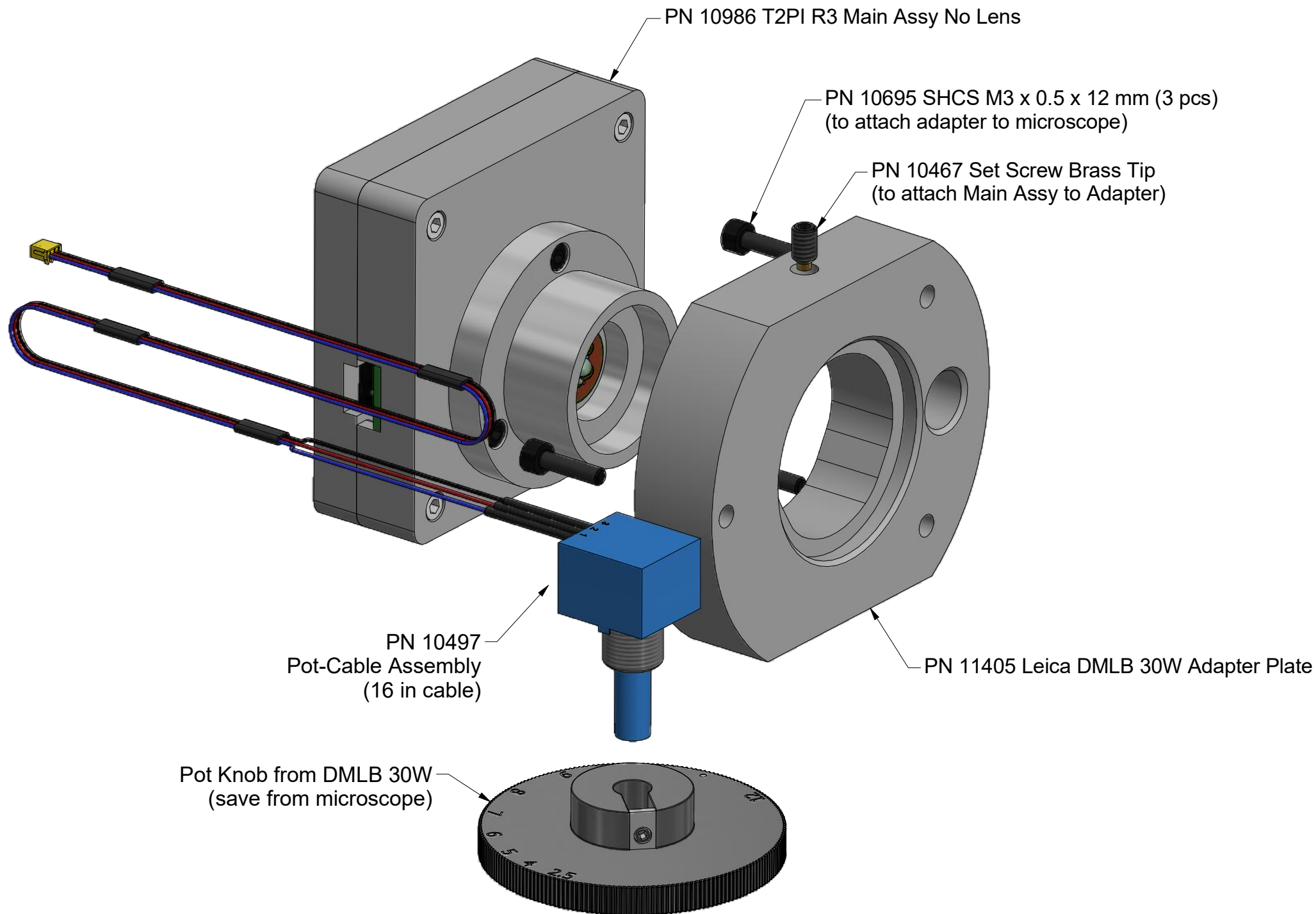


**Nanodyne Replacement Illuminator for Leica DMLB 30W Microscope Installation Instructions: Included Items**



**Additional Items Included But Not Shown:**

- PN 10456 Hex Key 1.5mm (for pot knob)
- PN 10490 Hex Key 5/64 inch (for set screw)
- PN 10566 Hex Key 2.5mm (for M3 screws)

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.



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.



Tape to secure wires.



PN 10736 Rubber plug to block unused AC power receptacle.

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

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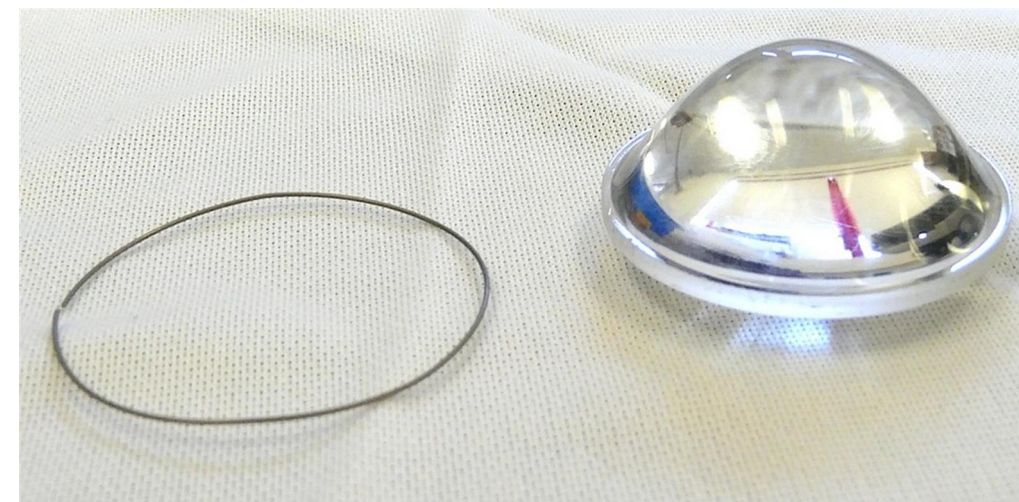
Nanodyne Replacement Illuminator for Leica DMLB 30W Microscope Installation Instructions: Step 1. Remove Old Lamp Housing and Collector Lens



(1) Back of microscope with original illuminator housing removed, exposing the lamp holder.



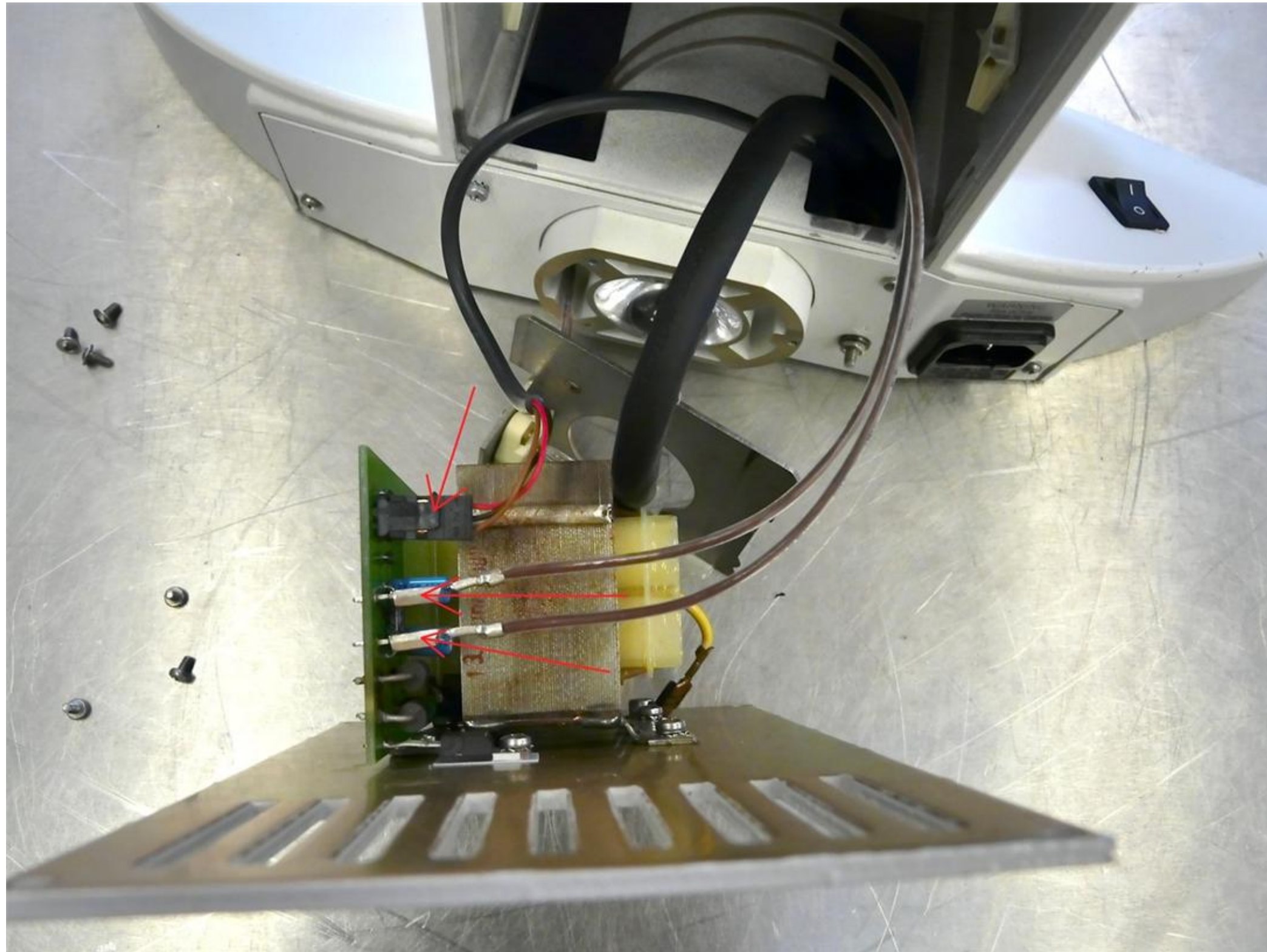
(2) Remove the three screws holding the lamp holder. Be aware that the lens can now fall out.



(2) Remove the lens, and the wire behind it. Set them in a safe place for later.



Nanodyne Replacement Illuminator for Leica DMLB 30W Microscope Installation Instructions: Step 2. Remove Back Cover and Old Wires



**(1)** Remove the back cover (it is held by 4 screws). Remove the three cables by pulling them free from the connectors shown above. The old lamp housing (connected to the two brown wires) can now be removed and discarded.

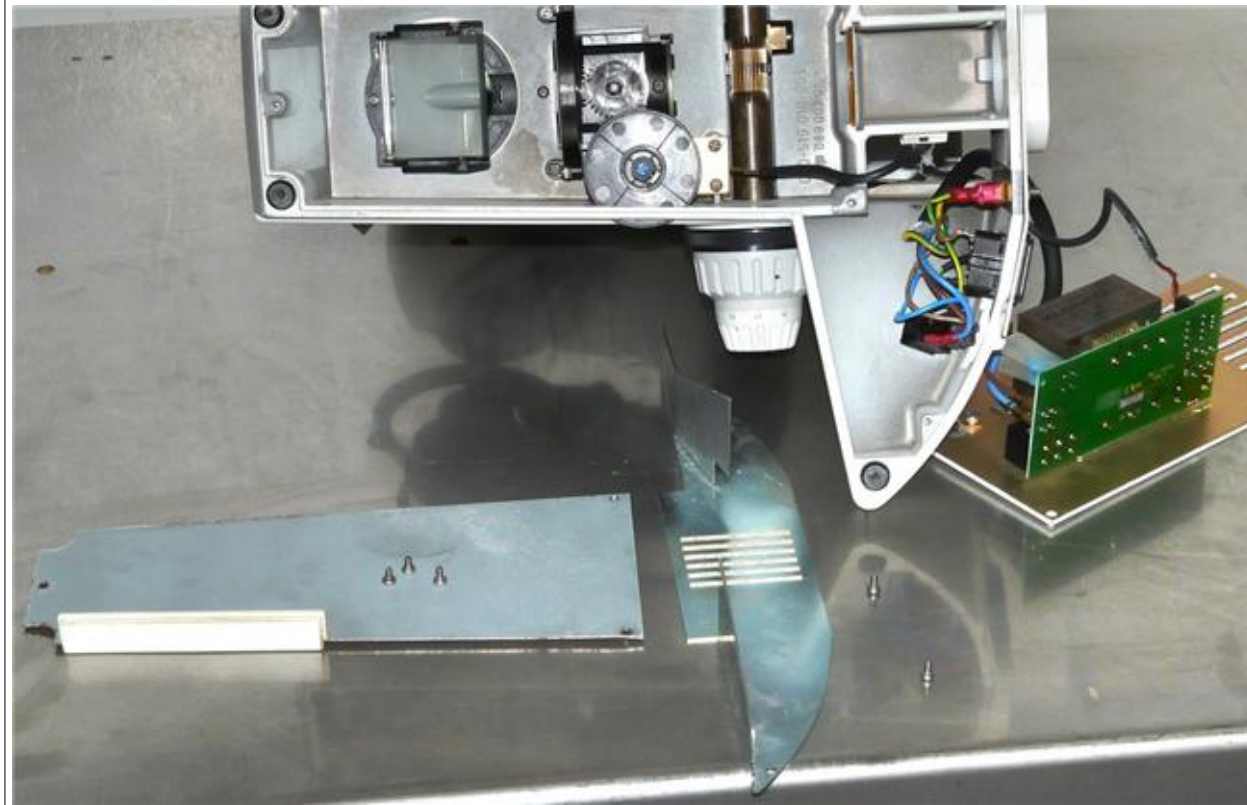
The old power supply with its heavy transformer can be removed from the back cover and discarded if desired.

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Nanodyne Replacement Illuminator for Leica DMLB 30W Microscope Installation Instructions: Step 3. Remove Bottom Cover and AC Power Connections, Inspect Diffuser



(1) Remove the two bottom covers.



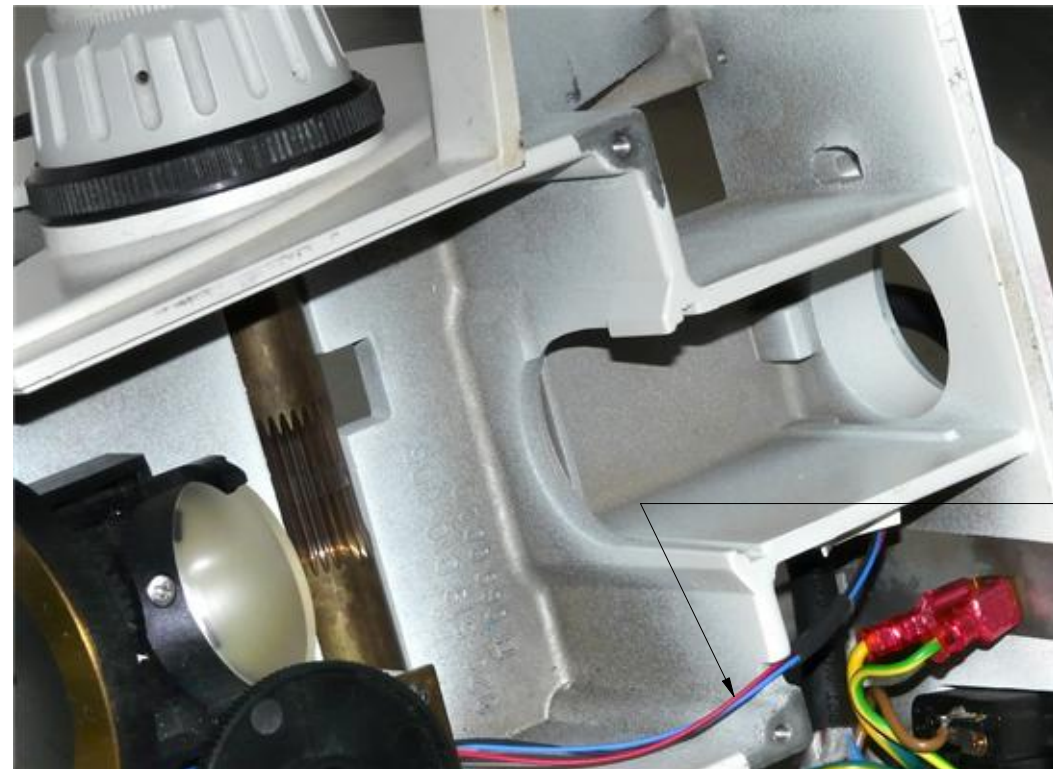
(2) Remove all of the AC Power connections from the AC receptacle shown in the picture above. The power connections to the power supply have already been removed by unplugging the power cable.

Remove the blue and brown wires by unplugging, unsoldering or cutting with a wire cutter. Only the green/yellow ground wire should be left.



(3) Inspect the diffuser in the center of the photo above. The one shown has severe heat damage, being cracked and yellowed.

It should be discarded, and either replaced or just left out. The light emission from the surface of an LED is much more uniform than from a tungsten light bulb, so you will probably not need the diffuser anyway.

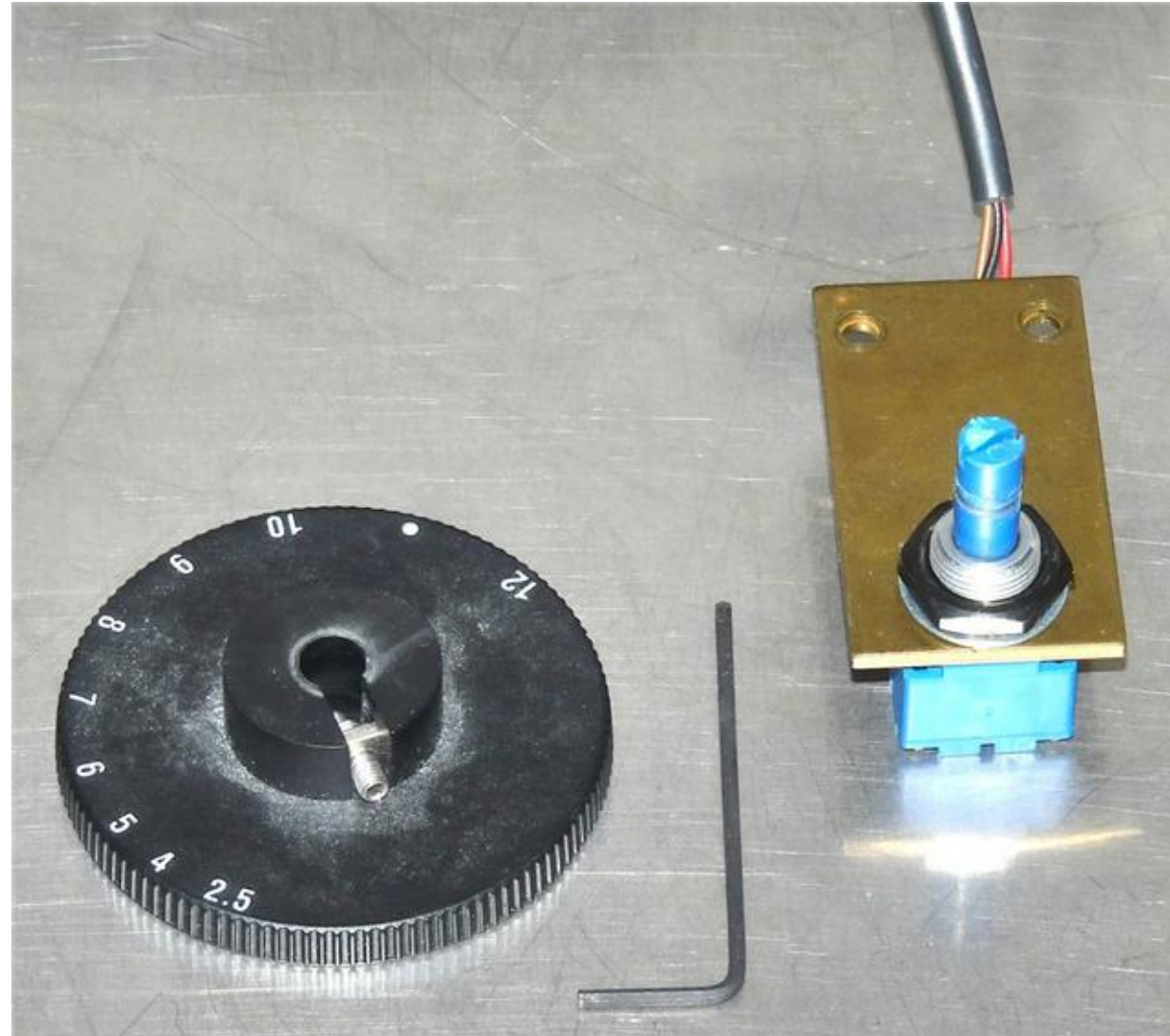


(4) Heat damaged diffuser removed and discarded.

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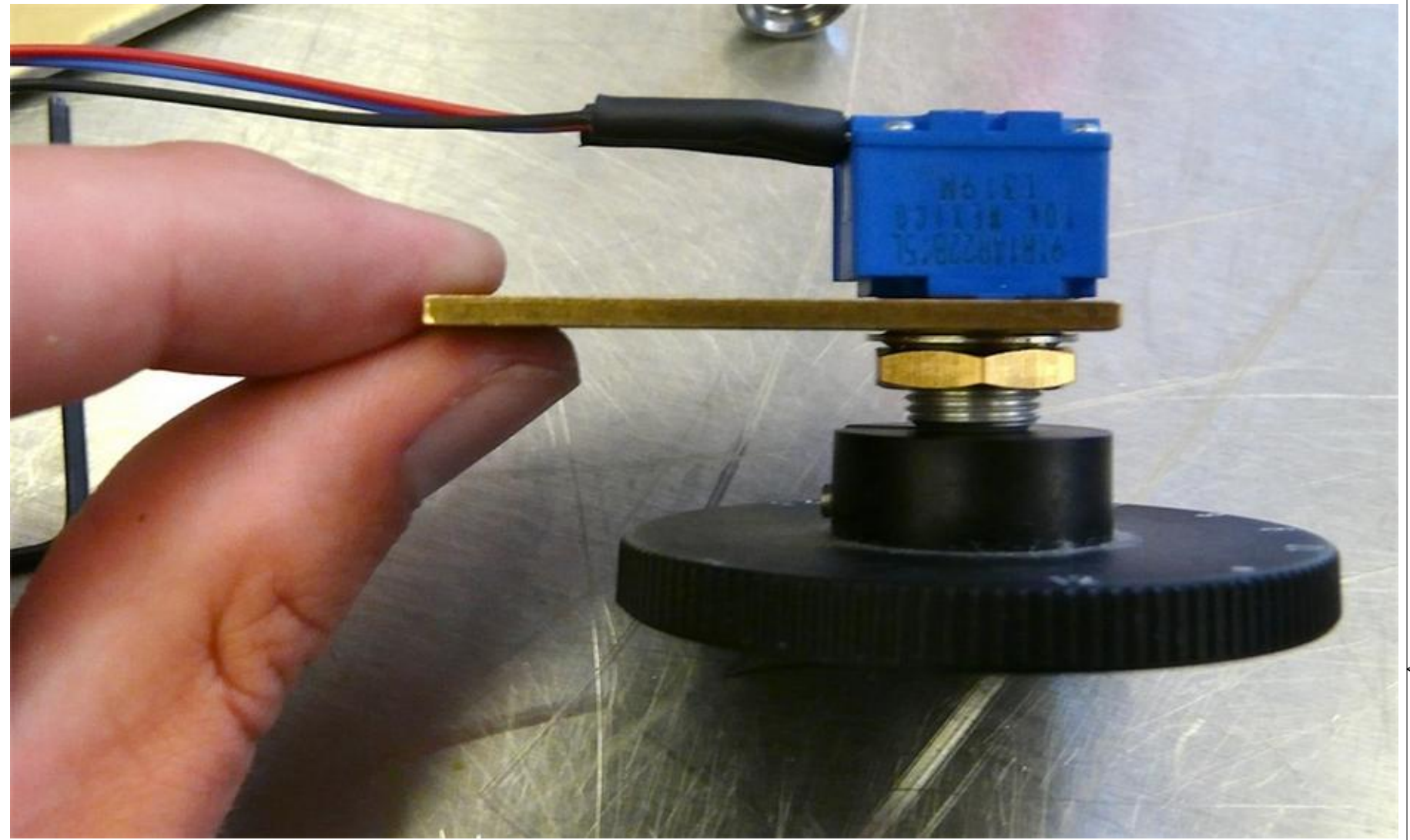
Nanodyne Replacement Illuminator for Leica DMLB 30W Microscope Installation Instructions: Step 4. Remove Old Potentiometer, Install New One



**(1)** Remove the potentiometer bracket by removing the two screws.

Remove the adjustment wheel using the 1.5mm hex key.

Remove the original pot from the bracket by removing the nut.



**(2)** Mount the new pot on the original bracket. Be sure it is oriented as shown above.

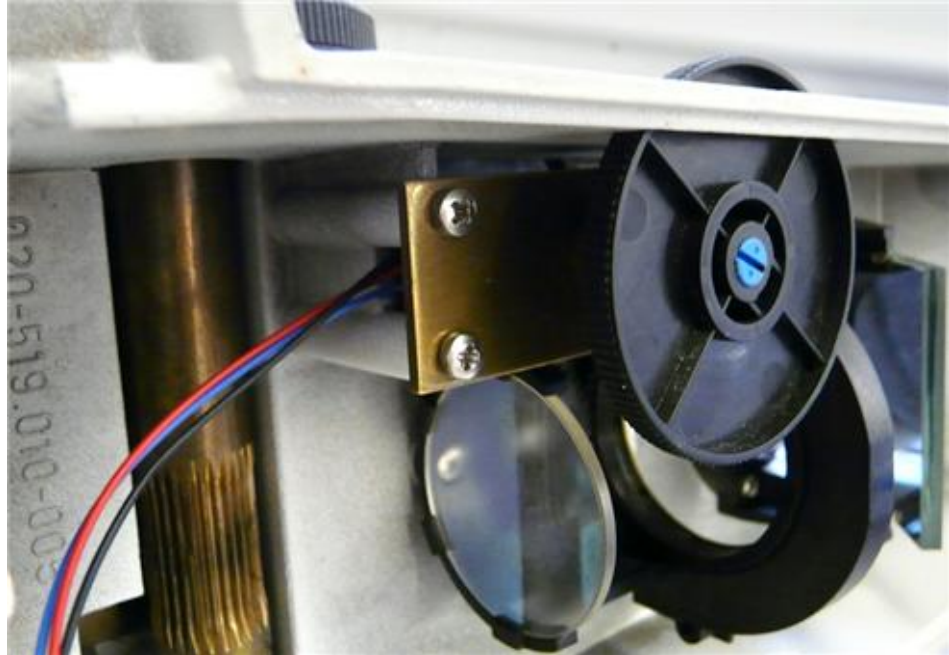
Place the adjustment wheel on the pot. Position the numbers on the wheel so that the "12" indicator will show when the pot is turned fully clockwise.

Secure the wheel by tightening the set screw with the 1.5mm hex key.

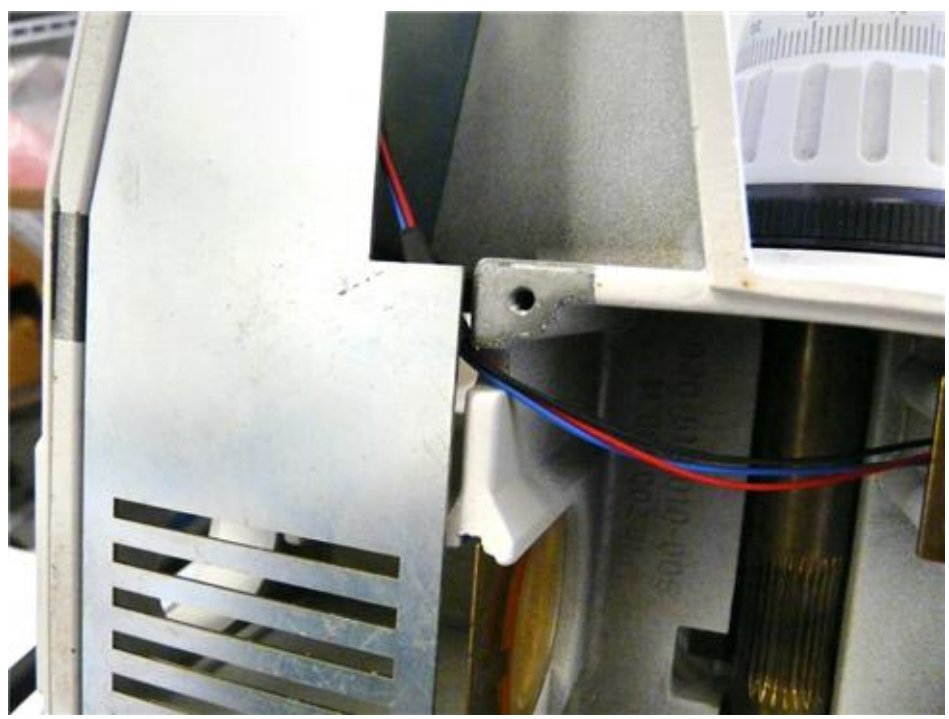
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Nanodyne Replacement Illuminator for Leica DMLB 30W Microscope Installation Instructions: Step 5. Install New Potentiometer and Route Cable

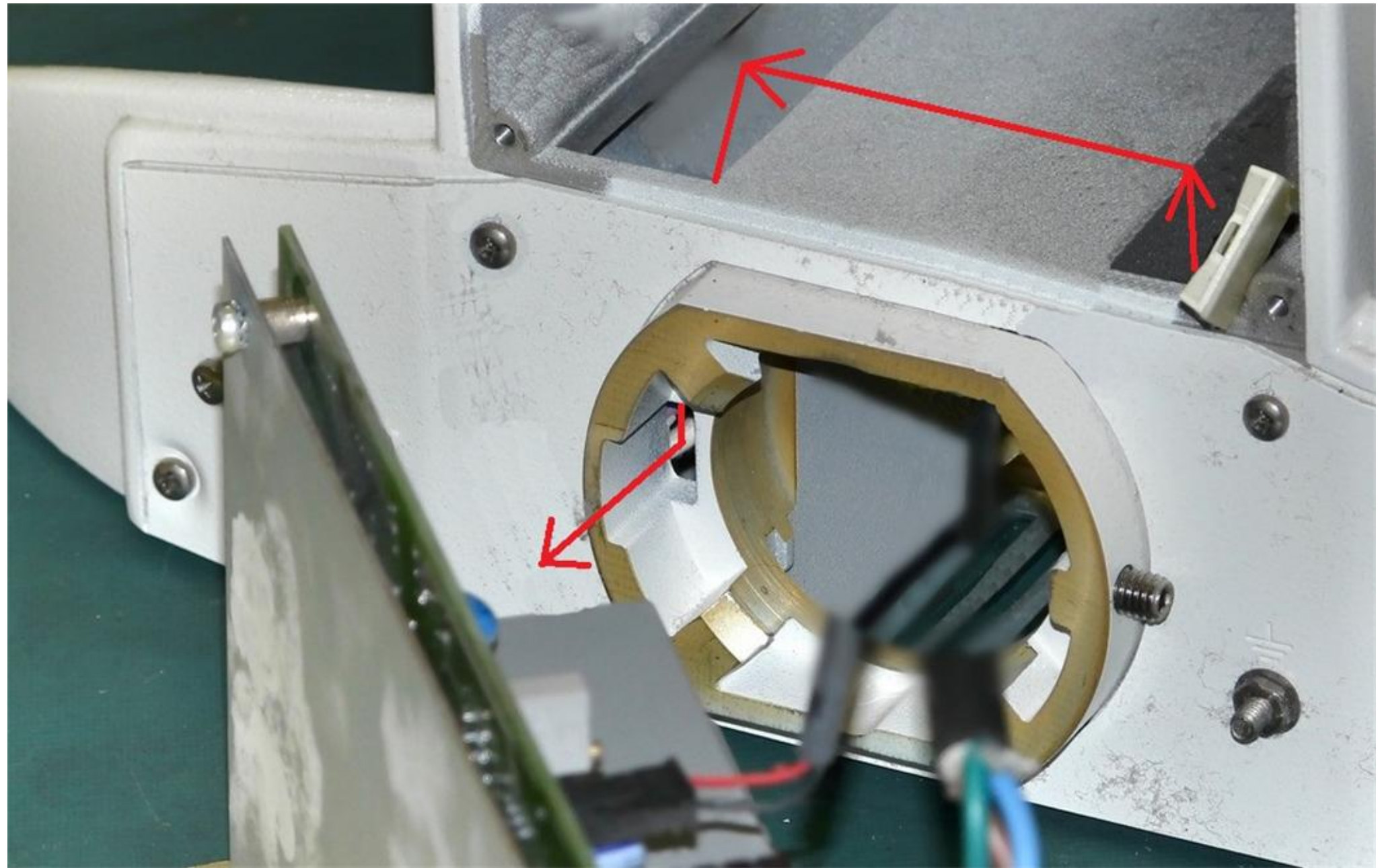


(1) Replace the potentiometer bracket, securing it with the original screws.



(2) Route the pot cable towards the back of the microscope as shown above.

Note that the bottom cover shown in the photo above should not be in place yet.



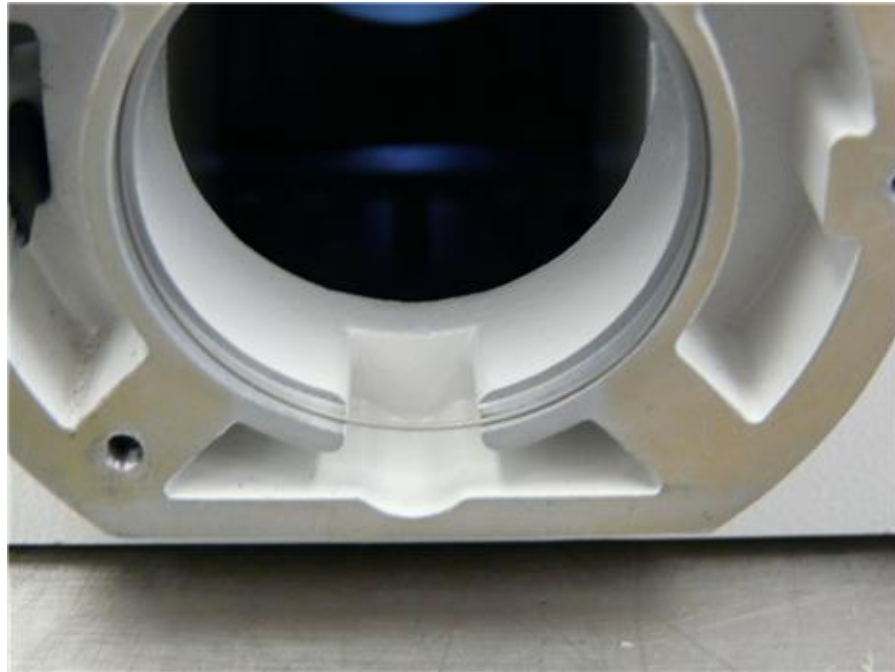
(3) Route the pot cable up, over, down, and out, following the path of the red lines in the photo above.

Note that the photo shows a DMLB 100W model, but it is the same except for the illuminator mounting.

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Nanodyne Replacement Illuminator for Leica DMLB 30W Microscope Installation Instructions: Step 6. Replace Condensing Lens and Install Adapter



(1) Replace the wire ring that goes behind the lens.



(2) Replace the lens.

Note that the pot cable should now be coming out of the hole to the left of the lens.



(3) Attach the adapter as shown. Use the M3 screws and the 2.5mm hex key. In the photo, the screws have just been started. See warning at right.

The pot cable should now be coming out through the hole in the adapter at the red circle.

Note that the photo shows an old version of the adapter. The new version makes routing the pot cable easier.

**Caution - while tightening the screws on the adapter plate be sure that the condenser lens is properly aligned and not jammed. There should be a small amount of play in the lens even after the screws are tightened. Do not continue to tighten the screws if the lens locks up tight or you could damage the lens.**

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Nanodyne Replacement Illuminator for Leica DMLB 30W Microscope Installation Instructions: Step 7. Attach Nanodyne Illuminator to Adapter, Connect Pot Cable



(3) Secure the illuminator to the adapter on the microscope. Insert the illuminator nose into the adapter and clamp in place by tightening the set screw in the adapter.

Plug the pot cable into the bottom of the illuminator (see sheet 9 for detailed instructions).

Secure the pot cable as shown to keep it away from the focusing gears. Any excess cable length can be looped up or folded, and then secured with the VHB tape.

Note that the photo shows an old version of the pot cable. You will not have the connector shown above, as the three wire red, blue and black cable now runs all the way from the pot to the illuminator.

**NOTE - The photo shows an obsolete pot cable and illuminator.**

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## Nanodyne Replacement Illuminator for Leica DMLB 30W Microscope Installation Instructions: Pot Cable Connection Details

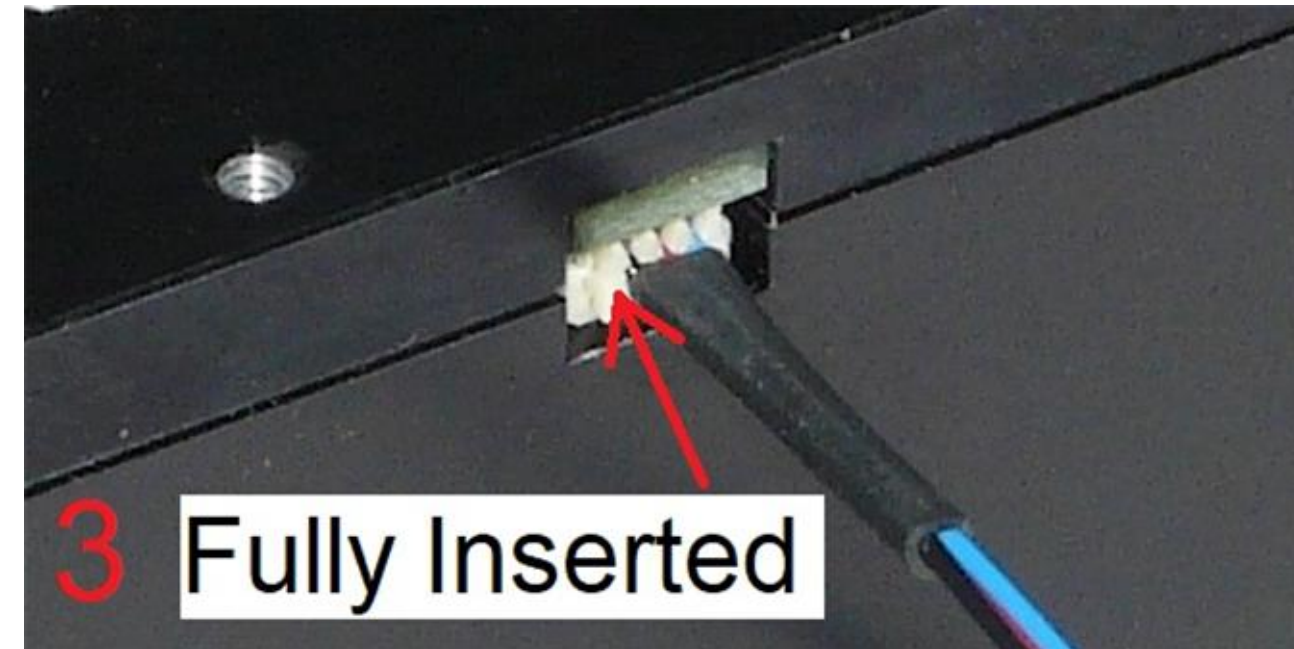
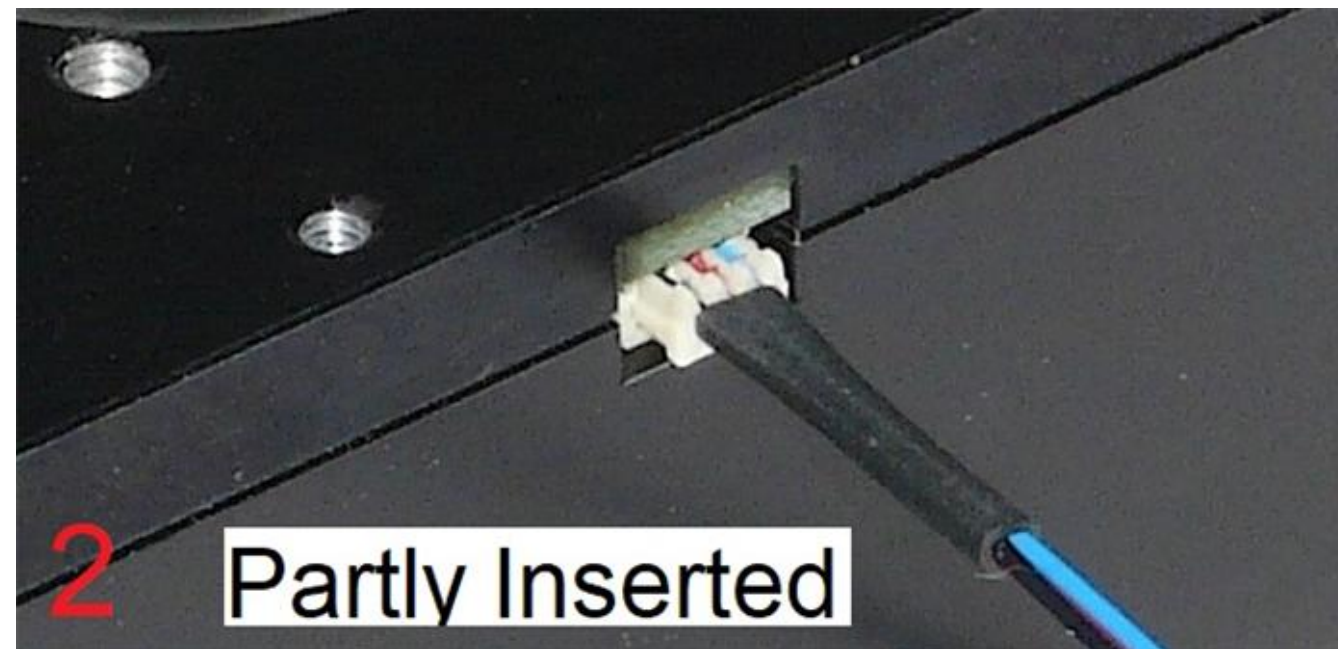
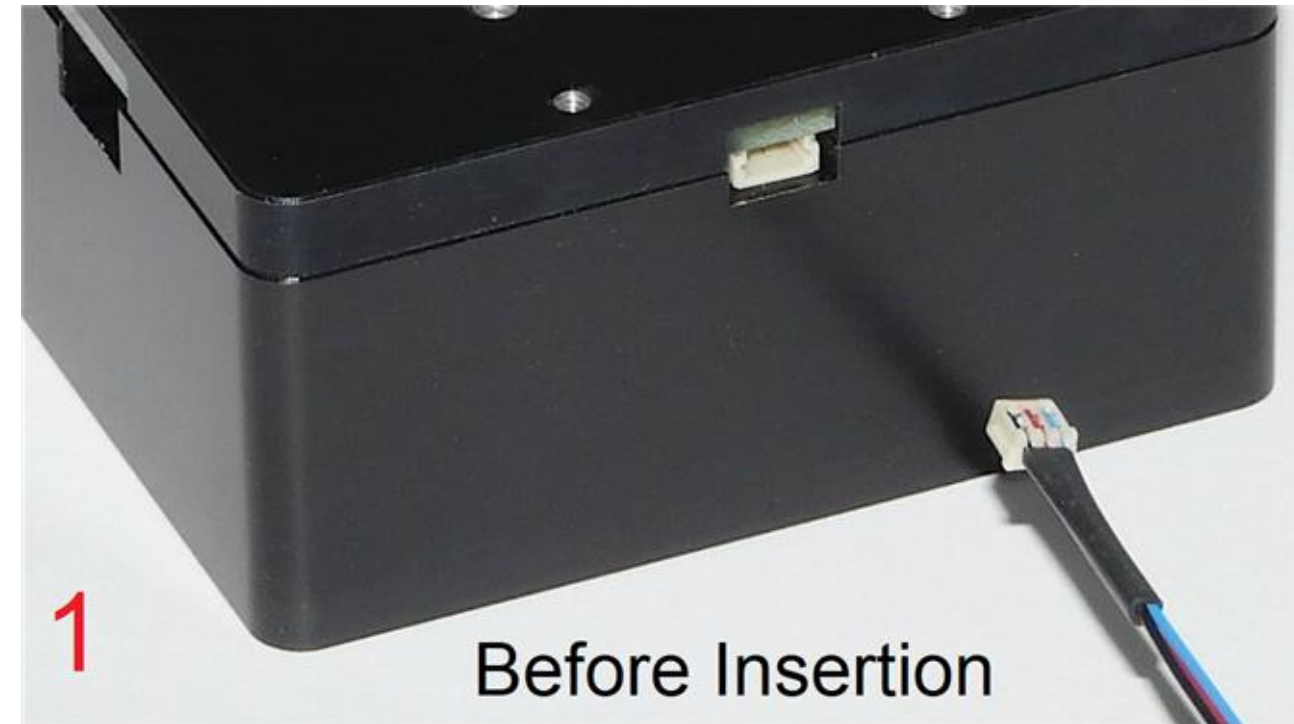
Connect the plug at the end of the Pot Cable Assembly to the mating socket of the illuminator, as shown in the pictures on this page. NOTE THAT THE PLUG IS KEYPED TO ONLY GO INTO THE SOCKET ONE WAY, AS SHOWN.

Partially insert the plug into the mating socket of the illuminator by holding the wire next to the plug with your finger (photo 2).

Use your fingernails, if you have them, or tools like a tiny screwdriver or tweezers pushing on the side of the plug to fully insert it (photo 3).

The socket cannot be fully engaged by pushing on the wires, as the wires would just collapse.

To disconnect it if needed, pull the wire straight out by firmly gripping the black heat shrink tubing.



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Nanodyne Replacement Illuminator for Leica DMLB 30W Microscope Installation Instructions: Step 8. Replace Covers, Block AC Receptacle, Connect New Power Supply



(1) Replace all of the covers.



(2) Install PN 10736 rubber blocking plug in the AC receptacle as shown in the photos above (from a different microscope).



Note - These photos show an older version of the illuminator.

(3) Connect the USB end of the power supply cable to the power supply and the other end to the illuminator as shown above. Plug the power supply into an AC outlet and the system is ready to use.

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