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Tech Tip
From Medica Technical Support

Product: Easy Blood Gas

Subject: Bubble Detector replacement

Report Number: 2.4.009

Date: 3.13.15

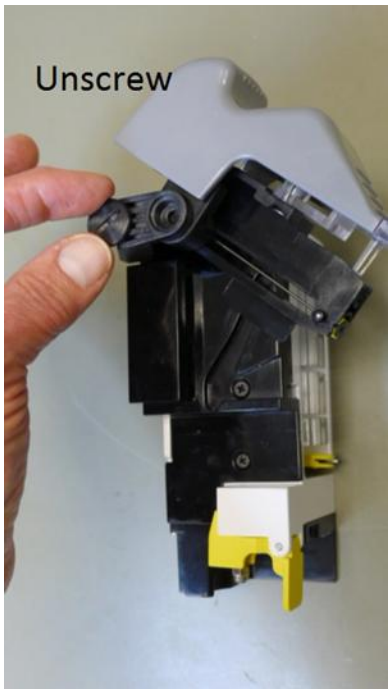
Note: For reference, see illustration of removed items, Step 14 below.

Removal

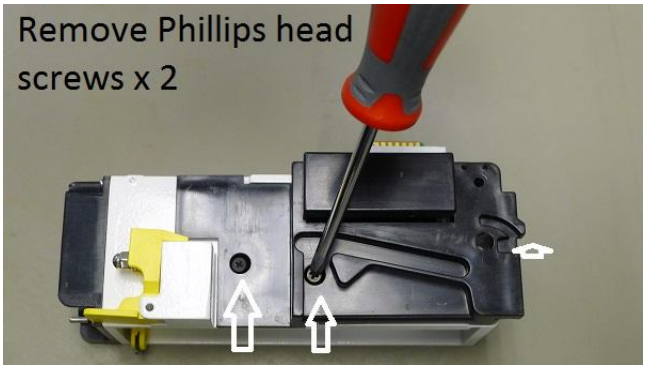
1. Remove **Sensor Module** and remove **Electrodes**.

2. Position the **Sampler** into the **Capillary mode** by opening at the **Capillary touch point**. NOTE: It is important that the **Sampler** be in the correct position to allow it to be removed without damage. In the **Capillary mode**, sample probe is NOT visible.

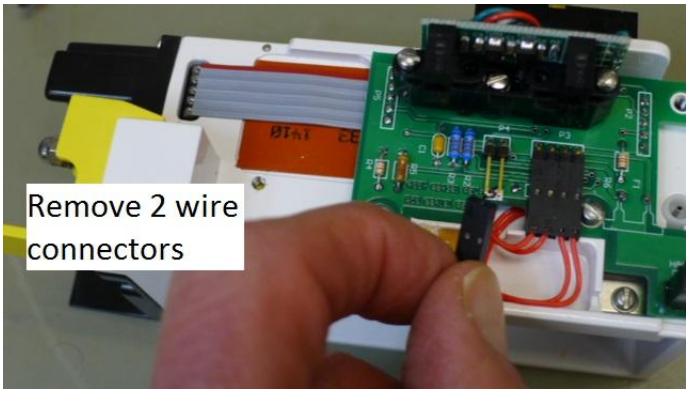
3. With the **Sampler** positioned in the Capillary mode, unscrew **Thumbscrew** securing **Sampler** assembly. Set both the **Thumbscrew** assembly and **Sampler** assembly aside.



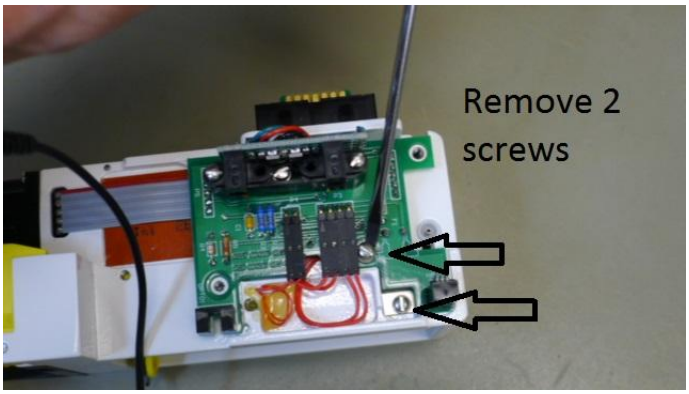
4. Remove two Phillips flat head screw from side of electrode housing. Set black **Side Cover** aside.



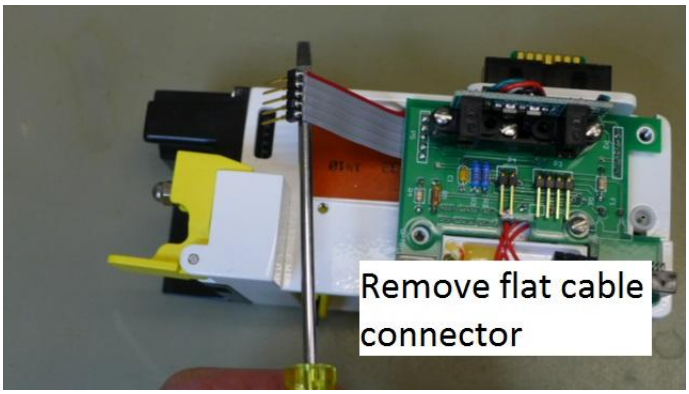
5. Remove two wire connectors (P3 and P4) from face of **PCB**



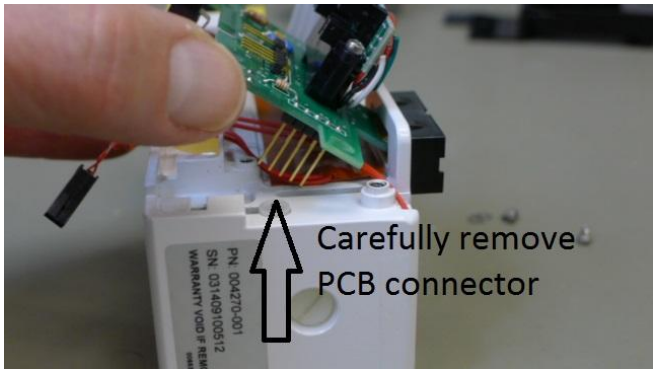
6. Remove two slotted pan head screws and washers securing **PCB** to **Chassis**.

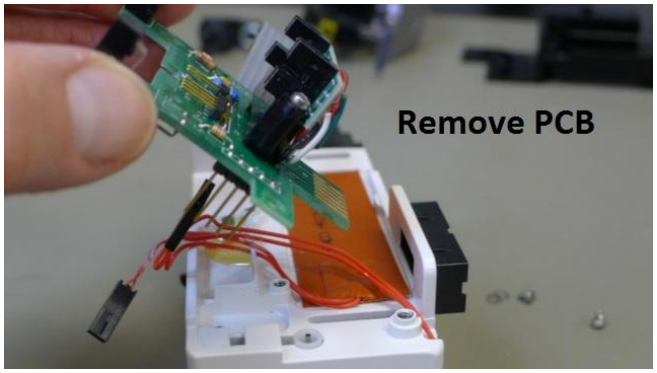


7. Carefully lift flat cable connector from **Lower Bubble Detector**.

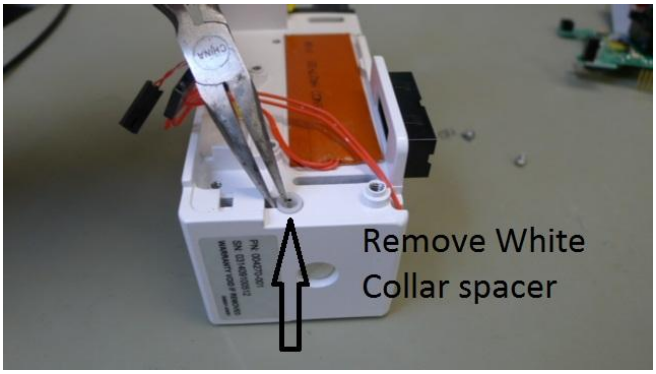


8. Carefully lift top edge of PCB pin connectors from **Upper Bubble Detector** by angling board as shown. Remove **PCB** from **Chassis**.

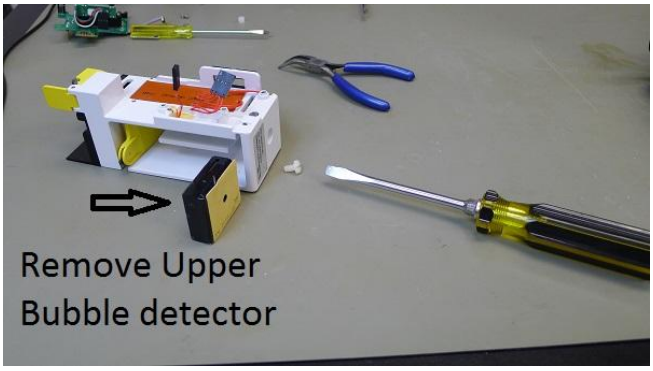




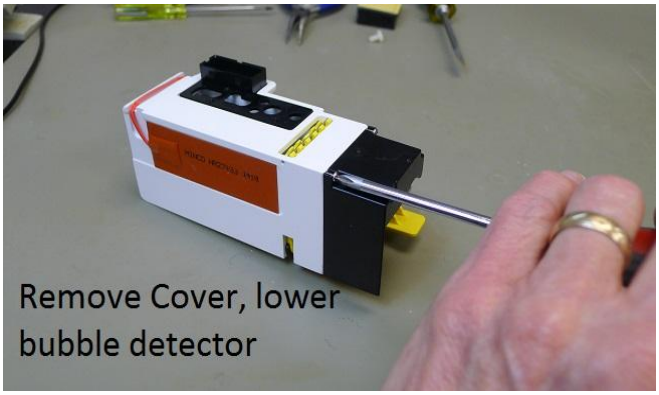
9. Remove **Nylon Screw** from top of assembly with appropriate size flat head screwdriver. Remove **White Collar Spacer** from input tube of **Upper Bubble Detector** using a suitable tool.



10. **Upper Bubble Detector** is now free. Carefully slide **Upper Bubble Detector** out.



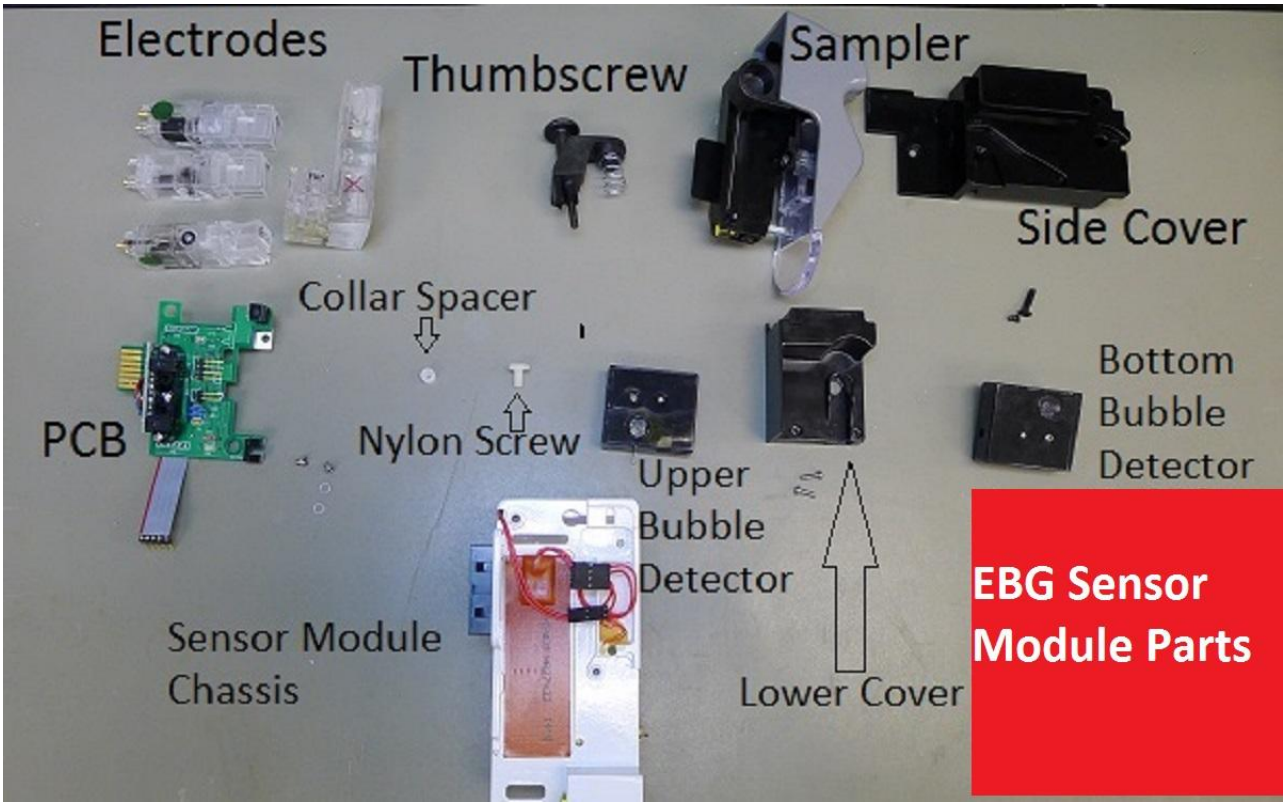
11. Remove four Phillips head screws from **Lower Cover**. Remove the **Lower Cover**.



12. **Bottom Bubble Detector** is now free. Remove **Bottom Bubble Detector**.

13. Disassembly complete.

Illustration of removed items



Clean and inspect all parts for residue or damage.

14. Inspect **Bubble Detectors** for any sign of leakage (salt tracks, etc.) and for any visible cracks in sample flow path. The clear material used for the flow path where the photo detection of the sample takes place must be free of visible cracks.

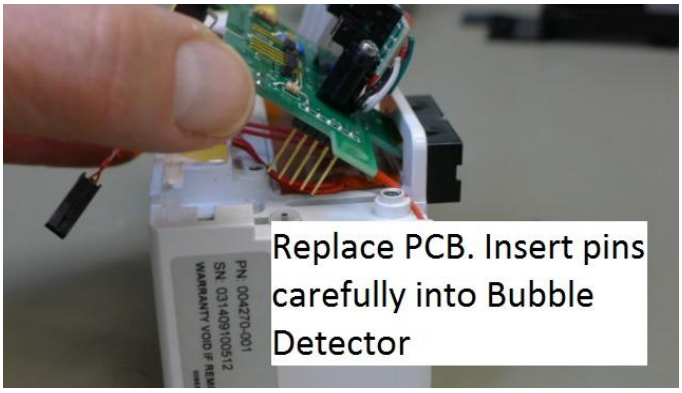
15. Clean all parts, especially the metal casting that forms the **Chassis**. Remove all salt or other residues with warm water. Dry all items prior to re-installing.

Reassemble Sensor Module

16. Align and insert **Bottom Bubble Detector** into **Chassis**, secure **Lower Cover** with four Phillips head screws.

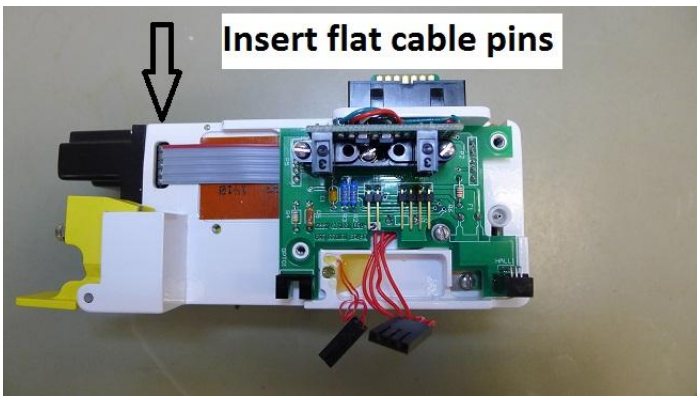
17. Insert **Upper Bubble Detector** into **Chassis**, noting that sample inlet pipe is visible in round cutout of chassis.

18. Insert **PCB** onto **Chassis**, carefully aligning five pins into **top bubble detector** female connector. Check carefully that wires are routed correctly and none will be trapped or pinched when **PCB** is in place and secured. Be sure **PCB** is seated onto its locators correctly.

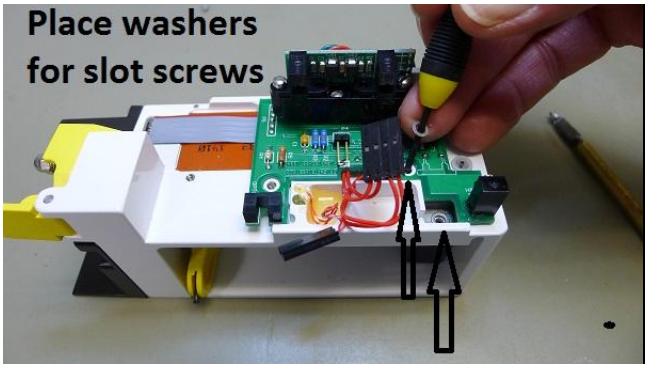


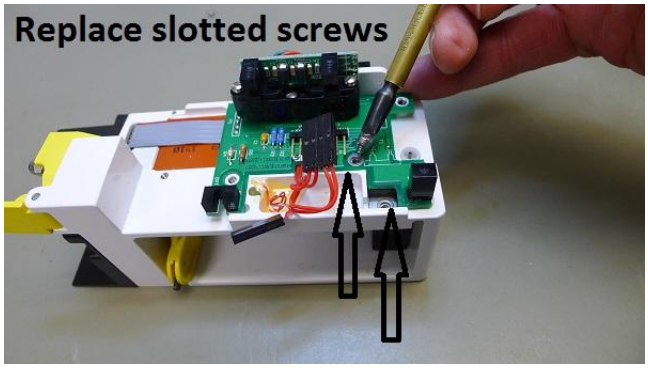
19. Place **White Collar Spacer** over sample inlet pipe. Install the **Nylon Screw** from top of chassis into **Upper Bubble Detector**. Carefully snug the nylon screw. Be careful; over tightening will break the screw!

20. Connect flat cable pins to **Lower Bubble Detector**.

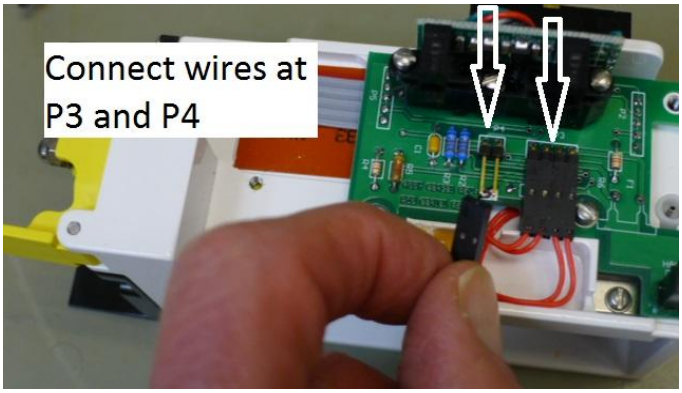


21. Secure **PCB** to **Chassis** with two washers, and two screws: one near HALL1 component, one near P3 Connector.



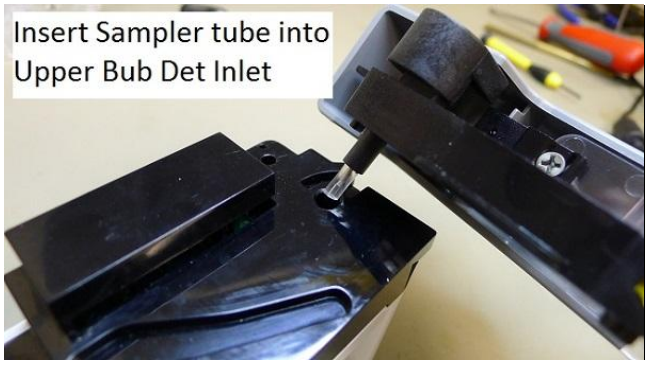


22. Make connections at P3 and P4.

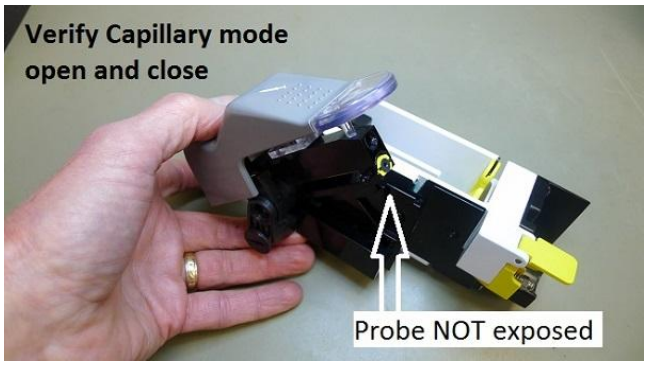


23. Place **Side Cover** onto **Chassis**, verify no wires are trapped or pinched. Secure **Side Cover** with 1 short Phillips flat head screw, and with 1 long Phillips flat head screw.

24. Place **Sampler** in position on **Chassis** (sample tube matched to **Upper Bubble Detector** inlet pipe). Secure **Sampler** with **Thumbscrew**.



25. Assure **Sampler** will move correctly to the Capillary mode, open and closed. Assure **Sampler** will move correctly to the Syringe mode, open and closed.



26. Replace the **Electrodes** into **Sensor Module.**

27. Install **Sensor Module** into analyzer and do complete system checkout.

28. Process complete.