

H.O.P.E.

Training Support Manual LBP-3260



Canon

LBP-3260 Training Support Manual

This LBP-3260 Training Support Manual describes the differences between the LBP-3260 and the previous model LBP-2460.

Due to the relatively minor number of differences between the LBP-3260 and the LBP-2460, only these differences will be handled in this manual and not the entire machine. This in turn means a basic knowledge of the LBP-2460 is necessary before studying this manual

The main differences between the LBP-3260 and the LBP-2460

The printing speed of the LBP-3260 was increased to 32 A4 (or letter) size pages per minute and 18 A3 per minute.

Therefore the following changes were made:

Rollers: The diameter of nearly all the rollers was increased.

Motors: The speed of the drive Motors was increased.

Controller: A new controller with a new data compression method was designed

Scanner unit: The Speed of the Motor Scanner was increased
An additional /VDO Signal was added
APC is performed in the laser scanner unit.

Fixing unit: The power of the heater was increased
A cleaning roller was added.

Toner: The capacity of the toner cartridge was increased to 20000 pages

Cover: The cover material was changed to PC-ABS

Accessories: New Accessories were designed

Specifications of the LBP-3260 compared to the LBP-2460.

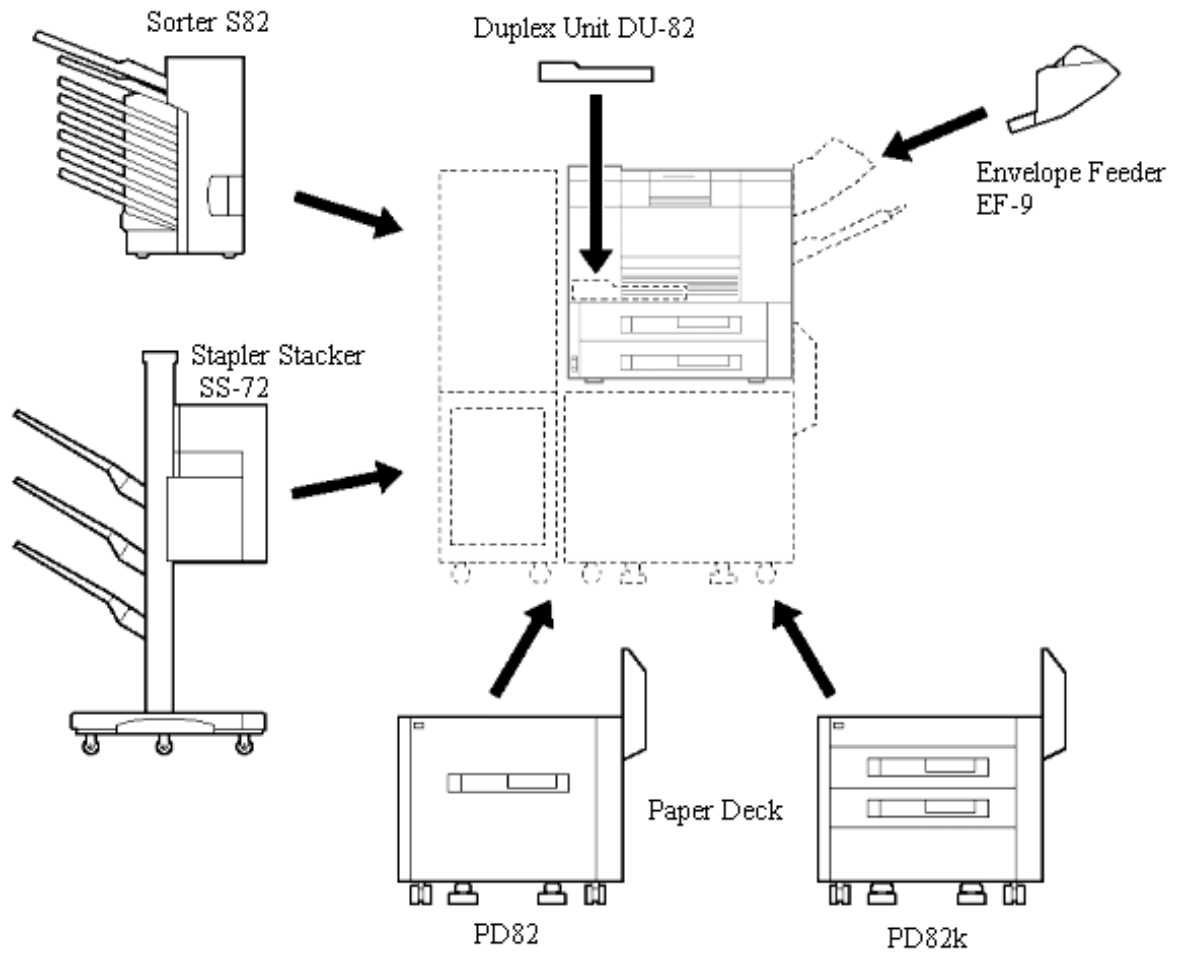
Item	LBP-3260	LBP-2460
Life	1,000,000 images or 5 years, whichever comes first	Same
Printing speed	32ppm/A4; 18ppm/A3	24ppm/A4; 13ppm/A3
First print time	13.9 seconds or less/A4	18.9 seconds or less /A4
Wait time	90 seconds or less	80 seconds or less
Resolution	600 dpi	Same
Toner cartridge	EP-72 CRG / 20,000 sheets	EP-W CRG / 15,000 sheets
Transfer	Roller transfer	Same
Separation	Curvature / discharge bias	Same
Cleaning	Blade	Same
Fixing method	Heater rollers 600W*1, 450W*1	500W*2
Paper type	Plain paper, Labels, Colored paper, Envelopes, OHT	Same
Paper pick-up	Upper cassette (about 500 sheets) Lower cassette (about 500 sheets) Multi-purpose tray (about 100 Sheets)	Same
Print delivery	Face-down / face-up	Same
Option	Stapler Stacker SS-72 Duplex Unit DU-82 2000 Sheet Paper Deck PD-82 2*500 Sheet Paper Deck PD-82k Envelope Feeder EF-9 Sorter S-82 Option Controller PH-72 Flash ROM Module FR-5 Adobe PostScript3 Module A-72 Hard Disk Unit HD-72 Network Boards EB-52, 1300ETX, 1000EX, 1000TX	Stapler Stacker SS-9 Duplex Unit TP-9 2000 Sheet Paper Deck PD-9 Envelope Feeder EF-9 Option Controller OC-9 Adobe PostScript Module A-4 Hard Disk Unit HD-4 Network Boards LT-3, CIS Boards, Emulex Boards

Specifications of the LBP-3260 controller compared to the LBP-2460

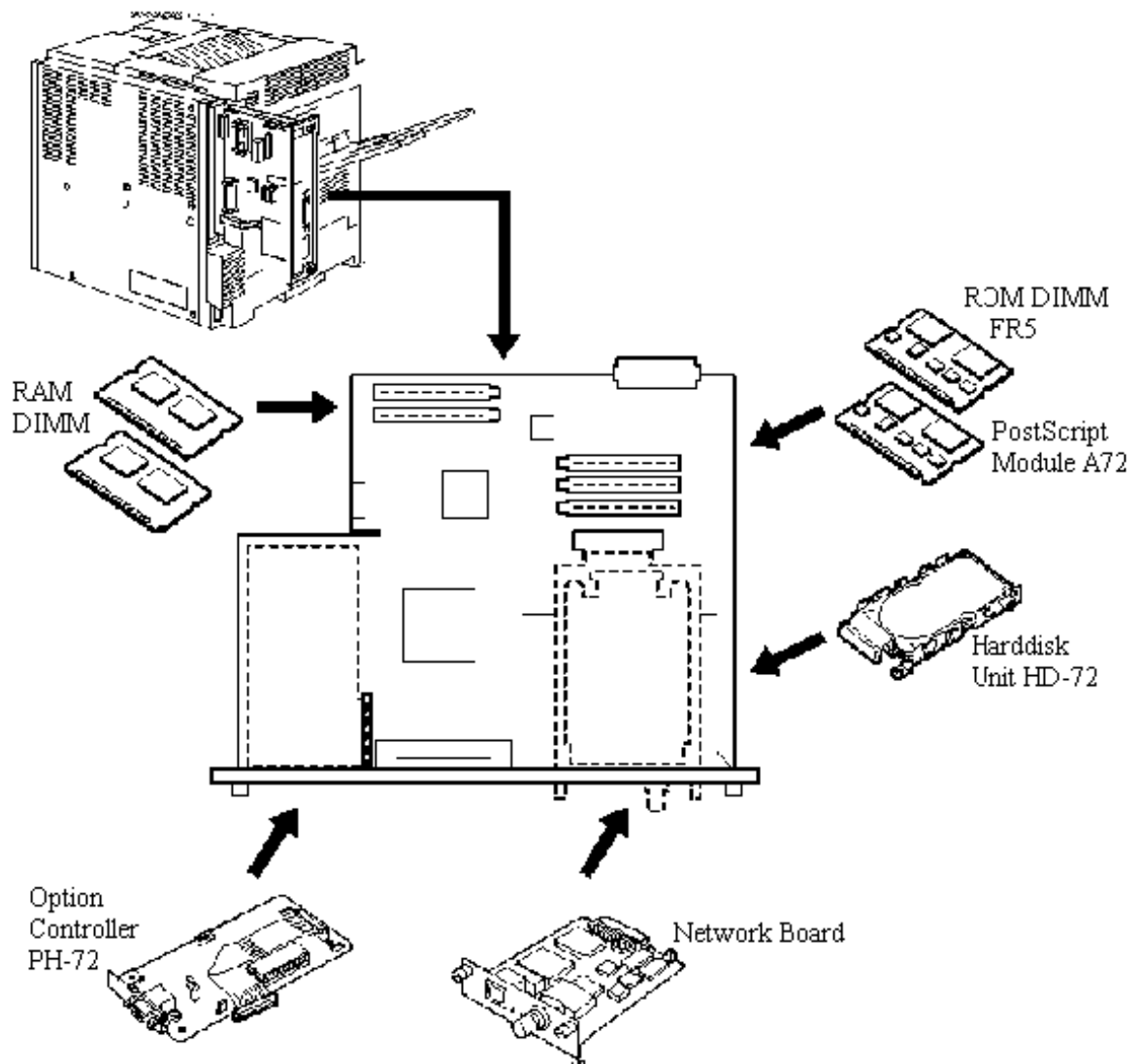
Item	LBP-3260	LBP-2460
CPU	Motorola PowerPC 603e	Intel A80960HD-66
Co-Processor	QuickPrint1800	QuickPrint1700
PJL	Peerless PJL	Same
PDL Standard	Peerless Print6 (PCL-XL & PCL5e)	Peerless Print5e
Option	Adobe PostScript 3	Adobe PostScript 2
Memory	8MB (Max: 40MB) ¹	4MB (Max:96 MB)
ROM DIMM Slots	3	2
RAM DIMM Slots	2	3
Host interface Standard	IEEE 1284 compliant parallel	Same
Option	Ethernet, Token Ring	Same + LocalTalk
Internal Fonts	45 Scalable fonts, 8 Bitmap fonts	45 Scalable fonts 6 Bitmap fonts
Scaler	UFST	UFST

¹ The LBP-3260 controller uses a new memory compression method. Therefore less memory is used and the max. memory was reduced.

Printer Options



Controller Options



Location of Main Parts



Paper and Fixing Rollers

Paper Cassette and Paper Guide

Image Formation System

Expected Life of Main Parts



	Part Name	Expected life
1	Manual feeding pick-up roller	200,000 prints
2	Separation pad	200,000 prints
3	Fixing unit	350,000 prints
4	Transfer charging Roller	350,000 prints
5	Feed roller / Separation roller	350,000 prints
6	Power supply fan	25,000 hours
7	Electrical unit fan	25,000 hours
8	Fixing unit fan	25,000 hours
9	Fixing / scanner fan	25,000 hours
10	MP tray fan	25,000 hours

Features of Electrical Design

Reduction in DC controller loads

APC performed in the laser scanner unit

The laser driver IC controls the automatic power control of the laser diode so that the laser diode emits a beam of constant intensity

Change in scanner motor to increase the print speed.

LBP-2460 about 25,000 rpm \Rightarrow LBP-3260 about 34,000 rpm

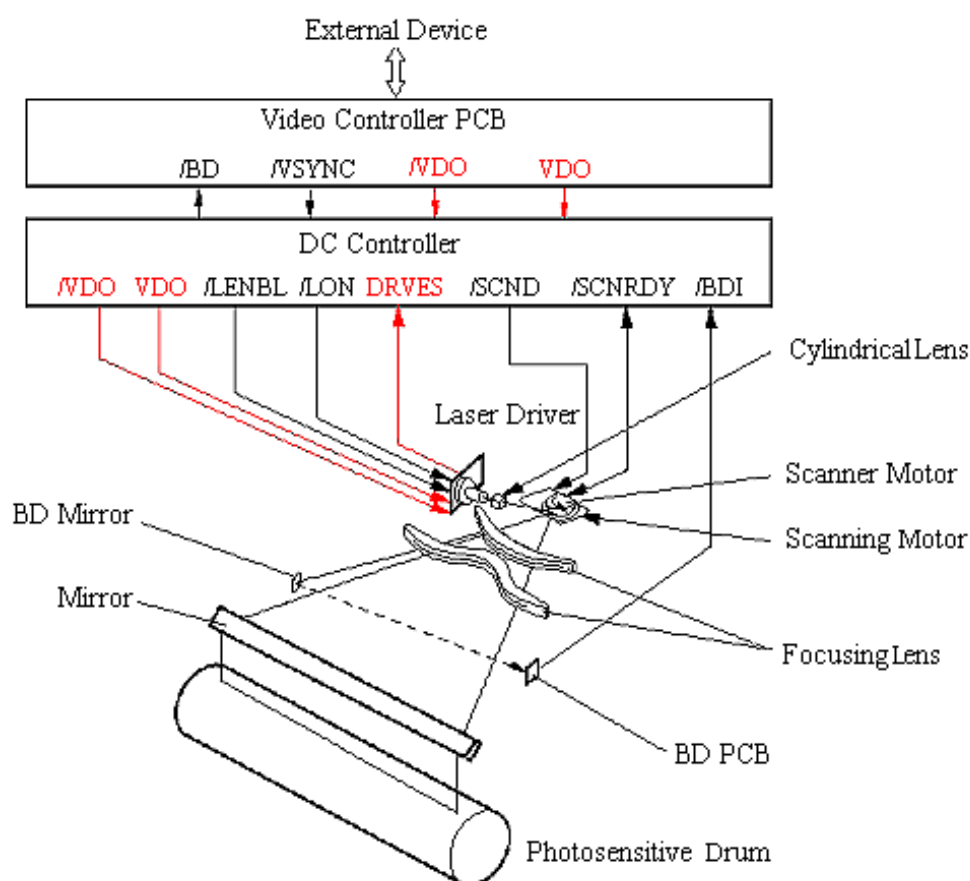
Increase in heater capacity to increase the print Speed

LBP-2460: 500W * 2 \Rightarrow LBP-3260: 600W * 1 & 450W * 1

Employment of a constant voltage circuit in the fixing drive circuit to meet the safety standard

Employment of the LVDS (Low Voltage Differential Signal) for the VIDEO signal to prevent noise

Laser/Scanner System



The scanner motor speed was increased

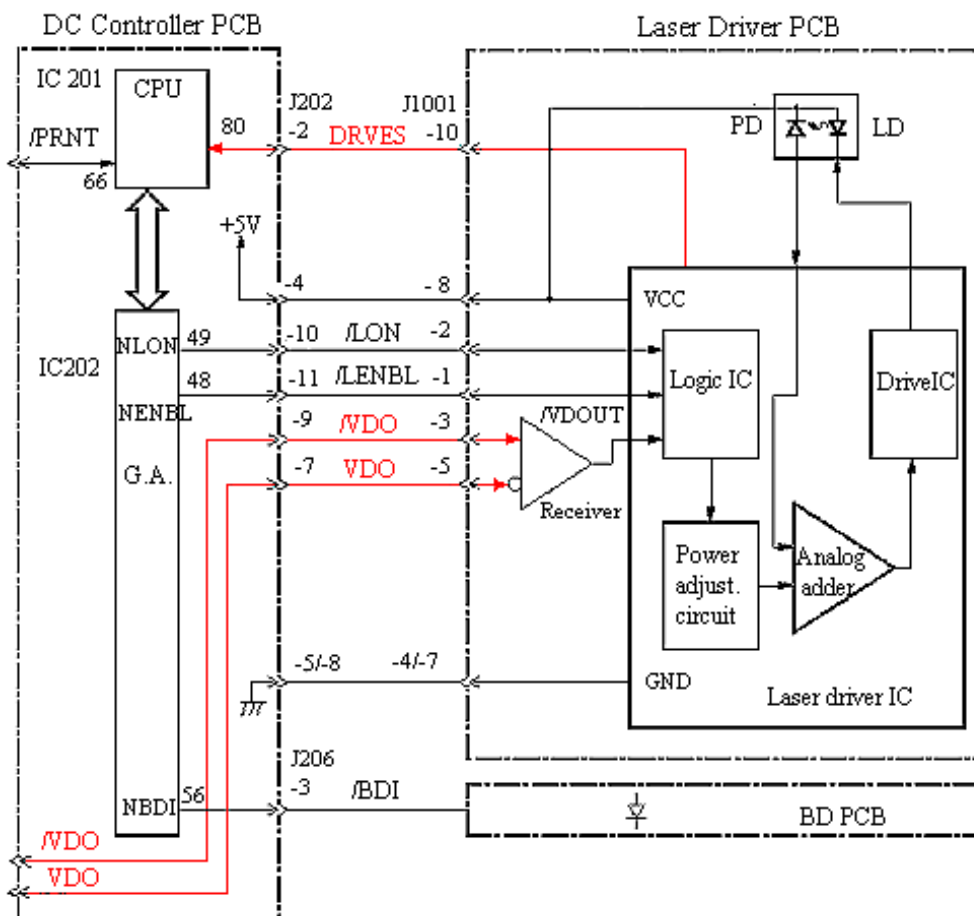
A /VDO signal was added

The APC (Automatic Power Control) is performed by the laser driver IC (LBP-2460 performed by the DC controller).

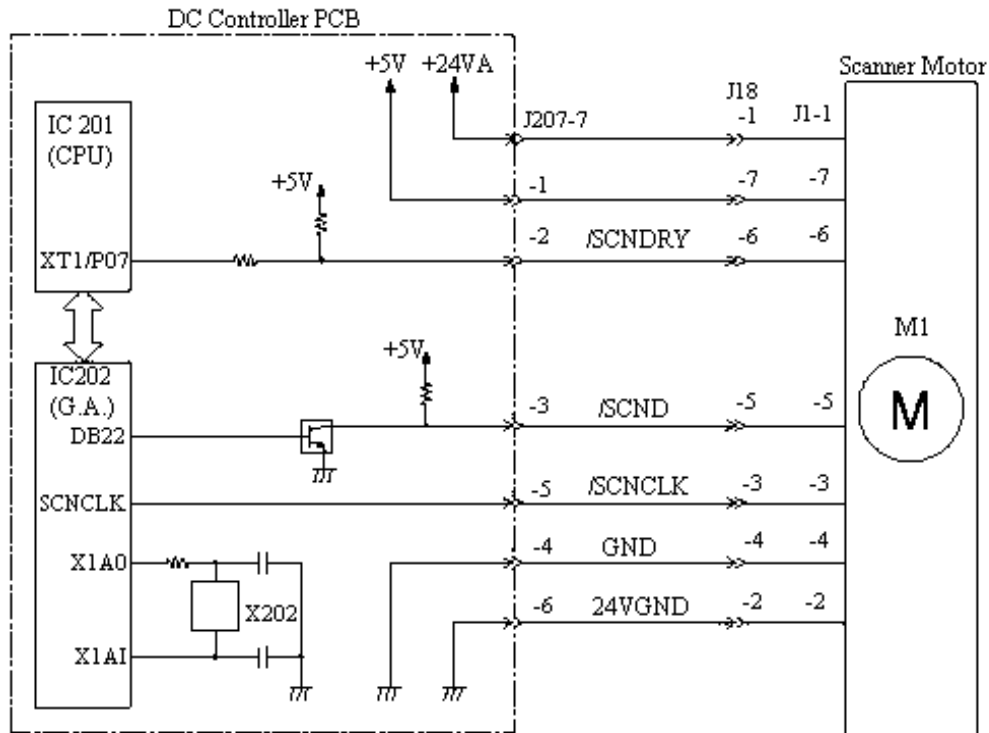
Therefore the LLCONT and PD signals are dropped and the DRVES signal was added. The DC controller CPU monitors the LASER FAILURE DETECTION signal (DRVES) to check whether the laser diode is generating laser normally or not.

The printer uses the APC method that conducts the beam intensity detection and control for each dot while the laser driver is emitting laser. While in the conventional method, the beam intensity was measured by emitting laser for a certain period of time between pages or during unblinking, this method controls the laser output, detecting the intensity of the laser, which is actually forming an image. Therefore, the APC of this printer has higher reliability of control over the conventional APC.

Laser Control Circuit:



Scanning System

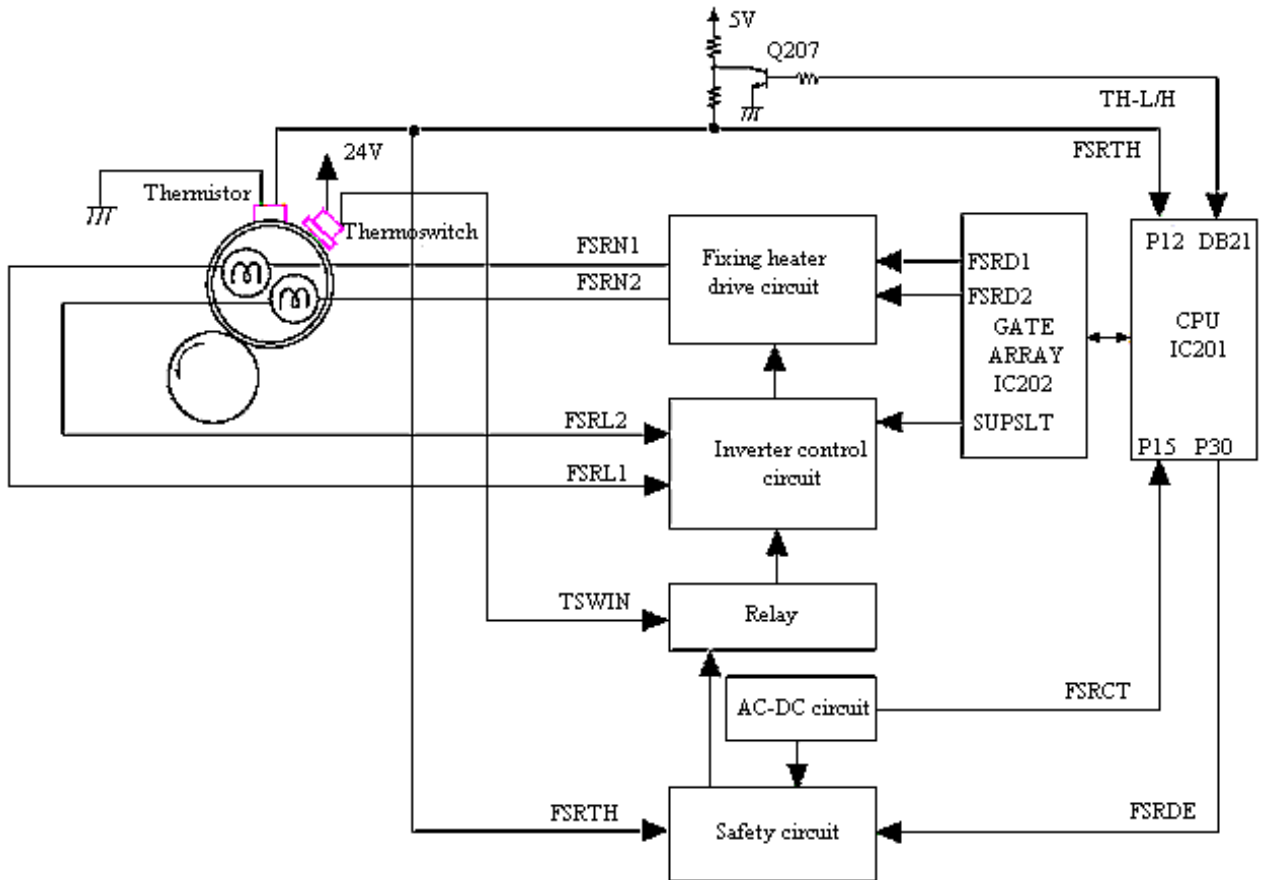


Scanner Failure

The CPU notifies the video controller of a scanner failure in the following cases:

1. When the /SCNRDY signal does not become "L" within 30 seconds after the scanner motor starts rotation.
2. When the /SCNRDY signal goes "H" for 1.5 continuous seconds after going "L".

Fixing Unit Control



CPU

- 1) Thermistor broken wire detection
- 2) Maximum temperature detection
- 3) Broken wire detection after the fixing unit is ready

Safety circuit

Detects “upper heater abnormal high temperature” by monitoring the FIXING ROLLER TEMPERATURE SENSE signal (FSRTH)

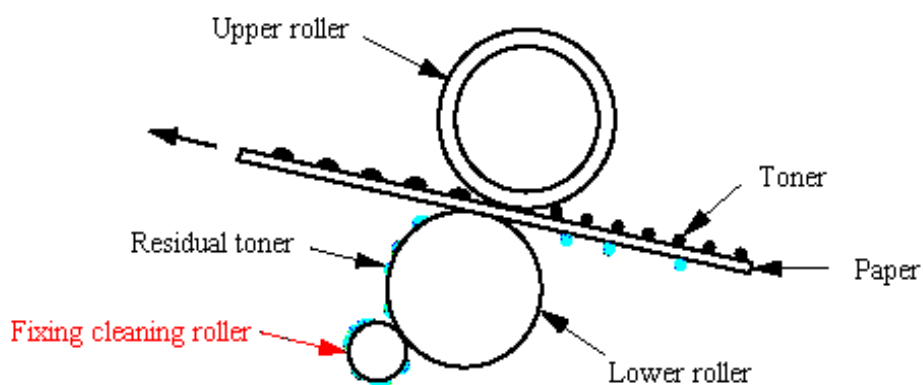
Thermo switch

Detects surface temperature of the upper fixing rollers (OFF when 200°C or more)

Changed Design of the Fixing Unit

Fixing Roller Cleaning

To avoid toner spots on the backside of the paper a new fixing unit cleaning mechanism was designed.



The (aluminum) cleaning roller cleans the lower fixing roller by attracting the residual toner on the lower fixing roller



New designed connector

The connector of the fixing unit was new designed. The LBP-3260 fixing unit has only one connector instead of two like the LBP-2460 fixing unit. Therefore it is impossible to exchange the LBP-3260- and the LBP-2460 fixing units

NEW LBP-3260 Fixing unit

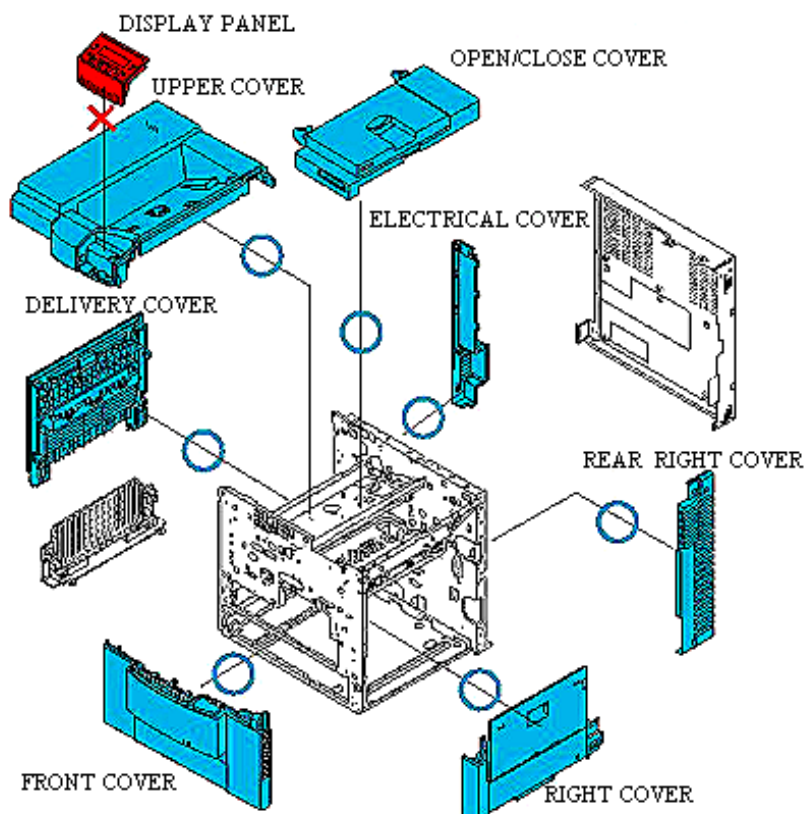


LBP-2460 Fixing unit



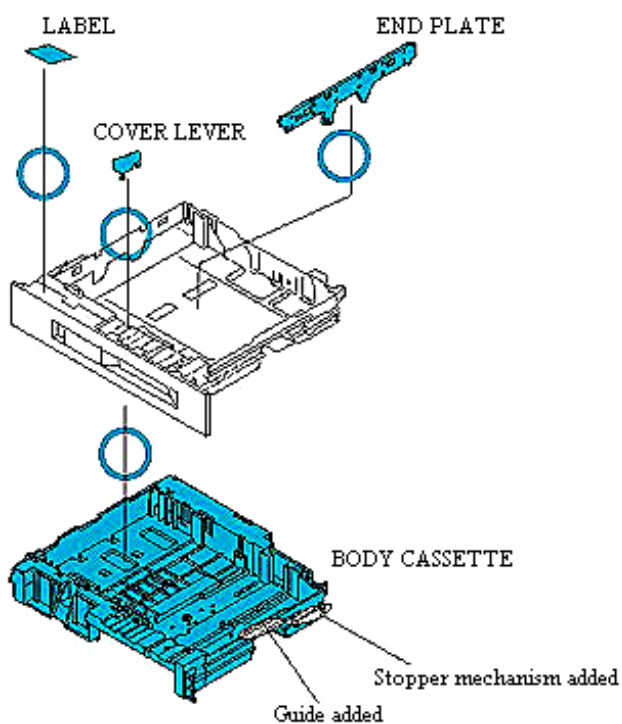
The mechanical system of the LBP-3260

External Covers



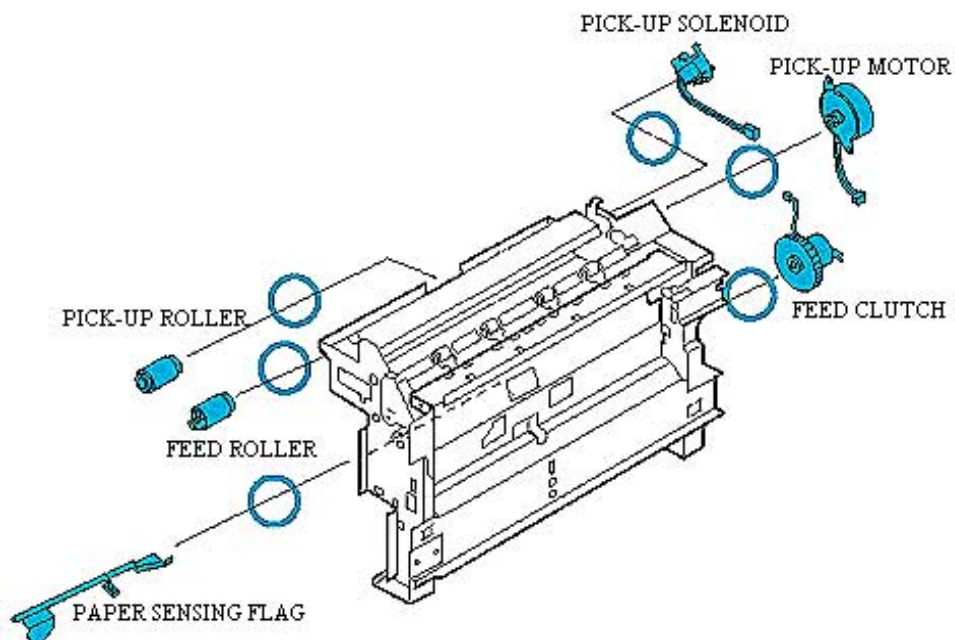
Name	Check item	Distinction	
		LBP-3260	LBP-2460
Display Panel	Connector pin	7pin	6pin
Upper cover	Cover material	PC-ABS	ABS
Delivery cover	Cover material	PC-ABS	ABS
Front cover	Cover material	PC-ABS	ABS
Right Cover	Cover material	PC-ABS	ABS
Rear Right Cover	Cover material	PC-ABS	ABS
Electrical Cover	Cover material	PC-ABS	ABS
Open/Close Cover	Cover material	PC-ABS	ABS

Cassette



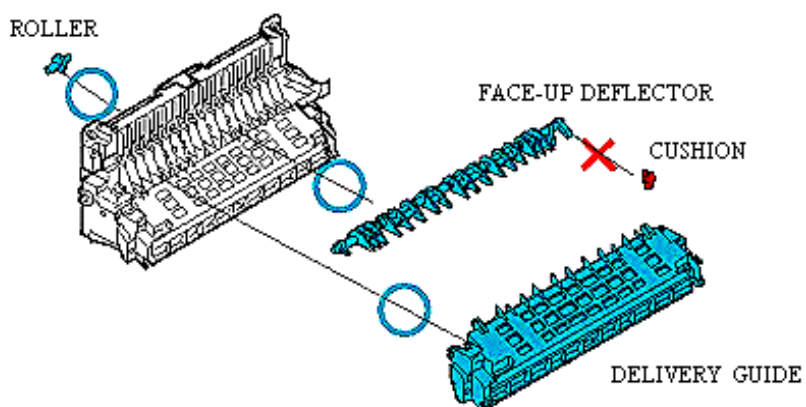
Name	Check item	Distinction	
		LBP-3260	LBP-2460
Label	Label color	Blue	Green
Cover Lever	Lever color	Blue	Green
End Plate	Plate color	Blue	Green
Body Cassette	Guide/Stopper mechanism	O	-

Paper Pick-Up Assy



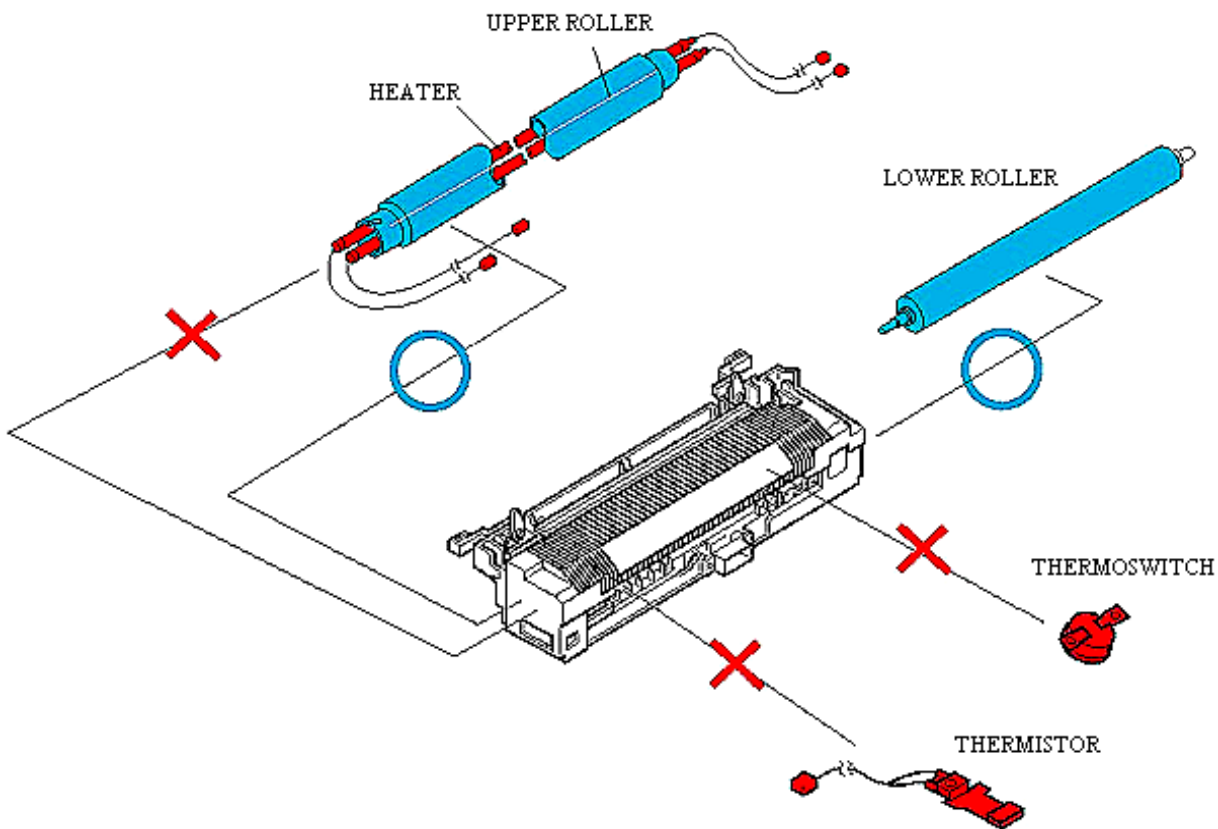
Name	Check item	Distinction	
		LBP-3260	LBP-2460
Pick-Up Roller	Roller thickness	Thick	Thin
Feed Roller	Roller thickness	Thick	Thin
Paper Sensing Roller	Flag color	Gray	Black
Feed Clutch	Clutch color	Silver	Black
Pick-Up Motor	Label color	Blue	White
Pick-Up Solenoid	Cable color	Purple	Gray

Delivery Frame Assy



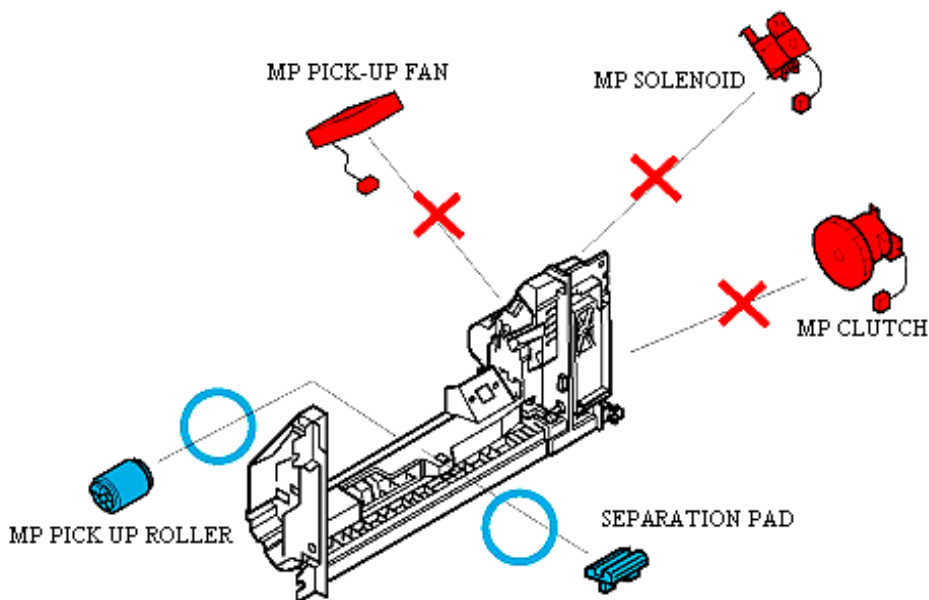
Name	Check item	Distinction	
		LBP-3260	LBP-2460
Face-Up Flapper	Deflector shape	-	-
Cushion	Cushion		
Delivery Guide	Guide color	Gray	Black
Roller	Roller material	Black	Silver

Fixing Unit



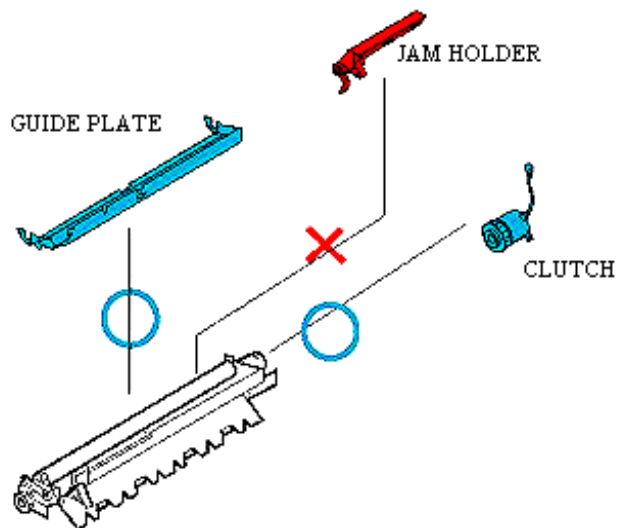
Name	Check item	Distinction	
		LBP-3260	LBP-2460
Thermistor	Connector form	-	-
Thermoswitch	Connector form	-	-
Lower Roller	Roller diameter	Large	Small
Upper Roller	Roller diameter	Large	Small
Heater	Connector form	-	-

Multi-Purpose Pick-Up Assy



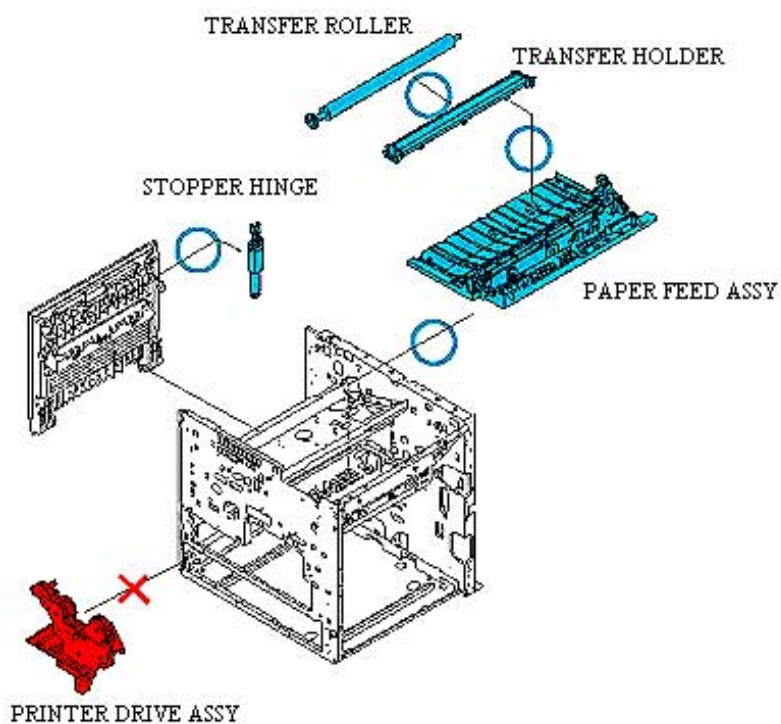
Name	Check item	Distinction	
		LBP-3260	LBP-2460
MP Pick-Up Roller	Rubber thickness	Thick	Thin
Separation Pad	Pad color	Gray	Orange/Gray
MP Pick-Up Fan MP Solenoid MP Clutch	Changes in the multi-purpose tray pick-up unit due to the added fan	-	-

Registration Roller Assy



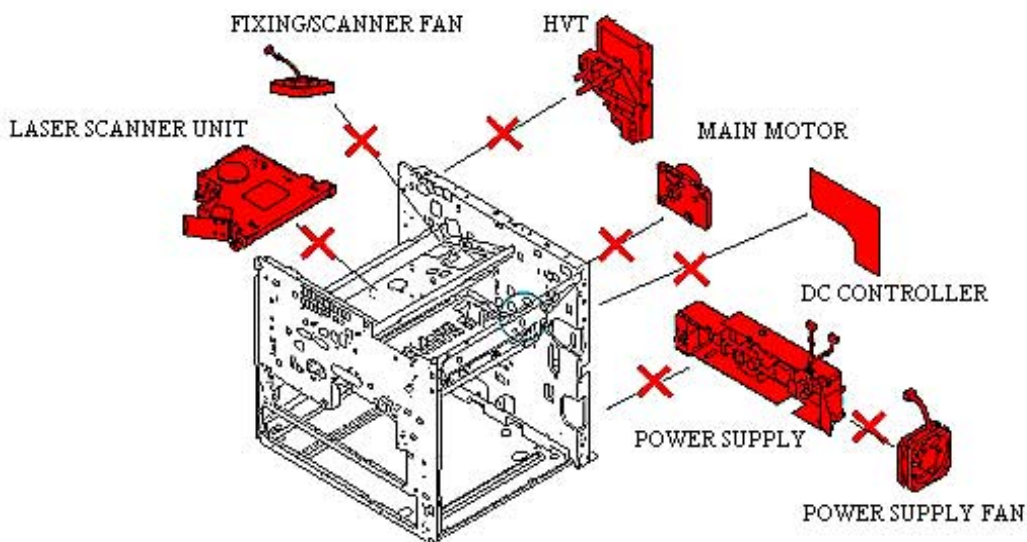
Name	Check item	Distinction	
		LBP-3260	LBP-2460
Guide Plate	Plate color	Black	Silver
Jam Holder	Holder	O	-
Clutch	Clutch color	Black	Silver

Internal Components I



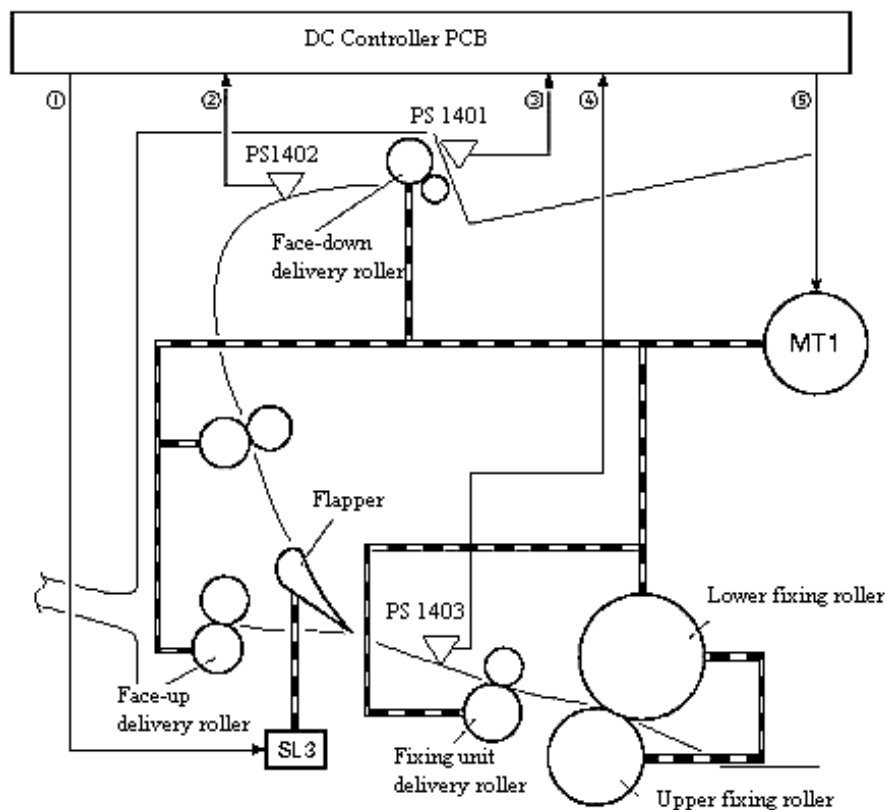
Name	Check item	Distinction	
		LBP-3260	LBP-2460
Stopper Hinge	Hinge color	Silver	Black
Transfer Roller	Sub roller	O	-
Transfer Holder	S mark	O	-
Paper Feed Assy	Bushing color	Gray	Black
Printer Drive Assy	Fixing drive gear color	Black	White

Internal Components II



Name	Check item	Distinction	
		LBP-3260	LBP-2460
Laser Scanner Unit	Connector pin	11 pin (J202)	10 pin (J202)
	Connector pin	5 pin (J206)	3 pin (J206)
Power Supply Fan	Connector form	-	-
HVT	Connector pin	24 pin	20 pin
Main Motor	Connector pin	6 pin	7 pin
Power Supply	Connector pin	14 pin (J217)	13 pin (J217)
	Connector pin	10 pin (J204)	6 pin (J204)
DC Controller	Connector pin	J202, 204, 217	

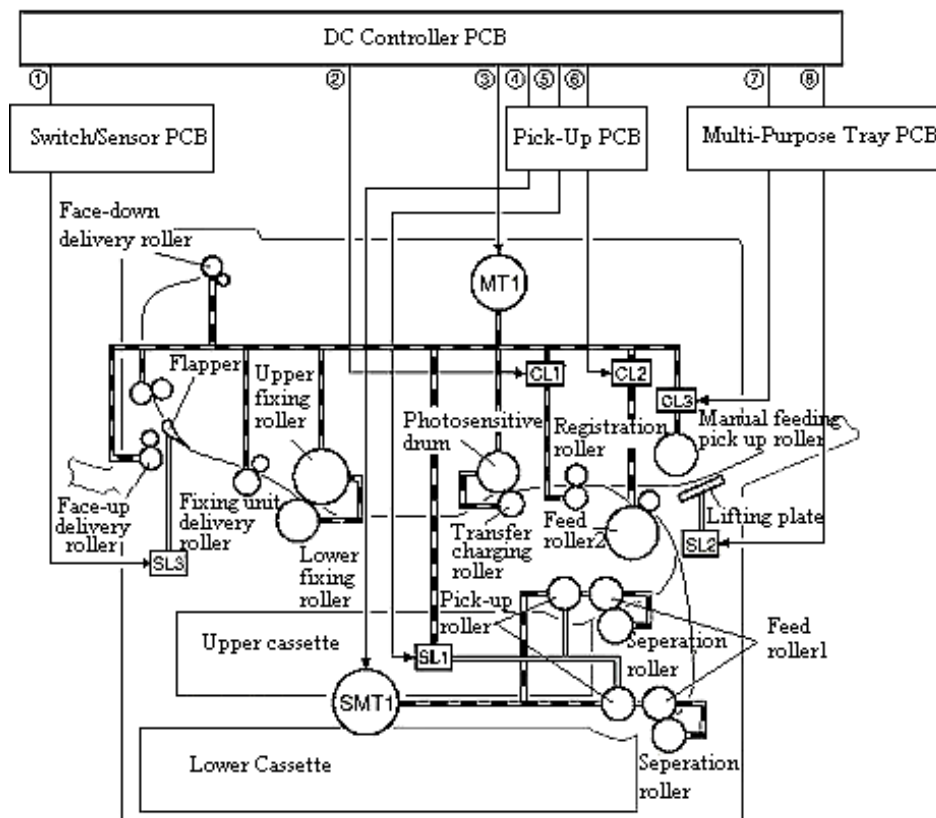
Fixing/Delivery Block



- (1): FACE-UP SOLENOID DRIVE signal (/FUSLD)
- (2): FACE-DOWN TRAY FULL SENSE signal (FDOUTS)
- (3): FACE-DOWN TRAY DELIVERY SENSE signal (FDFULS)
- (4): FIXING UNIT DELIVERY SENSE signal (/FPOUTS)
- (5): MAIN MOTOR DRIVE signal (/MMOTD)

PS 1401:	Face-down tray full sensor
PS 1402:	Face-down tray delivery sensor
PS 1403	Fixing unit delivery sensor
SL 3:	Face-up solenoid
MT 1:	Main motor

Pick-Up / Feed Block



- (1): FACE UP SOLENOID DRIVE signal (/FUSLD)
- (2): REGISTRATION CLUTCH DRIVE signal (/REGCLD)
- (3): MAIN MOTOR DRIVE signal (MMRDY)
- (4): PICK-UP MOTOR DRIVE signal
- (5): FEED CLUTCH DRIVE signal (FEEDCLD)
- (6): CASSETTE PICK-UP SOLENOID DRIVE (/PUPSLD)
- (7): MANUAL FEED CLUTCH DRIVE signal (/MPTCLD)
- (8): LIFTING PLATE SOLENOID DRIVE signal (/MPTS LD)

MT 1: Main motor

SMT1: Cassette pick-up motor

SL1: Cassette pick-up solenoid

SL2: Lifting plate solenoid

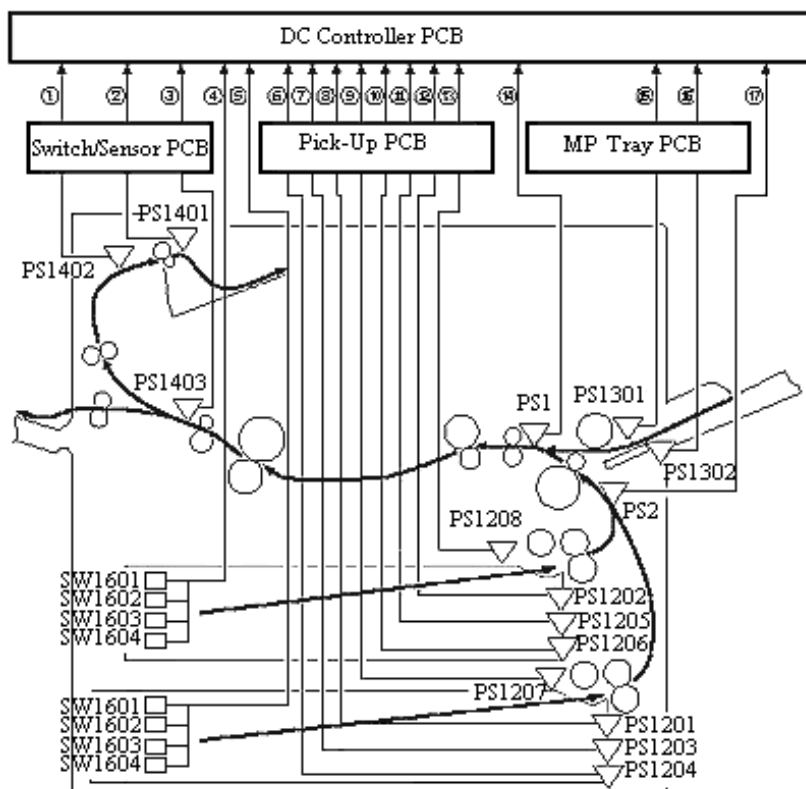
SL3: Face-up solenoid

CL1: Registration clutch

CL2: Feed clutch

CL3: Manual feed clutch

Paper Flow



- (1): FACE-DOWN TRAY DELIVERY SENSE signal (FDOUTS)
- (2): FACE-DOWN TRAY PAPER FULL SENSE signal (FDFULS)
- (3): FIXING UNIT DELIVERY SENSE signal (/FPOUTS)
- (4): UPPER CASSETTE PAPER SIZE SENSE signal
- (5): LOWER CASSETTE PAPER SIZE SENSE signal
- (6): LOWER CASSETTE PAPER LEVEL SENSE signal 1 (LPVS1)
- (7): LOWER CASSETTE PAPER LEVEL SENSE signal 2 (LPVS2)
- (8): LOWER CASSETTE SENSE (/LDECKS)
- (10): UPPER CASSETTE PAPER LEVEL SENSE signal 1 (UPVS1)
- (11): UPPER CASSETTE PAPER LEVEL SENSE signal 2 (UPVS2)
- (12): UPPER CASSETTE SENSE signal (/UDECK)
- (13): UPPER CASSETTE PAPER OUT SENSE signal (/UDECKS)
- (14): REGISTRATION PAPER SENSE signal (/REGS)
- (15): MULTI-PURPOSE TRAY PAPER SENSE signal (/MPTPS)

(16): LIFTING PLATE SENSE signal (/MPTLS)

(17): PICK-UP UNIT PAPER SENSE signal (/FEEDS)

PS1:	Registration paper sensor
PS2:	Pick-up unit paper sensor
PS1201:	Lower cassette sensor
PS1202:	Upper cassette sensor
PS1203:	Lower cassette paper lever sensor 1
PS1204:	Lower cassette paper lever sensor 2
PS1207:	Upper cassette paper lever sensor 1
PS1208:	Upper cassette paper lever sensor 2
PS1301:	Multi-purpose tray paper sensor
PS1302:	Lifting plate position sensor
PS1401:	Face-down tray paper full sensor
PS1402:	Face-down tray delivery sensor
PS1403:	Fixing unit delivery sensor
SW1601:	Cassette paper size sensing switch
SW1602:	Cassette paper size sensing switch
SW1603:	Cassette paper size sensing switch
SW1604:	Cassette paper size sensing switch

Paper Jams

