4.1.4 Mounting Instructions: Collimator to X-Ray Tube

Warning!! In order to ensure a safe and secure mounting of the collimator to the X-ray tube, the following installation guidelines must be followed.

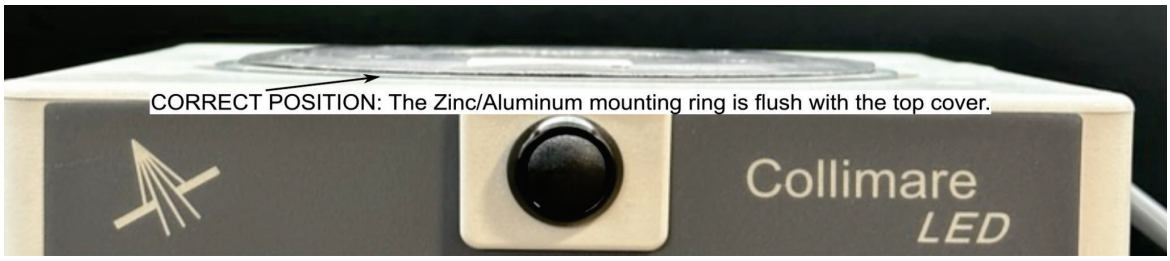
1. Determine the correct length of tube mount screws to use taking into account the collimator spacing requirements with respect to the tube housing port boss per the manufacturer's literature and specifications.
    - CML Model: Included with the collimator in the installation bag.
        - M6-1.0 x 30mm Flat Head Screws
        - M6-1.0 x 35mm Flat Head Screws
        - 1/4-20” x 1-1/4” Flat Head Screws
    - CPL Model: Screws are provided by the manufacturer of the portable x-ray system.

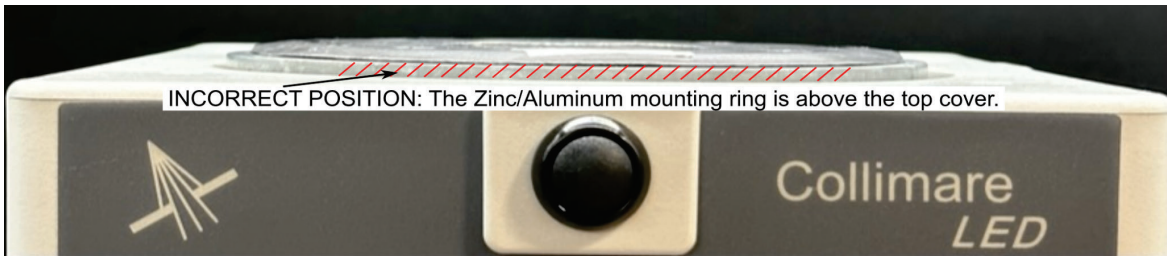
2. Remove the tube mount assembly from the top of the collimator by backing the mounting lug adjustment screws all the way out, a minimum of 3 full CCW turns. When removing the tube mount assembly take note that the zinc/aluminum mounting ring is flush with the top of the top cover.

3. Calculate the required number of tube mount shims to obtain a focal spot distance of 2.44 inches per the X-ray tube manufacturer’s specifications (Figure 2, Page 13 and Figure 6, Page 21).

4. Install the tube mount assembly and shims onto the X-ray tube with the stop-pin cut out to the front (Figure 6, Page 21). A medium strength thread locking compound, such as Loctite #242 must be applied to the screws before securing the tube mount to the X-ray tube.

5. Lift the collimator up to fully seat the mounting ring. It is critical to ensure that the zinc/aluminum mounting ring is flush with the top cover as shown below. Using an ⅛” Allen wrench, tighten each of the mounting lug screws a minimum of 3 full CW turns to an even pressure. Once the screws are tight, back off each screw ⅛ turn and rotate the collimator to align the laser crosshairs with the table or bucky.





6. Once the collimator has been aligned, use a torque screwdriver to apply torque incrementally up to 20 inch-pounds (2.26 Newton meters) to the mounting lug screws. For example, apply 10 in-lbs to each of the four mounting lug screws sequentially, then apply 15 in-lbs to each, then 20 in-lbs. With proper execution of this procedure, there should be a slight drag in the rotation of the collimator on the mounting ring.

7. Align the Light field to the X-Ray field per the instructions in Section 4.2 Alignment of X-Ray Field to Light Field found on page 24.

8. After mounting the collimator and/or performing any service to it or the tube housing, inspect the fit of the collimator and tube housing assembly. Ensure the collimator can freely rotate between detent locks while inspecting for loose joints or gaps between the tube/collimator assembly or the mounting area.

Failure to adhere to the above guidelines may result in damaged tube mount screws, mount failure, or unsecured collimator mounting clamps which could result in heavy components falling during use. Incidents of loose system components should be reported immediately to X-ray service personnel for repair.