# LCIT RT5090 Machine Code: D732

**Field Service Manual** 

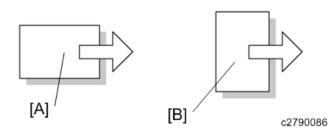
# Safety, Conventions, Trademarks

## Conventions

#### **Common Terms**

This is a list of symbols and abbreviations used in this manual.

Symbol	What it means
0P	Screw
<b>F</b>	Connector
<b>B</b>	E-ring
N	Clip ring
Ş	Harness clamp
FFC	Flexible Film Cable
JG	Junction Gate
LE	Leading Edge of paper
LEF	Long Edge Feed
SEF	Short Edge Feed
TE	Trailing Edge of paper



- [A] Short Edge Feed (SEF)
- [B] Long Edge Feed (LEF)

#### Warnings, Cautions, Notes

In this manual, the following important symbols and notations are used.

#### **⚠ WARNING**

 A Warning indicates a potentially hazardous situation. Failure to obey a Warning could result in death or serious injury.

#### **ACAUTION**

 A Caution indicates a potentially hazardous situation. Failure to obey a Caution could result in minor or moderate injury or damage to the machine or other property.

## 

 Obey these guidelines to avoid problems such as misfeeds, damage to originals, loss of valuable data and to prevent damage to the machine.



• This information provides tips and advice about how to best service the machine.

### Responsibilities of the Customer Engineer

#### Reference Material for Maintenance

- Maintenance shall be done using the special tools and procedures prescribed for maintenance of
  the machine described in the reference materials (service manuals, technical bulletins, operating
  instructions, and safety guidelines for customer engineers).
- Use only consumable supplies and replacement parts designed for use of the machine.

## 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.

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# 1. Replacement and Adjustment

# **Removing Trays**

## **ACAUTION**

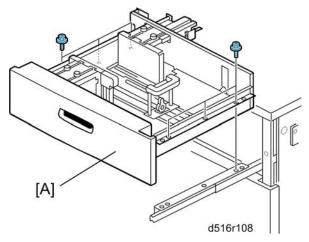
- Tray 2 weighs 27 kg (60 lb) empty. Trays 1 and 3 weigh 20 kg (44 lb) each empty.
- To prevent damage to the tray and personal injury, never attempt to lift a tray alone or without attaching the carrying handles, especially if a tray is loaded with paper.
- Two people on each side of the tray should lift the carrying handles together to lift and move the tray.
- Never remove the tray if the LCIT has not been docked to the copier. Removing the tray while the LCIT is standing alone can unbalance the LCIT and cause it to fall over.



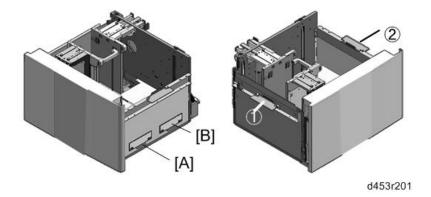
- Only one set of carrying handles is attached to the side of Tray 2. Follow the procedure below to attach and use these handles to move Tray 1, 2, or 3.
- 1. Pull the tray [A] out of the LCIT until it stops.
- 2. Remove the screws from the right rail (@x3)
- 3. Remove the screws from the left rail ( x3)



• You do not need to remove screw for the stopper pin bracket at the back of the left rail.



- 4. Remove carrying handles [A] and [B] from the right side of the tray (50° x 2 ea.)
- 5. Use the same screws to attach the carrying handles at 1 and 2.
- 6. With one person on each side of the tray, lift it carefully and remove it from the rails.



#### Ī

# **Door and Covers**

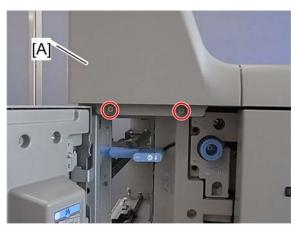
## Front Cover

1. Open the front door [A].



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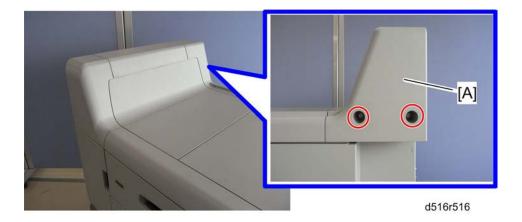
2. Front cover [A] (@x2)



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## Rear Cover

1. Rear cover [A] ( \$\mathbb{O}^{\mathbb{O}} x2)



# Top Cover

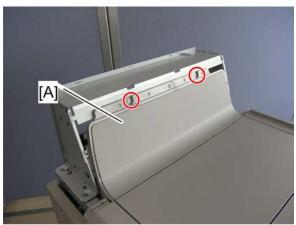
- 1. Front cover (page 7 "Front Cover")
- 2. Rear cover (page 7 "Rear Cover")
- 3. Top cover [A] (@x2)



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## Side Cover

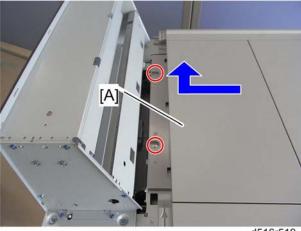
- 1. Top cover (page 8 "Top Cover")
- 2. Side cover [A] (@x2)



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# Left Top Cover

- 1. Top cover (page 8 "Top Cover")
- 2. Side cover (page 8 "Side Cover")
- 3. Left top cover [A] (\$\mathbb{O}^{\mathbb{C}}x2)\$

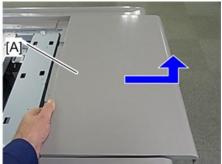


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# **Right Top Cover**

- 1. Left top cover (page 9 "Left Top Cover")
- 2. Right top cover [A] (\$\mathbb{O}^{\mathbb{O}}x2)\$

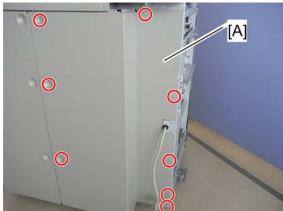




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## Left Rear Cover

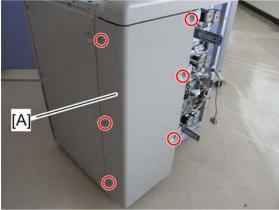
1. Left rear cover [A] (©x8)



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# Right Rear Cover

- 1. Left rear cover (page 10 "Left Rear Cover")
- 2. Right rear cover [A] (©x6)



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# Right Cover

- 1. Pull all the LCIT trays out a short distance.
- 2. Right cover [A] (@x6)



## **Inner Covers**

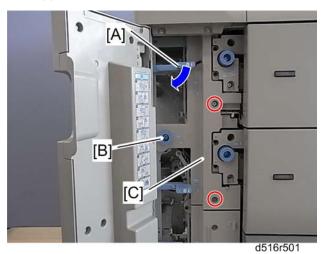
## Inner Upper Cover

- 1. Open the front door.
- 2. Pull down the U1 lever [A].

#### 3. Remove:

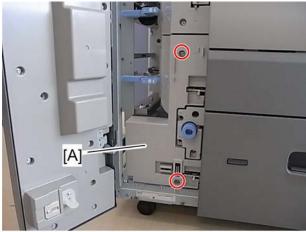
Knob [B] (@x1)

Inner upper cover [C] (@x2)



## Inner Lower Cover

- 1. Open the front door.
- 2. Inner lower cover [A] (@x2)

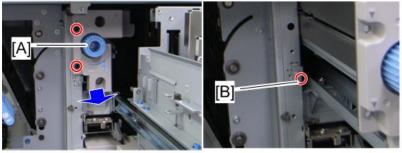


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# **Paper Feed**

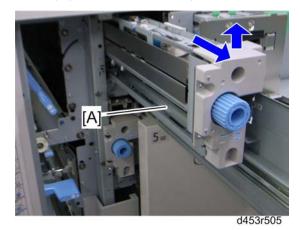
## **Paper Feed Units**

- 1. Pull out the top, middle or bottom tray.
- 2. Inner upper or lower cover (page 11 "Inner Covers")
  - For the paper feed unit in the top tray or middle tray, remove the inner upper cover.
  - For the paper feed unit in the bottom tray, remove the inner lower cover.
- 3. Pull the paper feed unit [A] ( x 2).
- 4. Stopper bracket [B] (@x 1)



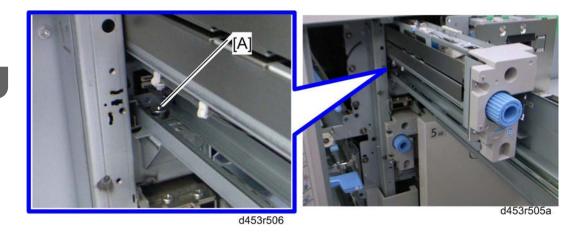
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5. Pull the paper feed unit [A] out fully, and then lift it.



#### When reinstalling the paper feed unit

When reinstalling the paper feed unit, align the cutout in the slide rail with the stud screw [A], and then install the paper feed unit.

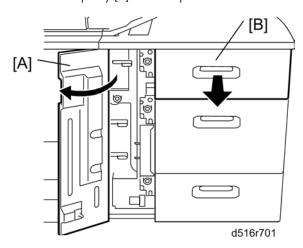


## Paper Feed, Separation and Pickup Rollers

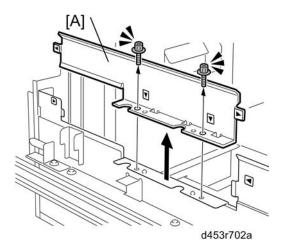
## Top Tray (Tray 1)

## **ACAUTION**

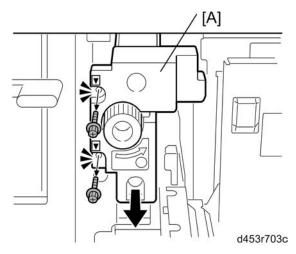
- Before doing this procedure, turn off the main machine and disconnect it from its power source.
- 1. Open the front door [A].
- 2. Pull out the top tray [B] until it stops.



3. Side plate [A] ( x 2)



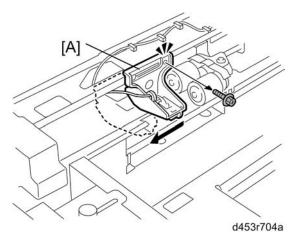
4. Pull the paper feed unit [A] ( x 2).



5. Slide the sensor bracket [A] to the front (@x 1).



• Note the original position of this bracket. It must be re-installed at its original position.

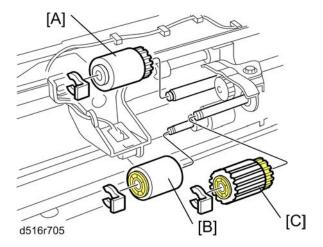


#### 6. Remove:

[A]: Paper feed roller (🕅 x 1)

[B]: Separation roller (®x 1)

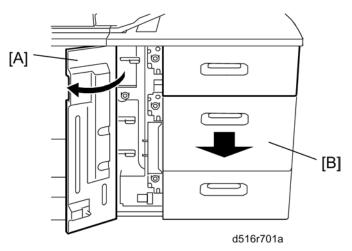
[C]: Pickup roller (🕸 1)



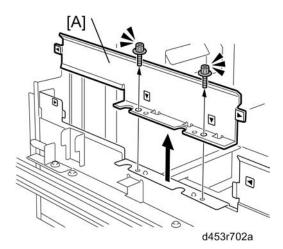
## Middle Tray (Tray 2)

## **ACAUTION**

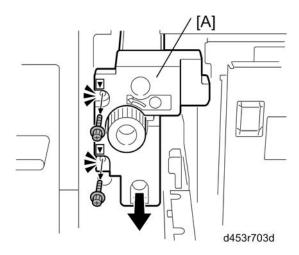
- Before doing this procedure, turn off the main machine and disconnect it from its power source.
- 1. Open the front door [A].
- 2. Pull out the middle tray [B].



# 3. Side plate [A] ( x 2)



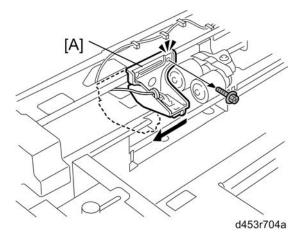
## 4. Pull the paper feed unit [A] ( x 2).



5. Slide the sensor bracket [A] to the front ( \*x 1).



• Note the original position of this bracket. It must be re-installed at its original position.

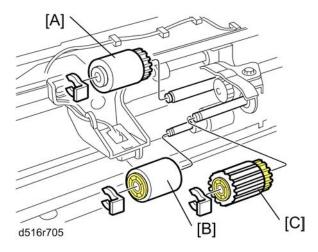


#### 6. Remove:

[A]: Paper feed roller (🕅 x 1)

[B]: Separation roller (®x 1)

[C]: Pickup roller (®x 1)

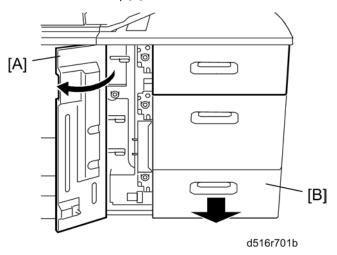


### **Bottom Tray (Tray 3)**

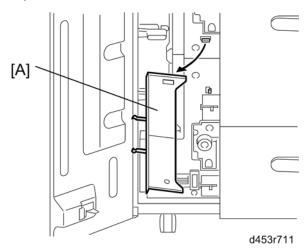
## **ACAUTION**

- Before doing this procedure, turn off the main machine and disconnect it from its power source.
- 1. Open the front door [A].

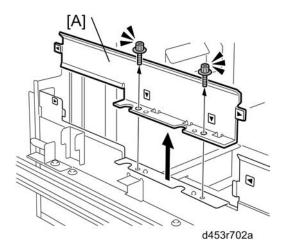
2. Pull out the bottom tray [B].



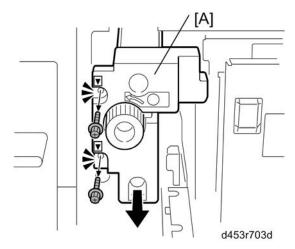
3. Paper end fence [A] if it is stored here.



4. Side plate [A] ( x 2)



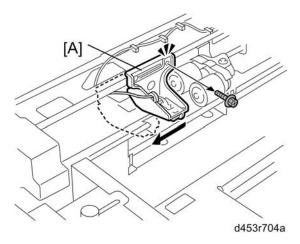
5. Pull the paper feed unit [A] ( x 2).



6. Slide the sensor bracket [A] to the front (@x 1).

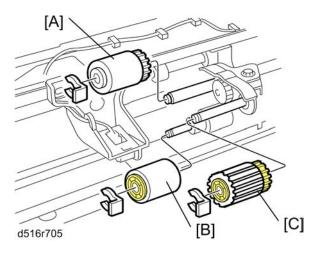


• Note the original position of this bracket. It must be re-installed at its original position.



## 7. Remove:

- [A]: Paper feed roller (🕅 x 1)
- [B]: Separation roller (🕸 1)
- [C]: Pickup roller (🕸 1)

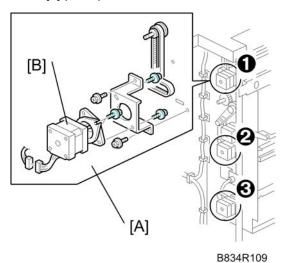


# **LCIT Motors**

## Transport Motors, LCIT Exit Motor

## 1st, 2nd, and 3rd Transport Motors ① ② ③

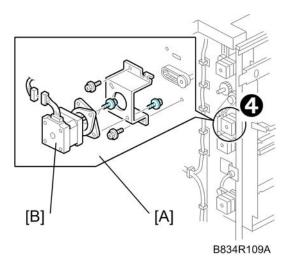
- 1. Left rear cover (page 10 "Left Rear Cover")
- 2. Motor unit [A] (\$\sim x1, \Ox1, \Ox1, \Ox2)\$
- 3. Motor [B] (@x4)



## LCIT Exit Motor 4

- 1. Left rear cover (page 10 "Left Rear Cover")
- 2. Motor unit [A] (\$\sim x1, \Ox1, \Ox2)\$
- 3. Motor [B] (@x4)

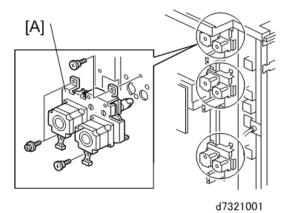
1



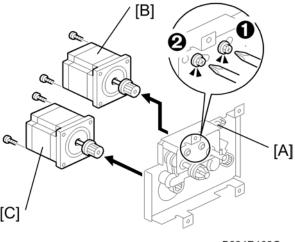
#### Feed Motors, Grip Motors

Each paper feed unit has a pick-up feed motor 1 and a grip motor 2. The removal procedure is the same for each feed tray.

- 1. Left rear cover (page 10 "Left Rear Cover")
- 2. Motor unit [A] (@x4,\\$x2,\\$x2)



- 3. Springs (x2) [A] (First, loosen the screws (@x2) ①, ②.)
- 4. Paper feed motor [B] (@x2, @x1)
- 5. Grip motor [C] (@x2, @x1)



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#### Reinstallation

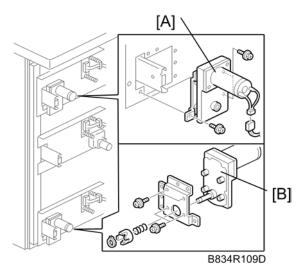
Attach the tension spring and then tighten the screws to tighten the belts.

### Lift Motors

### 1st, 3rd Lift Motors

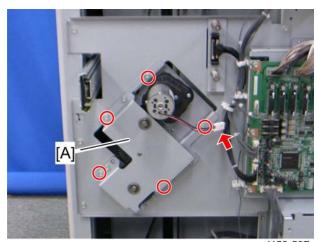
The procedure for removing the 1st and 3rd lift motors is the same.

- 1. Right rear cover (page 10 "Right Rear Cover")
- 2. Motor unit [A] (@x 3, \sqrt{x1})
- 3. 1st (or 3rd) lift motor [B] ( $\Im x4$ ,  $\Im x1$ , Coupling x1,  $\Im x1$ )



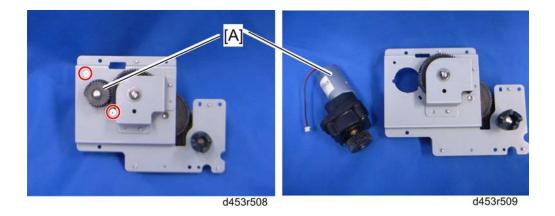
### 2nd Lift Motor

- 1. Right rear cover (page 10 "Right Rear Cover")
- 2. Motor unit [A] (@x 5, \$\square x1)



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3. 2nd lift motor [A] (@x 2)



## Exit Roller Lift Motor

- 1. Left rear cover (page 10 "Left Rear Cover")
- 2. The motor is located at [A].



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3. Disconnect the motor at [A] and [B] (\$x1, \$x1)

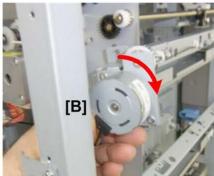




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- 4. Disconnect the motor mount [A] ( \*\bigsip x1).
- 5. Remove the motor [B].





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6. Separate the motor and bracket (\*\* x2, \*\*x1).



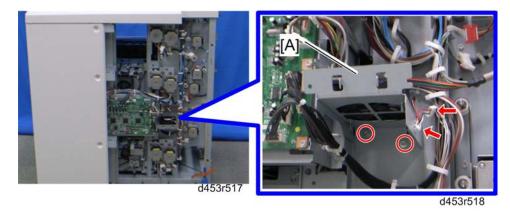




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# **Cooling Fan**

- 1. Left rear cover (page 10 "Left Rear Cover")
- 2. Fan bracket [A] (ℱx 2,蔘x 1,ℱx 1)



3. Cooling fan [A] ( \$\mathbb{O}^{\mathbb{C}} x 2 )



• When reinstalling the cooling fan, make sure that the cooling fan is installed with its decals facing upward.



# **Electrical Components**

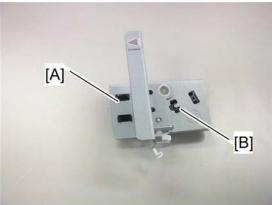
## Paper Feed and End Sensors

- 1. Pull out the paper feed unit
- 2. Sensor bracket [A] (  $\mathfrak{S}_x1$  , black screw x1 ,  $\mathfrak{T}_x1$  ,  $\mathfrak{T}_x2$  )



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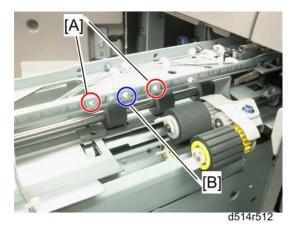
- 3. Paper feed sensor [A] (hooks)
- 4. Paper end sensor [B] (hooks)



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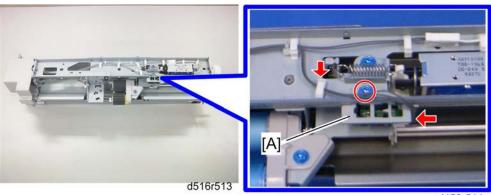
### When reinstalling the sensor bracket

- Make sure that the white connector is connected to the paper feed sensor and the red connector is connected to the paper end sensor.
- Use two holes [A] when attaching the sensor bracket. Do not use the hole [B].



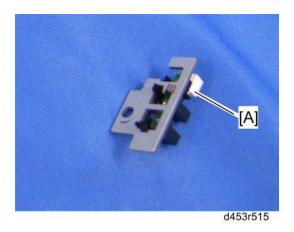
## Lift Sensor

- 1. Paper feed unit (page 13 "Paper Feed Units")
- 2. Sensor bracket [A] (ℱx1,蔘x1,ℱx1)



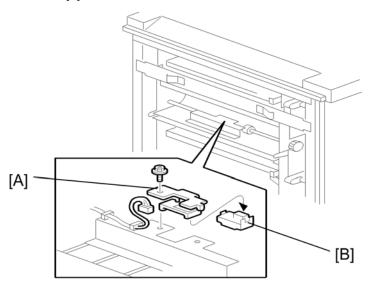
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3. Lift sensor [A] (▼x3)



## **LCIT Exit Sensor**

- 1. Disconnect the LCIT from the main machine.
- 2. Exit sensor unit [A] (@x1, Fx1)
- 3. Exit sensor [B]

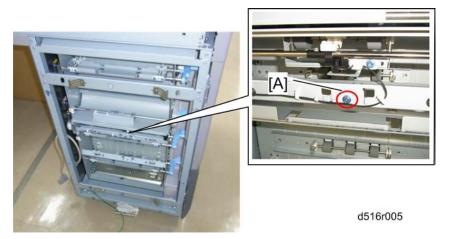


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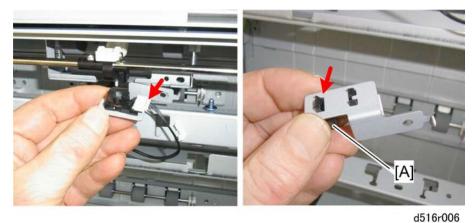
## **Exit Roller Lift Sensor**

1. Disconnect the LCIT from the main machine.

# 2. Sensor bracket [A] ( 🔊 x 1)

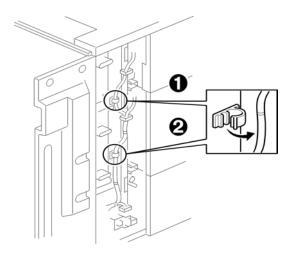


3. Exit roller lift sensor [A] (⋘x1, ▼x4)



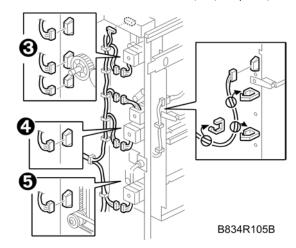
## Removing the Vertical Feed Unit

- 1. Open the front door.
- 2. Remove:
  - Inner upper cover (page 11 "Inner Covers")
  - Inner lower cover (page 11 "Inner Covers")
  - Left rear cover (page 10 "Left Rear Cover")
- 3. Disconnect the harness clamps ① and ② (\$\sqrt{x}2).



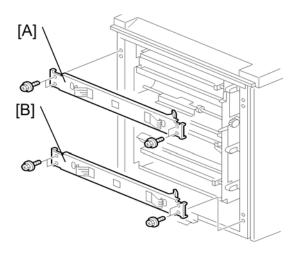
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4. Disconnect the motor harnesses ③, ④, ⑤ (\$\sigma x3, \$\sigma x11).



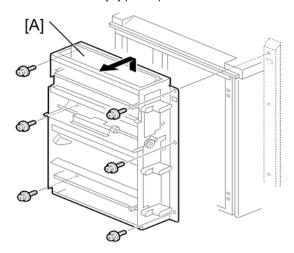
- 5. Upper stay [A] (@x2)
- 6. Lower stay [B] (@x2)

Ш



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7. Vertical feed unit [A] (@x6)



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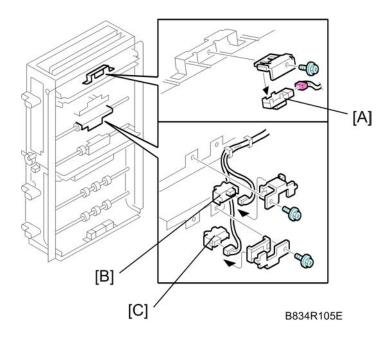
## 1st Transport, 1st Relay Upper, Lower Sensors

- 1. Vertical feed unit (page 32 "Removing the Vertical Feed Unit")
- 2. Remove:

1st Transport sensor [A]: (@x1, Fx1)

1st Relay sensor – upper [B] (@x1,Fx1)

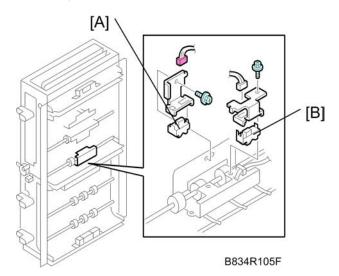
1st Relay sensor – lower [C] (@x1, Fx1)



# 2nd Relay Sensor, 2nd Transport Sensor

- 1. Vertical feed unit (page 32 "Removing the Vertical Feed Unit")
- 2. Remove:

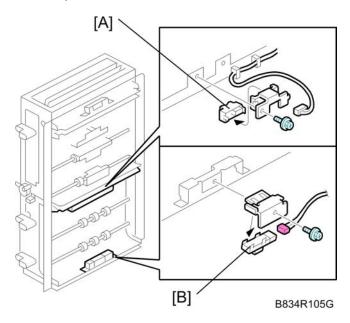
2nd Relay sensor [A] (@x1, \x1)
2nd Transport sensor [B] (@x1, \x1)



## 3rd Relay Sensor, 3rd Transport Sensor

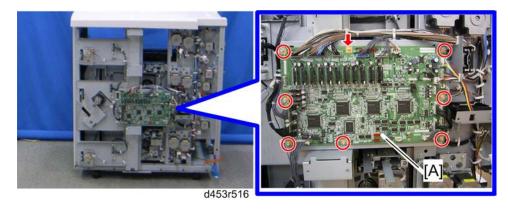
- 1. Vertical feed unit (page 32 "Removing the Vertical Feed Unit")
- 2. Remove:

3rd Relay sensor [A] (\$\mathbb{O}^{\pi} x 1, \mathbb{F} x 1)\$
3rd Transport sensor [B] (\$\mathbb{O}^{\pi} x 1, \mathbb{F} x 1)\$



### **Main Control Board**

- 1. Left rear cover (page 10 "Left Rear Cover")
- 2. Right rear cover (page 10 "Right Rear Cover")
- 3. Main control board [A] (\$\mathbb{O}^2 x7, \$\overline{\pi} x 1, \$\overline{\pi} x All).



1

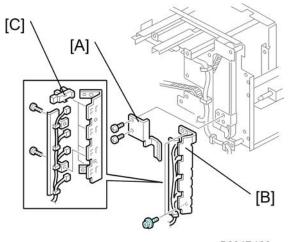
#### 1

## Paper Height, Paper Width Sensors

#### **Paper Height Sensors**

- 1. Left rear cover (page 10 "Left Rear Cover")
- 2. Remove:

Paper height sensor unit [A] ( $\Im x \ 2, \Im x \ 4$ ) Clamp bracket [B] ( $\Im x \ 2$ ) Paper height sensors (x 4) [C] ( $\nabla x \ 3, \Im x \ 2$  each)



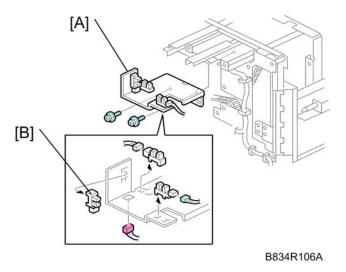
B834R106

#### **Paper Width Sensors**

- 1. Left rear cover (page 10 "Left Rear Cover")
- 2. Remove:

Paper width sensor unit [A] (@x2, \$\square\$x 3)

Paper width sensors [B] (⋘x3, ▼x2 each)

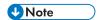


# **Adjustment**

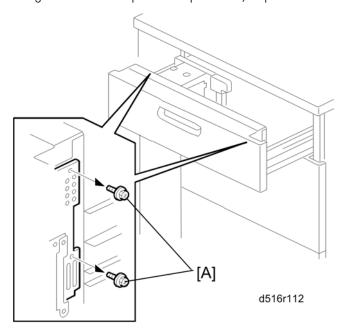
#### Side Registration Adjustment

Normally the side registration of the image can be adjusted with SP1002-004 to -006 (Side-to-Side Registration – Tray 1, 2, 3). When the punch hole positions are not aligned from a particular feed station, adjust the side registration by changing the tray cover position for the tray, as described below. Then adjust the side registration of the image with the SP1002.

- 1. Pull out the tray.
- 2. Change the screw positions [A] at both the right and left sides as shown.



• Adjustment range: 0 ± 2.0 mm adjustment step: 0.5 mm/step

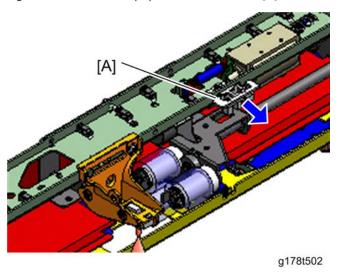


#### **Double Feed Problem from LCIT**

If double feed occurs several times when paper is fed from an LCIT (Tray 1, 2 or 3), try to change the upper limit of the paper stack in the LCIT tray. Changing the upper limit of the paper stack in the LCIT tray can improve paper separation for the paper stack in the LCIT tray.

- 1. Remove the paper feed unit of the LCIT unit (page 13 "Paper Feed Units").
- 2. Loosen the screw on the paper lift sensor bracket [A].
- 3. Move the bracket 0.5 mm in the arrow direction as shown above.

4. Tighten the screw on the paper lift sensor bracket [A].



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- To return the upper limit position to the default position, move the paper lift sensor bracket 0.5 mm to the opposite side.
- Return the upper limit position to the default if a paper jam occurs at the paper feed sensor in the LCIT.