



# iSED® Automated Erythrocyte Sedimentation Rate Analyzer

## Syringe Probe Tube Cleaning Procedure, 112-28-014 Rev. 0

### Purpose

The purpose of this procedure is to provide a guide on performing an as-needed maintenance on the iSED ESR Analyzer.

### Scope

This applies to *iSED*® instruments that are experiencing syringe probe errors. The iSED will alert the user when a Syringe Probe Error has occurred.

### Materials Required

1. All necessary Personal Protective Equipment.
2. 10 % Sodium Hypochlorite Solution
3. Deionized water
4. Kim-wipes or gauze

### Procedure

1. Power on *iSED*® by *toggling the switch on the back of the iSED*
2. Run a Wash Cycle by pressing the Wash Cycle Icon:
3. Power off instrument.



4. Remove needle access door by unscrewing metal thumb screw and lift door upward to remove. Figure 1



Figure 1

5. Remove tubing from top of syringe probe tube. Figure 2

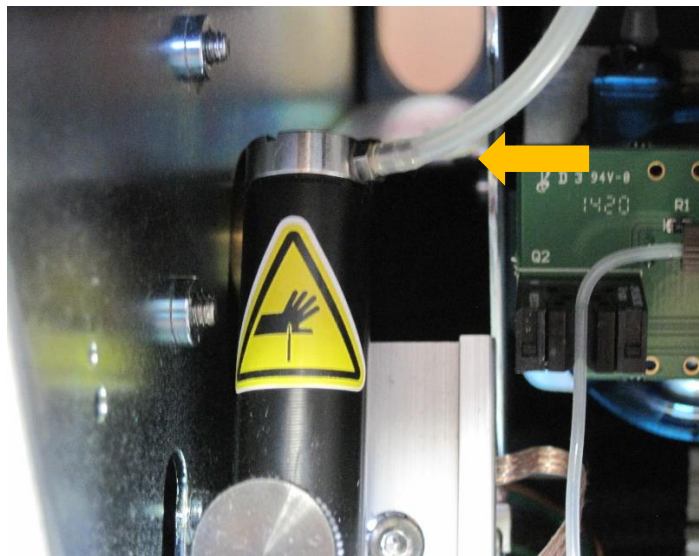
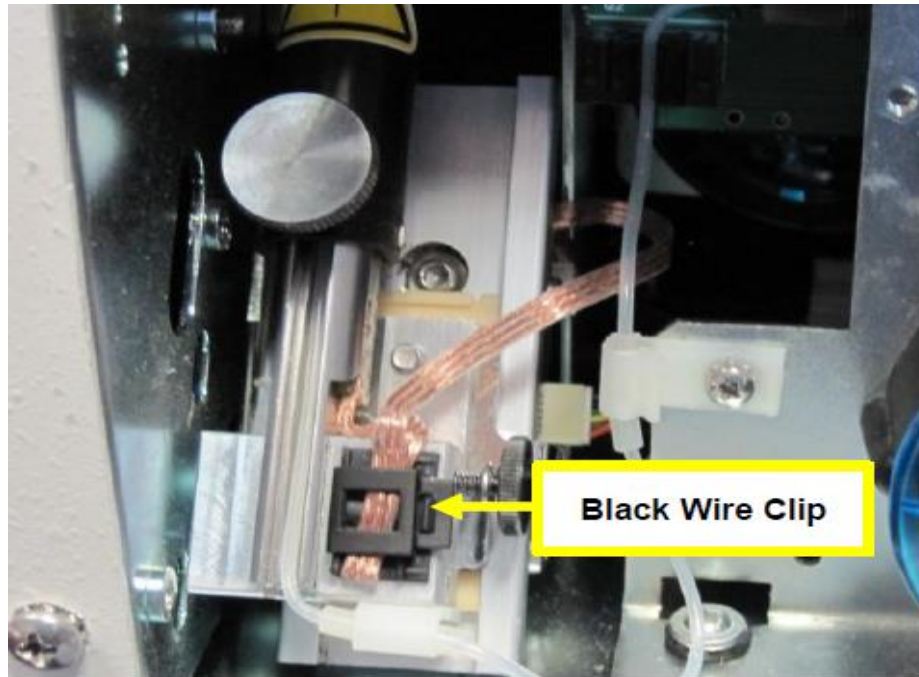


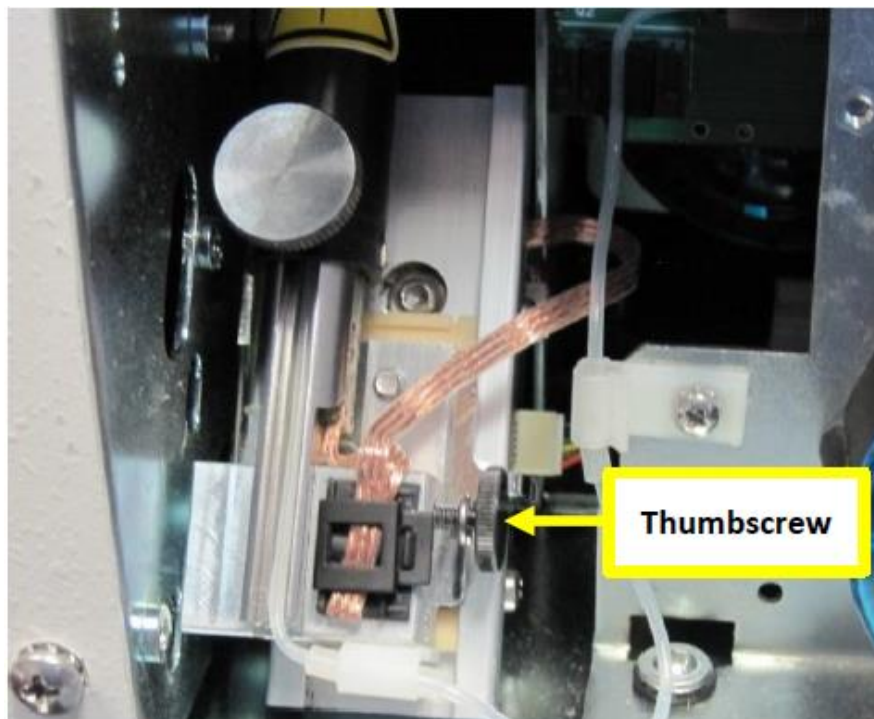
Figure 2

6. Remove the Probe Wire from the black Wire Clip. Figure 3



**Figure 3**

7. Unscrew thumbscrew about ½ inch and see if syringe pivots towards you. If it does not pivot, try unscrewing a little more, repeat until syringe pivots. Figure 4



**Figure 4**

8. Pivot the Needle Piston Assembly outward. Figure 5

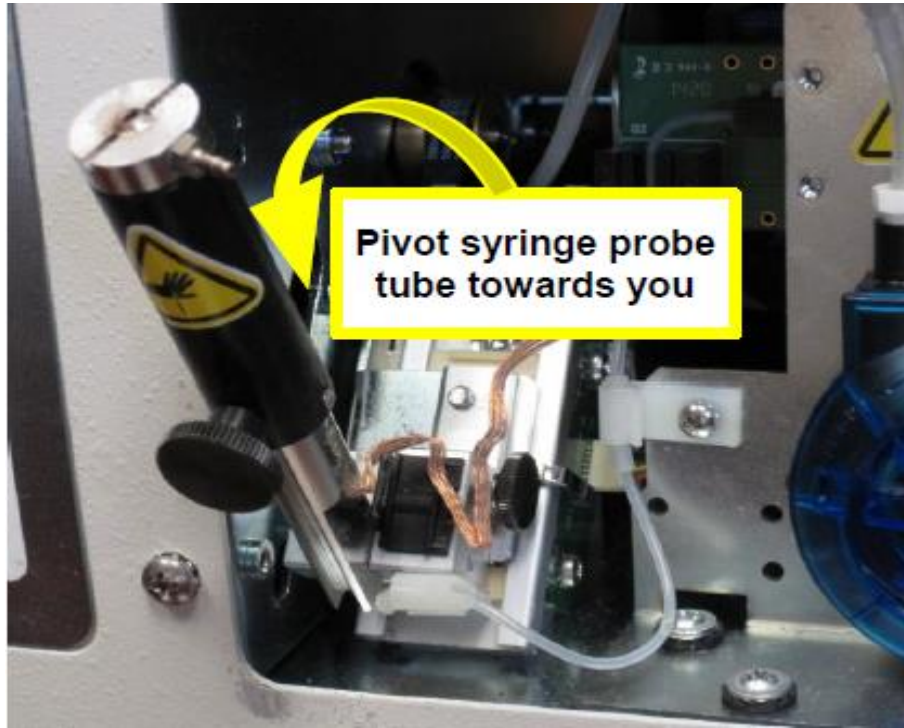


Figure 5

9. Remove Thumb Screw from Probe Tube shown in Figure 6. Now you are able to remove the Probe Tube Assembly Figure 7 and the spring from Needle Piston Assembly. **Caution this will expose the needle and could cause potential injury.**



Warning: Potential needle injury due to exposed needle

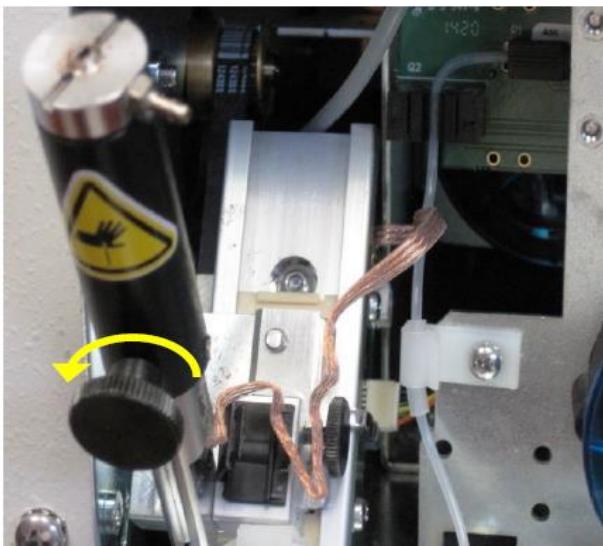


Figure 6

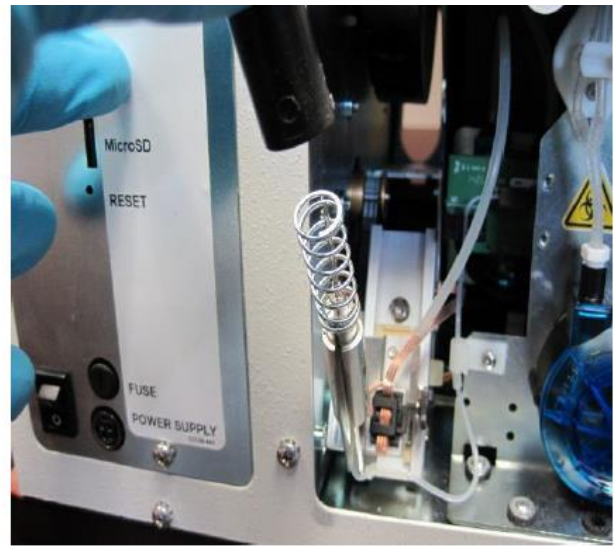


Figure 7

10. Clean spring and needle with deionized water, if any dried blood is seen. And return to original position while needle is exposed.
11. Unscrew the metal “Wash Ring” from the top of the probe tube. At the same time verify that the magnet is securely in place. Figure 8



**Figure 8**



**Figure 9**

12. Clean the inside of probe tube with Kim-Wipe or gauze lightly dampened with deionized water. Figure 9

13. Soak the silver wash ring in a 10% bleach solution for 5-10 minutes. Figure 10



**Figure 10**

14. Thoroughly rinse silver wash ring with deionized water to remove any excess bleach.

15. Screw wash ring back on syringe probe tube. Figure 11



**Figure 11**

16. Place probe tube over needle and spring. Figure 12

17. Replace the Thumb Screw on the Needle Tube Housing. You may will have to compress the Spring and Needle Tube Housing slightly in order to tighten the Thumb Screw. **COMPRESSING THE ASSEMBLY WILL CAUSE THE NEEDLE TIP TO BECOME EXPOSED FROM THE ASSEMBLY. BE AWARE OF PIERCING INJURY.** Thumb Screw should tighten completely down, but be careful to prevent stripping out the plastic of the Needle Tube Housing. Figure 13



Warning: Potential needle injury due to exposed needle



Figure 12

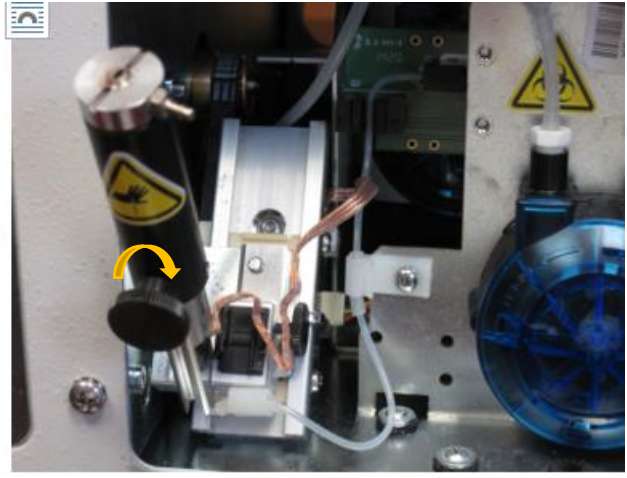
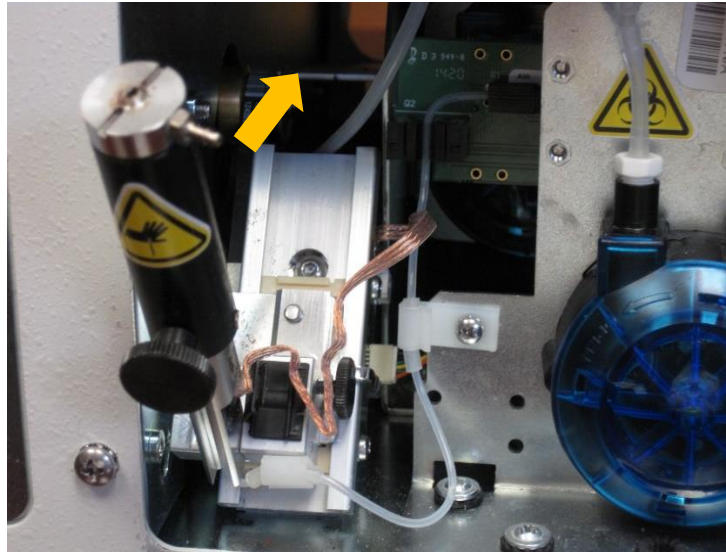
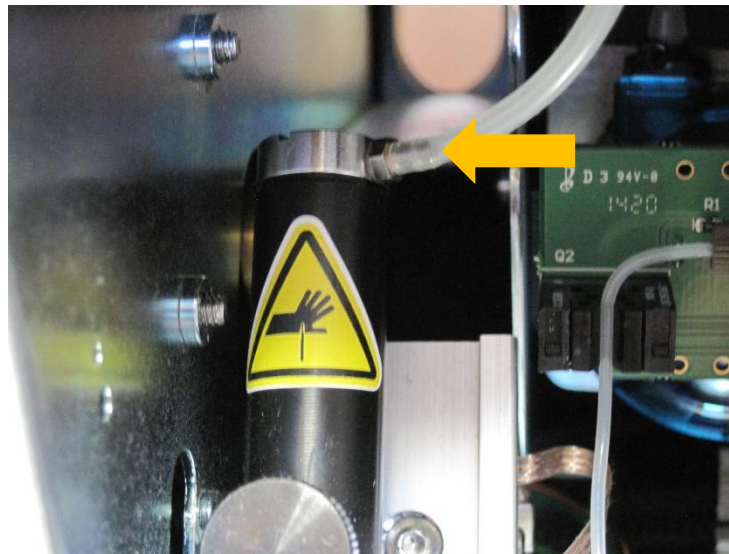


Figure 13

18. Pivot the Needle Piston Assembly back into the operational position Figure 14. Replace the Washing Tube back onto the Barb connector of the Needle Tube Housing. Figure 15.



**Figure 14**



**Figure 15**

19. Tighten screw completely. Verify Needle Piston Assembly is locked in position and cannot pivot outwards. Replace the Probe Wire into the black Wire Clip, and the Needle Tube into the Tube Clip. Figure 16

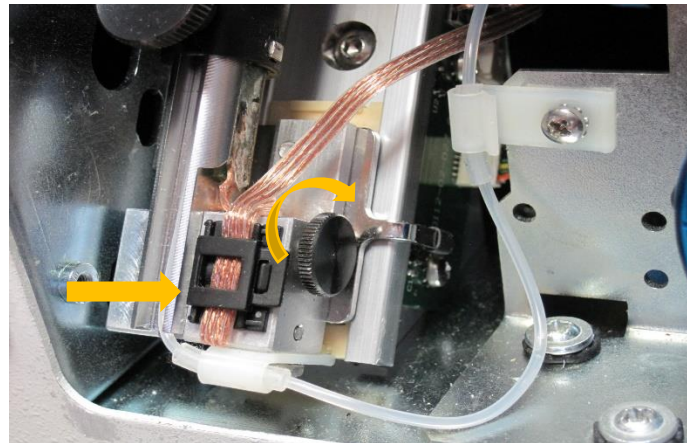


Figure 16

20. Power on iSED. Perform 3 wash cycles and observe probe tube for leaks.  
21. Go to service by pressing the service icon on the main page. See figure 17 with red box.



Figure 17

22. Enter code 19912 then press enter button

23. On Page 1 of the Service Screen (see # 1 on top right hand corner). Verify that the lights in the Needle section are in the same color pattern as the example in Figure 18. “Home” may be blue or red, “Up” is blue and Probe is red. If this pattern is not seen, contact tech service.

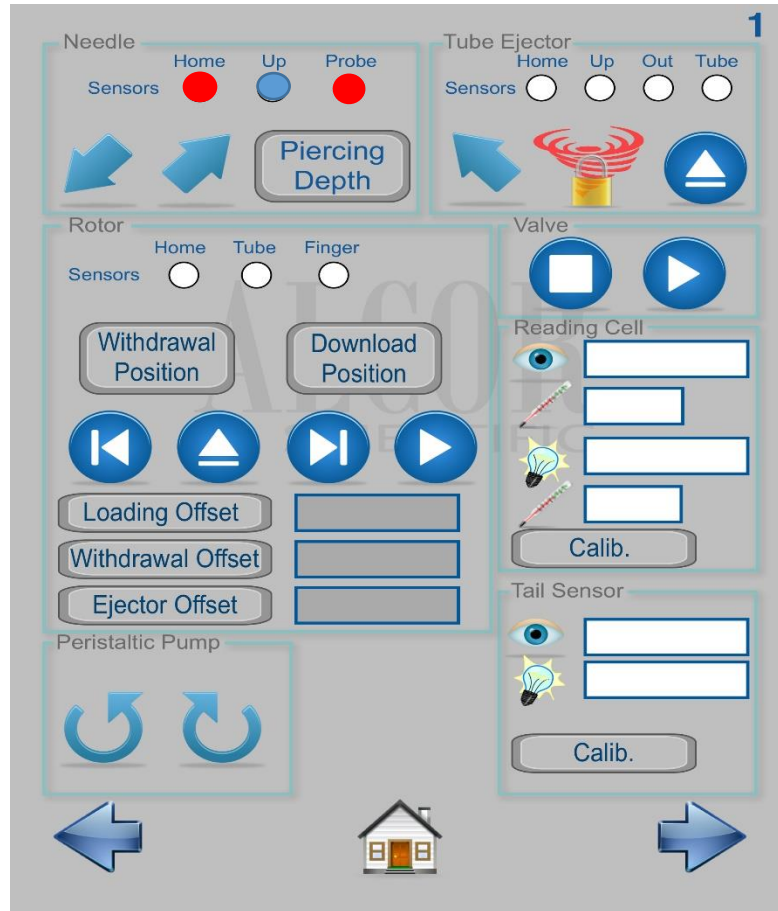



Figure 18

24. Press the home button  on the bottom of the screen to return to the main page.
25. Perform three additional Wash Cycles and verify the Wash status printout indicates “Wash OK”.
26. Replace rear access door and tighten thumb screw.