Instructions for Changing to the Large Frame Sample Cell (LSX-200 Plus Version)

1. Open the lid of the LSX-200 Plus by opening the front door and turning the two latches to their unlatched position. The latches are located inside the unit midway down the right side and in the middle of the valves on the left side. Once unlatched the lid can be lifted up.

2. Remove the left side panel, which is fastened with six flathead screws. Also, remove the tubing from the Sample Out and Carrier Gas fittings on the side panel.

3. Unscrew the tubing connectors from the sample cell and remove the sample cell by turning the lid. (See Figure 1).

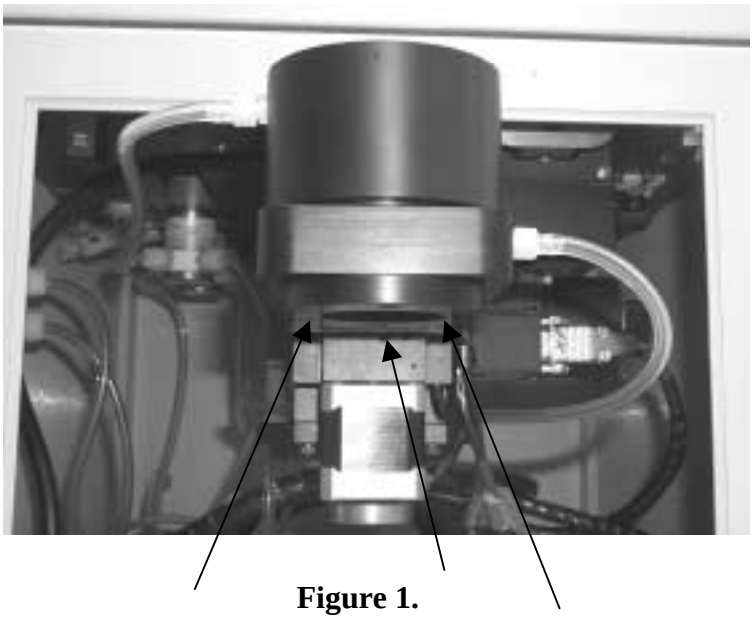

Figure 1.

4. Remove the three screws underneath the sample cell base. (See Figure 1).

5. Next, remove the four screws that hold the Z-axis adapter plate to the Z-motor. (See Figure 2).

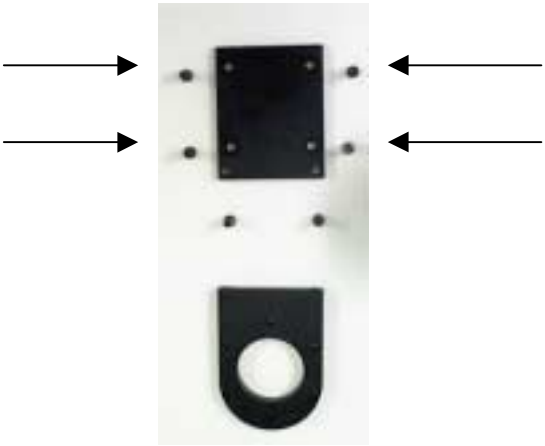

Figure 2.

6. Reuse the sample cell platform. (See Figure 3). Install it to new Z-axis adapter plate.

Figure 3.

7. Attach the new Z-axis adapter plate to the Z-motor. The new adapter plate is a little longer than the original. (See Figure 4).

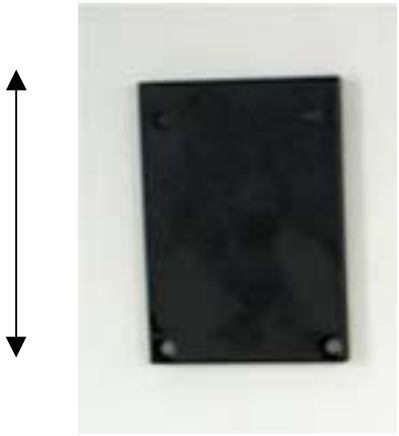

Figure 4.

8. Remove the valve plate that has the two solenoid valves mounted to it. (See Figure 5). There are two screws holding the plate in place. Note the location of the screw hole closest to the back of the unit because this hole will be used to mount the new valve plate.

Figure 5.

9. Now, remove the solenoid valves and mount them in the new valve plate. The new plate should be oriented so that the end with the single hole in the middle points to the front of the unit.

10. Mount the new valve plate by first removing the screws from the old plate. This hardware will be mounted from the top side of the laser base plate and the other mounting hole will be attached from the bottom side as with the original valve plate. (See Figure 6) The I/O board may have to be loosened to gain access to the back screw if the unit is equipped with Auo-focus.

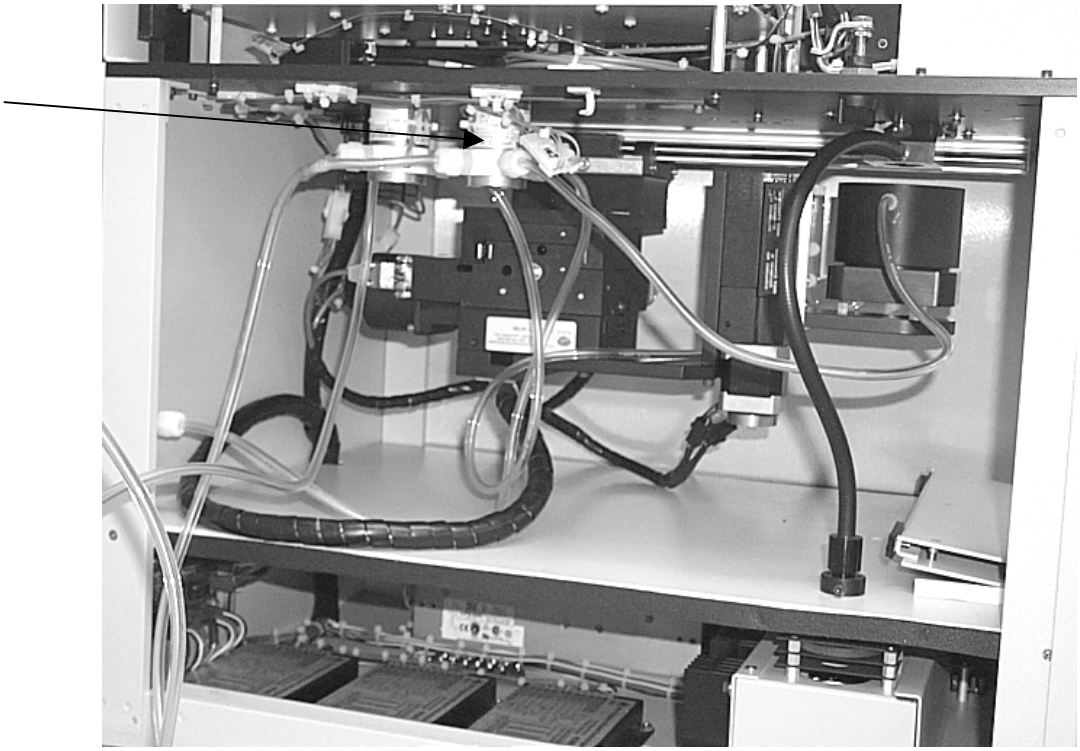

Figure 6.

11. Refer to the screw hole location from step 8 above and mount the new valve plate at the location using the same screw that was removed from the original valve plate.

> NOTE: If there are tie wrap hold-downs that prevent proper mounting of the new plate, then they need to be removed using a screwdriver or razor blade and moved. New hold-downs and tie wraps are provided.

12. After the bottom screw is in place drop the screw, washer, spacer hardware into the large hole located under the main circuit board on top of the laser base plate. Start the screw into the valve plate and finger tighten. Also, finish tightening the remaining screw. If the unit is equipped with Auto-focus then the insulator has to be around the screw before insertion.

13. Because the valves have been pushed back , some tubing has been replaced with longer pieces. These pieces are; from the Sample Out fitting; from the Carrier Gas fitting; both lines from the sample cell. These new pieces are all precut and labeled.

14. Remove the nuts and ferrules from the old tubing and reattach on the new. The Teflon ferrule will need to be stretched to fit over the new tubing. The use of a pen, pencil, or phillips screwdriver will help to accomplish this. Figure 7 shows the tubing diagram for the system.

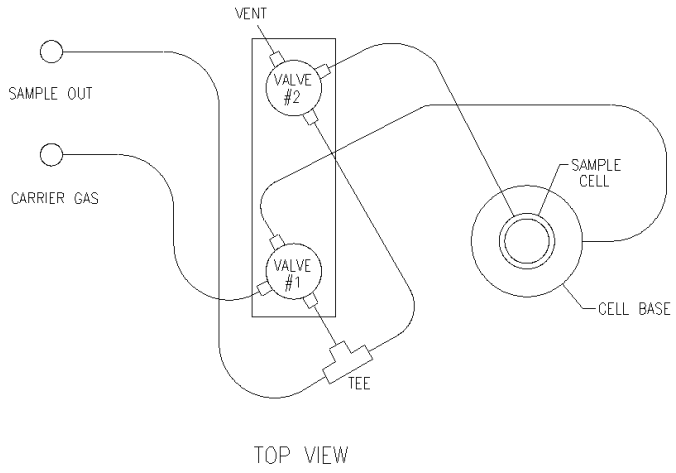

Figure 7.

15. Place the tubing keepers in such a location that it keeps the tubing out of the way. Slide the stage in and out several times to make sure the tubing is not in the way or binding.

16. Next, remove the front stop by unscrewing one screw in the front and replace it with the carriage stop. (See Figure 8).

Figure 8.

17. Remove the two allen scews that hold the metal strip to the carriage. The metal strip may not come off because it is epoxied. If that is the case then just leave the metal strip in. Add the magnet retainer w/ magnets already attached. (See Figure 9).

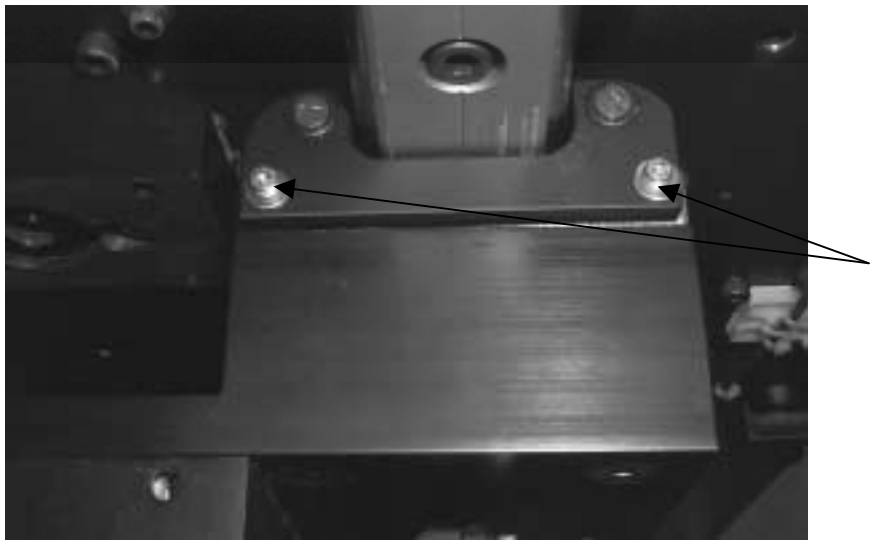

Figure 9.

18. Install the Large frame sample cell with three screws from the bottom. (See Figure 10).

Figure 10.

19. A sample spacer removal tool is supplied to remove the sample spacers from the Large frame sample cell. (See Figure 11).

Figure 11.

20. If the original size sample holder is required after installation of the large one then spacers need to added to the original sample cell before installation. (See Figure 12).

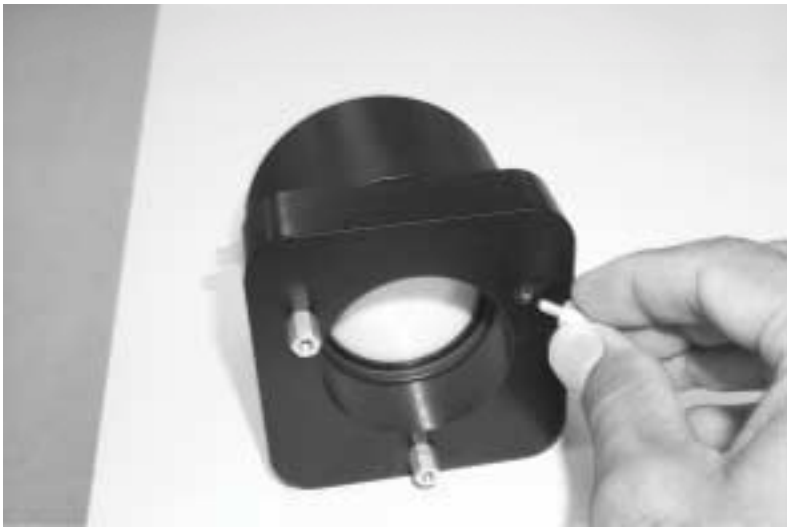

Figure 12.

21. Replace the left side panel and reattach the six flathead mounting screws.

22. Close the lid and engage the two latches to lock the lid closed. Close the front door.

23. The LSX-200 Plus is now ready for operation.