

Why do I need to change my liners every 2,000 milkings or at least every six months?

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The milk liner is the only part of the milking machine that comes into direct contact with the cow, so their condition is critical for mastitis control and efficient milking. Over time, worn liners reduce milking performance, decreasing the speed and completeness of milking, increasing teat end damage and the spread of mastitis-causing bacteria. Liners lose their elasticity and become collapsed as rubber deteriorates naturally over time. This is added to by exposure to the cleaning products used for machine disinfection particularly chlorine. When liners become worn, they take longer to open but will close early due to their tendency to collapse under vacuum.

The interior of the liner can also become rough, causing small tears in skin of the teat and this roughness makes cleaning and disinfection difficult, allowing bacteria to build up. These increase the potential of mastitis and cross-contamination between cows. The industry recommendation is to change liners after 2,000 milkings or 6 months, whichever comes first. It is important to check the inside of the liners regularly to see if they are soft and smooth or rough and cracked.

The choice of liner, in consultation with your milking machine technician, is very important in reducing teat damage and any increase in mastitis incidence. A well aligned, good quality liner should fit the teat cup shell as it must collapse fully around the base of the teat. If not, blood will not be able to circulate, leading to teat end swelling (oedema) and damage resulting in 'wedging' at the top of the teat (Figure 2) or abnormal amounts of 'ringing' at the base of the teat (Figure 3).



Figure 2. Teat wedging.



Figure 3. Ringing at base of teat.

The liner also needs to have a soft flexible mouthpiece that forms an airtight seal with the base of the teat adjacent to the udder. This minimises liner slip and cluster fall off. Poor contact can take place in cows with small, very large or splayed teats, or heifers with turgid teats due to excessive udder swelling.

Herds that have increased in size, with parlour size staying the same, sometimes forget that each cluster is milking more cows now than it might have a few years ago, meaning that liners may need to be changed every 3 or 4 months.

To work out exactly the number of days between liner changes, simply complete the following calculation.

$$\text{Number of days in between liner changes} = \frac{2000 \times \text{Number of milking units}}{\text{Herd size} \times \text{Number of milkings per day}}$$

For example, if you are milking 100 cows in an 8-unit milking parlour twice a day, liners should be changed every 80 days. If milking 200 cows, the number of days between liner changes is 40 days

For more information

Refer to CellCheck Farm guidelines on the AHI website at the following links:

- **Guideline 6:** Maintain and monitor milking machine function and
- **Guideline 9:** Manage teat sores and cracks.

Click on the link below to see our video - When Should I Change My Liners?

