

Note No.	SVC-FSB-0051
Release Date	12/7/2017
Contact	ngceoservice@ngc.com

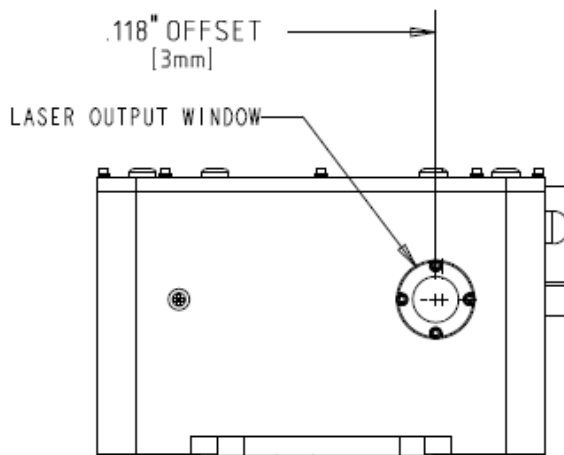
## Output Window Replacement Procedure

### Purpose

This bulletin is for cleaning, replacing, and rotating the Output Window on an Iklwa or Patara Laser System.

### Scope

This bulletin applies to the Patara and Iklwa Lasers. The laser output is offset from the center of the output window to allow for rotating damage spots out of the beam path.



### Safety Requirements

Turn off the diode drive electronics, and disconnect the diode current connector **J2** prior to performing this service.

### Tools and Materials

- 3/32" Allen Wrench
- Nitrogen or clean, dry air
- TechniSat™ Pre-Wetted Wipes or Equivalent
- Acetone or Methanol
- Q-Tips or Kim wipes
- Rubber Gloves
- Green penlight

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## Procedure

### Preparation

1. Using Nitrogen or clean, dry air, remove debris from the laser housing and cover.
2. Wipe the housing clean using TechniSat™ pre-wetted wipes or equivalent.



**NOTE:** Wear rubber gloves when performing this service. Use caution when removing the optic.

### Remove Optic

3. Use a 3/32" Allen wrench and remove the four #4-40 screws and locking hardware from the output window frame.



Figure 1: Removing Screws

4. Support the output window frame to ensure that optics do not fall out.
5. Make a note of the damaged location on the optic in relation to the laser. Note in Figure 1 that the laser output is 0.118" to the right of center. Do not position a damage spot directly in the beam path.
6. Gently wiggle the frame to loosen the optic from the housing.

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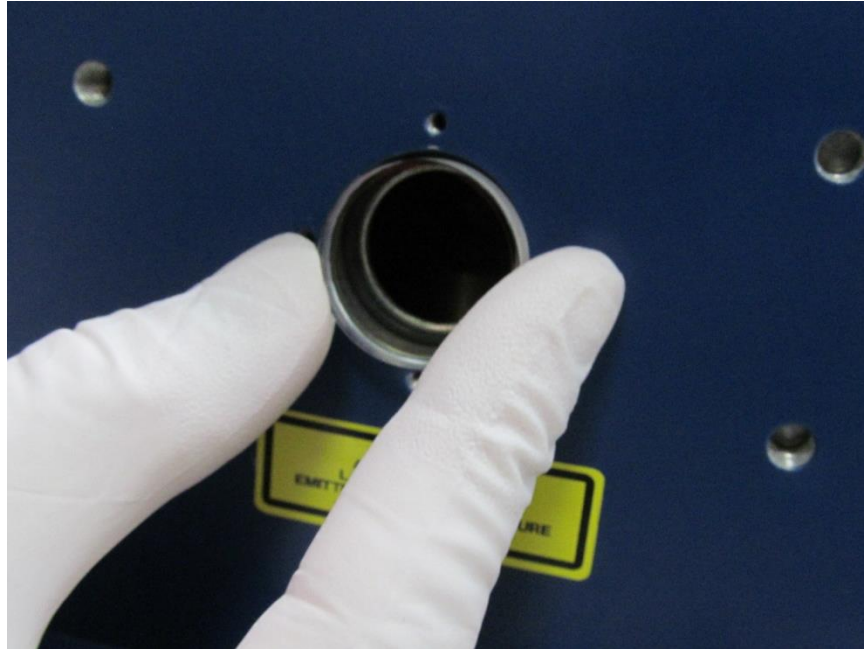


Figure 2: Wiggle Optic Out Carefully



**NOTE:** The o-rings will stick to the optic and may require methanol to separate the optic from the housing.

### Clean and Replace

7. Under a microscope or a green penlight to see particles, clean optic with acetone or methanol using a clean q-tip or lens tissue.

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Figure 3: Cleaning the Optic

8. Install one #20 o-ring into the front of the output window opening first.

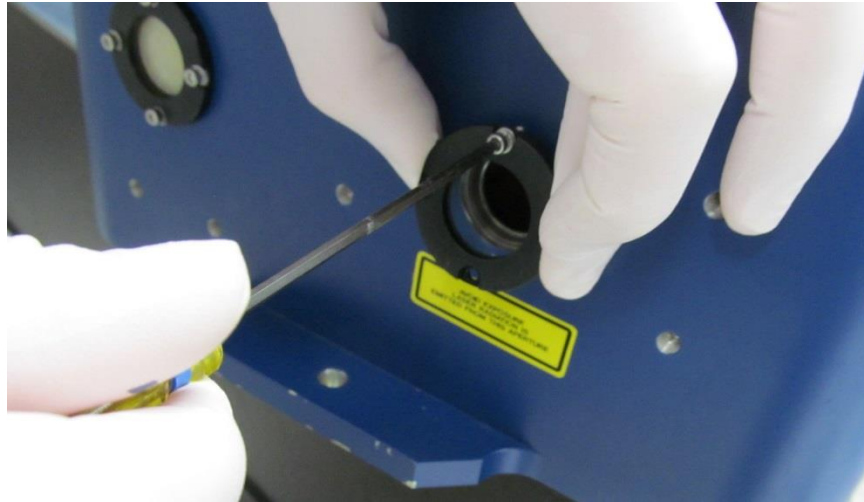


Figure 4: Installing O-Ring

9. Place the cleaned output window back into opening, making sure to rotate the damaged spot on the optic  $45^\circ$  to the right. Note in Figure 1 that the laser output is 0.118" to the right of center. Do not position a damage spot directly in the beam path.
10. Place a second #20 o-ring into the output window opening on the outside of the output window.

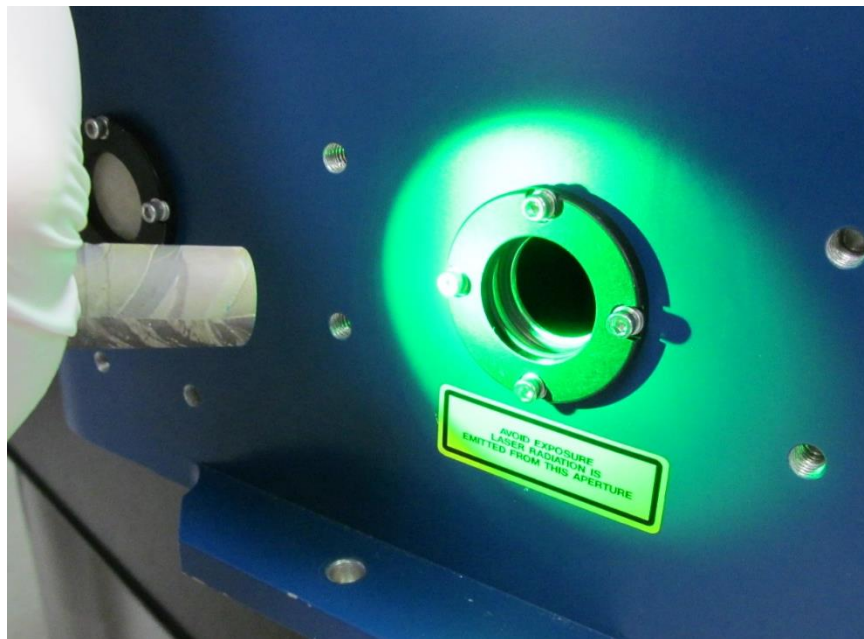
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11. Carefully align the frame with the output window and reinstall the four #4-40 x 3/8 SHC screws, lock, and flat washers. Hold the frame in place while tightening the screws.



**Figure 5:** Reinstalling Frame

12. Inspect the output window with green light.



**Figure 6:** Visual Inspection

13. Using nitrogen or clean, dry air, remove any particles from the output window.
14. Repeat this procedure if the particles do not move.