

**Work instruction Number 232**

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**Purpose:** Weekly maintenance

**Safety:** Bio Hazard area

**Instrument:** Starrsed TL

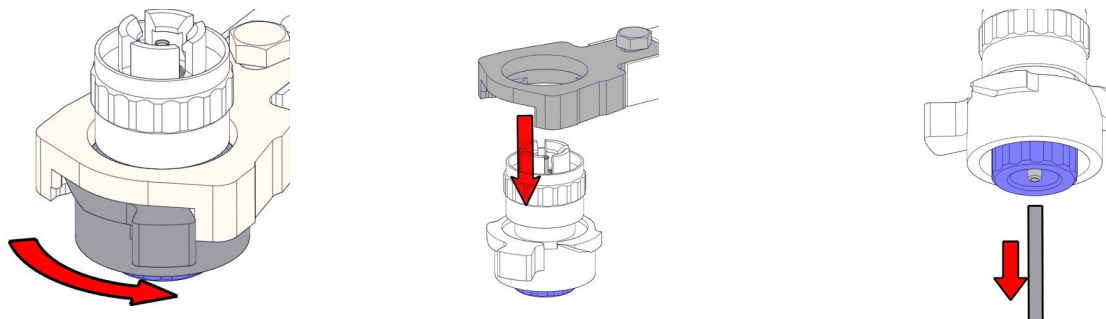
**Revision:** 002, 2019

**Prepare disinfectant:** (if not already prepared).

This disinfectant is for cleaning of all external parts that are exposed to blood.

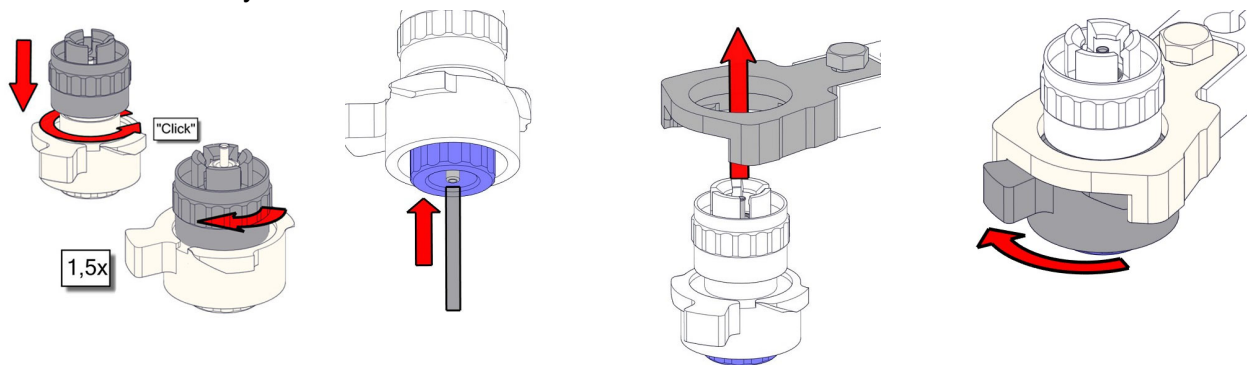
Change instrument status in the LAS from "online" to "offline"

### 1. Clean Fill nozzle



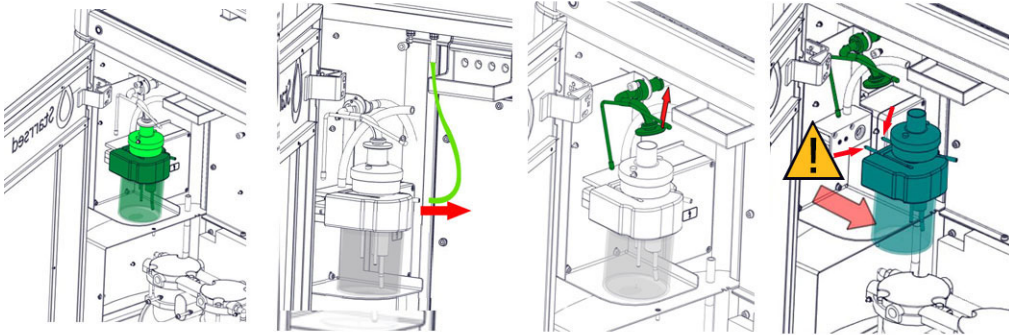
The use of a toothbrush and detergent is recommended.

1. Carefully scrub the fill nozzle inner part.
2. Use a tissue to dry the fill nozzle.



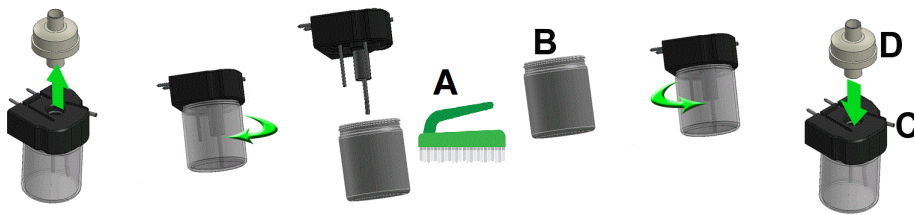
## 2. Clean Liquid separator

### Removing



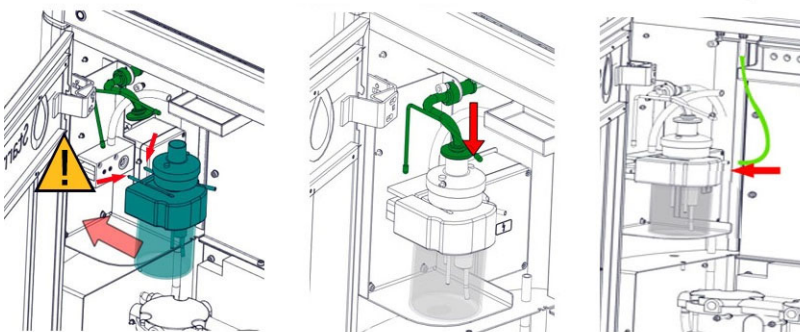
- A. Clean all parts with hot water and a brush.
- B. Use some acid free vaseline on the screw-thread of the glass jar.

### Cleaning



- C. A little silicon grease on the rim of separator will make the assembling and adjustment easier.
- D. If applicable replace the bacterial HEPA filter (For Maintenance Level 4: Exchange filter QWLV040002)

### Replacing



### 3. Check sensors

#### Vacuum pressure check

- Go to tab MAINTENANCE -> CHECK SENSOR. Select CHECK FLOW SENSOR box.  
Flow: 0925-**0980**-1020 Abs: 0300- **0320** -0340  
If the flow is not in range there might be a blockage in the vacuum flow line to the flow sensor.

#### Fill Stop sensor check

- Go to tab MAINTENANCE -> CHECK SENSOR. Select CHECK FILL STOP SENSOR box.  
Fill stop sensor FS 90..**140**..165

#### Diluter Start sensor check

- Go to tab MAINTENANCE -> CHECK SENSOR. Select DILUTER START SENSOR box.  
Diluter start sensor 400-700

#### Measure sensor check

- Go to tab MAINTENANCE -> CHECK SENSOR. Select CHECK MEASURE SENSOR box.  
Measure sensor MS 40..**50**..60

#### Temperature sensor check

- Go to tab MAINTENANCE -> CHECK SENSOR. Select CHECK TEMPERATURE SENSOR box.  
Temperature sensor TS [Room temperature]

#### Diluent flow sensor check

- Go to tab MAINTENANCE -> CHECK SENSOR. Select CHECK DILUENT FLOW SENSOR box.  
Press test. When test is finished, signal Standby and Flow must shown as activated.

#### Separator check

- Go to tab MAINTENANCE -> CHECK SENSOR. Select CHECK SEPARATOR SENSOR box.  
Separator sensor <200 **600** >700

### 4. Final preparation

1. Go to tab [MAINTENANCE] and perform the [End-of-day wash] procedure.
2. Open cover and front doors.
3. Check system for leakage.
4. Check drip trays under pump assembly and needle assembly .
5. Open carousel plate and inspect the peristaltic pump tubes and connections for leaks.
6. Check tubing from the syringe for trapped air bubbles.
7. Check Diluent syringe for trapped air bubbles.
8. If trapped air bubbles are found, go to tab [MAINTENANCE], click button [PRIME / CLEAN] and perform the [PRIME DILUENT] function.
9. Clean needle top with disinfectant.
10. Check if the suction tube in the guide fork is free of clogging, remove clogging if needed.
11. Wipe stainless steel plates below the pipettes with disinfectant.
12. Close cover/front doors and activate the instrument in the LAS.