
APPENDIX (FOR MODEL AP-C1)

1. SCANNER ACCESSIBILITY OPTION TYPE 4045 (B838)

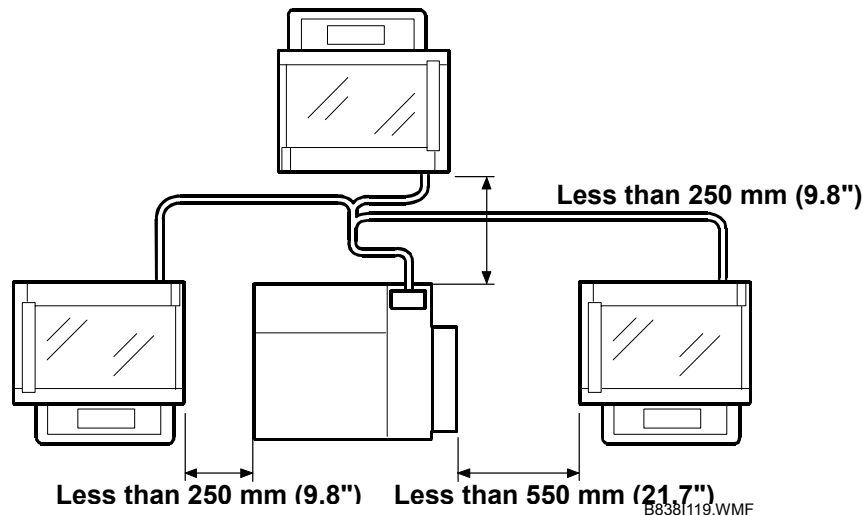
1.1 INSTALLATION REQUIREMENTS

General Requirements

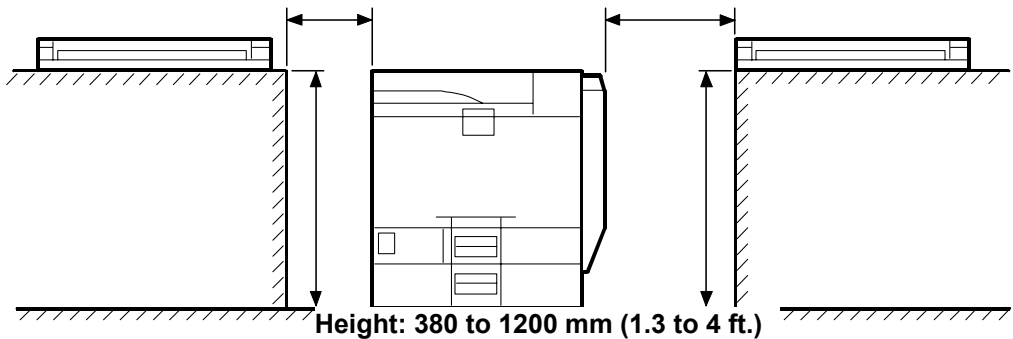
- Install the scanner on a solid base.
- Do not install the scanner in areas where the unit can fall down when the ADF cover is opened.
- Make sure you install the unit in area that allows easy access for operation.
- Ask the customer about their requirements before you install the unit.

Specific Requirements

- The scanner cable should not touch the floor.
- The cables should not hang free where they can become entangled with other equipment or furniture such as a wheelchair.
- The unit should be positioned within 380 to 1220 mm (1.3 to 4 ft.) above the floor.



- The scanner should be positioned as follows:



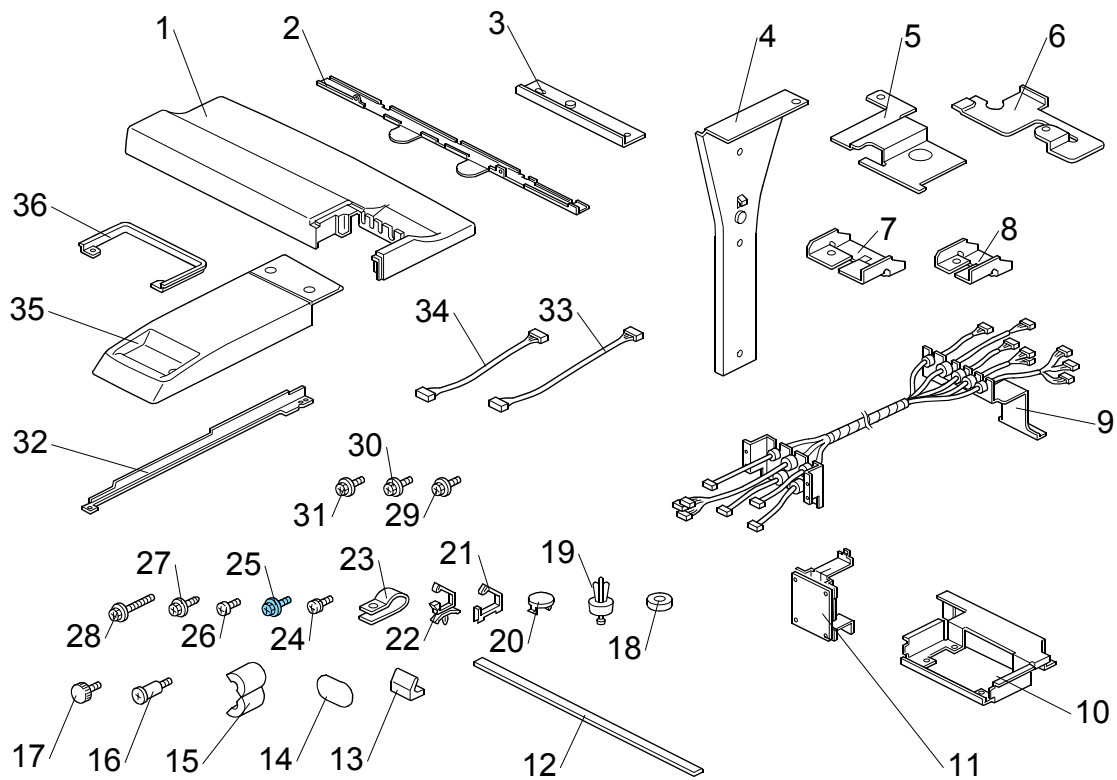
Within 250 mm (9.8") from the left and rear side of the main unit

Within 550 mm (21.7") from the right side of the main unit

1.2 ACCESSARY CHECK

Check the accessories and their quantities against the following list.

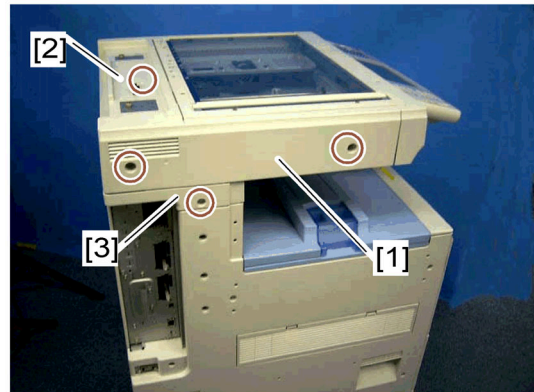
No.	Description	O'ty
1	Top Rear Cover	1
2	Rear Bracket	1
3	Key Counter Bracket (only for installing key counter)	1
4	Left Scanner Stay	1
5	Right Bottom Plate	1
6	Left Bottom Plate	1
7	Left Stopper	1
8	Right Stopper	1
9	Cable Bracket Unit	1
10	Operation Panel Interface Board	1
11	MB Interface Board	1
12	Gasket - Scanner Frame	1
13	Gasket - Scanner Lens	1
14	Seal - Bottom	1
15	Ferrite Core	17
16	Shoulder Screw (only for installing key counter)	1
17	Adjuster	2
18	Spacer	2
19	Rubber Leg	3
20	Cap	3
21	Saddle Clamp	1
22	Clamp	1
23	Plate Clamp	4
24	Screw-Round: M4x8	2
25	Screw-Tapping: M3x8 (blue)	7
26	Screw-Round: M3x6	4
27	Screw 2-Tapping: M3x8	4
28	Screw-Tapping: M4x16	4
29	Screw-Tapping: M4x8	4
30	Screw-Tapping: M3x6	5
31	Screw-Tapping: M3x8	6
32	Left Bracket	1
33	Harness - MB	1
34	Harness - Operation Panel Board	1
35	Top Right Cover	1
36	Cable Bracket Cover	1



B838I501.WMF

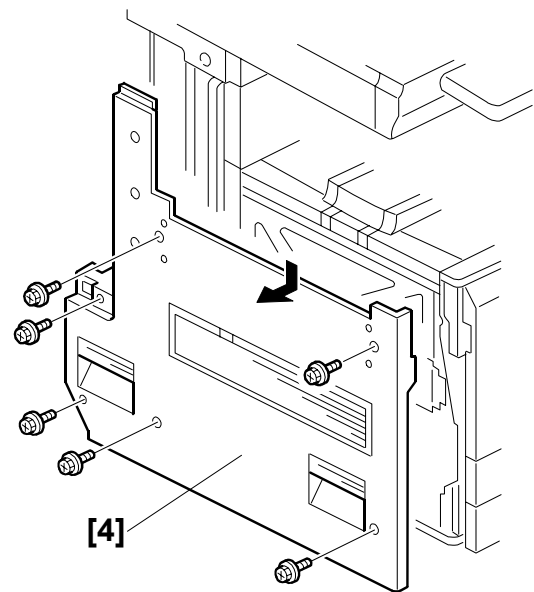
Step 1: Removal Procedure for Covers

1. Scanner left cover [1] (⚙ x 2)
2. Slide the scanner rear cover [2] to the left side, and then remove it (⚙ x 1, hook x 2).
3. Left rear cover [3] (⚙ x 1)



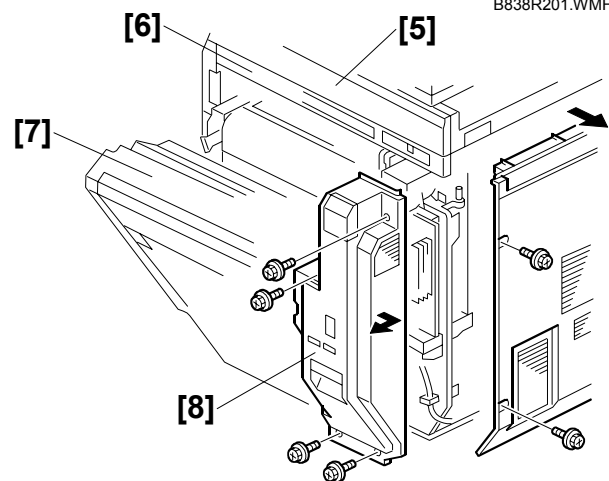
B838R517.PNG

4. Left cover [4] (⚙ x 6)



B838R201.WMF

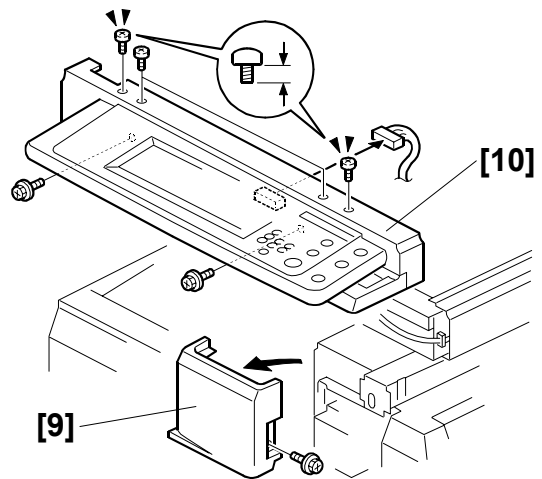
5. Scanner right cover [5] (⚙ x 2)
6. Right top cover [6] (⚙ x 1)
7. Open the right door [7].
8. Right rear cover [8] (⚙ x 4)



B222R305.WMF

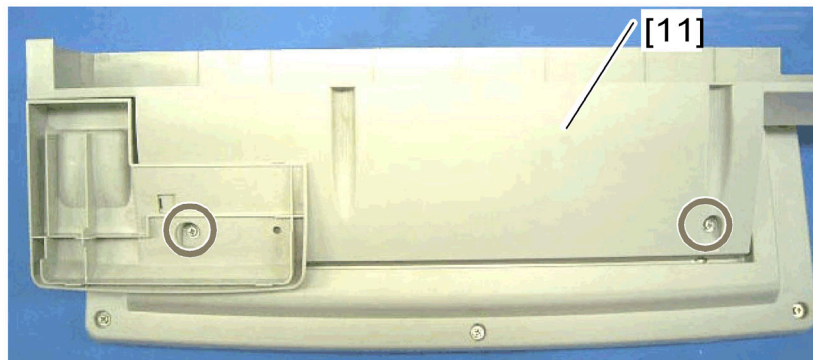
9. Front right cover **[9]** (⚙ x 1)

10. Operation panel with the scanner front cover **[10]** (⚙ x 6; M3x3 bind screw x 2, M3x5 bind screw x 2 on the top of the scanner front cover, M3x8 tapping screw x 2 on the bottom of the scanner front cover)



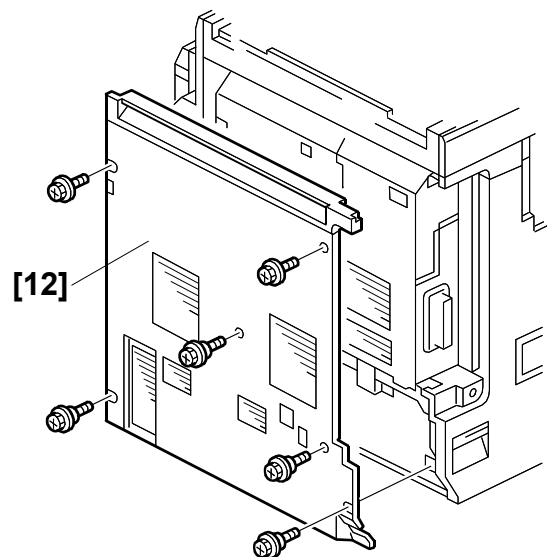
B222R157.WMF

11. Scanner front cover **[11]** (⚙ x 2)



B838R514.PNG

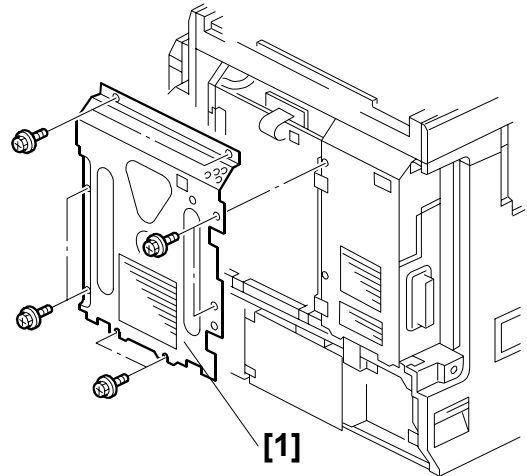
12. Rear cover **[12]** (⚙ x 6)



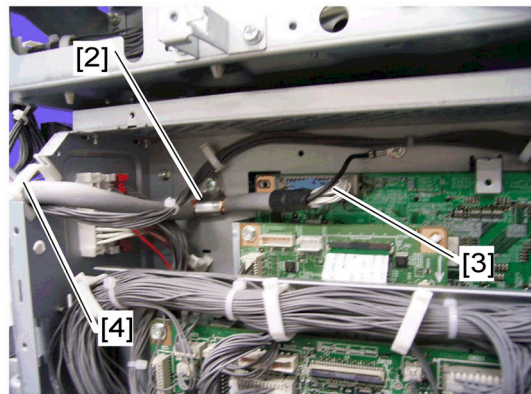
B838R102B.WMF

Step 2: Removal Procedure for Scanner Unit

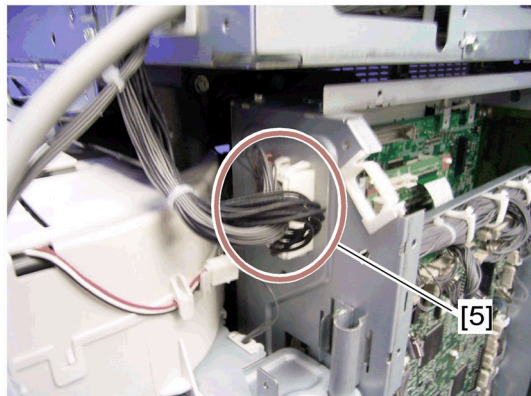
1. Controller box right cover **[1]** (⌀ x 8)



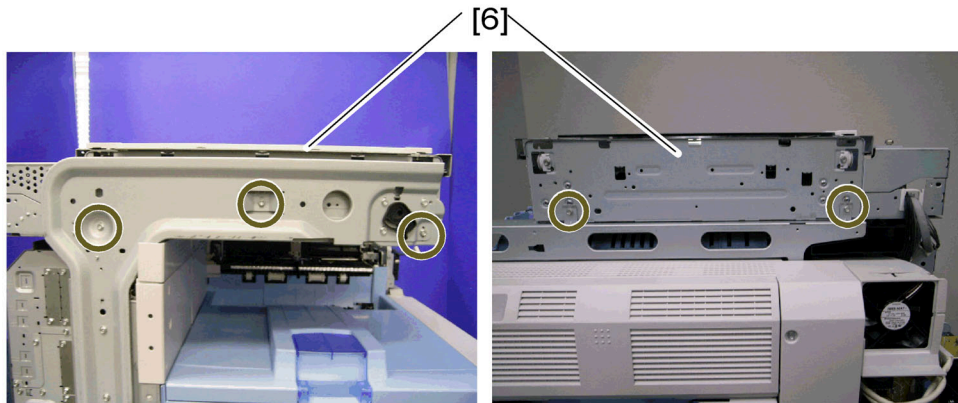
2. Remove the clamp plate **[2]** (⌀ x 1).
3. Disconnect the scanner I/F cable **[3]** from the connector (CN509) on the IPU (⌀ x 1, ground cable x 1).
4. Release the clamp **[4]**.



5. Disconnect the three connectors **[5]** on the controller box.

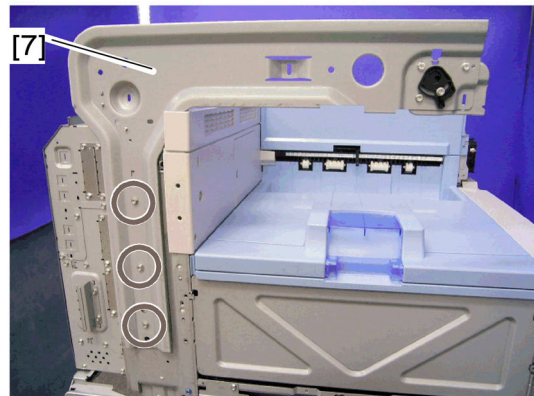


6. Scanner unit **[6]** (⚙ x 5; right side x 2, left side x 3)



B838R902.PNG

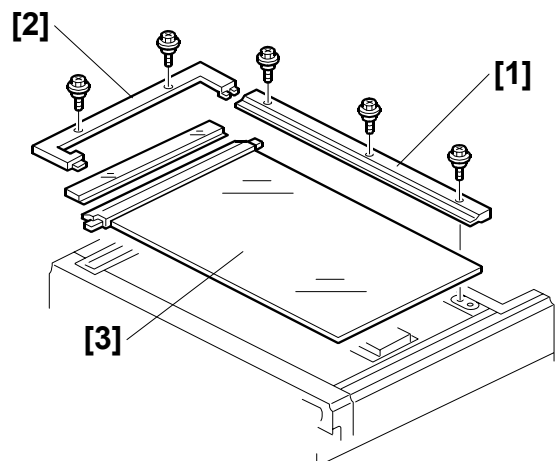
7. Scanner left stay **[7]** (⚙ x 3)



B838R904.PNG

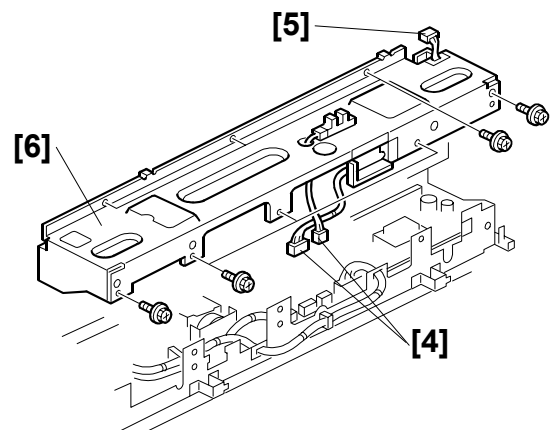
Step 3: Connecting Procedure for Scanner Unit

1. Rear scale **[1]** (⚙ x 3; stepped screw)
2. Glass cover **[2]** (⚙ x 2; stepped screw)
3. Exposure glass with the left scale **[3]**



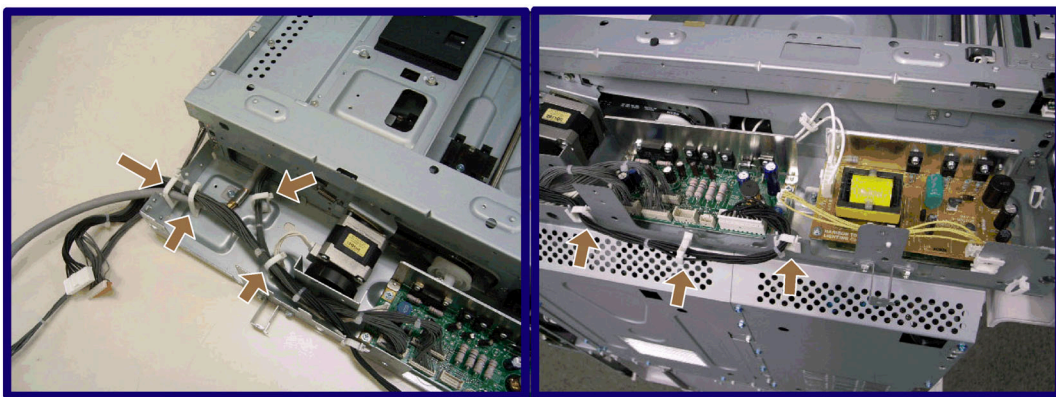
B838R153.WMF

4. Disconnect the connectors **[4]** (CN312, CN318) from the SIO.
5. Disconnect the scanner HP sensor connector **[5]**.
6. Scanner rear frame **[6]** (⚙ x 8)



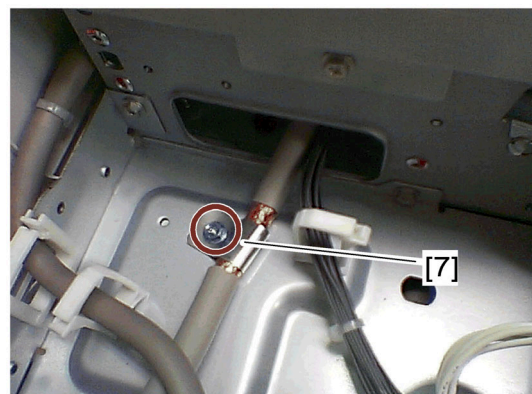
7. Release the clamps (⚙ x 7).

B838R160.WMF



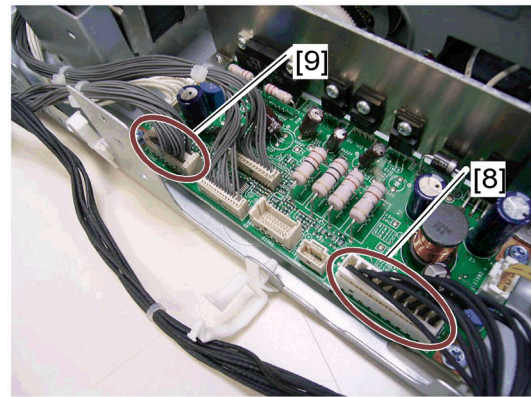
B838R905.PNG

8. Remove the clamp **[7]** for the scanner I/F cable (⚙ x 1). This clamp will be used hereafter.



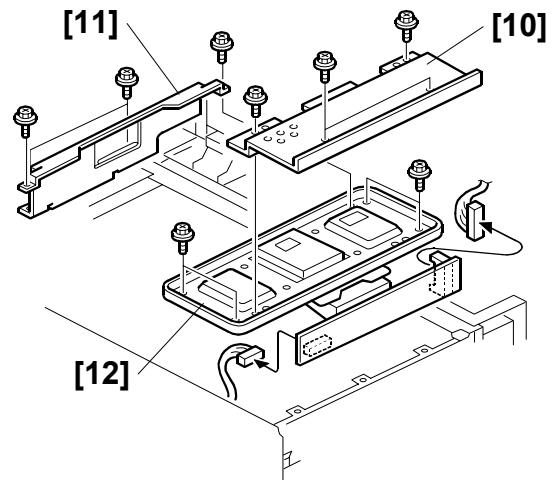
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9. Disconnect the BICU interface harness [8] (CN310 on the SIO), and then remove it.
10. Disconnect the power supply harness [9] (CN311 on the SIO), and then remove it



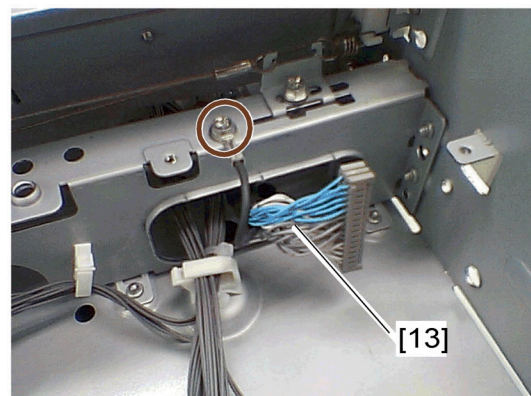
B838R907.PNG

11. SBU cover [10] (⚙ x 4)
12. SBU grounding plate [11] (⚙ x 4)
13. SBU [12] (⚙ x 4, 15 pins connector, 30 pins connector)



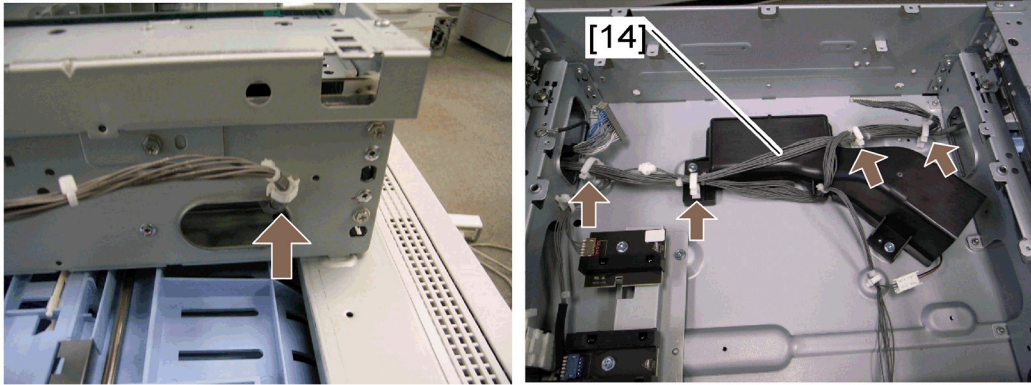
B838R156.WMF

14. Scanner I/F cable [13] (⚙ x 1, ground cable x 1)



B838R908.PNG

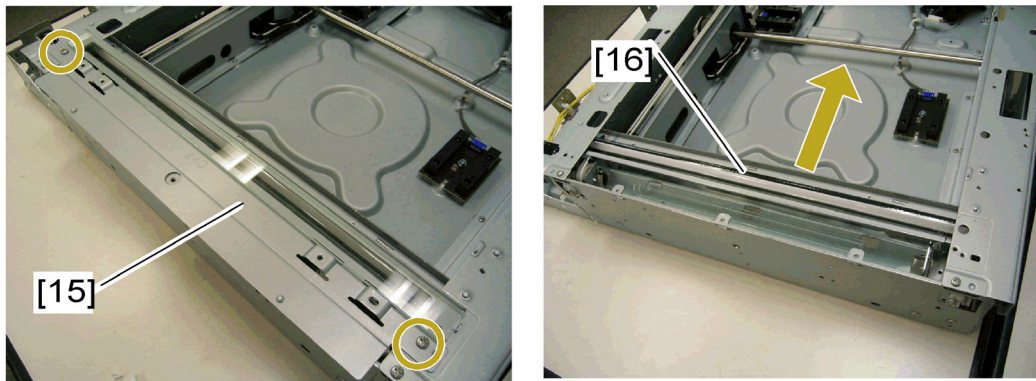
15. Operation panel I/F harness **[14]** (🔧 x 5)



B838R909.PNG

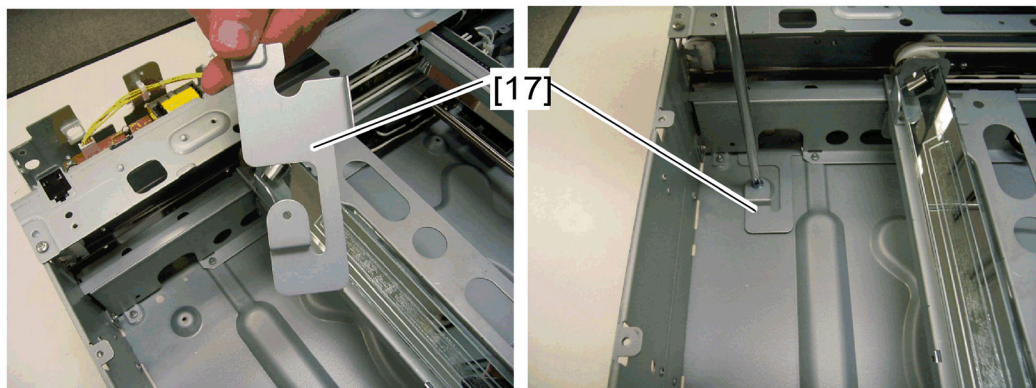
16. Scanner left stay **[15]** (🔧 x 2)

17. Move the scanner carriage **[16]** to the center position.



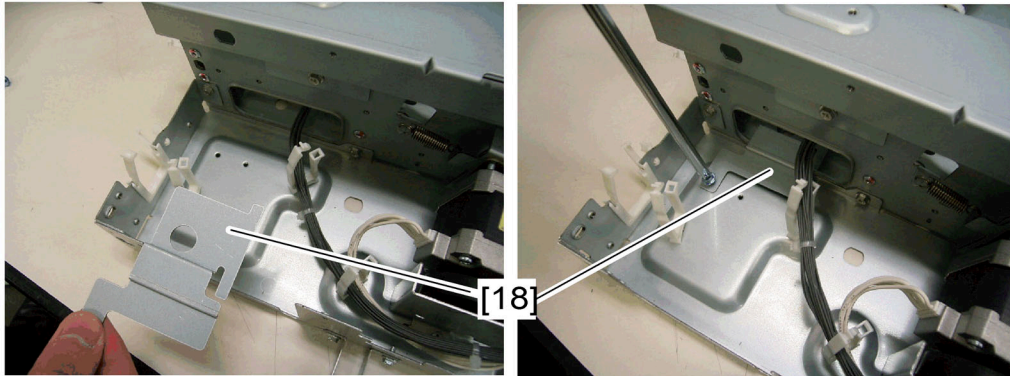
B838R910.PNG

18. Install the left bottom plate **[17]** in the place as shown (🔧 x 1; M3x6 blue screw).



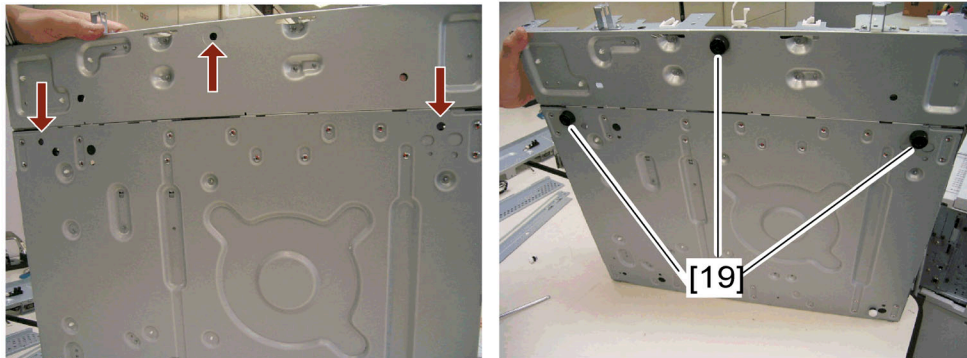
B838R911.PNG

19. Install the right bottom plate **[18]** in the place as shown (⌀ x 1; M3x6 blue screw).



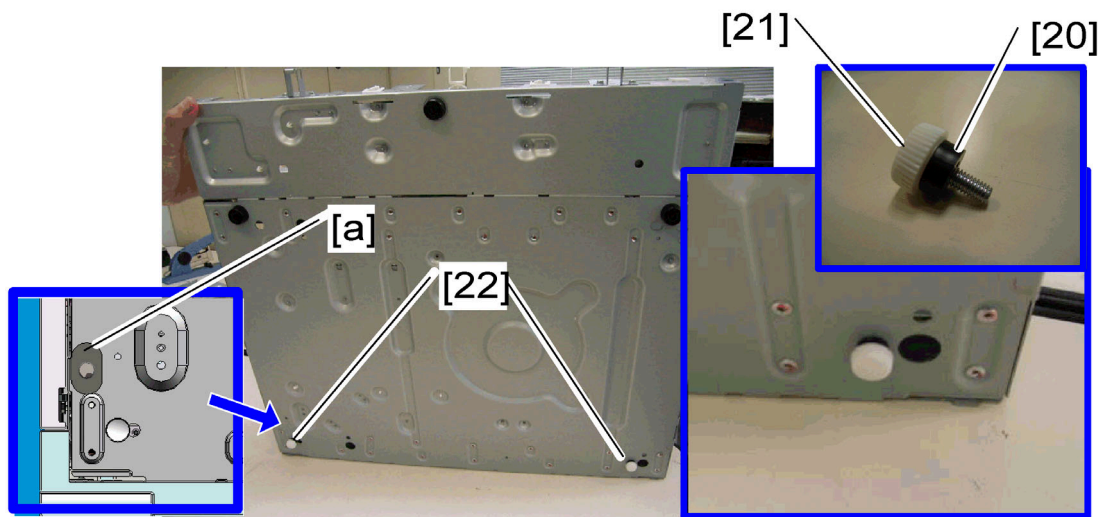
B838R912.PNG

20. Install the three rubber legs **[19]** in the bottom of the scanner unit.



B838R913.PNG

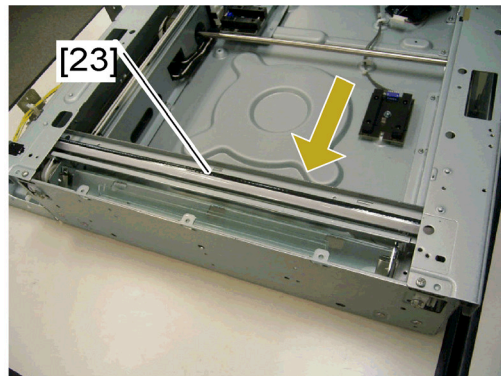
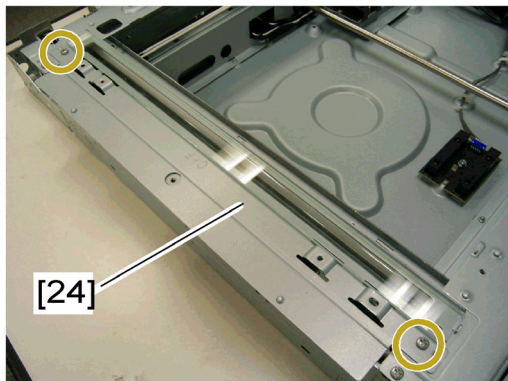
21. Install the two spacers **[20]**, adjusters **[21]** and seal **[a]** in the bottom **[22]** of the scanner unit.



B838R914.PNG

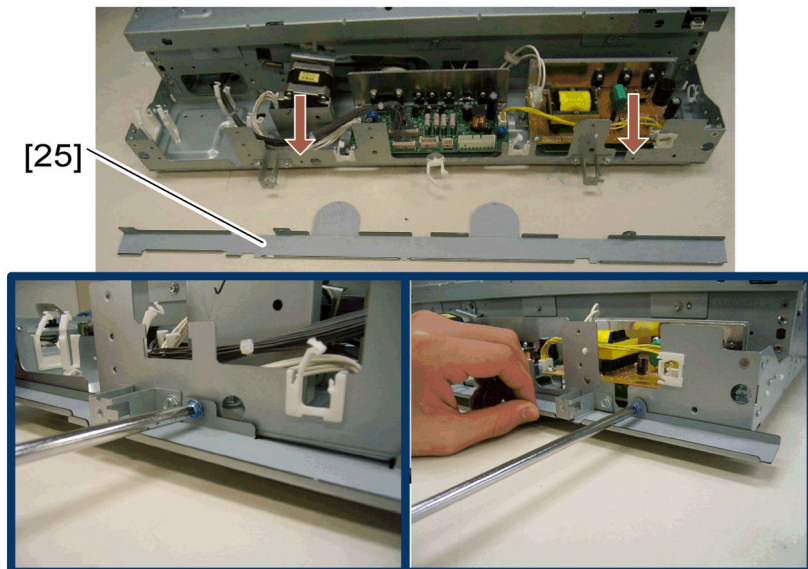
22. Move the scanner carriage **[23]** to its home position.

23. Reinstall the scanner left stay **[24]** (⌀ x 2).



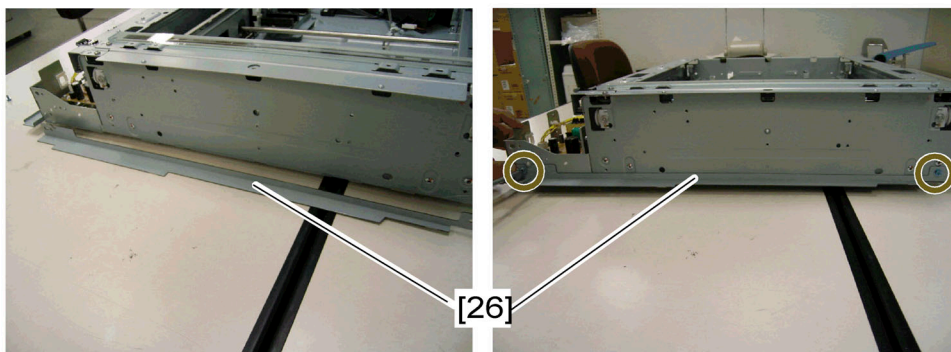
B838R915.PNG

24. Install the rear bracket **[25]** to the outside of the scanner rear frame (⌀ x 2; M3x6 blue screw).



B838R916.PNG

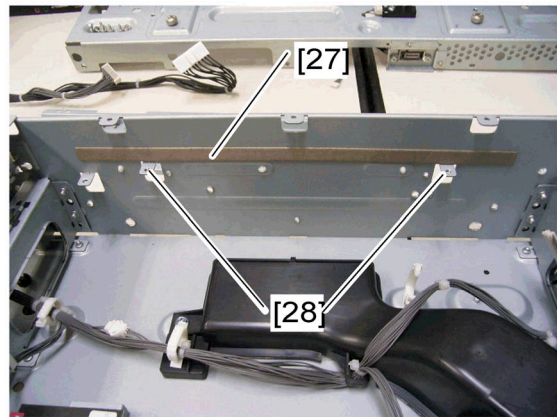
25. Install the left bracket **[26]** to the outside of the scanner left frame (⌀ x 2; M3x6 blue screw).



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26. Clean the inside of the scanner left frame with a cloth absorbing alcohol.

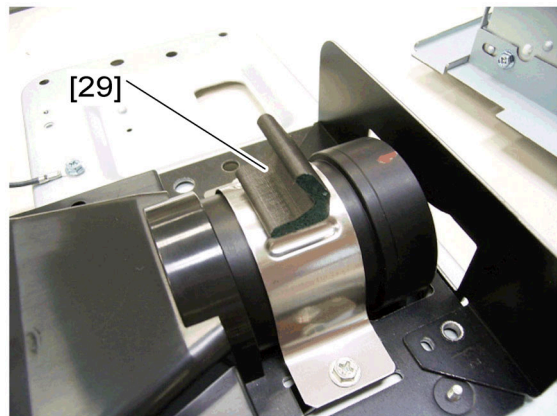
27. Attach the gasket **[27]** to the inside of the scanner left frame aligning with two projections **[28]**.



B838R918.PNG

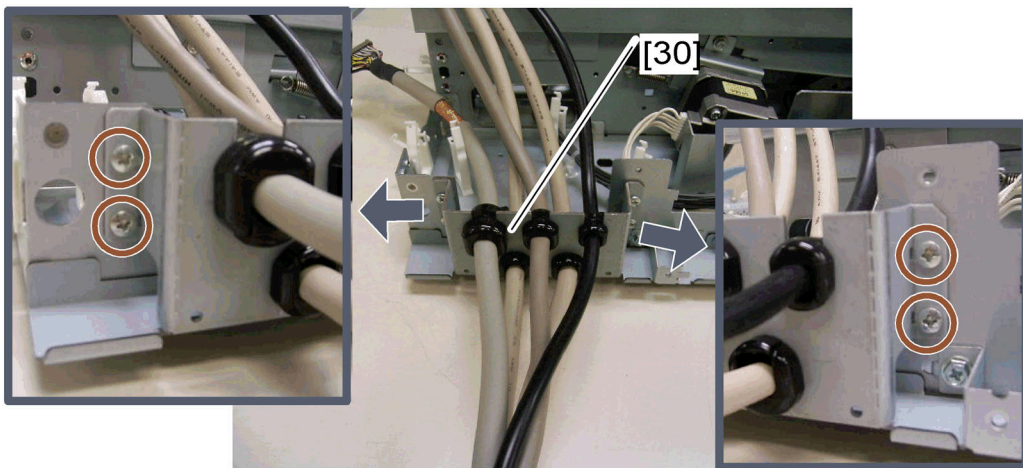
28. Clean the lens bracket with a cloth absorbing alcohol.

29. Attach the gasket **[29]** to the lens bracket as shown.



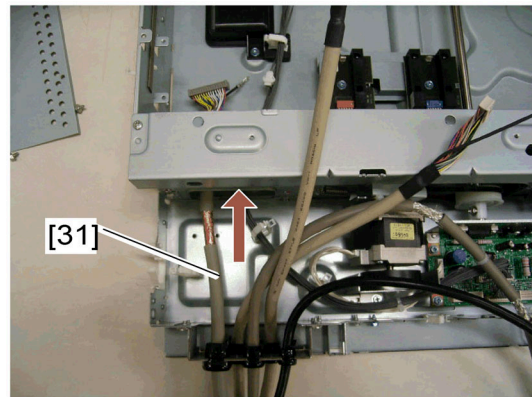
B838R919.PNG

30. Attach the cable bracket **[30]** to the rear right of the scanner unit (⌀ x 4; screw-round M3x6).



B838R920.PNG

31. Put the scanner I/F cable **[31]** through the cutout of the scanner rear frame.

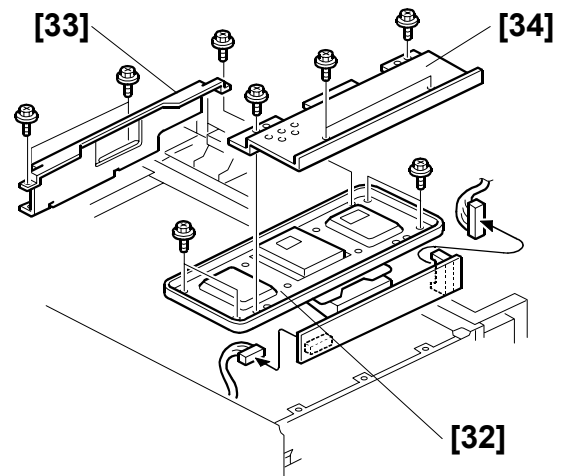


B838R921.PNG

32. Reinstall the SBU **[32]** (⚙ x 4, 15 pins connector, 30 pins connector) and ground cable of the scanner I/F cable (⚙ x 1).

33. Reinstall the SBU grounding plate **[33]** (⚙ x 4).

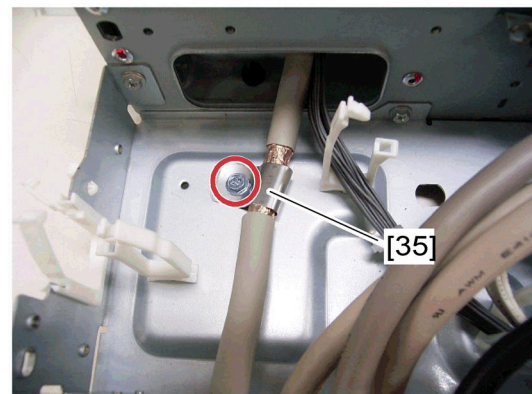
34. Reinstall the SBU cover **[34]** (⚙ x 4).



B838R156.WMF

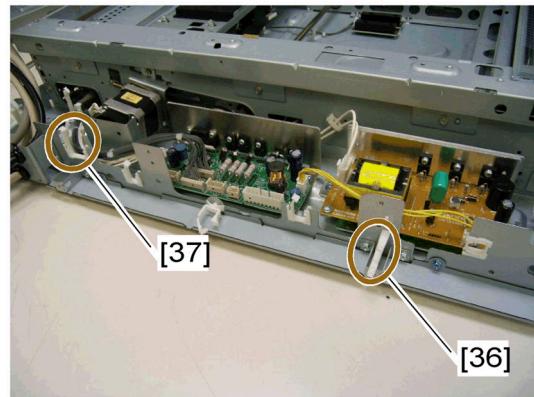
35. Remove the rap on the scanner I/F cable.

36. Attach the clamp **[35]** (this clamp is removed in step 8 in the "Connecting Procedure for Scanner Unit") to the scanner I/F cable and then secure it (⚙ x 1; M3x6 blue screw).



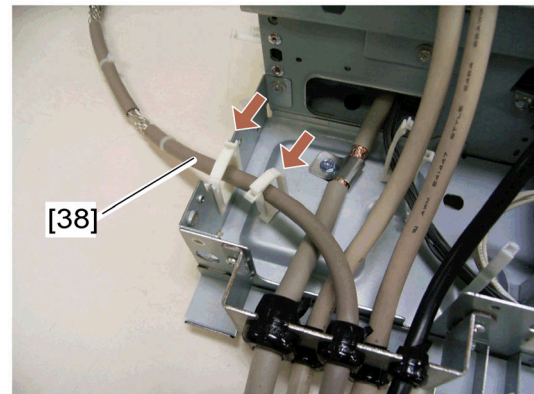
B838R922.PNG

37. Install the clamp [36] and saddle clamp [37] as shown (🔧 x 2).



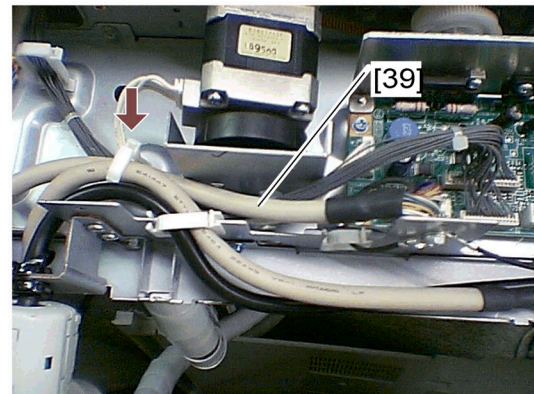
B838R923.PNG

38. Route the operation panel I/F cable [38] and clamp it (🔧 x 2).



B838R924.PNG

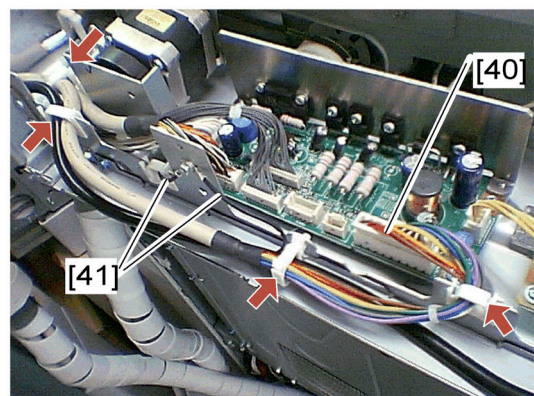
39. Route and connect the BICU interface cable [39] to CN311 on the SIO (🔧 x 1).



B838R925.PNG

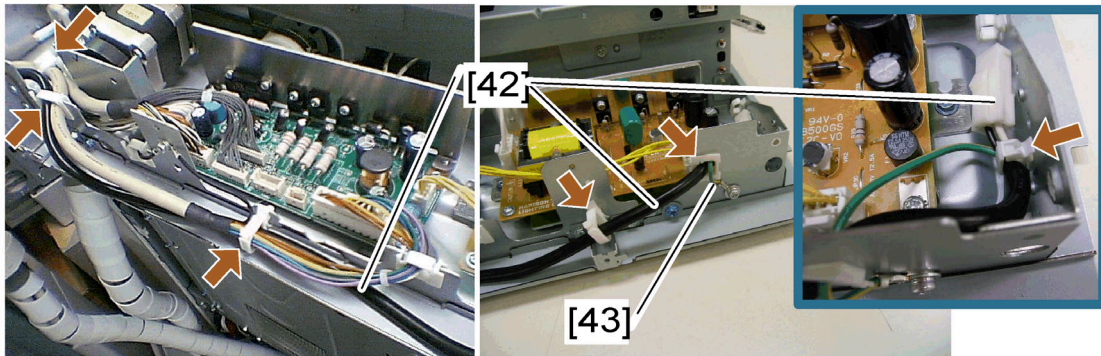
40. Route and connect the power supply cable [40] to CN310 on the SIO (🔧 x 4).

41. Secure two ground cables [41] (BICU interface cable and power supply cable) (🔧 x 1; M3x6 blue screw).



B838R926.PNG

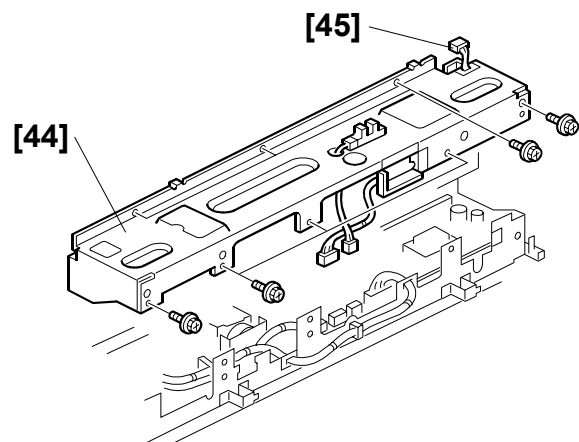
42. Route the heater relay cable **[42]** as shown and secure ground cable **[43]** (⚙ x 6, ⚙ x 1; screw-round M4x8).



B838R927.PNG

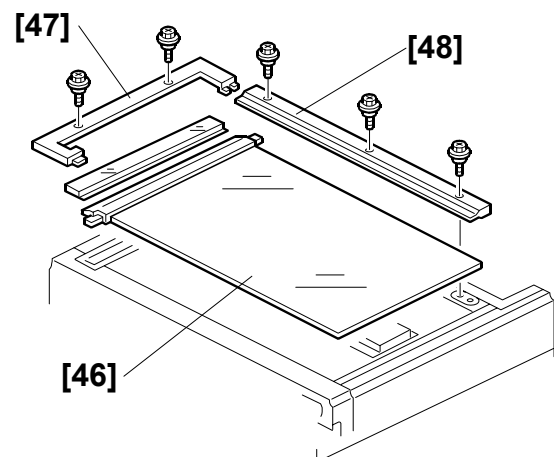
43. Reinstall the scanner rear frame **[44]** (⚙ x 8, ⚙ x 2).

44. Connect the harness **[45]** to the scanner HP sensor.



B838R160.WMF

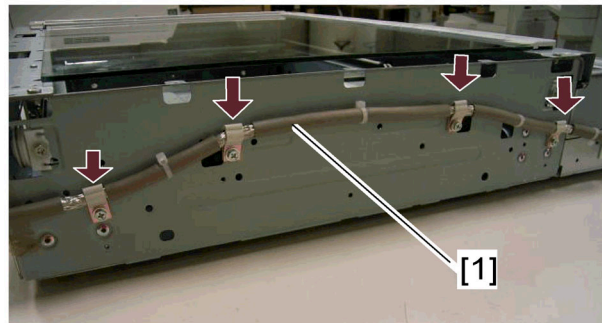
45. Reinstall the exposure glass with left scale **[46]**.
46. Reinstall the glass cover **[47]** (stepped screw x 2).
47. Reinstall the rear scale **[48]** (stepped screw x 3).



B838R153.WMF

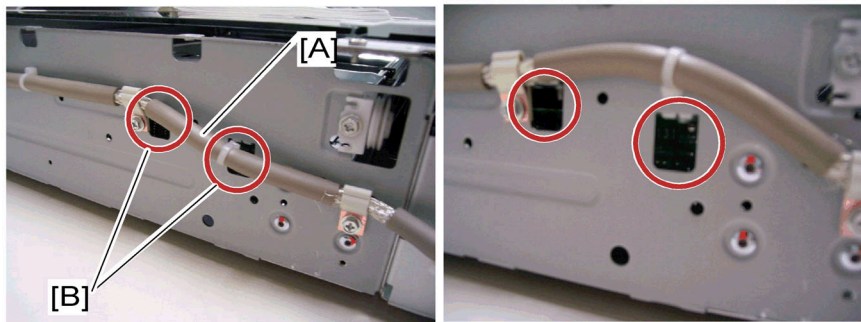
Connecting Procedure for Operation Panel

1. Route and attach the operation panel I/F cable to the outside of the scanner right frame with four plate clamps (4 x 4; screw - tapping M3x8).



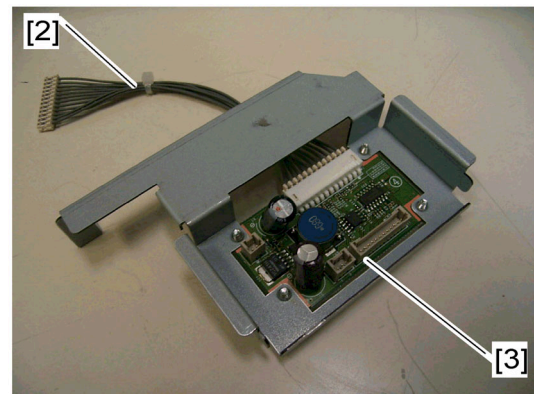
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NOTE: Make sure that the operation panel I/F cable [A] does not cover the three cutouts [B].



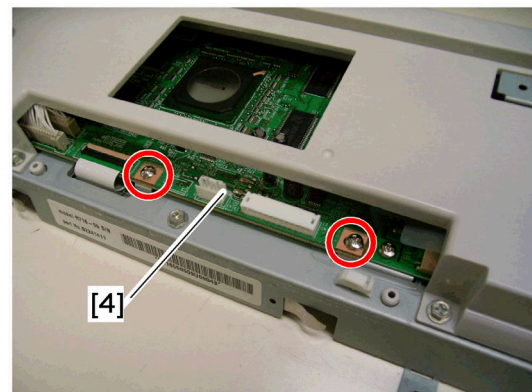
B838R934.PNG

2. Connect the harness [2] to the operation panel interface board [3] as shown.



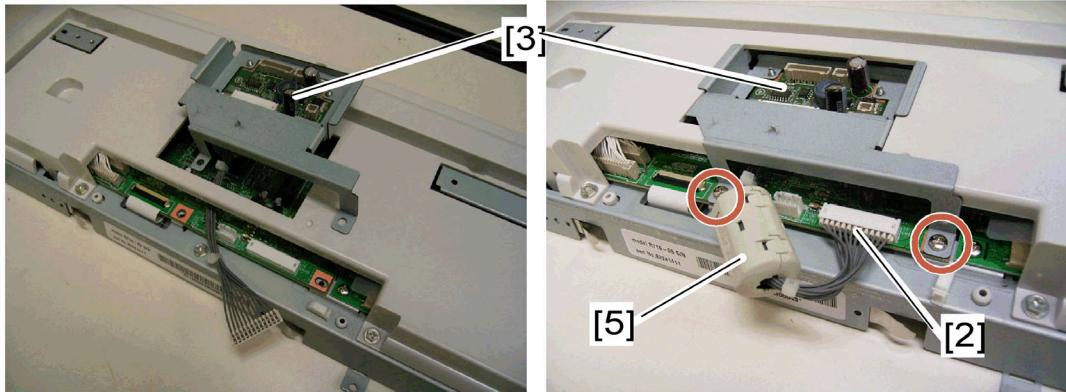
B838R929.PNG

3. Remove the two screws on the operation panel drive board [4].

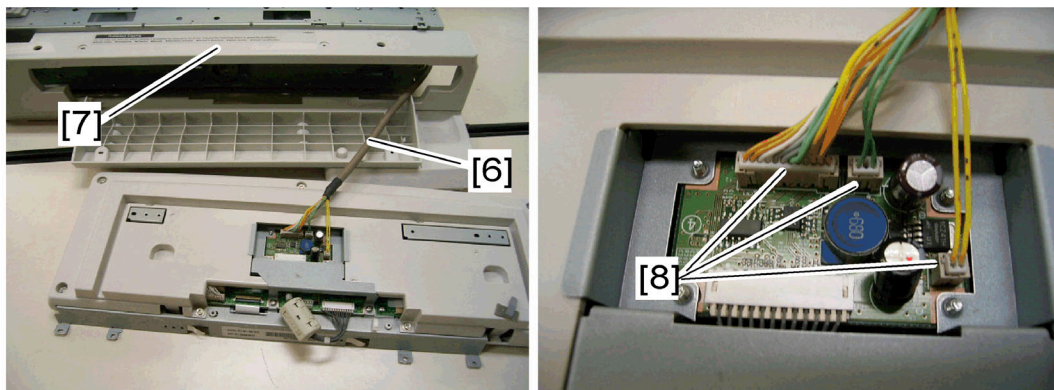


B838R930.PNG

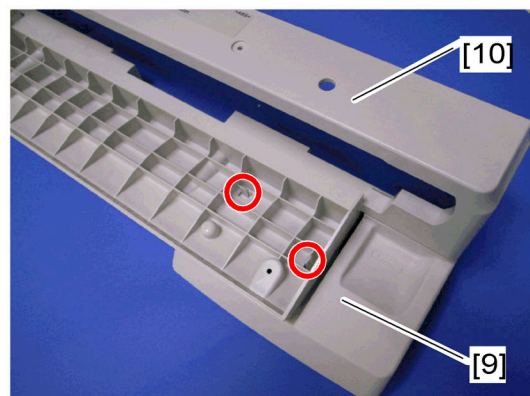
4. Attach the operation panel interface board [3] as shown (⌀ x 2; these are removed in step 3 in this procedure).
5. Connect the harness [2] to CN700 on the operation panel drive board and install the core [5] (RFC-8).



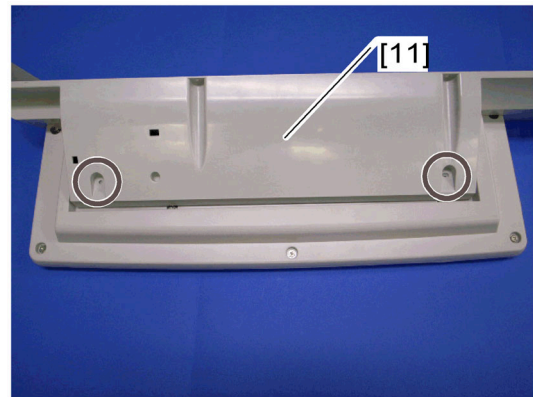
6. Put the operation panel I/F cable [6] through the scanner front cover [7].
7. Connect the three connectors [8] of the operation panel I/F cable to operation panel interface board.



8. Remove the clip tray [9] from the scanner front cover [10].

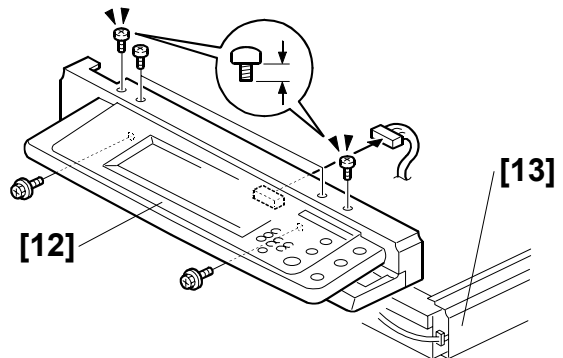


9. Attach the scanner front cover [11] to the operation panel (⚙ x 2).



B838R933.PNG

10. Reinstall the operation panel with the scanner front cover [12] in the scanner front frame (⚙ x 6; M3x3 bind screw x 2, M3x5 bind screw x 2 on the top of the scanner front cover, M3x8 tapping screw x 2 on the bottom of the scanner front cover).

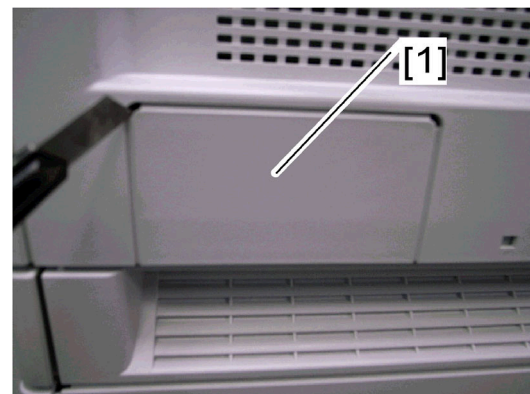


B838R157.WMF

11. Reinstall the scanner right cover [13] (⚙ x 2).

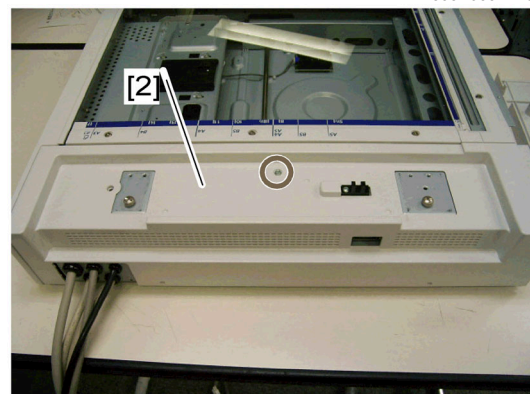
Harness Bracket Attachment Procedure

1. Cut off the rear right [1] of the scanner top rear cover with a cutter.



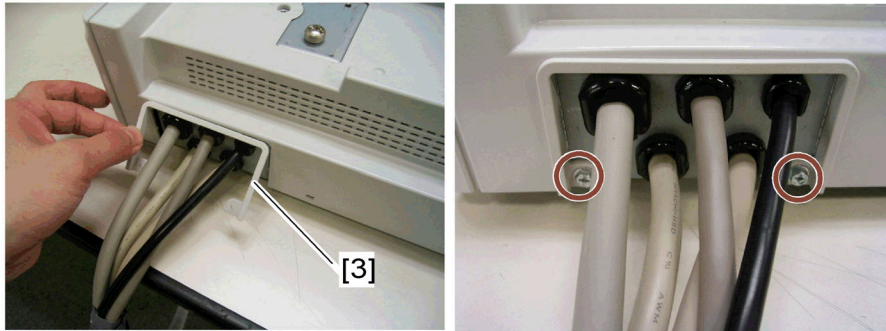
B838R935.PNG

2. Reinstall the scanner top rear cover [2] (⚙ x 1; M3x8 tapping screw).



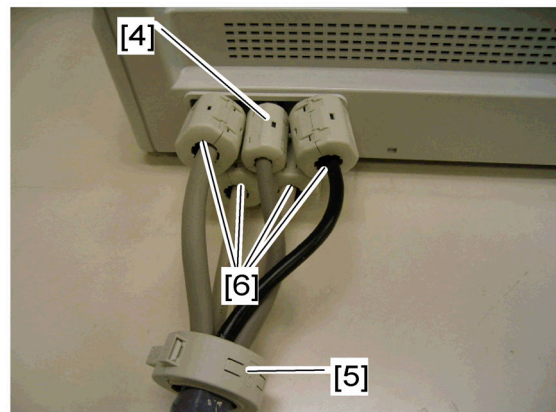
B838R936.PNG

3. Install and attach the cable bracket cover [3] (⚙ x 2; screw-tapping M3x8).



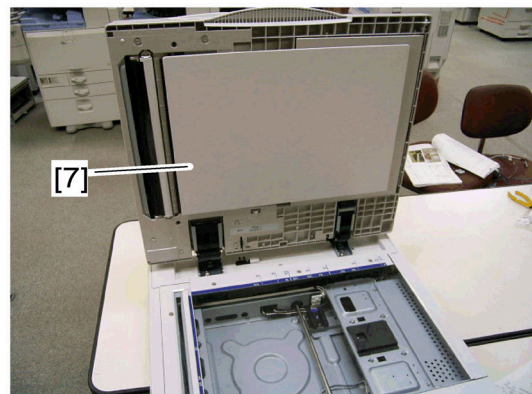
B838R937.PNG

4. Reinstall the scanner left cover (⚙ x 2).
5. Install the core [4] (RFC-9) to the operation panel I/F cable, ring core [5] (TFCM-41-27-16) to the bound cables and the cores [6] (RFC-13) to the other cables.



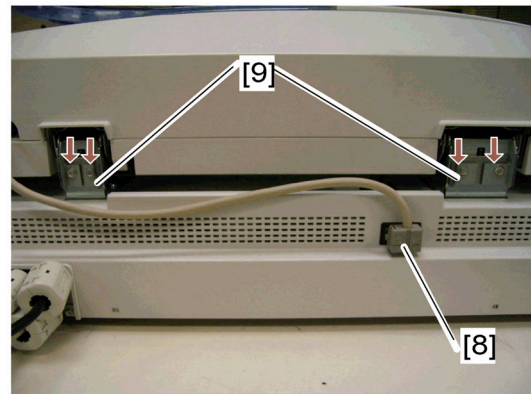
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6. Install the ARDF [7] or platen cover on the scanner unit (stud screw x 2).



B838R939.PNG

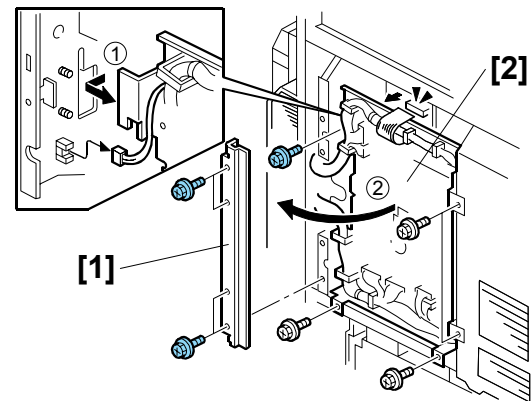
7. Connect the ARDF I/F cable [8] to the connector of the scanner unit.
8. Install the right and left stoppers [9] to the ARDF hinges (⌀ x 2 each; screw-tapping M3x16).



B838R940.PNG

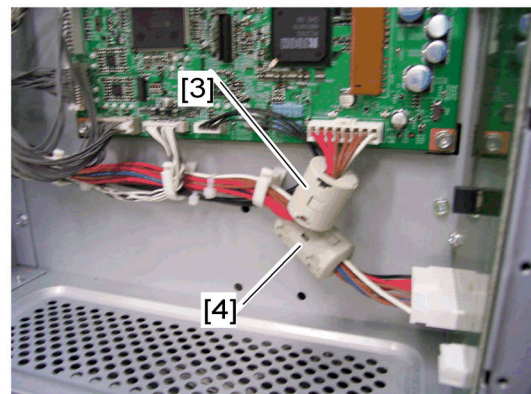
Connecting Procedure for Mainframe

1. Controller box stay [1] (⌀ x 4)
2. Open the IOB bracket [2] (⌀ x 5, flat cable x 1, ⌀ x 1).



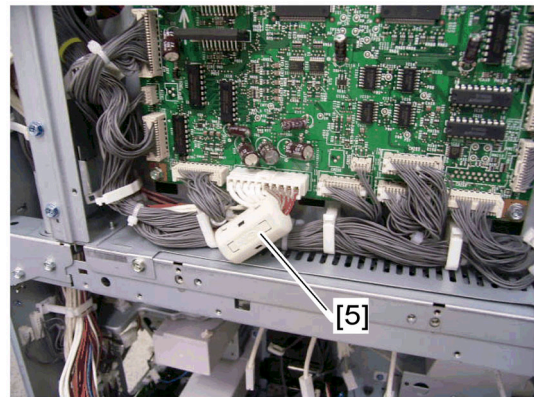
B222R109.WMF

3. Install the core [3] (TFC16816) in the harness of CN510 (on the IPU) and the core [4] (RFC-8) in the harness of CN540 (on the MB).
4. Close the IOB bracket [2] (⌀ x 5, flat cable x 1, ⌀ x 1).
5. Reinstall the controller box stay [1] (⌀ x 4).



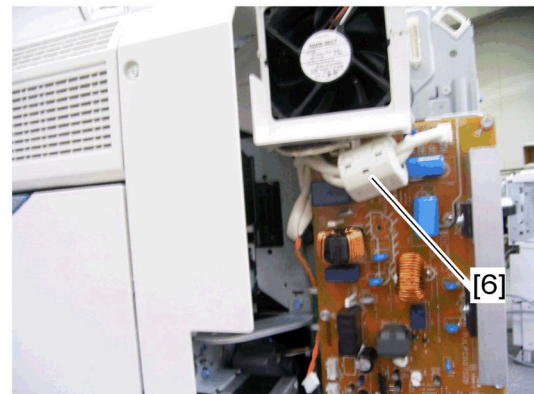
B838R941.PNG

6. Install the core **[5]** (RFC-5) in the brown and red harnesses of CN201 (on the IOB).



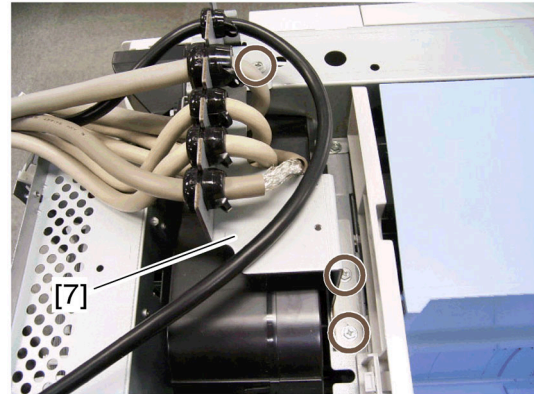
B838R942.PNG

7. Install the core **[6]** (RFC-13) in the power supply cables on the IH inverter.



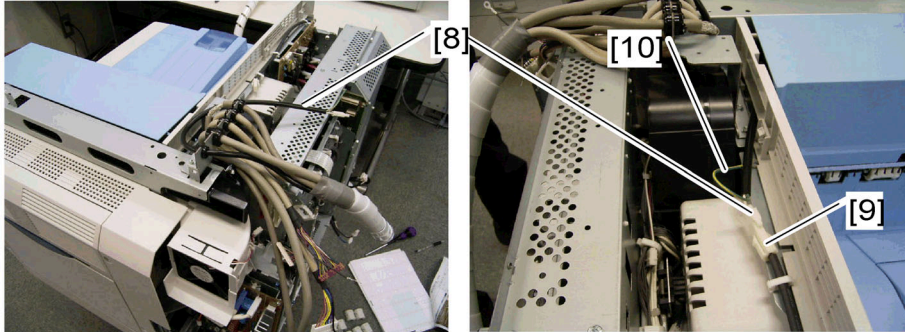
B838R943.PNG

8. Install the cable bracket **[7]** in the rear frame of the mainframe (⌀ x 3; screw-tapping M3x6).



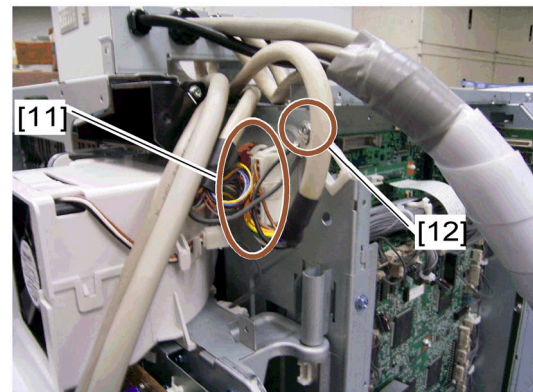
B838R944.PNG

9. Route and connect the heater relay cable [8] to the heater cable [9] of the mainframe.
10. Secure the ground cable of the heater relay cable [10] (⚙ x 1; screw-round M4x8).



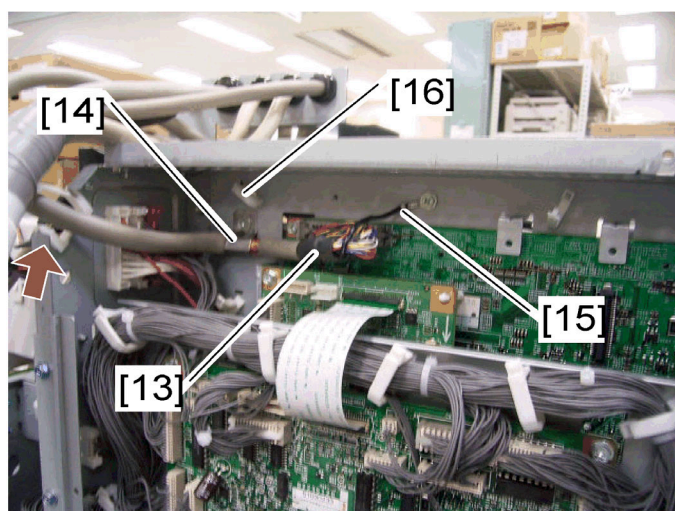
B838R945.PNG

11. Connect three connectors [11] to the outside of the controller box.
12. Secure the two ground cables [12] (⚙ x 1; screw-tapping M3x6).



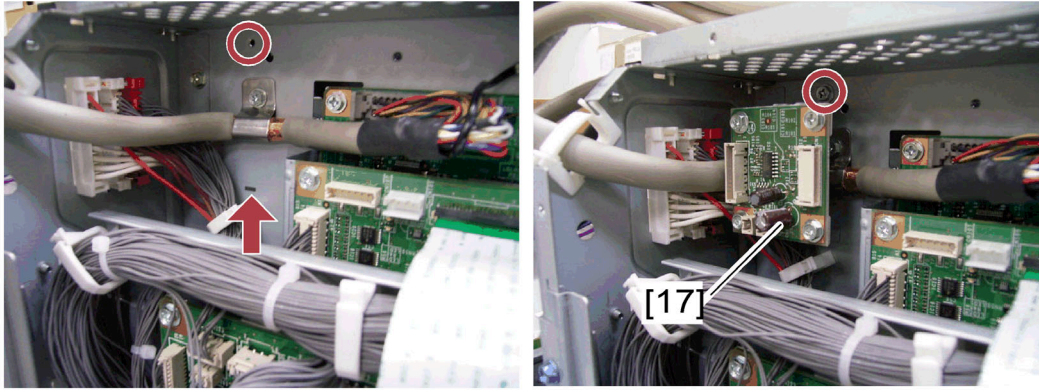
B838R946.PNG

13. Route the scanner I/F cable [13] and connect it to CN509 (on the IPU) (⚙ x 1).
14. Secure the scanner I/F cable with the clamp [14] (⚙ x 1; M3x6 tapping screw) and the ground cable [15] (⚙ x 1; M3x6 tapping screw).
15. Remove the clamp [16].



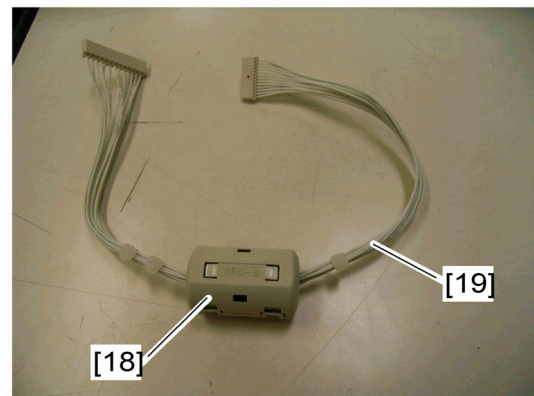
B838R947.PNG

16. Install the MB interface board [17] (🔩 x 1; screw-tapping M3x6).



B838R948.PNG

17. Install the core [18] (RFC-8) in between binds on the long relay harness [19].

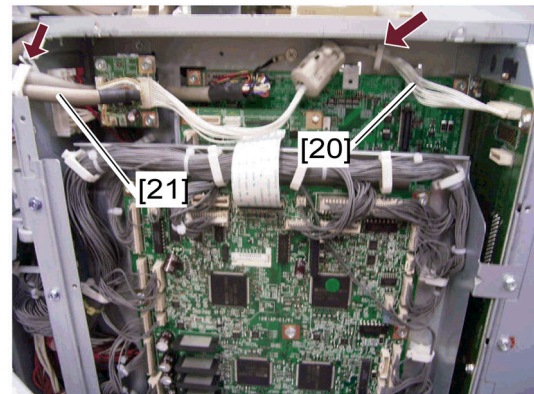


B838R949.PNG

18. Route the long relay harness [20] with the connector, which has two binds, connecting to the MB and the connector, which has one bind, connecting to the MB interface board and clamp it between two binds (🔧 x 1).

19. Connect the harness [20] to CN536 on the MB and other terminal to the CN1 on the MB interface board.

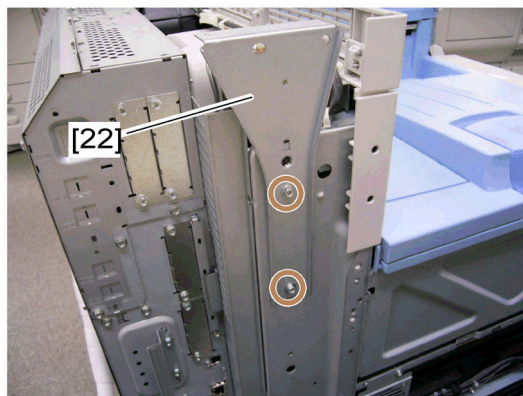
20. Connect the operation panel I/F cable [21] to the CN2, CN5 and CN6 on the MB interface board and clamp it (🔧 x 1).



B838R950.PNG

21. Reinstall the controller box right cover (🔩 x 8).

22. Install the left scanner stay **[22]** (🔩 x 2; M4x6 tapping screw) in the left side of the main machine.



B838R951.PNG

23. Reinstall the left cover (🔩 x 6).

24. Reinstall the left rear cover (🔩 x 1).

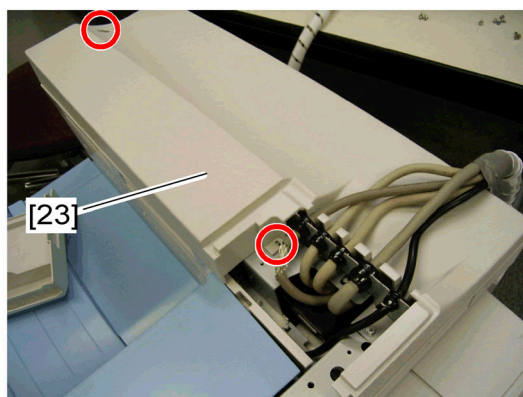
25. Reinstall the right rear cover (🔩 x 4).

26. Close the right door.

27. Reinstall the right top cover (🔩 x 1).

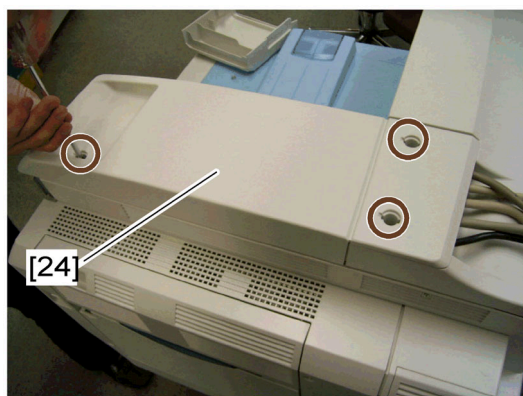
If you install the key counter, first refer to the "Installation for Key Counter".

28. Install the top rear cover **[23]** (🔩 x 2; screw-tapping M3x8).



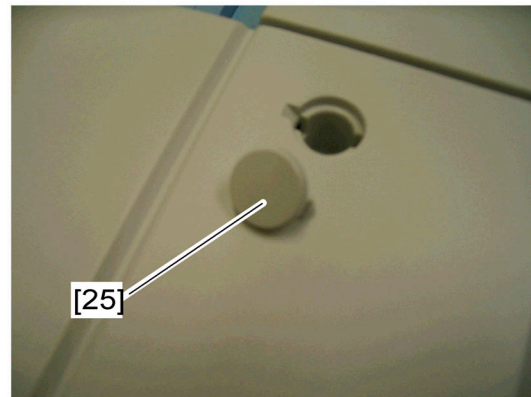
B838R952.PNG

29. Install the top right cover **[24]** (🔩 x 3; screw-tapping M3x8).



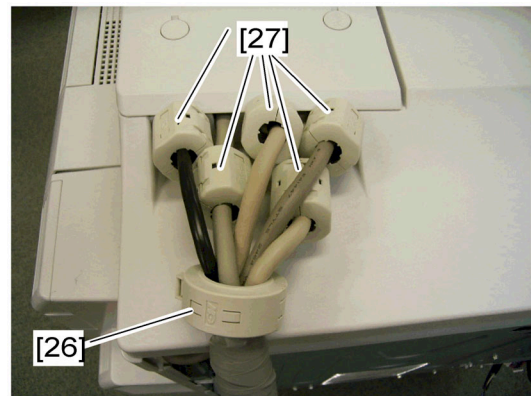
B838R953.PNG

30. Attach the three caps **[25]** to the screw holes on the top right cover.



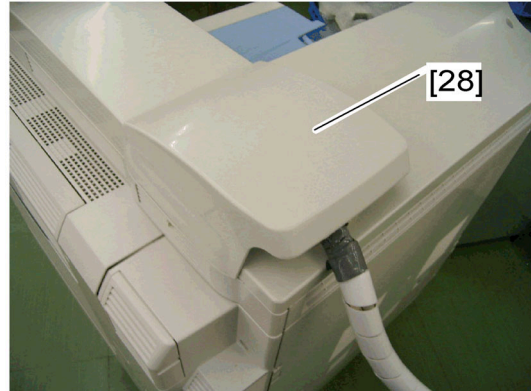
B838R954.PNG

31. Install the ring core **[26]** (TFCM-41-27-16) to the bound cables and the cores **[27]** (RFC-13) to the other cables.



B838R955.PNG

32. Install the cable cover **[28]** in the top rear cover.

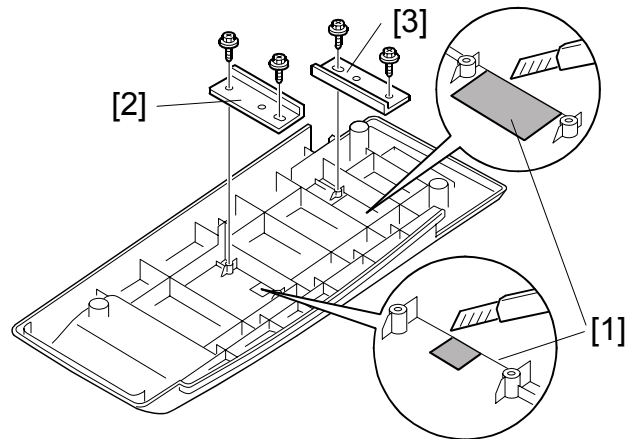


B838R957.PNG

33. Follow the "INSTALLATION REQUIREMENTS" to place the scanner accessibility unit for safety.
34. After installation, adjust the scanner image (☛ "Image Adjustment" > "Scanning" in the chapter "Replacement and Adjustment" of the Model AP-C1 SERVICE MANUAL)

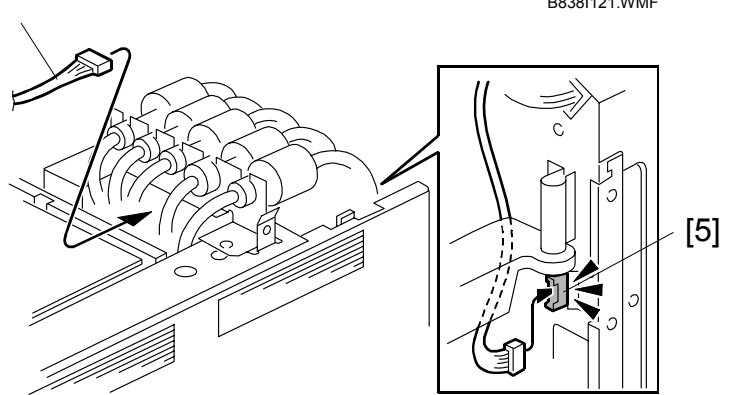
Installation for Key Counter

1. Cut off and remove the parts [1] with a cutter.
2. Attach the key counter front bracket [2] and rear bracket [3] to the reverse side of the top right cover (⚙ x 4; screw 2-tapping M3x8).



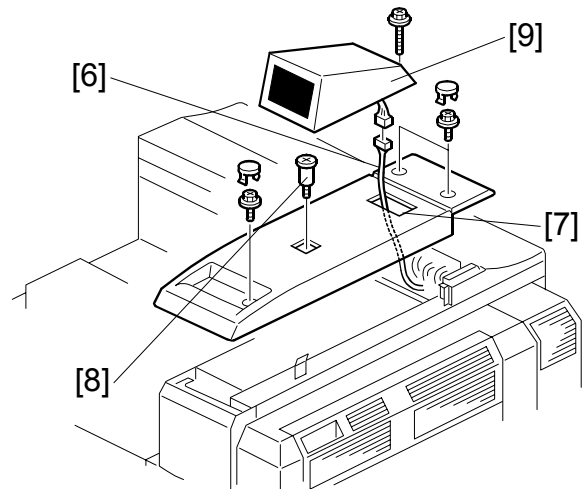
B838I121.WMF

3. Put the key counter harness [4] into the machine.
4. Connect the key counter harness to the connector [5] of the right side of the controller box.



B838I122.WMF

5. Install the top rear cover (☛ step 28 in "Connecting Procedure for Mainframe")
6. Put the key counter harness [6] through the cut out [7].
7. Install the top right cover in the machine and attach the caps to the screw holes (☛ steps 29 and 30 in "Connecting Procedure for Mainframe").
8. Install the shoulder screw [8].
9. Install the key counter [9] (⚙ x 1; screw-tapping M4x16, ⚙ x 1).



B838I123.WMF

For details about installing the key counter, refer to the "Service Manual for B222/B224".