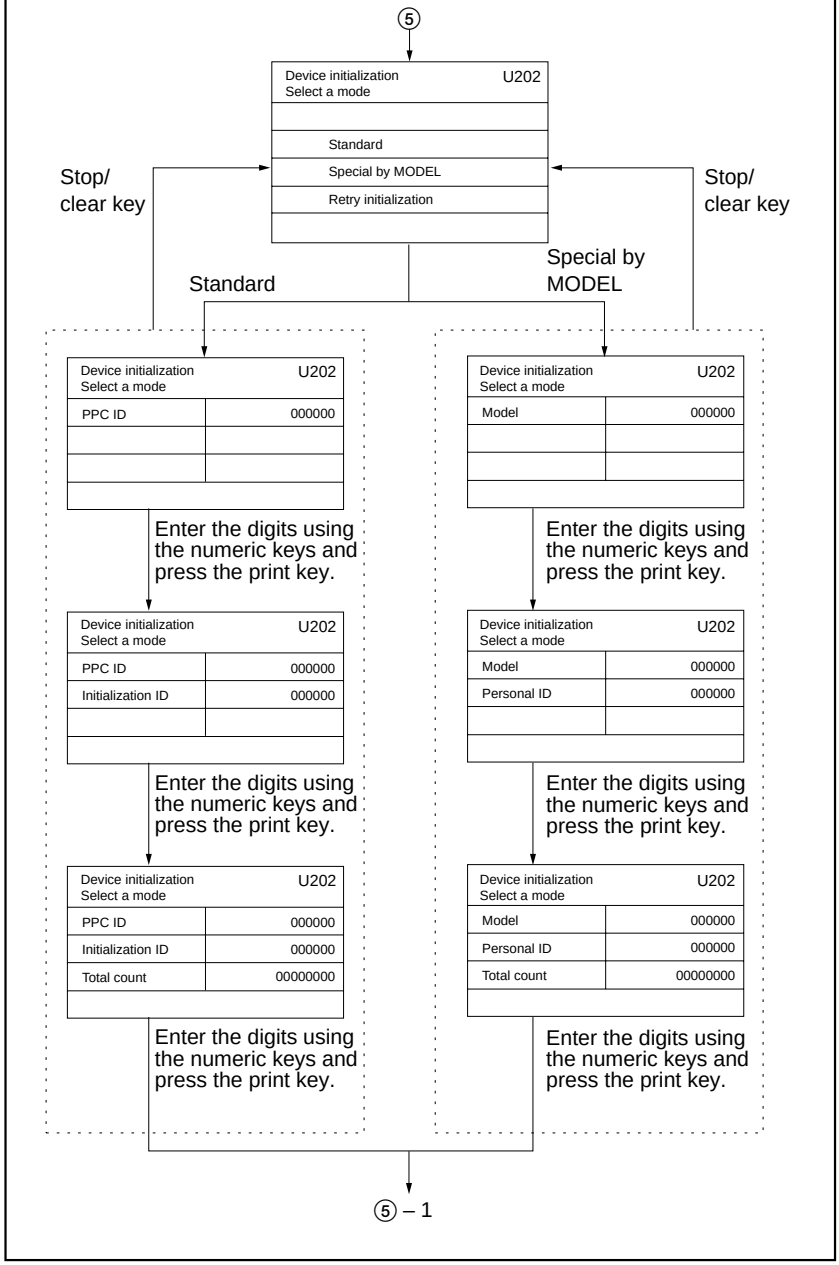
Maintenance item No.	Description



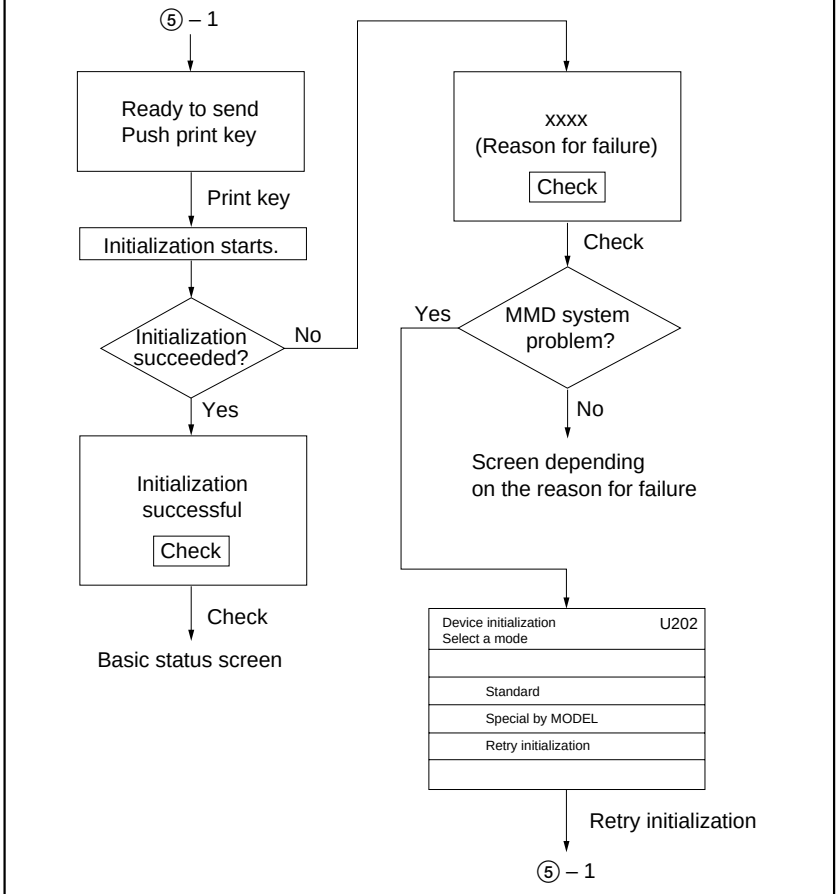
Maintenance item No.	Description



Maintenance item No.	Description



Maintenance item No.	Description



Maintenance item No.	Description
U203	**Operating DF separately** **Description** Simulates the original conveying operation separately in the SRDF. **Purpose** To check the SRDF. **Method** ① Press the print 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.

Display	Operation
ADF MODE	With paper, single-sided original
RADF MODE	With paper, double-sided original
ADF MODE (NON-PAPER)	Without paper, single-sided original (continuous operation)
RADF MODE (NON-PAPER)	Without paper, double-sided original (continuous operation)

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.

Maintenance item No.	Description
U204	**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 specifications. 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. ② Press the print 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.

Display	Description
KEY CARD	The key card is installed.
KEY COUNTER	The key counter is installed.

Maintenance item No.	Description
U206	**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.

Maintenance item No.	Description
U209	**Setting date and time** **Description** Sets the real time clock, which is used as a reference when correcting drum time. **Purpose** To set the date and time after initializing data. **Method** ① Press the print 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 print key. The current setting for the month is displayed. ③ Set the month using the numeric or Up/Down keys and press the print key. The current setting for the date is displayed. ④ Set the date using the numeric or Up/Down keys and press the print 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 print key. The current time setting for hours is displayed. **Setting** / **Description** 1 Monday 2 Tuesday 3 Wednesday 4 Thursday 5 Friday 6 Saturday 7 Sunday ⑥ Set the time (hours, 0 to 23) using the numeric or Up/Down keys and press the print key. The current time setting for minutes is displayed. ⑦ Set the minutes using the numeric or Up/Down keys and press the print 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
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 print 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.

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

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.

Maintenance item No.	Description
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 print 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. **Display** / **Type of switches**: SW — On/off switches; VR — Volume switch **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. **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) 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.

Maintenance item No.	Description
U244	

Numerical value	Original width to be detected	
000		$5^1/_2" \times 8^1/_2"$
49.664	A5R	
50.176		
61.440		
61.952	B5R	
103.936		$8^1/_2" \times 14"$/ $8^1/_2" \times 11"$
104.448	Folio/A4R	
139.264		
139.776		
146.432	B4/B5	
146.994		
197.120		
197.632	CF (11" × 15")	11" × 17"/ 11" × 15"/ $11" \times 8^1/_2"$
197.720		
223.232	A3/A4	
256		

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 print 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 large paper deck and paper feed desk

Description
Turns on motors and clutches of the large paper deck*1 or the upper and lower drawers of the optional paper feed desk*2.
*1: 42 ppm:optional/52 ppm: standard.
*2: Optonal for 42 ppm only.

Purpose
To check the operation of motors and clutches of the respective paper feed devices.

Start
① Press the print key. The screen for selecting an item is displayed.
② Select the paper feed device to be checked. The screen for executing is displayed.
<table>
<tr><th>Display</th><th>Paper feed device</th></tr>
<tr><td>3000 DECK
500 × 2 DESK</td><td>Large paper deck
Upper and lower drawers of the paper feed desk</td></tr>
</table>
Method
① Press the item to be operated. The selected item is displayed in reverse and operation starts.
• Large paper deck
<table>
<tr><th>Display</th><th>Motors and clutches</th><th>Operation</th></tr>
<tr><td>LCF MOT</td><td>Deck paper conveying motor (CM)</td><td>On for 5 s</td></tr>
<tr><td>L CL</td><td>Paper feed clutch 1 (PFCL1)</td><td>On for 1s</td></tr>
<tr><td>PCL1</td><td>Paper conveying clutch (CCL)</td><td>On for 1s</td></tr>
<tr><td>PCL2</td><td>Paper feed clutch 2 (PFCL2)</td><td>On for 1s</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Maintenance item No.</th><th>Description</th></tr>
<tr><td>U247</td><td>• Upper and lower drawers of the paper feed desk
<table>
<tr><th>Display</th><th>Motors and clutches</th><th>Operation</th></tr>
<tr><td>DESK MOT</td><td>Desk drive motor (DDM)</td><td>On for 5 s</td></tr>
<tr><td>FEED CL</td><td>Desk feed clutch (DFCL)</td><td>On for 1 s</td></tr>
<tr><td>UPP CL</td><td>Upper desk paper feed clutch (DPFCL-U)</td><td>On for 1s</td></tr>
<tr><td>LOW CL</td><td>Lower desk paper feed clutch (DPFCL-L)</td><td>On for 1s</td></tr>
</table>
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.</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. 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.</td></tr>
</table>

Maintenance item No.	Description
U248	**Start** Press the print 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

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

I f 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 print 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.

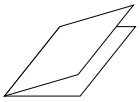
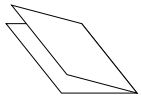
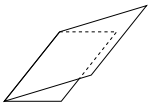
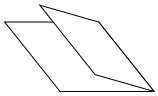
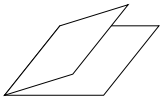
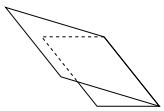
When the punch-hole scrap count reaches the punch limit, “Check punch waste tank.” is displayed on the touch panel.

④ Press the print 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 print key. The value is set.

⑤ 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>U250</td><td>
Setting the maintenance cycle

Description
Displays and changes the maintenance cycle.

Purpose
To check and change the maintenance cycle.

Method
Press the print 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.

<table>
<tr><th>Description</th><th>Setting range</th><th>Initial setting</th><th>Change in value per step</th></tr>
<tr><td>Maintenance cycle</td><td>0 to 600</td><td>150</td><td>1000 (copies)</td></tr>
</table>
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.
</td></tr>
<tr><td>U251</td><td>
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 print key. The maintenance count is displayed.

Clearing
① Press CLEAR on the touch panel.

② Press the print 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 print 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.
</td></tr>
</table>

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 print 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) specifications
INCH	Inch specifications
EUROPE METRIC	Metric (Europe) specifications
ASIA PACIFIC	Metric (Asia Pacific) specifications

② Press the print 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 drawer 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 print key. The screen for selecting an item is displayed. **Setting** ① Select double or single count. **Display** / **Description** DOUBLE COUNT: Double count for A3/11" × 17" paper only SINGLE COUNT: Single count for all size paper Initial setting: DOUBLE COUNT ② Press the print 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.

<table>
<tr><th>Maintenance item No.</th><th>Description</th></tr>
<tr><td>U254</td><td>
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.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>ON</td><td>Auto start function on</td></tr>
<tr><td>OFF</td><td>Auto start function off</td></tr>
</table>
Initial setting: ON

② Press the print 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.
</td></tr>
</table>

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 print key. The value is set. Current settings are displayed. **Setting** ① Change the setting using the Up/Down key. **Description** / **Setting range** / **Initial setting** Auto clear time / 0 to 270 / 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 print 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.

<table>
<tr><th>Maintenance item No.</th><th>Description</th></tr>
<tr><td>U256</td><td>
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 print 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.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>ON</td><td>Auto preheat/energy saver function on</td></tr>
<tr><td>OFF</td><td>Auto preheat/energy saver function off</td></tr>
</table>
Initial setting: ON

② Press the print 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.
</td></tr>
</table>

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.

Method
Press the print key. The current setting is displayed.

Setting
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)	0

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 print 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>U260</td><td>
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.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>COUNT:FEED</td><td>When secondary paper feed starts.</td></tr>
<tr><td>COUNT:EJEC</td><td>When the paper is ejected.</td></tr>
</table>
Initial setting: EJECT

② Press the print 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>

<table>
<tr><th>Maintenance item No.</th><th>Description</th></tr>
<tr><td>U263</td><td>
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 print key. The screen for selecting an item is displayed.

Setting
① Select an ejection orientation.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>FACE-DOWN (NORMAL)</td><td>Face down ejection.</td></tr>
<tr><td>FACE-UP (SPEED)</td><td>Face up ejection with bitmap copy.</td></tr>
<tr><td>FACE-UP (MEMORY)</td><td>Face up ejection with memory copy.</td></tr>
</table>
Initial setting: Face down

② Press the print 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>

<table>
<tr><th>Maintenance item No.</th><th>Description</th></tr>
<tr><td>U264</td><td>
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 print key. The screen for selecting an item is displayed.

Setting
① Select the order of display.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>YEAR-MONTH-DATE</td><td>Year - month - day</td></tr>
<tr><td>MONTH-DATE-YEAR</td><td>Month - day - year</td></tr>
<tr><td>DATE-MONTH-YEAR</td><td>Day - month - year</td></tr>
</table>
Initial setting: inch: Month - day - year
metric: Day - month - year

② Press the print 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>U265</td><td>
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 print key.

Setting
① Use the numeric keys or Up/Down keys to adjust the preset value.

② Press the print 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.
</td></tr>
</table>

Maintenance item No.	Description
U330	**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 print key. The screen for adjustment is displayed.

Setting
① Use the numeric keys or Up/Down keys to adjust the preset value.

Description	Setting range	Initial value
Number of copies to be ejected on the sub tray	1 to 100 (sheets)	100

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 print 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
U333	**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 print key. The screen for selecting an item is displayed. **Setting** ① Select the number of digits. Initial setting: 4 digits ② Press the print 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.

Display	Description
4 digits	The number of digits of ID-code is 4.
7 digits	The number of digits of ID-code is 7.

Maintenance item No.	Description
U334	**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** Sets the value to 1 BIN to use one bin only for copying and the other bin only for printing. **Method** Press the print key. The screen for selecting an item is displayed. **Setting** ① Select an ejection method. **Display** / **Description** 2 BIN — The eject bin is switched when a bin overflows. 1 BIN — The eject bin is not switched even when a bin overflows. Initial setting: 2 BIN ② Press the print 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>U343</td><td>
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.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>ON</td><td>Duplex copy</td></tr>
<tr><td>OFF</td><td>Simplex copy</td></tr>
</table>
Initial setting: OFF

② Press the print 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
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.

Display	Control in preheat 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 30°C/54°F (42 ppm) or 20°C/36°F (52 ppm) and the copier is forcibly stabilized 30 s after exiting preheat mode.
E 2000	The fixing control temperature is decreased by 40°C/72°F (42 ppm) or 20°C/36°F (52 ppm).
SILENT MDOE	ON: Polygon motor off/OFF: Normal

Initial setting: Energy Star applied

③ Press the print 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>U345</td><td>
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 print key. The current setting is displayed.

Setting
① Change the setting using the numeric or Up/Down keys.
<table>
<tr><th>Description</th><th>Setting range</th></tr>
<tr><td>Display period for the next maintenance
(remaining count before the end of the maintenance cycle)</td><td>0 to 9999</td></tr>
</table>
Initial setting: 0

② Press the print 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
U347	**Setting auto drawer size detection** **Description** Turning the auto drawer size detection function on/off. **Purpose** To be used when turning the auto paper size (in the drawers) detection off and making copies onto only the specified size paper. **Method** Press the print key. The screen for selecting an item is displayed. **Setting** ① Select ON or OFF. **Display** / **Description** ON: Detects the paper sizes in the drawers automatically. OFF: Does not detect the paper sizes in the drawers automatically. Initial setting: ON for inch and OFF for metric specifications ② Press the print 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.

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<table>
<tr><th>Maintenance item No.</th><th>Description</th></tr>
<tr><td>U348</td><td>
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 print key. The screen for selecting an item is displayed.

Setting
① Select the density range.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>SPECIAL AREA</td><td>25 steps (enlargement mode)</td></tr>
<tr><td>NORMAL</td><td>13 steps</td></tr>
</table>
Initial setting: SPECIAL AREA

② Press the print 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>

<table>
<tr><th>Maintenance item No.</th><th>Description</th></tr>
<tr><td>U350</td><td>
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 print key. The screen for selecting an item is displayed.

Setting
① Select ON or OFF.
* The selected item is highlighted.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>ON</td><td>Error report is output.</td></tr>
<tr><td>OFF</td><td>Error report is not output.</td></tr>
</table>
Initial setting: ON

② Press the print 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>U402</td><td>
Adjusting margins for image printing

Adjustment
See page 3-3-20.
</td></tr>
<tr><td>U403</td><td>
Adjusting margins for reading an original on the contact glass

Adjustment
See page 3-3-40.
</td></tr>
<tr><td>U404</td><td>
Adjusting margins for DF original reading

Adjustment
See page 3-3-100.
</td></tr>
</table>

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 print 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
FIRST	Copier upper drawer
SECOND	Copier lower drawer
THIRD	Paper feed desk*1 upper drawer
FORTH	Paper feed desk*1 lower drawer
LCF	Large paper deck*2
DUPLEX	Duplex unit

*1: Optional for 42 ppm only.
*2: 42 ppm: optional/52 ppm: standard.

When an optional paper feed device 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 print 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
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. **Method** ① Press the print key. The jam count is displayed by jam codes. ② Change the screen using the Up/Down keys. **Clearing** ① Press ALL on the touch panel. Jam counts cannot be cleared individually. ② Press the print key. The count is cleared, 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
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. **Method** ① Press the print key. The jam count is displayed by service call codes. ② Change the screen using the Up/Down keys. **Clearing** ① Select the count to be cleared. The selected count is displayed in reverse. To clear all counts, press ALL on the touch panel. ② Press the print key. The count is cleared. When all counts are cleared, the screen for entering a maintenance item No. is displayed. **Completion** Press the stop/clear key. The screen for selecting a maintenance item is displayed.

Maintenance item No.	Description
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 siticher. Also to clear the counts after replacing consumable parts.

Method
① Press the print 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	Description
CHANGE	Original replacement count
ADF	No. of single-sided originals that has passed through the DF in ADF mode
RADF	No. of double-side originals that has passed through the DF in RADF mode

• Finisher (SORTER)

Display	Description
COPY COUNT	No. of copies that has passed
STAPLE	Frequency the stapler has been activated
PUNCH	Frequency the punch has been activated
STACKER	Frequency the stacker has been activated
SADDLE	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 print 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 drawers or other sections below, and the related parts are serviced. The following sections can be the subject of the partial operation: SRDF Large paper deck Copier upper drawer Copier lower drawer Paper feed desk upper drawer Paper feed desk lower drawer Duplex unit Finisher **Method** ① Press the print key. ② Press RESET on the touch panel. ③ Press the print 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.

Maintenance item No.	Description
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 print 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 print 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 print key. * The count value of the total counter is displayed. **Display** / **Description**: COUNT / 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.

Maintenance item No.	Description
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 print 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 print key. The accumulated time is cleared, and the screen for selecting a maintenance item No. is displayed. **Setting** ① Enter a six-digit accumulated time using the numeric keys. ② Press the print key. The time is set, and the screen for selecting a maintenance item 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.

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 print key. The printer count is displayed. **Clearing** ① Press CLEAR on the touch panel. ② Press the print 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 print 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.

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