

**brother**<sup>®</sup>

**LASER PRINTER  
SERVICE MANUAL**

**MODEL:HL-1260e/1660**

# CONTENTS

## CHAPTER I GENERAL

1.	FEATURES .....	Refer to HL-1260 (P.I-1)
2.	SPECIFICATIONS .....	I-1
3.	SAFETY INFORMATION .....	I-6
3.1	Laser Safety (110 - 120V Model only) .....	I-6
3.2	CDRH Regulations (110 - 120V Model only) .....	I-6
3.3	Additional Information .....	I-7
4.	PARTS OF THE PRINTER .....	Refer to HL-1260 (P.I-8)
4.1	External Views .....	Refer to HL-1260 (P.I-8)
4.2	Cross Sectional View .....	Refer to HL-1260 (P.I-9)
5.	STORAGE AND HANDLING OF EP-ED CARTRIDGES .....	Refer to HL-1260 (P.I-10)
5.1	Storage of Sealed EP-ED Cartridges .....	Refer to HL-1260 (P.I-10)
5.2	Storage of Unsealed EP-ED Cartridges .....	Refer to HL-1260 (P.I-10)

## CHAPTER II THEORY OF OPERATION

1.	BASIC OPERATIONS .....	II-1
1.1	Mechanical Configuration .....	Refer to HL-1260 (P.II-1)
1.2	Main Drive .....	Refer to HL-1260 (P.II-2)
1.3	Basic Sequence of Operations .....	II-1
2.	LASER/SCANNER SYSTEM .....	Refer to HL-1260 (P.II-4)
3.	IMAGE FORMATION SYSTEM .....	Refer to HL-1260 (P.II-5)
3.1	Outline .....	Refer to HL-1260 (P.II-5)
3.2	Printing Process .....	Refer to HL-1260 (P.II-5)
3.2.1	Electrostatic latent image formation stage .....	Refer to HL-1260 (P.II-6)
3.2.2	Developing stage .....	Refer to HL-1260 (P.II-8)
3.2.3	Transfer stage .....	Refer to HL-1260 (P.II-9)
3.2.4	Fixing stage .....	Refer to HL-1260 (P.II-10)
3.2.5	Drum cleaning stage .....	Refer to HL-1260 (P.II-10)
3.3	Operation .....	Refer to HL-1260 (P.II-11)
4.	PAPER PICK-UP/FEED SYSTEM .....	II-2
4.1	Outline .....	Refer to HL-1260 (P.II-12)
4.2	Cassette Feed .....	II-2
4.3	MP Tray Feed .....	II-3
4.4	Paper Jam Detection .....	II-4

## CHAPTER III ELECTRICAL SYSTEM

1.	MAIN PCB .....	III-1
1.1	Outline .....	III-1
1.2	Video Controller Circuit .....	III-2
1.3	Engine Controller Circuit .....	III-6
2.	PAPER FEED DRIVE CIRCUIT .....	Refer to HL-1260 (P.III-9)
3.	DISPLAY CIRCUIT .....	Refer to HL-1260 (P.III-11)
3.1	Outline .....	Refer to HL-1260 (P.III-11)
3.2	Operation .....	Refer to HL-1260 (P.III-11)
4.	LOW-VOLTAGE POWER SUPPLY ASSY .....	Refer to HL-1260 (P.III-12)
4.1	Outline .....	Refer to HL-1260 (P.III-12)
4.2	Protection Functions .....	Refer to HL-1260 (P.III-12)
5.	HIGH-VOLTAGE POWER SUPPLY ASSY .....	Refer to HL-1260 (P.III-14)
5.1	Outline .....	Refer to HL-1260 (P.III-14)
5.2	Operation of the Components of the High-Voltage Power Supply Assy .....	Refer to HL-1260 (P.III-14)

## CHAPTER IV MECHANICAL SYSTEM

PRINTER DISASSEMBLING PROCEDURE .....	Refer to HL-1260 (P.IV-2)	
1.1	Configuration .....	Refer to HL-1260 (P.IV-3)
1.2	Toner Cartridge Lid .....	IV-2
1.3	Side Cover L .....	Refer to HL-1260 (P.IV-3)
1.4	Font Cover Assy .....	Refer to HL-1260 (P.IV-4)
1.5	Upper Cover Assy, Rear Cover Assy .....	Refer to HL-1260 (P.IV-4)
1.5.1	Upper cover assy, rear cover assy .....	Refer to HL-1260 (P.IV-4)
1.5.2	Changeover guide, jam remove cover .....	Refer to HL-1260 (P.IV-5)
1.6	Side Cover R .....	Refer to HL-1260 (P.IV-5)
1.7	DC Fan Motor .....	IV-2
1.8	Main PCB .....	IV-3
1.9	Control Panel Unit .....	Refer to HL-1260 (P.IV-8)
1.10	Scanner Unit .....	IV-5
1.11	Cartridge Stopper Assy .....	IV-5
1.12	Paper Feed Chassis Unit .....	Refer to HL-1260 (P.IV-10)
1.13	Separation Pad Assy .....	Refer to HL-1260 (P.IV-11)
1.14	MP PE Sub Actuator .....	Refer to HL-1260 (P.IV-12)
1.15	P Feed /Size-SW PCB Assy .....	Refer to HL-1260 (P.IV-12)
1.16	Size-Switch Spring .....	Refer to HL-1260 (P.IV-12)
1.17	Regist Sensor Actuator .....	Refer to HL-1260 (P.IV-13)
1.18	MP Paper Detection Actuator .....	Refer to HL-1260 (P.IV-13)
1.19	PE Sensor Actuator MP .....	Refer to HL-1260 (P.IV-13)
1.20	Tray Sensor Holder .....	Refer to HL-1260 (P.IV-14)
1.21	Roller Holder .....	Refer to HL-1260 (P.IV-14)
1.22	Paper Pick-up Roller Assy, Bearing .....	Refer to HL-1260 (P.IV-15)
1.23	Paper Pick-up Solenoid .....	Refer to HL-1260 (P.IV-16)
1.24	Paper Feed Motor Assy .....	Refer to HL-1260 (P.IV-16)
1.25	MP Tray Cover .....	Refer to HL-1260 (P.IV-17)
1.26	MP Tray Assy .....	Refer to HL-1260 (P.IV-17)
1.27	Paper Path Separation Plate, Paper Path Separation Film .....	Refer to HL-1260 (P.IV-18)
1.28	Latch .....	Refer to HL-1260 (P.IV-19)
1.29	Fixing Unit (for both 120V and 230V, the only difference is the halogen heater) .....	Refer to HL-1260 (P.IV-19)
1.30	Transfer Unit .....	Refer to HL-1260 (P.IV-22)

1.31	DC Gear Holder Assy .....	IV-6
1.31.1	Scanner Fan Motor .....	IV-6
1.32	PS Switch Wire, Remote Switch .....	Refer to HL-1260 (P.IV-23)
1.33	High-Voltage Power Supply PCB Assy .....	Refer to HL-1260 (P.IV-24)
1.34	Low-Voltage Power Supply PCB Assy .....	Refer to HL-1260 (P.IV-24)
1.35	Toner Cartridge (EP-ED Cartridge) .....	Refer to HL-1260 (P.IV-25)
1.36	Paper Tray .....	IV-7

## CHAPTER V MAINTENANCE AND SERVICING

1.	PERIODICAL REPLACEMENT PARTS .....	Refer to HL-1260 (P.V-1)
2.	CONSUMABLE PARTS STANDARD ENDURANCE TABLE .....	V-1
3.	LIST OF STANDARD TOOLS .....	Refer to HL-1260 (P.V-2)
4.	LIST OF LUBRICANTS AND CLEANERS .....	Refer to HL-1260 (P.V-3)

## CHAPTER VI TROUBLESHOOTING

1.	INTRODUCTION .....	Refer to HL-1260 (P.VI-1)
1.1	Initial Check.....	Refer to HL-1260 (P.VI-1)
1.2	Basic Procedure .....	Refer to HL-1260 (P.VI-2)
2.	TEST PRINTING AND MECHANICAL CHECK .....	Refer to HL-1260 (P.VI-2)
2.1	Test Printing .....	Refer to HL-1260 (P.VI-2)
3.	IMAGE DEFECTS .....	Refer to HL-1260 (P.VI-3)
3.1	Image Defect Examples .....	Refer to HL-1260 (P.VI-3)
3.2	Troubleshooting Image Defects .....	Refer to HL-1260 (P.VI-4)
4.	TROUBLESHOOTING OF MALFUNCTIONS .....	VI-1
5.	TROUBLESHOOTING PAPER TRANSPORT PROBLEMS .....	Refer to HL-1260 (P.VI-19)
5.1	Paper Jams .....	Refer to HL-1260 (P.VI-19)
5.2	Incomplete Paper Feed .....	Refer to HL-1260 (P.VI-22)
6.	OPERATION .....	Refer to HL-1260 (P.VI-23)
6.1	Line Inspection Mode Procedure .....	Refer to HL-1260 (P.VI-23)
6.2	DRAM Test .....	Refer to HL-1260 (P.VI-25)
7.	STATUS MESSAGE LIST .....	VI-9

## APPENDICES

1.	Engine Block Diagram .....	A-1
2.	Paper Feed/Size-SW PCB Circuitry Diagram (1/1) .....	Refer to HL-1260 (P.A-2)
3.	Main PCB Circuitry Diagram (1/7) .....	A-2
4.	Main PCB Circuitry Diagram (2/7) .....	A-3
5.	Main PCB Circuitry Diagram (3/7) .....	A-4
6.	Main PCB Circuitry Diagram (4/7) .....	A-5
7.	Main PCB Circuitry Diagram (5/7) .....	A-6
8.	Main PCB Circuitry Diagram (6/7) .....	A-7
9.	Main PCB Circuitry Diagram (7/7) .....	A-8
10.	Control Panel PCB Circuitry Diagram (1/1) .....	Refer to HL-1260 (P.A-11)
11.	Scanner LD PCB Circuitry Diagram (1/1) .....	A-9