TFX Head

Cleaning the Head Window on the ThermoFlex Wide II

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Revision History

Revision	Date	Author	Comments
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1. REQUIRED TOOLS AND PARTS

- Metric hex key set
- Antistatic wrist strap
- Flathead screwdriver
- TFX front window for window replacement (part number 30-1170A)
- HPLC-grade acetone or IPA (isopropyl alcohol)
- Plastic-handled cotton swabs
- Lint-free cloth for cleaning
- Flashlight

2. OVERVIEW

Inspect the TFX head window:

- Monthly
- When artifacts occur
- When the debris removal nozzle is clogged
- When the debris removal filter has not been replaced and is clogged
- After a plate flyoff where the media has been shredded inside the ThermoFlex device

If the window is scratched or damaged in any way, replace it with a new one. If the window is relatively free from debris, install it back into the device without cleaning it. If the window requires cleaning, clean it according to the instructions given in this document.

3. PREPARATION

1. Turn on the ThermoFlex Wide II device.
2. Start Print Console to initialize the device.
3. From the **Device** menu , select **Home** (tailstock side).
4. Slide the table open and open the top front panel.
5. Turn off the device.

4. REMOVING THE WINDOW

Note: Wear an antistatic wrist strap at all times when handling the head.

Before removing the window from the head, clean the area surrounding the window with a lint-free cloth and HPLC-grade acetone.

1. Slide the nozzle upwards and remove it from the head.
2. Rotate the red lever on the nozzle support assembly up (counterclockwise).
3. Loosen the M4 clamp screw on the left of the upper surface of the window clamp bar. This is a captive screw and will not fall out.

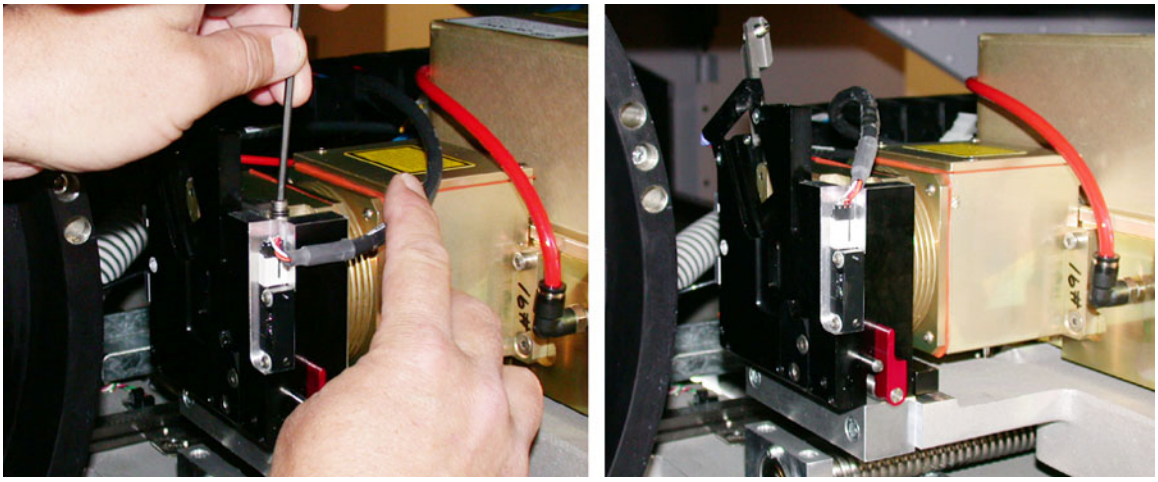


Figure 1: Rotating the clamp bar

4. Rotate the clamp bar to the open position.
5. To remove the window frame assembly, hook a bent tool (a 3 mm hex key works well) into the hole provided at the upper left corner of the frame and lift the window straight up and away—you can reach the hole from the slot in the nozzle support assembly.

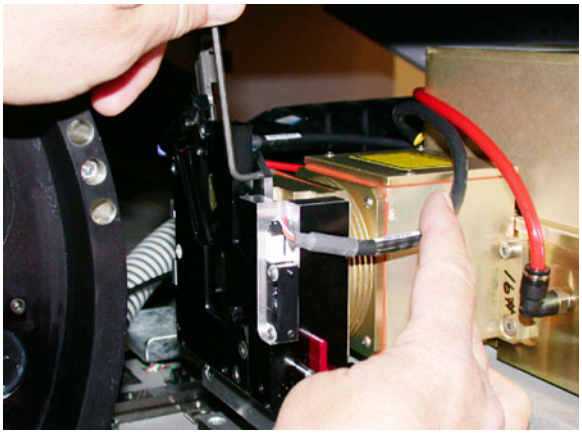


Figure 2: Removing the window

6. Inspect the window for excessive debris buildup or scratches by shining a flashlight on the window at an angle that best shows the lens contamination or damage.
   If the window needs cleaning, continue to the next section.
   If the window needs to be replaced, see section 6, Installing the Window.



WARNING: Do not leave the front window off for any longer than necessary. Dust will enter the head and affect its performance.

5. CLEANING THE WINDOW

Note: Hold the window by the steel frame only—do not touch the glass surfaces. Use only HPLC-grade acetone or IPA solvents for cleaning. Do not use Windex, Methyl Ethyl Ketone (MEK), or Kodak lens cleaning solutions.

To clean the window:

1. Dip a plastic-handled cotton swab in acetone or IPA.
   Shake the swab to get rid of any excess acetone. Keep the time between dipping and cleaning to a minimum, as solvents dissolve the glue holding the swabs, and possibly the plastic rod as well, which will contaminate the surface of the window.

Note: Do not dip the swab into the container of solvent, as it will contaminate the remainder of the solvent in the container. Do not use wooden-handled swabs, because the solvent breaks down the glue on the swab and leaves residue on the lens.

2. Begin cleaning near the center of the lens and roll towards and across the edge.

3. Rotate the swab slowly against the surface as you wipe it, so that each part of the glass surface touches a new, clean portion of the swab. Apply light pressure, similar to the pressure applied when spreading mayonnaise on a slice of bread.
   The direction of rotation should be against the direction of the stroke. As the swab rotates, it brings clean solvent in contact with the surface. Do not rotate the swab more than 360º and only use each swab once. Typical cleaning can use in excess of 20 swabs.

4. Repeat the procedure until the entire lens surface has been cleaned.

5. Re-inspect the window with the flashlight:

   - If debris or streaking is still visible, clean the window again. It is not unusual to have to clean the window multiple times to get it clean.
   - Reinstall the window and continue with normal operation. See section 6, Installing the Window.

5.1 Fingerprints on the Window Lens

Fingerprints left on the glass surface must be cleaned immediately. Do not wrap a window with a fingerprint or smudge on the lens in lens tissue and put it away for storage. Skin oils oils are slightly acidic and will permanently etch the glass surface over time.

6. INSTALLING THE WINDOW

Note: Hold the window by the steel frame only—do not touch the glass surfaces.

1. If you are installing a new window, unwrap the window and clean it with clean, dry compressed air to remove any dust from the wrapping.
   The dot on one side of the steel frame must be at the top of the window and facing forward (away from the head, toward the drum).

2. Holding the window with the hex key and the right top edge, slide the window down the front surface of the nose-piece into its locating surfaces. You must feel slight resistance as the window frame slides over the rubber O-ring on the front of the nose. Be careful not to drop the new window into the device.

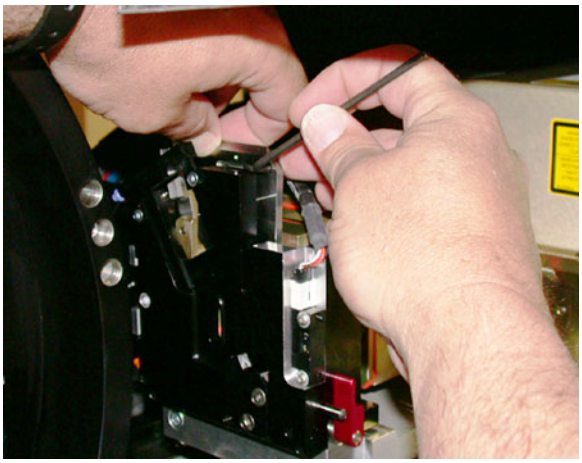


Figure 3: Sliding the window into place

3. Rotate the window clamp bar into place and tighten the M4 clamp screw.

Replacing the debris removal system is the reverse of the removal procedure.

4. Slide the debris nozzle into the nozzle support structure. Ensure there is no pressure on the nozzle from the debris hose. If pressure exists, loosen the hose clamp on the nozzle and reposition the hose to reduce it.

5. Rotate the red lever on the nozzle support assembly to the horizontal position (clockwise).
   This seals the assembly around the TFX head window.

6. Check that the air hoses, cables, and the debris hose will not interfere with the stage motion or cause the nozzle to lift out of position.

7. Close the top front panel, close the table, and resume normal operations.