LCIT RT3030 Machine Code: D696 Field Service Manual

May, 2016

Symbols, Abbreviations and Trademarks

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

F	Clip ring	
OP	Screw	
Ø.	Connector	
Ş	Clamp	
SEF	Short Edge Feed [A]	
LEF	Long Edge Feed [B]	



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1. Replacement and Adjustment

Rear Cover

Rear Cover

1. Pull out the LCT [A].



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2. Cable cover [A] (*1)



3. Cable bracket [A] (@*×1,@*×1)



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4. Open the right cover [A].



5. Rear cover [A] (🕮×3)



Front Cover

Front Cover

- 1. Open the right cover (page 10 "Right Cover")
- 2. Front cover [A] (*** 4)



Upper Cover

Upper Cover

- 1. Front cover (page 8 "Front Cover")
- 2. Rear cover (page 5 "Rear Cover")
- 3. Upper cover [A] (1 × 2)



Right Cover

Right Cover

- 1. Front cover (page 8 "Front Cover")
- 2. Right cover [A] (𝒱×1,𝔅×1)



Pick-up Roller, Feed Roller, Friction Roller

Pick-up Roller, Feed Roller, Friction Roller

1. Open the right cover [A].



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2. Pick-up roller [A] ([®]×1)



3. Sensor bracket [A] (@*×2)



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4. Feed roller [A] (🕅×1)



5. Friction roller [A] ([®]×1)



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Paper Feed Motor

Paper Feed Motor

- 1. Rear cover (page 5 "Rear Cover")
- 2. Paper feed motor [A] (\$\$ ×2, \$* ×1)



Transport Motor

Transport Motor

- 1. Rear cover (page 5 "Rear Cover")
- 2. Transport motor [A] (🗊×2, 🐨×1)



Tray Lift Unit

Tray Lift Unit

- 1. Rear cover (page 5 "Rear Cover")
- 2. Tray lift unit [A] (@*3, @**1, \$*10)



Controller Board

Controller Board

- 1. Rear cover (page 5 "Rear Cover")
- 2. Controller board [A] (𝔐×4, 𝖅×9, 𝒱×2)



Tray Set Switch (Front)

Tray Set Switch (Front)

- 1. Front cover (page 8)
- 2. Tray set switch (front) [A] (😂 ×1)



Tray Set Switch (Rear)

Tray Set Switch (Rear)

- 1. Front cover (page 8 "Front Cover")
- 2. Tray set switch (rear) [A] (**1)



Paper Feed Sensor, Paper End Sensor, Upper Limit Sensor, Transport Sensor

Paper Feed Sensor, Paper End Sensor, Upper Limit Sensor, Transport Sensor

- 1. Upper cover (page 9 "Upper Cover")
- 2. Paper feed unit [A] (☞×4, ☞×1, ≪×2)



3. Paper feed unit cover [A] (SX×5)



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- [1]: Paper feed sensor
- [2]: Upper limit sensor
- [3]: Paper end sensor
- [4]: Transport sensor

4. Paper feed sensor [A] (🕬×1)



5. Paper end sensor [A] (🎯×1)

/ [A]





6. Upper limit sensor [A] (🕬 ×1)



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7. Transport sensor [A] (🕬 × 1)



1. Replacement and Adjustment

2. Detailed Descriptions

LCIT RT3030 (D696)

Changes from the Previous Machine

The maximum paper quantity is increased.

The bottom part [B] of the tray holder [A] which holds the paper tray and the timing belt has been shortened to increase the maximum paper quantity ([C]: The tray holder for increasing the LCIT capacity).

A maximum of 1500 sheets of paper (thickness: 0.11 mm) can now be set, but only after changing some of the parts (a paper tray, a belt pulley, and side fences). For the modification procedure, refer to "Modification for Increasing the LCIT Capacity" in the installation procedure for LCIT RT3030 (D696) in the main service manual.



• Tray horizontal adjustment

For the previous machine, the paper tray [C] could not be placed on the bottom plate [B], so a jig [A] was placed in between to make the tray horizontal. For this machine, the paper tray can be placed on the base plate so the jig is removed.



Parts Layout



No.	Description	No.	Description
1	Friction roller	6	Feed roller
2	Transport sensor	7	Paper end sensor
3	Transport roller	8	Pickup roller

No.	Description	No.	Description
4	Paper feed sensor	9	Remaining paper sensor (inside lift unit)
5	Upper limit sensor	10	Lower limit sensor



No.	Description	No.	Description
1	Tray set switch (front)	8	Transport motor
2	Paper feed sensor	9	Paper feed motor
3	Upper limit sensor	10	Remaining paper sensor (inside lift unit)
4	Transport sensor	11	Tray lift motor (inside tray lift unit)
5	Pick-up roller solenoid	12	Interlock switch
6	Paper end sensor	13	Controller board
7	Tray set switch (rear)	14	Lower limit sensor

Mechanism

Paper feed separating mechanism

The tray unit and paper feed transport unit are integrated. The pick-up roller, feed roller and reverse roller are common with the main frame's paper feed unit. Both paper feed and paper separation mechanisms use the same RF paper feed system.

In order to feed the paper at regular intervals, there is a paper feed sensor between the pick-up roller and the feed roller, and this sensor is used to adjust the paper feed timing.

- 1. The paper feed motor turns ON, and feeds the first sheet of paper.
- 2. To prevent the next sheet from being transported, the pick-up solenoid turns ON just before the trailing edge of the first sheet passes through the pick-up roller, and the pick-up roller leaves the paper surface.
- 3. Just before the trailing edge of the first sheet leaves the paper feed roller, the paper feed motor turns OFF.

However, at this time, if the paper feed sensor does not detect paper (the second sheet is not transported to the paper feed sensor position), the paper feed motor does not turn OFF. Pre-feed is performed as follows:

- 1. The pick-up solenoid turns OFF, and the second sheet of paper is transported to the paper feed sensor position.
- 2. When the trailing edge of the second sheet passes the feed roller, the paper feed motor is turned OFF. The pick-up solenoid remains OFF.
- 4. Just before the trailing edge of the first sheet passes the feed roller, the pick-up solenoid turns OFF. The pick-up roller is brought into contact with the paper surface.

If paper is pre-fed, the pick-up solenoid will remain OFF, and this operation will not performed.

When the first sheet is transported a specified distance by the downstream transport roller, the paper feed motor turns ON to feed the second sheet.



No.	Description	No.	Description
1	Friction roller	5	Feed roller
2	Transport sensor	6	Paper end sensor
3	Transport roller	7	Pick-up roller
4	Paper feed sensor		

Drive mechanism

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



Tray lift/descent mechanism

The tray lift motor is coupled with the lift shaft, so that when the shaft rotates, the tray bottom plate rises.

Conditions for tray lift

- The main power is turned ON.
- During copying, the tray upper limit sensor is ON (the sensor is not blocked)
- The top cover is closed and the tray upper limit sensor is ON.
- The main machine recovers from low power mode.

Vote

• The tray lifts until the upper limit sensor turns OFF (the sensor is blocked).



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No.	Description	
1	Upper limit sensor	
2	Actuator	

Conditions for tray descent

- The right cover is opened.
- Paper end is detected.

Vote

• The tray descends until the lower limit sensor turns OFF (the sensor is blocked).



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No.	Description	
1	Remaining paper sensor (inside lift unit)	
2	Tray lift motor	
3	Lower limit sensor	
4	Tray	

Remaining paper/paper end detection

Remaining paper detection

Remaining paper in the paper feed tray is detected using a pulse count by the remaining paper sensor. The paper remaining is displayed on the control panel.

Remaining paper	Paper end sensor	Control panel display
100%	OFF	4 bars
70%	OFF	3 bars
30%	OFF	2 bars
10%	OFF	1 bar
Paper end	ON	None

Paper end detection

There is a reflector-type sensor in the upper stay that detects the upper surface of the paper in the tray.



No.	Description	No.	Description
1	Paper end sensor	2	Remaining paper sensor