

Nikon MM-800 Left-Hand Z-Drive Installation Procedure

The procedure below outlines the steps necessary to install the ASI Microscope Focus Controller Drive onto the Nikon MM-800 microscope.



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

- Small cross blade screwdriver
- 3mm Allen Wrenches
- 1.5mm Allen Wrenches
- 1.3mm Allen Wrenches
- 7/64 Allen Wrenches
- 1/16 Allen Wrenches
- Need 2 mm x 8 mm socket head cap screws for attaching drive

The Allen hex wrenches, and screws are provided by ASI

The procedure has three parts

1. Removing the left fine focus knob & cover plate assembly.
2. Installing the clutch plate.
3. Installing and aligning the motor drive assembly.
4. Installing the motor drive cover plate and fine focus knob.

Part 1 & 2 - Removing the Left Fine Focus Knob and Installing the Clutch Plate



Figure 1. Locate two cross head screws that secure left hand cover & remove them .



Figure 2. Cover removed.



Figure 3. Locate hole on left hand fine focus knob to access setscrew





Figure 4. Use 1.3 mm Allen wrench to loosen setscrew.



Figure 5. Pull knob off to remove it.



Figure 6. Note flat spot on fine focus shaft.

As shown in figures 1 through 6 remove the cover and fine focus knob from the left side of the focus assembly.



Figure 7. Brass clutch plate.

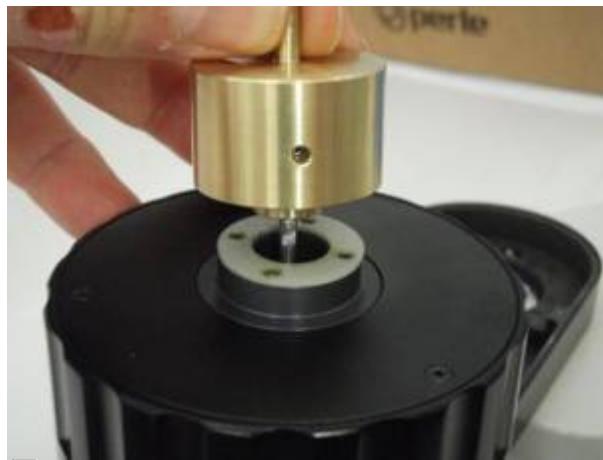


Figure 8. Install plate as shown with setscrew lined up with flat on fine focus shaft.



Figure 9. Use the 1.3 mm Allen wrench to tighten the setscrew securely.

Locate the brass clutch plate shown in figure 7 and install it onto the fine focus shaft as shown in figures 8 & 9. Insure the plate is pressed completely onto the focus shaft & that the setscrew is securely tightened to hold the plate onto the fine focus shaft. Please note that the setscrew must engage the flat on the fine focus shaft shown in figure 6.

Part 2 & 3 - Installing the Baseplate and Aligning the Motor Drive





Figure 10. MM-800 Z Drive assembly.

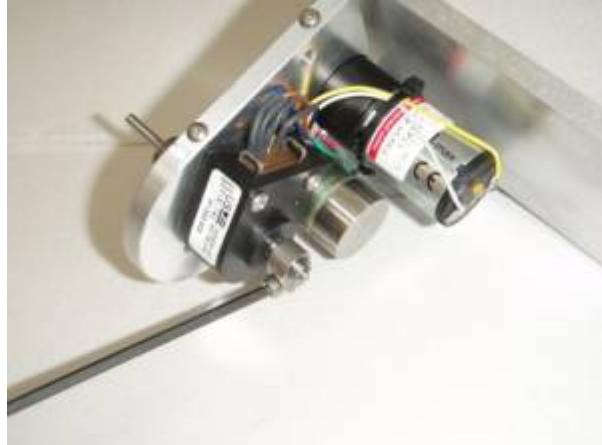


Figure 11. Use the 7/64 inch Allen wrench to loosen the screw on the drive shaft clamp.

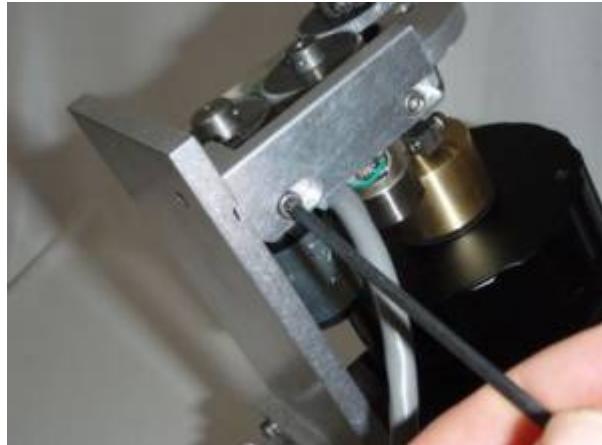


Figure 12. Use the 7/64 inch Allen wrench to loosen the vertical adjustment screws.

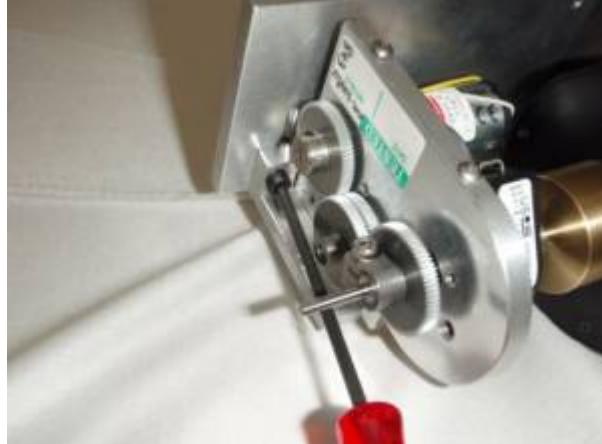


Figure 13. Use the 7/64 inch Allen wrench to loosen the horizontal adjustment screw.



Figure 14a. Install the Z drive as shown note that the drive shaft on the drive slides over the shaft on the brass clutch plate as shown.

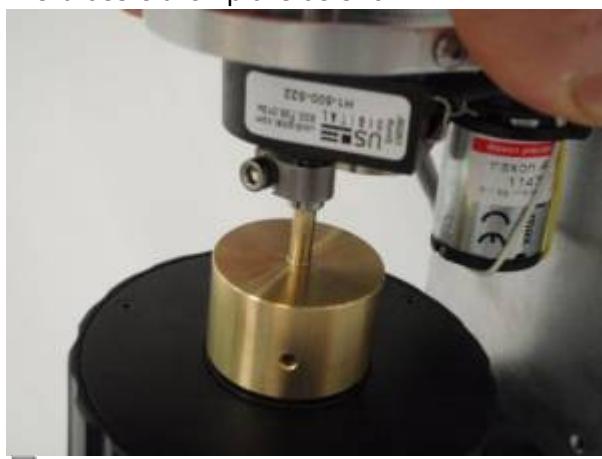


Figure 14b. Install the Z drive as shown note that the drive shaft on the drive slides over the shaft on the brass clutch plate as shown.

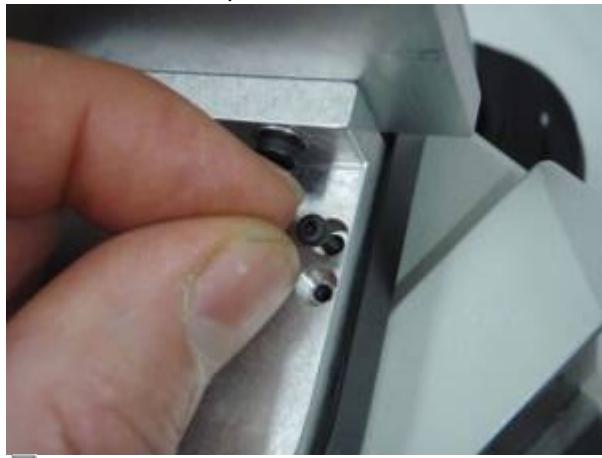


Figure 15a. Use the two 2 x 8 mm socket head cap screws sent with the drive assembly & the 1.5 mm Allen wrench to secure the drive assembly to the focus assembly as shown.



Figure 15b. Use the two 2 x 8 mm socket head cap screws sent with the drive assembly & the 1.5 mm Allen wrench to secure the drive assembly to the focus assembly as shown.



Figure 16. Use the 7/64 inch Allen wrench to securely tighten the screw on the drive shaft clamp. This is the same screw that was loosened in figure 11.



Figure 17. Slide 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 that were loosened in figures 12 & 13. Please note that these screws should not be over tightened. In fact, the horizontal and vertical adjustment screws can be a bit loose. Recheck the z drive for drag by turning 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

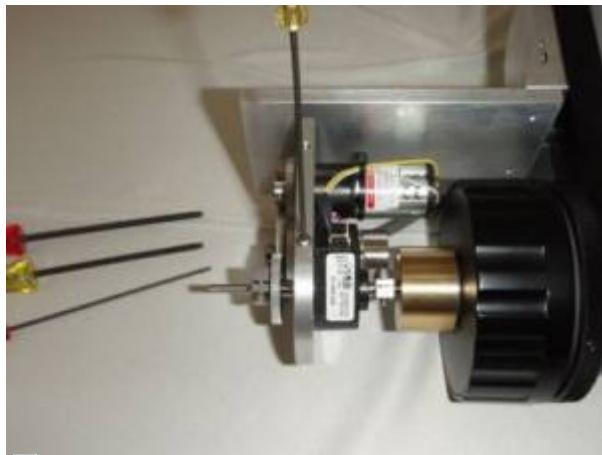


Figure 17a. Use the 1/16-inch Allen wrench to remove the two cover screws & slide the cover on as shown. Use these screws to secure the cover in place



Figure 17b. Use the 1/16-inch Allen wrench to remove the two cover screws & slide the cover on as shown. Use these screws to secure the cover in place



Figure 17c. Use the 1/16-inch Allen wrench to remove the two cover screws & slide the cover on as shown. Use these screws to secure the cover in place



Figure 18a. Install the original knob that was removed in figure 5. Note that the setscrew must be lined up with flat on fine focus shaft as shown. Use the 1.3 mm Allen wrench to tighten the setscrew securely.



Figure 18b. Install the original knob that was removed in figure 5. Note that the setscrew must be lined up with flat on fine focus shaft as shown. Use the 1.3 mm Allen wrench to tighten the setscrew securely.

This completes the procedure for installing the ASI focus drive on to the Nikon MM-800 microscope.

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