Thermal 2 head
Cleaning the Window

1. REQUIRED TOOLS

- Small flashlight
- 2.5 mm hex wrench
- Lens cleaning kit (part number 04-0012B)

2. RELATED DOCUMENTS

Find all documents on the Procedures page on the Thermal 2 TechPlanet site (**TechPlanet Home** > **Output** > **Heads** > **Thermal 2** > **Procedures**).

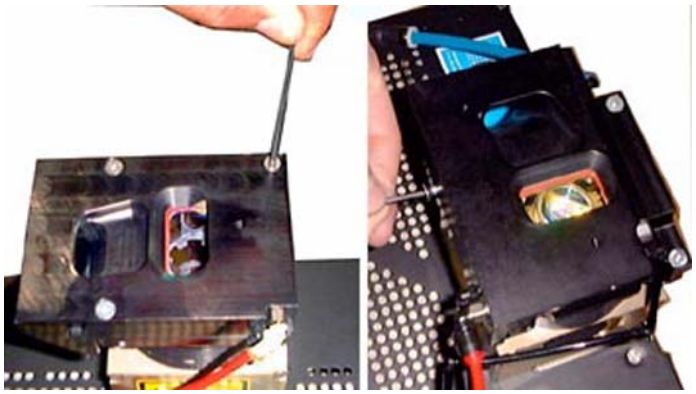
- Lens Cleaning FAQ
- Removing a Thermal 2 Head from a *Lotem* Quantum
- Thermal 2 Debris Removal Nozzle Cleaning Procedure (part number 719-00226A)
- Debris removal cabinet filter replacement: in the UDRC Operator Guide (part number 731-00103A), on the Reference page of the UDRC TechPlanet site: **TechPlanet Home** > **Output** > **Debris Removal**
- Debris Removal Firmware Guide(part number 750-00001A): on the Control/Settings page of the TechPlanet UDRC site: **TechPlanet Home** > **Output** > **Debris Removal**

3. PROCEDURE

1. Type the command `>>head install on` and note the sum and error values.
2. Remove the head from the device. Place it on a safe work surface.

Note: If you are working on a Magnus 800, you do not need to remove the head from the device.

3. Remove the debris removal nozzle as shown in Figure 1. Note that there are two different styles of debris removal nozzle.



Old style (screws on the face) New style (screws on the side)
Figure 1: Removing the debris removal nozzle (two styles of nozzle)

4. Check the debris removal cabinet filter:

   - ***Trendsetters* only**: Refer to document 750-00001A-G, Debris Removal Firmware Guide and look at Table 2, Nozzle-specific parameters. Look up the appropriate debris nozzle. Type the command `>>debris`. If the nozzle flow is below `fmar`, the filter may need to be replaced. Advise the customer. For the filter replacement procedure, see *Related Documents*.
   - ***Lotems* only**: Determine when the debris removal filter was last replaced. If it was replaced 6 months ago or more, advise the customer to replace the filter.

5. Dampen a new, clean cloth with acetone and clean the head surface around the window. The cloths and acetone are provided in the lens cleaning kit, part number 04-0012B.

Note: To avoid contaminating the bottle of acetone, pour a small amount into the lid of the bottle and dip the cloth in the lid.

6. Inspect the window by shining a flashlight over the window surface. Point the flashlight towards you on an angle, so that you can see the blue reflection of the window coating (see Figure 2). Make note of the amount of debris.

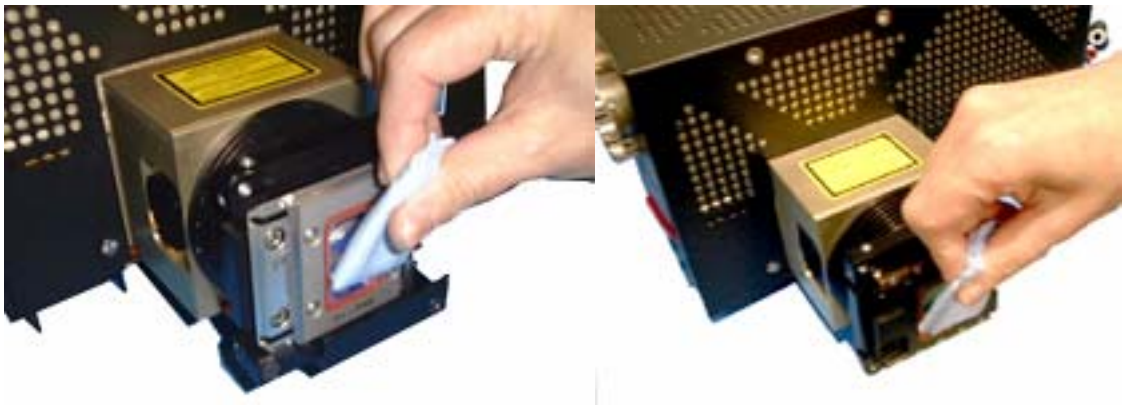


Figure 2: Visual inspection with a flashlight

7. Fold a new, clean cloth (such as the *Luminex* cloth provided in the lens cleaning kit) into a comfortable size. Do not touch the part of the cloth that will come into contact with the window.

8. Wet the cloth with acetone. It should be damp, not dripping.

9. Slowly drag the damp cloth across the window. Drag the cloth from one side to the other, being careful not to touch the red silicon edging with the acetone (see Figure 3).



New style window Old style window

Figure 3: Wiping the window

CAUTION: Do not allow the cloth to come into contact with the red silicon edging around the window. It will smudge the silicon across the window.

10. Repeat step 9 with a new cloth or re-fold the cloth to expose a clean area.
    - Do not dip the cloth into the container of acetone. This contaminates the acetone in the container.
    - You may lightly scrub stubborn areas that do not come clean with gentle wiping.

Note: If the coating is coming off, you must replace the head and check the customer's air supply for contamination.

11. Inspect the window again by shining a flashlight over the window surface as before. Use a loupe if one is available. If it is not clean or there are streaks, repeat steps 7 to 10 as many times as is necessary.

12. If the window is scratched, damaged, or still dirty after several cleanings, mark the top of the window with a pen and remove the window from the head. Thoroughly clean the window on both sides. Reinstall the window, making sure that it is oriented in the same way.

Note: If the window is cracked or scratched, or the coating is coming off, you must replace the head.

13. Inspect and clean the debris removal nozzle before reinstalling it on the head. See *Related Documents* for this procedure.

14. Re-install the head on the device. Note the sum and error values and compare them to the values noted in step 1. If there was debris build-up on the window, the sum value may have increased. Ensure the sum is 1200 +/- 200 and the error value is 0 +/-20.

15. Complete the device-specific procedure to setup to properly re-configure the carriage, and so on. For Magnus 800, see the procedure Cleaning the thermal 2 head window on Magnus 800.

Note: You are encouraged to reoptimize the head by running a focus series and a power series.