analytikjena
An Endress+Hauser Company

Technical Bulletin
TB-101

UVP Transilluminator Selector Switch Replacement

Overview

The purpose of this Technical Bulletin is to explain the process of uninstalling a faulty selector switch and installing a replacement switch on a UVP transilluminator. This instruction applies to transilluminator selector switches used either for wavelength or intensity selection.

To complete this procedure, the following tools will be required:

- Phillips-head screwdriver
- 1/16" Allen wrench
- Pliers
- Flat-head screwdriver

Caution: This procedure requires a moderate level of technical competence. If you are not comfortable working with electronics, tools and/or related components, contact Analytik Jena for information on returning your transilluminator for repair or replacement.

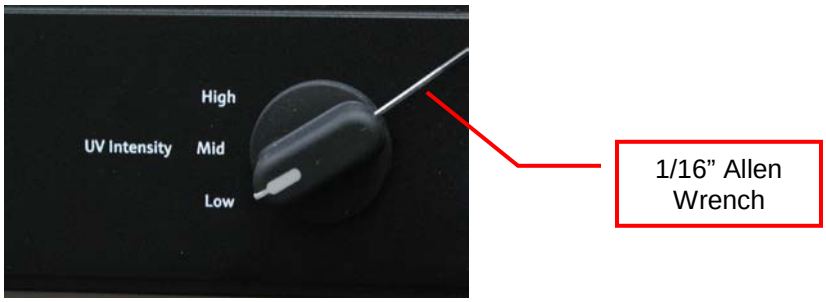
Note: For information on replacing the transilluminator power switch, see TB-100, "Power Switch Replacement Instructions".

Removal Procedure

When performing the following procedure, place all components (screws, nuts, etc.) in a secure location as they will be reused for installation.

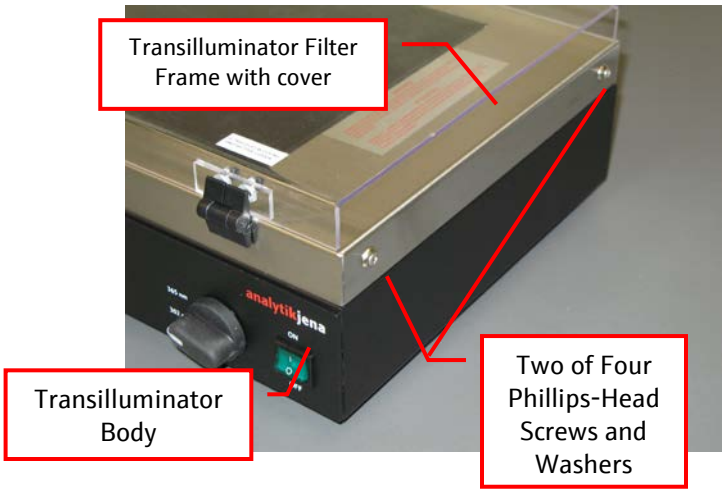
1. Turn off the transilluminator by placing the power switch on the front of the unit in the OFF position. Then, unplug the unit from the wall power.

2. Using a **1/16" Allen wrench**, loosen the set screw securing the selector switch knob to the selector switch shank.

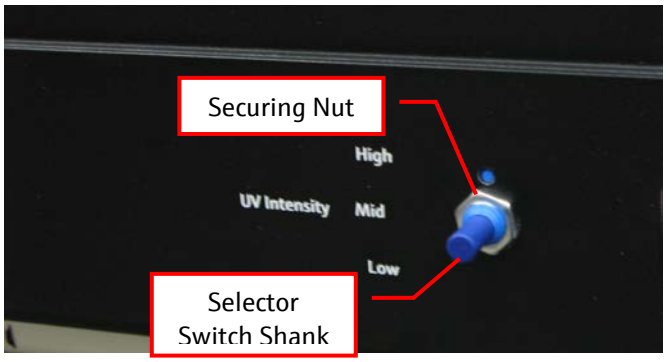


3. While firmly holding the transilluminator housing, pull forward on the knob to remove it from the selector switch shank. *Note: This process may require a fair amount of force as the knob fits snugly over the shank.*

4. Remove the **four Phillips-head screws** and washers securing the transilluminator filter frame to the body of the transilluminator. Lifting up, remove the **transilluminator filter frame** from the **transilluminator body**. Place the filter frame aside.



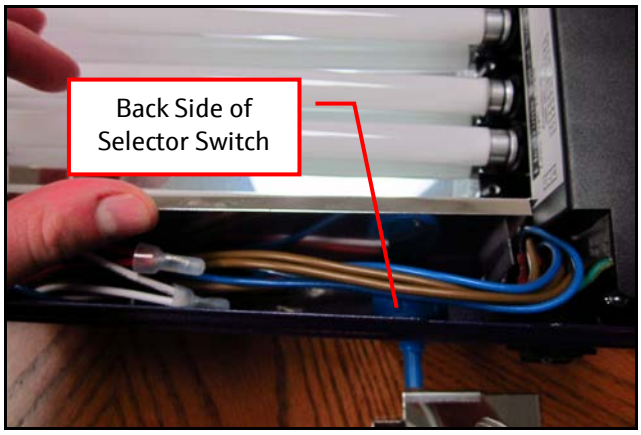
5. Using the pliers, remove the **securing nut** securing the selector switch to the transilluminator body.



6. Inside the unit, locate the **side reflector panels** which are two reflective metal panels located at each end of the transilluminator light tubes. Note how these panels are installed prior to removal, as this will aid with reinstallation later on.

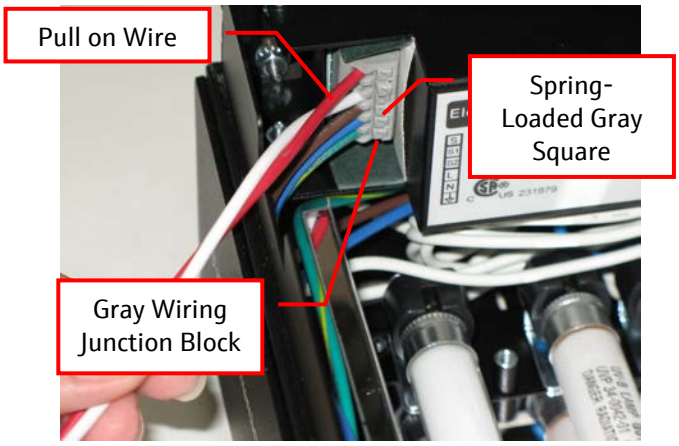
7. Pulling straight up, remove the two side reflector panels from inside the transilluminator.

8. Looking inside the front panel of the transilluminator body, locate the **back side of the transilluminator selector switch**. Trace the wires from the back of the switch to the gray wiring junction block located at the front-left corner of the unit. Note which wires are connected from the switch to the junction block.



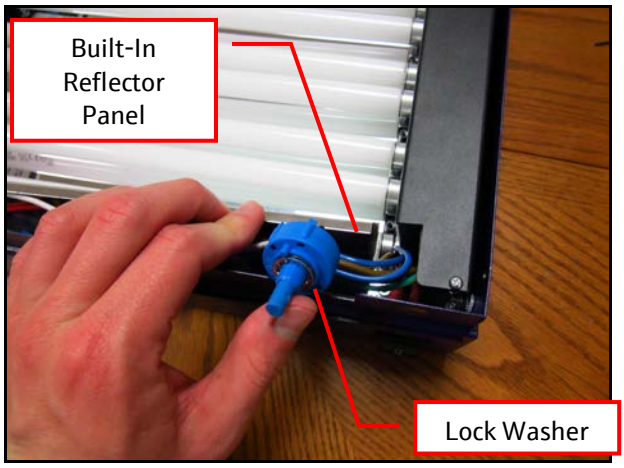
9. ***Note**: Prior to completing this step, make a note of the location of the transilluminator selector switch wiring on the gray wiring junction block.*

   The **gray wiring junction block** contains a number of **spring-loaded gray squares** with diagonal hash marks. The spring-loaded action of these squares holds the corresponding wire in place. Using a flat-head screwdriver and while pulling on the appropriate wire, press in on the gray square and pull the wire out. Repeat this process until all wires leading from the selector switch to the junction block are removed.



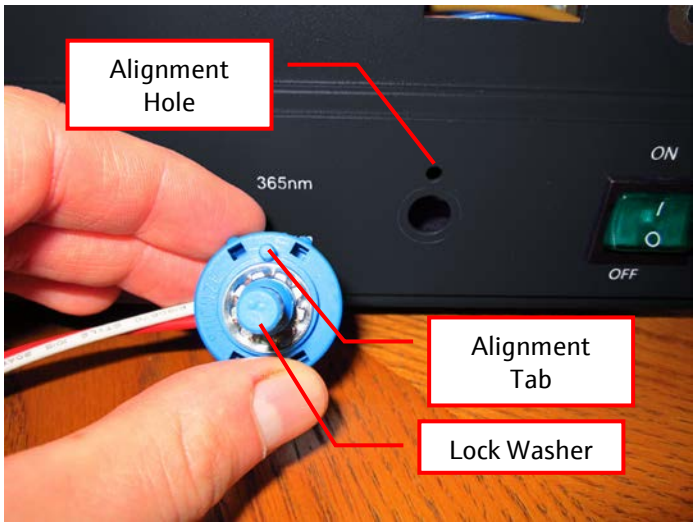
10. Locate the portion of the **built-in reflector panel** directly behind the selector switch. Flexing the reflective panel toward the rear of the transilluminator, remove the selector switch from the inside of the transilluminator.

    ***Note**: There is a metal lock washer located between the selector switch body and the transilluminator body. When removing the switch, be careful not to lose this washer in the base of the transilluminator under the reflector panel as it will be used during installation of the replacement switch.*



Installation Procedure

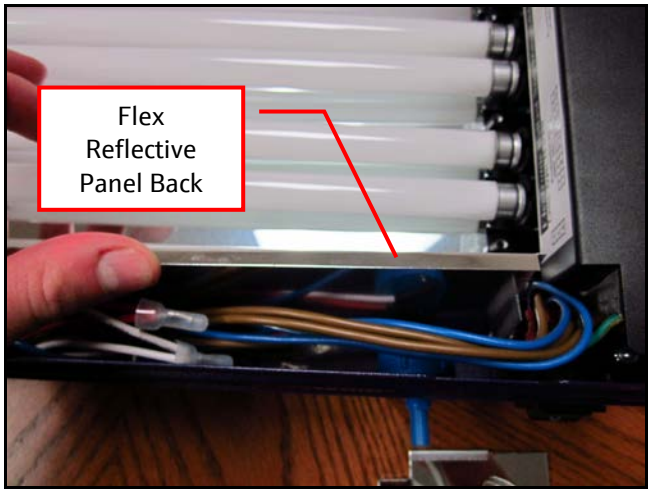
1. Looking at the front of the replacement selector switch, note the position of the **alignment tab**. When installing the new switch, this tab should be aligned with the **alignment hole** in the body of the transilluminator (see illustration).



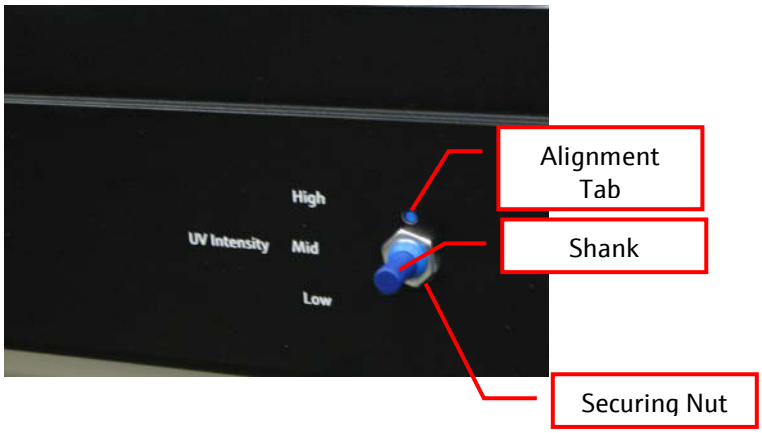
2. Place the **lock washer** over the shank of the replacement selector switch.

3. Flexing the front of the **reflective panel** toward the rear of the transilluminator, insert the selector switch into the opening in the body of the transilluminator so that the alignment tab and selector switch shank fit through the correct holes.

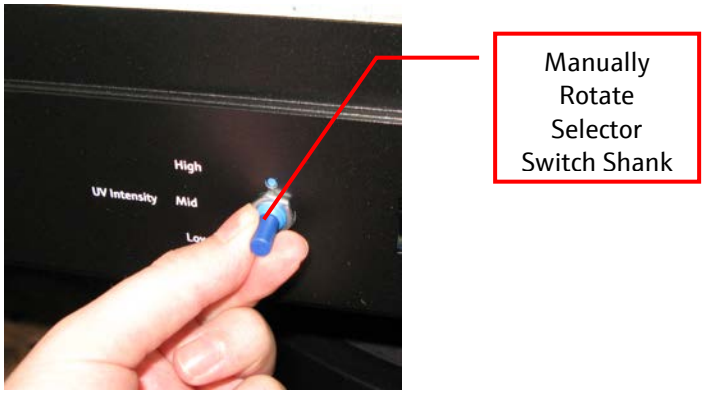
   ***Note**: Ensure that the alignment tab is inserted into the small hole above the opening for the selector switch shank. Also, ensure that the lock washer is in place between the body of the selector switch and the body of the transilluminator.*



4. Thread the **securing nut** onto the **shank** of the selector switch. Hand tighten the nut, and then use the pliers to tighten the nut snugly. Again, verify that the **alignment tab** is inserted in the small hole above the shank of the switch.



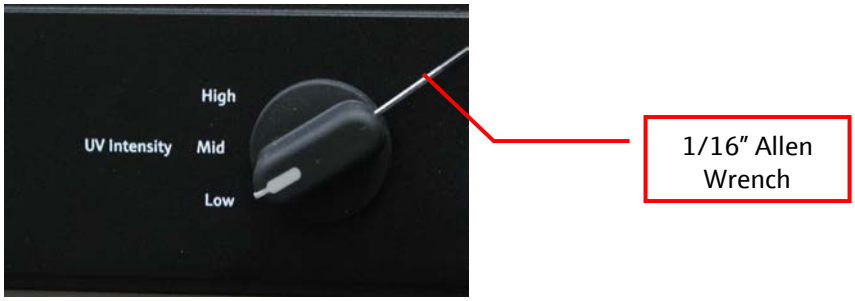
5. Without the selector switch knob installed, use your fingers to rotate the selector switch shank to the lowest position (in this case, to the "302nm" position).



6. The selector switch knob does not have a groove or flat surface to align on the selector switch shank, so it is necessary to visually align the white indicator line on the knob with the desired indicator position on the face of the transilluminator.

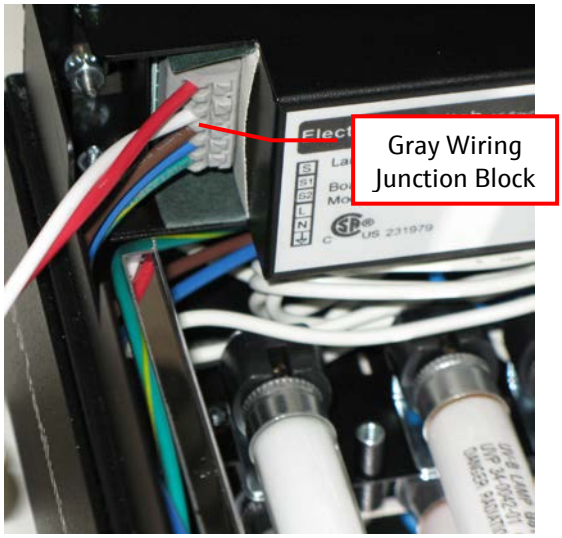
   Once the position of the knob has been aligned, firmly press the selector switch knob into place on the switch shank. Gently rotate the knob to ensure correct alignment. If the knob is not aligned, remove the knob and repeat the process until properly aligned.

7. Using the **1/16" Allen wrench**, tighten the set screw securing the selector switch knob to the selector switch shank.

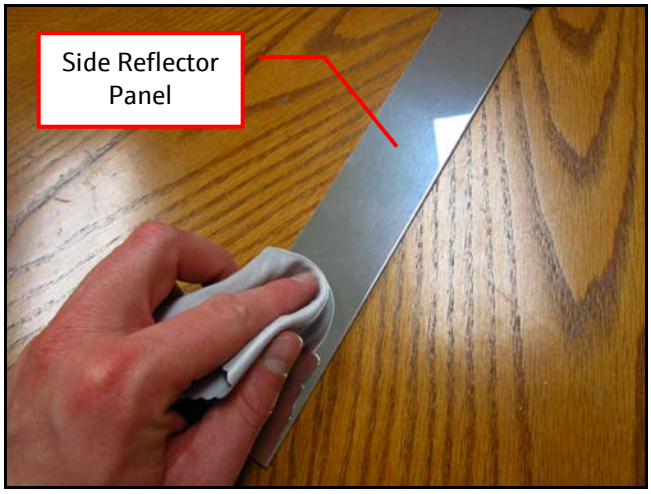


8. Route the wiring from the selector switch to the **gray wiring junction block**. Using a flat-head screwdriver, press in on the gray square while pushing the metal portion of the wire into the corresponding hole (refer to the notes from Step 9 in the "Removal Procedure" to determine where each wire should be installed). Repeat this process until all wires leading from the selector switch to the junction block are installed.

   ***Note**: When a wire is fully installed, the gray square will remain in the "pushed in" position and the wire will stay snugly in place.*



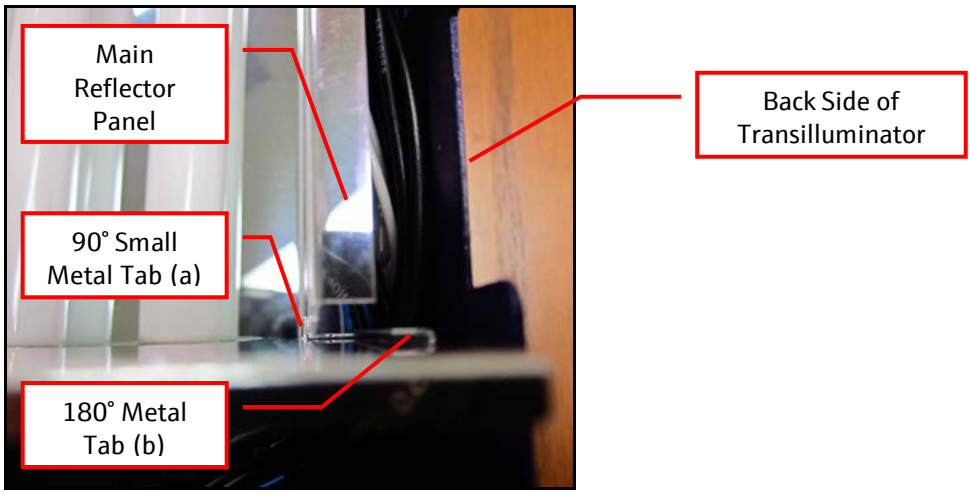
9. Using a soft cloth, clean any fingerprints or other dirt off of the surface of the side reflector panels prior to reinstallation.



10. The side reflector panels must be aligned with the **main reflector panel** during reinstallation.

    a. A **small metal tab (a)** protrudes from the side reflector panel at a 90˚ angle. This tab must slide on the inside (the bulb side) of the main reflective panel.

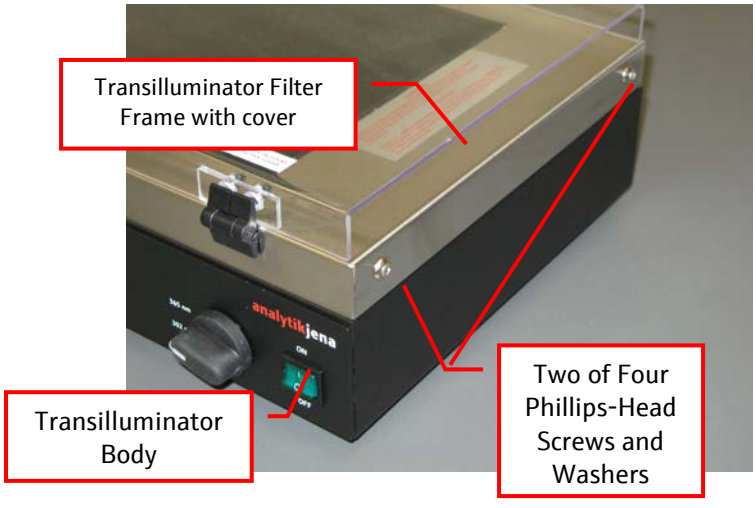
    b. Another portion of the side reflector panel is bent at a tight 180˚ angle to create a **180˚ angle tab (b)**. This must be aligned with a metal tab protruding from the outside (non-bulb side) of the main reflective panel.



11. As the edges of the side reflector panels are sharp, ensure that all wiring is moved out of the way during installation of the side reflector panels to avoid cutting into the sheathing of the wiring. Slide the side reflector panels into place until the top edges of the reflector panels are flush with the top edges of the main reflector panel.

12. With the **two sets of two small holes** on the filter frame facing toward the front of the unit, replace the transilluminator filter frame on top of the body of the transilluminator.

13. Reinstall the four Phillips-head screws and washers on the sides of the transilluminator to secure the transilluminator filter frame to the transilluminator body.



Technical Support

Contact Analytik Jena US Technical Support for additional assistance:

If you are in North America, South America, East Asia or Australia:	**If you are in Europe, Africa, the Middle East or Western Asia:**
Call (909) 946-3197, and ask for **Technical Support** during regular business days, between 7:00 am and 5:00 pm, PST.	**Call +44(0) 1223-42002**, and ask for **Customer Service** during regular business days between 8:30 am and 5:30 pm.
E-mail your message to: info@us.analytik-jena.com or support@us.analytik-jena.com	**E-mail** your message to: uvp@uvp.co.uk
Fax Technical Support at (**909) 946-3597**	**Fax** Customer Service at **+44(0) 1223-420561**