Leica DM2000 & DM2500 Left-Hand Z-Drive Installation Procedure

The procedure below outlines the steps necessary to install the ASI Microscope Focus Controller Drive onto the Leica DM 2000/2500 microscope

To perform the following steps, you will need the following tools:

1.5mm 1/16, 3/32 5/64 and 7/64 inch Allen hex wrenches The Allen hex wrenches are provided by ASI

The procedure has three parts:

1. Removing the left fine focus knob & Installing the helical coupler
2. Installing the Baseplate & Installing and aligning the motor drive assembly.
3. Installing the motor drive cover plate and fine focus knob.

Part 1 - Removing the Left Fine Focus Knob

Figure 1: Use 1.5 mm Allen wrench to loosen setscrew to remove knob. Pull knob straight off to expose shaft – Do not twist.

a) The DM2000 & 2500 have a magnetic attachment to a steel inner knob b) Use 1.5 mm Allen wrench to loosen setscrew to remove knob. c) Pull knob straight off to expose shaft – Do not twist

Figure 2a

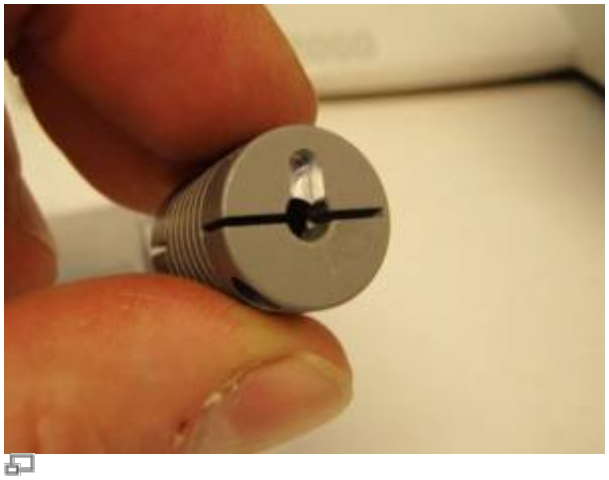


Figure 2b

Figure 2c

Figure 2d: Locate the ASI Z drive and use the 2 mm Allen wrench to remove the helical flex coupler off of it. Note as shown the coupler will have a notch machined out of one side. The notch is designed to slide over the tab that is on the white inner gear as shown. Once the coupler has been slid over the tab that is on the white inner gear, hold the coupler in place and securely tighten it with the 2 mm wrench to hold the couple onto the fine focus shaft of the microscope

d) Locate the ASI Z drive and use the 2 mm Allen wrench to remove the helical flex coupler off of it. Note as shown the coupler will have a notch machined out of one side. The notch is designed to slide over the tab that is on the white inner gear as shown. Once the coupler has been slid over the tab that is on the white inner gear, hold the coupler in place and securely tighten it with the 2 mm wrench to hold the couple securely onto the fine focus shaft of the microscope. Please note that the right fine focus knob must be pushed all the way into the microscope while performing this step & that the coupler must be securely tightened to prevent slippage

Part 2 - Installing the Baseplate & Installing and Aligning the Motor Drive

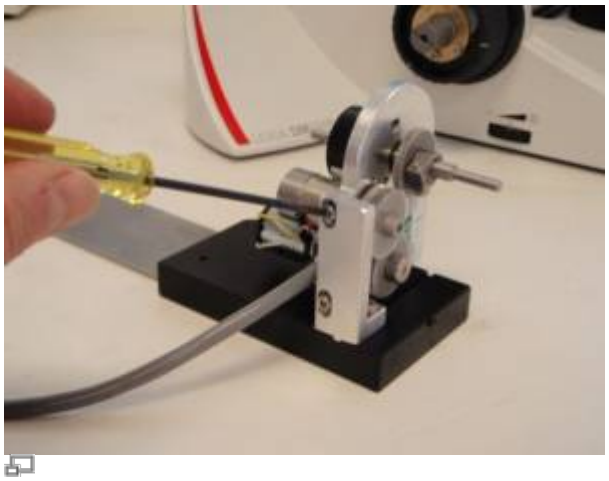


Figure 3: Location of vertical adjustment screws

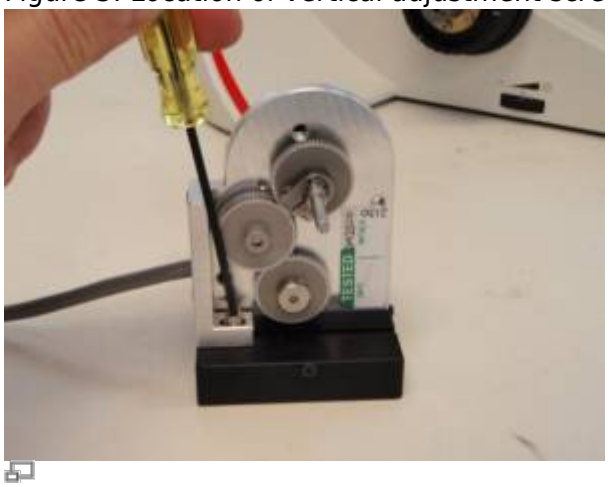


Figure 4: Location of horizontal adjustment screw

a) Locate the ASI fine focus motor drive and loosen the two vertical adjustment screws that secure the drive to the adjustment bar. (See figure 3 for location of the two vertical adjustment screws.) Using the 7/64“hex wrench, loosen the screws just enough so that the drive can slide easily in the groove in the adjustment bar.

b) Locate the base plate, and if the Z-drive is attached to it as shown in figure 4, use the 7/64” Allen wrench to remove the horizontal adjustment screw that secures it to the base plate.

Figure 5: Slide base plate under microscope as shown

c) Lift the front of the microscope up and slide the baseplate under the microscope so that the unit is centered under the left focus knob as shown in figure 5.

Figure 6: Installing the Z-drive.

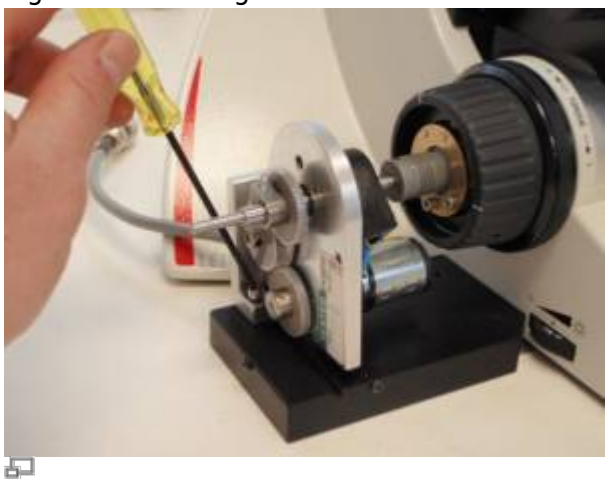


Figure 7: Loosely tighten the horizontal adjustment screw to hold the drive in place

d) Locate the ASI fine focus motor drive and align the drive shaft on the ASI drive with the helical coupler as shown in figure 6. Slide the motor drive shaft into the hole on the helical coupler as shown. Use the 7/64” Allen wrench to loosely tighten the horizontal adjustment screw to hold the drive in place as shown in figure 7. Please note that the base plate may need to be moved slightly to align it properly.

Figure 8: Use the 2 mm wrench to securely tighten the couple onto the fine focus shaft of the ASI Z

drive.

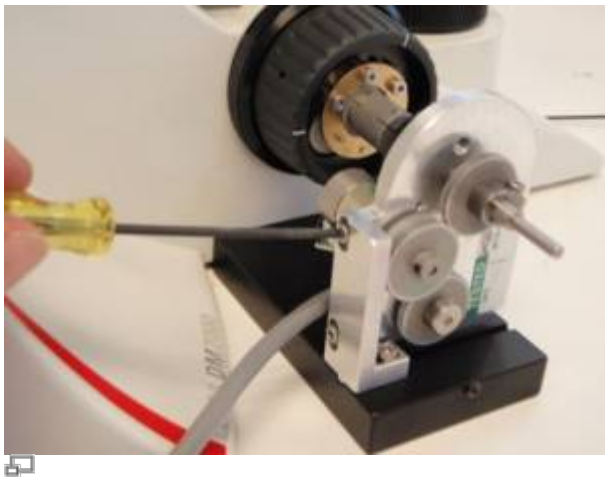


Figure 9: Vertical Adjustment screws

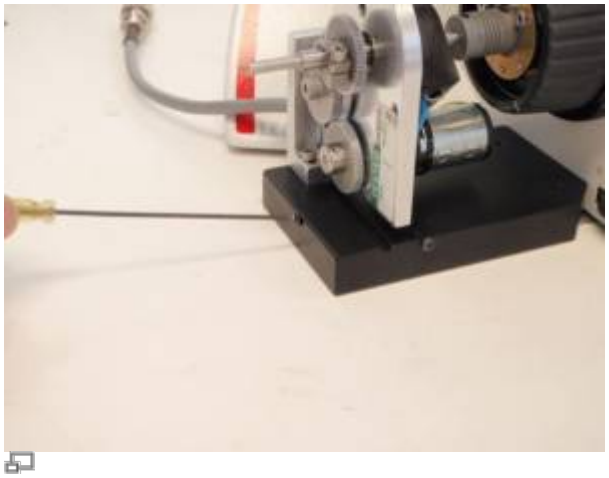
e) Use the 2 mm wrench to securely tighten the couple onto the fine focus shaft of the ASI Z drive as shown in figure 8. Use the 7/64” Allen wrench to loosely tighten the vertical adjustment screws as shown in figure 9. Please note that the coupler must be securely tightened to prevent slippage

f) Test the alignment of the Z-drive by turning the right fine focus knob. There should be no point within the 360 degree movement of the knob where any binding or drag is felt. If any drag is felt loosen the vertical & horizontal adjustment screws and side the motor drive up and down, forward and backward slightly while turning the right fine focus knob until it is in the position where minimum drag is felt on the right focus knob. Secure the motor drive into position by tightening the horizontal and vertical adjustment screws.

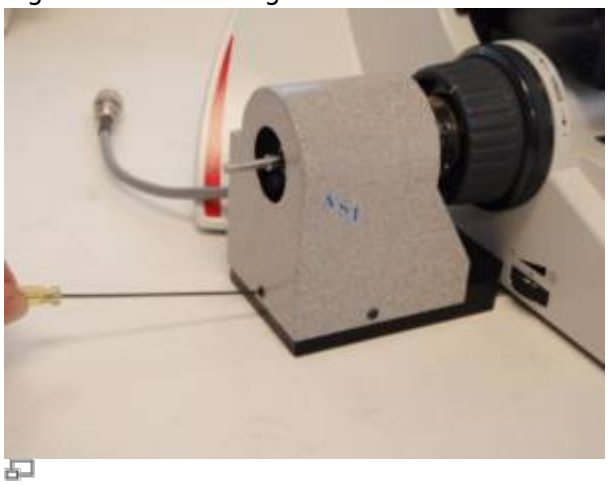
Figure 10: Tighten Baseplate set screw

g) Using the 5/64 inch Allen wrench tighten the base plate set screw as shown in figure 10. Recheck the alignment in step f, above, by noting the drag on the right fine focus knob. No noticeable drag should be felt. Repeat the above steps, if necessary.

Part 4 - Installing the Motor Drive Cover Plate and Fine Focus Knob



Figures 11: Installing cover and focus knob



Figures 12: Installing cover and focus knob

a) Locate the motor drive cover. Remove the 4/40 button head screws from the baseplate with the 1/16” Allen wrench. Position the motor drive cover over the motor drive assembly and secure in place using the 4/40 button head screws.

b) Slide the microscope fine focus knob, that was removed in figure 1, over the shaft extension and secure it in place by tightening the setscrew loosened in figure 1.

This completes the procedure for installing the ASI focus drive on to the Leica DM 2000 to DM2500 microscope.

leica, dm2000, dm2500, zdrive