

Milk sampler (VMS 2012)



Instruction Book

Milk sampler (VMS 2012)

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Operation

1 About collecting milk samples

A sampling sequence normally takes 24 hours and is to be stopped after performing a system cleaning. This way, the sampler will be cleaned after the sampling.

Before starting a system cleaning, putting the milking station into manual mode is recommended. This makes it possible to disconnect the sampler before milking restarts. Consequently, milk residues in the milk sampler during storage or transportation will be avoided. When a system cleaning is inconvenient or impractical, see the section "Manual cleaning" in the Operators maintenance.

Reports about sampling sequences can be accessed in the management software. Sampling reports are located in *Default Reports > Milking > Milk Sampling*. For more information about reports, see the help file in the DelPro software.

2 Collecting milk samples

There are three main steps when collecting milk samples:

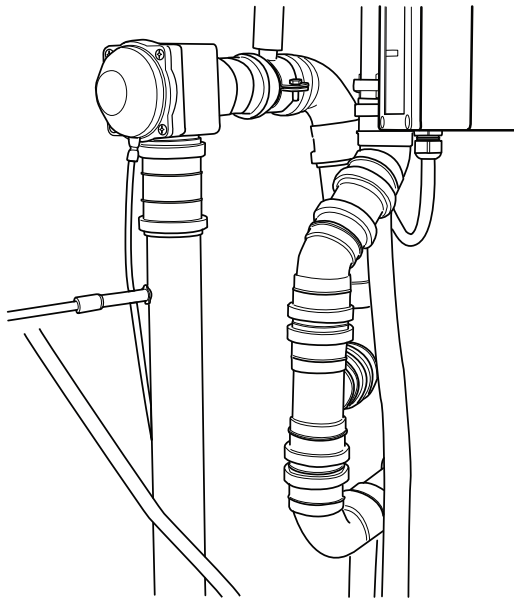
- Connecting the milk sampler
- Starting a sampling sequence
- Stopping a sampling sequence

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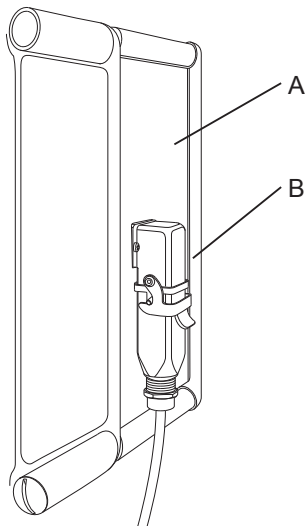
2.1 Connecting the milk sampler

1. Stop the cow traffic through the milking station. Milking must not take place when the steps below are in progress.
2. Place the milk sampler in front of the milking station on an even surface.
3. Shut off the vacuum to the receiver by pulling off the hose to VV401.
4. Attach the milk hose to the milk pump connection on the milk pump.



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5. Connect the electrical cable to the ALCOM bus connector (B) on the control box (A).

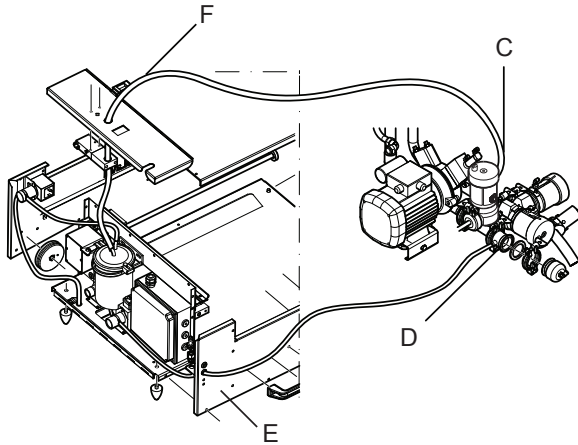


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- A Control box
B ALCOM bus connector

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- C Milk pump connection
- D Return line connection
- E Return line
- F To milk sampler milk container

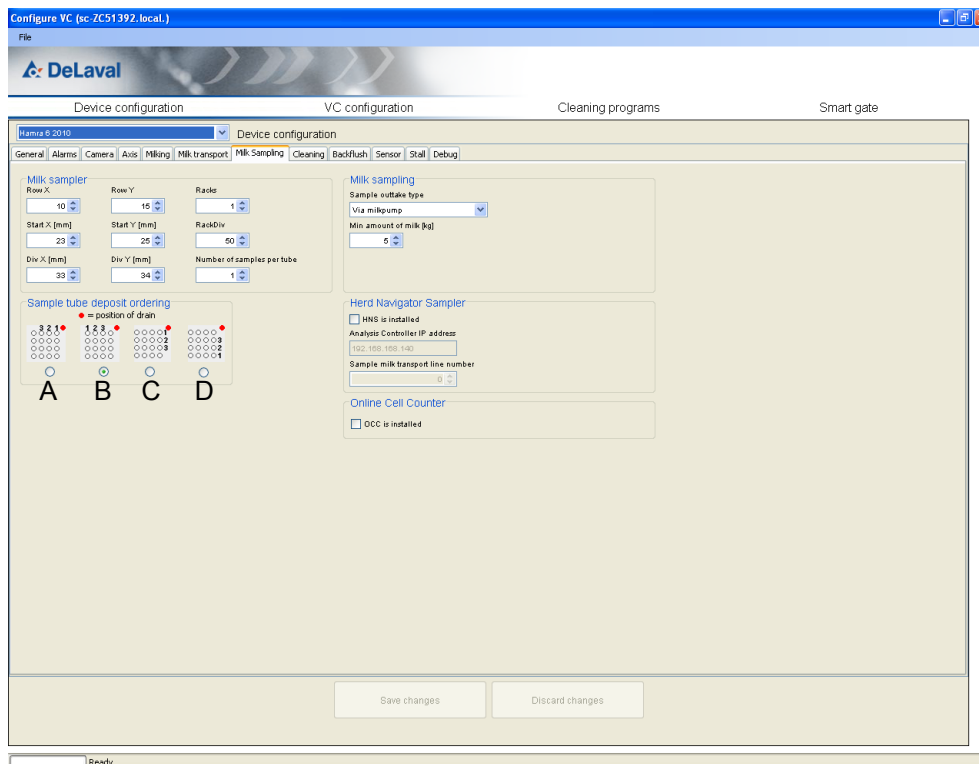
6. Remove the air-purge valve and mount the return line connection (D).
7. Connect the return line (E) to the return line connection.
8. Turn on the vacuum to the receiver using the manual valve.

2.2 Starting a sampling sequence

When the milk sampler has not been used more than three days it may need to be cleaned before being used again. That is why the sampling sequence is normally started just before a system cleaning.

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The ordering of the sample tubes can be changed in *Sample tube deposit ordering* in the management software (VC configuration). Four different options are available (A, B, C, and D).

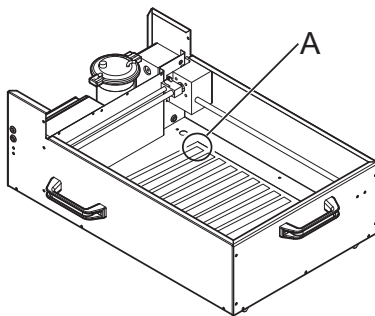
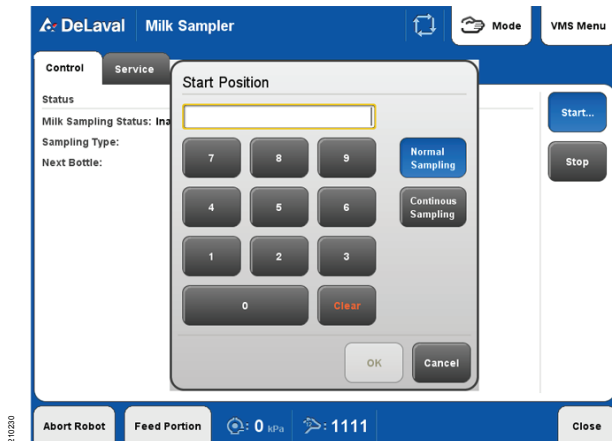
Note! Make sure to check the settings for milk sampling in the management software (VC configuration) before starting a sampling sequence. For further information, see the DeLaval DelPro software, VMS (Help file).

Sampling is performed by using the touch screen.

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1. Press the *VMS Menu* button in the top right corner to display the VMS menu.
2. Press the *Milk Sampler* button.
3. Press the *Start* button to display the Milk sampler window.



4. Select a sample bottle by typing the bottle's number on the keypad. The illustration shows the first bottle for configuration (A) in the VC configuration.

Note! The first bottle is located differently depending on the configuration in the VC configuration.

- For normal sampling type one (1) for the first bottle.
The first bottle (1) is located differently depending on the configuration in the management software (VC configuration), see above.
- For continuous sampling, when the sampling sequence will continue with a new rack, use the coming number after the last bottle number of the previous rack. In other words, if the sample tray has contained 130 bottles in the first place, it is possible to continue the sampling sequence by typing the bottle number "131".

Use the *Cancel* button when typing the wrong number.

5. Press *Ok*
6. Press the *Start* button to start the sampling.

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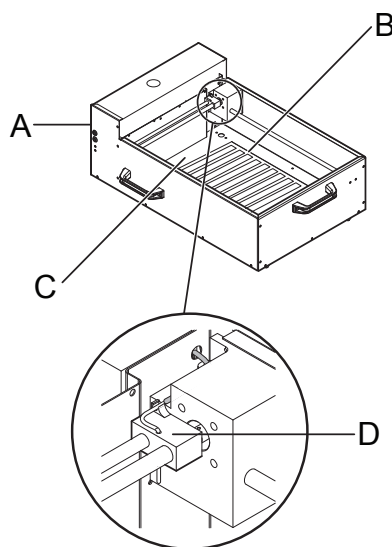
2.3 Stopping a sampling sequence

A sampling sequence is stopped manually from the touch screen, after a system cleaning.

1. Put the milking station into manual mode and start a system cleaning. The runner then goes to the 0 (zero) point.
2. After the system cleaning, press the *Stop Milk Sampling* button on the Milk sampler window.
3. With the runner still in the 0 (zero) point position, disconnect the milk sampler from the milking station.

Note! The sampler must be disconnected before milking restarts to avoid milk residues in the sampler during storage or transportation.

4. Remove the sample tray (B) and flush the sample compartment (C). To prevent water from damaging the electrical parts, close the control box cover (A). Make sure that the runner is clean.
5. Check the silicone tubes for damage.



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- A Control box cover
- B Sample tray
- C Sample compartment
- D Runner at zero point

Operators maintenance

Note! This chapter is intended for the customer.

1 About carrying out maintenance

In normal circumstances, the milking station will carry out the cleaning process on the milk sampler during a system cleaning. Manual cleaning will only be performed when the milk sampler has not been cleaned by the VMS.

If any parts such as a silicone hose has been damaged or deteriorated, additional maintenance will be needed.

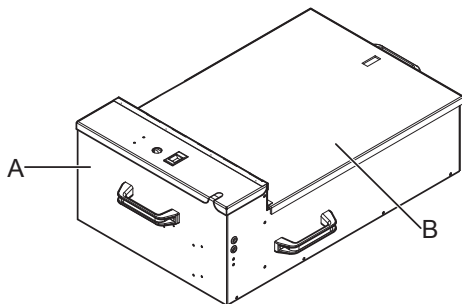
1.1 Manual cleaning

Tools: Syringe without needle.

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Operators maintenance

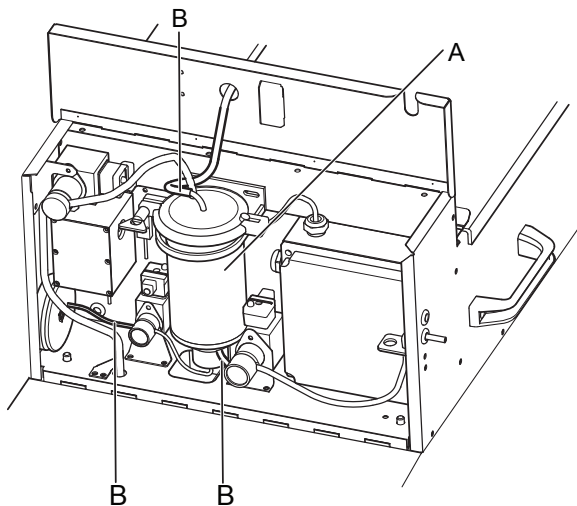
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- A Control box cover
- B Main cover

2



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- A Milk container
- B Disconnect hoses


1. Open the control box cover (A) and the main cover (B).

2. Disconnect all hoses (B) from the milk container (A), then remove the container.

3. Use a syringe without a needle to clean the disconnected hoses.

3.1 Fill the syringe with lukewarm water, press the tip of the syringe into one of the hoses and then inject the water through the hose. Repeat the same procedure for all hoses.

3.2 If there are any dirt or milk residues left in the hoses, remove the hoses and rinse them with lukewarm water, then wash them using a mild detergent, then rinse again with water to remove detergent.

3.3 If the milk sampler has not been cleaned for a long time, milk residues may be impossible to remove, in which case the tubes is to be replaced. For more information, see  Chapter 2 "Additional maintenance" on page 13.

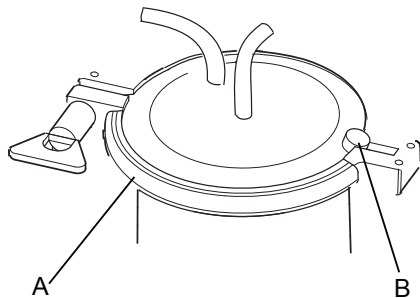
4. First disassemble the container, then rinse it with lukewarm water and clean with appropriate detergents. Finally, rinse again with water to remove detergent.

5. Reconnect the hoses onto the container.

Note! It is important not to shorten the hoses too much if they have been deteriorated.

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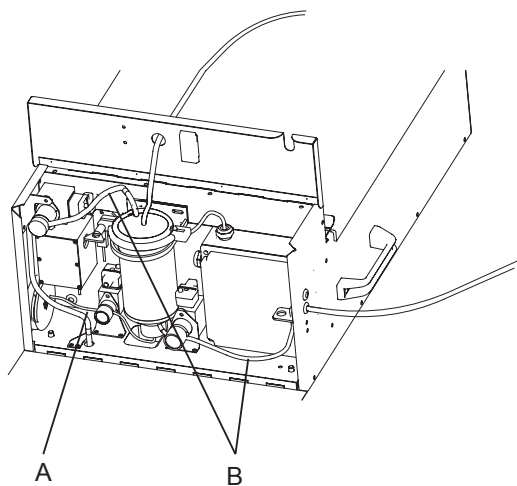
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- A Clip
- B Cylindrical cone or container lid

6. Reassemble the container. Note that the cylindrical cones (B) must face each other and be properly inserted in the clip (A).

2 Additional maintenance

2.1 Changing hoses



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- A Silicone hose on the tube wheel

- B The other two hoses

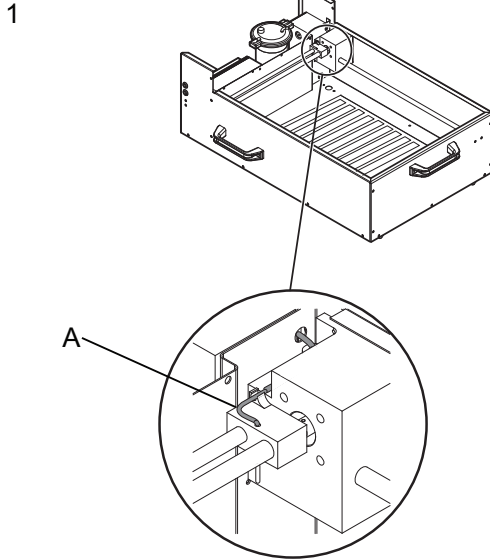
The three hoses (A and B) must be changed if they have been deteriorated or if they not can be cleaned properly. Due to the complicated operation, only the hose changing on the tube wheel has been described.

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Operators maintenance

Changing the silicone hose on the tube wheel

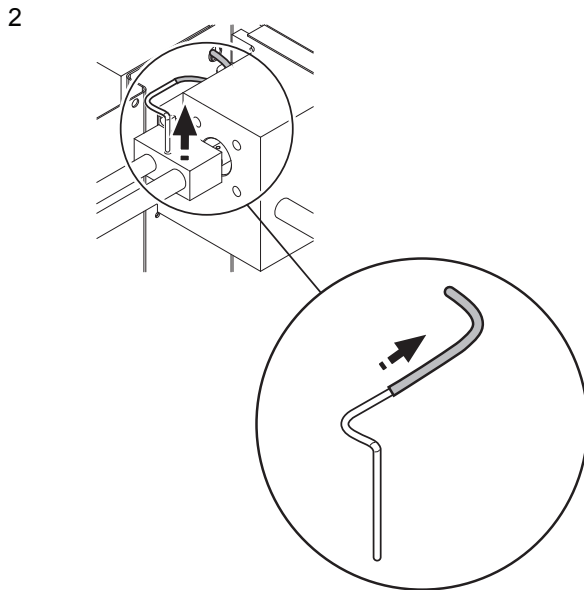
1. Lift the sample tube (A) that is inserted in the runner.



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A Sample tube

2. Remove the silicon hose from the sample tube and hold the silicone hose.

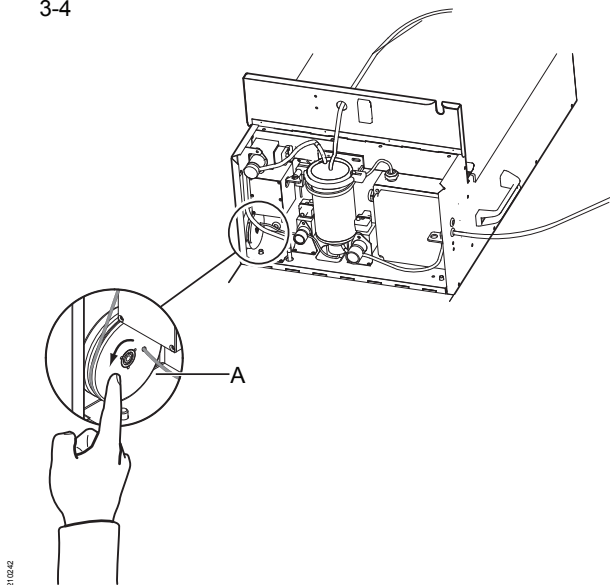


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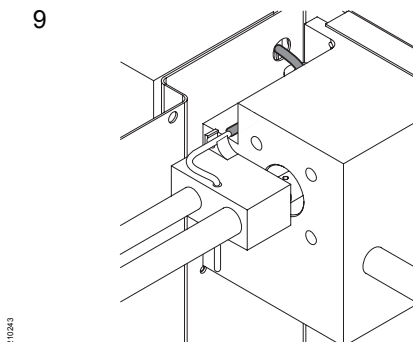
Operators maintenance

3-4



A Silicon hose

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3. Remove the silicone hose (A) from the hole by slowly rewinding the silicone hose onto the tube wheel using a finger.

4. Pull the silicone hose and remove it from the hole.

Note! Keep a finger on the tube wheel to prevent it from revolving too fast. If the tube wheel rotates freely, the spring will be damaged and must then be replaced.

5. Return the wheel slowly to the start position.

6. To fit a new silicone hose onto the tube wheel, turn the tube wheel 8 times clockwise.

7. Push the silicone hose through the hole in the wheel.

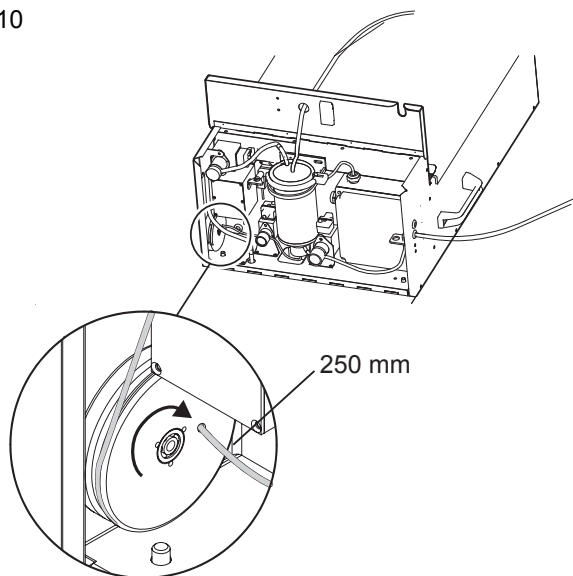
8. Allow the spring to rewind the silicone hose on to the wheel.

9. Reinsert the sample tube into the silicone hose.

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10. Check that about 250 mm of the tube protrudes from the hole in the wheel.

