Focus Tool Calibration

1. Install the Lens Kit of the focus tool to be calibrated (i.e., to calibrate the 2.0 Focus Tool ensure the 2.0 Lens Kit is installed in the focus carriage).
2. Remove everything from the engraving table (stage), including any currently installed accessories (Cutting Table, Rotary, or Pin Table).
3. With the system ON, open the UCP and click System Tab. Make sure the Auto Z box does not have a checkmark.

4. Using a ruler, lower the stage one inch below the estimated focal distance of the installed optics.
   - 3 inches for a 2.0
   - 2.5 inches for a 1.5
   - 3 inches for an HPDFO
   - 4 inches for a 3.0
5. In the graphic software, create a blue vector line roughly 2 inches long. Position the line in the middle of the table. Print to the UCP using the Materials Database. Select Anodized Aluminum and decrease the Vector Engrave Intensity to -50%.
6. Place a piece of anodized aluminum on the Engraving Table in the marking area.
7. Process the job. Repeat, raising the Z-axis height by .01 each time the job is run until the card is lightly marked.
8. Using a caliper, measure the distance from the top of the card to the bottom of the Lens Kit in the focus carriage.
9. Continue to repeat step 7, moving the card slightly each time so the laser marks on a clean surface, until a line is created that matches the first line.
10. Once the lines match, measure from the top of the card to the bottom of the Lens Kit on the focus carriage.
11. Add the two distances together and divide the resulting distance by two.
12. This number is the distance to set the focus carriage from the engraving table.
13. Slightly loosen the setscrew located on the base of the focus tool.

14. Raise and/or lower the shaft of the focus tool until the distance between the base of the tool and the notch is in perfect focus with the carriage as it was set in step 12.
15. Tighten the setscrew and check the distance to ensure the shaft of the tool did not slip.
16. The Focus Tool is calibrated.