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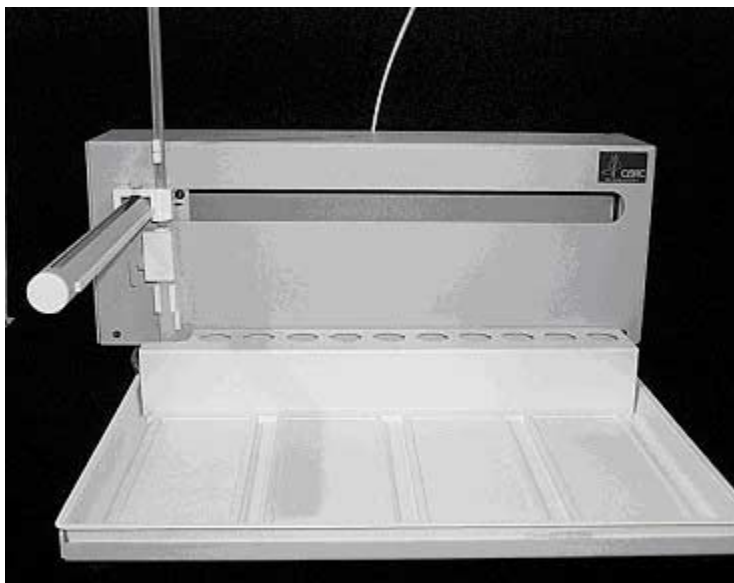
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**Main Board Replacement  
Procedure for ASX-510  
(SP5220) < 049621ASX**

## MAIN BOARD AND PUMP REPLACEMENT PROCEDURE FOR ASX-510

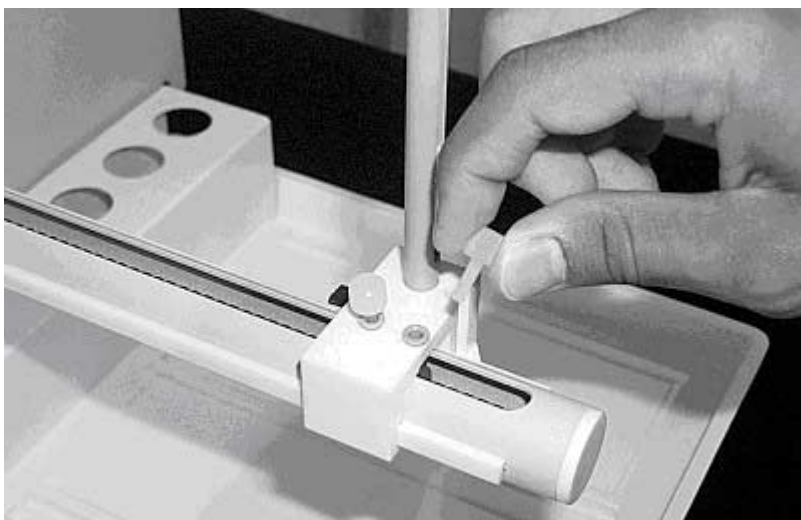
**NOTE:**

MAKE SURE THE UNIT IS UNPLUGGED AND IN THE "OFF" POSITION BEFORE BEGINNING THIS PROCEDURE.

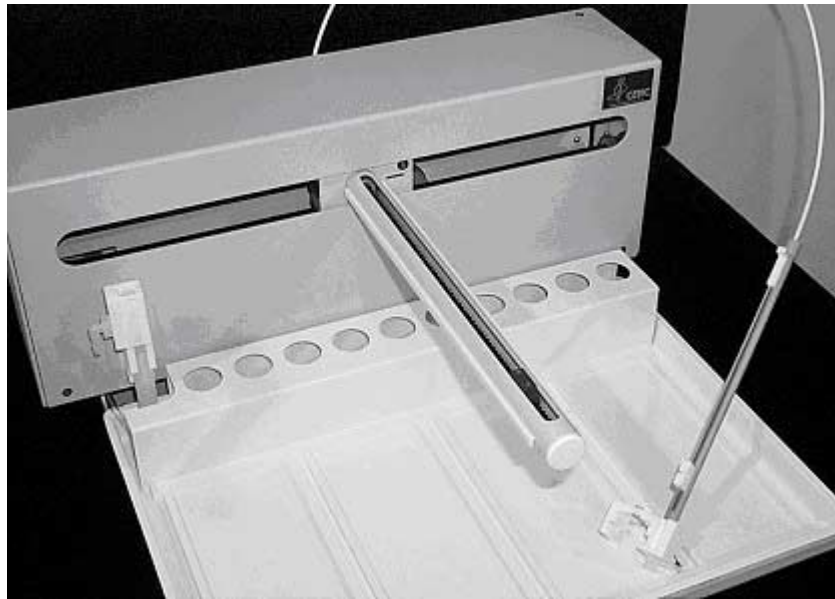


**Figure 1-1.** Front view of ASX-510.

1. First, remove the two Kynar thumbscrews from the Y-axis home block. See Figure 1-2.

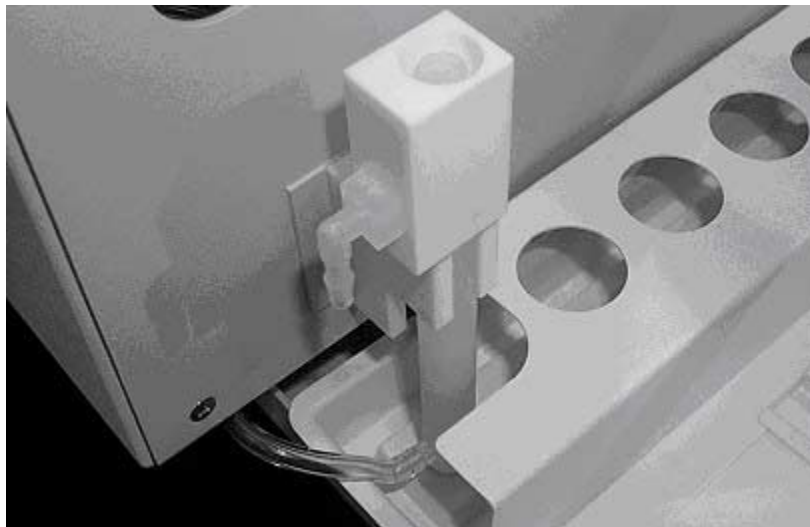


**Figure 1-2.** View of Y- axis home block with Kynar thumbscrews.

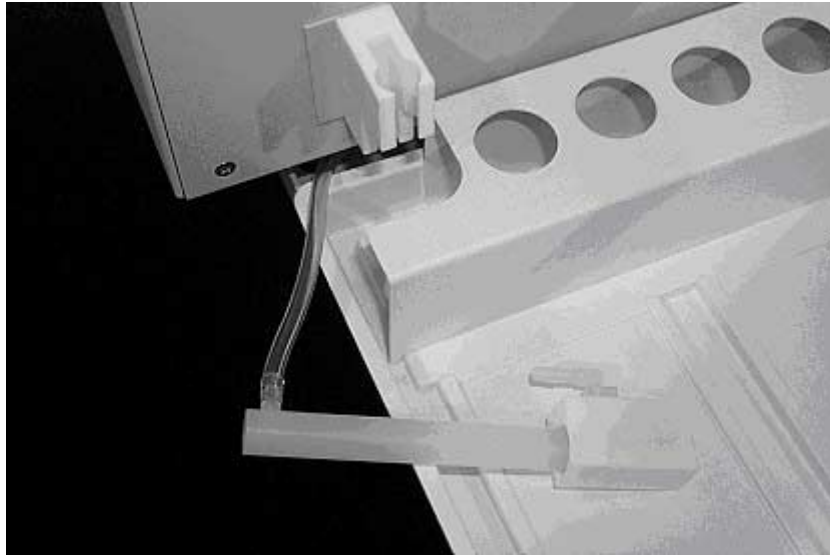


**Figure 1-3.** Z-drive removed from arm assembly.

2. Next, remove the whole Z-drive assembly from the arm by pulling the whole Z-drive assembly forward and off the Auto Sampler arm. See Figure 1-3.
3. After the Z-drive assembly is removed, then remove the rinse station. See Figure 1-4. Turn the rinse station  $\frac{1}{4}$  turn counter-clockwise while pulling up. Also, the tubing located at the bottom of rinse station will have to be removed or moved aside. See Figure 1-5.

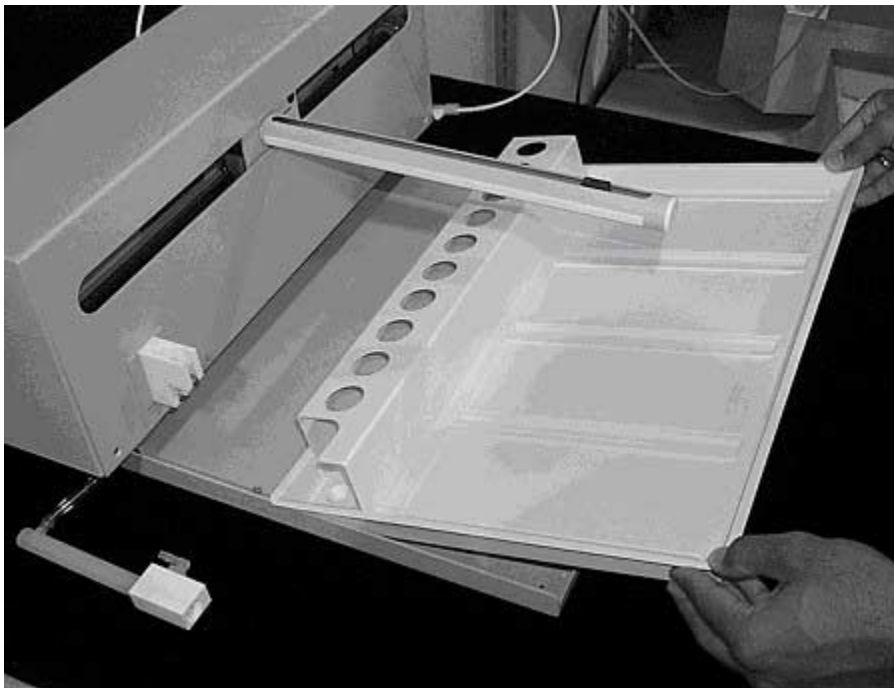


**Figure 1-4.** View of rinse station.



**Figure 1-5.** View of rinse station removed from the front cover.

4. The Auto Sampler tray is next to be removed. Lift up the tray and pull forward. See Figure 1-6.

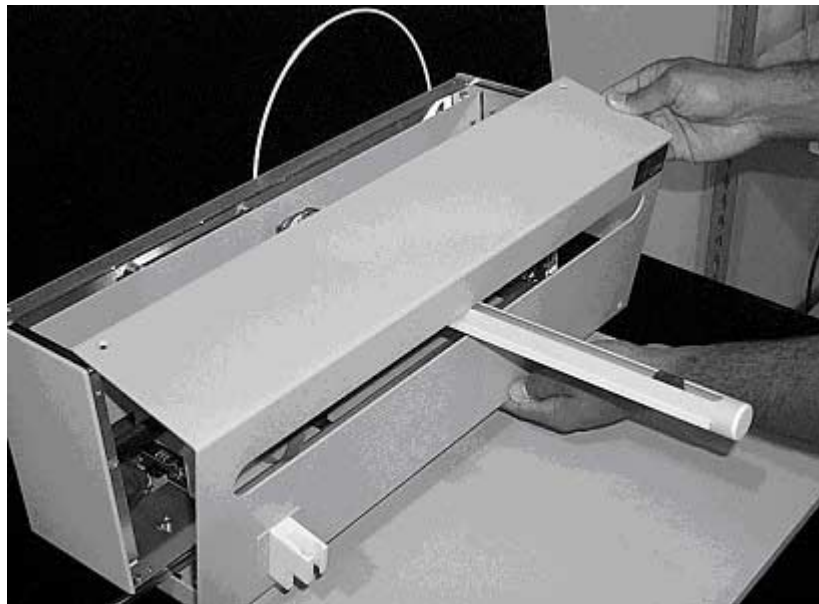


**Figure 1-6.** Removing the tray.

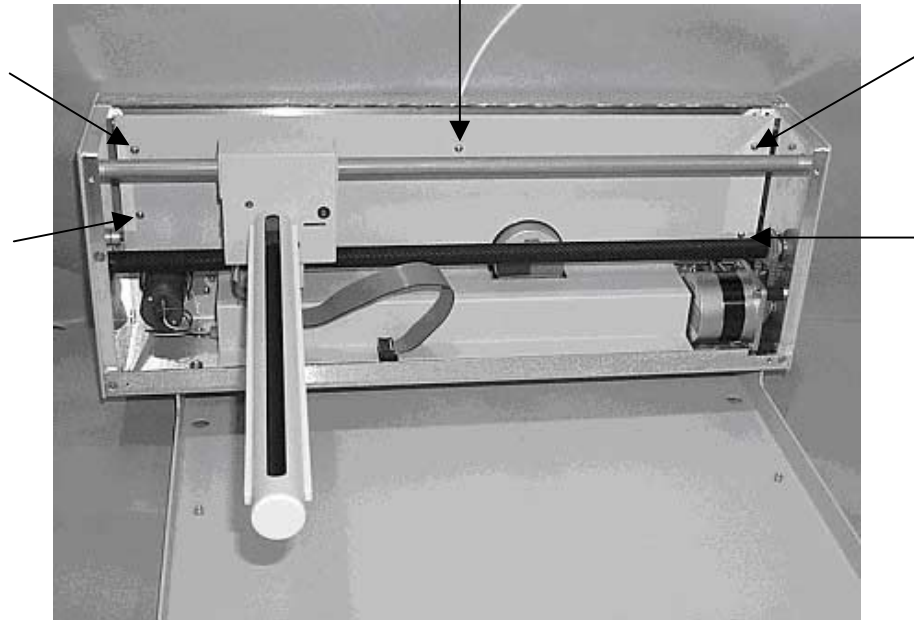


**Figure 1-7.** Front view of ASX-510 Auto Sampler showing front cover screws.

5. Next, the front cover needs to be removed. Remove the four corner screws shown in Figure 1-7.
6. The front cover can be removed by lifting it slightly and pulling forward. See Figure 1-8.

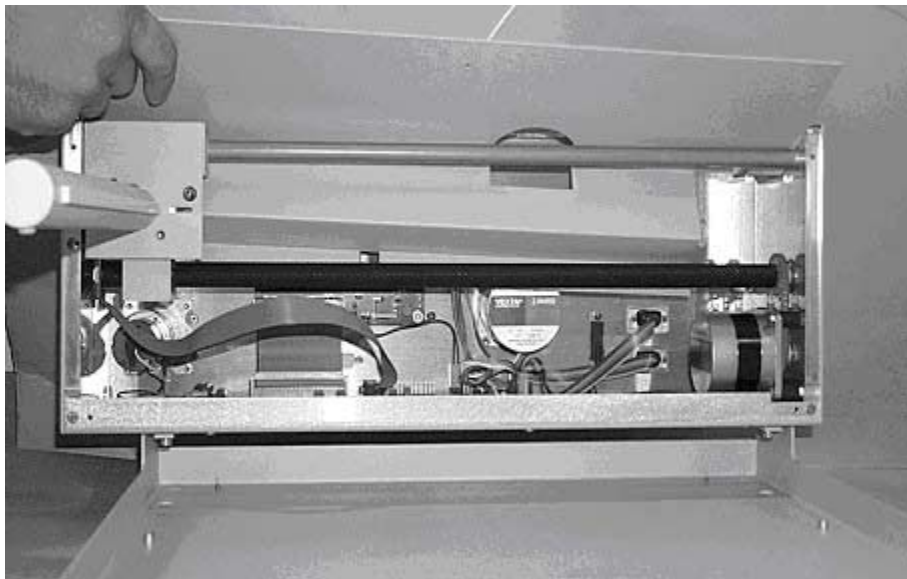


**Figure 1-8.** View of ASX-510 Auto Sampler with the front cover being removed.

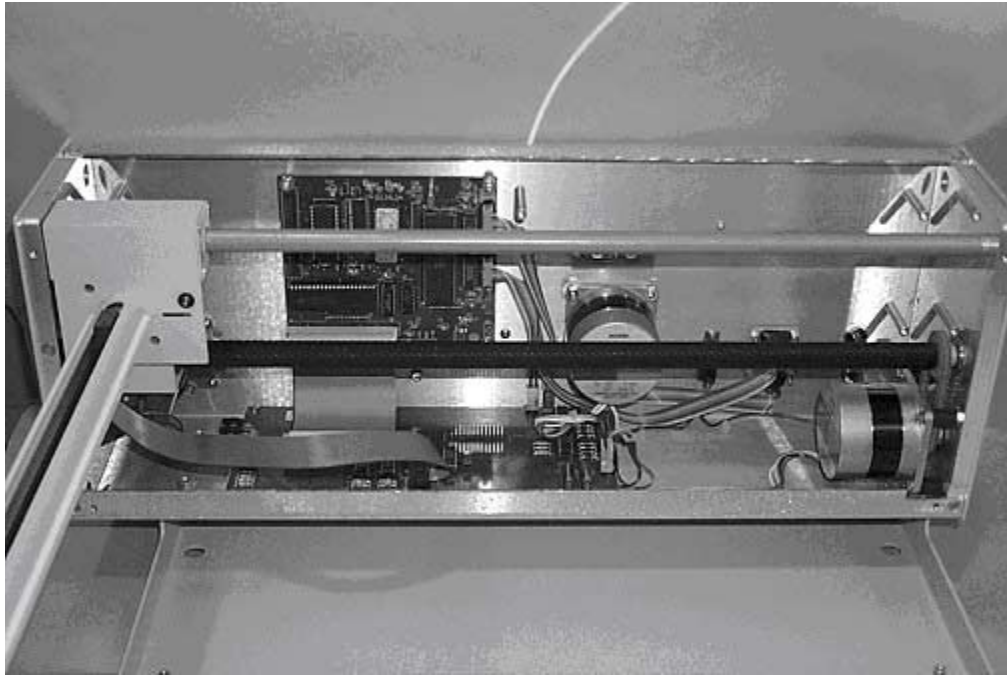


**Figure 1-9.** View of inner shield inside the ASX-510.

7. The five screws that hold the inner shield will have to be removed. Move the Y-axis assembly all the way to the left. See Figure 1-9.
8. The inner shield can be removed by lifting it up while pulling forward. See Figure 1-10.

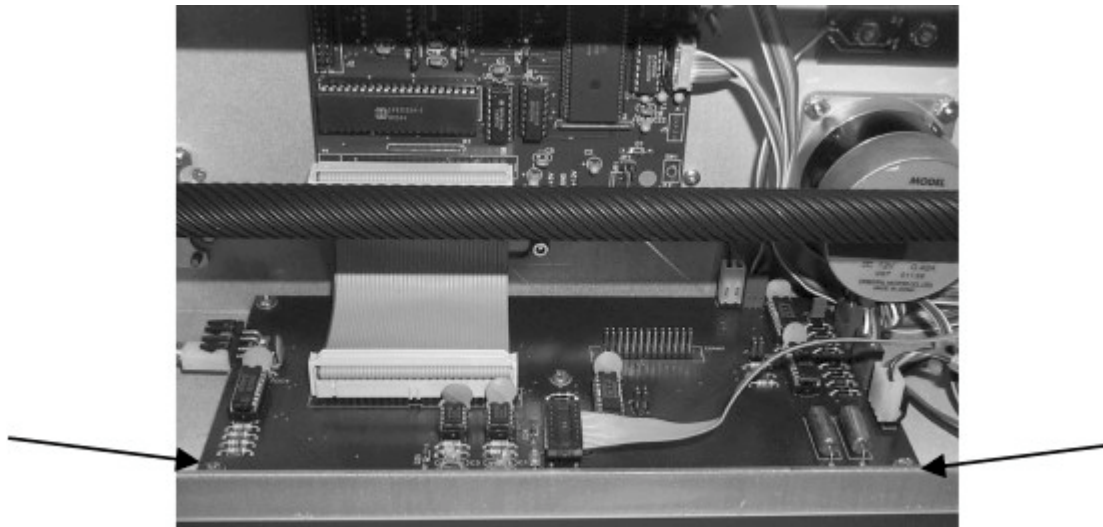


**Figure 1-10.** Removal of inner shield.



**Figure 1-11.** View of ASX-510 with inner shield remove

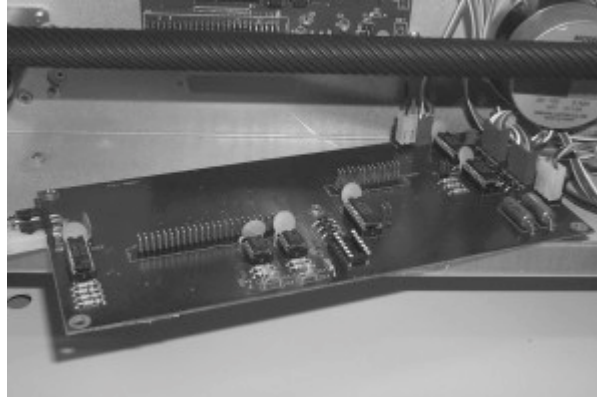
9. Remove the two front screws. See Figure 1-12.



**Figure 1-12.**

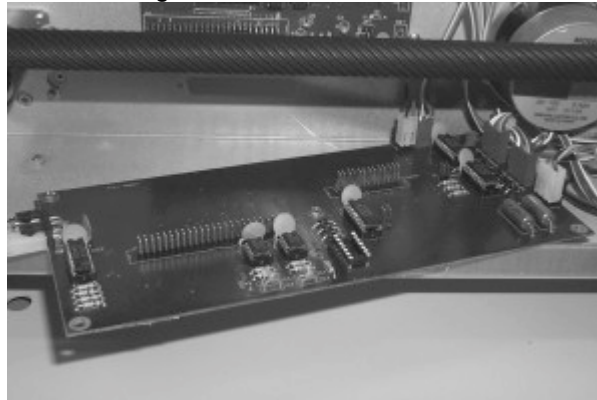


10. Remove the two bottom screws. If your ASX500/510 has the 37 pin Auxiliary port then remove the two additional screws. See Figure 1-13.



**Figure 1-13.**

11. Remove the Main board. See Figure 1-14.

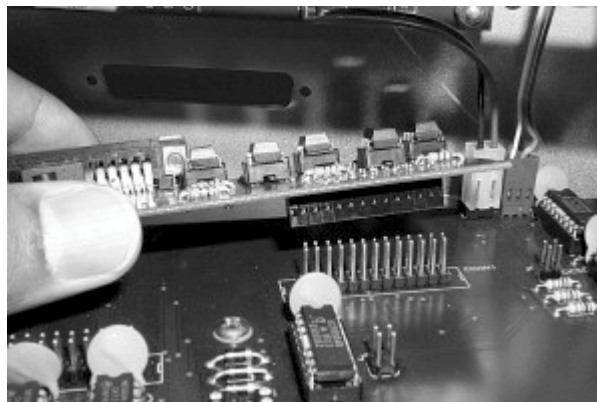


**Figure 1-14**

12. Install the new Main Board. If your ASX500/510 does not have an Auxiliary board (See Figure 1-13) then skip to step 17.

### **Installation of Daughter Board**

13. Attach the Daughter board to the top of the Main board. See Figure 1-15.



**Figure 1-15.** View of Daughter board attaching to the Main board



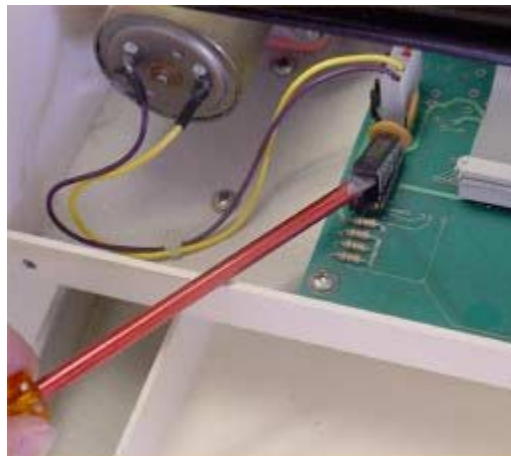
14. Tighten the two screws that hold the connector to the back panel. See Figure 1-15A.
15. Attach both ribbon cables, the two bottom screws that hold the Main board from the rear and the two top screws that hold the front of the Main board.
16. To assemble the rest of the unit, replace the inner shield, the front cover, the tray, the rinse station and finally the Z-drive assembly.



**Figure 1-15A.** Back view of connector that attaches to the Daughter board

### **Installation of Voltage Control Board**

17. Remove motor driver chip and the corner screw that holds the motor driver board. See figure 1-16.



**Figure 1-16**

18. Insert the ¼" spacer between the stepper driver board and the voltage control board. Then use the 6-32 screw (supplied in the kit) to hold the voltage control board. Note: Make sure when installing the

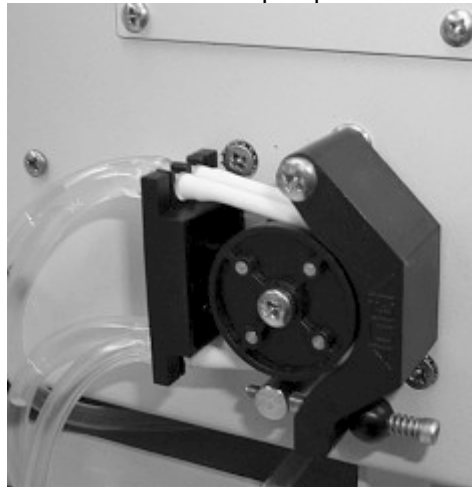
board into the socket that the pins do not bend over. Fig 1-17.



**Figure 1-17**

### **Installation of Peri Pump**

19. Remove the defective pump by removing the two outer screws on the outside rear of the pump. Also, remove the screw that is located in the center of the pump head rotor assembly. See Figures 1-18



**Figure 1-18**

20. Remove roller head assembly and then pump can be removed.
21. A plate will need to be removed from the new pump before it can be installed.
22. To remove pump plate from the new pump first remove the screw that holds the roller head assembly, behind the roller head there will be a small pin on the shaft of the motor remove it and keep the pin for installation. Then remove the outer 4 screws that are shown in figure1-19. Keep 2 of screws for installation to chassis.

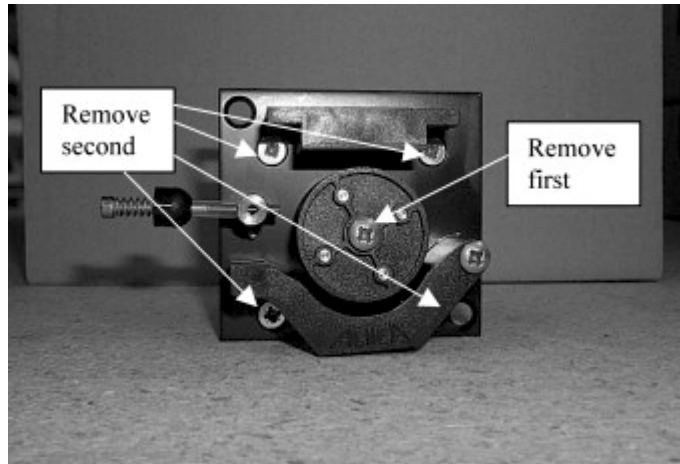


Figure 1-19 Front of pump on bracket

23. Remove tubing holder, shoe, and tension nut by screws shown in figure 1-20. Keeping screws with parts for installation in chassis later.

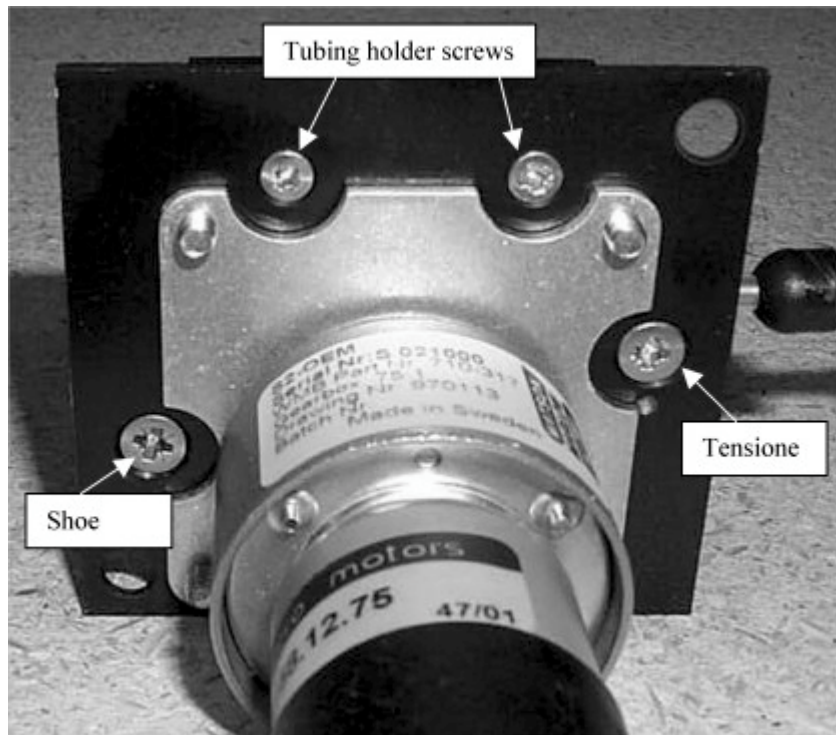


Figure 1-20 Removing shoe, tensioner, and tubing holder.

24. Install the new pump into your ASX500/510, put the two conical star washers underneath the two outer screws that hold the pump in place. See Figures 1-18.
25. Plug the pump connector into main board.
26. Reassemble the ASX500/510 by installing shield and cover. **Installation is complete. If you have questions please contact CETAC 1-800-369-2822 or [custserv@cetac.com](mailto:custserv@cetac.com)**