ORI COLLECTOR SETUP PROCEDURE FOR DELAVAL VMS

Before the test, a patch file must be installed by a DeLaval tech and settings changed in the controller of each robot. The robot software must be version 15.1 and higher and using Del pro 4.2 or 4.3 version and higher.

1. CONFIGURATION:

1.1 After stopping traffic to the stations, put in manual mode:

- ✓ Install patch "MS SW 15.1 Patch.exe Universal Sampler"

1.2 Station Configuration in VMS Controller tab **"Configuring Equipment"** In the **"Debugging"** tab, make the changes below;

- ✓ Spare A1: Bit 14 (Sampler mode active Universal)
- ✓ Spare B3: 5
- ✓ Spare B4: 5
- ✓ Spare B5: 5
- ✓ Spare C1: 7 (Required)

1.3 Also disassemble the non return valve + flow limiter placed on the control compressed air VA 243 sampling valve (In other words remove the check valve).
This lets air to escape from the system and allow the cylinders to retract on the Ori Collector.

2. CONNECTING THE DEVICE AND STARTING THE SESSION:

2.1 In order to limit the residual milk in the transfer tubing between each sample sent to the sampler , it is recommended to install the sampler at the same level (or slightly higher) than the stall. This will allow for a shorter milk hose length as shown below. In the "Sample Connection» tab the capacity of the sampler is 90 bottles, set the station as shown below.

2.2 Disconnect the air hose from the VA243 sampling valve and seal the joint with a D6 plug. (See orange below) Then connect the open airline to the air connection of the sampler controller using the air hose provided. Connect the milk hose to the robot milk nipple just below D6 plugged joint and attach the end to the collection cylinder of the Ori collector. (See yellow arrows below).
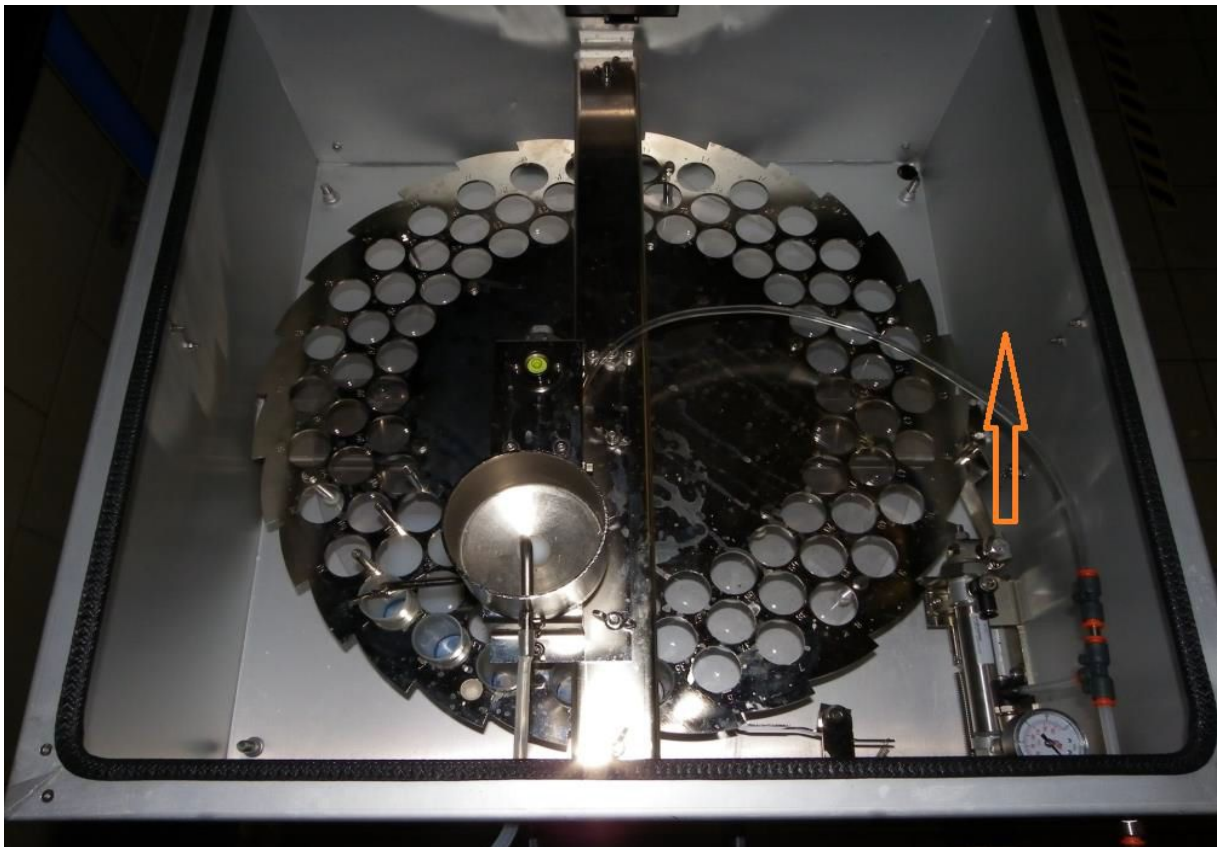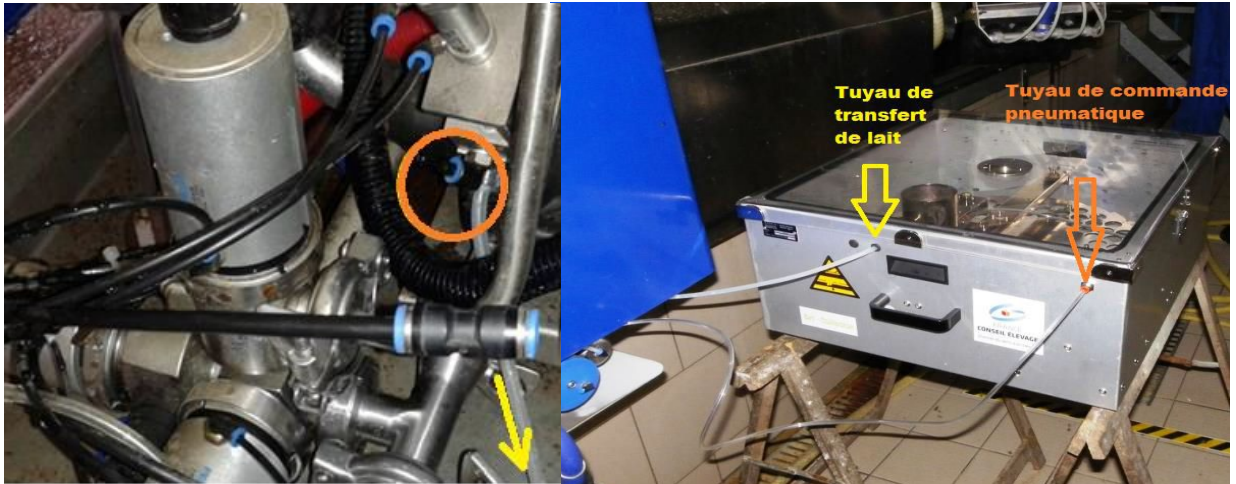
2.3 Check the operation of the pneumatic control for incrementing the crown and emptying of the tank from the touch screen button at each robot using **VMS Menu --> Test IO / command.** Look for the **"Milk Pump Pressure Valve"** from the item list and toggle from 1 to 0 while watching the cylinders. The main cylinder should aggressively grab the crown, while reaching a minimum **0.2 Mpa** on the air pressure gauge. If not, then the air pressure needs to increase by turning a black round knob located behind a shield just above the cow. This is a onetime setting and is not used for any other function in the robot.

If everything is operational, start the sampling session, from **VMS Menu --> Autosampler. Press "Start"** and indicate the number of vial 1 and **"regular sampling"** The sampler will not be cleaned automatically. Each Ori Collector must be manually cleaned at the end of session.
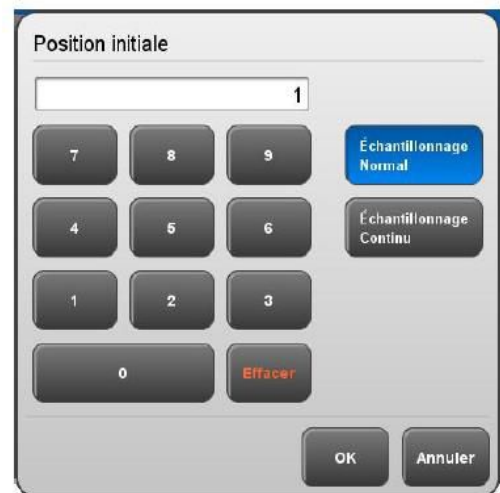
*NOTES: Disable automatic milk sampling of Fresh cows (up to 4 days) from their "animal listing" in the control tab. **As well, any treated cows must be disabled from sampling and sampled manually from the bucket. (To avoid risk of contamination of milk left in the milk hose)***

During the test cow numbers can be written on the bottle caps and at least have the bottles numbered in sequential order to match to the robot sampling report later. Samples should be capped and inverted during the test to ensure sample quality. When all cows are sampled, go to the sampling tab and press "Stop".

If you find that you are short a sample (or have an extra sample) at the end, look for possible refusals such as very low milk weight (<5kg) or ask about bucket cows etc. Sort the list by time of milking to find who is missing and referring to cow cards if necessary.

When observing the sampling, watch for possible double pump of the receive jar that may result in extra milk left in the tank or fill hose. This may occur from time to time, maybe 1 in 10 samples. Programming to increase suck time would alleviate this.