

# DeLaval milk meter MM15

## 161 Preventive maintenance Preventive maintenance

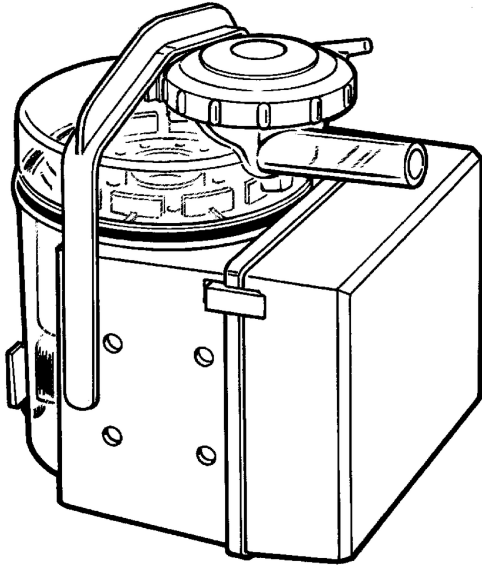
### DeLaval milk meter MM15

#### 1 Every 300 hours

At farms where the cleaning temperature is above 80° C and where aggressive acid or alkaline detergents are used, the valve seal must be changed more often.

We recommend an interval of **300 hours** cleaning time.

***Note!** Overdosing standard detergents will also cause this problem. A swelled and wrinkled sealing may cause incorrect measuring of the milk flow. It is therefore vital that the sealing always is functioning properly.*



#### 2 Once a year

- Replace rubber parts (1- 5) in the milk meter. Spare parts kit. [98510380](#)

The valve seal (2) should be replaced **twice a year** together with the liners when used in conditions not described above.

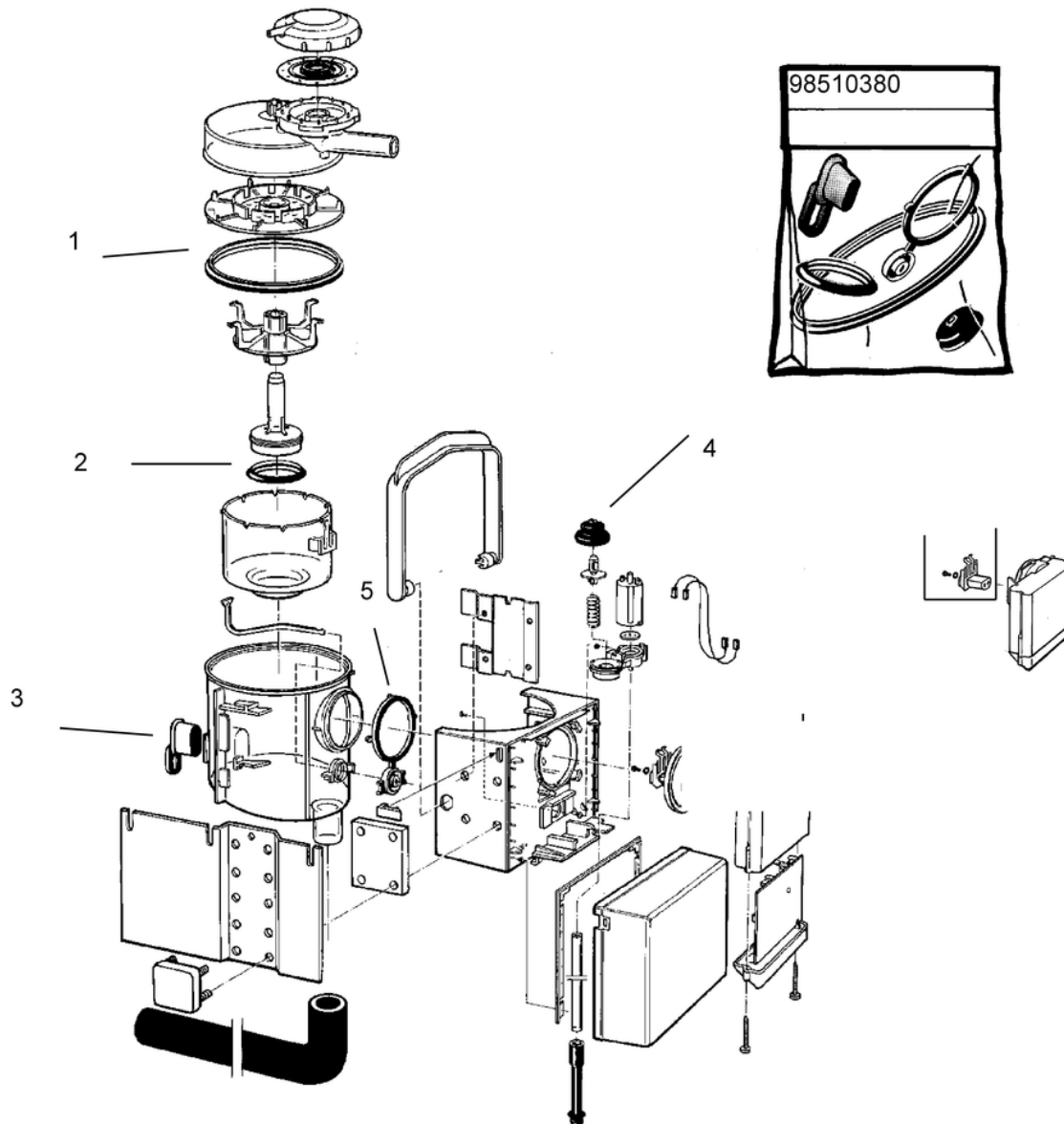
#### 3 Yearly service

Yearly service should be performed by an DeLaval serviceman (including replacement of rubber parts).

#### 4 Disassembly

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- Fold down the lock strap (1).
- Lift up the meter cover and the spoiler (2), and remove the gasket.
- Turn off the diaphragm cover and remove the diaphragm.
- Press the locking clip of the meter cup (3). To avoid any unnecessary breakage follow

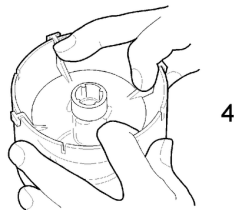
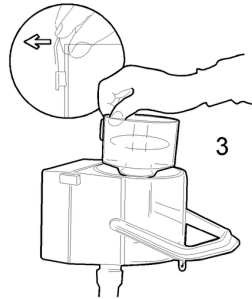
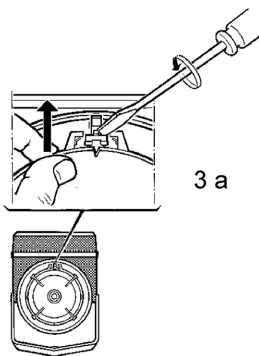
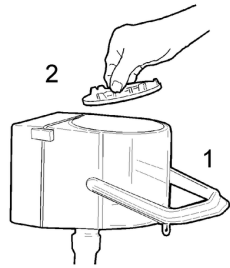
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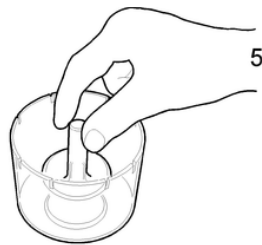
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this instruction when the measuring cup is hard to get out:

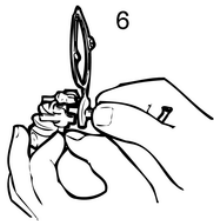
*Place a screwdriver between the stainless steel hook and the snap lock of the measuring cup (3 a). Turn the screwdriver gently and lift the measuring cup.*



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- Hold the cup close to its locking clip and lift it straight up. Place the cup on your working area upside down to prevent breaking the edge.
- Remove the valve guide from the meter cup by pressing the wings outwards while pulling upwards (4).
- Lift up the valve and remove the seal (5).
- Fold the lock strap to horizontal position and pull it off.
- Pull the milk meter housing forwards and remove the milk tube, carefully.
- Remove the plug in the sampling outlet.

- Remove the valve arm with gasket (6).
- Disconnect the vacuum tube from bottom of the valve housing.
- Snap open the locks to the lid, and fold down the lid with the electronics.
- Turn and remove the bayonet to the strain gauge.

- Pull out the strain gauge.
- Loosen the screw holding the valve housing from inside.
- Pull out the valve housing (7).
- Remove the solenoid, and take out the valve plate (8).
- Remove the lid together with the electronic unit and the valve.
- Remove the electronic unit from the lid and put it aside.

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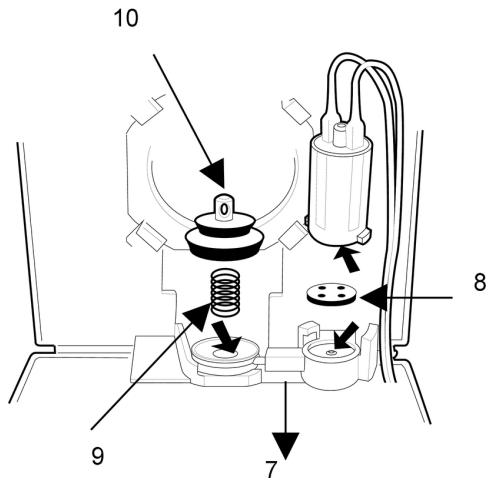
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- Pull off the bellows. Be careful; there is a spring (9) that may jump out.
- Remove the valve arm bracket (10) from the bellows.

The milk meter should now be completely taken apart.

- Wash all loose parts. The valve must be cleaned thoroughly; possibly by using a sharp tool to remove the incrustations.
- Clean with care the gauge on the electronic unit.
- Clean the milk meter body.
- Rinse the valve bottom from water and residues.
- Reassemble. See next page!

**Note!** *The DeLaval milk meter MM15 is an accurate measuring tool and should be handled very carefully.*



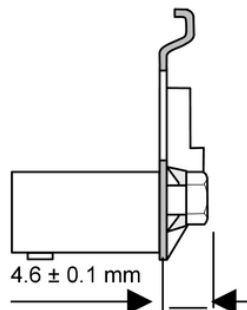
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## 5 Reassembly

- Put the milk meter together in reverse order, with new rubber parts.

### 5.1 Bellows

- Put back the valve arm bracket into the bellows. Make sure the tapered size of the slot is towards the milk meter.



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### 5.2 Meter housing

- The wings of the valve guide must be placed in the notches that have knobs. Make sure not to mix them up with the other notches. The valve guide must be locked to the cup.
- When you have assembled the meter cup, pour some water in it and check that it does not leak.
- Hold up the valve arm inside the meter housing when the electronic unit with the gauge is put back in place. Make sure the cables are not jammed.

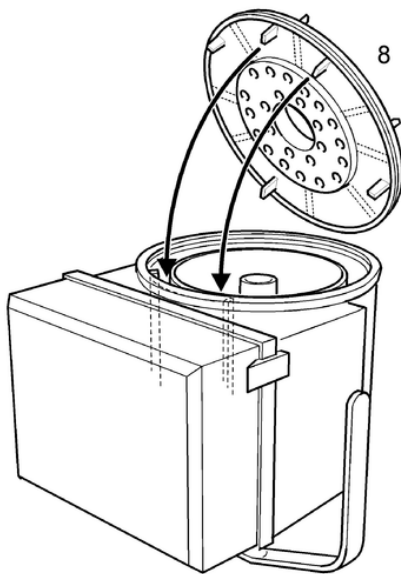
### 5.3 Spoiler

#### 5 moulded legs

Three of the five legs are moulded close to each other. See adjoining figure! When installing the spoiler plate notice that two of these three legs must be placed between the two bars moulded inside the housing. This is vital for a proper function. If the spoiler plate is installed correctly none of the legs should touch the meter cup locking clip.

#### 4 moulded legs

The plate with only four legs moulded underneath must be placed with no leg between the two bars because of the risk of blocking the weight cell.



### 5.4 Valve seal

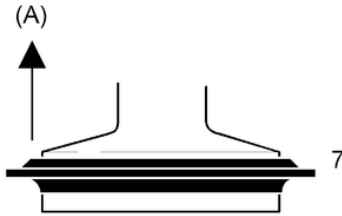
- Make sure not to mount the seal upside

(A) Article number up

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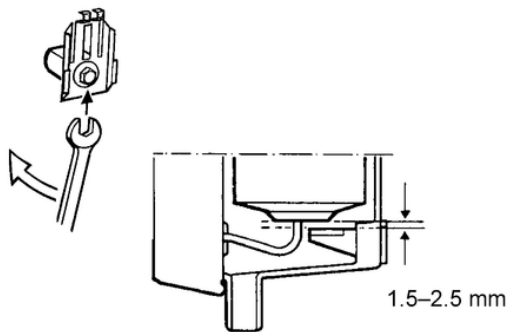
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down; Article number up!



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### 5.5 Meter cup



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- Remount the meter cup. Make sure that the meter cup angle is correctly adjusted.
- Adjust with the screw at the front of the hook.
- Check by mounting a fat sampler inlet. The distance shall be 1.5–2.5 mm. Make a calibration test and calibrate, if necessary. When the calibration weight is in the measuring cup there should still be a small (less than 1 mm) distance between cup and inlet.
- When the milk meter has been completely assembled, check by pressing **F76 + F902**. The value should be 25–250.
- Leave the function by pressing **F72**.

## 6 Fat sampler

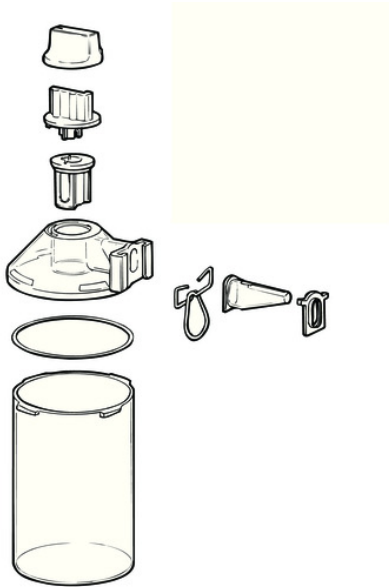
***Note!** The DeLaval milk meter MM15 is an accurate measuring tool and should be handled very carefully.*

### 6.1 Disassembly

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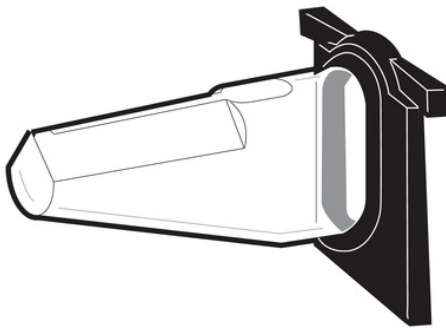
- Turn off the cover and remove the seal.
- Pull up the cock and remove the rubber part.
- Remove the seal from the milk sampling inlet.



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### 6.2 Sampling inlet

- Check that the edges of the slot on the upper side of the inlet are sharp and unbroken.



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### 6.3 Reassembly

- Assemble the inlet seal onto the inlet with the large tapered rib on the side next to the milk meter housing. The opposite side of the seal has a smaller rounded rib which contacts the sampler lid when assembled.
- Put the sampler together in reverse order, with new rubber parts.

### 7 Replacing the gauge

A special repair kit has been designed, so the electronic unit doesn't have to be removed.

Repair kit [98958080](#) This kit includes:

- one complete gauge
- six connectors
- repair instruction

In order to get the best result, it is very important that the instructions below are strictly followed. It is also very important that a proper tool is used.

- Disconnect the bus cable.
- Snap open the locks to the lid, and fold down the lid with the electronics.
- Open the meter. Remove the meter cover.
- Remove the spoiler and the measuring cup.
- Turn and remove the bayonet to the strain gauge.
- Pull out the strain gauge.
- Disconnect the two connectors to the solenoid valve.
- With the lid straight downwards, slide it to the left to release it from the hinges.
- Stretch the cable between gauge and electronic unit.
- Lay the cable flat on a table and fix it with a tape (1). Cut the cable.
- Dispose of the old gauge, and place the new gauge with the cable arranged exactly as the old one. It is very important that the cable is oriented exactly as the old one. Do not strip the wires.
- Take one wire from the gauge cable and corresponding wire from the electronic unit

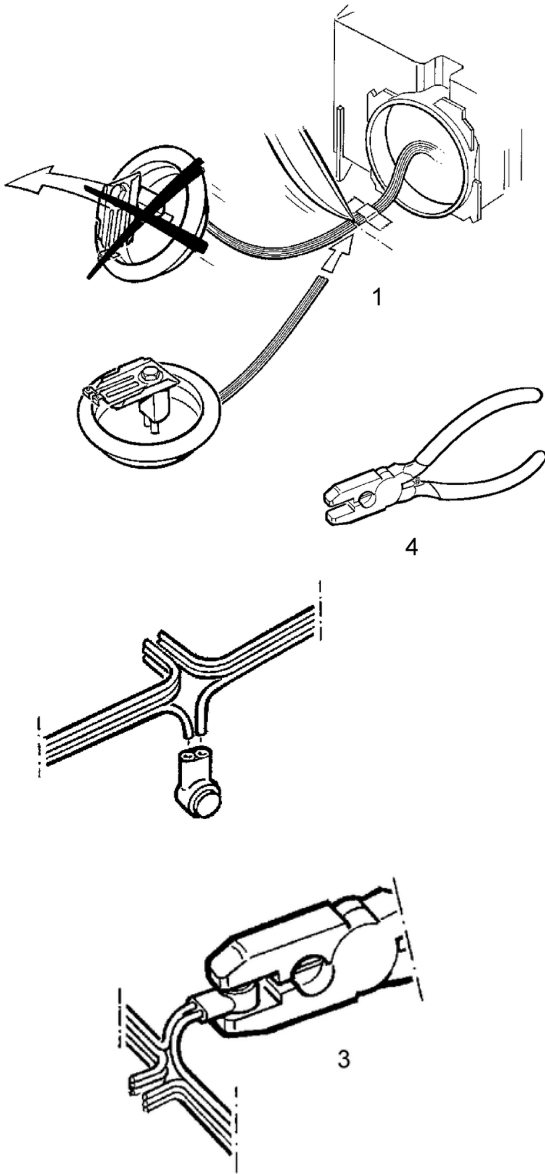


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cable, and put the ends into the connector (2).

- Press firmly with the pliers so the connector will lock (3). It is very important that the pliers press the connector with parallel jaws. We recommend a tool with article No. [98958801](#) (4).



- Do the same with the other three wires.

When the electronic unit with the gauge has been replaced, the milk meter must be calibrated, and its accuracy must be checked.