i450

SIMPLIFIED MANUAL

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QY8-1386-010

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Canon Inc

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1. PRODUCT LIST

1.1 Main Units

Product name	Product code	Sales territories	Accessories
Canon Bubble Jet Printer i450	8517A001AA	US	
	8517A002AA	CAN	
	8517A003AA	LAM LVT	
	8517A004AA	LAM HVT	
	8517A005AA	EUR	
	8517A006AA	DE	
	8517A007AA	FR	
	8517A008AA	ASA HVT	
	8517A009AA	AU	
	8517A010AA	KR	
	8517A011AA	GB	
	8517A013AA	TW	
	8517A014AA	HK	
	8517A015AA	CN	
PIXUS 450i	8517A012AA	JPN	

1.2 Consumables

Product name	Product code	Sales territories	Remarks
Canon Ink Tank			In common with the S300, S330, and i320
BCI-24BK	6881A001AA to 6881A004AA	001: JPN 002: EUR 003: USA / CAN 004: ASIA / AUST	
BCI-24CL	6882A001AA to 6882A004AA		
BCI-24BK Twin Pack	6881A008AA to 6881A011AA	008: JPN 009: EUR 010: USA / CAN 011: ASIA / AUST	
BCI-24CL Twin Pack	6882A008AA to 6882A011AA		

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2. SPECIFICATIONS

2.1. Printer Specifications

Type	Desktop serial color bubble jet printer			
Paper feeding method	Auto sheet feed (no manual feeding)			
Resolution	4,800 dpi x 1,200 dpi (Max.)			
Throughput (Target value)		Draft	Standard	High
	Black (New Black)	18 ppm	12 ppm	-----
	Color (New Color)	12 ppm	4.8 ppm	0.8 ppm
Printing direction	Bidirectional, uni-directional			
Print width	Max. 203.2 mm (220.9 mm in borderless printing)			
Line feed speed	215.9 mm/s			
Interface	USB 2.0 Full Speed			
ASF stacking capacity	Plain paper (75 g/m^2): Max. 10 mm (Approx. 100 sheets)			
Paper weight	64 to 105 g/m^2			
Detection functions	- Cover open - Remaining ink amount (dot count) - Waste ink amount - Carriage position		- Presence of print head - Paper out (Paper end sensor) - Pick-up roller - Head-to-paper distance	
Acoustic noise	45 dB (high quality mode)			
Environmental requirements	During operation	Temperature	5C to 35C (41F to 95F)	
		Humidity	10%RH to 90%RH (no condensation)	
	Non operation	Temperature	0C to 40C (32F to 104F)	
		Humidity	5%RH to 95%RH (no condensation)	
Power supply	Input voltage	Frequency	Power consumption	Standby
	AC 100 to 127 V	50/60 Hz	32W	2.5W
	AC 220 to 240 V	50/60 Hz	30W	2.6W
External dimensions	Approx. 393 (W) x 254 (D) x 202 (H) mm			
Weight	Approx. 3.7 kg, not including print head and optional device			
Related standards	Electromagnetic radiance: VCCI, FCC, IC, CE Mark, Taiwan EMC, Korea EMC, CCIB, C-tick, CCEE Electrical safety: Electrical Appliance and Material Control Law (DENTORI), UL, C-UL, CB Report, GS, CE Mark, FIMKO, CCIB (EMC), AS, CCEE, PSB, Electrical Safety Regulations of Korea, SASO Environmental regulations: Energy Star, Blue Angel, Environment label			
Serial number location	On the carriage ribbon cable holder (visible when the front cover is open).			
Remaining ink amount detection	Available (by dot count. Reset by user operation. Enabled at default.)			
Print head alignment	Available (11 types)			

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2.2. Print Head Specifications

	Print heads
Type	4-color removable ink tanks, single head for black and color (YMC) ink tanks
Print head	BK: 320 nozzles in 2 vertical lines, 30 pl Color: 256 nozzles in 2 vertical lines (128 nozzles each) per color, alternate 5 pl and 2 pl nozzles in line, horizontal zigzag nozzle allocation
Ink color	Pigment-based black, Dye-based cyan, magenta, yellow
Ink tank	BCI-24Black, BCI-24Color
Weight (Net)	Print head, 60g
Supply method	As a service part (not including ink tanks)
Part number	QY6-0047-000

Note: This print head is usable only for the new models of i450 and i470D, and not usable for the S300 or S330.

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3. ERROR LIST

3.1. Errors by LED Blinking in Orange

User recoverable errors

LED blinking in orange	Panel display	Error Code	Error	Solution
2 times	301	1000	No paper.	Set the paper, and press the Resume/Cancel button.
3 times	302	1300	Paper jam.	Remove the jammed paper, and press the Resume/Cancel button. If the error is not resolved, check that no foreign material is inside the printer.
6 times	402	1401	The print head is not installed.	Install the print head, and close the access cover.
7 times	403	1405	The print head is not installed properly. (EEPROM data of the print head is faulty.)	Re-install the print head, or with the print head installed, turn the printer off and on. If the error is not resolved, replace the print head.
8 times	202	1700	Warning: The waste ink absorber becomes almost full (to approx. 95% to 100% of the maximum capacity).	Pressing the Resume/Cancel button will exit the error. (The waste ink absorber full error occurs at 100% capacity, making it impossible to perform printing.
11 times	611	2001	Digital camera transmission time-out error (When the printer cannot communicate with a digital camera, the time-out error occurs.)	Disconnect the USB cable to the digital camera, and press the Resume/Cancel button.
	612	2001	Digital camera non-supporting device error (When a digital camera or device other than a digital camera, not supporting Direct Printing is connected to the printer with the USB cable, the error occurs.)	Disconnect the USB cable, and press the Resume/Cancel button.

*1:The error code is stored in the operator / service call history of the EEPROM information.

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3.2. Errors by LED Blinking in Orange and Green Alternately, or Lit in Orange

User unrecoverable errors

LED alternate blinking in orange and green	Panel display	Error Code	Error	Solution
2 times	802	5100	Carriage error	1. Check that no foreign material is inside the printer. 2. Replace the timing slit strip film. 3. Replace the purge unit. 4. Replace the logic board ass'y.
4 times	804	5C00	Purge unit error	1. Check that no foreign material is inside the printer. 2. Replace the purge unit. 3. Replace the logic board ass'y.
6 times	806	5400	Internal temperature error	1. Turn the printer off, and after a short period of time, turn the printer on again. 2. Replace the logic board ass'y.
7 times	807	5B00	Waste ink absorber full error	1. Replace the ink absorber. 2. Replace the logic board ass'y.
8 times	808	5200	Print head temperature rise error	1. Turn the printer off, and after a short period of time, turn the printer on again. 2. Replace the print head. 3. Replace the logic board ass'y.
9 times	809	6800	EEPROM error	Replace the logic board ass'y.
Lights in orange	No display	6800	RAM error	Replace the logic board ass'y.

*1:The error code is stored in the operator / service call history of the EEPROM information.

4. Service mode

4.1 Service mode function

Function	Procedures	Remarks
Service test print	See "Service mode operation procedures" below.	Set a sheet of A4/LTR- or larger-sized paper. For print sample, see page 9
EEPROM information print	See "Service mode operation procedures" below.	Set a sheet of A4/LTR- or larger-sized paper. For print sample, see page 10.
EEPROM initialization	See "Service mode operation procedures" below.	The following items are not initialized: - USB serial number - Destination settings (Japan / Overseas) - Cleaning flag on arrival - Waste ink counter
Waste ink counter reset	See "Service mode operation procedures" below.	Both the main and the borderless print waste ink counters are reset at the same time.
Destination settings	See "Service mode operation procedures" below.	Overseas: i450 Japan: PIXUS 450i
Print head deep cleaning		Cleans black and color, simultaneously.
Operation panel display confirmation	See "Operation panel operation confirmation procedures" below.	Confirm the operations of operation panel display and operation buttons. Perform the confirmation at operation panel replacement.

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4.2. Service mode operation procedures

1) Close the access cover, and turn off the printer. While pressing the Resume/Cancel button, press and hold the Power button. (The LED lights in green to indicate that a function is selectable.)
2) While holding the Power button, release the Resume/Cancel button.
3) While holding the Power button, press the Resume/Cancel button 2 times, and then release the Power and Resume/Cancel buttons. (In the operation panel, "02" will be displayed. Each time the Resume/Cancel button is pressed, the LED lights alternately in either orange or green. During initialization, the LED blinks in green.)
4) When the LED stops blinking and lights in green, press the Resume/Cancel button the specified number of time(s) according to the function listed in the table below. (Each time the Resume/Cancel button is pressed, the LED lights alternately in either orange or green.)

Time(s)	LED	Function	Remarks
0 times	Green	Power off	When the print head is not installed, the carriage returns and locks in the home position.
1 time	Orange	Service test print	When the Power button is pressed during printing, printing stops, and the mode returns to step 4) above.
2 times	Green	EEPROM information print	When the Power button is pressed during printing, printing stops, and the mode returns to step 4) above.
3 times	Orange	EEPROM initialization	
4 times	Green	Waste ink counter resetting	
5 times	Orange	Destination settings	Proceed to the following steps 5) and then 6) to set the destination.
6 times	Green	Print head deep cleaning	Cleans black and color, simultaneously.
7 times	Orange	Not used in servicing	
8 times or more	Green	Return to the menu selection	Return to step 4) above.

5) After the function (menu) is selected, press the Power button. The LED lights in green, and the selected function is performed. (When the operation completes, the printer returns to step 4) above.)

<Destination setting>

6) Press the Resume/Cancel button the specified number of time(s) according to the destination listed in the table below, and then the Power button.

Time(s)	LED	Destination
1 time	Orange	Overseas: i450
2 times	Green	Japan: PIXUS 450i

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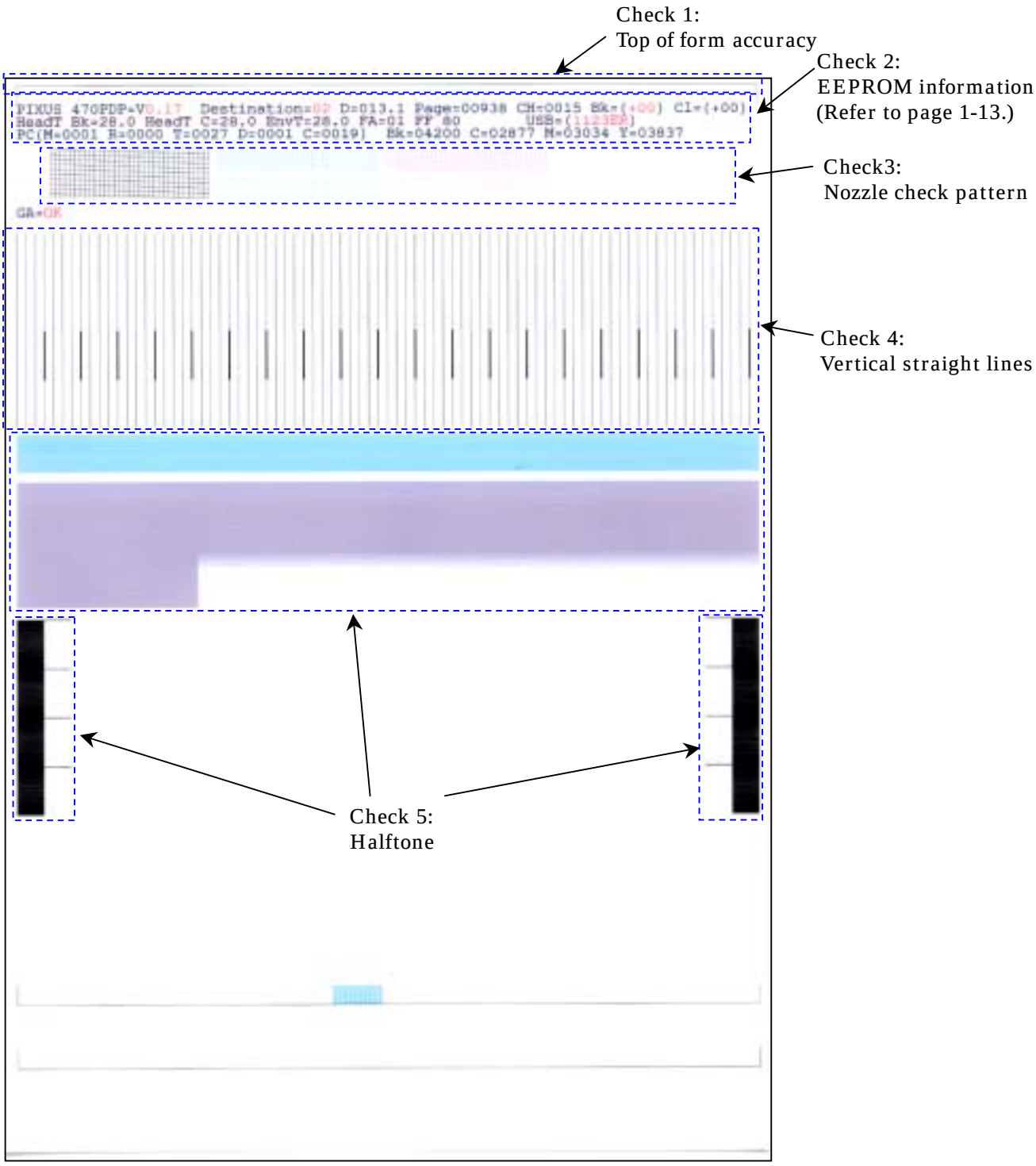
4.3. Service test print

After repair, print the service test print, and confirm the following items:

<Print quality items>

- Check 1, top of form accuracy: The line shall be within the paper.
- Check 2, EEPROM information: Destination and waste ink counter shall be checked.
- Check 3, nozzle check pattern: Ink shall be ejected from all nozzles.
- Check 4, vertical straight lines: The lines shall not be broken.
- Check 5, halftone: There shall be no remarkable streaks or unevenness.



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4.4. EEPROM information contents

On the EEPROM information print, the printer usage conditions can be confirmed. Refer to the sample print given below.

```
 1 PIXUS 470PDP=V1.00 Destination=02 D=004.8 Page=00562 CH=0002   Bk(00) Cl(00)
 2 HeadT Bk=25.5 HeadT C=25.0 EnvT=30.0 FA=01 87 80 USB(1000AQ)
 3 PC(M=0000 R=0000 T=0000 D=0000 C=0000) Bk=00000 C=00000 M=00000 Y=00000
 4 ER(TIME=2002/10/21-21:48 ER0=5100 ER1=5C00 ER2=1000 ER3=1401)
 5 TotalINK(Bk=00057098 C=00008108 M=00006992 Y=00007666)
 6 CLTime=2002/10/15-15:36 PC(M=0028 R=0015 T=0000 D=0020 C=0009)
 7 IC(Bk=1 C=1 M=1 Y=1) WP=0025 SetUsrReg=NONE
 8 UR1(A:Bkeo=000 B:Ce0=000 C:Meo=000(Yeo=000) D:Lceo=000 E:Lmeo=000(Lyeo=000)
 9 UR2(F:BkBi=000 G:ClBi=000 H:BkCl=000 I:LCBi=000 J:C_LC=000 K:M_LM=000)
10 ST=2002/9/15-20:15 PW(ON=0009 OFF=00005) BORDERLESS=00000
11 PAGE(ALL=00562 PP=00025 PC=0000 PR=00050 MP=0000 SP=0258)
12 CAMERA(BORDERLESS=0030 NORMAL=0028)

   HDEEPROM
13 V0000
14 SN=0318-A43D
15 LN(04 05 01 06 00 00 03)
16 DI(Bk=+001 CL=+001)
17 IL=(Bk=-08 C=-08 M=-08 Y=-08)
18 WLA=-08 WLB=-08
19 NGBk=000 NGC=000 NGM=000 NGY=000
```

*1 (lines 1–3)

*[1]: The information surrounded by a blue border is printed in the service test print, also.

1 Model name, ROM version, destination, waste ink amount, number of pages printed, number of times the head was installed, bi-directional registration (black, color)
2 Head temperature (black, color), internal temperature, process inspection information, USB serial number
3 Number of times cleaning was performed (manual, deep cleaning, timer, dot count, head/ink tank replacement), dot count of each color
4 Operator/ service call history (occurrence time*[2], ER0, 1, 2, 3)
5 Total ink consumption (Bk=00000000mg, C=00000000mg, M=00000000mg, Y=00000000mg)
6 Cleaning time, number of times cleaning was performed (manual, deep cleaning, timer, dot count, head/ink tank replacement), dot count of each color
7 Ink sponge recognition flag, number of times wiping was performed
8 User's print head alignment values
9 User's print head alignment values
10 Installation date, number of times printer was turned on/off, number of borderless printing pages
11 Number of pages fed (all, plain paper, postcard, Photo Paper Pro, Matte Photo Paper, Photo Paper Plus Glossy)
12 Number of pages in Digital Camera Direct Printing (borderless, bordered)

HEAD EEPROM

13 Version
14 Serial number
15 Lot number
16 DI sensor adjustment value
17 Ink ejection level
18 Overlay level
19 Number of unusable nozzles (Bk, C, M, Y)

*[2]: The time the user last performed printing before the error occurred.

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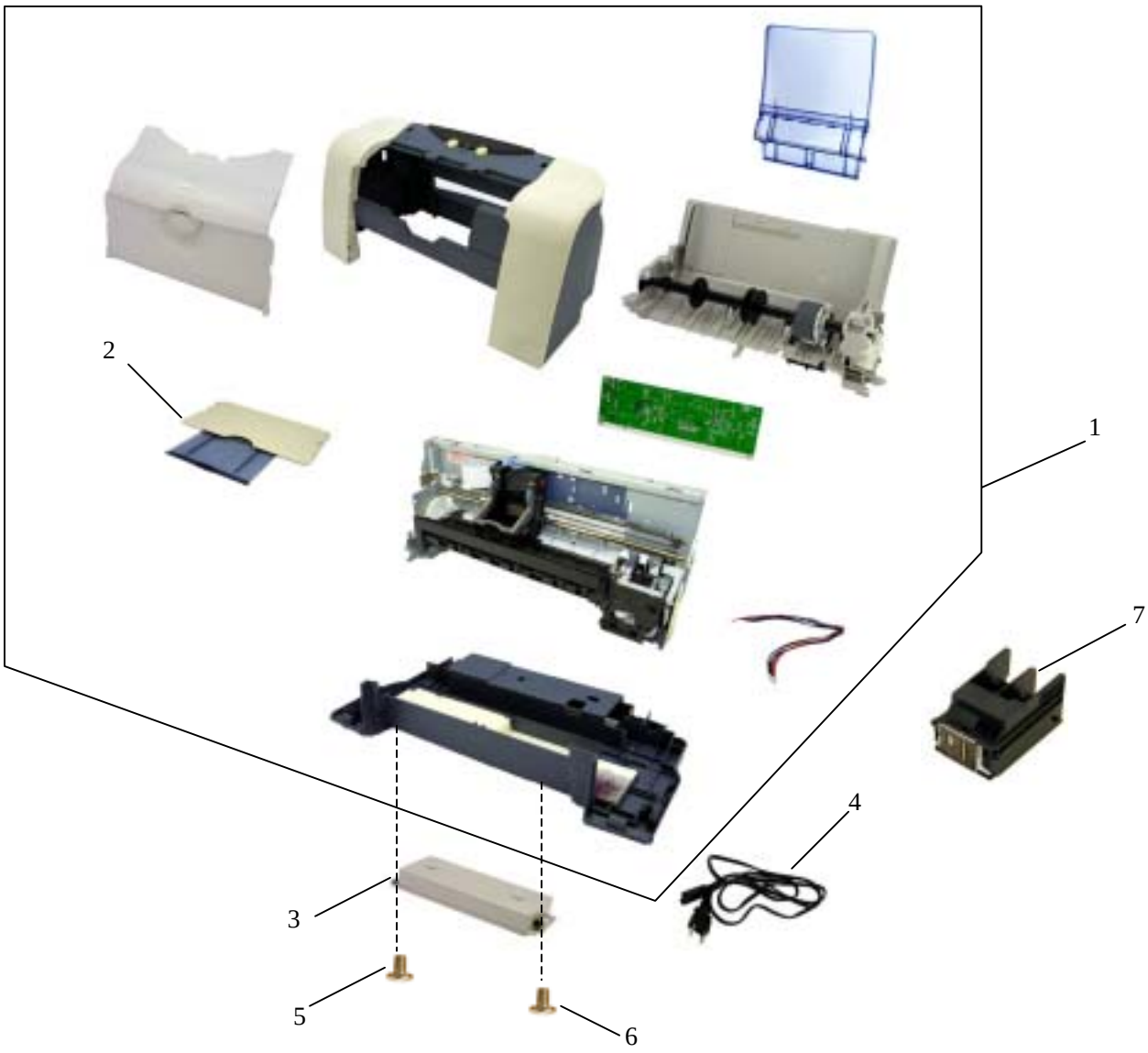
5. EXTERNAL VIEW / PARTS LIST



Key	Part Number	Rank	Q'ty	Description	Remark
1	0023U60701	N	1	WHOLE UNIT, W/O POWER SUPPLY UNIT	PIXUS 450i
2	QM2-0485-000	N	1	OUTPUT TRAY UNIT	
3	QH3-3618-000		1	AC Adapter:100-120V 50/60Hz	
	QH3-3619-000		1	AC Adapter:220-240V 50/60Hz	
4	WT3-5119-000		1	CORD, POWER	220V-240V
	WT3-5120-000		1	CORD, POWER	220V-240V (AU)
	WT3-5121-000		1	CORD, POWER	220V-240V (GB/HK)
	~~WT3-5123-000~~		~~1~~	~~CORD, POWER~~	~~100V-120V~~
	WT3-5122-000		1	CORD, POWER	100V-120V(JP)
	WT3-5131-000		1	CORD, POWER	100V-120V
	WT3-5124-000		1	CORD, POWER	220V-240V (CN)
	WT3-5158-000		1	CORD, POWER	220V-240V (LAM LV)
	WT3-5159-000		1	CORD, POWER	220V-240V (KR)
5	XB1-2300-607		1	SCREW,MACHINE,BIDING HEAD,M3x6	
6	XB4-7300-807		1	SCREW,TAP TIGHT,BIDING HEAD,M3x8	
7	QY6-0047-000	K	1	PRINT HEAD	

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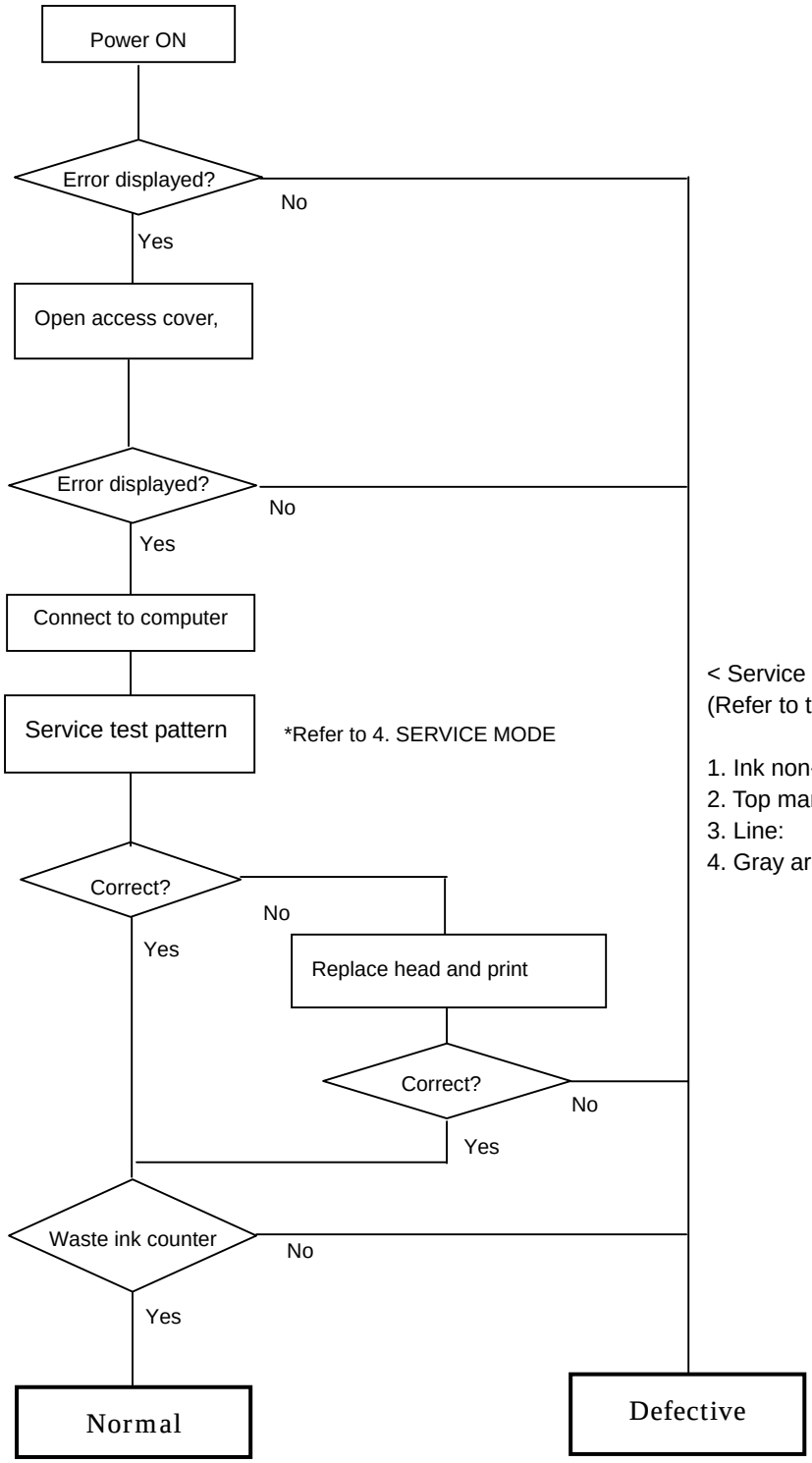
6. TROUBLESHOOTING FLOWCHART

6.1. Printer Main Unit Troubleshooting Flowchart (how to printer operation confirmation when refurbishing)



< Service test pattern check items of >
(Refer to the attached print sample.)

1. Ink non-ejection:	Yes	NG
2. Top margin:	Outside of paper	NG
3. Line:	Not connected	NG
4. Gray area:	White lines / uneven density	NG

< Note for normal printer refurbishment >
At the final step of refurbishment, be sure to reset the EEPROM in accordance with 4. SERVICE MODE, the EEPROM reset procedure. Remove the print head, unplug the power cord immediately, and do not print afterwards.

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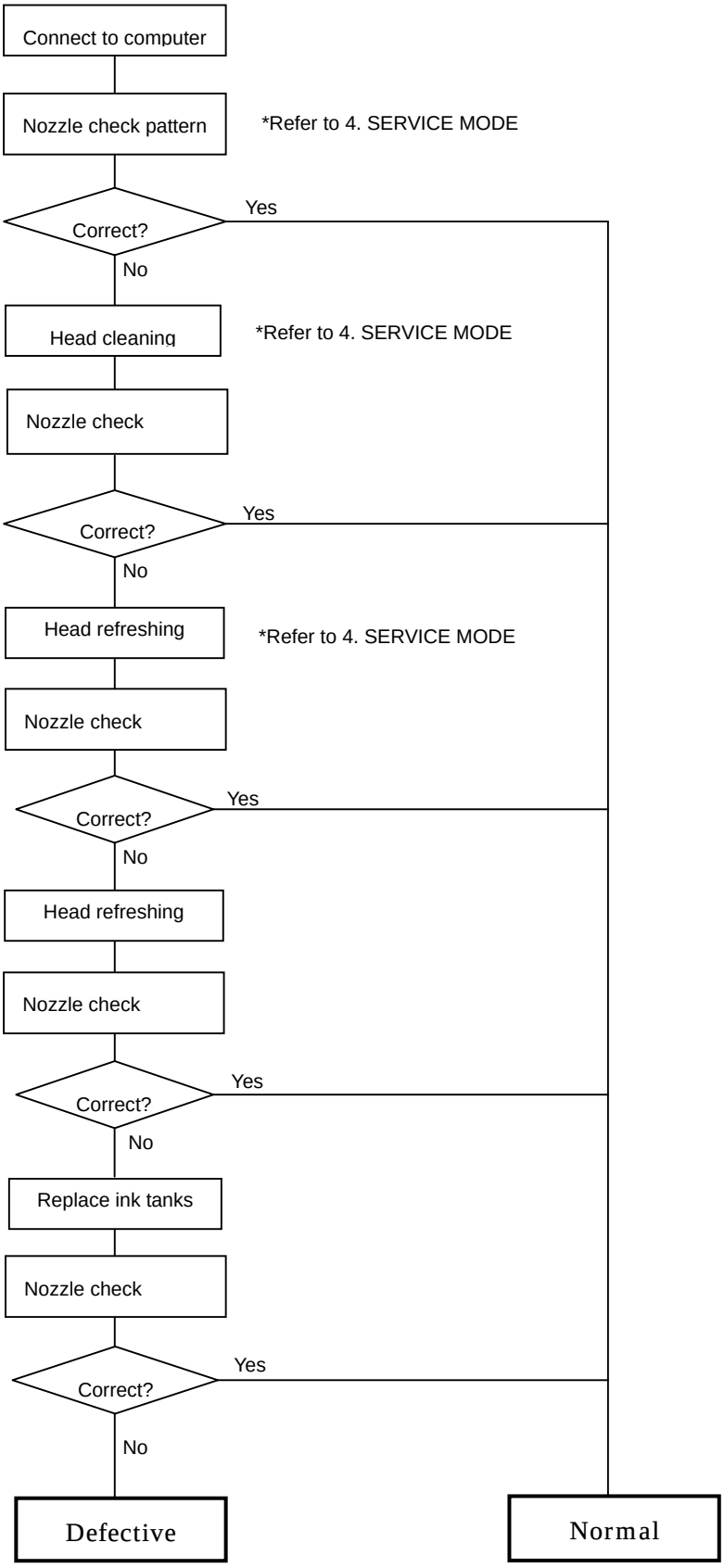
6.2. Print Head Troubleshooting Flowchart (print head operation confirmation)



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7. Service Information

7.1 Whole Unit Replacement

When the unit is exchanged as a Whole Unit (WHOLE UNIT, W/O POWER SUPPLY UNIT: 0023U60701 <PIXUS 450i>, take the following procedures:

1. Remove the AC adapter from the printer returned from the user.
2. Install the removed AC adapter in the whole unit.
3. Perform destination setting. (Refer to “4. SERVICE MODE” for details.)
4. Power off the whole unit, and confirm that the printer ready for shipment (with the paper lifting plate of the ASF in the upper position).

Caution:
For this printer model, as the Whole Unit for Japan has been designated as a service part, the product name on the Whole Unit is a Japanese model name, PIXUS 450i. Consequently, when replacing the Whole Unit in the regions other than Japan, replacement of the Output Tray Unit (QM2-0485-000), on which “i450” is printed, is necessary.

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