



miniSED® PUMP TUBING REPLACEMENT PROCEDURE

PURPOSE:

The purpose of this procedure is to describe the process for replacing the peristaltic pump tubing for both the Primary Pump and the Wash Pump in the miniSED Automated ESR analyzer.

SCOPE:

This document describes the procedure to be followed for replacing the tubing inside the Primary and Wash peristaltic pumps for the miniSED.

MATERIALS:

1. Protective rubber gloves
2. Replacement Primary Pump Tubing Assembly (ALCOR 112-13-002)
3. Replacement Wash Pump Tubing Assembly (ALCOR 1017-13-002)
4. 2 pieces of Cable Tie (ALCOR 000092 – Included in kit 1017-13-002)
5. Wire cutting pliers
6. Biohazard disposal as required by facility.

PREPARATION:

1. Wear protective rubber gloves
2. Power on the miniSED and run 2 Quick Clean washes to flush the system and remove any biohazardous material from the tubing.
3. Power off the miniSED and disconnect the power supply from the power input at the rear of the device. (Figure 1A)
4. Disconnect the miniWASH and miniWASTE connectors from the bottle caps. (Figure 1B) Lift up and remove the tray from the device and set aside.
5. Remove the two screws from the rear of the device holding the enclosure in place. (Figure 1A) Open the enclosure by rotating the housing towards the front of the device. (Figure 1B)

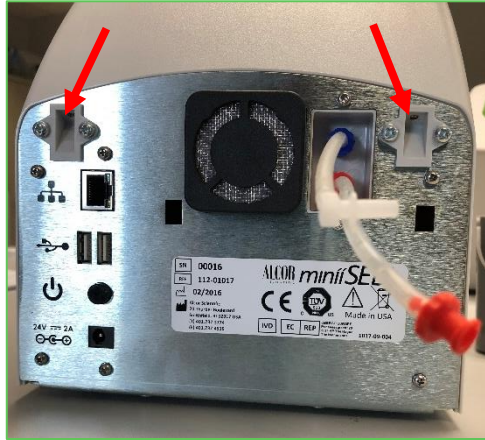


Figure 1A

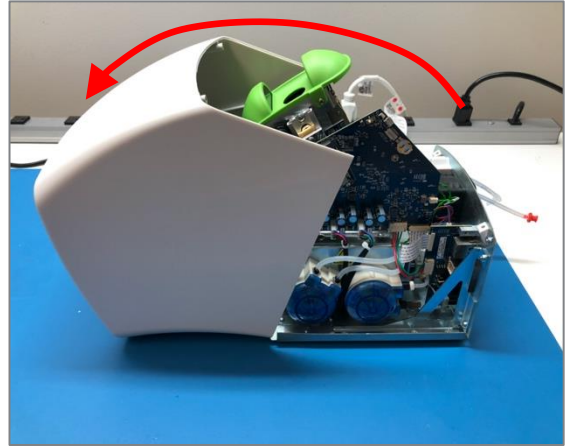


Figure 2B

PRIMARY PUMP PROCEDURE:

6. Remove the tubing from the white barb connector on the top port of the Primary Pump. (Figure 2)

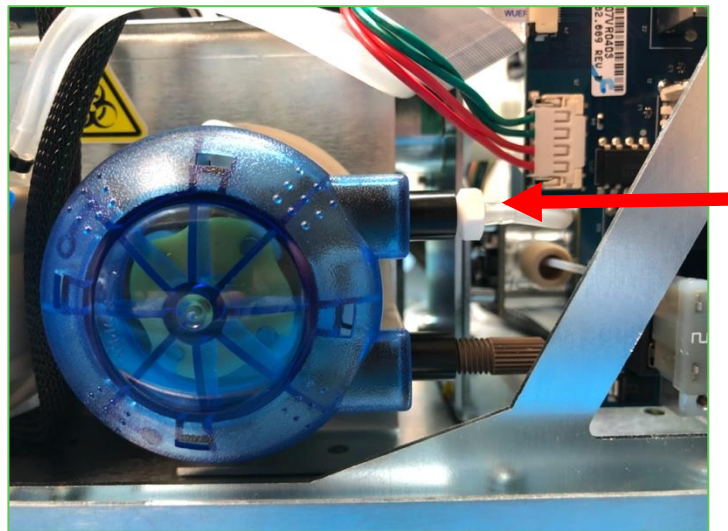


Figure 3

7. Unscrew the connector attached to the bottom port of the Primary Pump. (Figure 3)

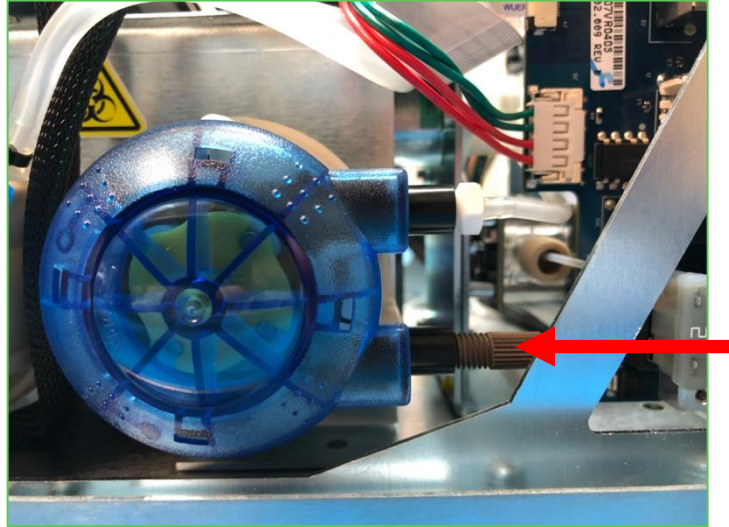


Figure 4

8. Remove the blue cover for the Primary Pump by rotating counterclockwise slightly and gently pulling towards you.
9. Remove the old Primary Pump tubing assembly. Be careful not to damage the roller as the old tubing is removed. (Figure 4)

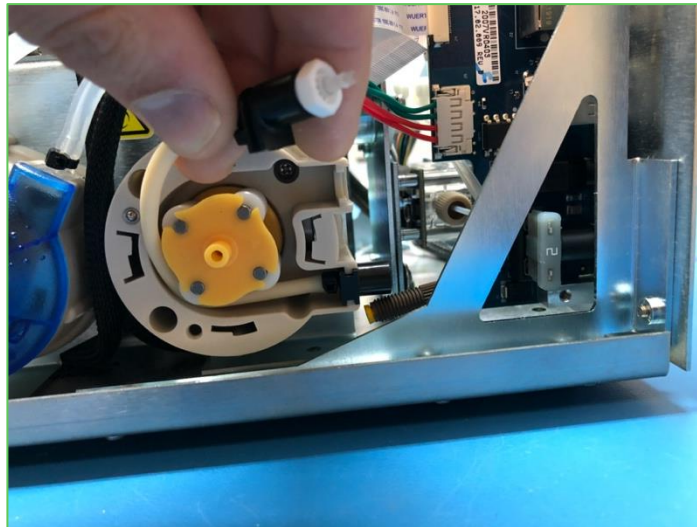


Figure 5

10. Clean inside the pump compartment (if necessary).
11. Dispose of the tubing assembly in proper biohazard disposal container.
12. Starting on the top side of the Primary Pump, insert the connector of the end of the new tubing with the white barb fitting into the upper slot on the pump. (See Figure 6 for correct placement of upper side tubing) Slowly work the tubing in the pump, rotating the rollers as needed by hand. Once the tubing is in place, insert the connector of the other end of the tubing into the lower slot of the pump. (See Figure 6 for correct placement of lower tubing)

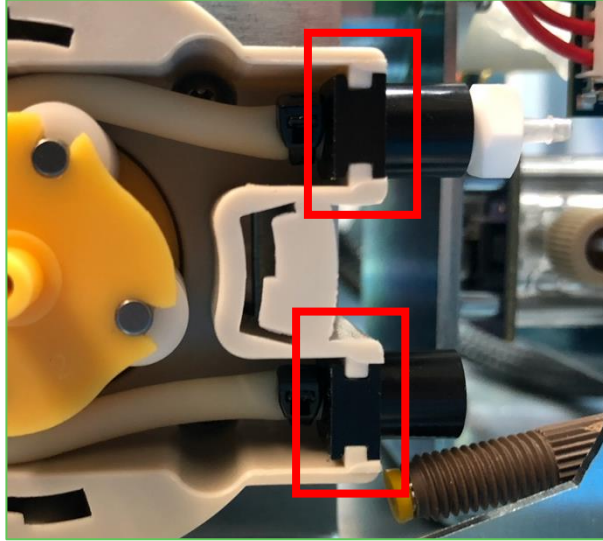


Figure 6

13. Once completed, return the blue cap to the Primary Pump and turn clockwise to lock in place.
14. Reconnect the tubing to the white connector on the left and re-attach the brown thumbscrew to the right of the peristaltic pump. (See Figure 3)

WASH PUMP PROCEDURE:

15. Using wire cutting pliers, cut the cable ties from both ends of the Wash Pump tubing. Be careful to avoid cutting the silicone tubing. (See Figure 6)

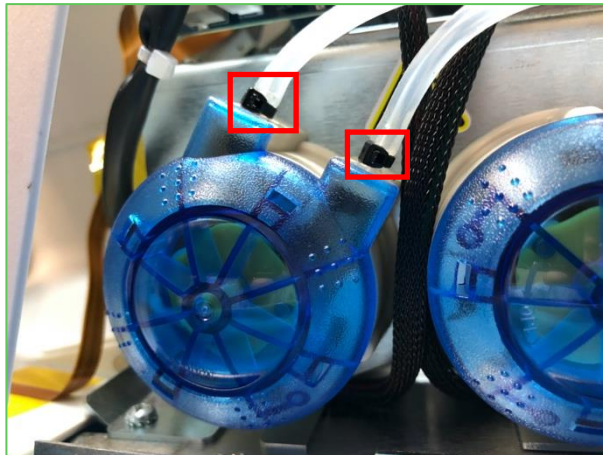


Figure 7

16. Make note of which end each of the silicone tubing was connected. (Figure 8)
 - 16.1. Connector at the left side of Wash Pump connects to the Piercing System
 - 16.2. Connector at the right side of the Wash Pump connects to a Y-Connector

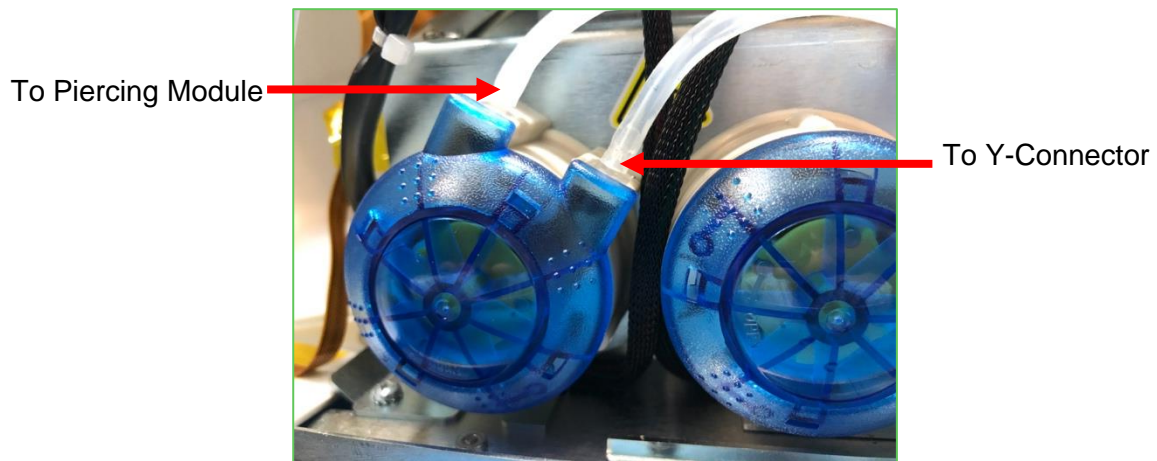


Figure 8

17. Disconnect the silicone tubing from each Wash Pump barb connector. Be careful not to damage the tubing as these will be reused. (Figure 8)
18. Remove the blue cover for the Wash Pump by rotating counterclockwise slightly and gently pulling towards you.

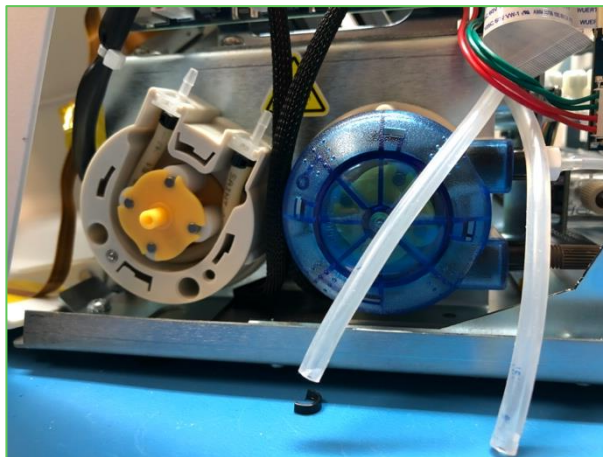


Figure 9

19. Remove the old Wash Pump tubing assembly from inside. Be careful not to damage the roller as the old tubing is removed.
20. Clean inside the pump compartment (if necessary).
21. Dispose of the tubing assembly in proper biohazard disposal container.
22. Starting on the right side of the wash pump, insert the connector of one end of the new tubing into the slot on the pump. See Figure 10 for correct placement of the right side tubing). Slowly work the tubing in the pump, rotating the rollers as needed by hand. Once the tubing is in place, insert the connector of the other end of the tubing into the left slot of the pump. (See Figure 10 for correct placement of the left side tubing).

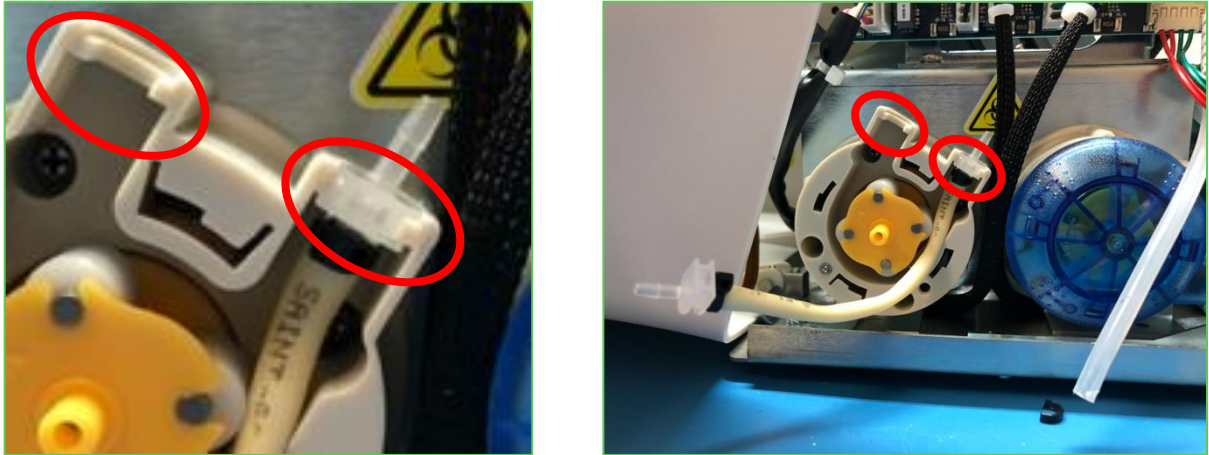


Figure 10

23. Once completed, return the blue cap to the Wash Pump and turn clockwise to lock in place.
24. Reconnect both silicone tubing to their respective barb connectors as indicated in Step 16.
25. Secure each tubing with a cable tie around both the end of the tubing and the barb connector. (Figure 10) Be careful to avoid securing the cable tie around the tubing without the barb connector, as this will block fluid flow. Cut the tails off the cable ties.

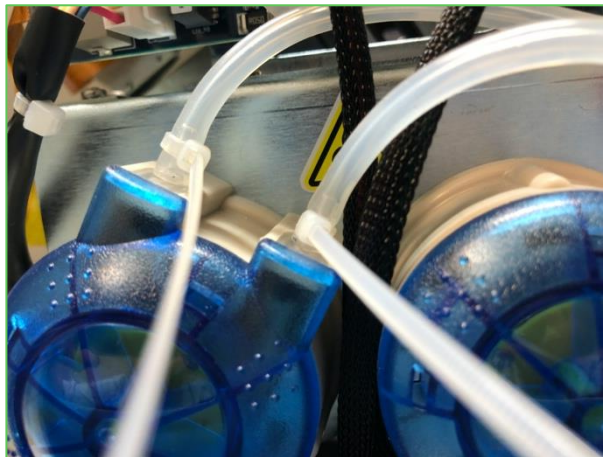


Figure 10

FINISHING UP:

1. Rotate the housing back into its normal position. Secure with the two screws from step 5.
2. Reattach the bottle holder to the rear of the device. Reconnect both the miniiWASH and miniiWASTE bottles to their respective tubing according to the Operator's Manual.
3. Power on the miniiSED and perform a Quick Clean.
4. The miniiSED is now ready for routine testing of patient samples and/or controls.