



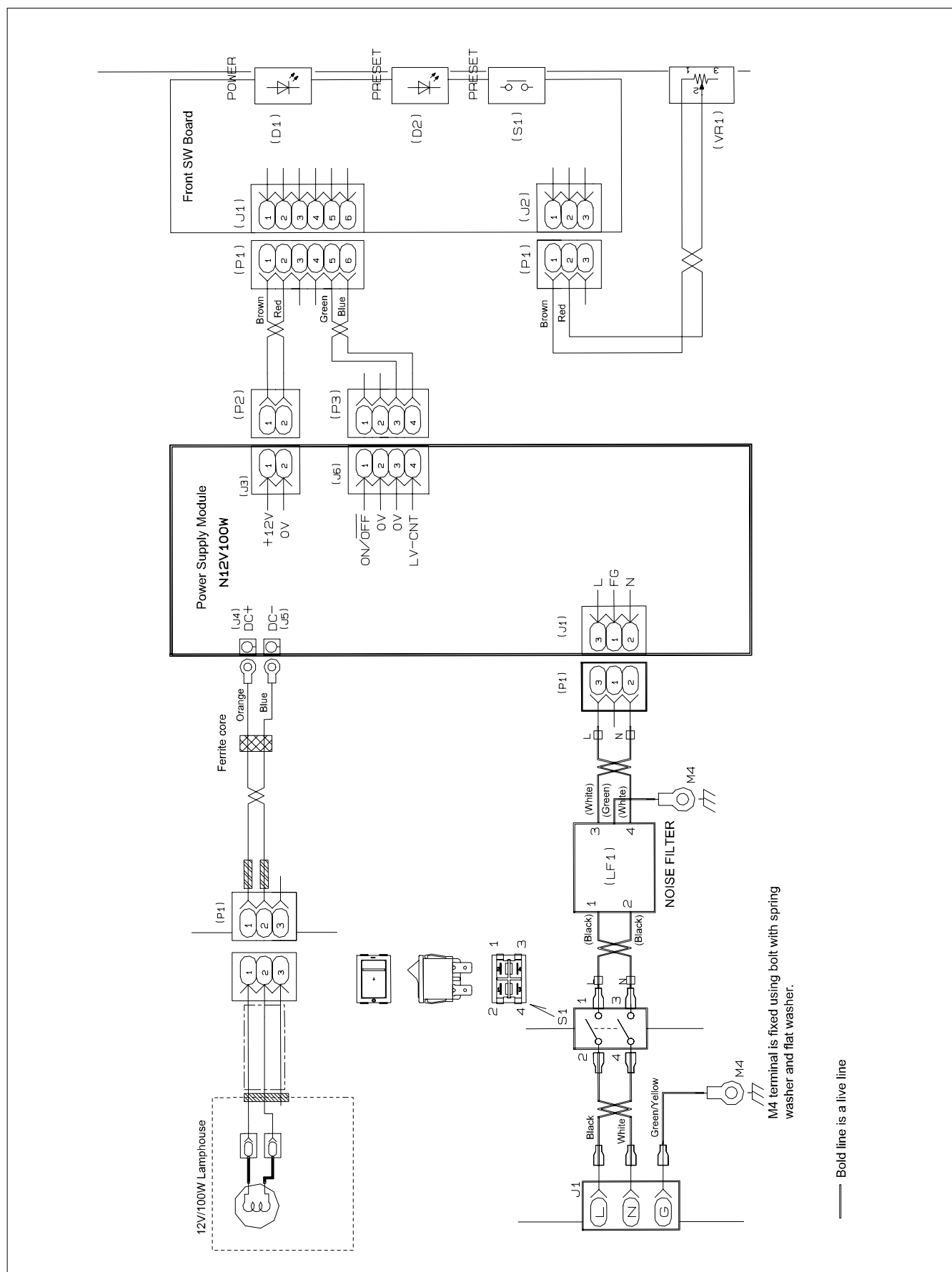
Microscope **ECLIPSE 80i**



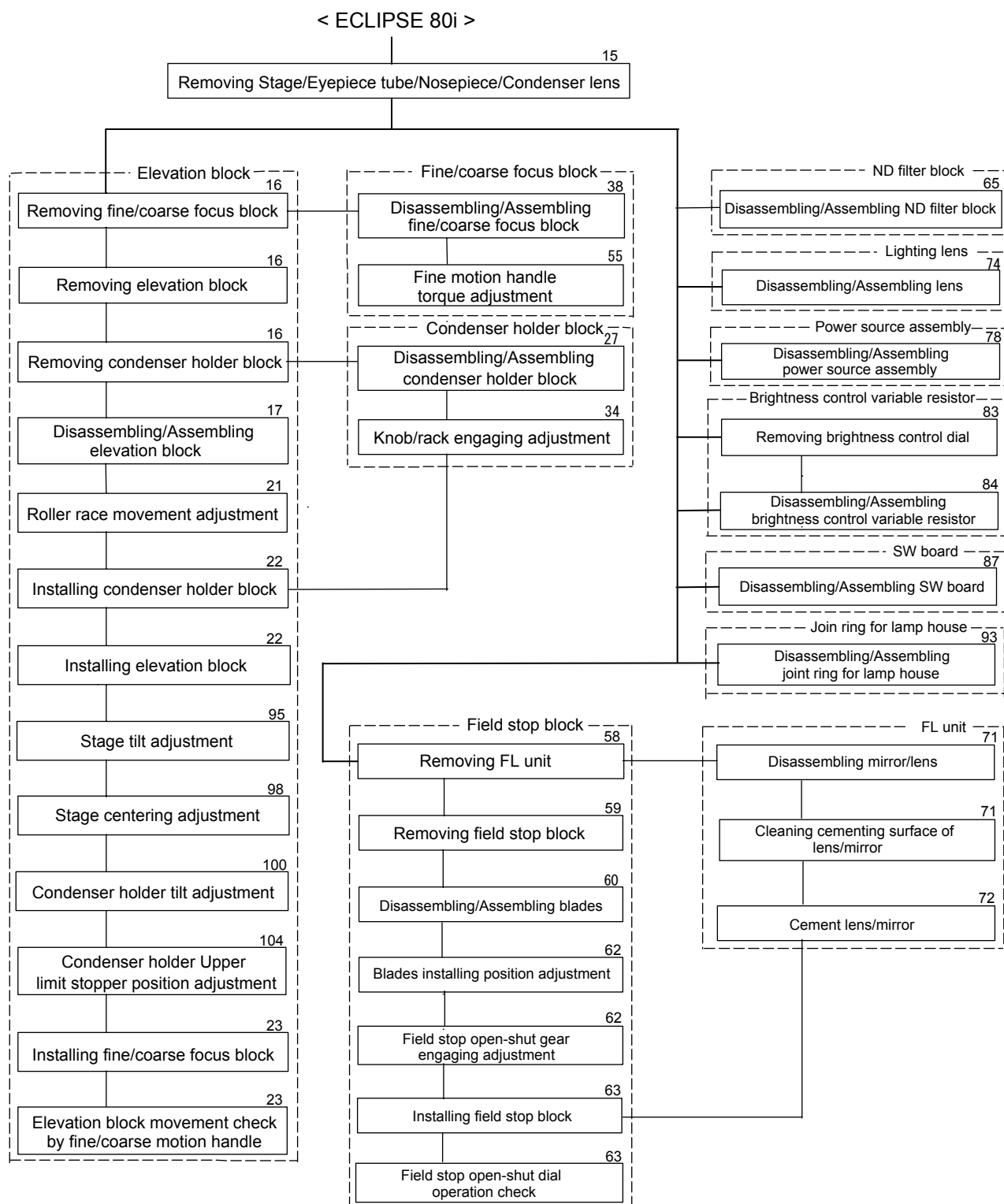
Repair Manual

NIKON CORPORATION

4-1. 80i



5-1. Disassembling/Assembling/Adjusting Flow



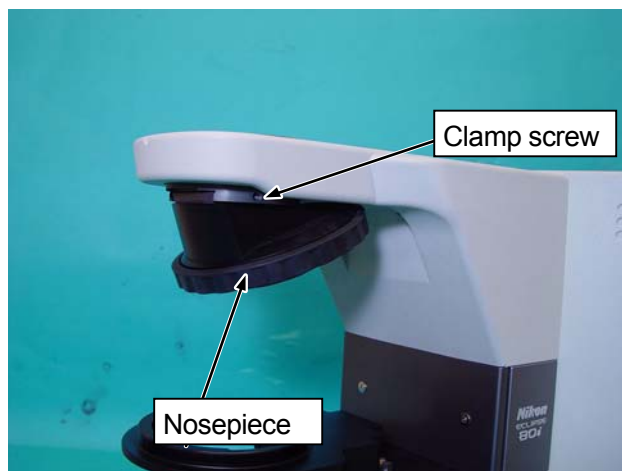
NOTE: The number at upper right of the frame shows the page of this item.

5-2. Removing Main Unit

Before disassembling and assembling the inside mechanisms of the microscope, remove the main unit. This will make it easier to disassemble and assemble the internal parts, and re-adjust the optical system.

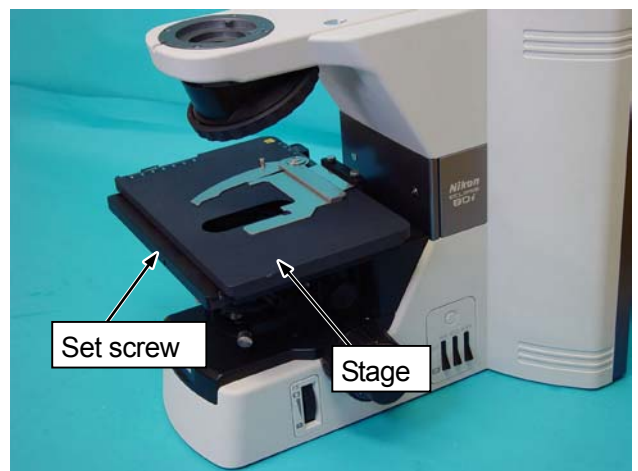
1. Nosepiece

Loosen the clamp screw beside the nosepiece, and remove the nosepiece.



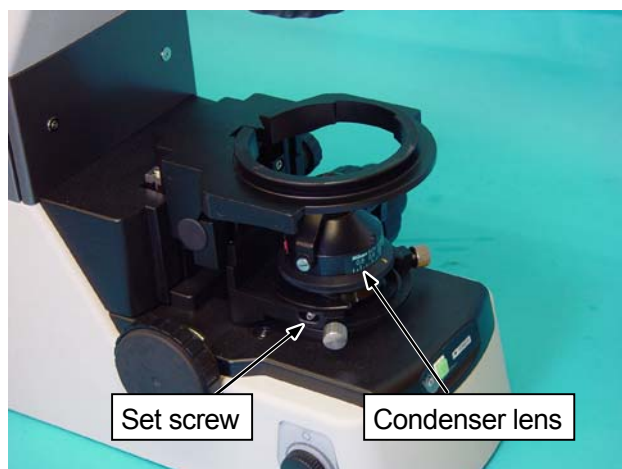
2. Stage

Loosen the set screw on the front side of the stage using a hex-key, and remove the stage.



3. Condenser lens

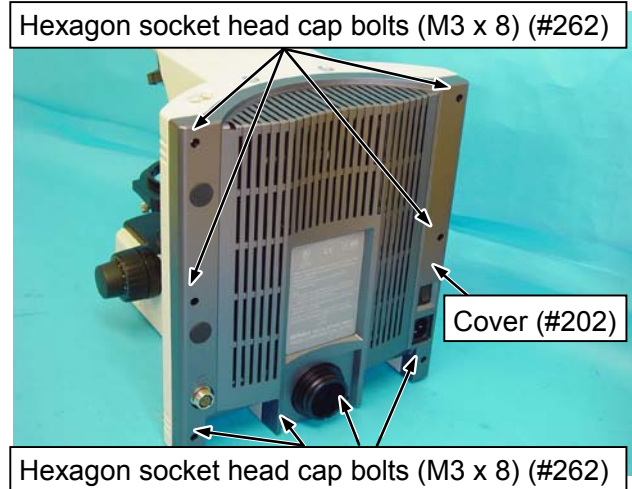
Loosen the set screw on the condenser receptacle using a hex-key, and remove the condenser lens.



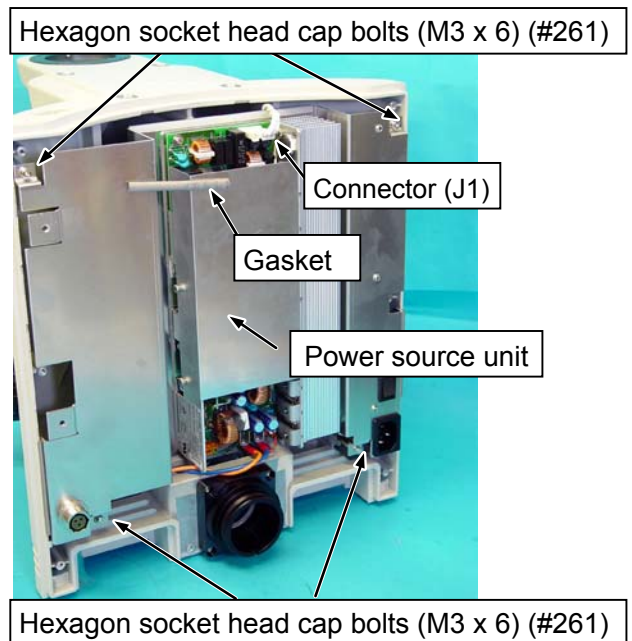
5-10-1. Disassembling Power Source Assembly

5-10-1. Disassembling

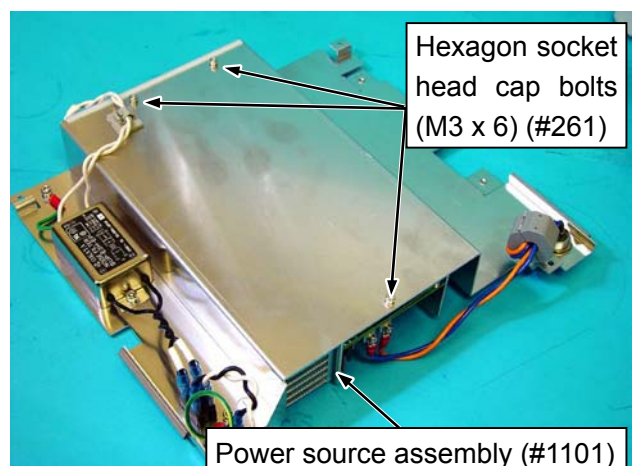
1. Remove the eight hexagon socket head cap bolts (M3 x 8) (#262), and remove the cover (#202).



2. Disconnect the harness from the connector (J1) on the power source assembly (#1101).
3. Remove the gasket.
4. Remove the four hexagon socket head cap bolts (M3 x 6) (#261), and remove the power source unit.

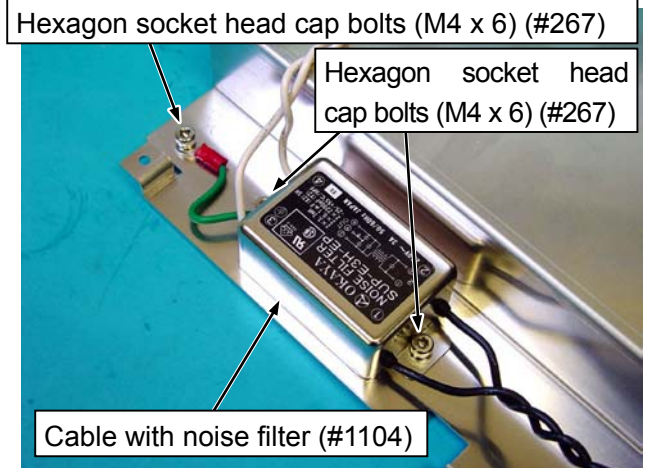


5. Remove the three hexagon socket head cap bolts (M3 x 6) (#261), and remove the power source assembly (#1101).

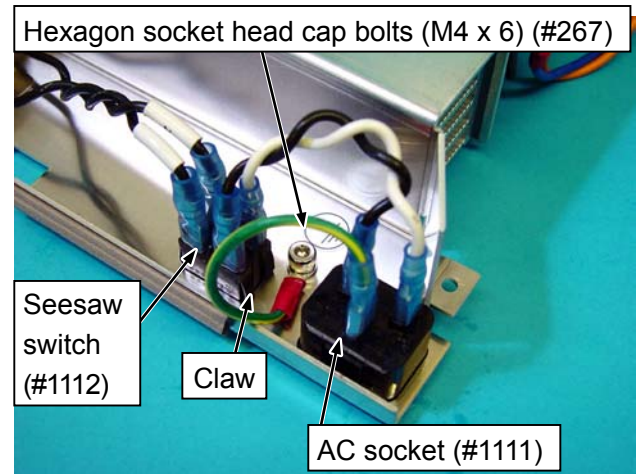


5-10-1. Disassembling Power Source Assembly

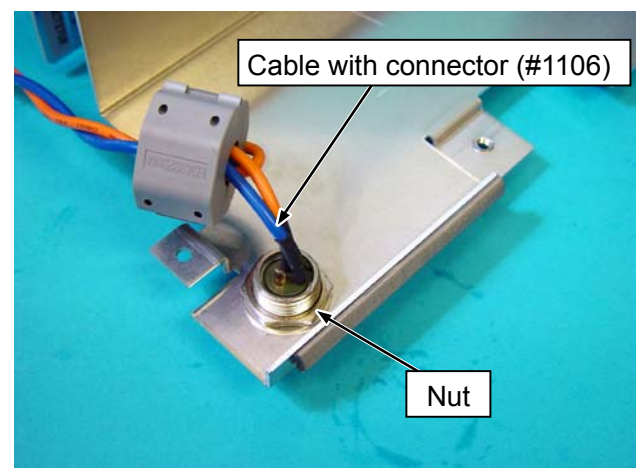
6. Remove the two hexagon socket head cap bolts (M4 x 6) (#267) fixing the noise filter, and one hexagon socket head cap bolt (M4 x 6) (#267) fixing the ground terminal, and remove the cable with noise filter (#1104).



7. Disconnect the terminals of the cable (#1103) and cable with noise filter (#1104) from the seesaw switch (#1112) and AC socket (#1111).
8. Release the claws on both sides of the seesaw switch and AC socket to remove them.
9. Remove a hexagon socket head cap bolt (M3 x 6) (#267), and remove the cable with earth (#1102) from the AC socket.



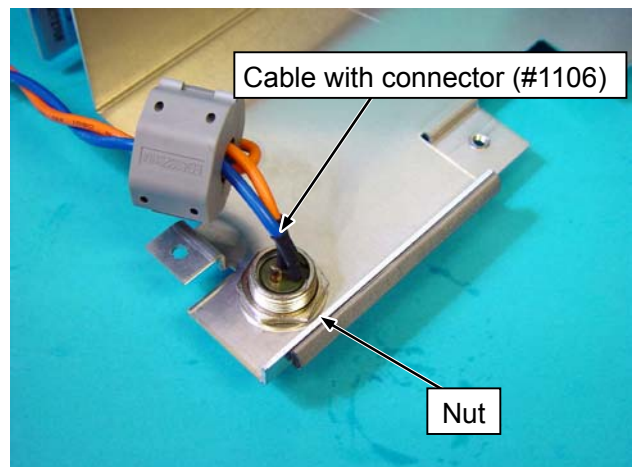
10. Remove a nut, and remove the cable with connector (#1106).



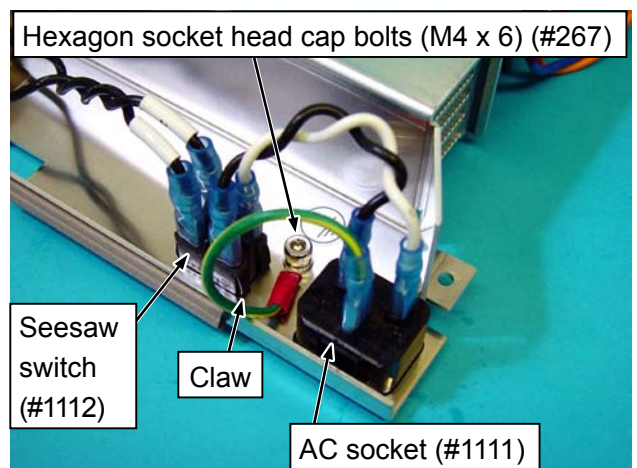
5-10-2. Assembling Power Source Assembly

5-10-2. Assembling

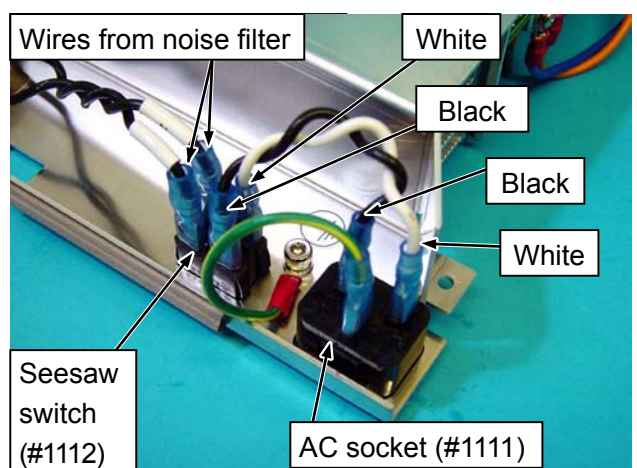
1. Tighten the cable with connector to the bending plate using the supplied nut.



2. Install the seesaw switch and AC socket to the bending plate, and secure them by the claws located on both side of them.

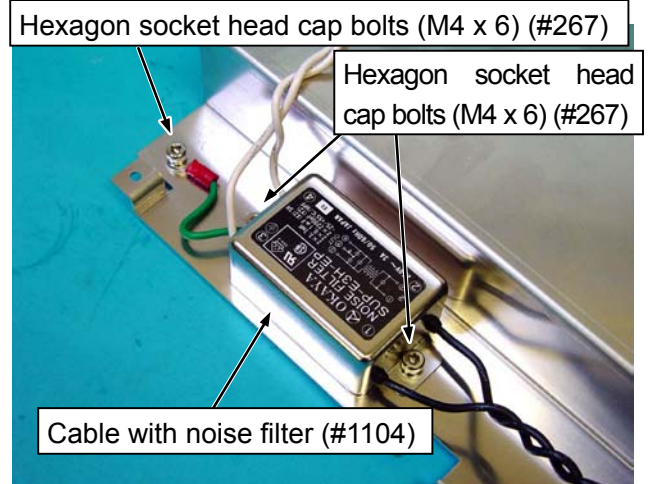


3. Connect the terminals of the cable and cable with noise filter to the seesaw switch and AC socket.

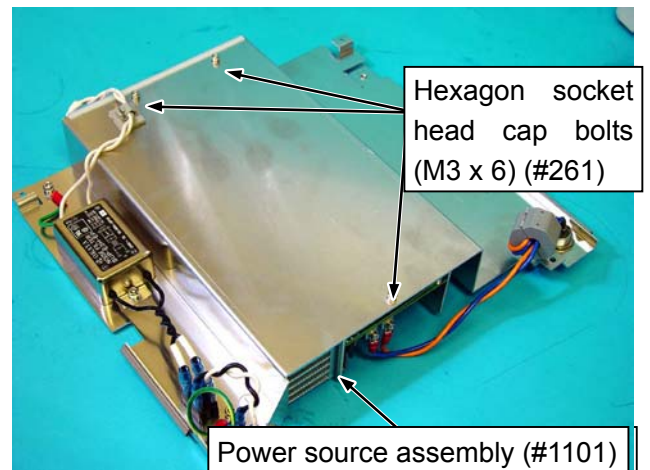


5-10-2. Assembling Power Source Assembly

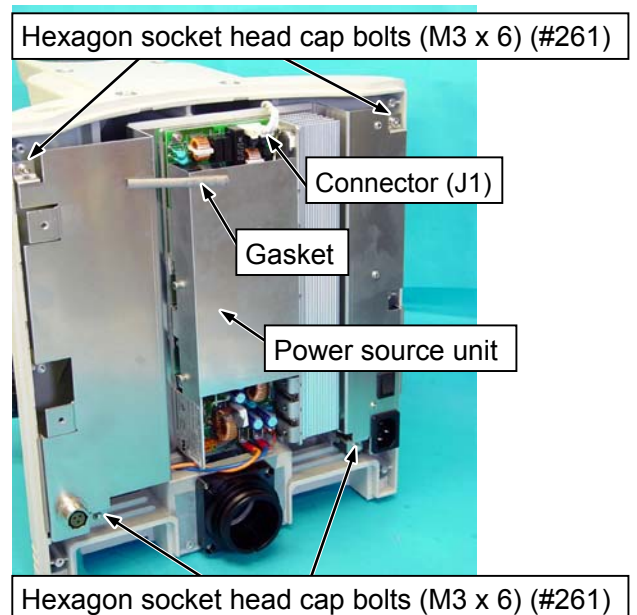
4. Tighten the cable with noise filter to the bending plate using the two hexagon socket head cap bolts (M4 x 6), and the ground terminal using a hexagon socket head cap bolt (M4 x 6).



5. Tighten the power source assembly using the three hexagon socket head cap bolts (M3 x 6).

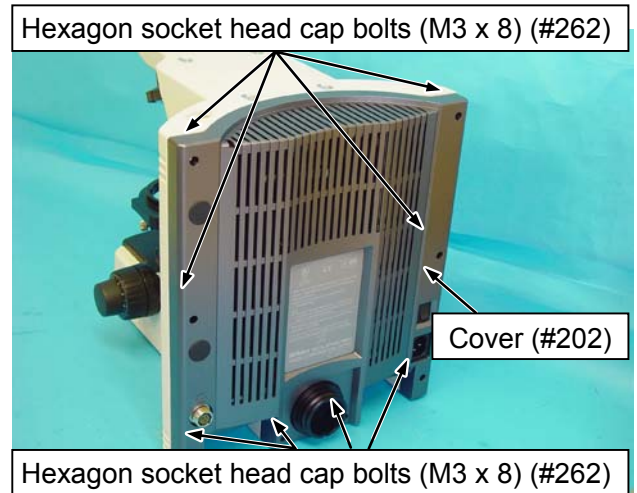


6. Tighten the power source unit using the four hexagon socket head cap bolts (M3 x 6).
7. Paste the gasket.
8. Connect the harness connector to the connector (J1) on the power source assembly.



5-10-2. Assembling Power Source Assembly

9. Tighten the cover using the eight hexagon socket head cap bolts (M3 x 8).



5-11-1. Disassembling Brightness Control Variable Resistor

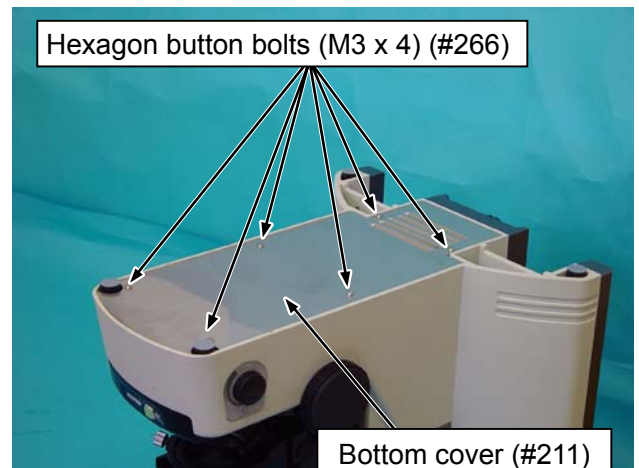
5-11-1. Disassembling

1. Remove the eyepiece tube.
2. Remove the objective lens.
3. Remove the condenser lens. (Refer to Section 5-2.)
4. Remove the stage. (Refer to Section 5-2.)
5. Place the microscope upside down.
6. Remove the six hexagon button bolts (M3 x 4) (#266), and remove the bottom cover (#211).

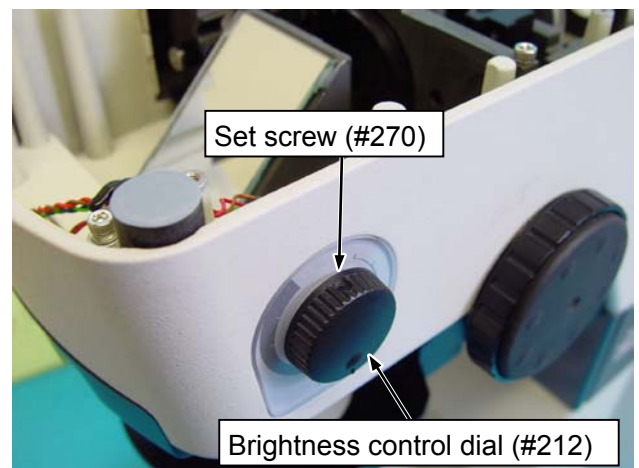
The six spring washers (#268) are removed at the same time.

[NOTE]

When removing the two hexagon button bolts among six bolts located on the rear side, be careful not to drop the spring washers into the microscope from the ventilation hole.

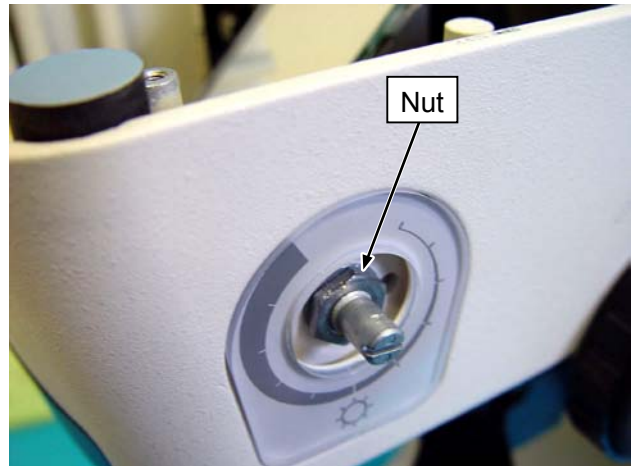
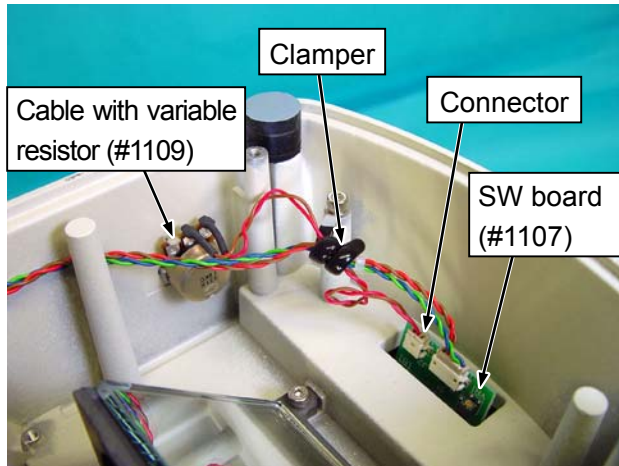


7. Loosen a set screw (#270), and remove the brightness control dial (#212).



5-11-1. Disassembling Brightness Control Variable Resistor

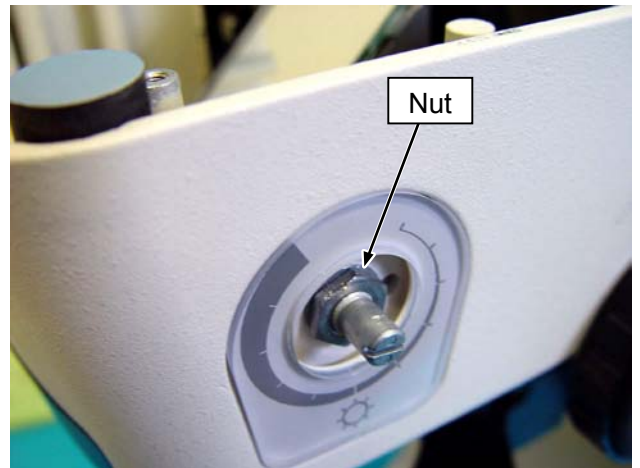
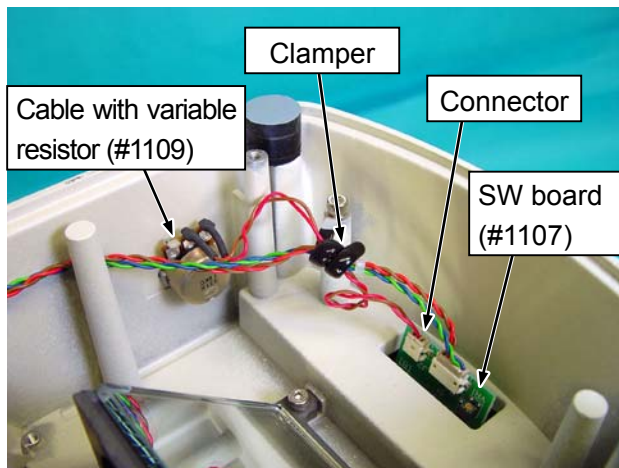
8. Disconnect the connector of the cable with variable resistor (#1109) from the SW board (#1107).
9. Release the clumper of the cable.
10. Remove a nut, and remove the cable with variable resistor.



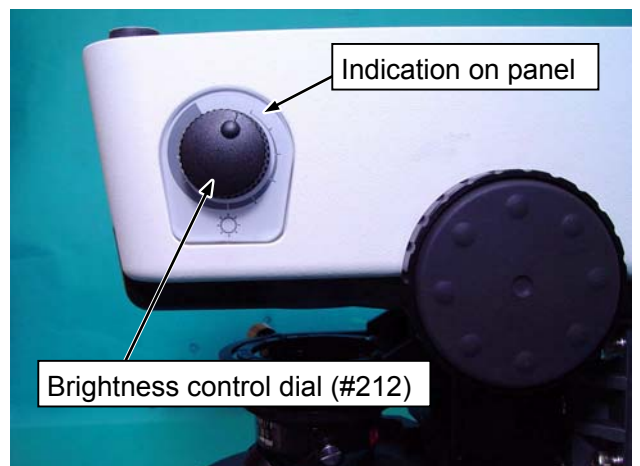
5-11-2. Assembling Brightness Control Variable Resistor

5-11-2. Assembling

1. Tighten the cable with variable resistor using a supplied nut.
2. Connect the connector of the cable with variable resistor to the SW board.
3. Fix the cable using the clumper.



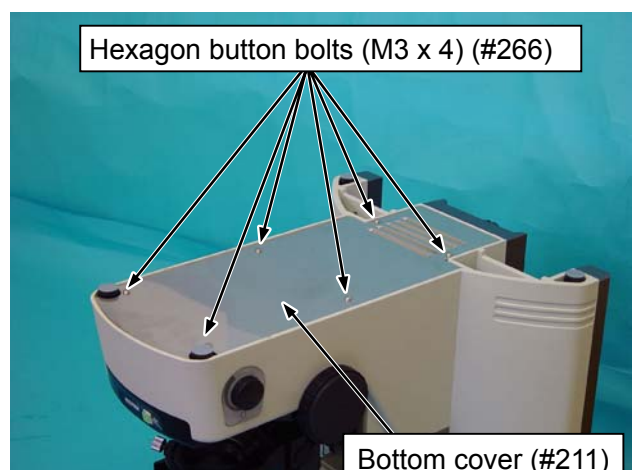
4. Install the brightness control dial to the shaft of the variable resistor, and adjust the position of the dial so that the indication of it places the minimum indication on the microscope. Tighten the brightness control dial using a set screw. When the brightness control dial is turned fully clockwise and counterclockwise, check that the indication of it is aligned with the indication on the microscope.



5. Tighten the bottom cover (#211) using the six hexagon button bolts (M3 x 4) and spring washers.

[NOTE]

When tightening the two hexagon button bolts at the rear side of the bottom cover, be careful not to drop the spring washers into the microscope from the ventilation hole.



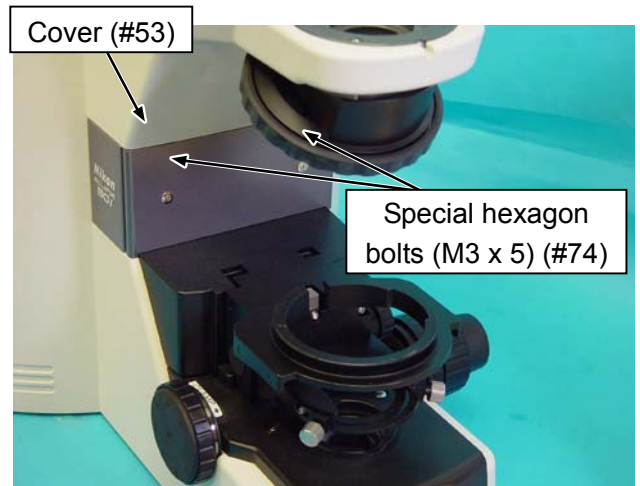
5-11-2. Assembling Brightness Control Variable Resistor

6. Return the microscope to its horizontal position.
7. Install the stage. (Refer to Section 5-2.)
8. Install the condenser lens. (Refer to Section 5-2.)
9. Install the objective lens.
10. Install the eyepiece tube.

5-12-1. Disassembling SW Board

5-12-1. Disassembling

1. Remove the eyepiece tube.
2. Remove the objective lens.
3. Remove the condenser lens. (Refer to Section 5-2.)
4. Remove the stage. (Refer to Section 5-2.)
5. Remove the two special hexagon bolts (M3 x 5) (#74), and remove the cover (#53).



6. Remove the two special hexagon bolts (M3 x 5) (#74), and remove the cover (#52) while expanding both lower sides.



5-12-1. Disassembling SW Board

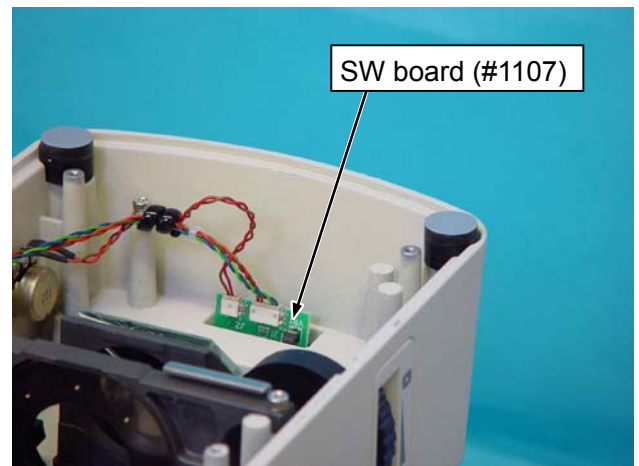
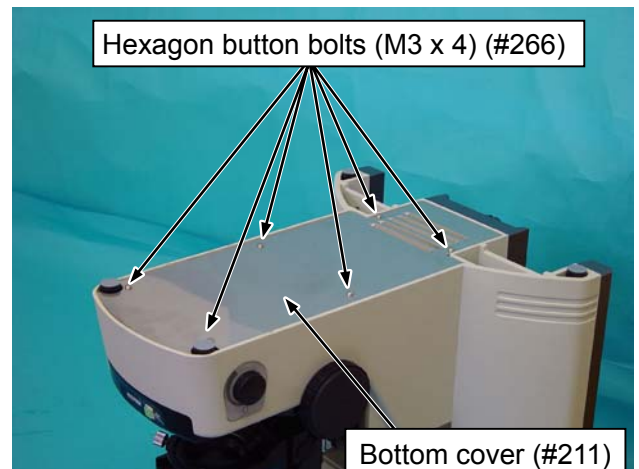
7. Place the microscope upside down.
8. Remove the six hexagon button bolts (M3 x 4) (#266), and remove the bottom cover (#211).

The six spring washers (#268) are removed at the same time.

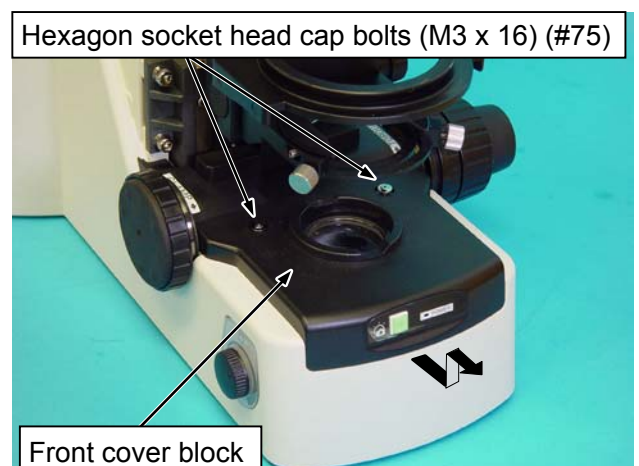
[NOTE]

When removing the two hexagon button bolts among six bolts located on the rear side, be careful not to drop the spring washers into the microscope from the ventilation hole.

9. Disconnect the two connectors from the SW board (#1107).



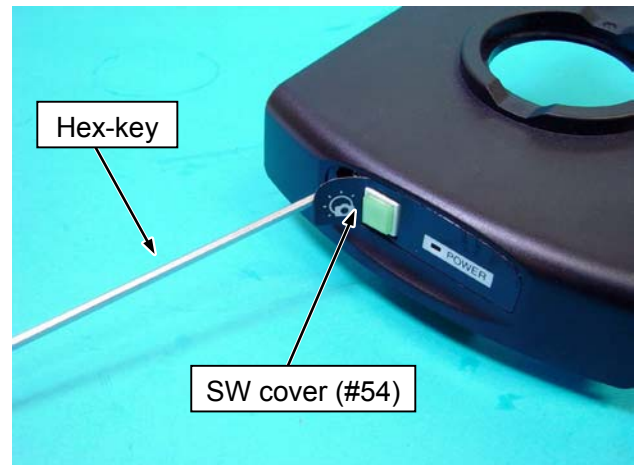
10. Return the microscope to its horizontal position.
11. Remove the two hexagon socket head cap bolts (M3 x 16) (#75) fixing the front cover block.
12. Move the front cover block in the direction of the arrow to remove.



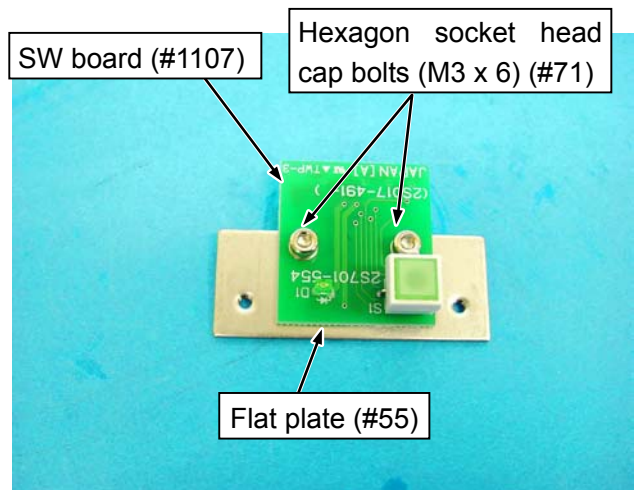
5-12-1. Disassembling SW Board

13. Peel off both ends of the SW cover (#54) so that it does not bend.

Insert the hex-key into the hole, and remove the two hexagon socket head cap bolts (M3 x 6) (#71) to remove the SW board block.



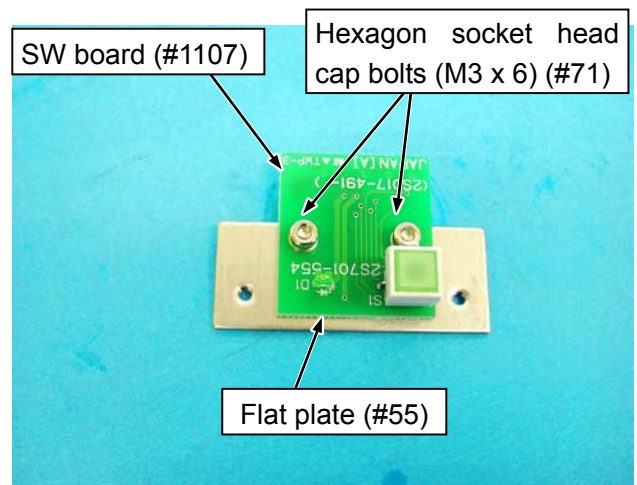
14. Remove the two hexagon socket head cap bolts (M3 x 6) (#71), and remove the SW board (#1107) from the flat plate (#55).



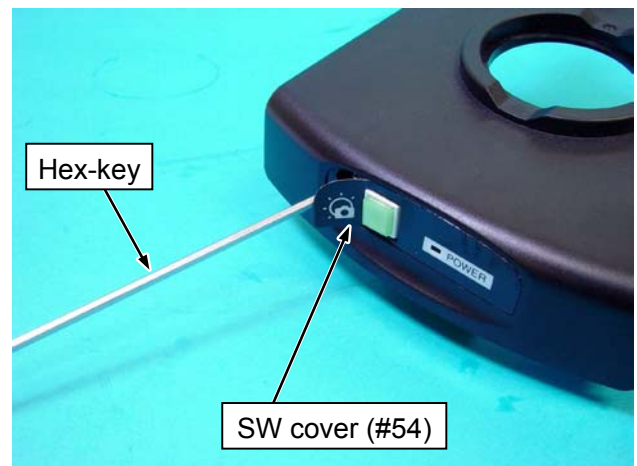
5-12-2. Assembling SW Board

5-12-2. Assembling

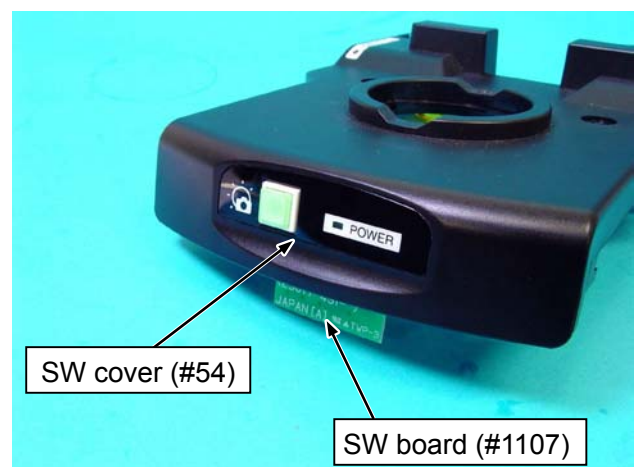
1. Tighten the SW board to the flat plate using the two hexagon socket head cap bolts (M3 x 6).



2. Insert the hex-key into the hole, and tighten the SW board block using the two hexagon socket head cap bolts (M3 x 6).

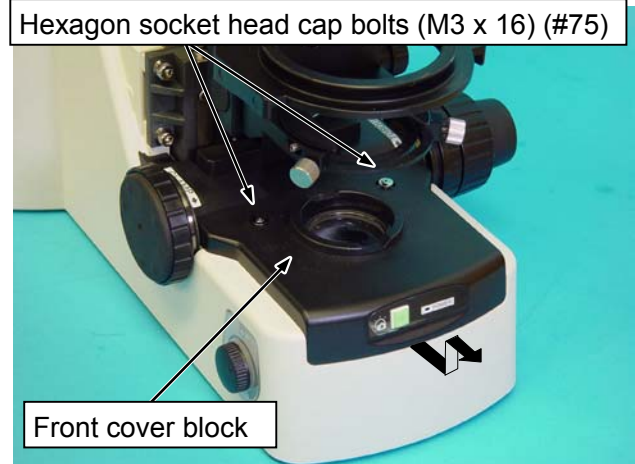


3. Paste the SW cover firmly to the microscope.



5-12-2. Assembling SW Board

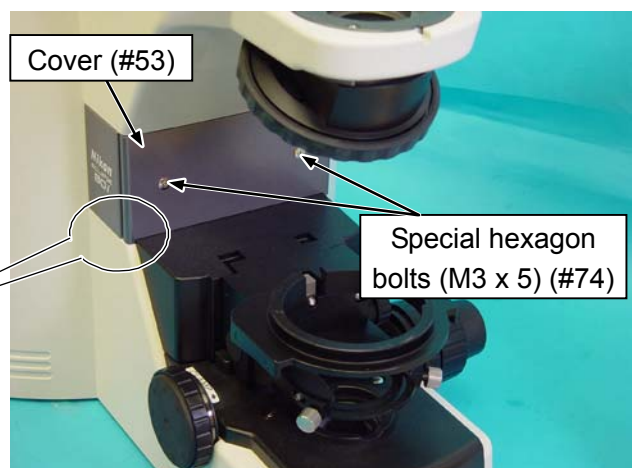
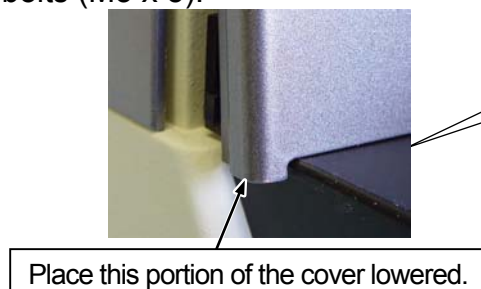
4. Install the SW board on the front cover block into the square hole on the microscope, and firmly move it in the opposite direction of the arrow. Tighten the front cover block using the two hexagon socket head cap bolts (M3 x 16) (#75).



5. Install the cover to the microscope while expanding both lower sides of it, and tighten it using the two special hexagon bolts (M3 x 5).

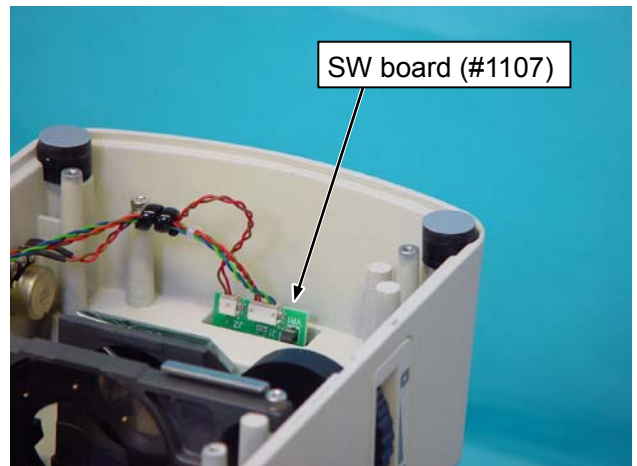


6. Install the cover to the microscope in the direction as shown in the photograph, and tighten it using the two special hexagon bolts (M3 x 5).



5-12-2. Assembling SW Board

7. Place the microscope upside down.
8. Remove the eight hexagon socket head cap bolts (M3 x 8) (#262), and remove the cover (#202). (Refer to Section 5-10-1 Disassembling Power Source Assembly.)
9. Connect the two connectors to the SW board.

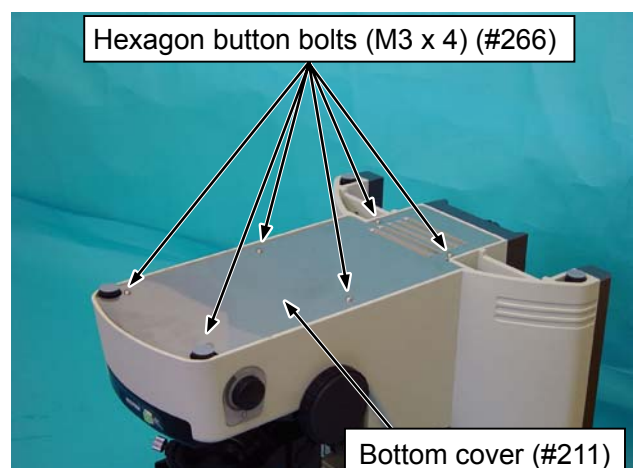


10. Connect the D-LH Precentered Lamphouse to the lamphouse connector on the back side of the microscope.
11. Supply an AC power, and press the power switch to the "I" position.
12. Check the lamp lights up, and then press the preset switch on the front side of the microscope.
13. Connect the circuit tester between J4 and J5 terminals (J5: - side) on the power module on the back side of the microscope.
14. Adjust the voltage using a trimmer mounted on the SW board.
Specifications: 9.5 +/-0.2 V DC

15. After adjustment, install the cover (#202). (Refer to Section 5-10-2 Assembling Power Source Assembly.)
16. Tighten the bottom cover (#211) using the six hexagon button bolts (M3 x 4) and spring washers.

[NOTE]

When tightening the two hexagon button bolts at the rear side of the bottom cover, be careful not to drop the spring washers into the microscope from the ventilation hole.

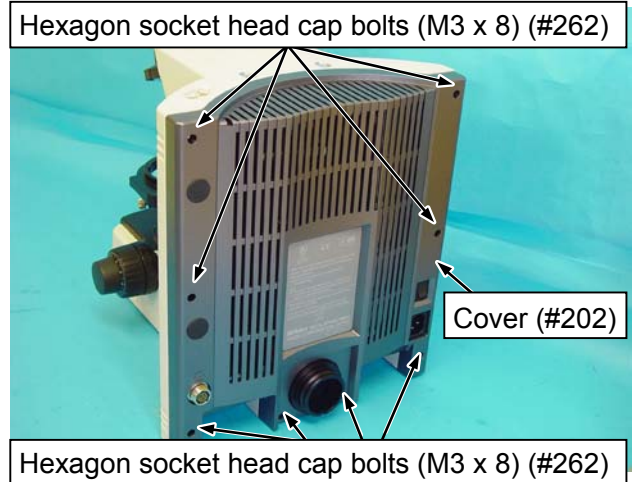


17. Return the microscope to its horizontal position.
18. Install the stage. (Refer to Section 5-2.)
19. Install the condenser lens. (Refer to Section 5-2.)
20. Install the objective lens.
21. Install the eyepiece tube.

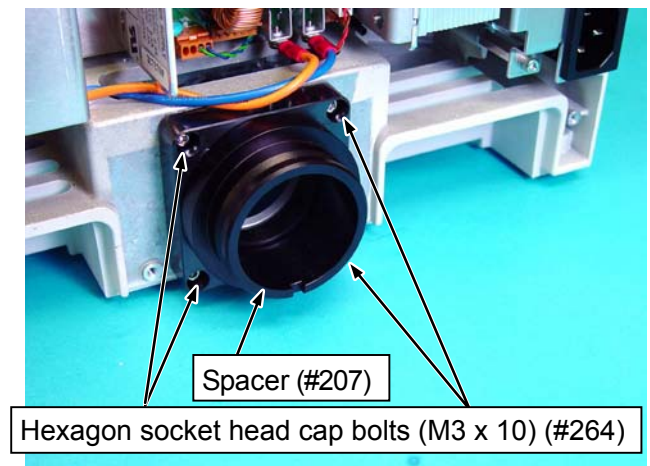
5-13-1. Disassembling Joint Ring for Lamp-house

5-13-1. Disassembling

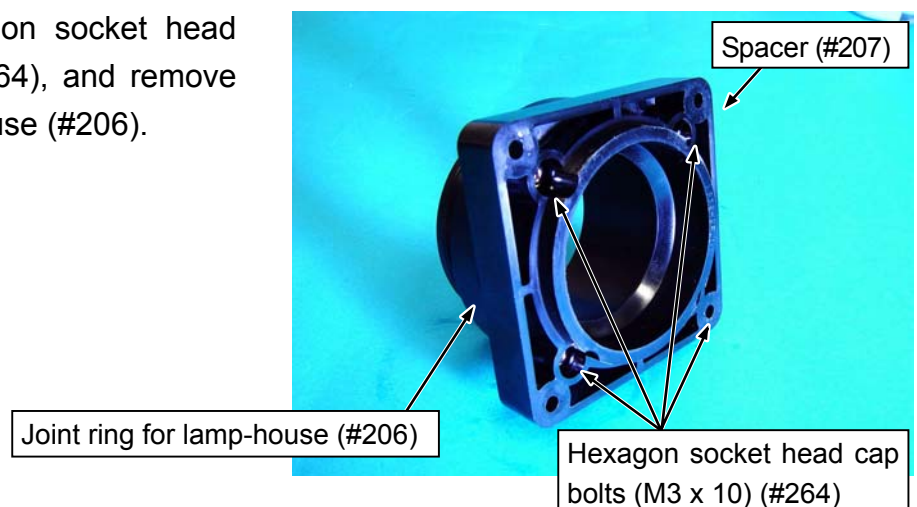
1. Remove the eight hexagon socket head cap bolts (M3 x 8) (#262), and remove the cover (#202).



2. Remove the four hexagon socket head cap bolts (M3 x 10) (#264), and remove the spacer (#207).



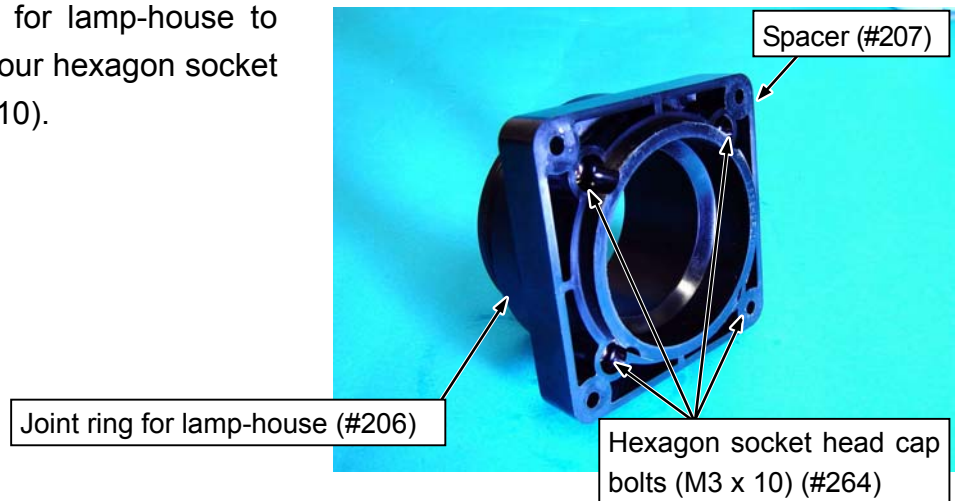
3. Remove the four hexagon socket head cap bolts (M3 x 10) (#264), and remove the joint ring for lamp-house (#206).



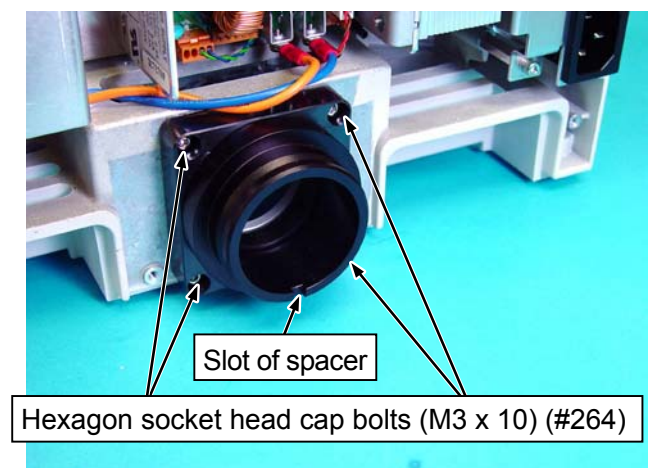
5-13-2. Assembling Joint Ring for Lamp-house

5-13-2. Assembling

1. Tighten the joint ring for lamp-house to the spacer using the four hexagon socket head cap bolts (M3 x 10).



2. Tighten the spacer using the four hexagon socket head cap bolts (M3 x 10) so that the slot of the spacer faces downward.



3. Tighten the cover using the eight hexagon socket head cap bolts (M3 x 8).

