Kodak

Adjusting the Imaging Head V-Groove on ThermoFlex Mid and Narrow Platesetters

Procedure

731-01061A-EN Rev A

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Product

This procedure applies to all configurations and options of the following products:

- Kodak® ThermoFlex® Mid platesetter family
- ThermoFlex Narrow platesetter family

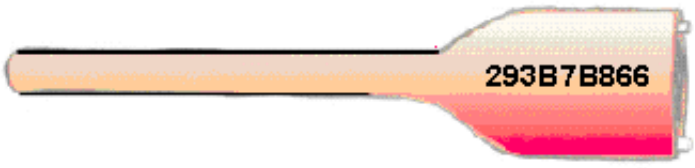
Background

Some imaging problems, such as the appearance of wavy lines in the subscan direction, may be resolved by adjusting the position of the imaging head V-groove. This procedure describes how to access the V-groove through the back of the telescope, remove the imaging head, and adjust the position of the V-groove.

Important: You must undergo special training to perform this procedure!

Requirements

- Optic head inner key (part number 293B7B866)



- Optic head outer key (part number 291B7B867)



Procedure

The following illustration provides an overview of the lens assembly.

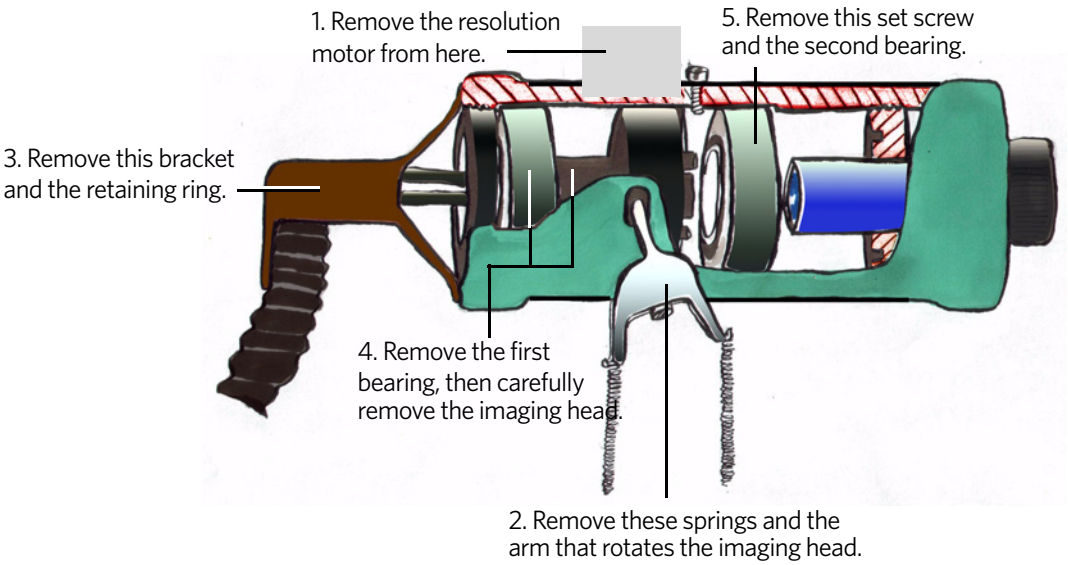


Figure 1: Overview of the lens replacement procedure

Preparing the Platesetter for the Procedure

1. In the ThermoFlex Controller software, send the carriage to position 700, or any position that enables you to work comfortably on the head.
2. Take the necessary steps to access the carriage, quit the ThermoFlex Controller software, turn off the platesetter, and disconnect the main power supply.

Accessing the Imaging Head

To remove the resolution motor and head rotation arm:

When removing the motor and springs, mentally note how to reassemble them. Pay close attention to how the resolution motor fits with the head rotation arm. They must be reassembled properly.

1. Disconnect the two detector connectors and the motor power connector, as shown in Figure 2, and move aside the motor and support bracket.
2. At the top back of the head assembly on the resolution motor, remove the four hex screws.

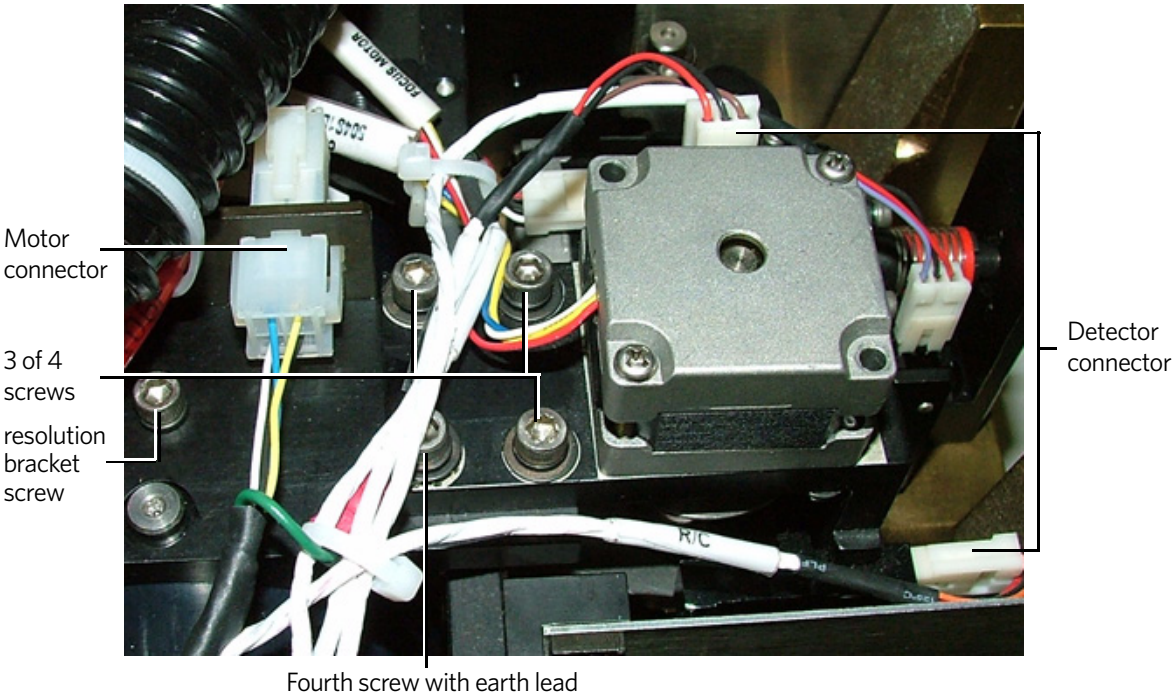


Figure 2: Resolution motor

3. Release the resolution bracket screw.
4. With the motor and mounting bracket released, unhook the two springs underneath the motor that provide tension to the head rotation arm. The arm and springs are shown in Figure 1.
5. Set the resolution motor aside.
6. Using a screwdriver, remove the head rotation arm from where it protrudes from the telescope, as shown in Figure 1.

To remove the bracket, retaining ring, and bearings:

1. Loosen, but do not remove, the locking set screws from the telescope and telescope holder.

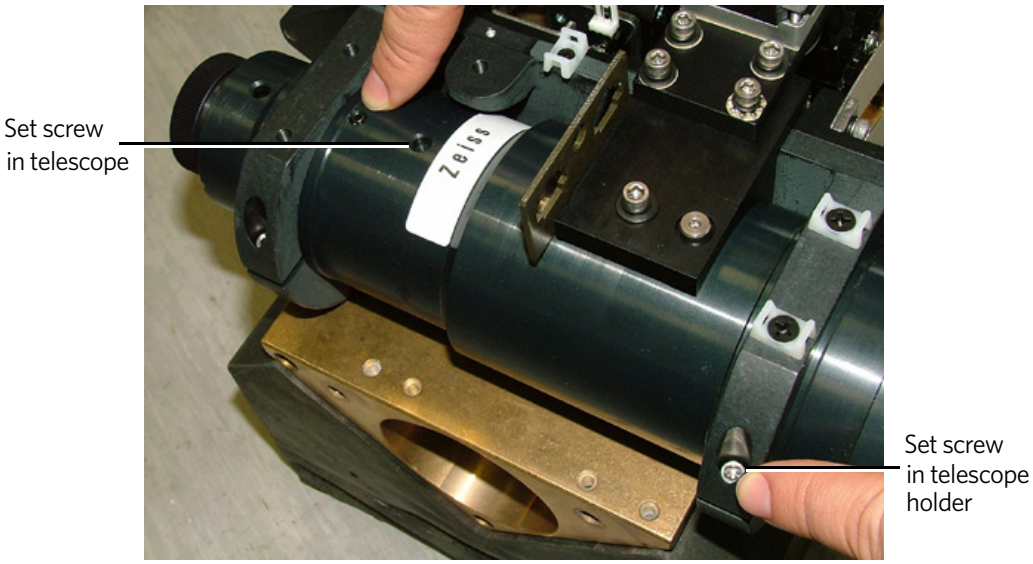


Figure 3: Telescope locking screw

Note: Before removing the cable ties in the next step, pay attention to how they are threaded through the two brackets. You will need to put them back in the same way.

2. At the back of the telescope, cut and remove the various cable wraps that secure the black plastic tubing in place.

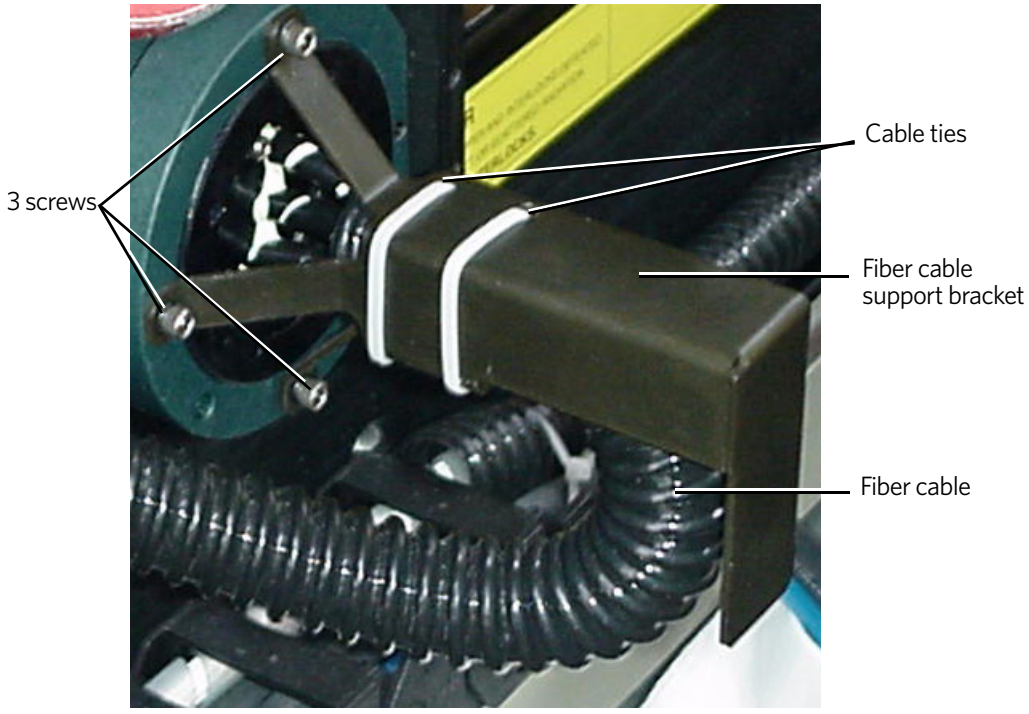


Figure 4: Fiber cable support bracket

Important: From this point on, the fibers are unsupported. You must be very careful with them.

3. Remove the three screws from the fiber cable support bracket (Figure 4) and set the cable support bracket aside.
4. From the back of the head/lens assembly telescope, remove the black retaining ring, using the optic head outer key.

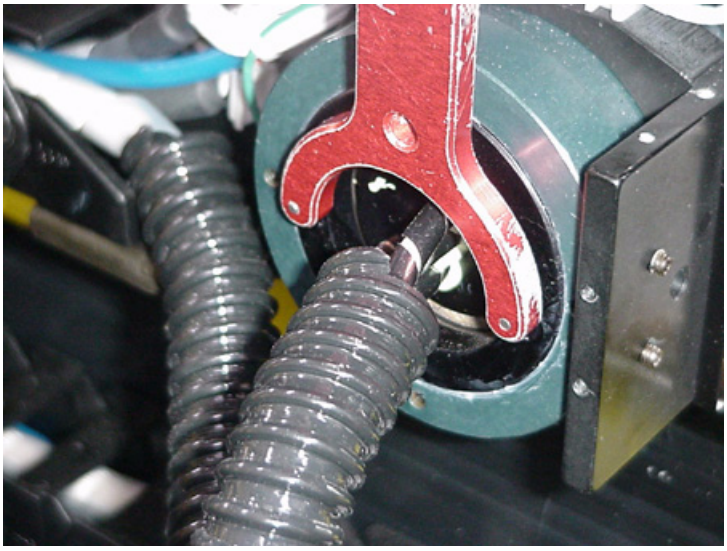


Figure 5: Removing the retaining ring

Note: To prevent rotation as you unscrew, temporarily reinsert the head rotation arm through the telescope so that you can hold it.

Note: There is a large spring washer directly behind the retaining ring. The washer will fall out when you remove the retaining ring. Remember to put it back at the end of the procedure.

5. Set aside the retaining ring and remove the bearing behind it, as shown in Figure 1 and in Figure 6.

6. Remove the imaging head and lay it over the V-block.

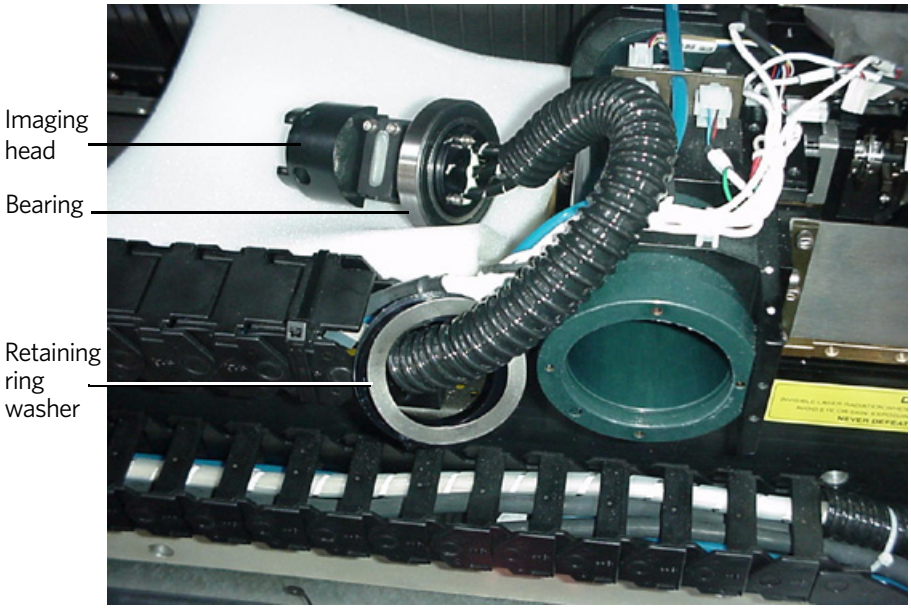


Figure 6: Imaging head on the V-block

Adjusting the V-Groove Position

The object of this adjustment is to achieve the proper distance between the edge of the V-groove and the optic lens. To achieve this, adjust the position of the imaging head cover so that the V-groove does not extend farther out than the edge of the imaging head protective cover, as shown. The adjustment procedure is described on page 8.

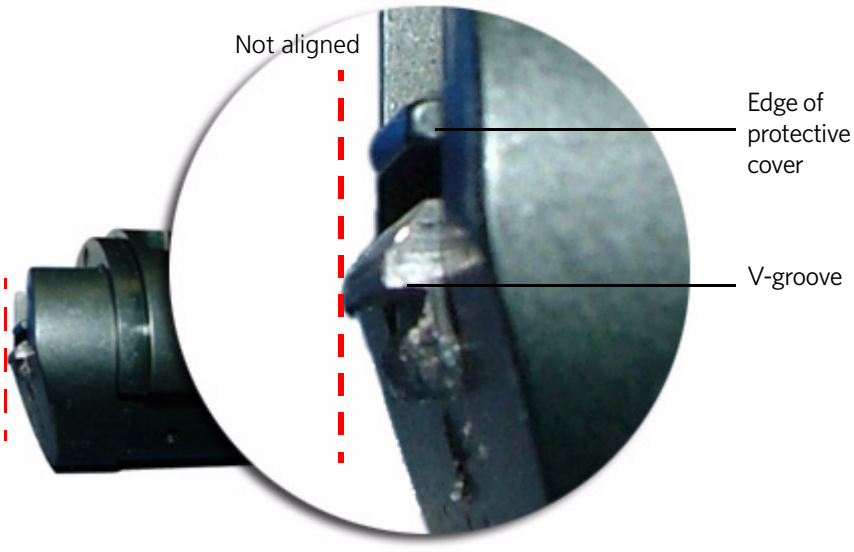


Figure 7: V-groove not positioned correctly



Figure 8: V-groove positioned correctly

To adjust the V-groove position:

➢ Open the two hex screws on the protective cover of the lens, as shown, and move the protective cover in the required direction to align the V-groove with the edges of the protective cover.

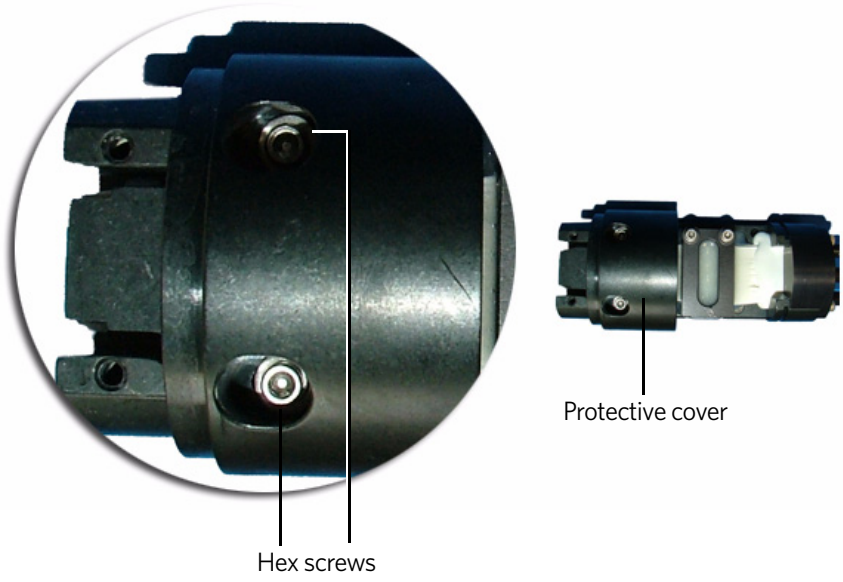


Figure 9: Lens adjustment screws

Reassembling the Lens Assembly

1. Carefully insert the imaging head into the telescope so that the rotation arm can pass through the telescope and screw into it.
2. From the back of the telescope, insert the bearing and then use the optic head outer key to secure the black retaining ring, as shown in Figure 5 on page 5.

   Note: Do not overtighten the retaining ring: that will cause an unsmooth resolution rotation. The retaining ring should protrude slightly, as shown in Figure 1 on page 2.
3. Insert the fiber cable support bracket and secure it with the three screws that you removed in step 3 of the *Accessing the Imaging Head* section.
4. Secure the black tubing to the fiber cable support bracket with cable ties, as described in step 2 of the *Accessing the Imaging Head* section.
5. Re-insert the hex screws removed in step 1 of the *Accessing the Imaging Head* section.
6. Thread the rotation arm through the telescope and screw the rotation arm back into the head assembly.
7. Secure the rotation arm with the two springs, as shown in Figure 1 on page 2.
8. Reinstall the resolution motor assembly by screwing the motor block into place. Ensure that it connects properly to the head rotation arm.
9. Connect the detector connectors and the motor power connector.
10. Insert the exposed earth wire under the resolution motor screw, as shown in Figure 2 on page 3, and tighten the four resolution motor hex screws.

Testing the Procedure

1. Verify that the resolution motor moves freely:
   a. Turn on the platesetter and start the ThermoFlex Controller software.
   b. From the **Resolution Motor** menu, on the **Properties** tab, check the **Max Pos App** value, and then move the resolution motor back and forth a few times between home position (HP) and the **Max Pos App** value.
2. Verify that the focus motor moves freely:
   a. Select **Hardware > Database > Focus Motor** and check the **Max Pos App** value.
   b. From the **Focus Motor** menu, move the focus motor back and forth a few times between HP and the **Max Pos App** value.
3. Fully calibrate the platesetter, including focus, intensity, resolution, delay, and elevation.