When executing maintenance mode U410 (Adjusting the halftone automatically), error code S004 (Original skew is in excess) might appear and the adjustment cannot be done correctly.

[Cause]
Printing output image is skewed (misaligned) when executing maintenance mode U410.

[Measure]
Check and adjust in the following order. If error code S004 disappears with each adjustment, the adjustment is completed.

a) Check and reset the cassette cursor position if paper is fed in skew.
b) Adjust the angle of the LSU (In case of performing b), it is necessary to check the misalignment of the sub scanning direction.
c) Check and adjust the position of the original.
d) Adjust the height of the ISU.

■ The method to check and measure
Measure the dimension of A and B, and check if the dimension difference is 1.0mm or more.

Rear side of the machine A*  Front side of the machine B*

* Measure at the center of the black square

a) Check and reset the cassette cursor position if paper is fed in skew.

■ Execute maintenance mode U410 (Adjusting the halftone automatically) and if error code S004 does not appear, the adjustment is completed. If not, go to the next step.
b) Adjust the angle of the LSU

- Remove the left rear cover, the left upper cover and the left lower cover.

  b.1: Remove 2 screws (a) (M3×8).
  b.2: Release 2 positions of hook (c) and remove the left rear cover (b) in the arrow direction.

b.3: Open the front cover.
b.4: Remove 2 screws (a) (M4×8).
b.5: Insert the flathead screwdriver (c) in the opening section (b) at the front side and widen it in the arrow direction to release 4 positions of hook (d), and remove the left upper cover (e).

Caution when attaching
When attaching the left upper cover (e), hang 4 positions of hook (f) first and then, hang the upper side hook (d) to install.

b.6: Pull out the lower cassette
b.7: Remove 4 screws (a) (M3×8)
b.8: Release 4 positions of hook (c) by lifting it up and remove the left lower cover (b)
b.9: Loosen 2 screws.
b.10: Shift the adjustment lever (blue circle mark) to the left side and fix with the screw
b.11: Output the PG by maintenance mode U034: Paper timing data adjustment and check the skew image
  (* Adjust the alignment within 0.5mm) (Slant line changes in the arrow direction below)
  * Estimated adjustment amount: Shift 3mm and change it about 2mm)

Execute maintenance mode U410 (Adjusting the halftone automatically) and if error code S004 does not appear, it is completed. Perform the adjustment described in the page 5 in order to check the misalignment of the CMY sub scan direction

If error code S004 does not disappear, go to the next step.
Service Bulletin

[Service information]

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C) Check and adjust the position of the original

c.1: Check if there is any gap at the position in the figure of the contact glass below (Position of the DP slit glass). Check the gap between the DP slit glass and its left cover.

![Front side of the machine](image1)

![Back side of the machine](image2)

Front side of the machine  
Back side of the machine

c.2: If there is a gap, remove the cover at right side of the contact glass and shift the contact glass to the left side, and then, reattach it without any gap. (Top/bottom direction: shift to the top side)

- Execute maintenance mode U410 (Adjusting the halftone automatically) and if error code S004 does not appear, it is completed. Perform the adjustment described in the page 5 in order to check the misalignment of the CMY in the sub scanning direction.
- If error code S004 does not disappear, go to the next step.

d) Adjust the height of the ISU

d.1: Remove 2 screws (a) (M3×8)
d.2: Remove the front side rib (c) and detach the right cover (b) in the arrow direction.

![ISU adjustment plate](image3)

d.3: Remove the screw (e) fixing the ISU adjustment plate (d).
d.4: Shift the ISU adjustment plate (d) in the adjustment direction.

* Estimated shifting amount: If lower it by one step, A/C side changes +0.26mm, B/D side changes -0.2mm

- If A/C side is lower (Output image pattern W)  
  ➔ Shift the ISU adjustment plate (d) in the arrow X direction to lower it.
- If B/D side is lower (Output image pattern X)  
  ➔ Shift the ISU adjustment plate (d) in the arrow Y direction to lower it.

After the adjustment, fasten the screw (e).

d 5: Attach the right upper cover (b) in the main unit and fix with 2 screws (a)

- Execute maintenance mode U410 (Adjusting the halftone automatically) and if error code S004 does not appear, it is completed. Perform the adjustment described in the page 5 in order to check the misalignment of the CMY in the sub scanning direction.
Adjustment after the LSU angle adjustment
There is the possibility of misalignment of the sub scanning direction on C,M,Y, therefore, adjust as follows.

<Color skew adjustment>
(1) Execute maintenance mode U469: Initial Set 1st Transfer Unit
(2) Select [Manual].
(3) Select [Print].
(4) Press [Start] key and output the chart for the manual adjustment.
(5) If the difference between the each color V-1 and V-5 (matched scale position) is more than 2 scales or more, adjust as follows.

- Open the front cover slightly and open the front cover for maintenance.
- Using hex wrench (5mm) (b) to rotate the Hexagon hole (a).
- Direction of rotation
  (Matched scale of V-1 - matched scale of V-5) ≥ 2 if it is 2 scales (Sample 1): Counterclockwise
  (Matched scale of V-1 - matched scale of V-5) ≥ -2 if it is -2 scales (Sample 2): Clockwise
- No. of rotation
  (Matched scale of V-1 - matched scale of V-5) x 4 clicks
(6) Close the front cover for maintenance and the front cover
(7) Output the chart for the adjustment and check it is within the range.
(8) Press [Stop] key.
* If the leading edge timing at the engine side and the center of the image is also misaligned, adjust them with maintenance mode U034 if necessary.

<Color registration adjustment> Auto
(1) Execute maintenance mode U469: Initial Set 1st Transfer Unit
(2) Select [Auto].
  * Output the chart for the auto adjustment.
(3) Select [Execute].
(4) Set the chart on the table and press [Start] key.
  * Auto adjustment will be done.
  After the adjustment is done correctly, display [OK].