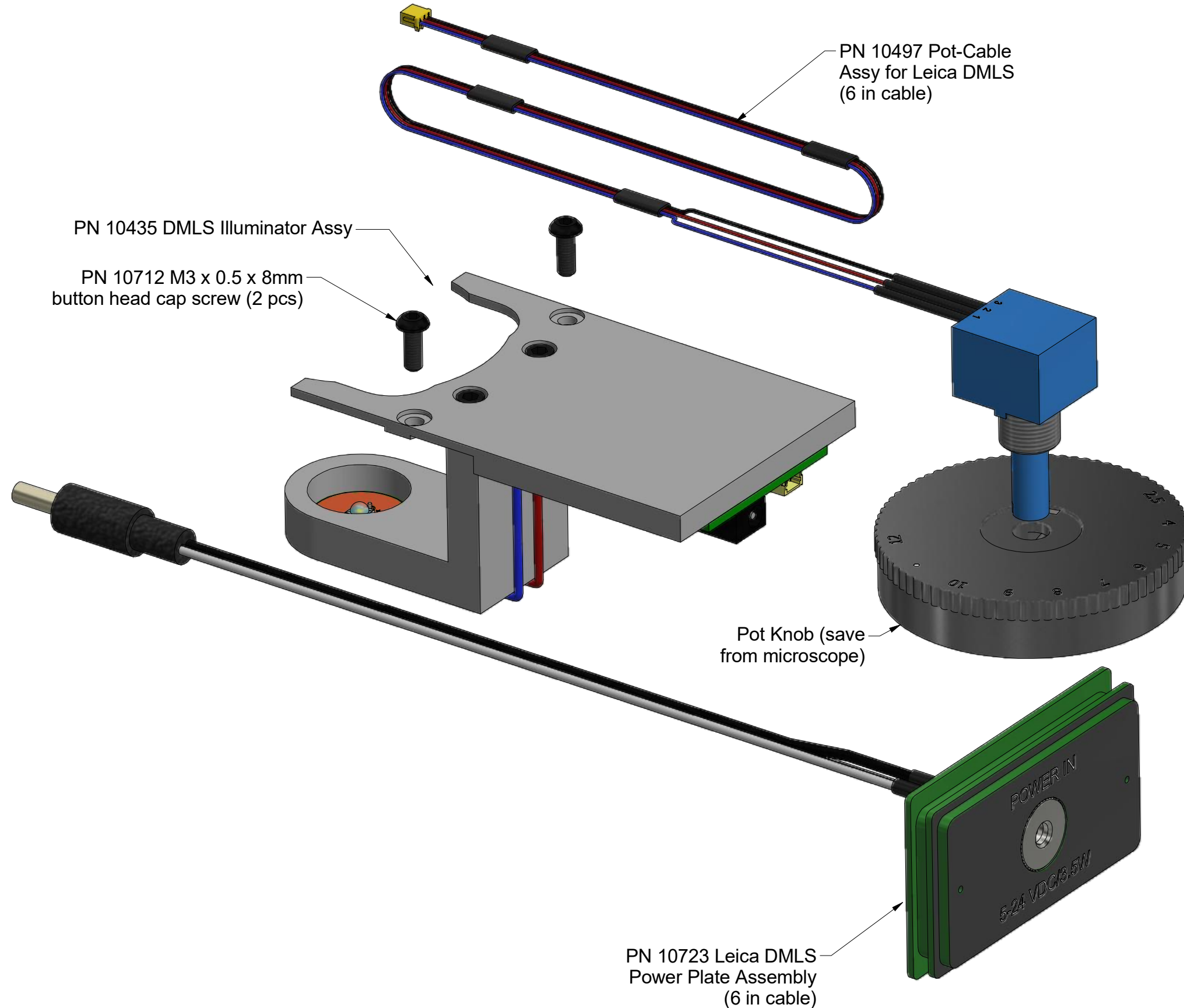


Nanodyne Replacement Illuminator for Leica DMLS Microscope Installation Instructions: Included Items

Additional Items Included But Not Shown:

- PN 10456 1.5mm Hex Key (for pot adjustment knob)
- PN 10337 2mm Hex Key (for M3 mounting screws)
- PN 10444 Tool to remove OEM lamp assembly



PN 10733 Power Supply - XP Power 5V 1A and PN 10734 Cable Assy 1.35mm ID x 3.5mm OD RA plug to USB A, 6 foot.

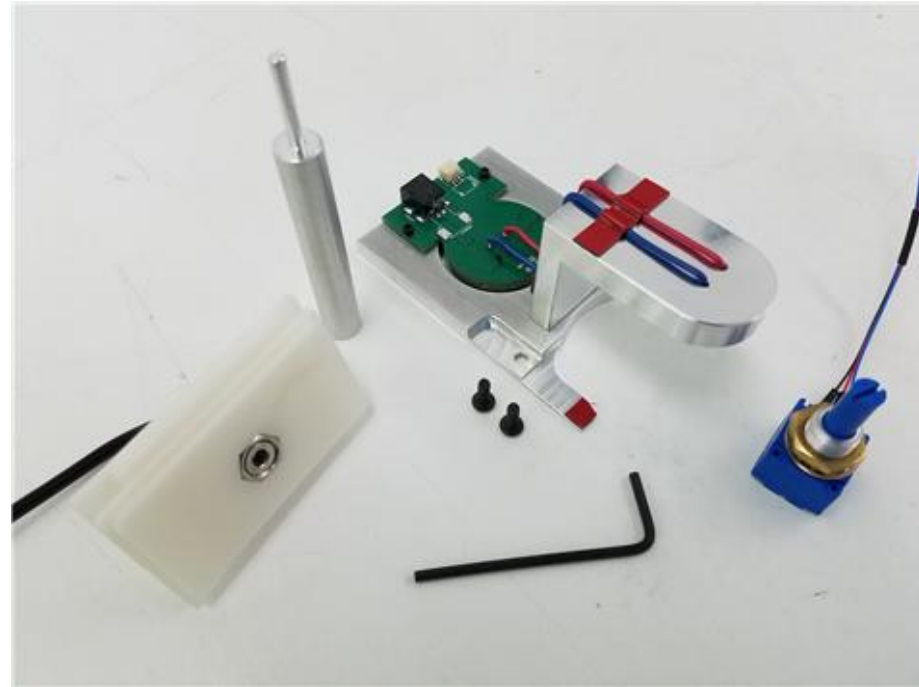
The illuminator may be powered by plugging the cable into the power supply provided, or into a suitable USB port on a computer or other device.

Power supplies are subject to substitution without notice due to availability issues and changes in regulations.

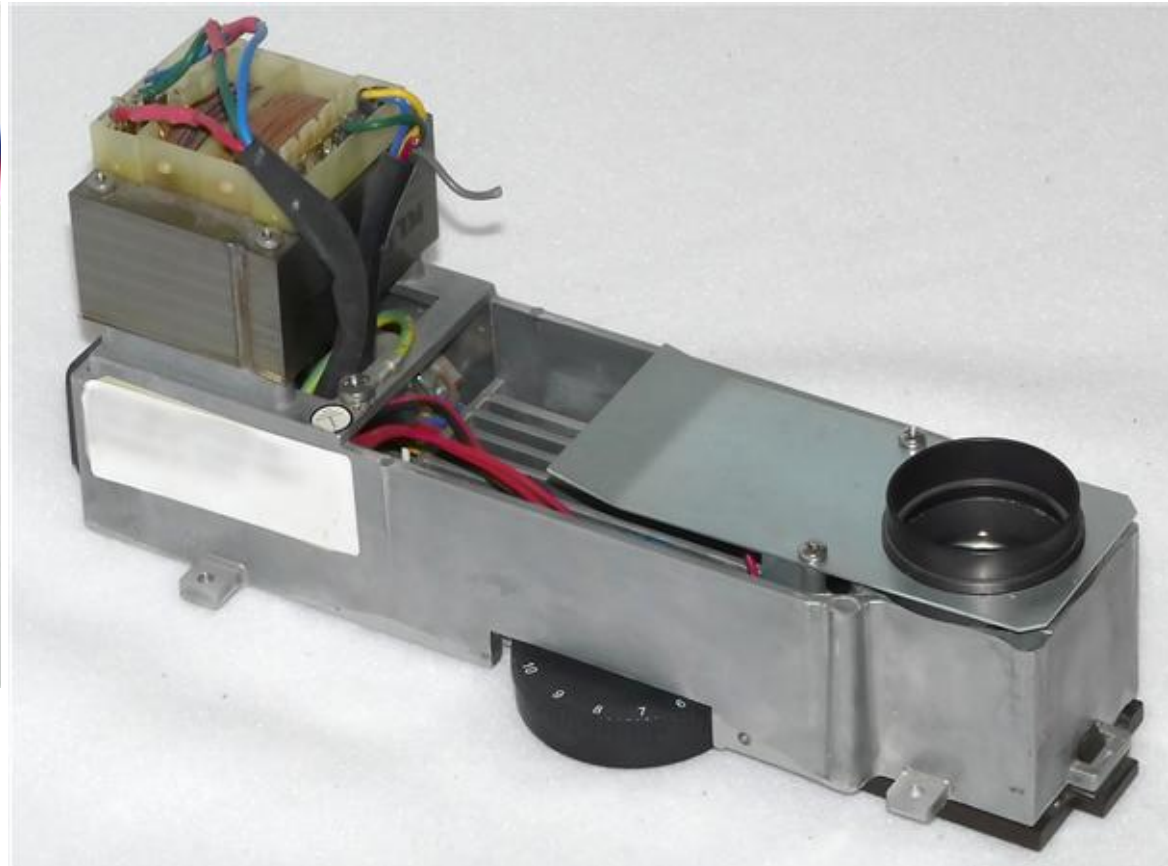
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Nanodyne Replacement Illuminator for Leica DMLS Microscope Installation Instructions - Step 1. Remove old illuminator assembly.

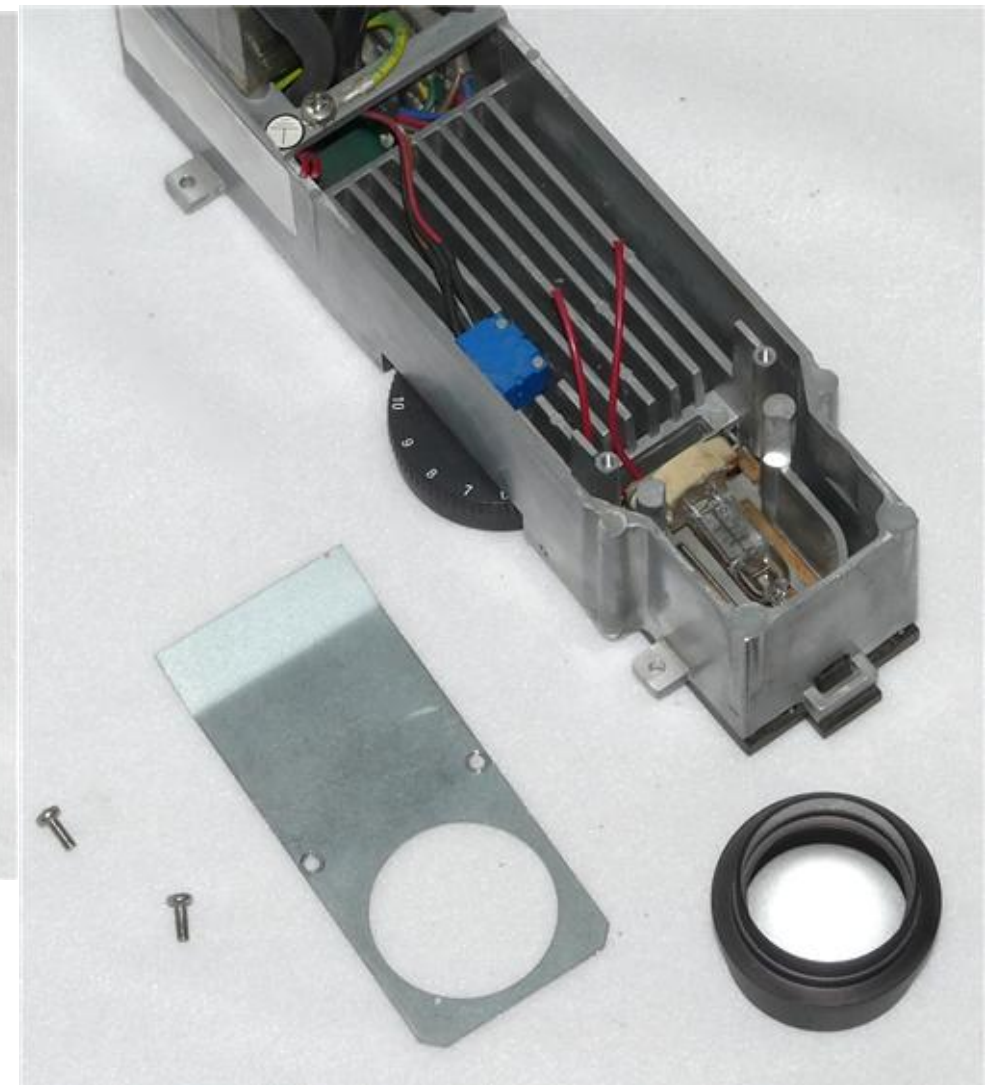


(1) Included items.



(2) Remove original illuminator assembly from microscope.

Note - we created these instructions using an illuminator assembly loaned to us. We did not have an entire microscope, only what is shown above, so we cannot show details of the removal and replacement of the illuminator from the microscope. (the gray and red cut leads by the transformer are as we received it)

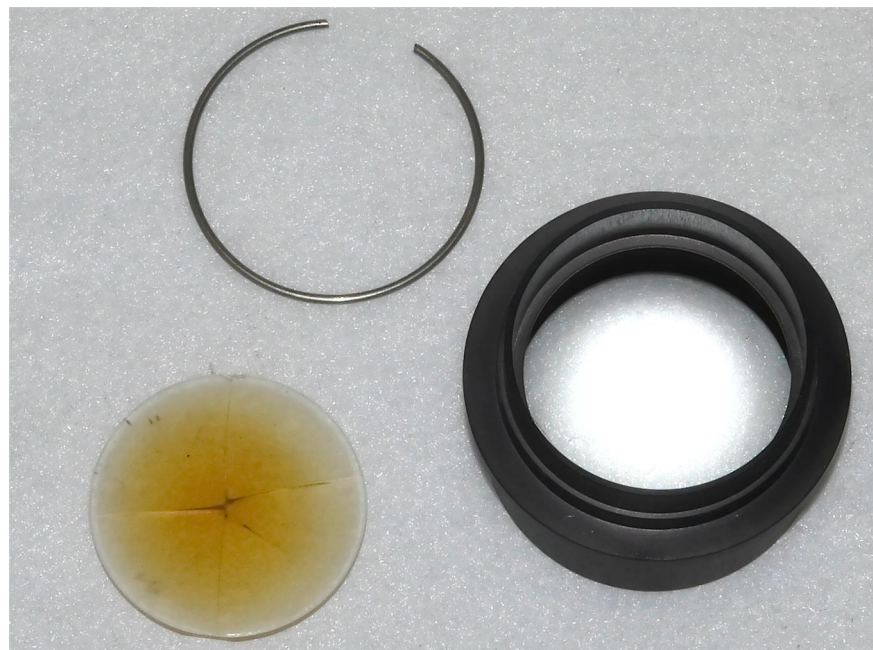


(3) Remove the sheet metal plate holding the condenser lens. Remove the collector lens and cut the leads to the lamp.

(note - the heat damaged diffuser shown in photo 4 has already been removed)

(4, continued) Olympus has conveniently located the diffuser so that the collector lens must be removed to get access to the diffuser. Then the clip holding the diffuser is accessible. If you have an assortment of dental picks, removing the clip ring will probably not be too hard. Without them you may find removal of the ring to be impossible.

The clip holding the lens was much easier to remove than the one holding the diffuser, so if you cannot get the diffuser clip out and are confident in your ability to judiciously apply violence you might try breaking the diffuser out. If you have the hands of a brain surgeon you might try this without removing the lens. In any case, Nanodyne will not be responsible for any damage which may result.

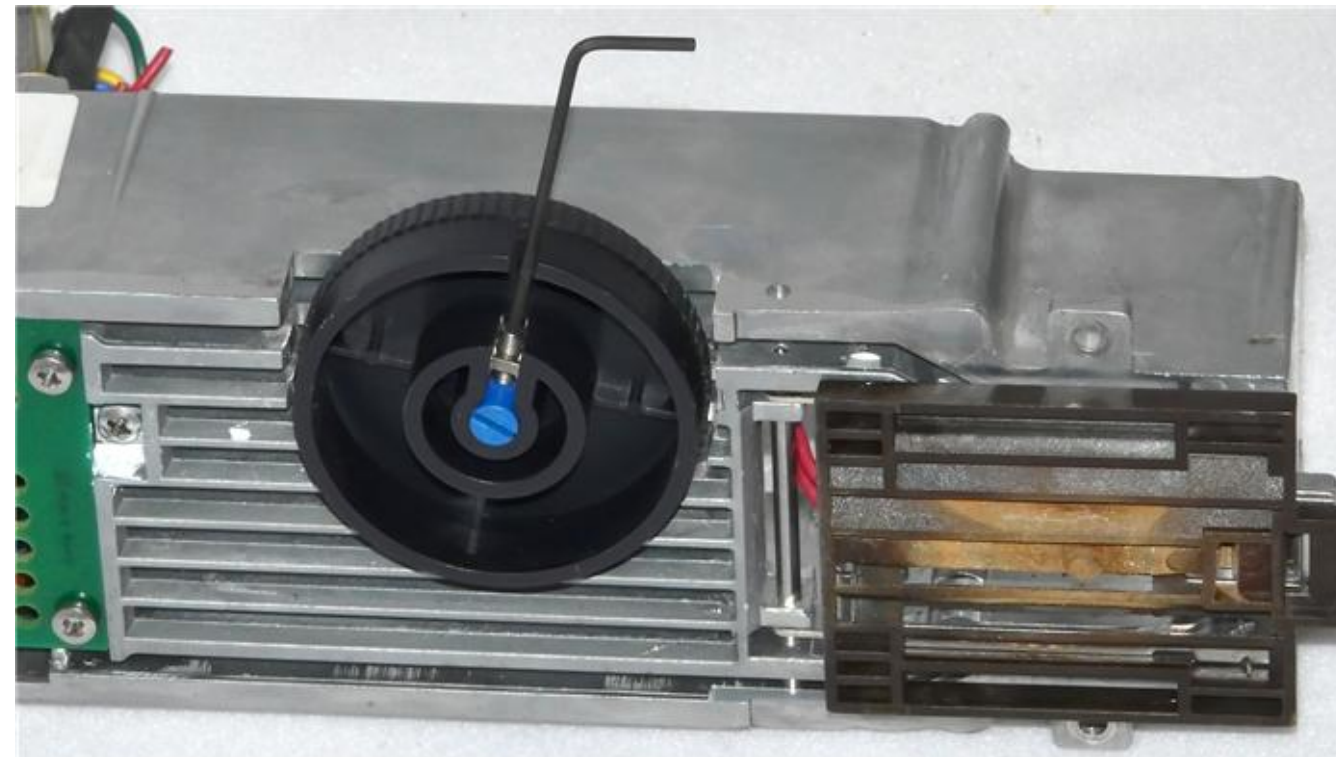


(4) If the plastic diffuser looks like the one shown above it needs to be removed.

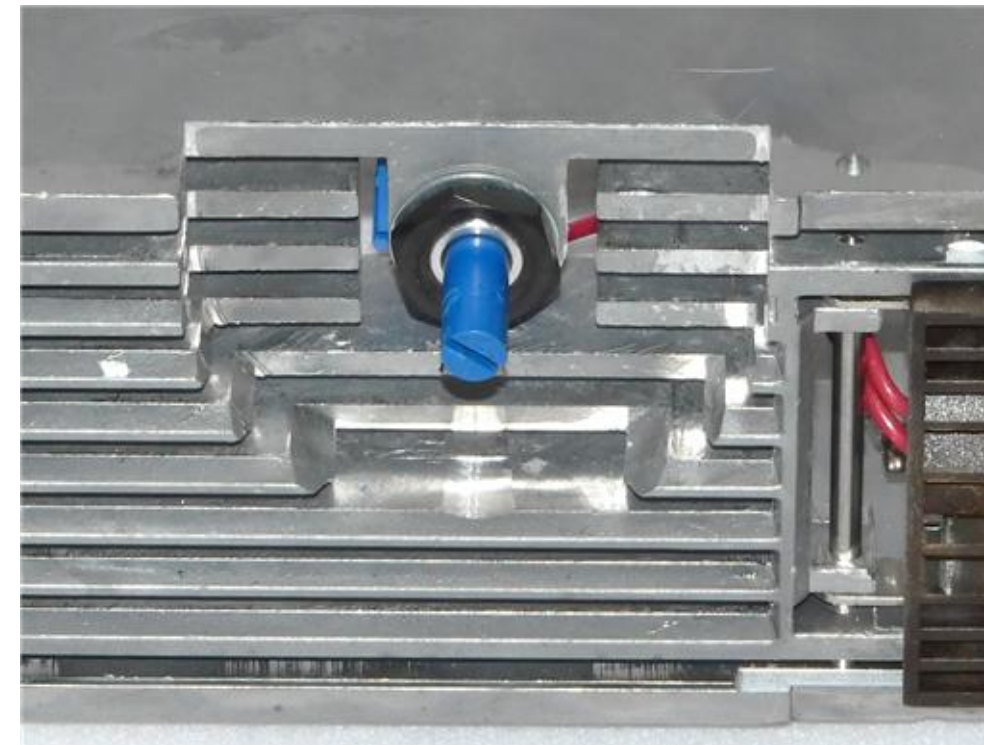
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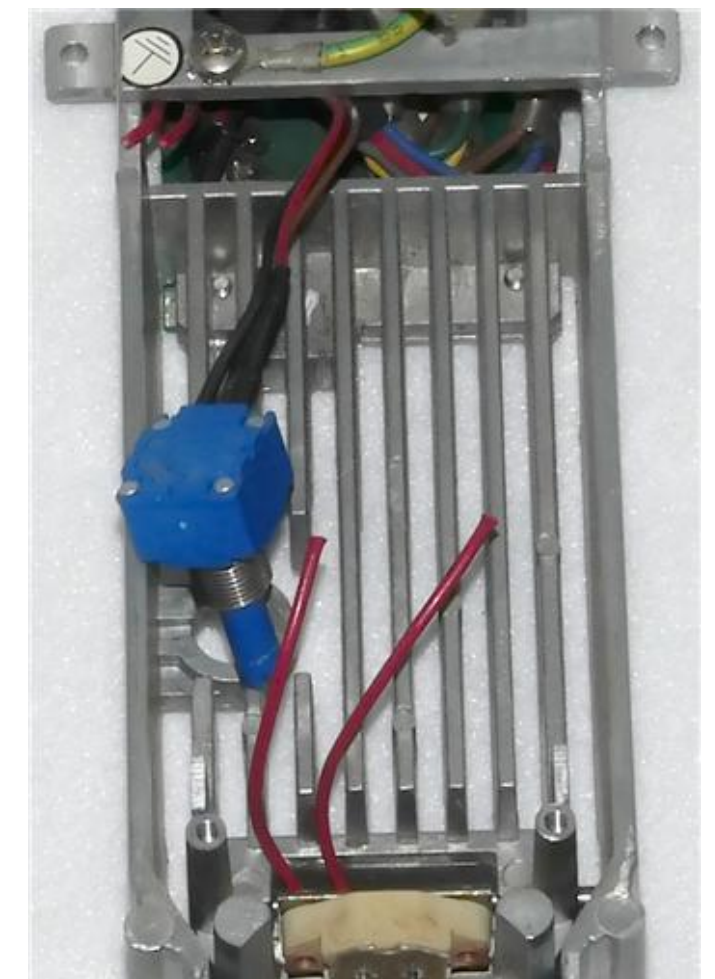
Nanodyne Replacement Illuminator for Leica DMLS Microscope Installation Instructions: Step 2. Remove old potentiometer.



(1) Remove the knob from the old pot using the 1.5mm hex key.

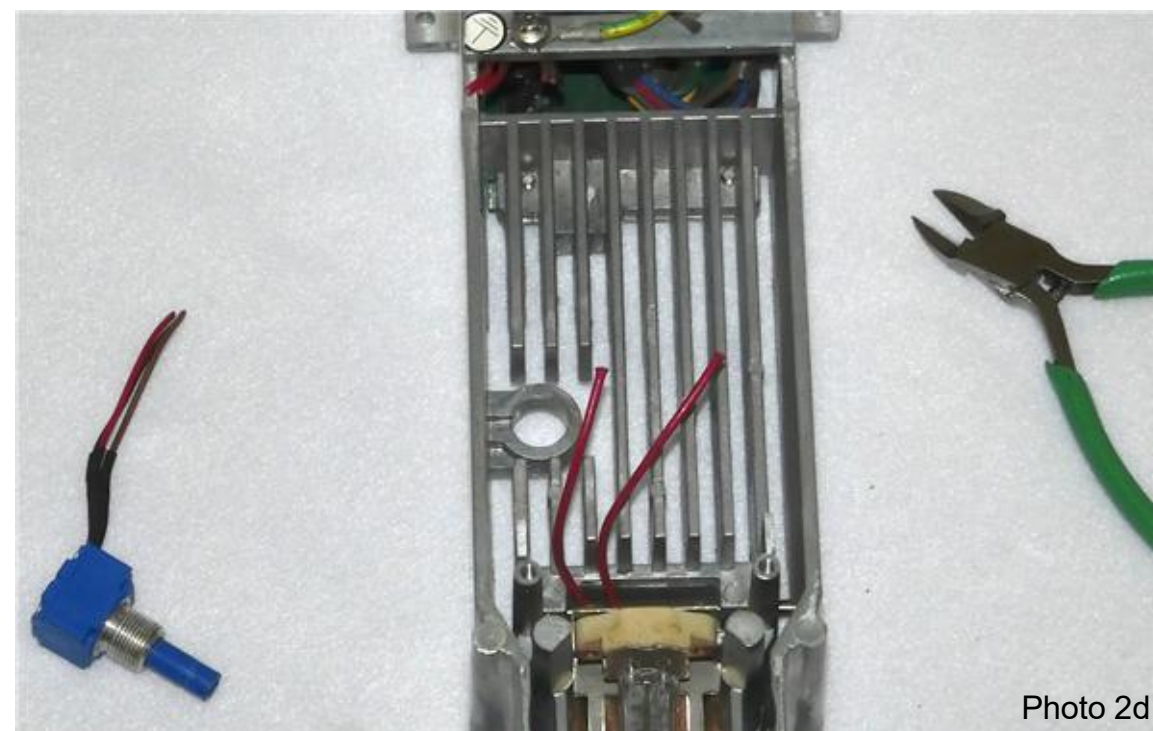


(2) Pot knob removed.



(3) Remove the nut holding the Pot. Remove the pot.

The proper size wrench for the nut is 14mm, but 9/16 will also work.

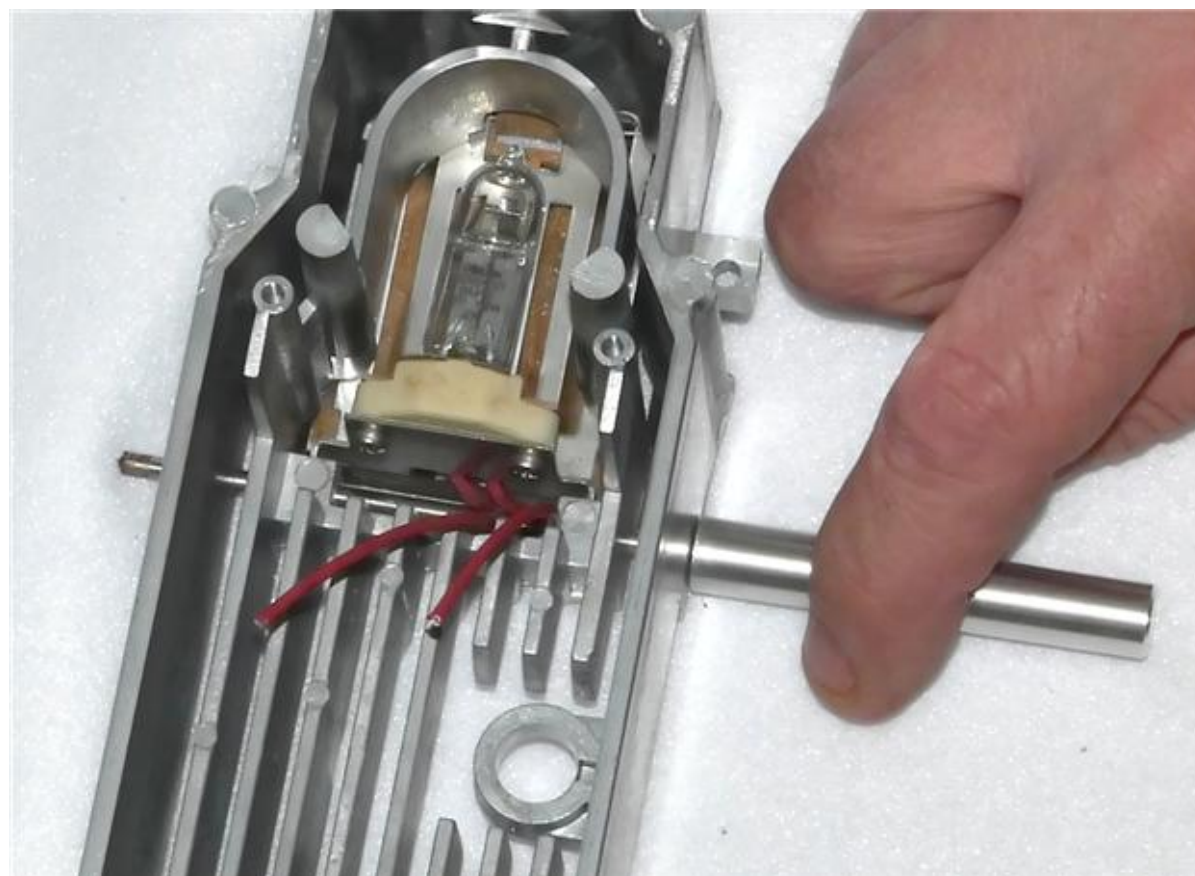
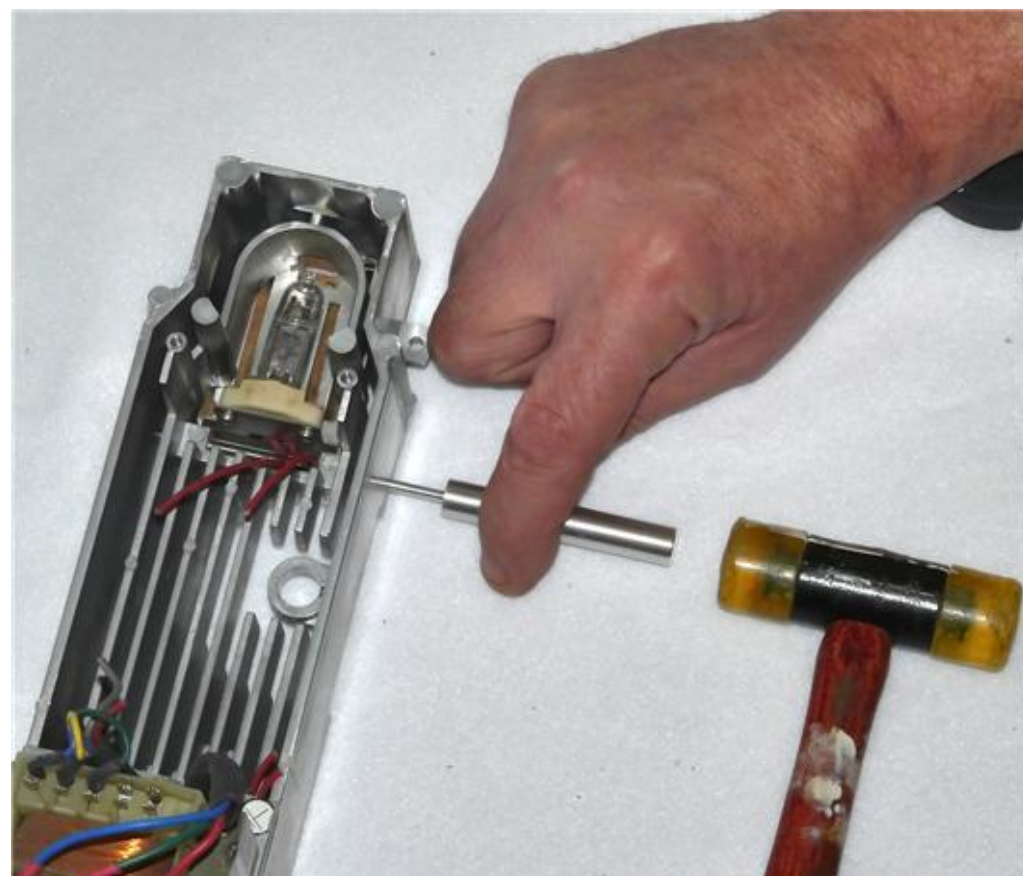
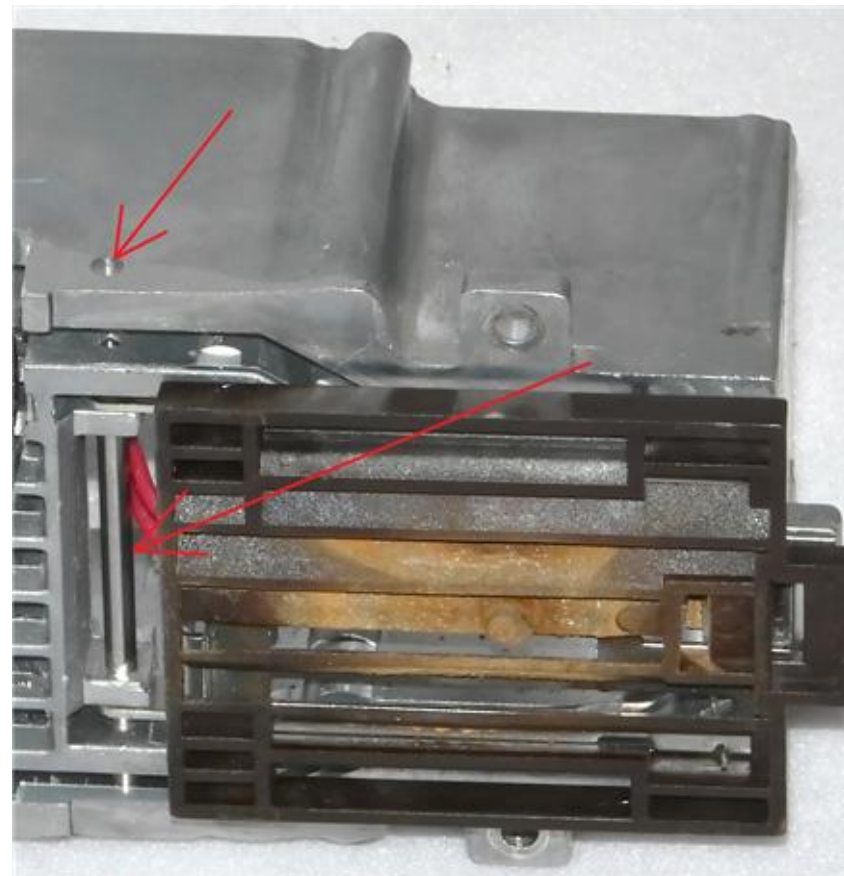


(4) Cut the leads to the pot and remove it completely.

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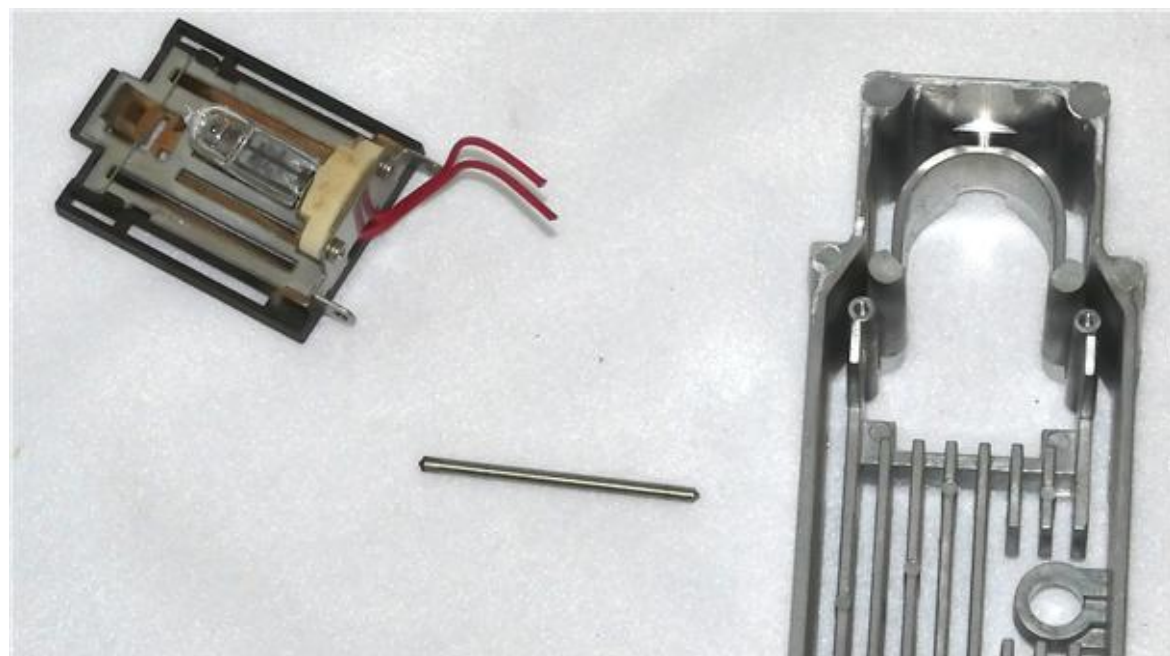


Nanodyne Replacement Illuminator for Leica DMLS Microscope Installation Instructions: Step 3. Remove old lamp and housing.



**(1)** Remove the hinge shaft holding the lamp assembly in place. Use the tool provided, and a small hammer as shown above.

**(2)** Drive the shaft out as far as possible by the tool. The shaft can then be removed by hand, or with pliers.

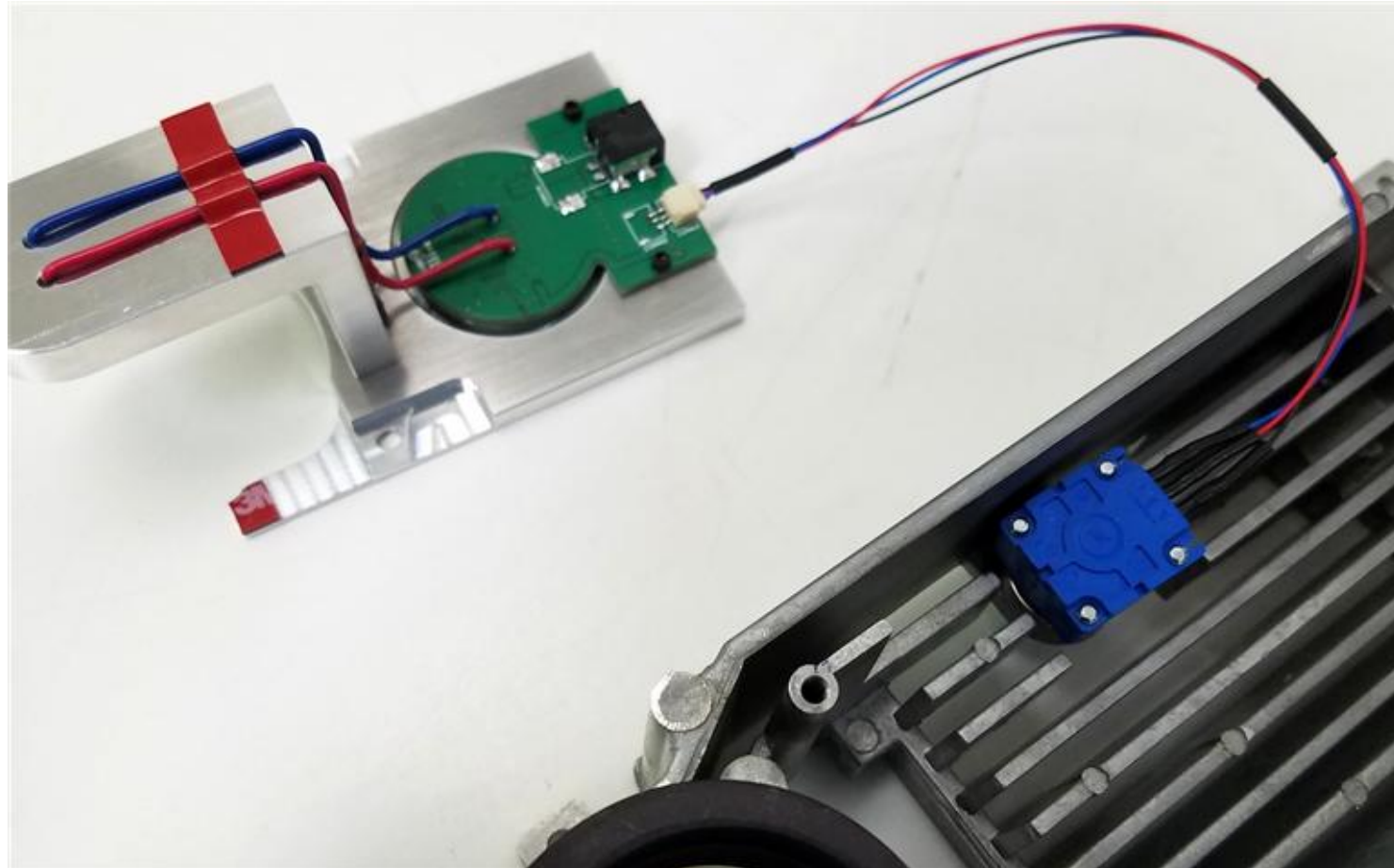


**(3)** After the shaft is removed, remove the lamp assembly.

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Nanodyne Replacement Illuminator for Leica DMLS Microscope Installation Instructions: Step 4. Install Nanodyne illuminator assembly.



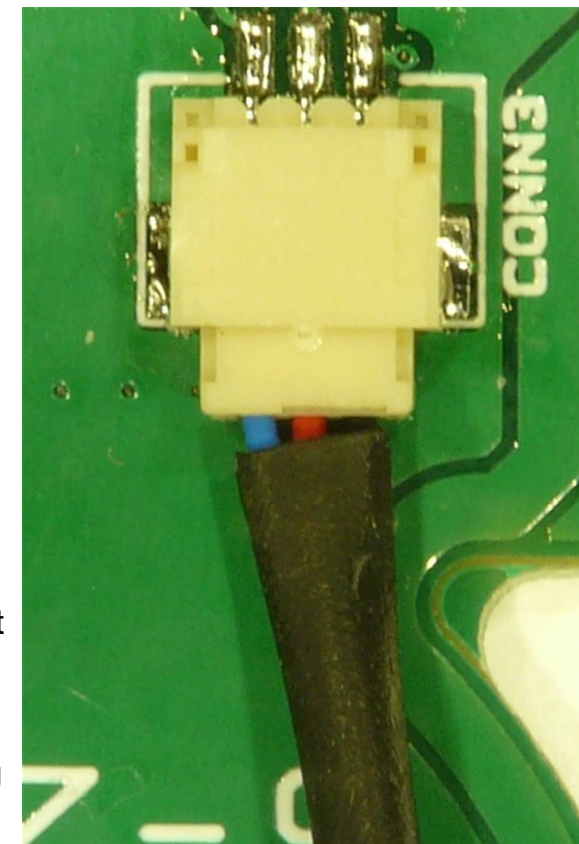
**(1)** Attach the new pot oriented as shown in above. Secure it with the brass nut provided.  
 (we recommend NOT using the toothed washer also provided, as it limits the thread engagement with the nut)  
 If not already attached, connect the pot cable to the illuminator. See the photos 3 and 4 at the bottom right for details.

**(3)** Connect the pot cable to the connector under the circuit board as shown. It must be oriented as shown. It can be inserted as far as shown by holding the wires.

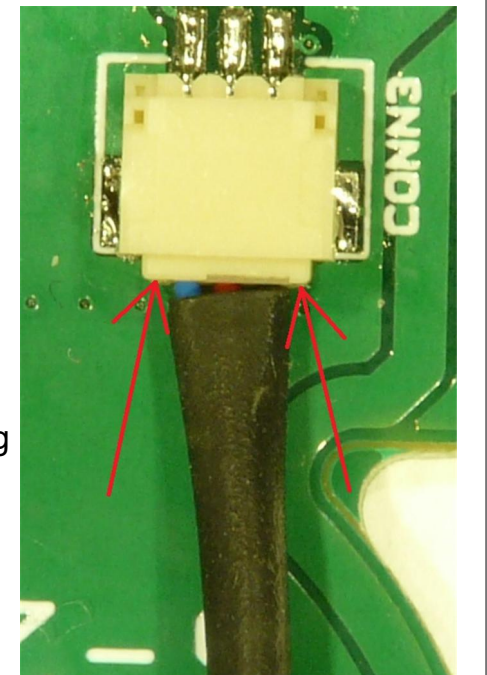


**(2)** Install the Nanodyne illuminator assembly as shown above. Secure it to the microscope with the two M3 x 8mm button head cap screws. Use the 2mm hex key to tighten.

Note that the collector lens must be installed before the illuminator assembly is attached.

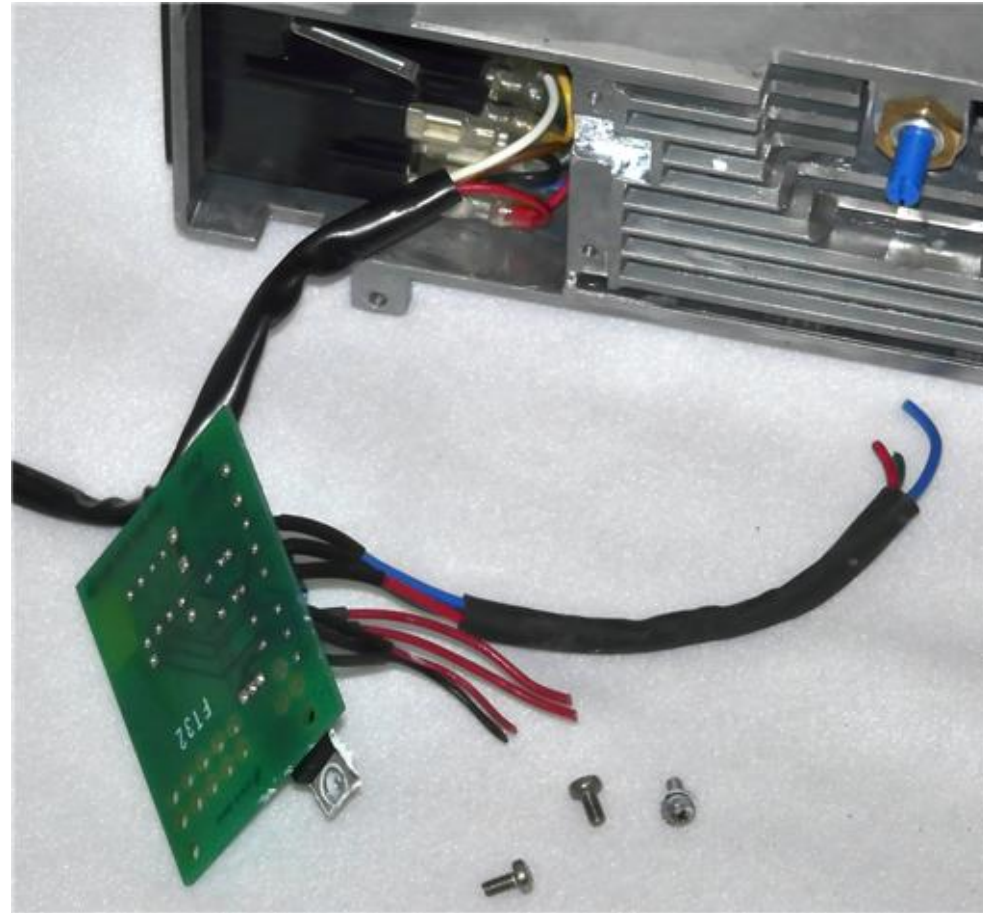


**(4)** Engage the connection by pushing on the sides of the plug with your fingernails, tweezers or a small screwdriver.

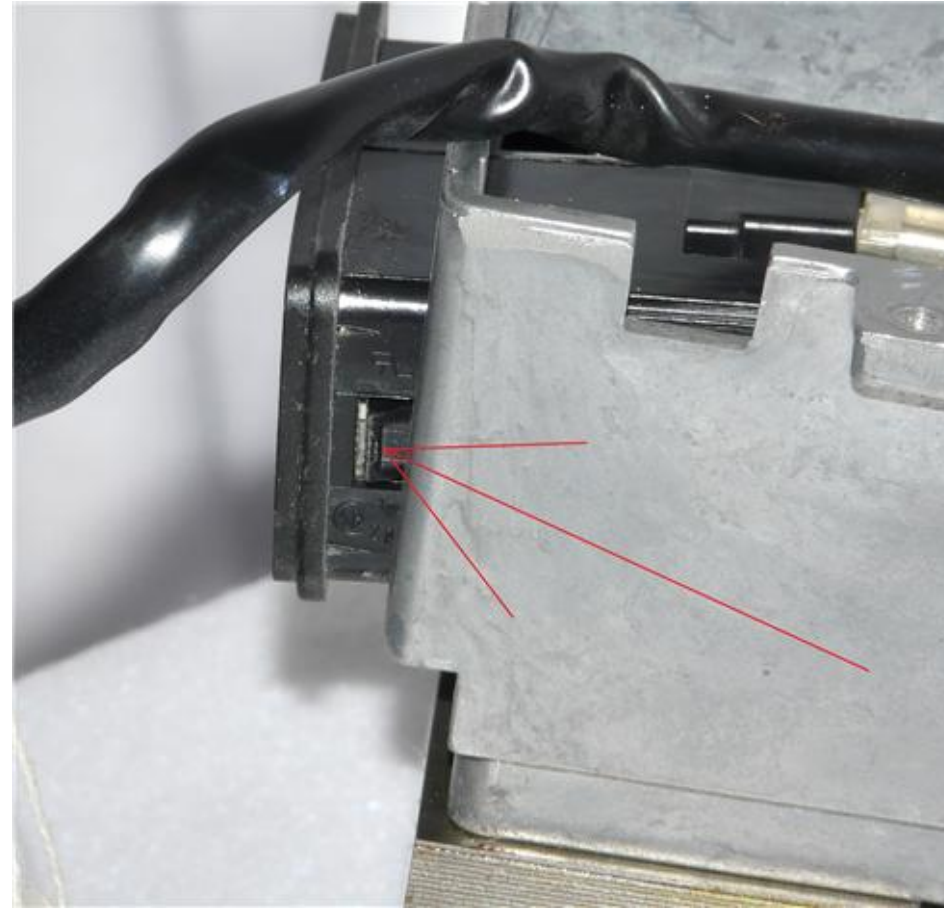




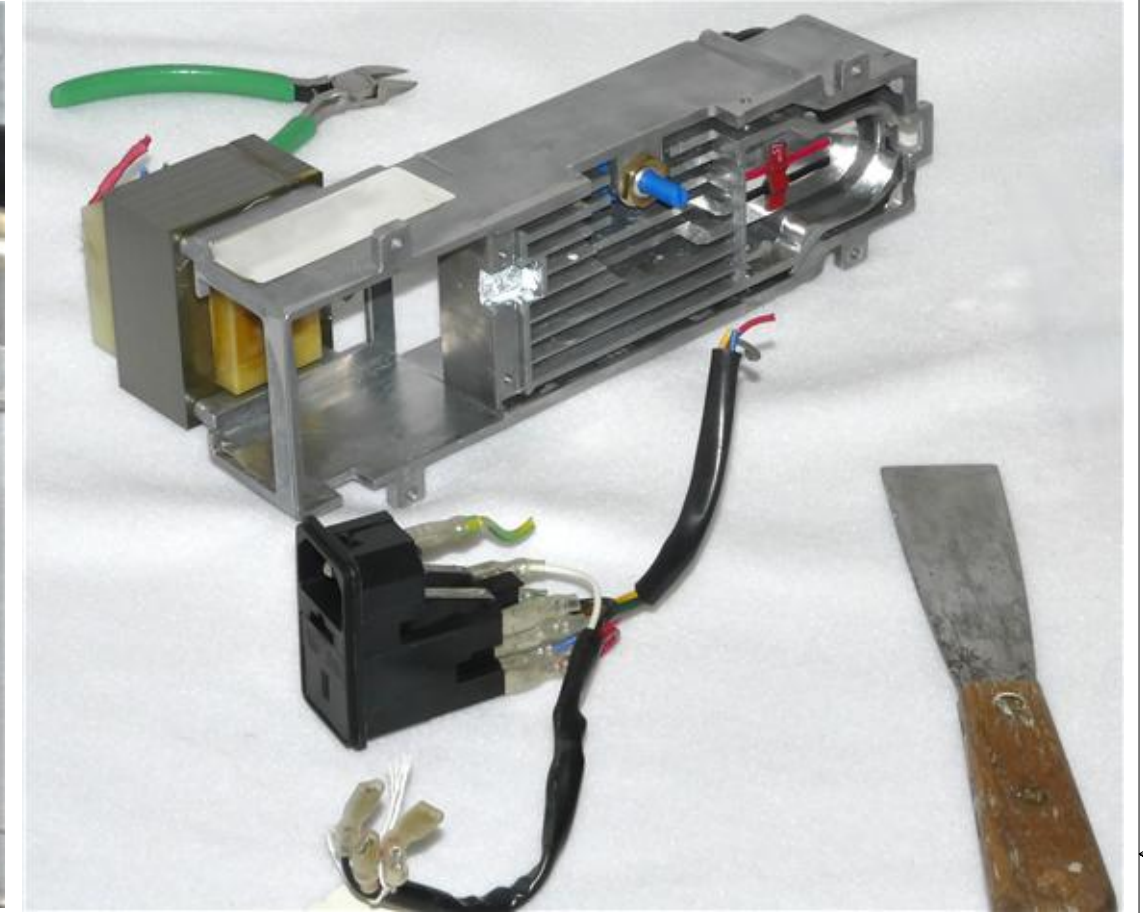
Nanodyne Replacement Illuminator for Leica DMLS Microscope Installation Instructions: Step 5. Remove the Old PCB and AC Power Receptacle.



(1) Remove the two screws holding the green circuit board in place, and the screw holding the power transistor. Remove the circuit board, cutting or disconnecting any wires as required.



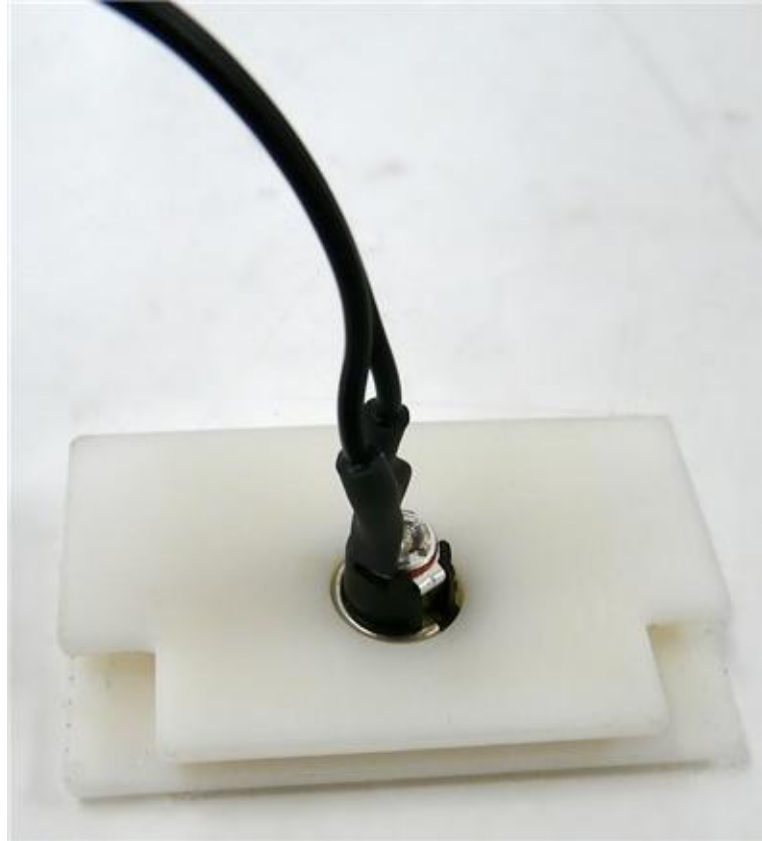
(2) Remove the old AC power receptacle. The photo above shows one of the two tabs that keep the receptacle in place. A putty knife may be used to depress the tabs, allowing the receptacle to be removed. Cut or disconnect any wires as required.



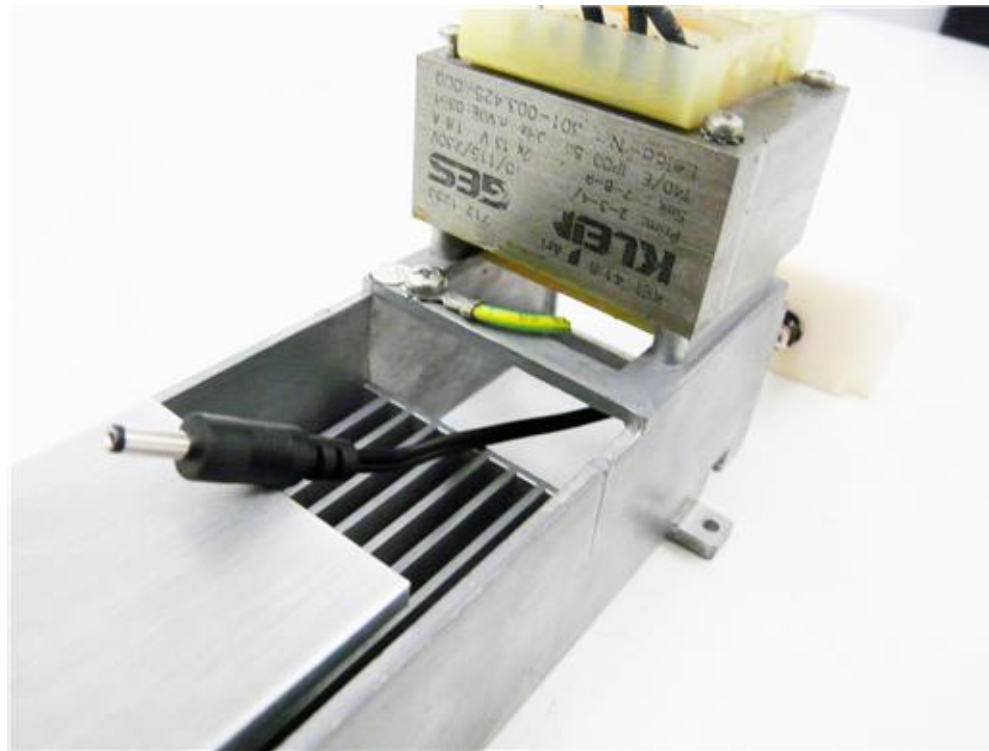
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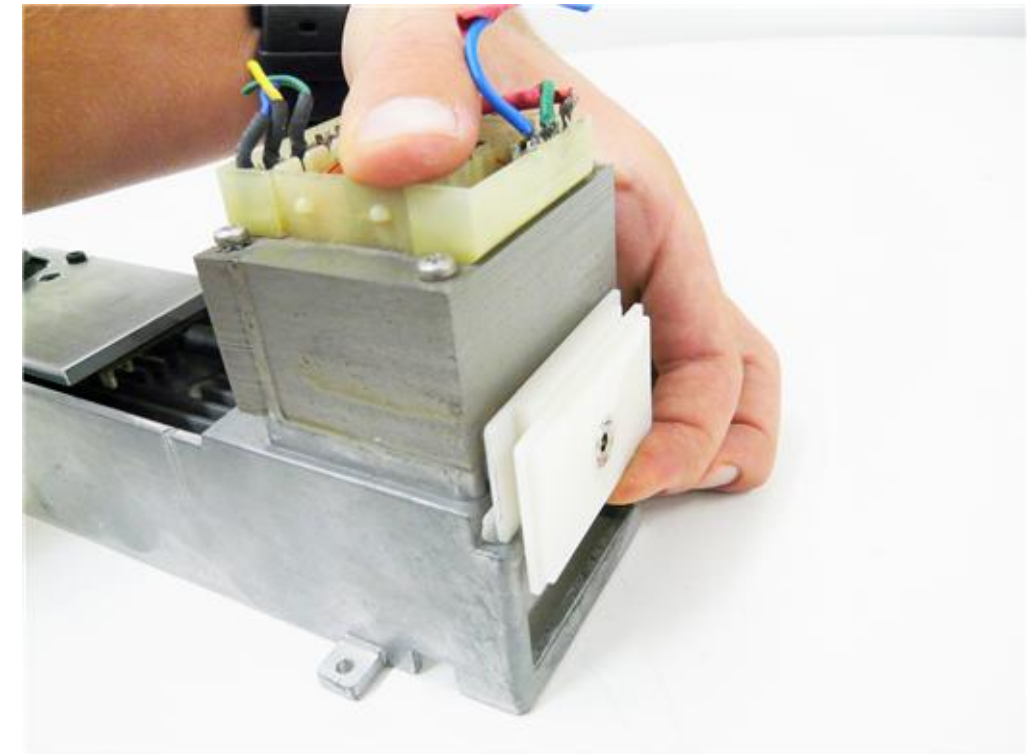
Nanodyne Replacement Illuminator for Leica DMLS Microscope Installation Instructions: Step 6. Install power plate assembly and connect new power supply.



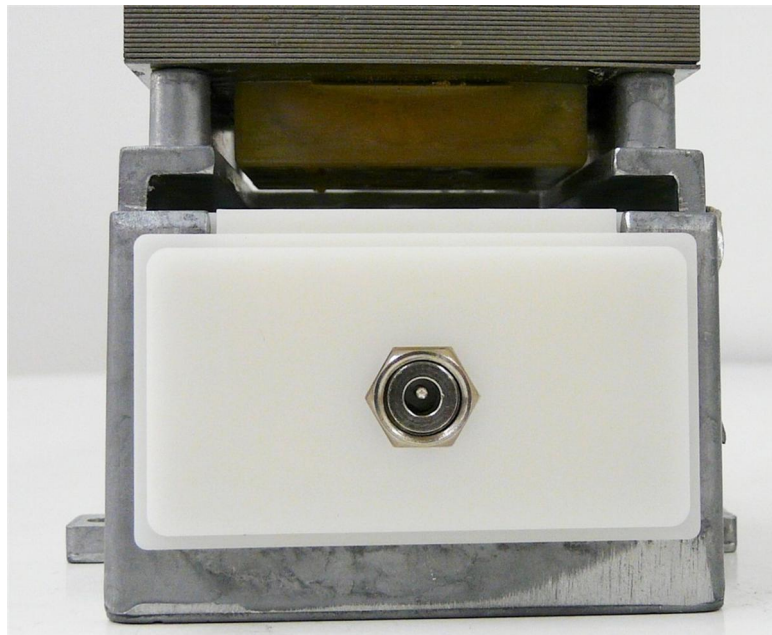
(1) Power plate assembly. The notches must be down when inserting it.



(2) Route the power plate cable as shown.



(3) Install the power plate as shown above. Push it all the way down. Due to variations in the microscope casting, filing the casting or the power plate might be required.



(4) Properly installed power plate.

(5) After installing the power plate, connect the power plate cable to the power connector on the circuit board. (not shown here)

(6) Replace the knob on the pot. Adjust the orientation of the numbers on the knob to the pot if desired.

(7) Connect the external power supply cable to the power plate jack and the power supply. Plug the power supply into an AC outlet and verify correct operation of the illuminator.

The illuminator assembly can then be installed in the microscope. It is ready to use.

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