PIXMA MX310

SERVICE MANUAL

Canon

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1. LIST OF ERROR DISPLAY / TROUBLESHOOTING

1-1. Operator Call Errors

Errors and warnings are displayed by the following ways:

1. Operator call errors are indicated by the Alarm LED lit in orange, and the error and its solution are displayed on the LCD.
2. Messages during printing from a computer are displayed on the MP driver Status Monitor.
3. Error codes are printed in the "operator call/service call error record" area in EEPROM information Print

Buttons valid when an operator call error occurs:

1. ON/OFF button: To turn the machine off and on again.
2. OK button: To clear and recover from an error. In some operator call errors, the error will automatically be cleared when the cause of the error is eliminated, and pressing the OK button may not be necessary.
3. Stop/Reset button: To cancel the job at error occurrence, and to clear the error.

Operator Call Error (Alarm LED Blinking in Orange)

Error	Error code	U No.	Message on the LCD	Solution
No paper in the rear tray.	[1000]	---	LOAD PAPER SET PAPER AND PRESS [OK].	Set the paper in the rear tray, and press the OK button.
Front door is closed.	[1250]	---	OPEN PAPER OUT TRAY	Open the paper output tray.
Paper jam.	[1300]	---	PAPER JAMMED CLEAR PAPER JAM AND PRESS [OK].	Remove the jammed paper, and press the OK button.
Ink cartridge not installed, or not properly installed.	[1401]	U051	CHECK INK U051	Install the ink cartridge properly.
Ink cartridge temperature sensor error.	[1403]	U052	COOLING HEAD…	Re-set the ink cartridge. If the error is not cleared, the ink cartridge may be defective. Replace the ink cartridge.
Non-supported ink cartridge is installed.	[1485]	U059	CHECK INK U059	A non-supported ink cartridge is installed. Install the supported ink cartridge.
Ink cartridge in a wrong position.	[1680]	U076	CHECK INK U076	Re-set the ink cartridge. If the error is not cleared, the ink cartridge may be defective. Replace the ink cartridge.
Multiple ink cartridges of the same color installed.	[1681]	U075	CHECK INK U075	Re-set the ink cartridge. If the error is not cleared, the ink cartridge may be defective. Replace the ink cartridge.
Ink cartridge hardware error	[1682]	U150	CHECK INK U150	Re-set the ink cartridge. If the error is not cleared, the ink cartridge may be defective. Replace the ink cartridge.
Ink cartridge not recognized.	[1684]	U140	CHECK INK U140	A non-supported ink cartridge is installed. Install the supported ink cartridge.

The remaining ink amount unknown.	[1686]	U162	CHECK INK U162	Replace the ink cartridge and close the scanning unit. Printing with an empty ink cartridge can damage the machine. To continue printing without replacing the ink cartridge(s), press the Stop/Reset button for 5 sec. or longer to disable the function to detect the remaining ink amount.
Ink cartridge not completely installed.	[1687]	U053	CHECK INK U053	Re-set the ink cartridge. If the error is not cleared, the ink cartridge may be defective. Replace the ink cartridge.
No ink.	[1688]	U163	CHECK INK U163	Replace the ink cartridge and close the scanning unit. Printing with an empty ink cartridge can damage the machine. To continue printing without replacing the ink cartridge(s), press the Stop/Reset button for 5 sec. or longer to disable the function to detect the remaining ink amount.
Warning: The ink absorber becomes almost full.	[1700]	---	REQ. SERVICE SOON	Pressing the OK button will exit the error, and enable printing without replacing the ink absorber. However, when the ink absorber becomes full, no further printing can be performed unless the applicable ink absorber is replaced.
Warning: The platen ink absorber becomes almost full.	[1710]	---	REQ. SERVICE SOON	Pressing the OK button will exit the error, and enable printing without replacing the ink absorber. However, when the ink absorber becomes full, no further printing can be performed unless the applicable ink absorber is replaced.
The connected digital camera or digital video camera does not support Camera Direct Printing.	[2001]	---	IMCOMPATIBLE CAMERA DISCONNECT CAMERA CABLE	Remove the cable between the camera and the machine.
Non-supported HUB	[2002]	---	UNSUPPORTED USB HUB REMOVE HUB	Remove the applicable USB HUB from the PictBridge (USB) connector.

1-2. Service Call Error (Cyclic Blinking in Orange (Alarm LED) and Green (ON/OFF LED))

Cycles of blinking in orange and green	Error	Error Code	Conditions	Corrective action (Replacement of listed parts, which are likely to be faulty)
2 times	Carriage error	[5100]	An error occurred in the carriage encoder signal.	- Carriage unit - Timing slit film - Logic board - Carriage motor
3 times	Line feed error	[6000]	An error occurred in the LF encoder signal.	- Timing slit disk film - Logic board
5 times	ASF (cam) sensor error	[5700]	This error takes place when feeding paper from the rear tray after an error occurred in the rear tray cam sensor.	- ASF_PE sensor board - Drive unit - Logic board
6 times	Internal temperature error	[5400]	The internal temperature is not normal.	- Logic board
7 times	- Main ink absorber full - Platen ink absorber full	[5B00, 5B01]	The main ink absorber or platen ink absorber becomes full.	- Ink absorber kit Replace the ink absorber and clear the applicable ink absorber counter.
8 times	Print head temperature rise error	[5200]	The print head temperature exceeded the specified value.	- Ink cartridge - Logic board
9 times	EEPROM error	[6800] [6801]	A problem occurred in writing to the EEPROM.	- Logic board
10 times	VH monitor error	[B200]	The internal temperature exceeded the specified value.	- Ink cartridge - Carriage unit - Logic board
12 times	AP position error	[6A00]	An error occurred in the AP motor during purging operation.	- Drive unit - Logic board
15 times	USB Host VBUS overcurrent	[9000]	The USB Host VBUS is overloaded.	- Logic board
22 times	Scanner home position error	[5010]	The scanner unit cannot detect the home position, or the scanner unit warming-up is not performed properly at power-on.	- Scanner unit - Logic board
Power LED turned off Alarm LED (orange) lit	ROM error RAM error	None	The check sum value is incorrect in the flash ROM or RAM check at hard-power-on.	- Logic board

1-3. Fax Errors

For error other than those listed below, please refer to the “G3/G4 Facsimile Error Code List (Revision 2) HY8-23A0-020.”

(1) User error codes

Error code	TX / RX	Meaning
#001	TX	Document jam
#003	TX / RX	Document is too long, or page time-over
#005	TX / RX	Initial identification (T0 / T1) time-over
#009	RX	Recording paper jam, or no recording paper
#012	TX	No recording paper at the receiving machine
#017	TX	Redial time-over, but no DT detected
#018	TX	Auto dialing transmission error, or redial time-over
#022	TX	Call failed (no dial registration)
#037	RX	Memory overflow at reception of an image
#085	TX	No color fax function supported in the receiving machine
#099	TX / RX	Transmission terminated mid-way by pressing the Stop/Reset button
#995	TX / RX	During TX (sending): Memory transmission reservation cancelled During RX (receiving): Image data received in the memory cleared

(2) Service error codes

Error code	TX / RX	Meaning
##100	TX	Re-transmission of the procedure signal has been attempted the specified number of times, but failed.
##101	TX / RX	Sender's modem speed does not match the receiving machine.
##102	TX	Fallback is not available.
##103	RX	EOL has not been detected for 5 seconds (or 15 seconds in CBT).
##104	TX	RTN or PIN has been received.
##106	RX	The procedure signal has been expected for 6 seconds, but not received.
##107	RX	Fallback is not available at the sending machine.
##109	TX	After DCS transmission, a signal other than DIS, DTC, FTT, CFR, or CRP has been received, and re-transmission of the procedure signal has been attempted the specified number of times but failed.
##111	TX / RX	Memory error
##114	RX	RTN has been received.
##200	RX	A carrier has not been detected for 5 seconds during image reception.
##201	TX / RX	DCN has been received in a method other than the binary procedure.
##204	TX	DTC has been received even when there is no sending data.

##220	TX / RX	System error (main program hang-up)
##224	TX / RX	An error has occurred in the procedure signal in G3 transmission.
##226	TX / RX	The stack pointer has shifted from the RAM area.
##229	RX	The recording area has been locked for 1 minute.
##232	TX	The encoder control unit has malfunctioned.
##237	RX	The decoder control unit has malfunctioned.
##238	RX	The print control unit has malfunctioned.
##261	TX / RX	A system error has occurred between the modem and the system control board.
##280	TX	Re-transmission of the procedure signal has been attempted the specified number of times, but failed.
##281	TX	Re-transmission of the procedure signal has been attempted the specified number of times, but failed.
##282	TX	Re-transmission of the procedure signal has been attempted the specified number of times, but failed.
##283	TX	Re-transmission of the procedure signal has been attempted the specified number of times, but failed.
##284	TX	After TCF transmission, DCN has been received.
##285	TX	After EOP transmission, DCN has been received.
##286	TX	After EOM transmission, DCN has been received.
##287	TX	After MPS transmission, DCN has been received.
##288	TX	After EOP transmission, a signal other than PIN, PIP, MCF, RTP, RTN has been received.
##289	TX	After EOM transmission, a signal other than PIN, PIP, MCF, RTP, RTN has been received.
##290	TX	After MPS transmission, a signal other than PIN, PIP, MCF, RTP, RTN has been received.
##670	TX	In V.8 late start, the DIS V.8 ability from the receiving machine was detected, and CI was sent in response; however, the procedure failed, causing T1 time-over.
##671	RX	In V.8 call reception, the procedure fails to proceed to phase 2 after CM detection, causing T1 time-over.
##672	TX	In V.34 transmission, the procedure fails to proceed from phase 2 to phase 3 or later, causing T1 time-over
##673	RX	In V.34 reception, the procedure fails to proceed from phase 2 to phase 3 or later, causing T1 time-over
##674	TX	In V.34 transmission, the procedure fails to proceed from phase 3 or 4 to the control channel or later, causing T1 time-over
##675	RX	In V.34 reception, the procedure fails to proceed from phase 3 or 4 to

		the control channel or further, causing T1 time-over
##750	TX	After transmitting PPS-NULL in ECM transmission, no significant signal has been received, and re-transmission of the procedure signal has been attempted the number of specified times but failed.
##752	TX	After transmitting PPS-NULL in ECM transmission, DCN has been received.
##753	TX	After transmitting PPS-NULL in ECM transmission, re-transmission of the procedure signal has been attempted the number of specified times but failed, or T5 time-over (60 sec.) has occurred.
##754	TX	After transmitting PPS-NULL in ECM transmission, re-transmission of the procedure signal has been attempted the number of specified times but failed.
##755	TX	After transmitting PPS-MPS in ECM transmission, no significant signal has been received, and re-transmission of the procedure signal has been attempted the number of specified times but failed.
##757	TX	After transmitting PPS-MPS in ECM transmission, DCN has been received.
##758	TX	After transmitting PPS-MPS in ECM transmission, re-transmission of the procedure signal has been attempted the number of specified times but failed, or T5 time-over (60 sec.) has occurred.
##759	TX	After transmitting PPS-MPS in ECM transmission, re-transmission of the procedure signal has been attempted the number of specified times but failed.
##760	TX	After transmitting PPS-EOM in ECM transmission, no significant signal has been received, and re-transmission of the procedure signal has been attempted the number of specified times but failed.
##762	TX	After transmitting PPS-EOM in ECM transmission, DCN has been received.
##763	TX	After transmitting PPS-EOM in ECM transmission, re-transmission of the procedure signal has been attempted the number of specified times but failed, or T5 time-over (60 sec.) has occurred.
##764	TX	After transmitting PPS-EOM in ECM transmission, re-transmission of the procedure signal has been attempted the number of specified times but failed.
##765	TX	After transmitting PPS-EOP in ECM transmission, no significant signal has been received, and re-transmission of the procedure signal has been attempted the number of specified times but failed.
##767	TX	After transmitting PPS-EOP in ECM transmission, DCN has been received.
##768	TX	After transmitting PPS-EOP in ECM transmission, re-transmission of

		the procedure signal has been attempted the number of specified times but failed, or T5 time-over (60 sec.) has occurred.
##769	TX	After transmitting PPS-EOP in ECM transmission, re-transmission of the procedure signal has been attempted the number of specified times but failed.
##770	TX	After transmitting EOR-NULL in ECM transmission, no significant signal has been received, and re-transmission of the procedure signal has been attempted the number of specified times but failed.
##772	TX	After transmitting EOR-NULL in ECM transmission, DCN has been received.
##773	TX	After transmitting EOR-NULL in ECM transmission, re-transmission of the procedure signal has been attempted the number of specified times but failed, or T5 time-over (60 sec.) has occurred.
##774	TX	After transmitting EOR-NULL in ECM transmission, ERR has been received.
##775	TX	After transmitting EOR-MPS in ECM transmission, no significant signal has been received, and re-transmission of the procedure signal has been attempted the number of specified times but failed.
##777	TX	After transmitting EOR-MPS in ECM transmission, DCN has been received.
##778	TX	After transmitting EOR-MPS in ECM transmission, re-transmission of the procedure signal has been attempted the number of specified times but failed, or T5 time-over (60 sec.) has occurred.
##779	TX	After transmitting EOR-MPS in ECM transmission, ERR has been received.
##780	TX	After transmitting EOR-EOM in ECM transmission, no significant signal has been received, and re-transmission of the procedure signal has been attempted the number of specified times but failed.
##782	TX	After transmitting EOR-EOM in ECM transmission, DCN has been received.
##783	TX	After transmitting EOR-EOM in ECM transmission, re-transmission of the procedure signal has been attempted the number of specified times but failed, or T5 time-over (60 sec.) has occurred.
##784	TX	After transmitting EOR-EOM in ECM transmission, ERR has been received.
##785	TX	After transmitting EOR-EOP in ECM transmission, no significant signal has been received, and re-transmission of the procedure signal has been attempted the number of specified times but failed.
##787	TX	After transmitting EOR-EOP in ECM transmission, DCN has been received.

##788	TX	After transmitting EOR-EOP in ECM transmission, re-transmission of the procedure signal has been attempted the number of specified times but failed, or T5 time-over (60 sec.) has occurred.
##789	TX	After transmitting EOR-EOP in ECM transmission, ERR has been received.
##790	RX	After receiving EOR-EOP in ECM reception, ERR has been transmitted.
##791	TX / RX	During the ECM mode procedure, a signal other than a significant one has been received.
##792	RX	In ECM reception, PPS-NULL between partial pages has not been detected.
##793	RX	During high-speed signal reception in ECM, no effective frame has been detected, and a time-over has occurred.

2. ADJUSTMENT / SETTINGS

2-1. Service Mode

<Service mode operation procedures>

1) With the machine power turned off, while pressing the Stop/Reset button, press and hold the ON/OFF button. (DO NOT release the buttons). The Power LED lights in green to indicate that a function is selectable.

2) While holding the ON/OFF button, release the Stop/Reset button. (DO NOT release the ON/OFF button.)

3) While holding the ON/OFF button, press the Stop/Reset button 2 times, and then release both the ON/OFF and Stop/Reset buttons. (Each time the Stop/Reset button is pressed, the Alarm and Power LEDs light alternately, Alarm in orange and Power in green, starting with Alarm LED.)

4) When the Power LED lights in green (and "Service Mode Idle" is displayed on the LCD), press the Stop/Reset button the specified number of time(s) according to the function listed in the table below, then press the ON/OFF button. (Each time the Stop/Reset button is pressed, the Alarm and Power LEDs light alternately, Alarm in orange and Power in green, starting with Alarm LED.)

Time(s)	LED indication	Function	Remarks
0 times	Green (Power)	Power off	When the ink cartridge is not installed, the carriage returns and locks in the home position capped.
1 time	Orange (Alarm)	Service test print	Service test print - Model name - ROM version - Ink absorber counter value (ink amount in the ink absorber) - USB serial number - Destination - EEPROM information - Barcode (model name + destination), etc.
2 times	Green (Power)	EEPROM information print	EEPROM information print - Model name - Destination - ROM version - Ink absorber counter value (ink amount in the ink absorber) - Print information - Error information, etc.
3 times	Orange (Alarm)	EEPROM initialization	The following items are NOT initialized, and the shipment arrival flag is not set: - Destination settings - Absorbed ink amount - USB serial number - Region code of ink cartridge - Record of ink absorber counter resetting and setting, etc.

4 times	Green (Power)	Ink absorber counter resetting	Set a sheet of A4 or Letter sized plain paper in the rear tray and reset the ink absorber counter. After the ink absorber counter is reset, the counter value is printed automatically. See "Ink absorber counter resetting" below
5 times	Orange (Alarm)	Destination settings	Press the Stop/Reset button the specified number of time(s) according to the destination. See "Destination settings" below.
6 times	Green (Power)	Print head deep cleaning	Cleaning of both Black and Color
7 times	Orange (Alarm)	Return to the menu selection	
8 times	Green (Power)	Return to the menu selection	
9 times	Orange (Alarm)	Return to the menu selection	
10 times	Green (Power)	Return to the menu selection	
11 times	Orange (Alarm)	Return to the menu selection	
12 times	Green (Power)	Button and LCD test	See "Button and LCD test" below.
13 times	Orange (Alarm)	Ink absorber counter setting	See "Ink absorber counter setting" below.
14 times	Green (Power)	Return to the menu selection	
15 times	Orange (Alarm)	Return to the menu selection	
16 times or more	Green (Power)	Return to the menu selection	

Note: If the Stop/Reset button is pressed 16 or more times, the Alarm LED (orange) or Power LED (green) lights steadily without any changes.

<Ink absorber counter resetting>

Reset the ink absorber counter (to 0%) when the ink absorber is replaced, or after the logic board is replaced.

1) In the service mode, press the Stop/Reset button 4 times to enter the ink absorber counter resetting mode.

2) In the ink absorber counter resetting mode, press the Stop/Reset button the specified number of time(s) according to the kind of ink absorber whose value should be reset to 0%.

Time(s) *1	Ink absorber
0 times	Main ink absorber (0%)
1 time	Platen ink absorber (0%)
2 times	Both the main and platen ink absorbers (0%)
3 times or more	Press the ON/OFF button to return to the ink amount resetting mode.

3) Press the ON/OFF button to specify the ink absorber whose value should be reset to 0%.

4) After the ink absorber counter is reset, the counter value is printed automatically.
("D=000.0 Ps=000.0" is printed at the top left of the paper.)

*1: According to the number of times the Stop/Reset button is pressed, the LED lights as follows:

- Odd number of times: Alarm LED lights
- Even number of times: ON/OFF LED lights

<Destination settings>

In the destination settings mode, press the Stop/Reset button the specified number of time(s) according to the destination listed in the table below, and press the ON/OFF button.

Time(s)	LED indication	Destination
0 times	Green (Power)	No change of the destination
1 time	Orange (Alarm)	Japan
2 times	Green (Power)	Korea
3 times	Orange (Alarm)	US
4 times	Green (Power)	Europe
5 times	Orange (Alarm)	Australia
6 times	Green (Power)	Asia
7 times	Orange (Alarm)	China
8 times	Green (Power)	Taiwan
9 times	Orange (Alarm)	Latin America
10 times	Green (Power)	Brazil
11 times	Orange (Alarm)	Canada
12 times or more	Green (Power)	Return to the destination selection

Note: After setting the destination, confirm the model name and destination in service test print or EEPROM information print.

<Button and LCD test>

Confirm the operation after replacement of the operation panel unit, scanner unit, or Logic board.

1) In the service mode, after pressing the Stop/Reset button 12 times, press the ON/OFF button to enter the button and LCD test mode.

   The ON/OFF button LED: Lights in green

   In Use/Memory LED: Lights in green

   Alarm LED: Lights in orange

   LCD: All dots (black) are displayed

2) In the button and LCD test mode, each time the OK button is pressed, the following LEDs are turned off.

   1 time: ON/OFF LED is turned off.

   2 times: In Use/Memory LED is turned off.

   3 times: Alarm LED is turned off.

3) After all the above LEDs are turned off, the key entering will be available. Press each button of the operation panel. Each time the button is pressed, the buzzer sounds and the segment on the LCD representing each button will be undisplayed.

   <The number of each segment of the LCD and the corresponding button names>

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

No.	Button name
1	ON/OFF
2	COPY
3	FAX
4	SCAN
5	Menu
6	Settings
7	FAX Quality
8	Back
9	◄
10	►
11	OK
12	1
13	2
14	3
15	4
16	5
17	6
18	7
19	8
20	9
21	*
22	0
23	#
24	Redial/Pause
25	Coded Dial
26	Black Start
27	Color Start
28	Stop/Reset

Note: There is no buttons corresponding to the number 29-40. Accordingly, after pressing all 28 buttons, the segments of the number 29-40 become undisplayed automatically and nothing is displayed on the LCD.

4) After pressing the OK button one time or two times in the above status, the font is changed as follows:

1 time: Russian font

2 times: Kana font

5) Press the Stop/Reset button to return to the menu selection of the service mode (Service Model Idle).

<Ink absorber counter setting>

Set the ink absorber counter value to a new EEPROM after the logic board is replaced in servicing.

1) Before replacement of the logic board, check the ink absorber counter value in EEPROM information print.

2) In the service mode, press the Stop/Reset button 13 times, then press the ON/OFF button to enter the ink absorber counter setting mode.

3) Press the Stop/Reset button the specified number of time(s) according to the ink absorber whose value should be set.

Time(s) *1	**Ink absorber**
0 times	Main ink absorber
1 time	Platen ink absorber
2 times	Both the main and platen ink absorbers
3 times or more	Press the ON/OFF button to return to the ink amount setting mode.

4) Press the ON/OFF button to enter the ink absorber counter setting mode.

5) Press the Stop/Reset button the appropriate number of time(s) to select the value which is closest to the actual ink absorber counter value. (The ink absorber counter value can be set in 10% increments.)

Time(s)	**Ink absorber counter value to be set (%)**
0 times	0%
1 time	10%
2 times	20%
3 times	30%
4 times	40%

5 times	50%
6 times	60%
7 times	70%
8 times	80%
9 times	90%
10 times or more	Not valid. Press the ON/OFF button to return to the ink absorber counter setting mode.

6) Press the ON/OFF button to set the selected value to the EEPROM. Print EEPROM information to confirm that the value is properly set to the EEPROM.

*1: According to the number of times the Stop/Reset button is pressed, the LED lights as follows:

- Odd number of times: Alarm LED lights
- Even number of times: ON/OFF LED lights

2-2. PTT Parameter Mode

2-2-1) FAX PTT parameter mode

Enter the PTT parameter mode from the user mode, but not from the service mode.

How to enter the PTT parameter mode:

1) In the user mode, press the SCAN button to enter the scan mode.

2-a) Press #, 9, 7, 6, 9, # to enter the PTT parameter mode.

2-b) Press #, 9, 7, 6, 8, # to print the PTT parameter setting value.

How to finalize the data:

Press the OK button to finalize the data and press the Stop/Reset button to save the data.

How to finish the PTT parameter mode:

Press the ON/OFF button to save the specified data in the EEPROM and turn off the machine.

2-2-2) How to enter the PTT parameter mode

1. In the user mode, press the SCAN button to enter the scan mode and press #, 9, 7, 6, 9, #.
2. The following message is displayed on the LCD.

PTT PARAMETER #1 BIT SWITCH

BIT SWITCH menu

3. Each time the right or left arrow key is pressed, the menu is changed.

PTT PARAMETER #2 NUMERIC PARAM.

NUMERIC PARAM. menu

PTT PARAMETER #3 FAX TYPE

Note: Not used in servicing.

PTT PARAMETER #4 NCU

Note: Not used in servicing.

PTT PARAMETER #5 PTT SPECIAL

Note: Not used in servicing.

PTT PARAMETER #6 FAX TEST

Note: Not used in servicing.

4. Press the OK button after “#1 BIT SWITCH” or “#2 NUMERIC PARAM.” is displayed to enter each mode.

2-2-3) #1 BIT SWITCH

1. After entering the #1 BIT SWITCH menu, the following screen will be displayed.

#1 BIT SWITCH SW#01 00000000

2. Each time the OK button is pressed, the SW# is changed from 01 to 20.
   Be careful not to enter the SW numbers which are not used in servicing.

   The SW numbers which are used in servicing: SW#01, 02, 03, 04, 05, 06, 07, 10, 11, 13
   The SW numbers which are not used in servicing (as of August 2007): SW#08, 09, 12, 14-20

3. Since each SW# has 8bit information, use the right or left arrow key to move the cursor to the bit to be specified and enter the setting value (1 or 0).

   Bit7 -> 00000000 <- bit0

   After entering the setting value (1 or 0), press the OK button to finalize it.
   See the G3 Facsimile Service Data Service Handbook for the definition and description of each bit of the SW#.

English: QY8-13BC-010
Japanese: QY8-12B6-020

4. After finalizing the setting value of each bit of the SW#, press the Stop/Reset button.

5. Press the ON/OFF button.

2-2-4) #2 NUMERIC PARAM.

1. After entering the #2 NUMERIC PARAM. menu, the following screen will be displayed.

```
#2 NUMERIC PAEAM.
01:          00000
```

2. Each time the OK button is pressed, the SW# is changed from 01 to 60.
Be careful not to enter the SW numbers which are not used in servicing.

The SW numbers which are used in servicing:
SW#01, 02, 04 to 09, 16 to 24, 26, 27, 30, 31, 41, 42
The SW numbers which are not used in servicing (as of August 2007):
SW#03, 10 to 15, 25, 28, 29, 32 to 40, 43 to 60

3. Use the right or left arrow key or numeric keypad to enter the setting value.
(The selection of the setting value varies depending on the item.)

4. After entering the setting value, press the OK button to finalize it.
See the G3 Facsimile Service Data Service Handbook for the definition and description of each bit of the SW#.

English: QY8-13BC-010
Japanese: QY8-12B6-020

5. After finalizing the setting value of each SW#, press the Stop/Reset button.

6. Press the ON/OFF button.

2-2-5) How to confirm the setting value

Output and confirm the PTT parameter as follows.

1. In the user mode, press the SCAN button to enter the scan mode, then press #, 9, 7, 6, 8, #.
2. PTT PARAMETER is printed automatically.

See the G3 Facsimile Service Data Service Handbook for the definition and description of each bit of the SW#.

English: QY8-13BC-010
Japanese: QY8-12B6-020

PTT PARAMETER output sample for the MX310 US model

08/06/2007 19:55 FAX 001

1.020
PRAM 14.1

****
*** PTT PARAMETER ***
****

#1 BIT SW

SW01 --- 00000000	SW06 --- 00000000	SW11 --- 00000100	SW16 --- 00000000
SW02 --- 00000000	SW07 --- 00000000	SW12 --- 00010000	SW17 --- 00000000
SW03 --- 00000000	SW08 --- 00000000	SW13 --- 00000000	SW18 --- 00000000
SW04 --- 00000100	SW09 --- 00100001	SW14 --- 00110000	SW19 --- 00000000
SW05 --- 00101010	SW10 --- 10000000	SW15 --- 00000000	SW20 --- 00000000

#2 NUMERIC PARAM.

01:	0	13:	150	25:	58	37:	2	49:	5632
02:	10	14:	100	26:	60	38:	45	50:	4480
03:	10	15:	4	27:	44	39:	60	51:	0
04:	10	16:	100	28:	8	40:	30	52:	0
05:	15	17:	0	29:	6	41:	120	53:	0
06:	12	18:	200	30:	0	42:	350	54:	0
07:	5500	19:	100	31:	0	43:	0	55:	0
08:	3500	20:	0	32:	10	44:	0	56:	0
09:	1300	21:	200	33:	25	45:	2	57:	0
10:	600	22:	4	34:	2	46:	1000	58:	0
11:	60	23:	44	35:	2	47:	18	59:	0
12:	600	24:	10	36:	10	48:	6	60:	0

#3 FAX TYPE ---- U.S.A.

#4 NCU

1. TONE/PULSE

01:	---	39
02:	---	780
03:	---	90
04:	---	180
05:	---	1
06:	---	3

2. DIAL TONE 1

01:	---	10
02:	---	80
03:	---	14
04:	---	120
05:	---	12
06:	---	7
07:	---	130
08:	---	4

3. DIAL TONE 2 --- 00000000

01:	---	350
02:	---	90
03:	---	10
04:	---	0
05:	---	0
06:	---	0
07:	---	5
08:	---	3

4. BUSY TONE --- 10000000

01:	---	0
02:	---	18
03:	---	60
04:	---	18
05:	---	60
06:	---	12
07:	---	3
08:	---	3

5. REORDER TONE --- 10000000

01:	---	0
02:	---	18
03:	---	32
04:	---	18
05:	---	82
06:	---	12
07:	---	3
08:	---	3

6. AUTO RX

01:	---	10
02:	---	60
03:	---	10
04:	---	120
05:	---	1100
06:	---	0
07:	---	2
08:	---	13
09:	---	84

7. CNG DETECT

01:	---	40
02:	---	60
03:	---	85
04:	---	40
05:	---	64
06:	---	5
07:	---	2
08:	---	70

2-3. User Mode

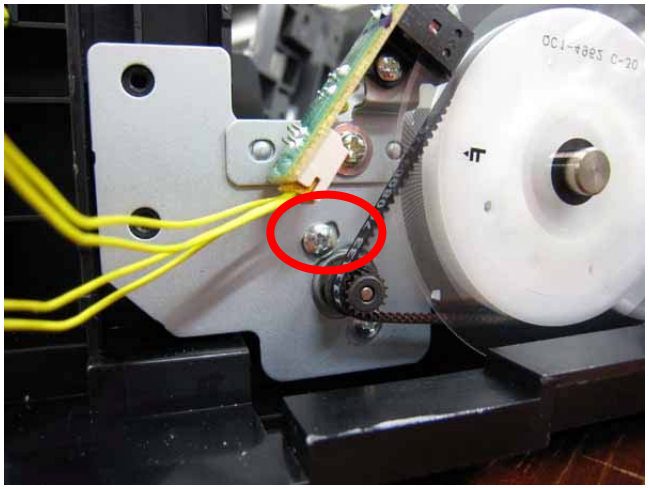
Function	Procedures	Remarks
Nozzle check pattern printing	Perform via the machine operation panel, or from the MP driver Maintenance tab.	Set a sheet of plain paper (A4 or Letter) in the rear tray.
Print head cleaning	Perform via the machine operation panel, or from the MP driver Maintenance tab.	Unclogging of the print head nozzles, and maintenance to keep the print head conditions good. If there is a missing portion or white streaks in the nozzle check pattern printout, perform this cleaning.
Print head deep cleaning	Perform via the machine operation panel, or from the MP driver Maintenance tab.	If print head manual cleaning is not effective, perform this cleaning. Since the deep cleaning consumes more ink than regular cleaning, it is recommended to perform deep cleaning only when necessary.
Manual print head alignment	Perform via the machine operation panel, or from the MP driver Maintenance tab.	Set 2 sheets of plain paper (A4 or Letter) in the rear tray.
Print head alignment value printing	Perform via the machine operation panel, or from the MP driver Maintenance tab.	Confirmation of the current print head alignment values.
Paper feed roller cleaning	Perform via the machine operation panel, or from the MP driver Maintenance tab.	The paper feed rollers rotate while being pushed to the paper lifting plate. Since the rollers will wear in this cleaning, it is recommended to perform this only when necessary.
Bottom plate cleaning	Perform via the machine operation panel, or from the MP driver Maintenance tab.	Cleaning of the platen ribs when the back side of paper gets smeared. Fold a sheet of plain paper (A4 or Letter) in half crosswise, then unfold and set it in the rear tray with the folded ridge facing down.

2-4. Notes on Service Part Disassembling / Reassembling

(1) Paper feed motor attachment position adjustment

When attaching the paper feed motor, the following adjustment will be needed.

1) When removing the screws, make marks where the screws are.



2) When attaching the motor, fasten the screws to each marked position.
3) After replacement, be sure to perform the service test print, and confirm that no strange noise or faulty print operation (due to dislocation of the belt or gear, or out-of-phase motor, etc.) occurs.

<Note>
The screws securing the paper feed motor may be loosened only at replacement of the paper feed motor unit. DO NOT loosen them in other purpose.

(2) Main chassis / carriage rail attachment position adjustment

[Carriage rail attachment]
When attaching the carriage rail, the following adjustment will be needed.

1) When removing the screws, make marks where the screws are.

2) When attaching the carriage rail, fasten the screws to each marked position.
3) After attaching the carriage rail, be sure to perform the following test to confirm that print result has no problem and that the print head does not contact paper.

[Main chassis attachment]
After attaching the main chassis, be sure to perform the following test to confirm that print result has no problem and that the print head does not contact paper.

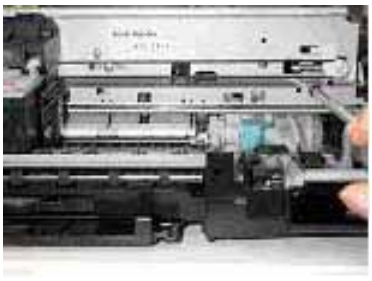
<Test procedure>

Set the paper thickness lever to the left (normal position) and print images on the PR paper, then confirm that print result has no problem and that the print head does not contact paper.

If print quality deterioration or print head contact is found, adjust the head-to-paper distance with the following procedures.

<Adjustment of head-to-paper distance>

1) Mark the current positions of the screws located on both sides of the chassis.
   See [Carriage rail attachment], 1).
2) Loosen the screws to adjust the head-to-paper distance.
   When the print head contacts paper: Raise the chassis rail from the current position.
   When print quality deteriorates: Lower the chassis rail from the current position.



3) Document Pressure Sheet attachment position adjustment

When attaching the document pressure sheet, the following adjustment will be needed.

1) Position the upper left corner of the document pressure plate sheet at the scanning reference point (back left) on the platen glass and peel off the cover sheet from the double-sided adhesive tape of the document pressure sheet.

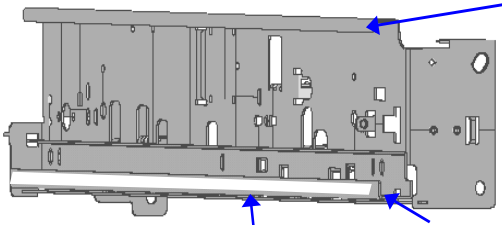
2) Slowly close the ADF unit and attach the document pressure sheet to the plate.

2-5. Grease Application

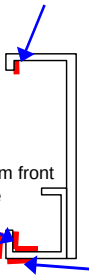
Where to apply grease / Grease oil amount (mg)

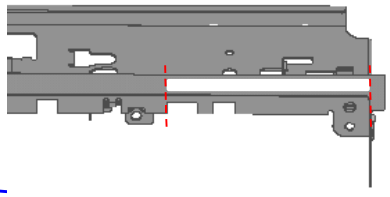
Printer Chassis

Floil KG-107A
QY9-0057-000



Entire rear surface of the upper bent part:
180±20mg (160 to 200mg)



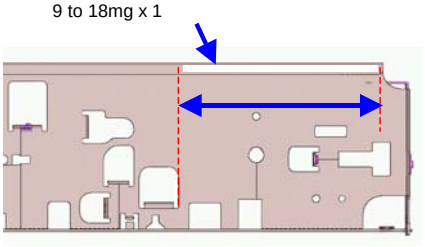


Entire rear surface of the bottom front bent part + entire upper surface of the bottom part:
600±60mg (540 to 660mg)

Entire front surface of the bottom front part:
180±20mg (160 to 200mg)

Right-hand side of the bottom surface:
9 to 18mg x 1

Right-hand side of the front surface:
9 to 18mg x 1



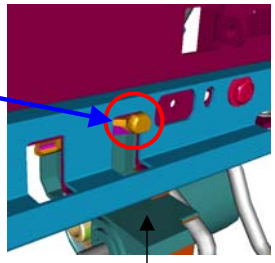
Where to apply grease / Grease oil amount (mg)

Bottom Case

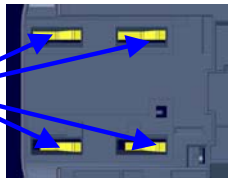
Molykote PG-641
CK-0562-000

Slider shaft sliding portions:
9 to 18mg x 4

Trigger Arm (Carriage sliding portion): 2 to 6mg x 1



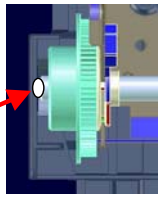
Slider shaft sliding portions on the back side of the bottom case:
9 to 18mg x 4



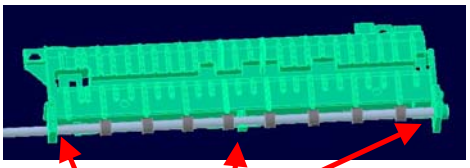
The pump part of the driver unit (No grease application)

Slider shaft sliding portions
: 2 to 6mg x 4

Floil KG-107A
QY9-0057-000



End of the eject roller (which contacts the bottom case): 4.5 to 9mg x 1

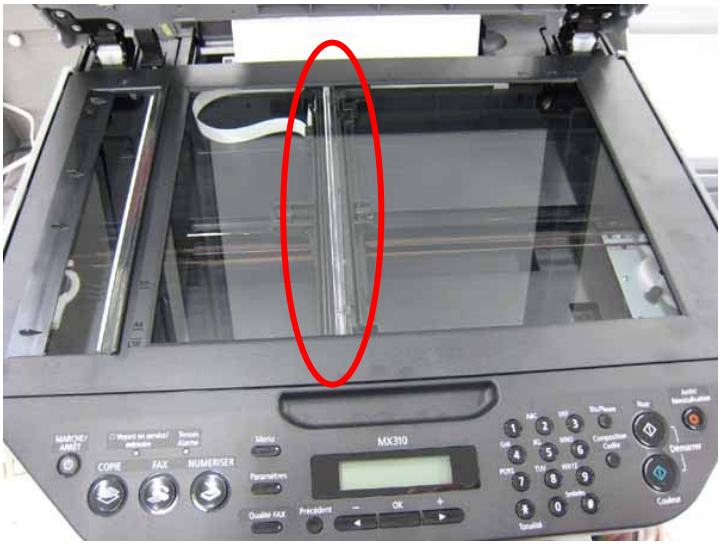


Eject roller shaft sliding portions on the platen:
4.5 to 9mg x 3

2-6. Notes on Machine Transportation

Be sure to transport the machine after moving the CIS unit (Scanner Carriage Unit) to the appropriate position. If the machine whose CIS unit is in the home position (inappropriate position) is vibrated or dropped when it is transported, the scanner flat cable may be jammed/damaged and the scanner may become out of work.

<Procedure>
After finishing the service mode correctly, the CIS unit automatically moves to the appropriate position.



Appropriate CIS unit position at transportation