UDI_1105-815-209 Upgrade AL02 Collimator

How to install the AL02 collimator in Precision i5

APPLICABLE TO: Precision i5 systems previously equipped with OP30 collimator.

Kit p/n : 1105-815-209

IMAGE TO BE ADDED

TOOLS: Standard Service tools.

IMAGE TO BE ADDED

Standard service tools, Torque wrench (10Nm), Loctite 243 or eq. Torx T10, 5,5 mm Ratchet wrench.

PROTECTIVE MEASURES:

CAUTION!
Printed circuit boards contain electrostatic highly sensitive components requiring particular care in their handling. Ground before making contact and place only on a conductive surface.

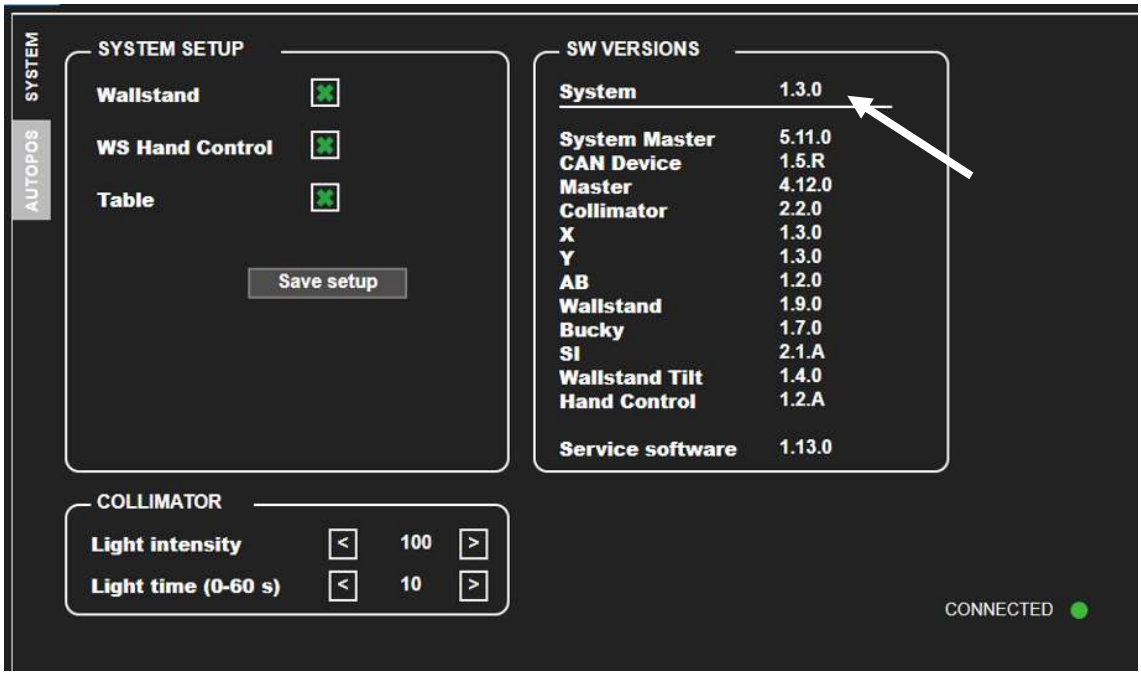
CAUTION!
Remaining energy may exist when the equipment is switched off. Always wait at least 15 seconds before working on the system.

ACTION STEPS:

1. Test the system and confirm its current state. Upgrade should not be started if the system is in error state.
2. Check current version of CanonNE to determine if it is 2.19 or 3.1x.

3. Check current software version of the system. Press and hold the Settings icon in lower left corner of the display to open the Settings menu.

4. Select the *SERVICE* tab and *SETTINGS* menu. Enter password *1895*.
5. Check and confirm that the System software version matches the CanonNE installation. NE2.19 require software version 5.6.1. NE3.1x require software version 1.4.0 or later.



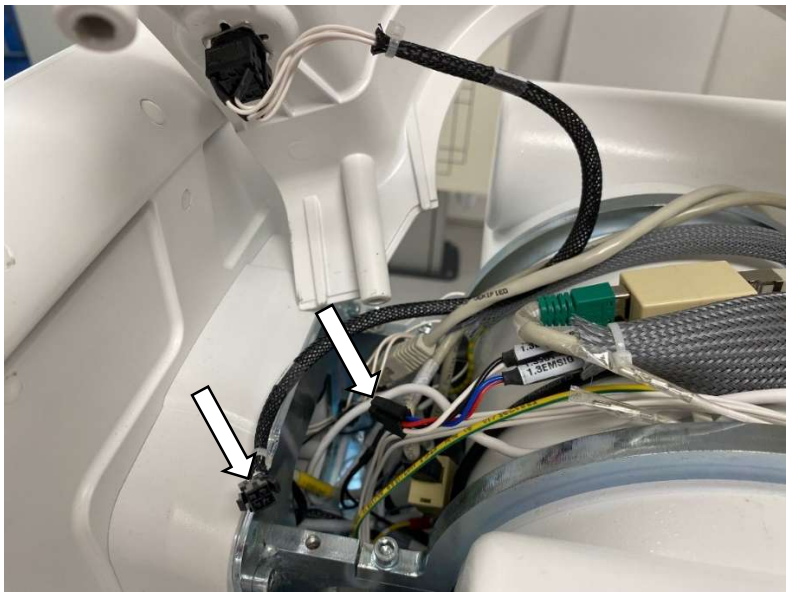
System software version

6. Upgrade software if necessary.
7. Place the OTC in a good working position and height where it can be easily accessed.

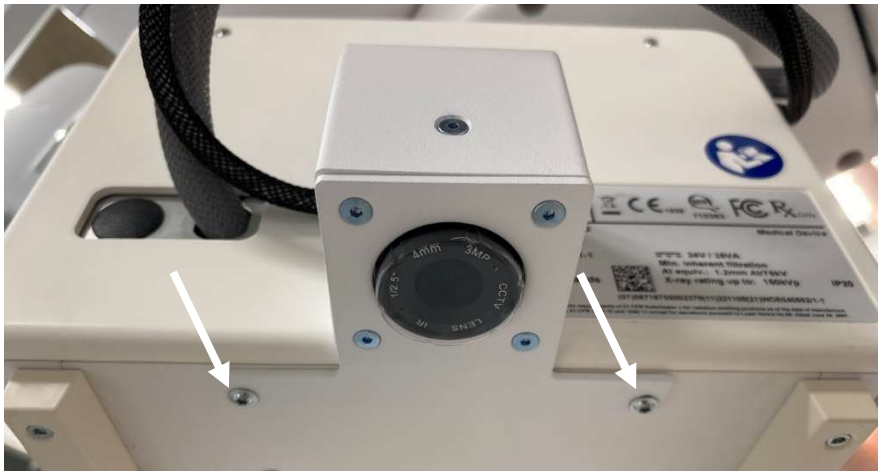
8. Turn the system OFF from the generator mini console.

9. Release and remove the six screws for the OTC tube cover. To prevent damage to the emergency stop cable, carefully lift the cover off and turn it out of the way to access the back of the display unit.

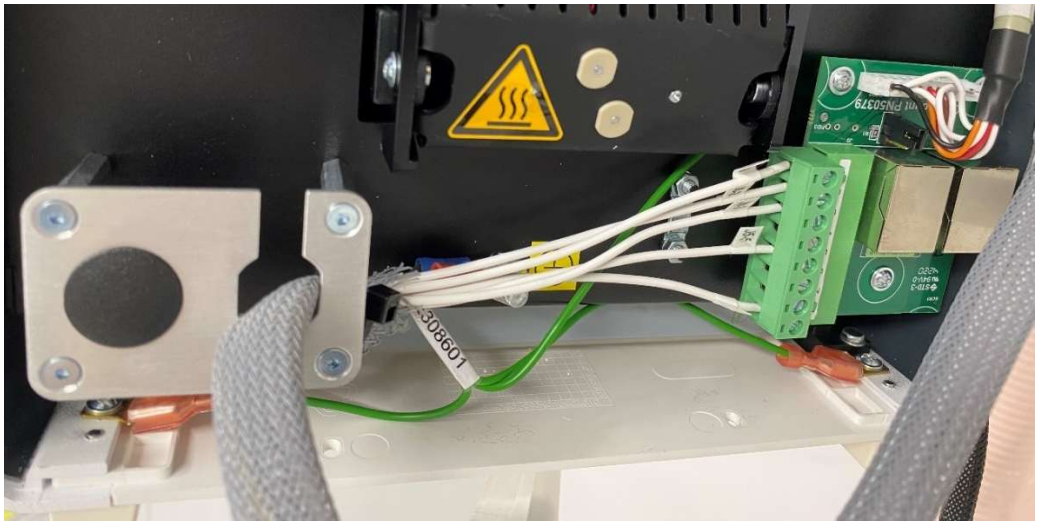
10. Disconnect the emergency stop cable *1.3EMSIG* to improve access. The cover can now be moved out of the way for the next steps.



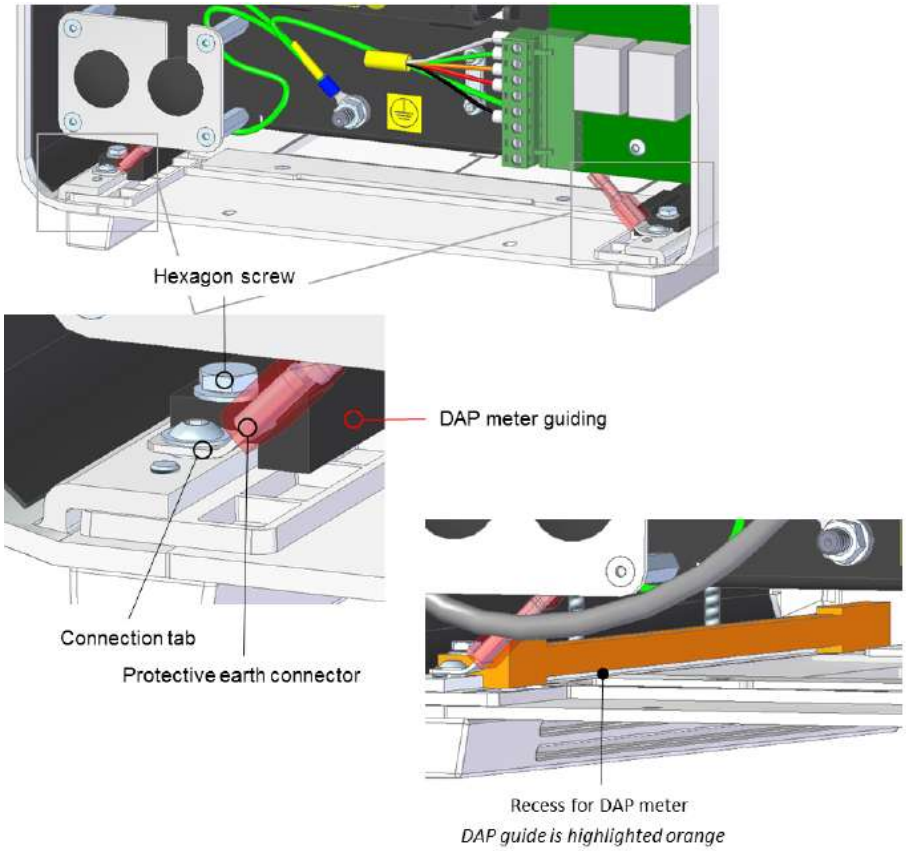
11. Release and remove the four (4) screws to remove the back cover of the OP30 collimator. If a patient view camera (optional) is installed, remove it too.



12. Disconnect the OP30 collimator cable in the terminal. Pull the cable back and remove it. It will not be used with the new collimator.



13. Disconnect both Protective earth (PE) connectors and loosen the hexagon screws approximately three (3) turns. Wrench size is 5,5mm.

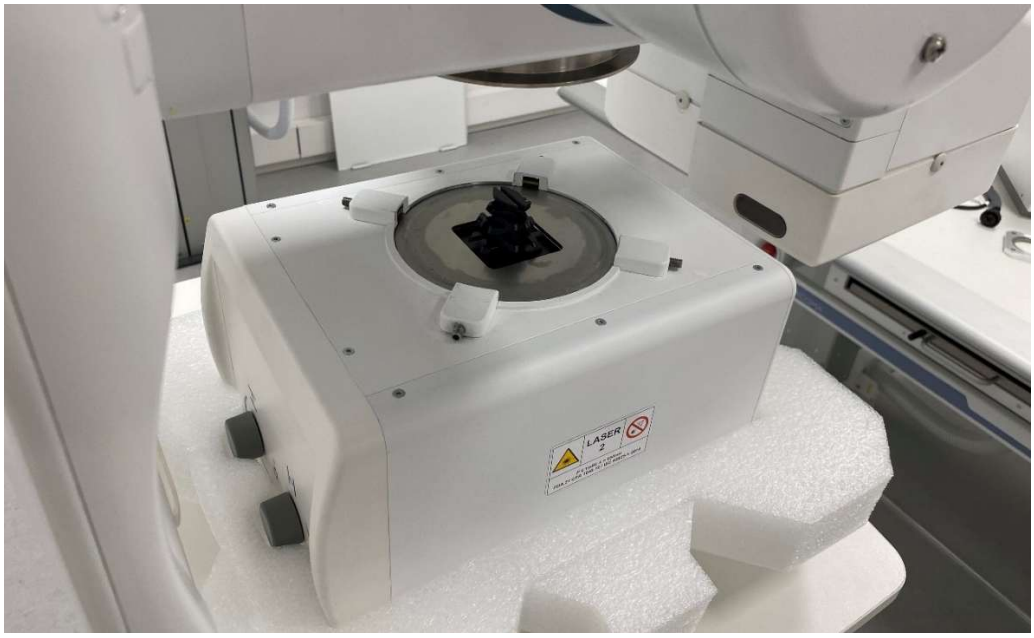


DAP guide is highlighted orange

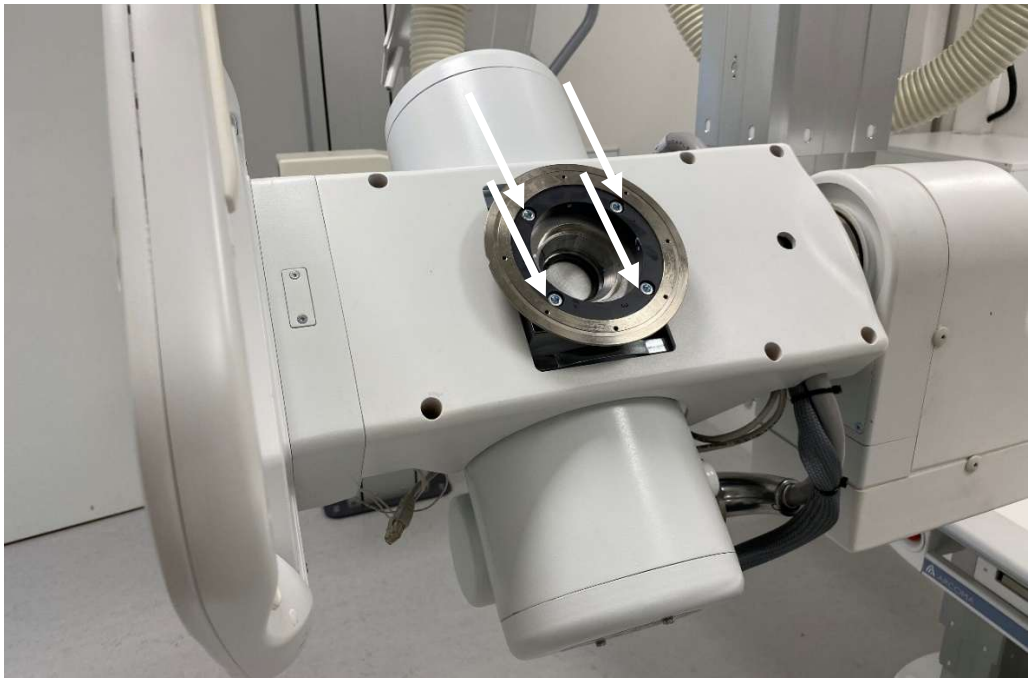
14. Carefully lift the DAP meter guidings and pull the DAP chamber out. Save it for later. It will be inserted in the new collimator.

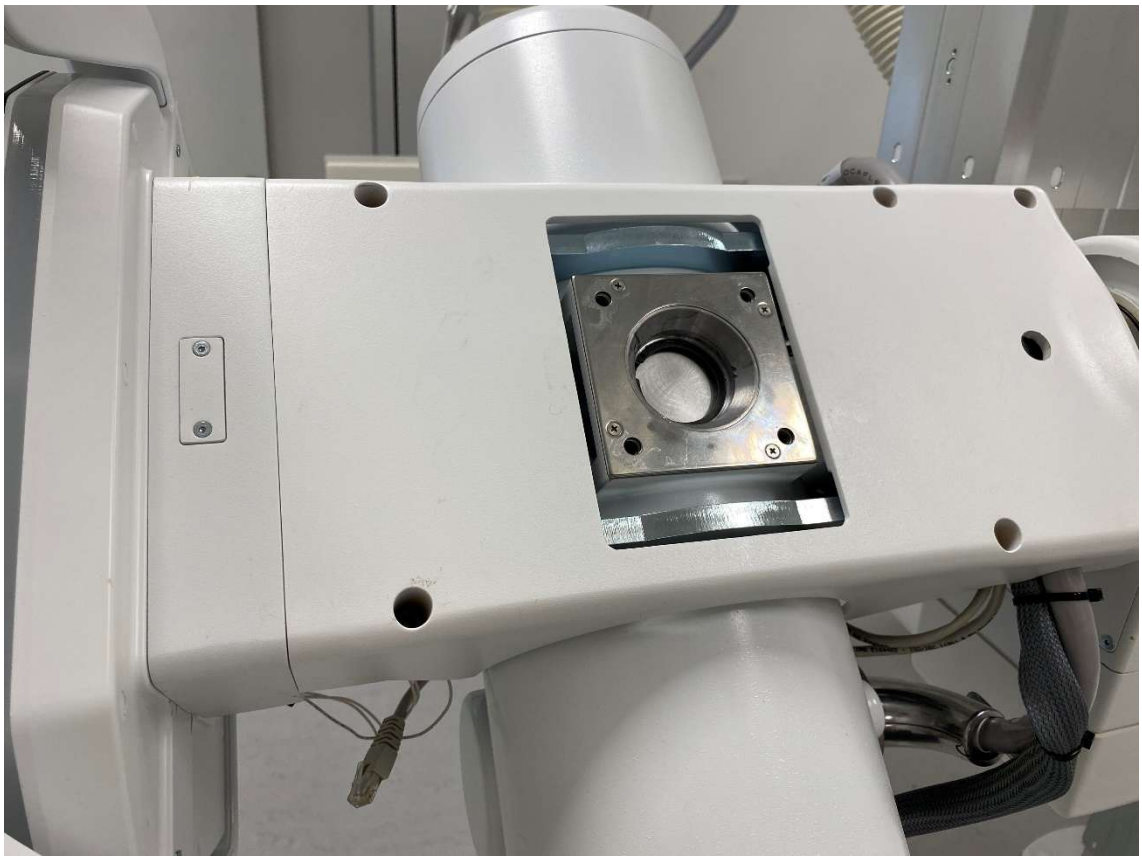
15. Support the OP30 collimator to prevent it from falling. An elevating table can be useful for this step.

16. Release the three (3) or four (4) set screws to remove the collimator.

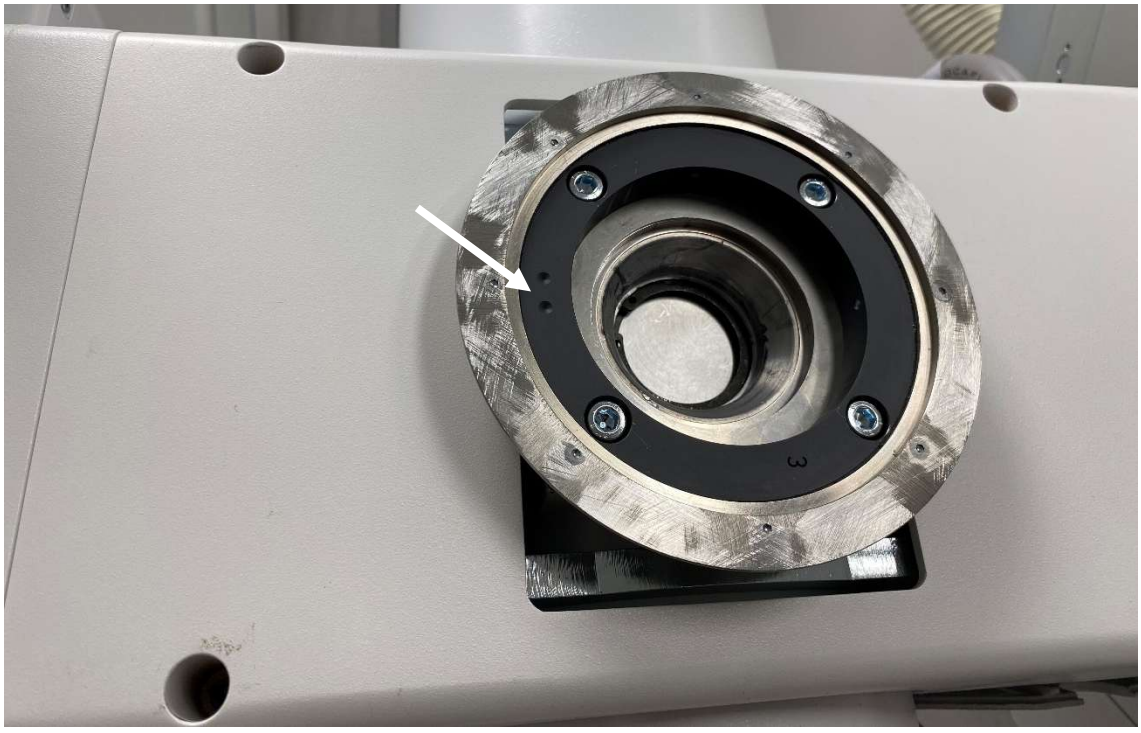


17. Remove the OP30 collimator flange. Flange and screws are no longer needed.





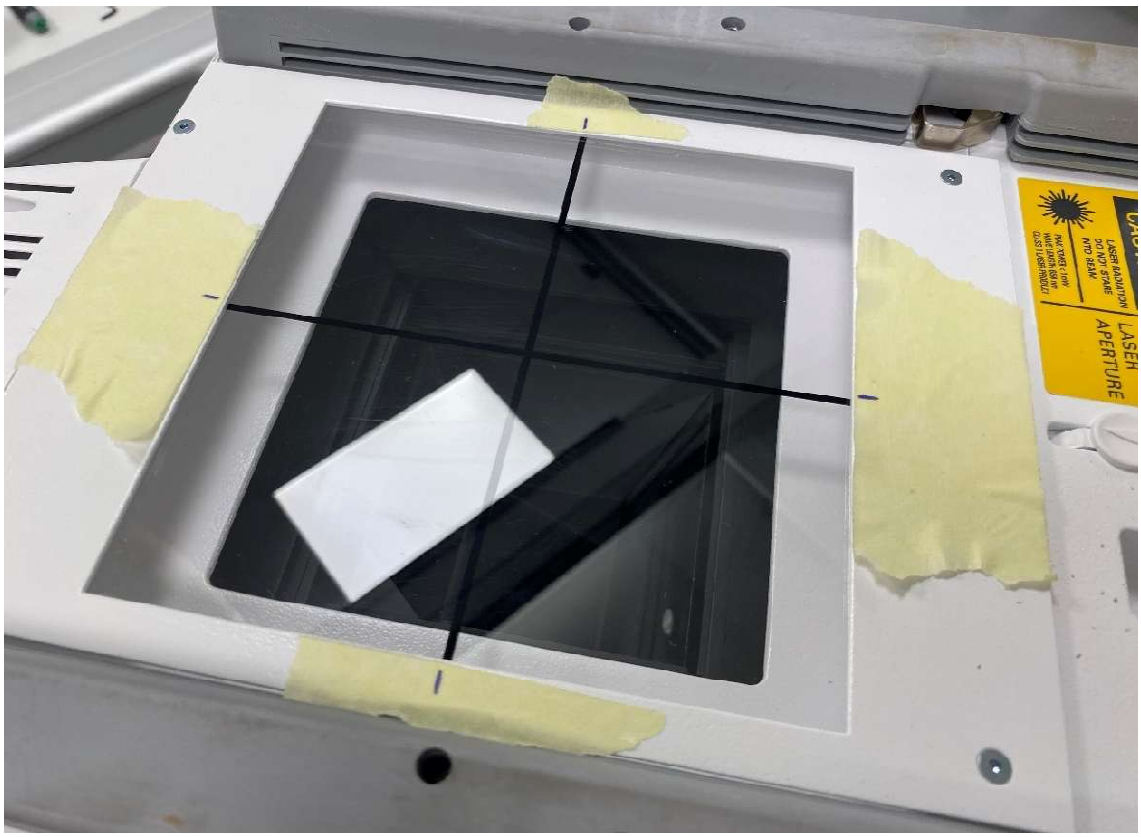
18. Mount the AL02 flange together with distance pieces using the 4pcs 4st MF6S M6x25 from the upgrade kit. Tightening torque: 10Nm, use Loctite 243 or equivalent.



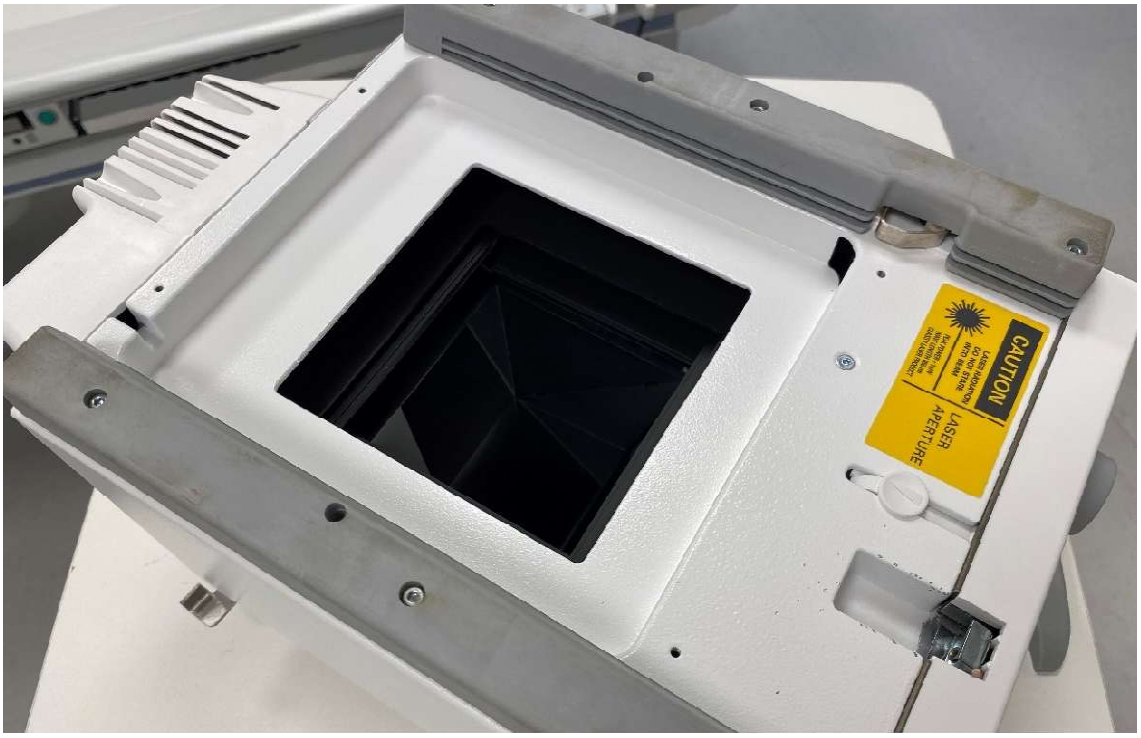
19. Prepare the AL02 collimator before mounting it to the system.

20. Remove accessorie rails from the DAP chamber. They are no longer needed.

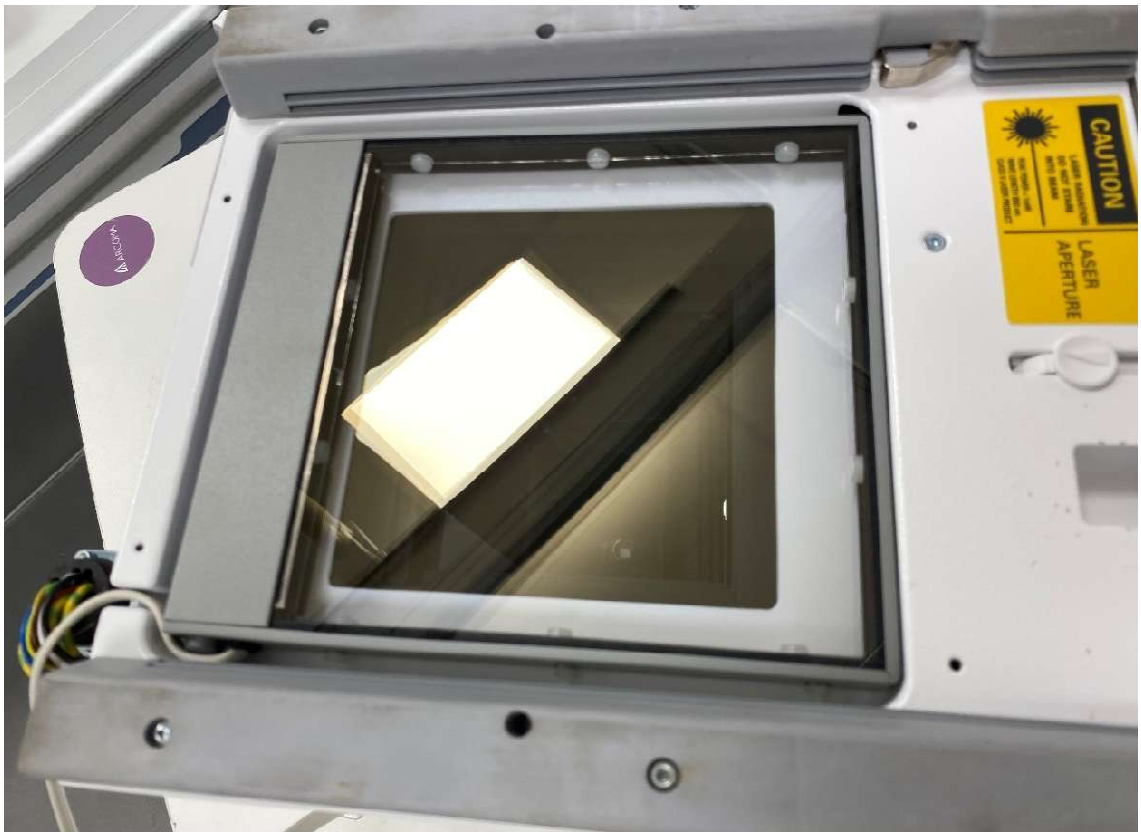
21. Place the collimator upside down on a workbench. Mark the position of the cross-hair window to make sure it can be re-mounted in the same position.



22. Release the four (4) screws for the collimator frame and remove it. Slide out the cross-hair window.



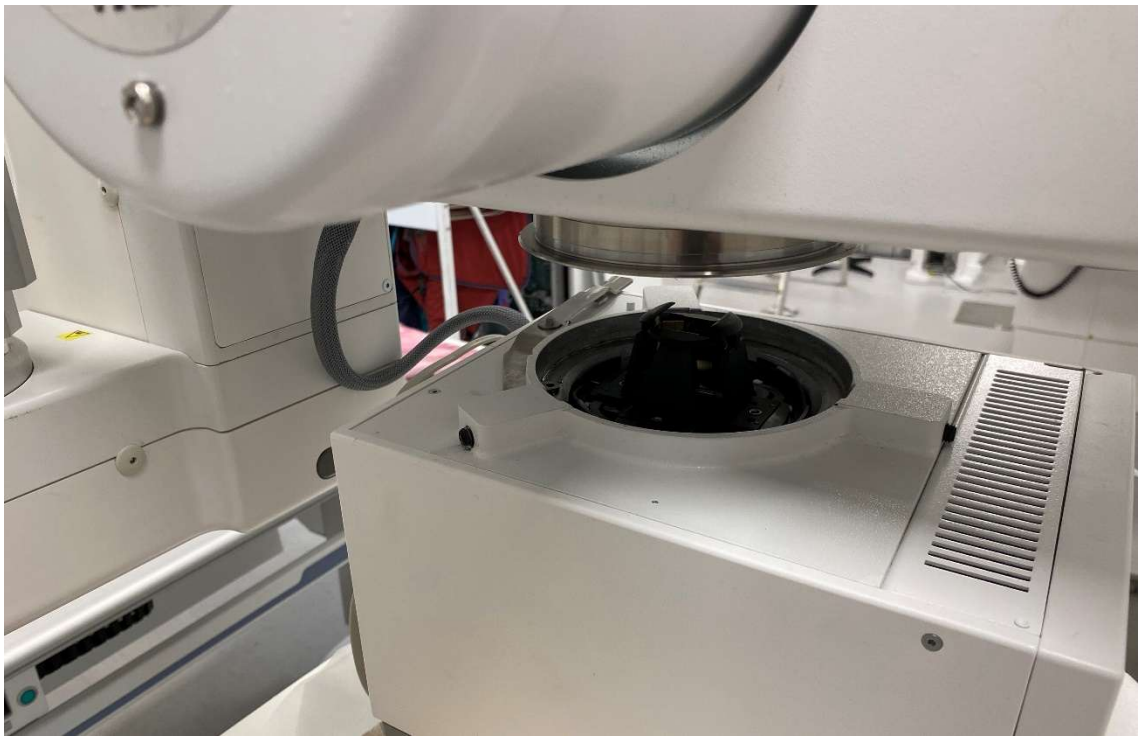
23. Position the DAP chamber inside the collimator and rout the cable towards the back.



24. Slide the cross-hair window back in place and remount the frame. Adjust the window to its center position using the marks from an earlier step. Then tighten the four screws and remove the temporary marks.

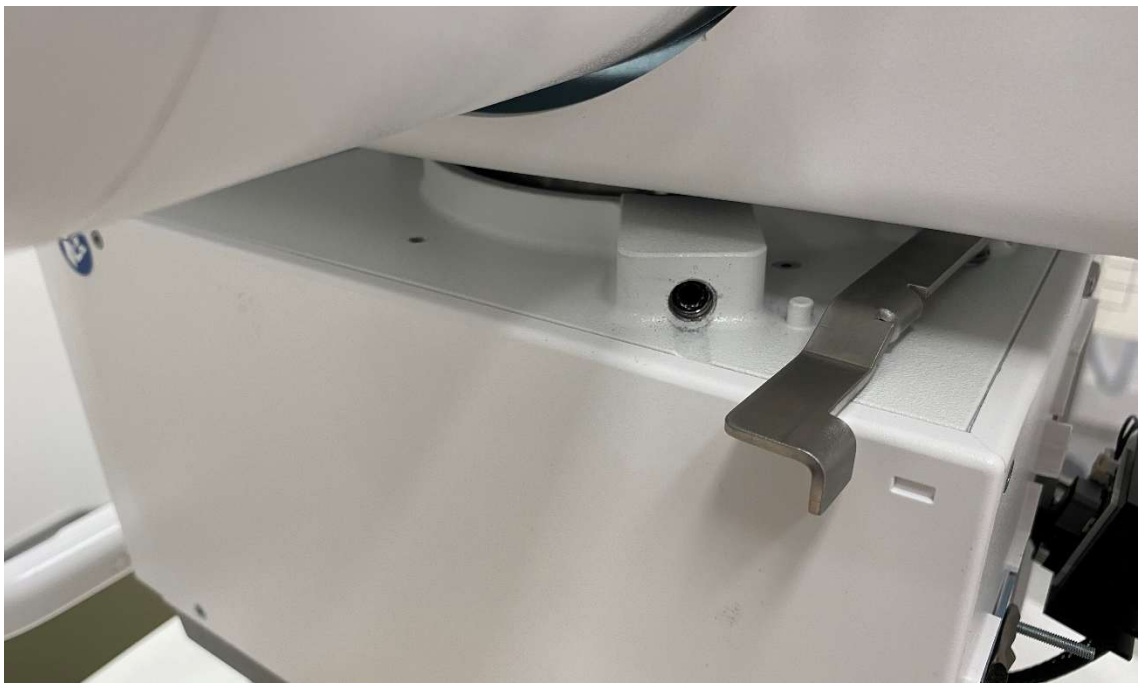
25. Remove the three transportation screws from the collimator. **NOTE!** Save the screws. They must be used if the collimator is ever removed and transported in the future.

26. Position the collimator for the assembly to the tube head. Make sure the three (3) collimator fixation set screws are untightened.



27. Lift the collimator up towards the flange and hold it in place. An elevating table or stand can be used for this operation. Note that the index arm needs to be pushed in while the collimator meets the flange.

28. Mount the new AL02 collimator using the three (3) fixation set screws. Tigthen the two screws on the back of the collimator first. Then carefully lower the elevating stand. Turn the collimator to reach the front screw. Tighten this one as well.

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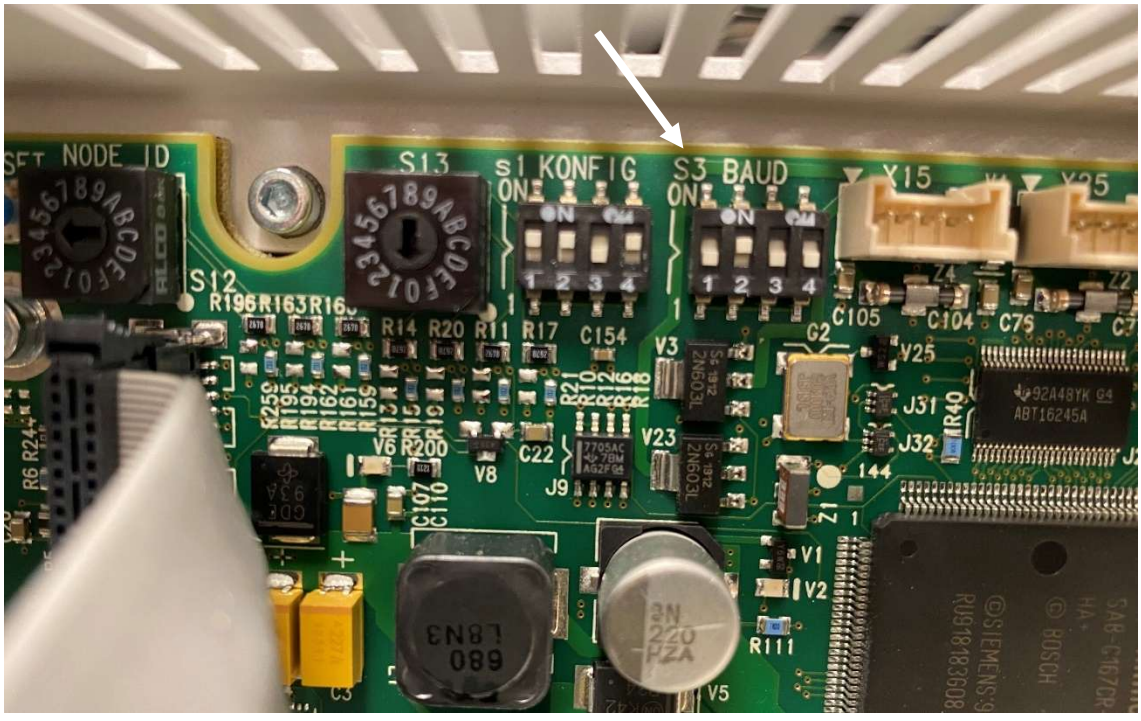
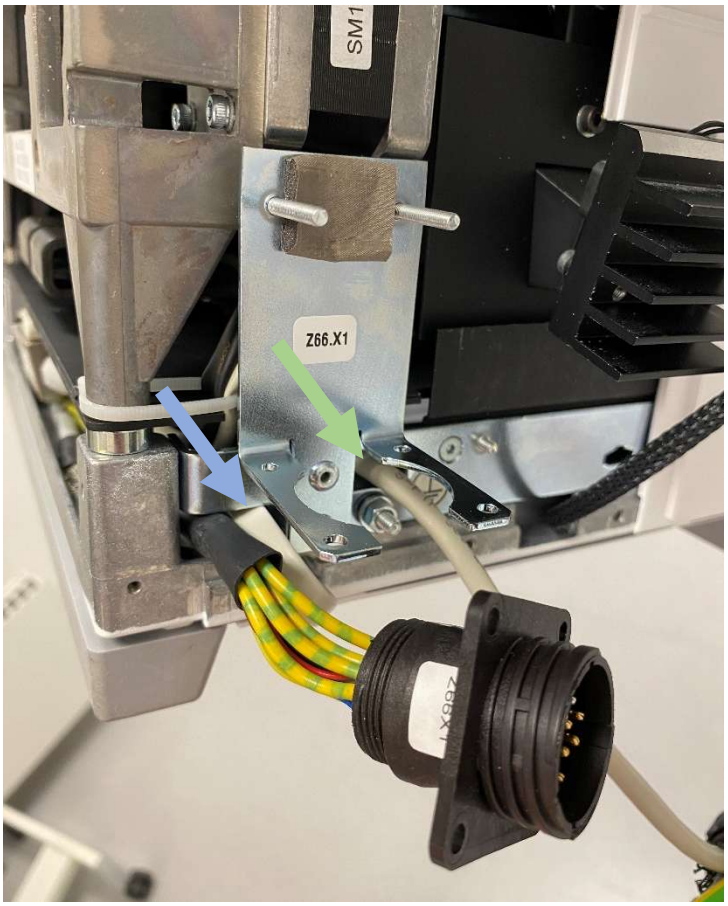
29. Open the collimator front by relasing the two (2) scews. Half a turn of each screw is enough.

30. Confirm the settings of DIP-switch bank S3 (BAUD) for correct communication speed. 1=OFF, 2=ON and 3=OFF.



31. Close the collimator front.

32. Remove the back cover of the AL02 collimator by releasing the three (3) screws. Remove the strain relief. Release and remove the four screws and nuts for the CP16 connector of the AL02 collimator. Carefully and without damaging the cables, remove the connector from its bracket.



Push the cable aside and rout the cable from the DAP chamber through the hole. See blue arrow in the picture to the left.

Rout the DAP cable from cable assembly 00xx-750-xxx that was delivered with the upgrade kit, through the hole. See green arrow in the picture to the left.

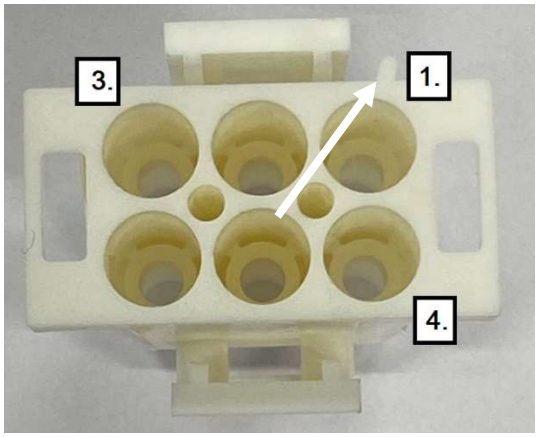
NOTE! If the hole is too tight for the cable you may need to remove the protective over of the cable temporarily.

33. Connect the DAP chamber to the main cable assembly and bundle the connector inside the collimator. Make sure the cable and connector doesn't interfere with internal functions of the collimator.

34. Re-mount the CP16 connector. Connect the cable p/n 0073-750-003 from the upgrade kit.
35. Mount the strain relief.

IMAGE TO BE ADDED

36. Close the collimator back cover.
37. Rout the other end of the cable p/n 0073-810-003 through the hole in the tubehead cover. Connect the loose wires to the white connector from the upgrade kit 1.6J02 (24V supply).



38. Connect the black connector 1.3J07 (CAN).

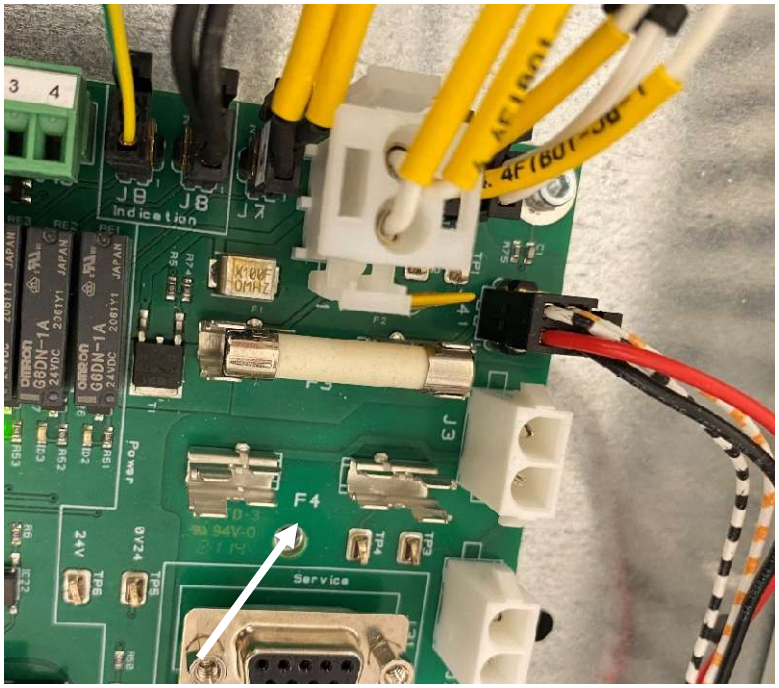
IMAGE TO BE ADDED

39. Connect the cable from the DAP chamber.

IMAGE TO BE ADDED

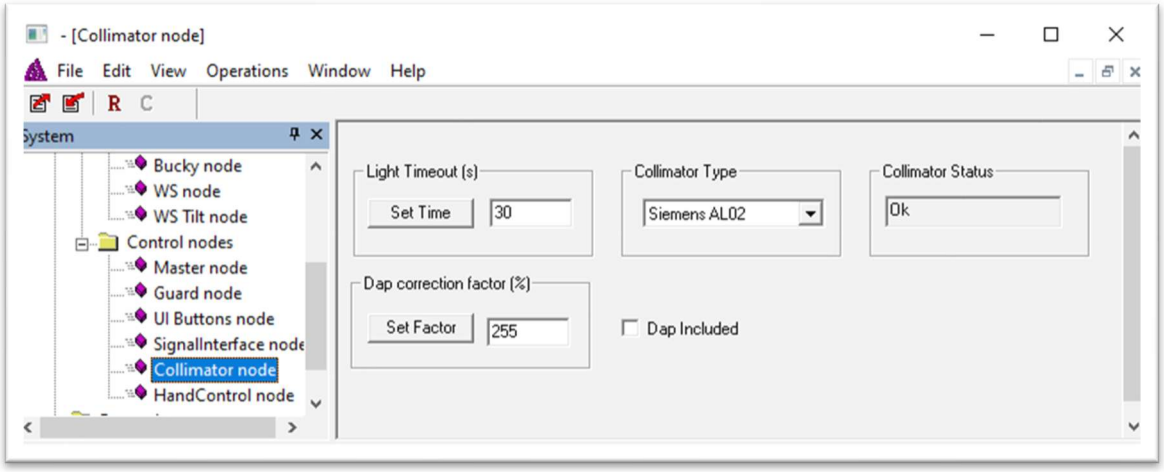
40. Re-mount the patient view camera (optional).

41. Open the top cover of the system cabinet and confirm that fuse F4 on the 4.4FIB01 PCB has been removed. If the fuse is mounted it should be removed now.



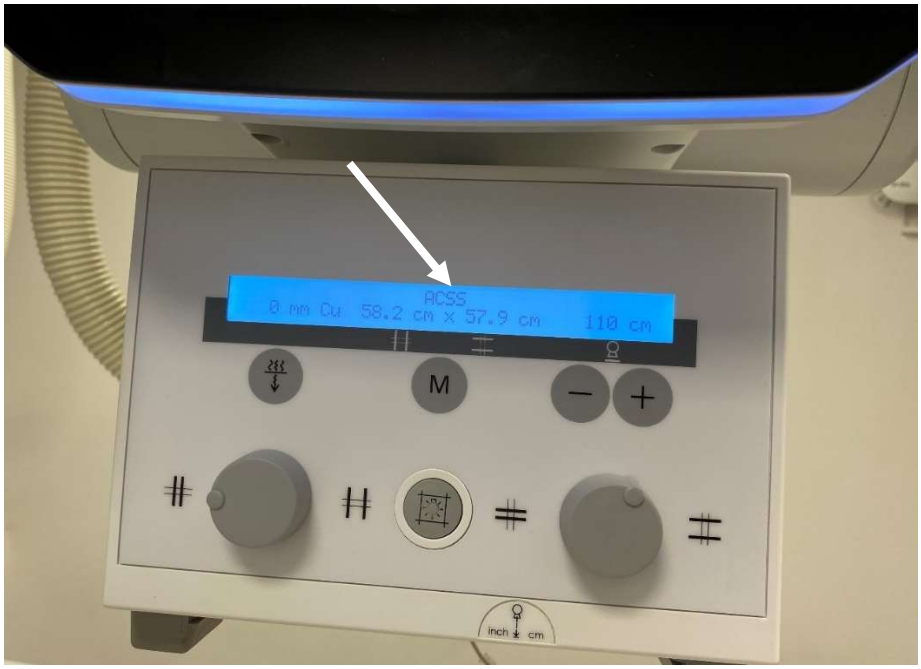
42. Turn the system ON from the generator mini console.

43. Launch the service program ArcoCeil and select Collimator Type: **Siemens AL02**

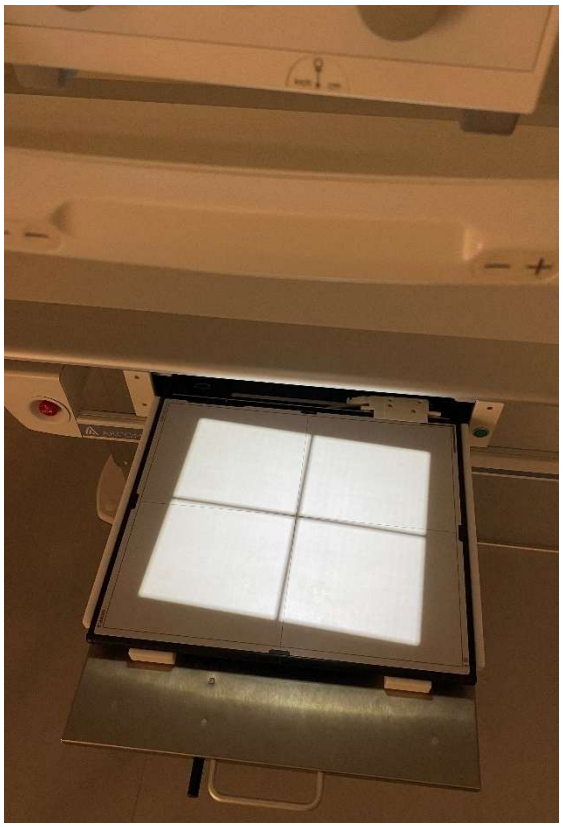


44. Restart system from the generator mini console.

45. Confirm that the Collimator enter automatic mode ACCS when the system starts.



46. Check the collimator index position. The table detector or other suitable object can be used to check alignment. Position the collimator in its index position. Release the three (3) fixation screws and turn the collimator carefully to align it. Re-tighten the set screws.



47. X-ray/light adjustment has been performed in factory. Consult the collimator manual if needed.

48. Check all system functions.

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