NCR
Product Specification

Instruction – 7167 Check Scanning Kit

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KITS CONTENTS

Check Scanner Mechanism + Accessories
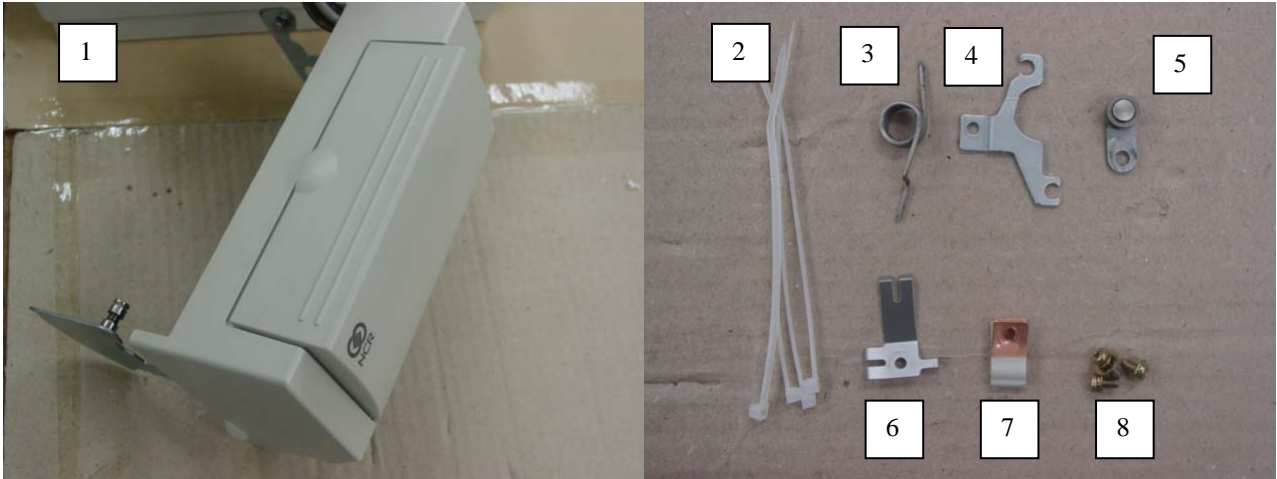
No.	Items	Qty
1	Check Scanner Mechanism	01
2	Cable ties	04
3	Hinge Spring	01
4	Hinge Plate	01
5	Hinge roller	01
6	Earth Plate	01
7	Grounding Chip	01
8A	M3x5 pan head screw	01
8B	M3x6 double washer	01
8C	M3x8 double washer	01
9	Slip Table	01
-	60 gsm copier paper (110mm x 130mm)	01

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Check Scanner Main PC Board + Check Scanner Sub PC Board + Accessories.
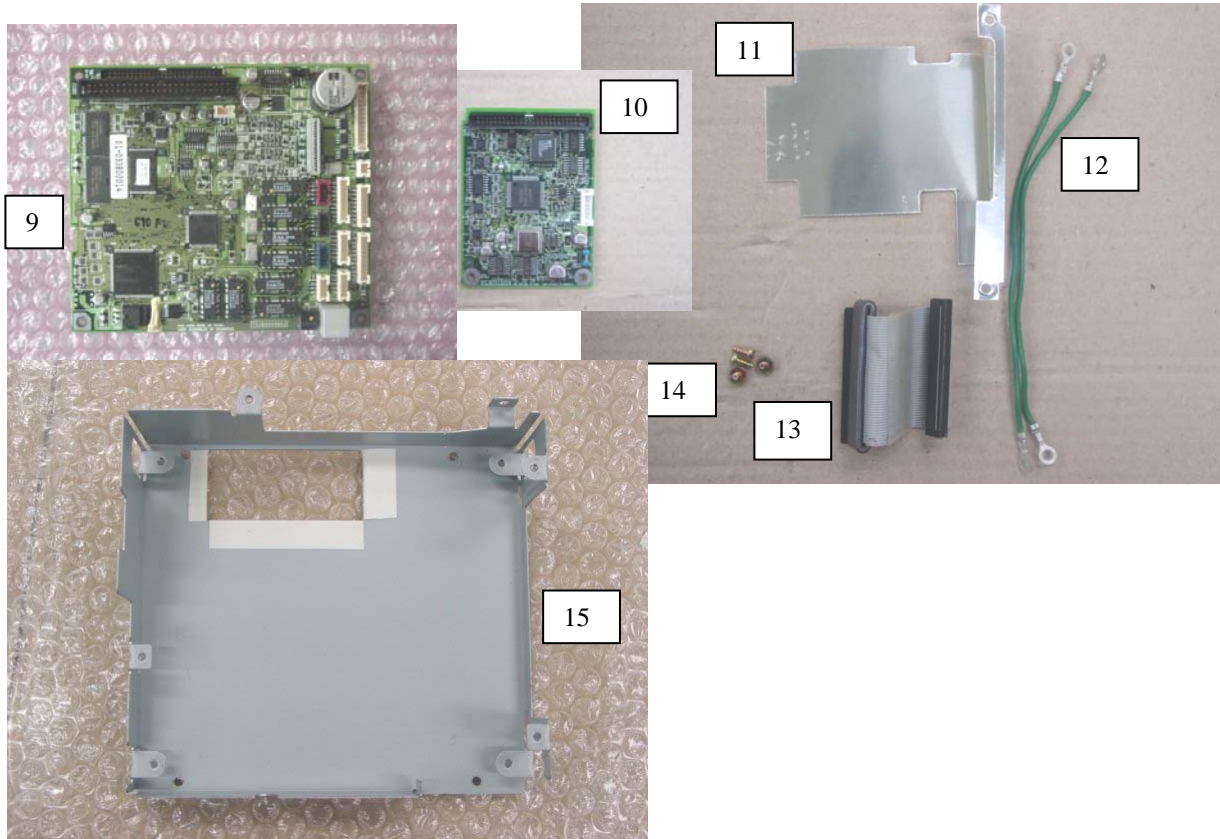
No.	Items	Qty
9	Check Scanner Main PC Board	01
10	Check Scanner Sub PC Board	01
11	Grounding Sheet	01
12	Earth wires	02
13	Flat Cable + mylar	01
14A	M3x6 pan head with flange screw	02
14B	M3x8 self tap screw	02
15	Check Scanner Main PC Board Plate	01

Tools

You will need the following tools:

- **Phillips® screwdriver**
- **Cutter**

Removing the Printer Main PC Board

Caution: Before working on the printer be sure that the power has been turned off. Wear a grounded wrist strap and use a static mat or other ESD protected work surface.

Note: Some 7167 models may appear slightly different than what is shown in the illustrations. The procedures are the same for all models unless otherwise noted.

Caution: Electro Static Discharge may damage the PC board. Wear a grounded wrist strap and use a static mat or other ESD protected work surface whenever you work with the PC board.

1. Turn off the host computer or unplug the power supply depending on where the printer receives power.

2. Remove any thermal paper from the receipt station. Reposition the printer upside-down with the bottom of the printer towards you.

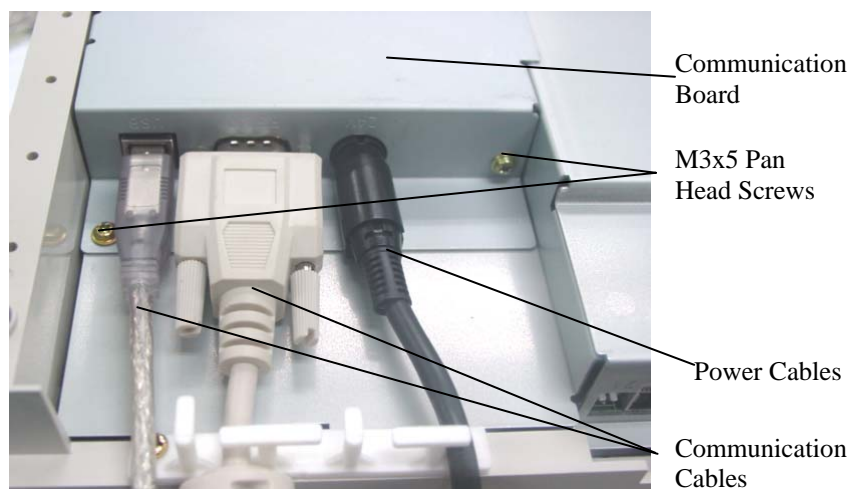3. Disconnect the communication and power cables. (Refer to Figure 1)

Figure 1 – Removal of Communication Cables

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4. Pull (in the direction indicated) and remove the communication board assembly.
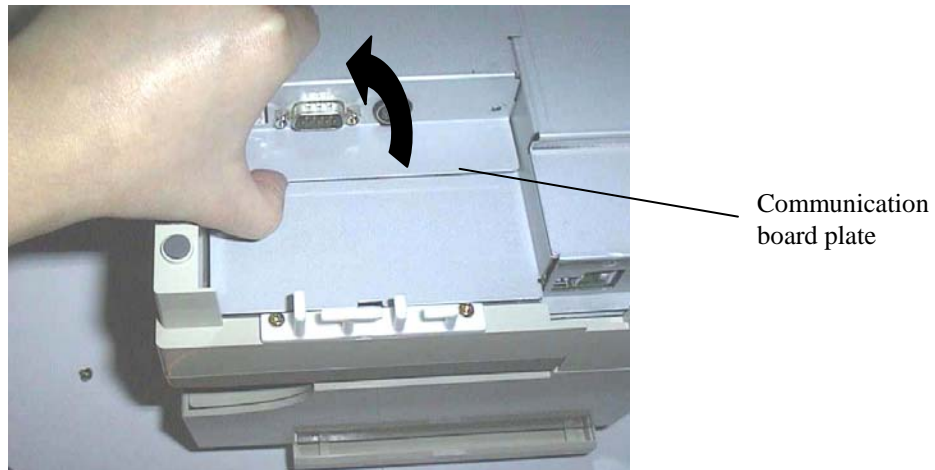

Communication board plate

Figure 2 – Removing Printer Communication Board

5. Unscrew three M3x5 pan head screws and remove the Main PC board middle plate from the assembly. (Figure 3)
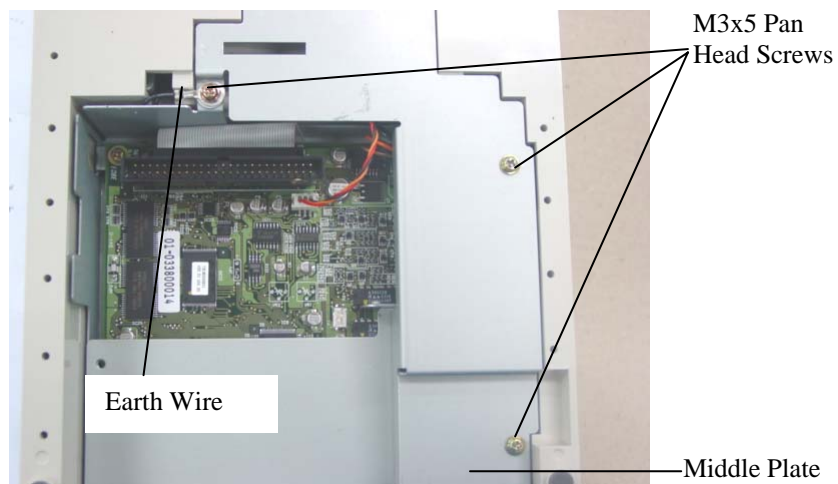

M3x5 Pan Head Screws

Earth Wire

Middle Plate

Figure 3 – Removal of Middle Plate

6. Remove all the cables by gently tugging on the connector.

Receipt Feed cable (J1)
Slip motor cable (J2)
Carrier motor cable (J3)
Flip motor cable (J4)
Receipt cable (J5)
Flip sensor cable (J6)
Thermal head cable (J7)
Carrier motor/ Slip motor/ Control Panel cable (J8)
Bottom of Form/ Slip LED cable (J9)
Cutter motor cable (J10)
Shutter motor/ Shutter sensor/ Top of Form sensor (J11)
MICR cable (J12)
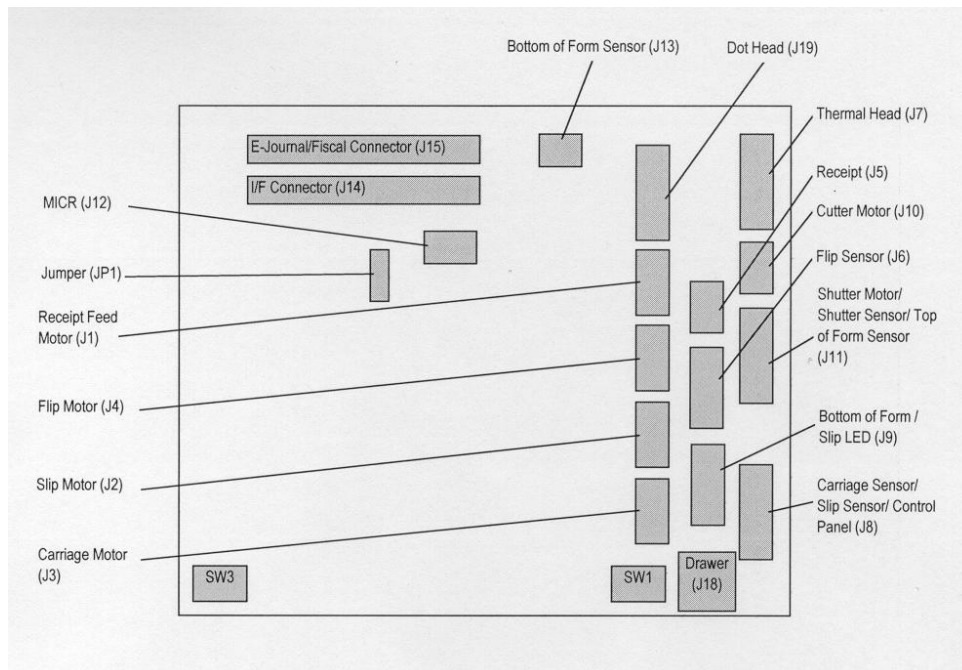Bottom of Form sensor cable (J13)
Impact head flex cable (J19)

Figure 4 – Diagram of Main PC Board

7. Remove four M3 x 6 double washer screws that fasten the Main PC board to the Main PC board plate and one M3x5 pan head screw. (Figure 5)
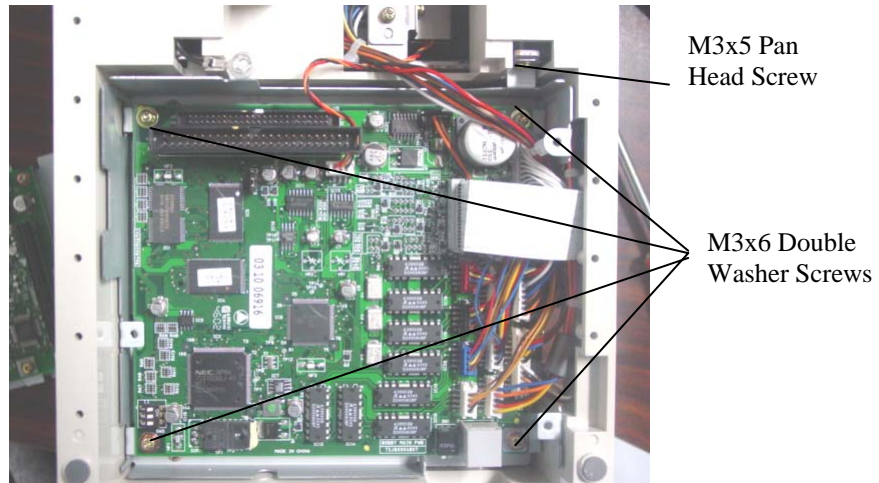

M3x5 Pan Head Screw

M3x6 Double Washer Screws

Figure 5 – Removal of screws

8. Move the Main PC board slightly to the right to clear the screw hole, lift it out of the printer from the left and place it somewhere safe. (Figure 6)
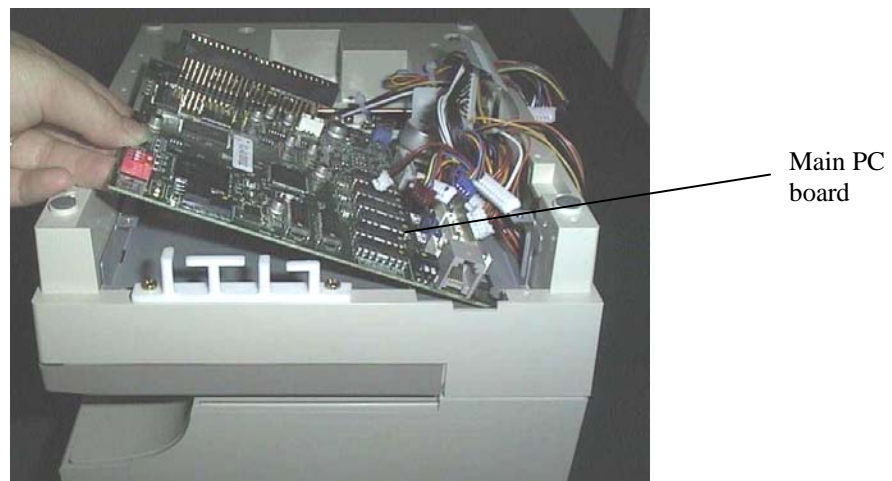

Main PC board

Figure 6 – Removal of Main PC Board

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9. Unscrew four M3x10 self-tapping screws and remove the Main PC Board Plate. (Figure 7)

M3x10 self tapping screws
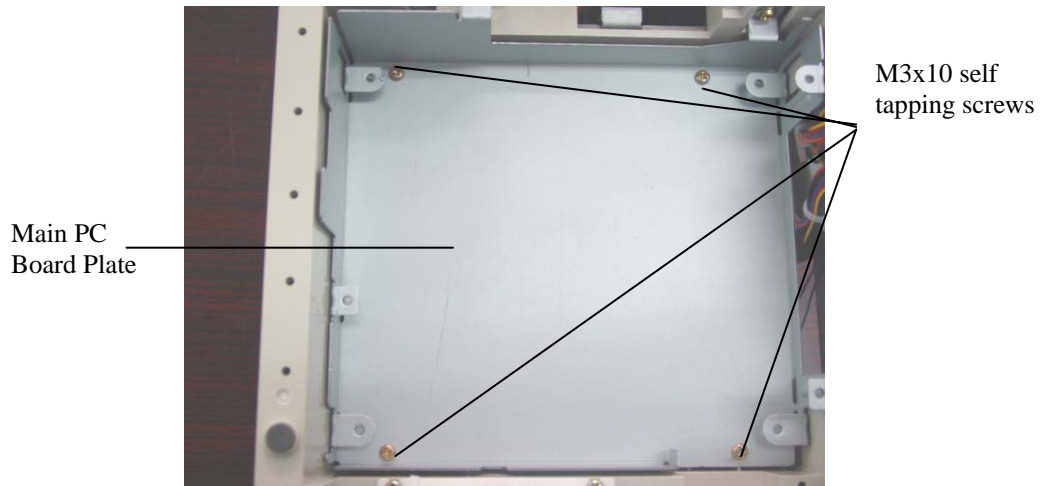
Main PC Board Plate

Figure 7 – Removal of Main PC Board Plate

Removing the Flip Mechanism

1. Orientate the printer so that it is in an upright position.

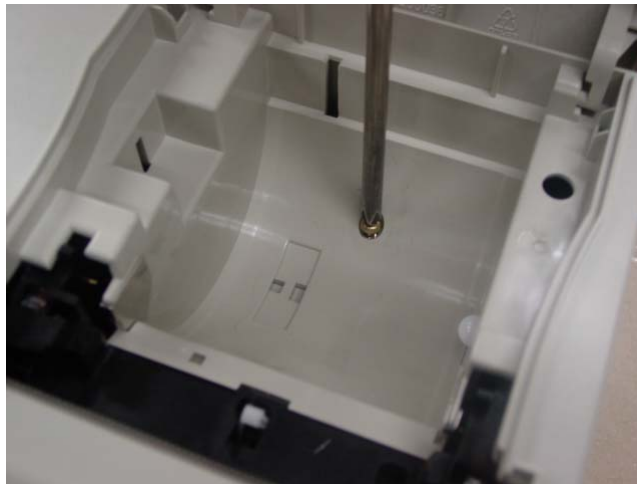2. Open Receipt Cover, unscrew M4 x 10 pan head screw and remove the Top Cover. (Figure 8)
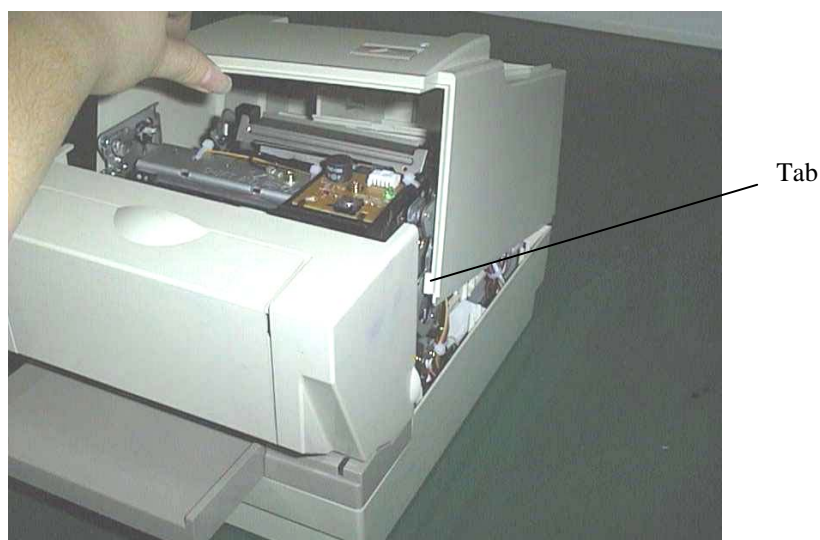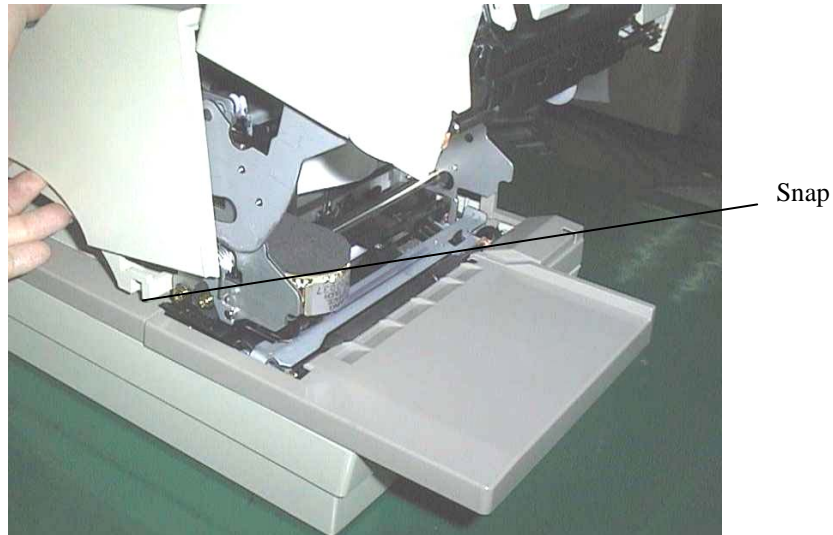

Figure 8 – Removing Top Cover

a. Use a flat blade screwdriver to push and release the latching tab holding the top cover to the right side of the LED cover.

Tab

b. Release the left snap at the base (near the slip table) on the left side of the top cover.

Snap

c. Partially close the front cover and lift off the top cover.

3.   Locate the hinge assembly by opening the slip cover. Unscrew the M3x6 double washer screw and remove the Hinge Plate (Figure 9)
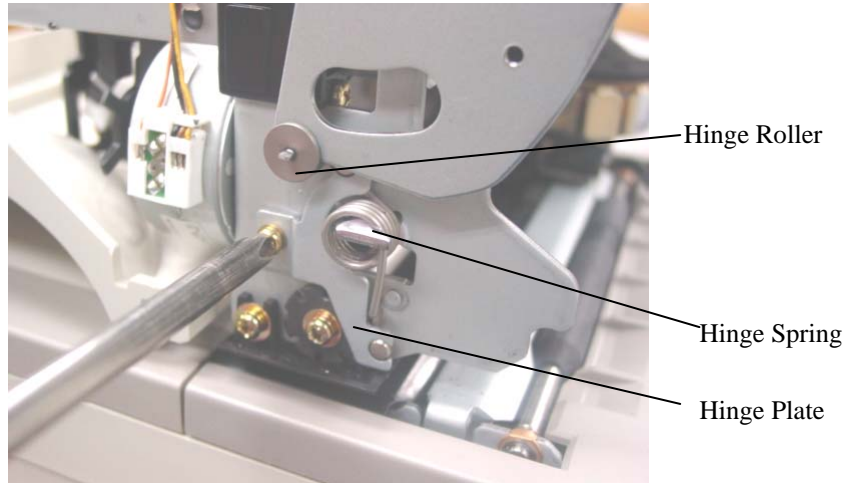

Figure 9 – Removing Hinge Plate

4.   Remove the Hinge Spring and Hinge Roller as shown (Figure 10). Note: parts can be different between 7167 models.
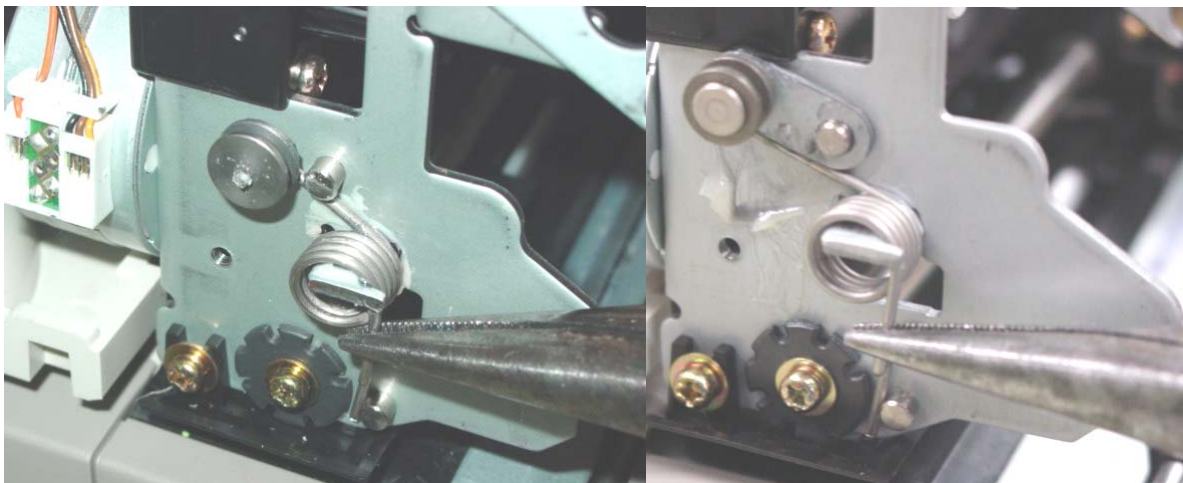

Figure 10 - Removing Hinge spring and roller

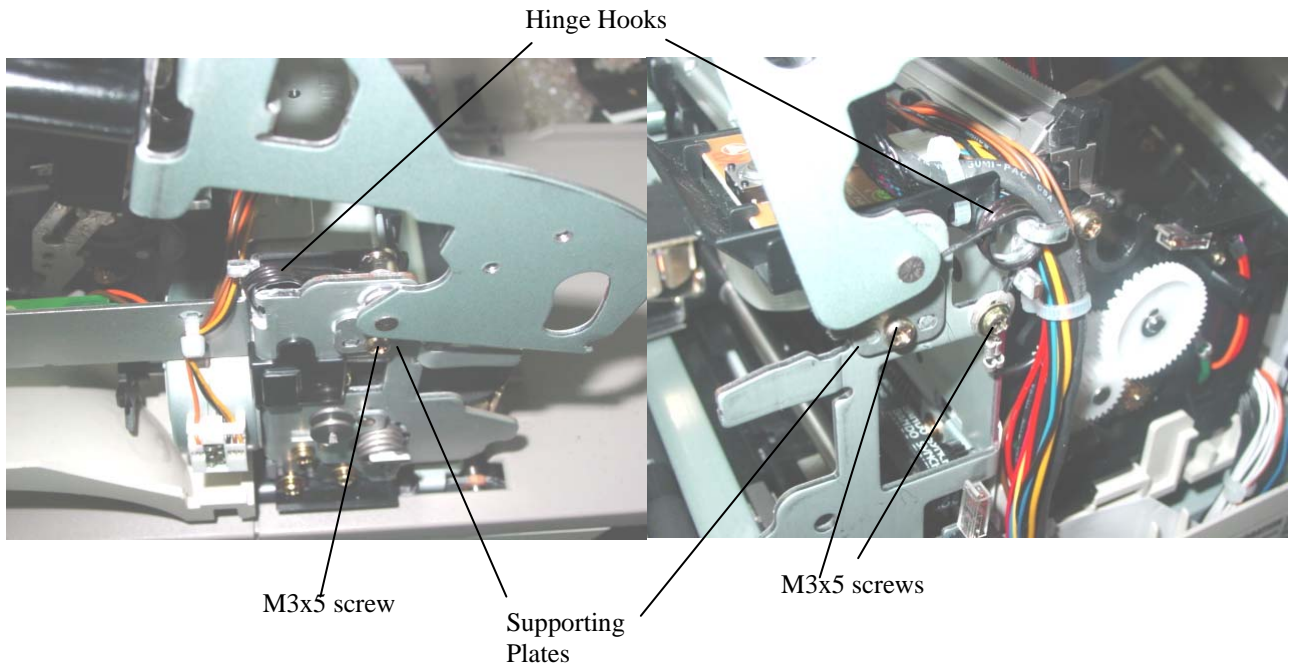5.   Unscrew three screws (M3x5 pan head screw), two hinge arm supporting plates and two hinge hooks. (Figure 11)

Hinge Hooks

M3x5 screw

Supporting Plates

M3x5 screws

Figure 11 – Removing Flip Mechanism

6.   Remove three cable ties along the harness of Flip Mechanism and unscrew the black Earth wire (Figure 12)
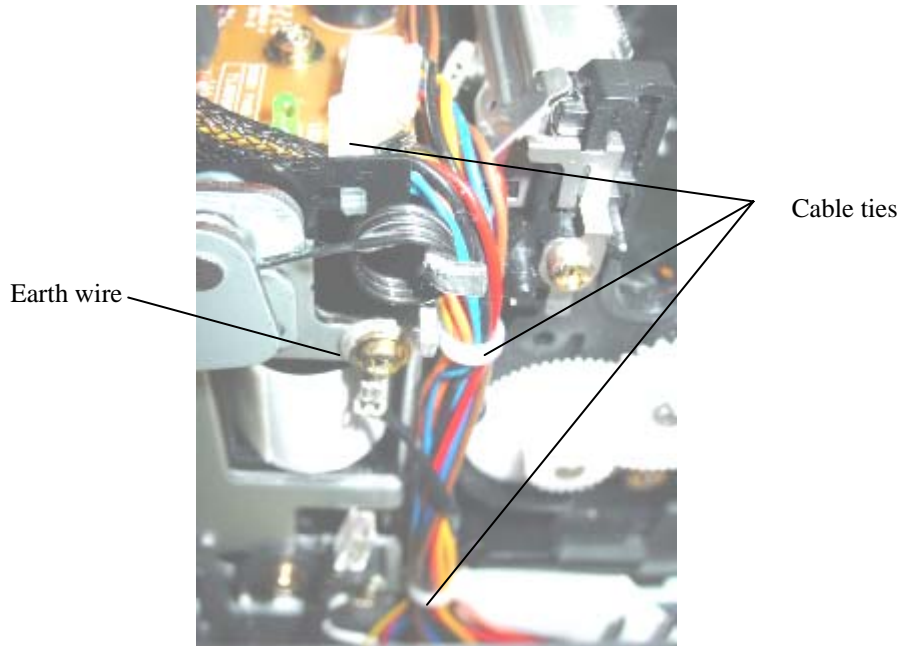
Figure 12 - Removing cable ties and earth wire

7.   Remove the Flip Mechanism together with the harness

Installing the Check Scanner Mechanism

1. Assemble the Check Scanner Mechanism (part 1) to the Slip Station Assembly, fastening the original two supporting plates with M3x5 pan head screws, and replacing the original two hinge hooks. (Figure 13)
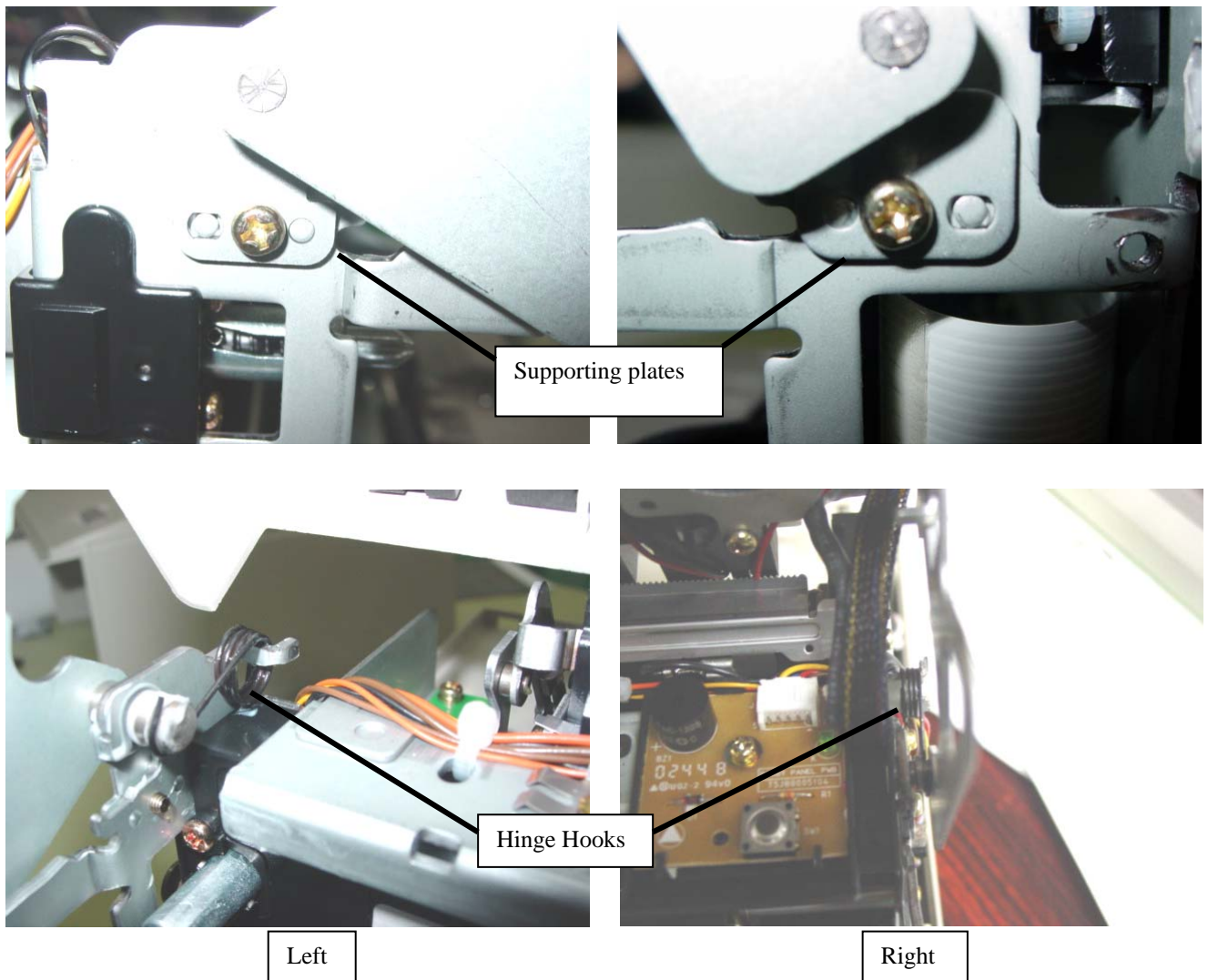
Supporting plates

Hinge Hooks

Left

Right

Figure 13 - Assembling supporting plates and hinge hooks

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2. Assemble the black earth wire, together with a grounding clip (part 7), using M3x8 double washer screw (part 8C). (Figure 14)

3. Ensure the Check Scanner Mechanism harness (Check Scanner Harness & Flip Harness) is routed properly around the front assembly to the opening for the main board and replace the three cable ties (part 2). (Figure 14)
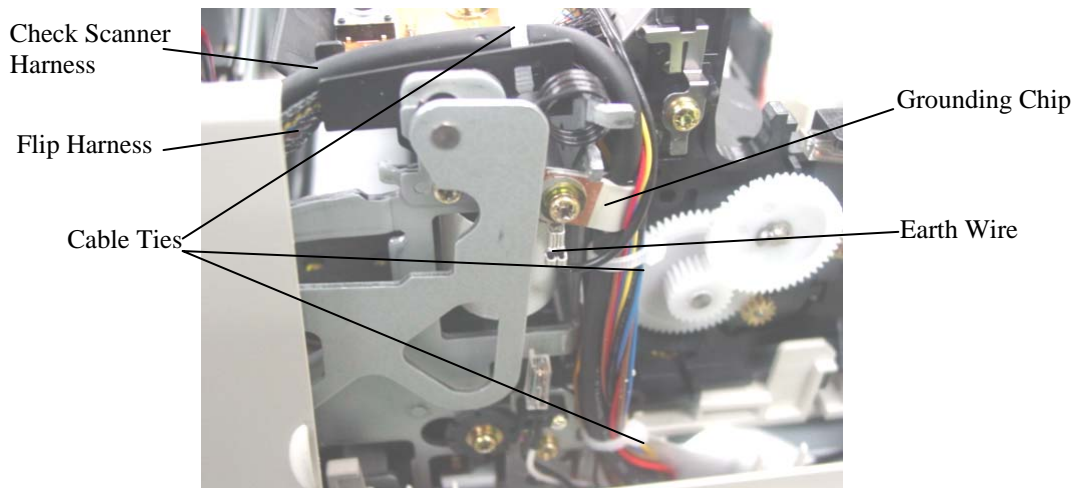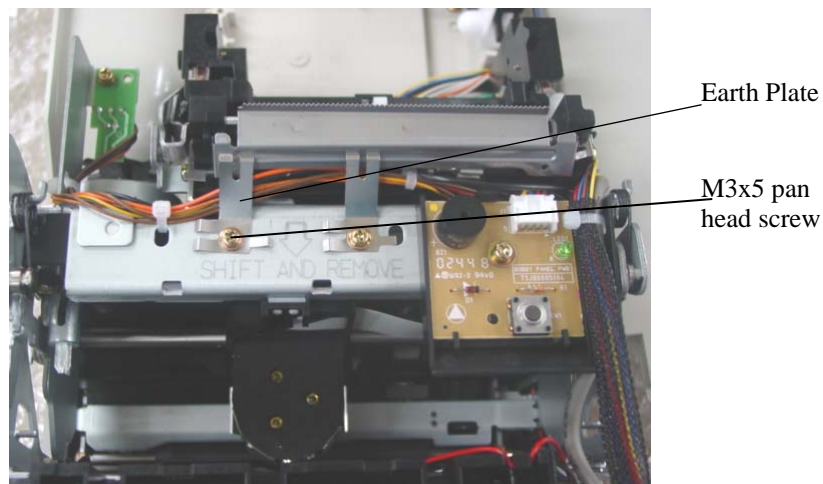

Figure 14 – Assembly of Check Scanner Harness

4. Assemble additional Earth Plate (part 6) onto the Slip Station Assembly using M3x5 pan head screw (part 8A) (Figure 15)

5.   Assemble the Hinge Roller (part 5) followed by the Hinge Spring (part 3)and tighten the Hinge Plate with M3x6 double washer screw (part 8B). (Figure 16)

6.   Apply lubricant to all moving contact areas. (Figure 16). Close the check scanner mechanism door.
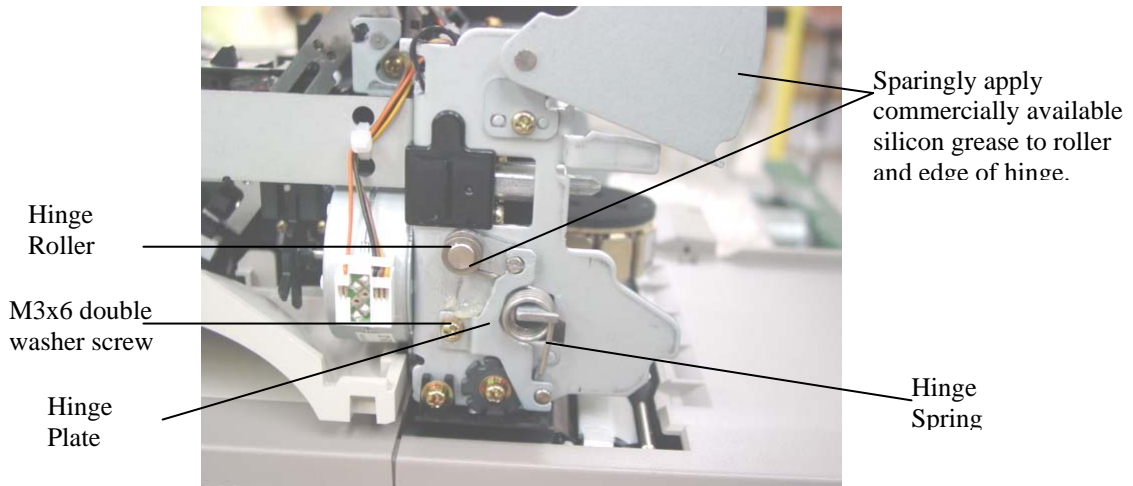

Sparingly apply commercially available silicon grease to roller and edge of hinge.

Hinge Roller

M3x6 double washer screw

Hinge Plate

Hinge Spring

Figure 16 – Assembly of Hinge Plate, spring and roller

7. Replace the Top Cover by aligning the Tab and press the Top Cover in place. (Figure 17) Fasten the Top Cover using M4X10 pan head screw. (as illustrated in Figure 8)

8. Close the Receipt Cover.
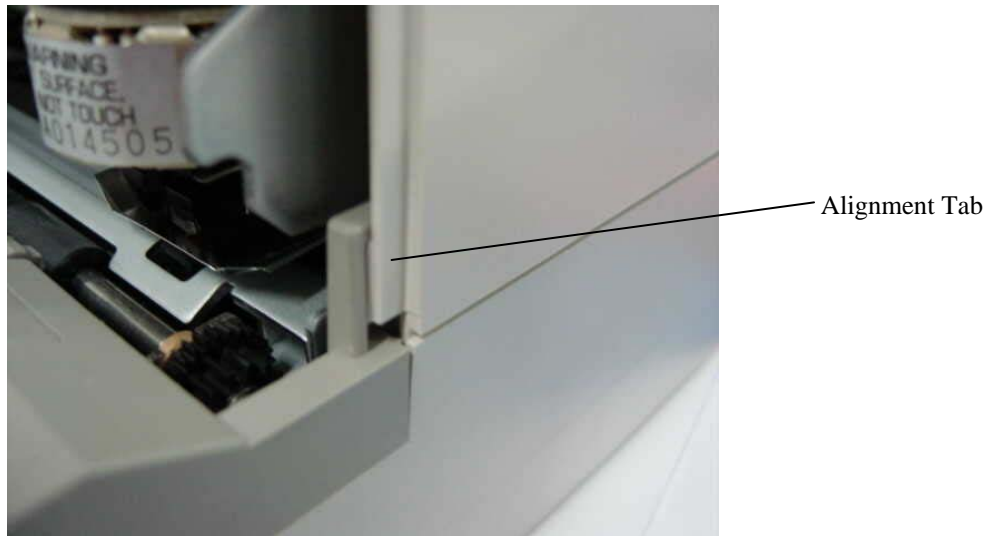

Alignment Tab

Figure 17 – Replacing the Top Cover

9. Install the slip table that is provided in the kit. To assist in replacing the slip table align the support ribs on the bottom of the slip table with the step in the base of the printer. Slide the printer to the right and snap into position.

   Note: When replacing the slip table, the platen must be in down position.

Installing the Check Scanner Sub PC Board

1. Remove the double-side tape protective layer and paste Grounding Sheet (part 11) on the bottom cover, ensuring the two holes of the Grounding Sheet are aligned with the two bosses on the bottom cover. (Figure 18)
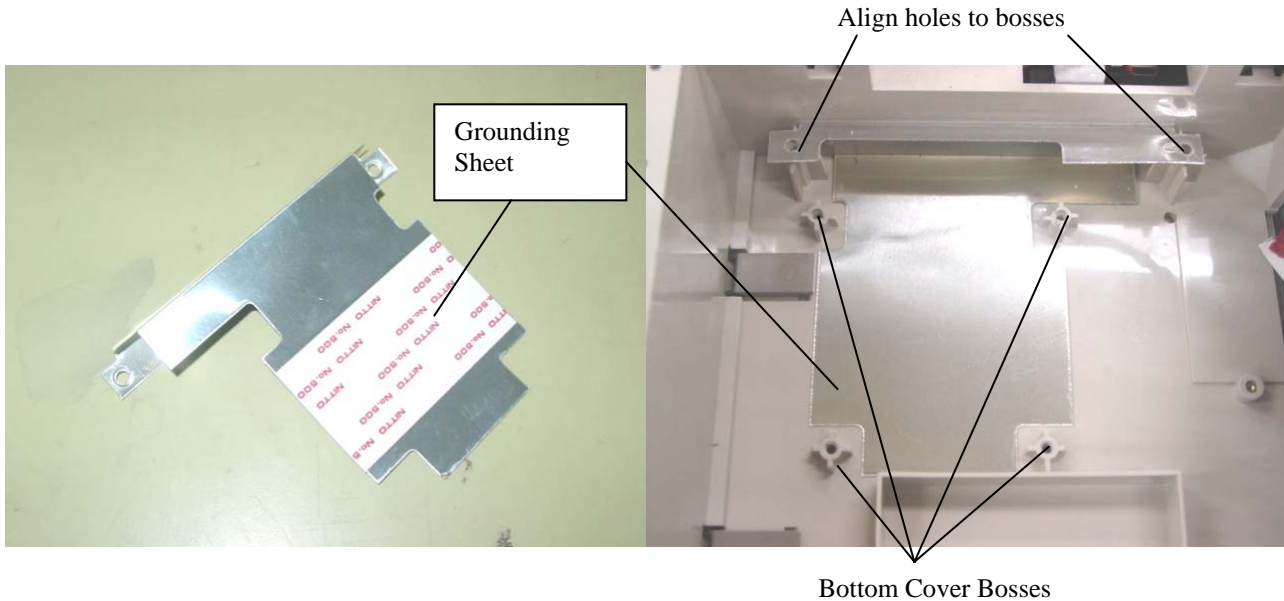

Align holes to bosses

Grounding Sheet

Bottom Cover Bosses

Figure 18 – Pasting of Grounding Sheet

2. Place Check Scanner Sub PC Board (part 10) on the four bosses of the bottom cover (Figure 18, 19)

3. Connect the Check Scanner Harness to the Check Scanner Sub PC Board (Figure 19)

4. Fasten the Check Scanner Harness earth wire, together with the green earth wire (part 12) on the bottom right hole, and one green earth wire (part 12) on the bottom left hole, using two M3x8 self tap screws (part 14B) (Figure 19)

5. Fasten the remaining two holes with two M3x6 pan head with flange screws (part 14A) (Figure 19)

M3x6 pan head with flange screw

Check Scanner Harness

Earth wires

M3x8 self tap screws
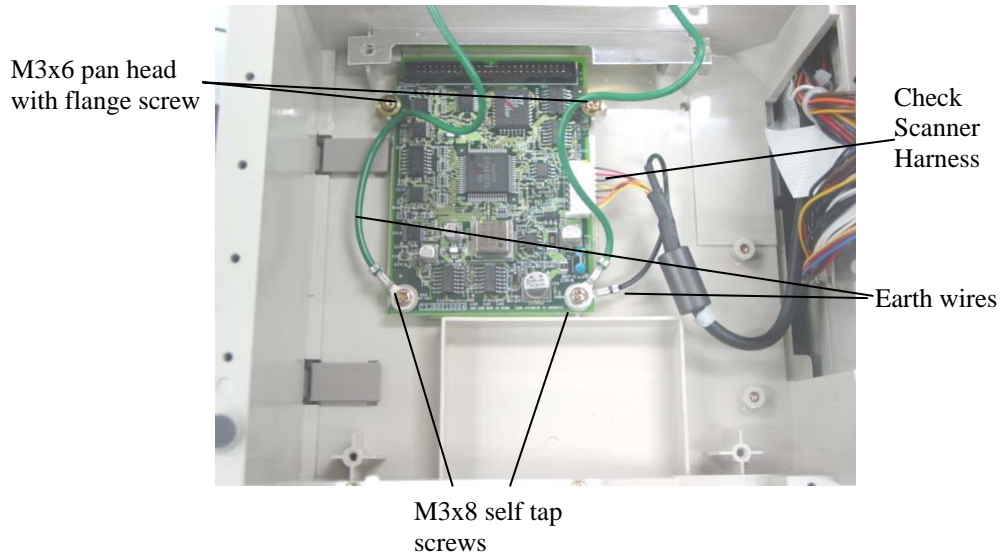
Figure 19 – Assembly of Check Scanner Sub PC Board

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Installing the Check Scanner Main PC Board

1. Assemble Check Scanner Main PC Board Plate (part 15) on the Bottom Cover using original M3x10 self tapping screw. (Figure 20)

2. Ensure the two green earth wires come out through the opening of the Check Scanner Main PC Board Plate.

3. Fasten the upper two holes of the Check Scanner Main PC Board Plate together with the two green earth wires using two M3x10 self tapping screws.

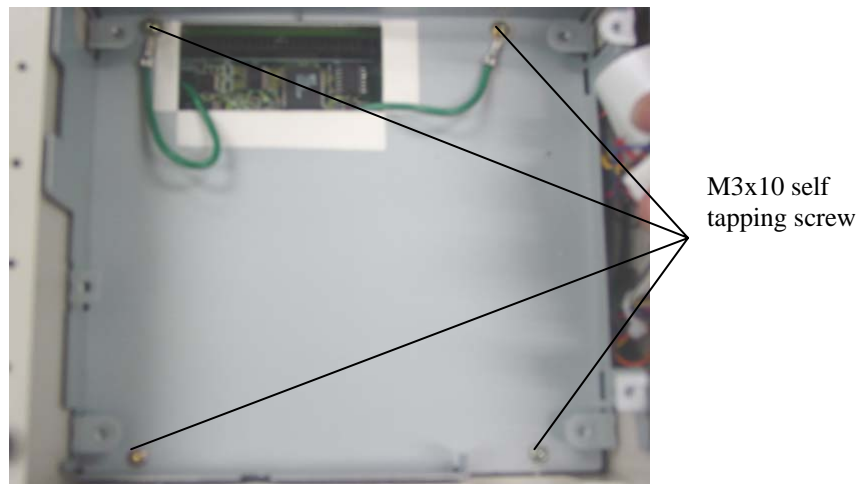4. Fasten the remaining two holes with two M3x10 self tapping screws.

M3x10 self tapping screw

Figure 20 – Assembly of Main PC Board Plate

5. Remove the bubble sheet from the ferrite core of the Flat Cable (part 13) (Figure 21)

6. Ensure mylar is pasted onto the Flat Cable

Bubble Sheet

Mylar

Figure 21 – Flat Cable

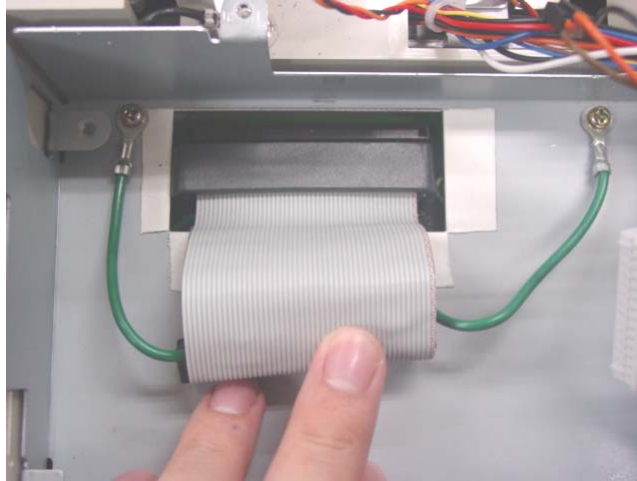7. Connect the Flat Cable to the Check Scanner Sub PC Board (Figure 22)

Figure 22 – Assembly of Flat Cable to Check Scanner Sub PC Board

8. Connect the other end of the Flat Cable to the Check Scanner Main PC Board (part 9). (Figure 23)

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Figure 23 – Assembly of Flat Cable to Check Scanner Main PC Board

9. Fasten the Check Scanner Main PC Board at the four corners with M3x8 double washer screws (part 8C) (Figure 24)

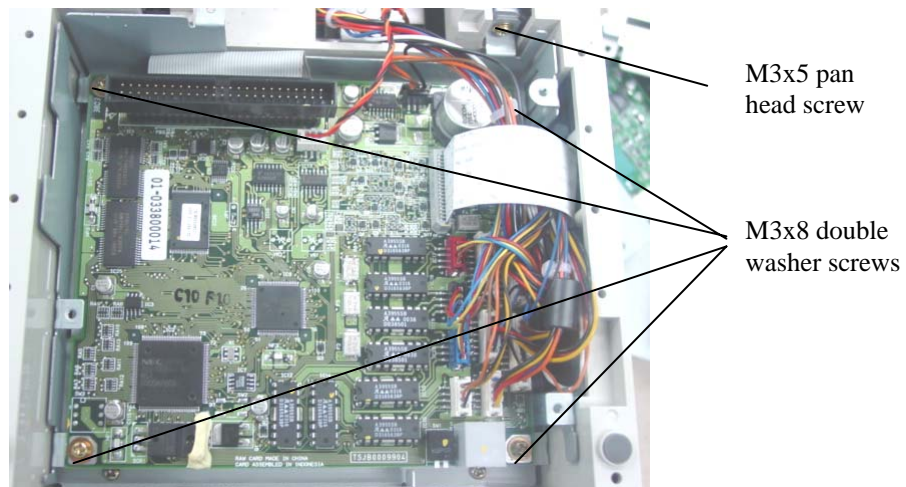10. Connect all the cables according to the instructions stated for Main PC Board (Figure 4)

M3x5 pan head screw

M3x8 double washer screws

Figure 24 – Assembly of connectors to the Check Scanner Main PC Board

11. Reassemble the Main PC Board Middle Plate with three M3x6 pan head screws. (Figure 2)

12. Reassemble the Printer Communication Board with two M3x6 pan head screws and reconnect back the communication and power cables. (Figure 1)

Performing Black/White Shading Correction

1. Turn on the host computer or plug in the power supply depending on where the printer receives power.

2. Turn the printer so that the back of the printer is facing you. (Figure 25)
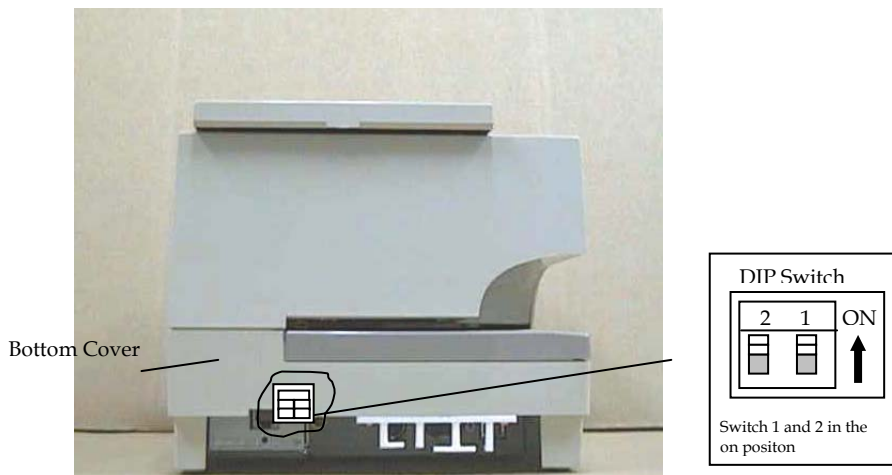
Back of Printer

Figure 25 - DIP Switch Setting

3. Set the DIP Switch to Vendor Adjustment Mode. (Figure 25)

4. Reset the printer by disconnecting/reconnecting the DC power or by opening the Slip door and closing the slip door while holding the receipt paper feed button down.

5. Choose "B&W Shading Correction" by pressing the receipt paper feed button 8 times followed by holding down the receipt paper feed button until a "beep" sound is heard.

_____

6. Open Flip Cover and cover the flip mechanism using a 110 x 130mm 60 gsm copier paper and close the Flip Cover. (Figure 26)

Figure 26 - Performing B&W Shading Correction

7. Press and hold the receipt paper feed button until a "beep" sound is heard.

8. Shading correction is completed when the "Adjustment Menu" is printed

9. Remove the 110 x 130mm 60 gsm copier paper.

10. Reset the printer.

11. Printer is ready to use.