LCIT PB3290 Machine Code: D3G2 Field Service Manual Ver. 1.0

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Symbols, Abbreviations and Trademarks

Symbols, Abbreviations

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

Symbol	What it means
Ŵ	Clip ring
SP .	Screw
S.	Connector
\$	Clamp
6)	E-ring
45 ³	Flat Flexible Cable
\bigcirc	Timing Belt
SEF	Short Edge Feed
LEF	Long Edge Feed
К	Black
С	Cyan
М	Magenta
Y	Yellow
B/W, BW	Black and White
FC	Full color



[A] Short Edge Feed (SEF)

[B] Long Edge Feed (LEF)

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1. Detailed Descriptions

Changes from the Previous Machine

Antistatic Control

Metal cover [A] for antistatic control has been added to the transport sensor. When replacing the sensor, this cover will also be used after replacement, so remove it from the old sensor. When you do so, be careful not to deform or damage anything.



Specifications

Item	Specification	
Feed system:	RF (Roller Friction) paper feed system + Pick-up solenoid	
Paper size:	A4 LEF, 8 1/2 x 11 LEF	
Paper weight:	52–300 g/m ² (14 lb. Bond–110 lb. Cover)	
Paper capacity (80 g/m ² , 20 lb. Bond):	1,000 sheets x 2 trays	
Power consumption:	15 W (Power is supplied from the main unit.)	
Dimensions (W x D x H):	Except stabilizers	
	587 × 685 × 247 mm (23.2 × 27.0 × 9.8 inches)	
	With stabilizers	
	670 × 755 × 247 mm (26.4 × 29.8 × 9.8 inches)	
Weight:	Approx. 22 kg (48.5 lb.)	

Parts Layout



No.DescriptionNo.Description1Pick-up roller3Paper transport roller2Feed roller4Friction roller





No.	Description	No.	Description
1	Paper transfer HP sensor (S9)	11	Paper transport cover switch (SW2)
2	Left tray set switch (SW3)	12	Right tray set switch (SW1)
3	Left tray paper end sensor (S8)	13	Lower limit sensor (S6)
4	Transfer fence HP sensor (S7)	14	Dehumidification heater (Option) (H1)
5	Controller board (PCB1)	15	Paper feed sensor (S1)
6	Paper transfer motor (M3)	16	Paper end sensor (S3)
7	Tray lift motor (M4)	17	Paper transport sensor (S2)
8	Paper feed motor (M2)	18	Upper limit sensor (S4)
9	Paper transport motor (M1)	19	Pick-up solenoid (SOL1)
10	Remaining paper sensor (S5)		

Mechanism

Paper Feed Separation Mechanism

The feed system is a RF paper feed system. The paper feed unit has a pick-up roller, feed roller, and friction roller. The feed roller and friction roller are high durability rollers.

Drive Mechanism

The pick-up roller and feed roller are driven by the paper feed motor (M2). The transport roller is driven by the paper transport motor (M1). The friction roller is not driven.



Friction Roller/Pick-up Roller Release Mechanism

When the right tray is set, the friction roller comes in contact with the feed roller. The pick-up roller touches the top sheet of paper that is to be transported.

When the right tray is opened, contact between the feed roller and friction roller, and contact between the pick-up roller and paper are released.

Paper Feed Transport Mechanism

In order to feed the paper at regular intervals, paper feed sensor (S1) between the pick-up roller and the feed roller is used to adjust the paper feed timing.



Tray Lift/Descent Mechanism

Tray lift

When the right tray is set, the right tray set switch (SW1) on the rear plate turns ON, and the tray lift motor (M4) starts rotating. Simultaneously, the remaining paper sensor (S5) performs a pulse count to determine the amount of paper in the tray.

The tray lift motor (M4) and rotation shaft are joined by a coupling, so that when the rotation shaft rotates, the tray bottom plate rises. The tray bottom plate rises until the actuator turns OFF the upper limit sensor (S4) (the sensor is blocked). If there is paper, lift operation stops. If there is no paper, the tray bottom plate descends.

Vote

• After the right tray is set, if the upper limit sensor (S4) is OFF, it will turn ON. The tray descends until the lower limit sensor (S6) turns OFF. After stopping temporarily, the tray bottom plate then rises to the upper limit.



No.	Description
1	Upper limit sensor (S4)
2	Pick-up roller

Tray descent

If there is no paper when the upper limit operation is completed, the tray bottom plate descends until the lower limit sensor (S6) turns OFF (the sensor is blocked). The tray bottom plate will descend if paper end is detected during paper transport.



No.	Description
1	Remaining paper sensor (S5) (inside lift transfer unit)
2	Tray lift motor (M4) (inside lift transfer unit)
3	Lower limit sensor (S6)
4	Actuator
5	Tray bottom plate

Left Tray Transfer Fence Mechanism

After the right tray has finished descending, if there is paper in the left tray, the left tray transfer fence shifts, and the paper in the left tray is transferred to the paper feed tray. When the paper has been transferred to the right tray, the left tray transfer fence returns to its original position, until the transfer fence HP sensor (S7) turns OFF (the sensor is blocked).

The left tray end fence is moved by the paper transfer motor (M3) (DC motor inside the lift transfer unit). When the right tray has finished descending, the paper transfer motor (M3) is driven, and the left tray transfer fence begins to shift.

After the left tray paper end sensor (S8) detects no paper (detection is by a feeler), the left tray transfer fence shifts for a certain time in accordance to the paper size. After shifting, the transfer motor turns OFF.

Note

• This time for which the left tray transfer fence shifts is set for either A4 or LT paper, so that the paper stops at the feed position of the right tray



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No.	Description	
1	Left tray transfer fence	
2	Paper transfer HP sensor (S9)	
3	Left tray paper end sensor (S8)	
4	Paper transfer motor (M3) (inside lift transfer unit)	

Remaining Paper Detection

Right tray remaining paper detection

The remaining paper sensor (S5) in the lift transfer unit performs a pulse count.

Left tray remaining paper detection

The left tray paper end sensor (S8) is turned ON/OFF using a feeler.

If there is paper in the left tray, paper end will not be displayed even if there is no paper in the right tray.

Remaining paper	Left tray paper end sensor	Display
100%	OFF	4 bars
Paper end	ON	None

2. Replacement and Adjustment

The Aim of Anti-tip Components and Precautions

The anti-tip components are necessary for meeting the requirements of IEC60950-1, the international standard for safety.

The aim of these components is to prevent the products, which are heavy in weight, from toppling as a result of people running into or leaning onto the products, which can lead to serious accidents such as persons becoming trapped under the product. (U.S.: UL60950-1, Europe: EN60950-1) Therefore, removal of such components must always be with the consent of the customer. Do not remove them at your own judgment.

Rear Cover

<u>1.</u> Remove the connecting brackets (2 brackets).



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2. Remove the rear cover [A] (\$\vert^{\text{x}}\$ × 2).



Left and Right Trays

<u>1.</u> Open the paper tray [A].



<u>2.</u> Remove the left tray [A].



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<u>3.</u> Remove the right tray [A].



Left Tray Paper End Sensor (S8)

- 1. Remove the left tray. (Left and Right Trays)
- 2. Remove the rear cover. (Rear Cover)
- 3. Remove the left tray paper end sensor (S8) [A] (***).

/ [A]



Paper Transfer HP Sensor (S9)

- **<u>1.</u>** Open the paper tray.
- <u>2.</u> Remove the left cover [A] (\$\vert^* \text{ 1}).





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3. Remove the paper transfer HP sensor unit [A] ($\Im \times 1$, $\Im \times 1$, $\Re \times 2$).





4. Remove the paper transfer HP sensor (S9) [A].



Controller Board (PCB1)

- **<u>1.</u>** Remove the rear cover (Rear Cover).
- <u>2.</u> Remove the controller board (PCB1) [A] (𝔅 ×4, 𝔅 ×9).



Paper Feed Unit

- **<u>1.</u>** Open the paper tray.
- **<u>2.</u>** Open the paper transport cover [A].



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 $\underline{\mathbf{3.}} \quad \text{Remove the interlock switch cover [A] (} \mathbb{S}^{\times} 1).$



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4. Remove the paper feed guide plate [A].



<u>5.</u> Remove the stopper [A].





<u>6.</u> Remove the paper feed unit [A] (\Im ×2, \Im ×1, \Re ×1).



Lower Limit Sensor (S6)

- 1. Remove the right tray. (Left and Right Trays)
- 2. Remove the rear cover. (Rear Cover)
- 3. Remove the tray lift/paper transfer unit. (Tray Lift/Paper Transfer Unit)

[A] \



Left Tray Set Switch (SW3)

- **<u>1.</u>** Remove the left tray. (Left and Right Trays)
- 2. Remove the rear cover. (Rear Cover)
- 3. Remove the left tray set switch (SW3) [A] (***).

[A] \



Right Tray Set Switch (SW1)

- **<u>1.</u>** Remove the right tray. (Left and Right Trays)
- 2. Remove the rear cover. (Rear Cover)
- 3. Remove the tray lift/paper transfer unit. (Tray Lift/Paper Transfer Unit)
- **<u>4.</u>** Remove the right tray set switch (SW1) [A] (\Im ×1).





Tray Lift/Paper Transfer Unit

- **<u>1.</u>** Remove the rear cover (Rear Cover).
- **<u>2.</u>** Remove the tray lift/paper transfer unit [A] (𝒱×4, 𝒱×3, 𝒱×14).



Tray Lift Motor (M4)

- 1. Remove the tray lift/paper transfer unit (Tray Lift/Paper Transfer Unit).
- **<u>2.</u>** Remove the tray motor unit [A] (S*×5).



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3. Remove the tray lift motor (M4) [A] (***2).



Paper Transfer Motor (M3)

- **<u>1.</u>** Remove the tray motor unit (Tray Lift Motor (M4)).
- **<u>2.</u>** Remove the paper transfer motor (M3) [A] (𝒱×2, 𝒱×1).



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Remaining Paper Sensor (S5)

- **<u>1.</u>** Remove the rear cover (Rear Cover).
- 2. Remove the remaining paper sensor unit [A] (𝒱×2, 𝒱 ×1, 𝒱×3).



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3. Remove the actuator [A].



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4. Remove the remaining paper sensor (S5) [A].



Paper Feed Motor (M2)

- **<u>1.</u>** Remove the rear cover (Rear Cover).
- **<u>2.</u>** Remove the paper feed motor (M2) [A] (\Im ×2, \Im ×1).



Paper Transport Motor (M1)

- **<u>1.</u>** Remove the rear cover (Rear Cover).
- **<u>2.</u>** Remove the paper transport motor (M1) [A] (\Im ×2, \Im ×1).



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Pick-up Roller, Feed Roller, Friction Roller

- 1. Remove the paper feed unit (Paper Feed Unit)
- **<u>2.</u>** Remove the holder [A]. $(\widehat{W}x1)$



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3. Remove the pick-up roller [A].



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4. Remove the feed roller [A].



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2.Replacement and Adjustment

<u>5.</u> Remove the friction roller [A].



🕅 x1

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Paper Transport Sensor (S2), Paper Feed Sensor (S1), Paper End Sensor (S3), Upper Limit Sensor (S4)

Paper Transport Sensor

- 1. Remove the paper feed unit (Paper Feed Unit).
- Remove the paper transport sensor unit [A] (S*1, S*1). <u>2.</u>



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3. Remove the paper transport sensor (S2) [A].



Metal cover [A] for antistatic control has been added to the transport sensor. When replacing the sensor, this cover will also be used after replacement, so remove it from the old sensor. When you do so, be careful not to deform or damage anything.

2.Replacement and Adjustment



Paper Feed Sensor

<u>1.</u> Remove the pper feed sensor unit [A].



☞ x1, ☞ x1

- d0bqm1013
- 2. Remove the paper feed sensor (S1) [A].



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Paper End Sensor





 $\underline{2.} \quad \text{Remove the upper limit sensor (S4) [A] (S*1).}$



Right Tray Side Fence

<u>1.</u> Open the left and right trays.

[A]

<u>2.</u> Remove the right tray side fence (front) [A], right tray side fence (rear) [B], and right tray end fence
 [C] (³×3).

