CHAPTER 3: MAIN DRIVE SECTION

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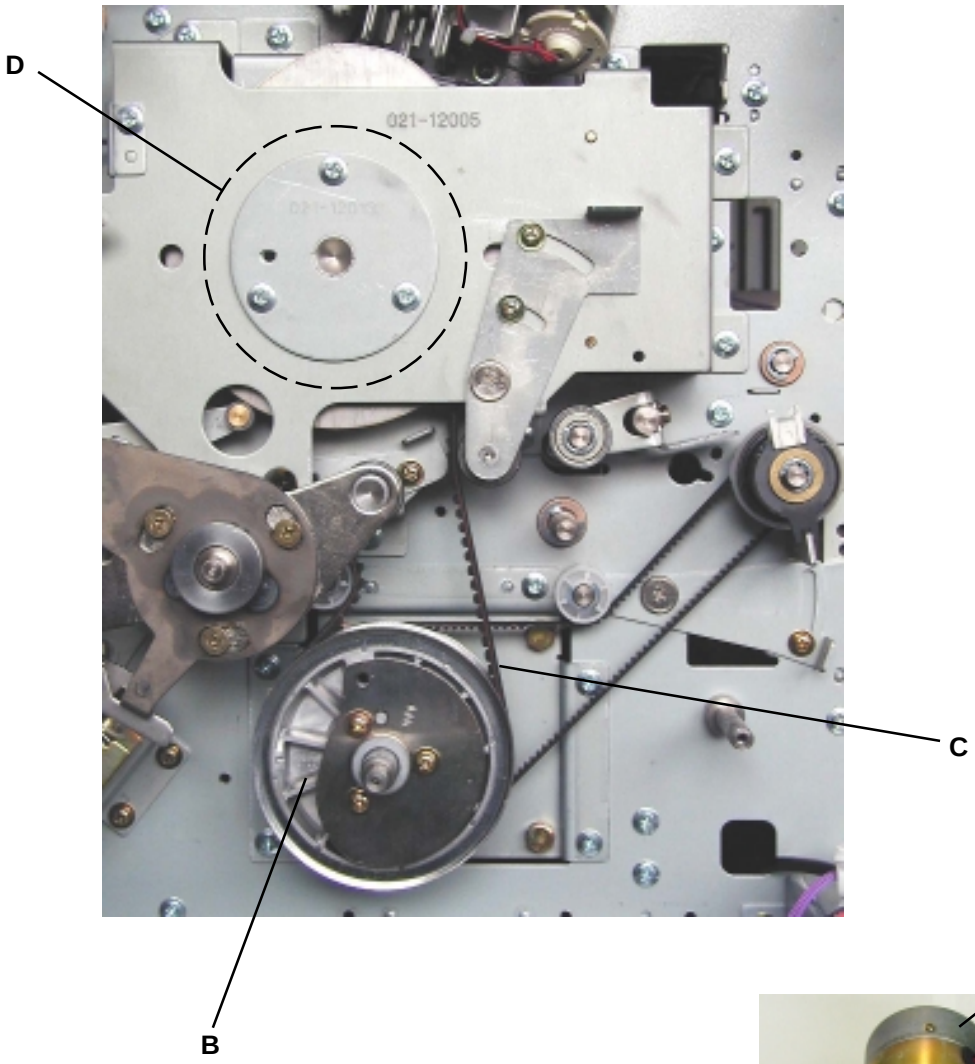
1. Print Drum Position-A Adjustment 3-10

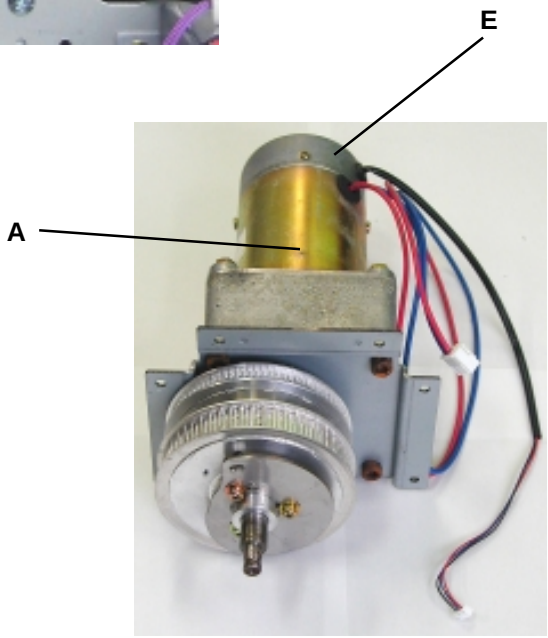
Mechanism

1. Main Drive Section

When the Main motor [A] is turned on, the Main pulley [B] rotates and the rotation is transmitted to the Print drum pulley [D] via the Main belt [C].

The Main motor encoder sensor [E] detects the speed and position of the main motor [A].

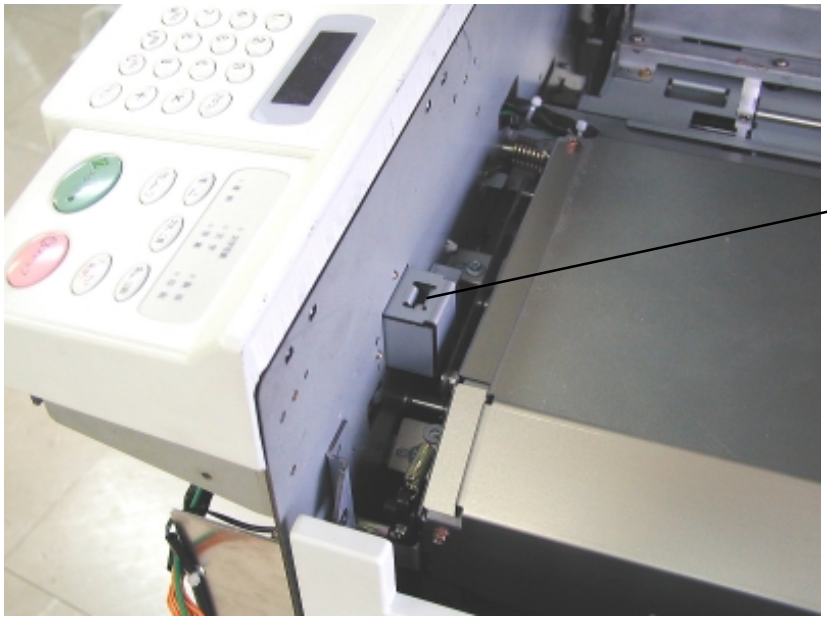


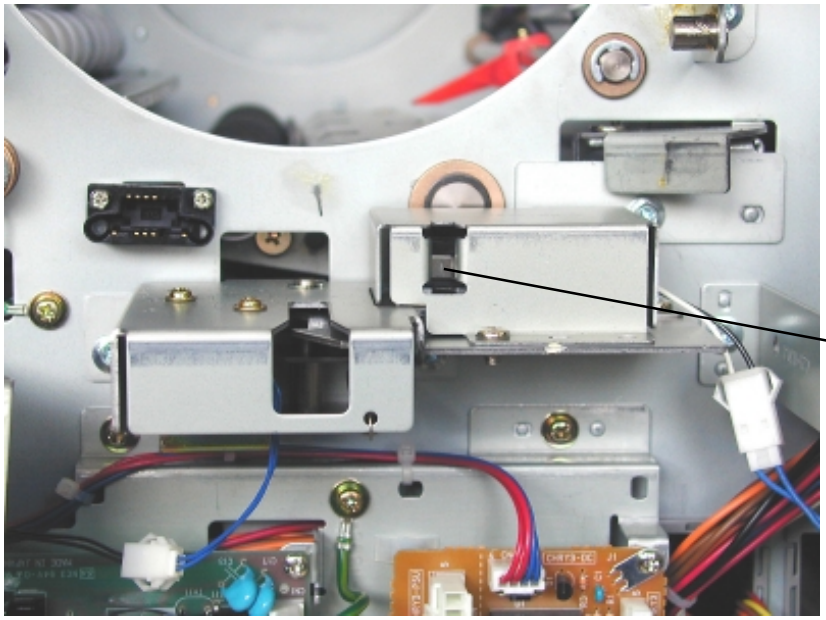


A: Main motor
B: Main pulley
C: Main belt
D: Print drum pulley
E: Main motor encoder sensor

2. Main Motor Safety Mechanism

Two safety switches (Flat bed set switch [A] and Print drum safety switch [B]) prevent the motor from being turned on if parts are not positioned.





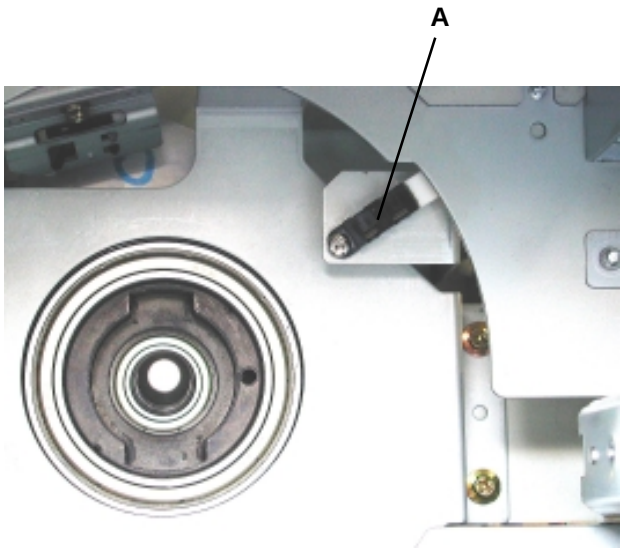
A: Flat bed set switch

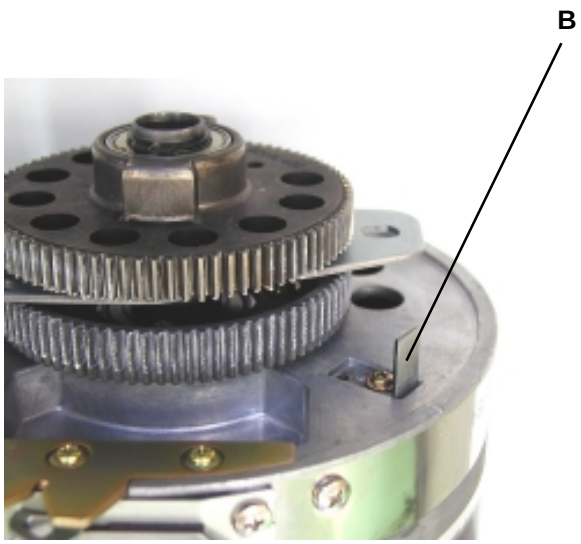
B: Print drum safety switch

3. Print Drum Position Check Mechanism

The print drum's rotation position is detected by the Main motor encoder sensor referenced to the position A detected by the Position A sensor [A] on the machine and Position A detection plate [B] on the print drum.

The encoder counts 2933 pulses for each revolution of the print drum.





A: Position A sensor
B: Position A detection plate

[Memo]

Removal and Assembly

1. Removing the Main Motor Unit

(1) Position the print drum at position A, turn off the power, and then remove the following covers and components.

- Front door
- Front cover
- Rear cover
- Controller
- Main PCB
- Print positioning unit

(2) Reduce the tension on the Paper feed timing belt [A].

- Loosen the retaining screws on the Idler A ass'y [B].

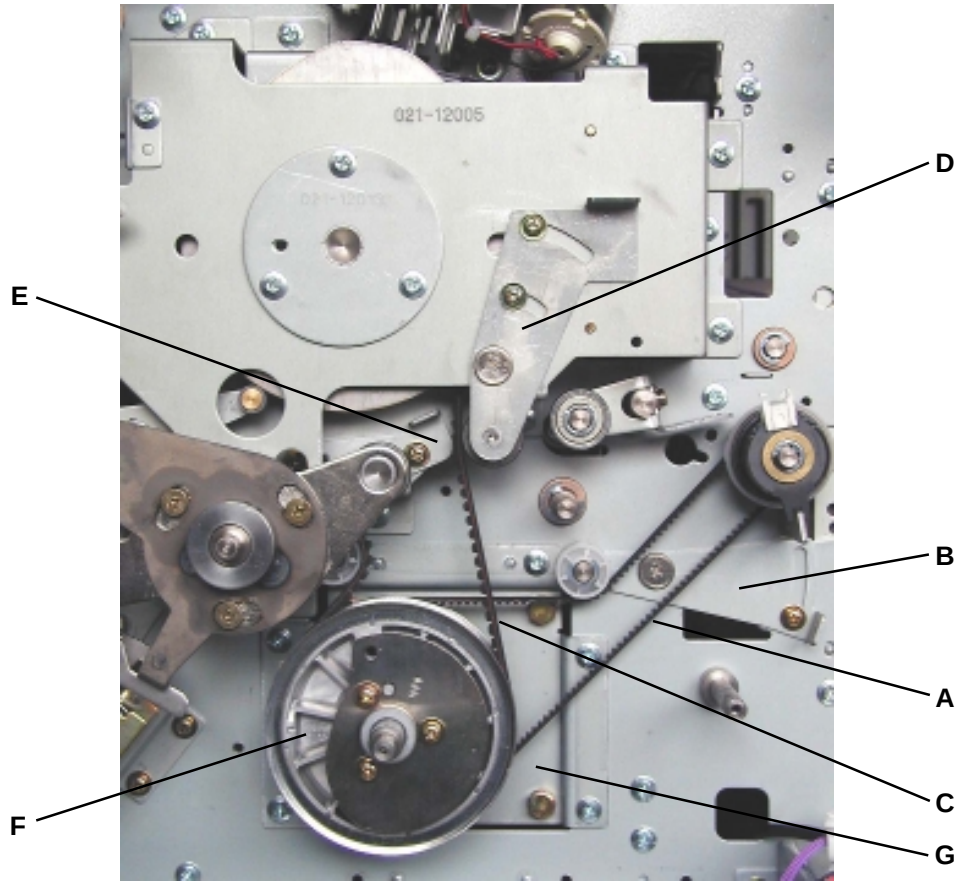
(3) Reduce the tension on the Main belt [C].

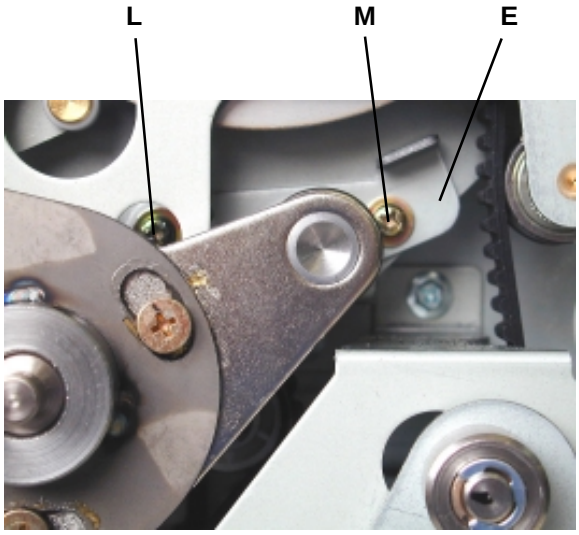
- Loosen the retaining screws on the Idler B ass'y [D].
- Loosen the retaining screw [L] on the Idler C ass'y [E], and then remove the mounting screw [M].

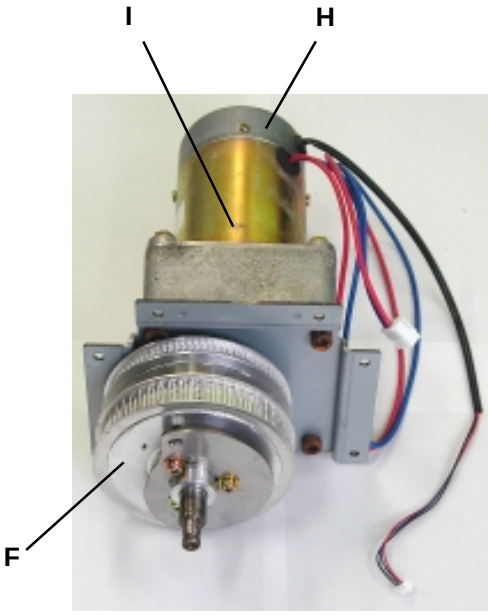
  * Do not remove the retaining screw [L] on the Idler C ass'y [E].

(4) Remove the Paper feed timing belt [A] and Main belt [C] from the Main pulley [F].

(5) Unplug one wire harness connector from slot No. CN403 of the Drive PCB, and another wire harness connector at the rear of the machine, close to the Print positioning unit. Then remove the mounting screws (M4 x 8: 6 pcs), and remove the Main motor unit [G].



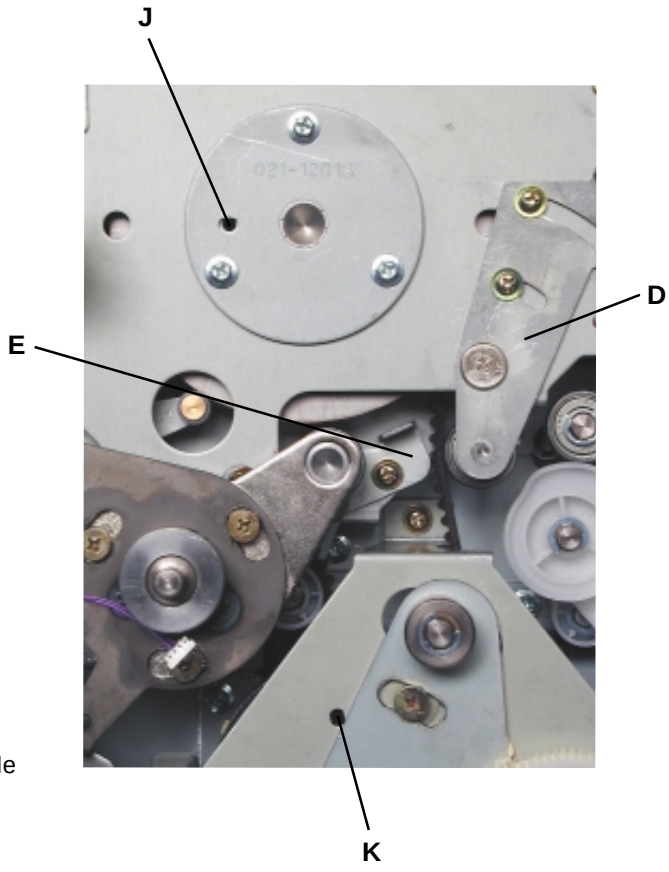




Main motor unit

[Precautions on Reassembly]

- Tension the main belt by aligning the position-A alignment hole [J] on the print drum with the main-pulley position-A alignment hole [K] and then turning the Idler C ass'y [E] counter-clockwise to apply tension on the Main belt [C] and lock its position. Apply further tension on the Main belt [C] by turning the Idler B ass'y [D] clockwise.



A: Paper feed timing belt
B: Idler A ass'y
C: Main belt
D: Idler B ass'y
E: Idler C ass'y
F: Main pulley
G: Main motor unit
H: Main motor encoder sensor
I: Main motor
J: Print drum pulley "position-A" alignment hole
K: Main-pulley position-A alignment hole
L: Idler C ass'y retaining screw
M: Idler C ass'y mounting screw

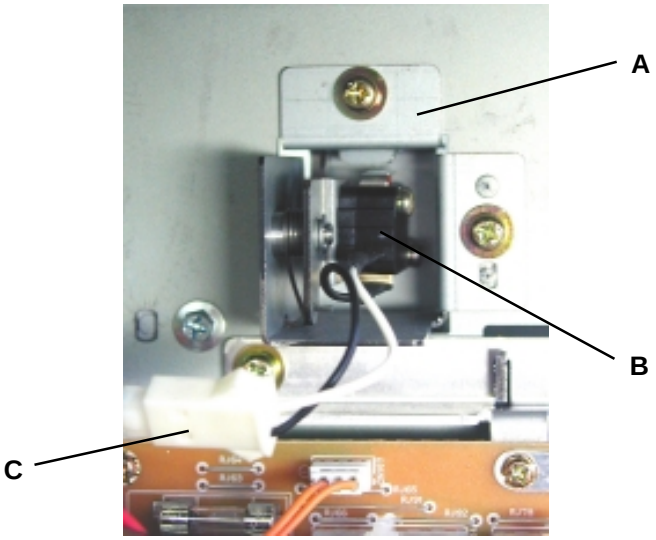
2. Removing the Flat Bed Set Switch

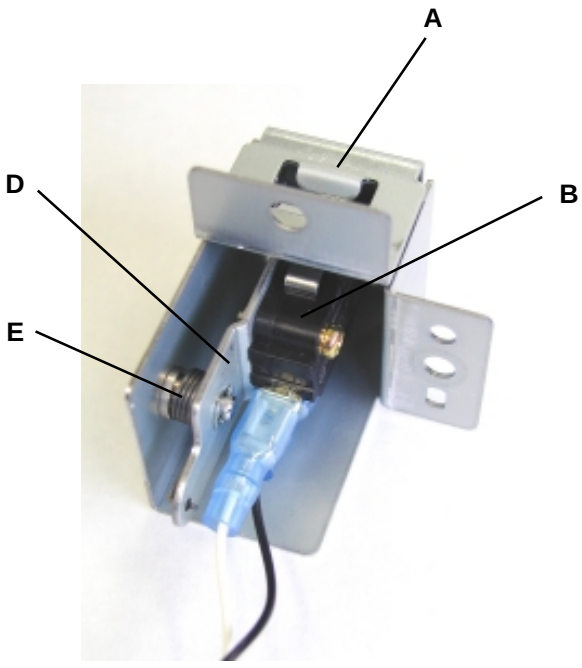
(1) Pull out the print drum and remove the covers.
- Front door
- Front cover

(2) Unplug the connector [C], remove the mounting screws (M4 x 6: 2 pcs), and then remove the entire Flat bed set switch cover [A].

(3) Remove the E-ring, remove the Torsion spring [E], and then remove the Flat bed set switch [B] together with the sensor bracket [D].

(4) Remove the mounting screws (M3 x 14: 2 pcs) and remove the Flat bed set switch [B].





A: Flat bed set switch cover
B: Flat bed set switch
C: Connector
D: Sensor bracket
E: Torsion spring

3. Removing the Print Drum Safety Switch

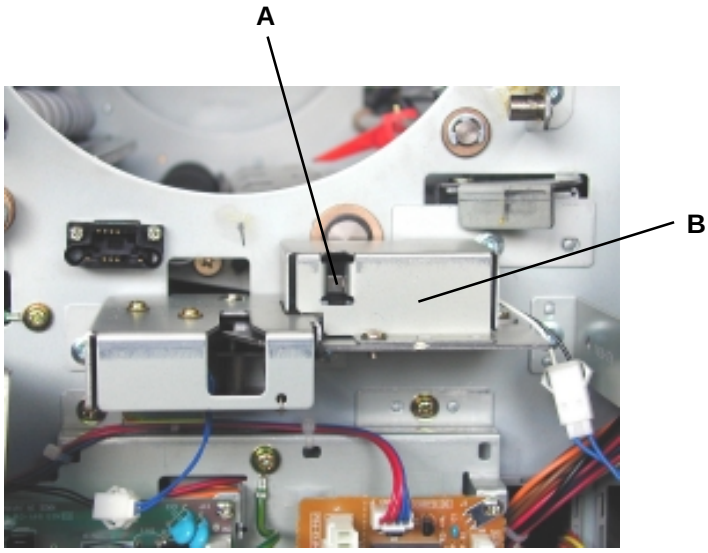
(1) Pull out the print drum.

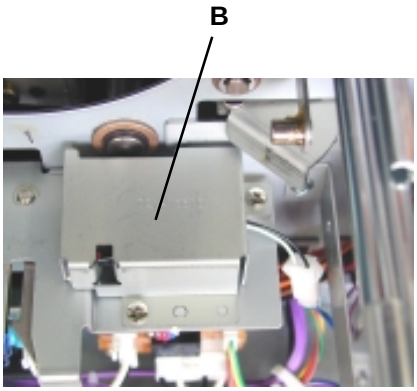
(2) Remove the covers.

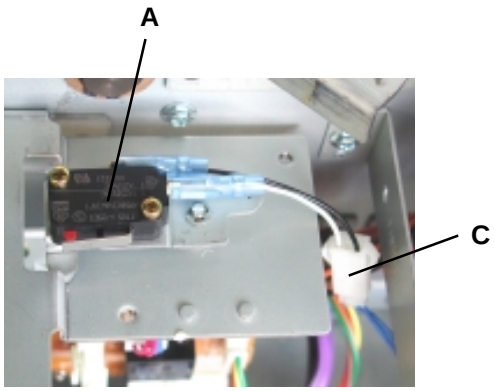
- Front door
- Front cover

(3) Remove the Print drum safety switch cover [B]. (M4 x 6: 2 pcs)

(4) Unplug the Connector [C], remove the mounting screws (M3 x 14: 2 pcs), and then remove the Print drum safety switch [A].







A: Print drum safety switch
B: Print drum safety switch cover
C: Connector

Adjustment

1. Print Drum Position-A Adjustment

Checking and adjustment procedure

(1) Pull out the print drum and return it back after removing the master attached to it.

(2) Open the Scanner table.

(3) Start the test mode, and run test mode No. 551 (set drum to position-A).

(4) Open the Master disposal gate housing, press down the Clamp open arm plate by hand, and check that it slots smoothly into the groove in the position-A Compensator plate without the print drum moving.

(5) If it does not slot smoothly into the position-A Compensator plate or if the print drum moves, run test mode No. 581 (position-A adjustment) to adjust position-A for the print drum. (On the setting procedure, refer to Chapter 16: Test Mode.)

(6) Repeat from step (3) until correct print drum position-A is achieved.