

## Glowforge Alignment Process

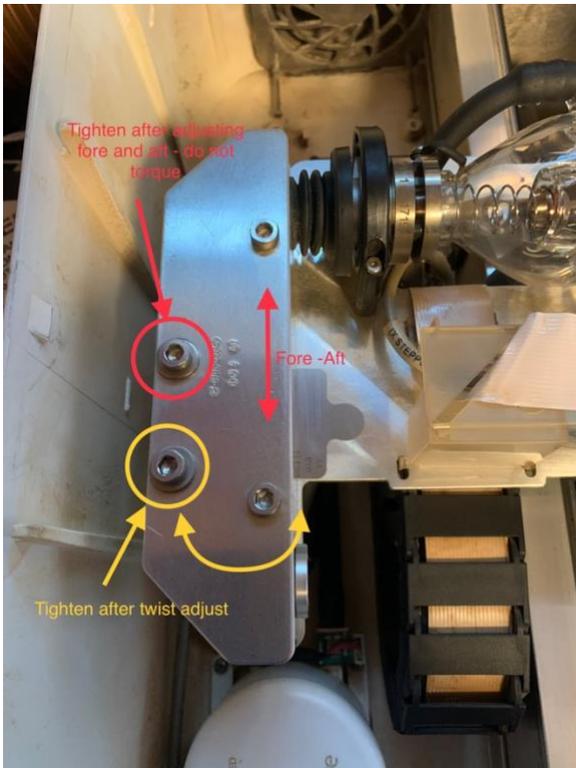
- 1) Remove left side cabinet cover
- 2) Remove print head and prep for alignment
  - a. Remove side lens
  - b. Remove mirror and lower lens
  - c. Place 1 ½" x 1" clear acrylic (3mm) over side mirror opening using two sided tape (see picture 1)
- 3) Replace print head and reconnect white ribbon (see picture 2)
- 4) Turn Glowforge on and allow to home and scan bed
- 5) On Glowforge Dashboard, create line ¼" long (horizontal)
  - a. Place in upper left corner
  - b. Set power to 30%, speed 200
- 6) Select "Print" and press button when it turns blue
  - a. Laser will melt dot into acrylic
  - b. Note location (fore, Aft or centre)
  - c. If required, move mirror box forward or aft, sufficient to place laser dot in centre
  - d. Using black Sharpie, blacken laser dot so that another pulse will show without having to replace acrylic.
  - e. Repeat step 6 until laser dot is centre of lens opening
  - f. Once centre, tighten Allen screw (circled in Red, picture 3) enough to prevent from moving
- 7) On Glowforge Dashboard, move ¼" long line to far right side of bed
- 8) Select "Print" and press button when it turns blue
  - a. Laser will melt dot into acrylic
  - b. Note location (fore, aft, or centre)
  - c. If required, twist mirror box to move laser dot into centre
  - d. Using black Sharpie, blacken laser dot so that another pulse will show without having to replace acrylic.
  - e. If mirror box needed twisting, you must repeat steps 6, 7 and 8.
  - f. If mirror box did not require twisting, tighten Allen screw with yellow circle (picture 3).
- 9) With a new piece of acrylic on Print head side lens opening, repeat steps 6, 7 and 8 to verify alignment.
- 10) If alignment is good, torque both Allen screws to ensure mirror box will not move (do not over tighten and you may strip screw holes or cold weld the screw into the mount)
- 11) Alignment is complete. Carry out test cuts in each corner to verify ability to cut material over full range of bed.
- 12) Reassemble Glowforge.



Picture 1: Acrylic placement



Picture 2: Head assembly with acrylic re-installed



Picture 3: Mirror box with Allen screw adjustments