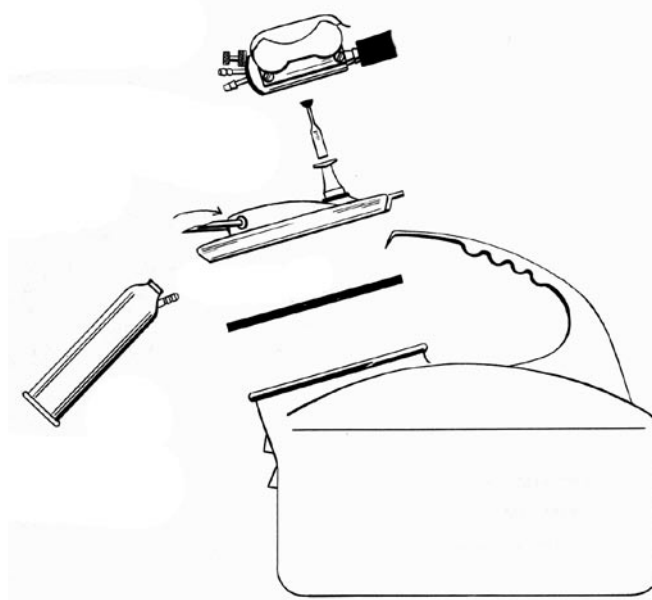


# Instruction Manual Surge Bucket Milker



## Inside:

- Milking Procedures.....Page 1-7
- Washing Instructions .....Page 8
- Replacement parts.....Page 9
- Maintenance .....Page 10-12
- Dairy Supplies .....Page 13

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## HAMBY DAIRY SUPPLY

2402 SW Water St. Maysville, MO. 64469

1-800-306-8937 ● [www.hambydairysupply.com](http://www.hambydairysupply.com)

# THE MAGIC OF TUG AND PULL

HERE ARE SOME  
IMPORTANT WORDS  
ON THE OPERATION  
AND SERVICING OF  
YOUR SURGE MILKER  
READ THEM CAREFULLY

Hamby Dairy



*This is your*

## **SURGE INSTRUCTION BOOK**

***Please Study it - Follow its Directions...and SAVE it!***

# 3 short rules

Hamby Dairy



Supply

**1**

*Hang the Surge*  
**Unit LOW and LEVEL!**

**2**

*Pull the Surcingle*  
**Well Forward**

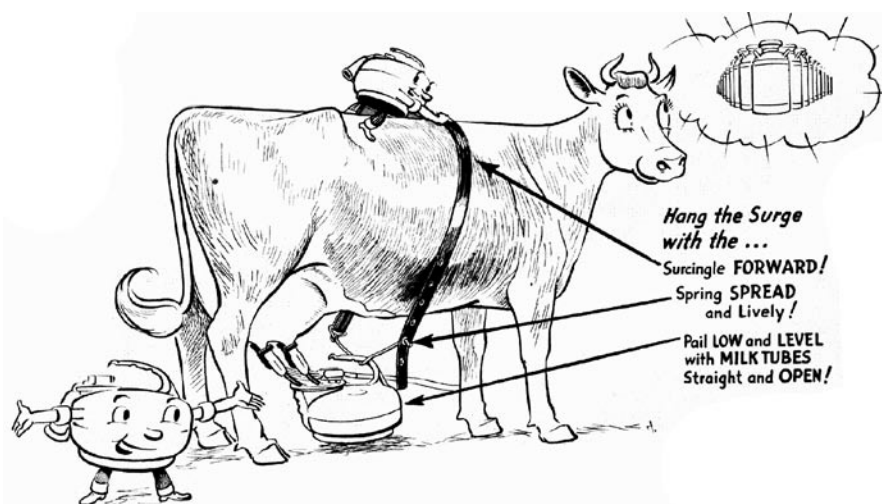
**3**

*When she's milked out -*  
**TAKE IT OFF!**

Always remember the 3 rules and you will become an expert Surge Milker Operator.

Following those simple steps will protect your cows, step up production and save you a great amount of time.

Following these rules does not take time  
...it saves time!





### RULE

# 1

*Hang the Surge Unit LOW and LEVEL!*

The Surge Pail is like a swinging pendulum. It is always trying to hang straight down and plumb. You pull it over to attach the teat cups but it keeps tugging, trying to get back to plumb...so...it is always tugging and pulling. When the pulsator slides over and suction is applied to the teat and the teat cups try to climb up and swallow the teat just as they do on any milking machine, but...the instant the pulsator slides the other way and the suction eases, the freely swinging

unit pulls them right back where they belong. That is exactly why Surge Teat Cups don't creep up and shut off the flow of milk. That is why Surge Teat Cups don't climb up and injure the udder - that is why Surge Milking is Safe Milking.

It is just as easy and just as quick and simple to hang the Surge Unit low and level as it is to hang it any other way but careless hanging cuts down on the efficiency of the Surge.

**ALWAYS**

**Hang the Surge Unit LOW and LEVEL**



## RULE

# 2

## Pull the Surcingle Well Forward



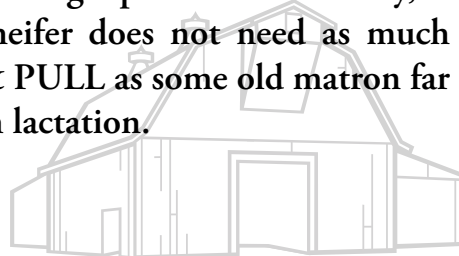
Not all cows are built the same way - they have various kinds of teats and udders. On some teats the teat cups have very little hold - on others they anchor themselves to the teat with a firm grip.

For those reasons you can pull the surcingle all the way up to the shoulders on some cows and on others you can't get it so far forward.

It will pay you well to learn your cows and you can do it in a couple of milkings. Put on as much forward pull as you can and not have the teat cups

pulled off the teats. Before a teat cup falls off it will usually begin to suck air around the top of the teat and squawk or squeal. When you hear that noise you have gone a little too far and had better ease up a little bit.

Placing the surcingle well forward or tightening the spring increases the TUG AND PULL of the Surge and increases the speed and the safety of your milking operation. Naturally, a flushy heifer does not need as much TUG & PULL as some old matron far along in lactation.



# Supply

## RULE

# 3

## *When she's milked out* - TAKE IT OFF!

While a properly hung Surge Milker can probably stay on a dry teat longer and do less harm than other machines, it is still bad practice, even for a Surge.

Any milking machine should be removed just as soon as the cow is milked out.

### Note!

*Leaving the machine on too long does not reduce the stripping and it does not save any time.* On the contrary it teaches a cow to be a slow milker whether she wants to become one or not.

You gain nothing and you lose much by trying to operate too many units - you gain no time and you lose both time and milk when you try to do other things while you are milking.

Your cows *can* be taught to milk out faster - they *can* be taught to help you get through the job of milking sooner and to give more milk while they are doing it.

The very first step toward faster milking is to take the machine off each cow as soon as she is milked out.

Thousands of hours were wasted this morning, and thousands more will be wasted against tonight by people who did not take the Surge off each cow as soon as she was milked out.

You don't need to make that mistake.

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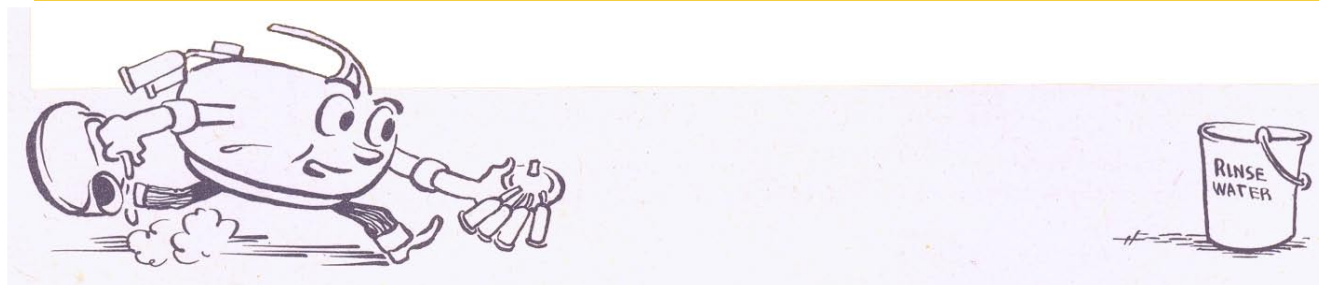


Supply



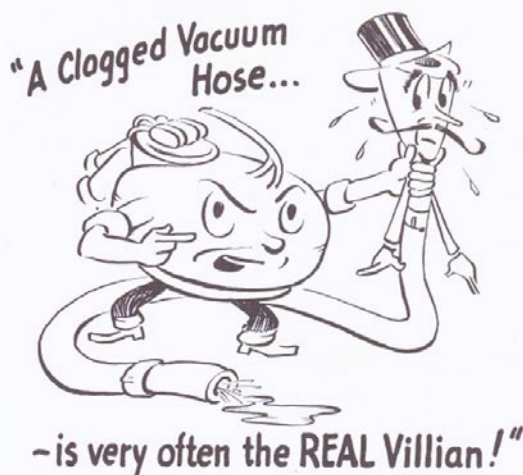
*"Rinse the milker immediately. The first and all important rule is: never let a milking machine get dirty. Milk is clean as it comes from the cow. It does not dirty the milker unless it is allowed to stay in the milker and dry on. Thus the first step in never letting the milker get dirty is to rinse it immediately after the last cow is milked, not 15 or 20 minutes later or after breakfast, but IMMEDIATELY...Sterilization cannot be perfectly effective unless the milking machine parts are first free from all milk and dirt. Old milk and dirt protect the bacteria during sterilization. These bacteria cause the contamination at the next milking."*

*Cornell University*



## Your Long Vacuum Hose

Beyond any question more Surge Milkers are slowed down by CLOGGED LONG VACUUM HOSES (typically 8 ft. long) than by all other reasons put together. Just about everything has been blamed for slowed up milking when a partially clogged long vacuum hose was the real villain.



*You may be able to blow* through it and feel the air, you may be able to run water through and yet it still may not have a sufficiently large opening to permit a free flow of air. The one way to MAKE SURE is to scrub it out occasionally with the long brush.

Through careless handling, bits of straw, or bedding may be drawn into the long hose. Bugs and insects can and do crawl into the hose and build nests.

When your Surge Speed is reduced... when you seem to be having trouble in maintaining vacuum...CHECK THE LONG VACUUM HOSE FIRST.

### Note!

*Clean hose daily and replace approximately every six months.*

# Instructions for Machine Milking Family Cows

Cows like consistency. Milk at the same time each day.  
Follow the same routine each milking.

1. Wash your hands. Dirty hands spread disease.
2. Wear Nitrile Milking Gloves to reduce the spread of mastitis causing germs from your hands. The small cracks and crevices in human hands harbor a lot of bacteria including contagious Staph Aureus.
3. Sanitize your milking machine with a chlorinated sanitizing solution just before you milk.
4. Entrance. Bring the Cow into a calm, stress free milking environment. Stress, such as loud noise, inhibits milk let down.
5. Warm hands first and then fore strip. Hand milk 1 or 2 squirts from each teat onto the black screen of a strip cup. Look for clots, clumps, blood, or signs of abnormal milk. Fore stripping promotes milk letdown & faster milkout.
6. Teat Prep & Sanitation. The purpose of this step is to reduce the amount of bacteria on teat skin and promote milk let down.
  - Teat Wipes*: Wipe and massage each teat for 15 seconds. Use one wipe per cow or one per teat if they are visibly dirty. Teats will dry in a few seconds due to the alcohol in the wipes.
  - Pre Dipping*: Predip with Teat Kote 10/111. Wait 30 seconds, then dry off with a paper or cloth towel. Use one clean towel per cow. Do not reuse the towel as this may spread diseases from one cow to the next.
7. The goal is to milk clean, dry teats. Wet udders are a good conduit for bad bacteria and mastitis (udder infection). Wet udders may drip down to the top of the liner, and if the liner slips it will suck in the dirty water. Limit water use on the udder.
8. Apply the milker within one minute of the beginning of teat preparation. This maximizes the animals natural milk letdown (oxytocin), speeds up milk flow, and reduces the machine on time. Let the vacuum pull the milker onto the teat.

DO NOT force the teat into the liner. It only needs to go in about 1/2 inch.





# Instructions for Machine Milking Family Cows *continued*

9. Adjust milking unit so it hangs square with out twisting the teats. A little forward tension will provide faster milkout.

10. The cow is finished milking when the large volume of milk flow drops off to a trickle. Milk out time should be 5 to 10 minutes on most cows. Pinch off the rubber milk tubes on the bottom of the inflations, then gently pull the inflation down off the teats.

11. Animals that were hard to milk by hand will take longer to milk with a machine. Most healthy udders will shrink significantly when milked out...Except for the first few days (post calving) when the udder has a lot of swelling (edema). Usually the swelling leaves within a few days and then the udder should shrink when milked out. Dynamint udder cream will help reduce swelling if used in the first few days after calving.

12. Should you post strip? No! Research has shown that post stripping may cause more harm than benefit. It may train the cow to hold back some milk and your hands will contaminate the teat end at a vulnerable time when the Keratin teat end seal is open. If the cow is not milking out properly, then you may need to adjust the way the milker is hanging, adjust the pulsator, or vacuum level, or have your milking machine checked for proper operation.

13. Post dip IMMEDIATELY for Teat disinfection. Post dipping sanitizes the teat skin including the opening at the bottom of the teat. Post dipping has been proven to dramatically reduce cases of udder infections. Post Dip with AstroTek. Teat Kote 10/111, or DermaSept protocol tested teat dips. Use the Hamby Dairy Supply dip cup provided with your milking machine. This non-return style dip cup provides a fresh dose of teat dip for each teat. For temperatures below 25 degrees, DermaSept is recommended because it will not freeze.

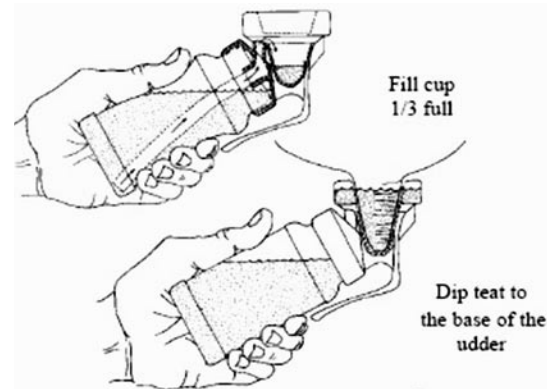
14. It is important to keep the dairy cow standing for a while after milking. This will give some time for the wax-like seal of the teat orifice to seal back up. A good solution is to have a rack of fresh hay and fresh water available right after they exit the milking parlor.



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Supply



# Here's how to wash your Surge Bucket

## Note!

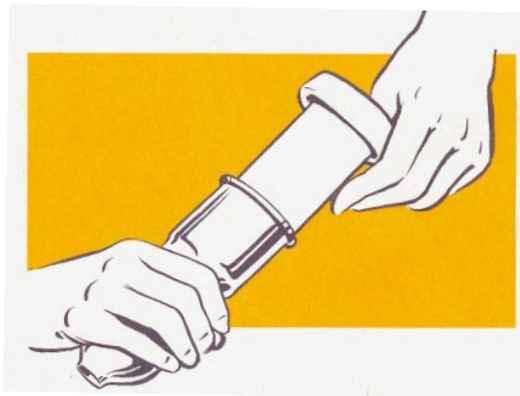
Instructions to wash claw milking units are very different than the following instructions, which are used in washing your surge bucket!



**1** IMMEDIATELY upon removal of machine from the last cow, snap it all apart and throw the inflations and pail lid gasket into clean, WARM water. This takes less time, is better and more thorough than any attempt to suck water through your surge bucket.



**2** Remove the pulsator and put the pail lids into the same water.



**3** With the patented Surge Shell the inflation never goes back in exactly the same way and you prolong the life of the inflation by removing it from the shell. This is the ONLY way to make sure the inflation is properly cleaned.



**4** As soon as possible, scrub all the rubbers with the proper brush, plenty of hot water, and a reliable washing powder. NEVER USE SOAP. Rinsing is all right as far as it goes, but thorough brushing MAKES SURE. Scrub each inflation to remove all milk fat...scrub the pail lid and run the brush through each nipple...scrub the pail, taking special care with the inside tip. If you rinse immediately and scrub thoroughly, no milkstone will ever form.



Supply

# Surge Bucket Milker Repair Parts

## Replacement Parts Kit - Cow

Includes choice of Surge cow inflations, air tubes, original thick lid gasket, and vacuum hose  
501-10175K

## Retro Kit for Milking 2 goats or sheep at a time

Includes 3/8 silicone milk hose, 1/4 ID pulsator tubing, 4 semi-automatic goat milking claws, 4 3/8 shutoffs for milk hose, 4 silicone goat inflations, 4 clear plastic goat shells.  
*Please specify full size goat, mini goat, or sheep when ordering.*

## Rebuilt Pulsator (when available)

501-105C Rebuilt and tested "C style"

501-105S Rebuilt and tested "S style"

## Rebuild Service

Rebuild service for your vacuum pulsator - includes parts kit.  
501-10310 and labor 501-109

## Pulsator Repair Parts

Rebuild Kit - includes instructions, 4 leathers, expanders, housing gaskets, adjusting screw gasket, rubber cap for check valve, O-ring for "C" model pulsators, brush for cleaning the small ports inside the pulsator

501-10310- Pulsator Rebuild Kit

501-10335 O-ring for under pulsator

501-10508B pack of 20 leathers

Surge Bucket Milker for cows, Complete.

Reconditioned and Tested

Reconditioned with new ITP Pulsator

## New Replacement Pulsator; Kit includes L80

*Long Life Interpulse Pulsator w/4 outlets, mounting adaptor and O-ring. Adjustable Speed....* 1081-159K

## Replacement Interpuls

Mounting Adaptor ..... 1081-178

Surge Check Valve ..... 7750-0010-250

Pulsator Oil..... 1010-244

Lid Gasket thin generic ..... 1120-293

Lid Gasket Original Surge-thick  
and long life

96" Surcingle with Triangle..... 1114-075

Surcingle Spring..... 501-10556

Vacuum Hose 8 foot HD clear plastic .... 1090-002V

Vacuum stall cock with lever ..... 1060-251

Vacuum Regulator Brass for 1/3  
to 1.5 hp pumps

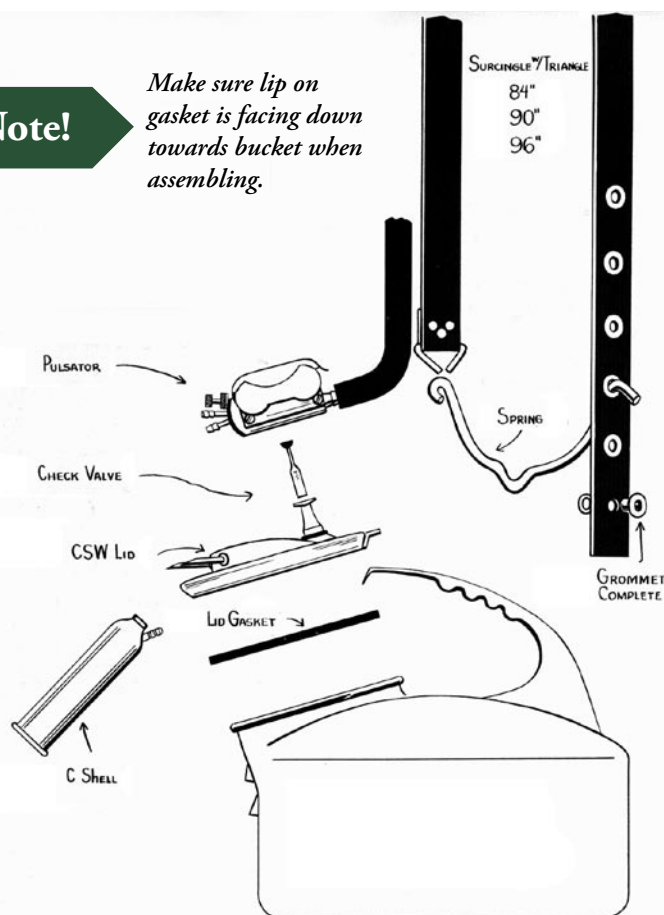
Short Air Tubes (4)

Original Surge Long Life..... 7750-2902-451

Air tubes for ITP pulsator ..... 1090-205

**Note!**

*Make sure lip on gasket is facing down towards bucket when assembling.*



View pictures, print instructions, and read the fascinating 80 year history of the Surge Bucket Milker at [www.surgemilker.com](http://www.surgemilker.com)

## Inflations

7750-2902-094 ..... Uses Surge C Shell

7750-2902-052 ..... Uses Surge C Shell

7750-2902-063 ..... Uses Vac Saver Shell

Maes 282

*Medium bore for C shell* ..... Uses Surge C Shell

Maes 221

*Narrow bore for vac saver shell* ..... Uses Vac Saver Shell

0/398 ..... Jet Flo Shell

501-10117C1



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9

# Flushing Instructions for Conde Vapor Oil Pumps

## - *Start up & Maintenance*



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It may be necessary to flush your Conde Vapor Oil Pump to remove any gum or varnish buildup inside the pump that cause the vanes to stick in their slots. This is a simple maintenance operation that should be the first step.

1. Remove the oil tube at the oil reservoir.
2. Be sure the exhaust is directed away from the motor or engine.
3. Use Kerosene or fuel oil for the flushing process. While the pump is running under vacuum, simply insert the oil tube into the kerosene and allow the pump to draw the fluid in. Alternately, let air into the tube with the kerosene. It can take up to a gallon of kerosene to clean the pump. **NEVER USE GASOLINE OR OTHER HIGHLY FLAMABLE LIQUIDS TO FLUSH OUT PUMP.**
4. After flushing, in the same manner draw in about 5 ounces of oil to complete the process.



# Conde Vapor Oil Vacuum Pumps - *Start up & Maintenance*

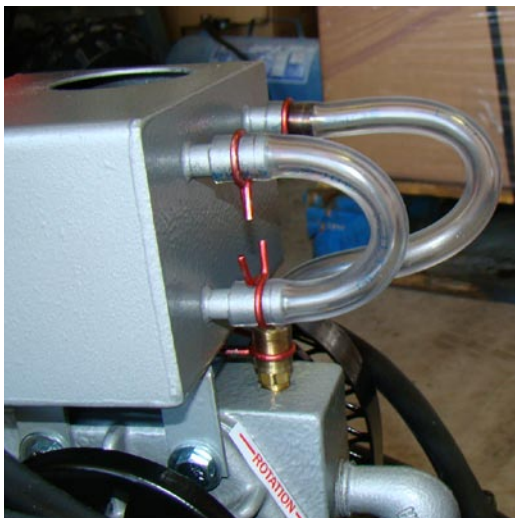
Use a high detergency 10w-40 oil for all Conde Vapor Oil Vacuum Pumps. Synthetic oil, like Mobil 1, is recommended by Conde. This includes the LWVS portable, HD portable, or Model 6 stationary pump sold by Hamby Dairy Supply.

When starting a new vapor oil pump, fill oil reservoir above the fittings in which the oil wicks are inserted. This will give the pump extra oil for the first two hours of operation. When refilling, fill to just below oil wicks.

Capacities:	Description	Pump Model	Oil Tank Capacity
	LWVS	Conde Model 2	1 quart oil
	HD	Conde Model 3	1 quart oil
	#6 Stationary	Conde Model 6	2 quarts oil

## Note!

By looking in sight glass, you'll know when you need oil, because it will be low. It's best if the oil level inside the sight glass should be 1/2 to 3/4 full.



*The sight glass is on the side of the oil reservoir*



*Adding oil to the oil reservoir.*

# L-80 Pulsator Instructions

## Rate Adjustment

The L-80 pulsator is adjustable. Using the Allen key supplied, turn the speed governor gently -

CLOCKWISE to DECREASE speed,

ANTI-CLOCKWISE to INCREASE speed -

to obtain the rate you require. (See Fig.1)

Ensure that the main slide is clean before making any adjustment.

## Maintenance

**Note!**

- DO NOT LUBRICATE THE MOVING PARTS
- Clean the filter at least once per month by means of compressed air. Replace the filter every 6 months. Recommendations are approximate and must be adopted to the real necessities. (Fig.2)
- EVERY 2 MONTHS carefully clean the working parts and the pulsator body using tepid water and a mild detergent. Use a soft not-metallic brush to loosen any stubborn dirt. Rinse all parts in clean water and dry.
- Follow the instructions in the diagrams (Fig. 3-4-5-6) for dismantling and assembly procedures.
- Under very damp and dusty conditions the above maintenance should be carried out at least once a month.
- WHENEVER MILK HAS BEEN SUCKED INTO THE PULSATOR (eg from a split liner) the pulsator must be immediately washed good and dry.
- It is recommended that the pulsator rate and the milking ratio be checked by means of a pulsator tester at least once a year. This should be carried out by an authorized service center or by a milking machine service technician.
- Whenever a general overhaul of the pulsator is necessary, contact your local dealer.

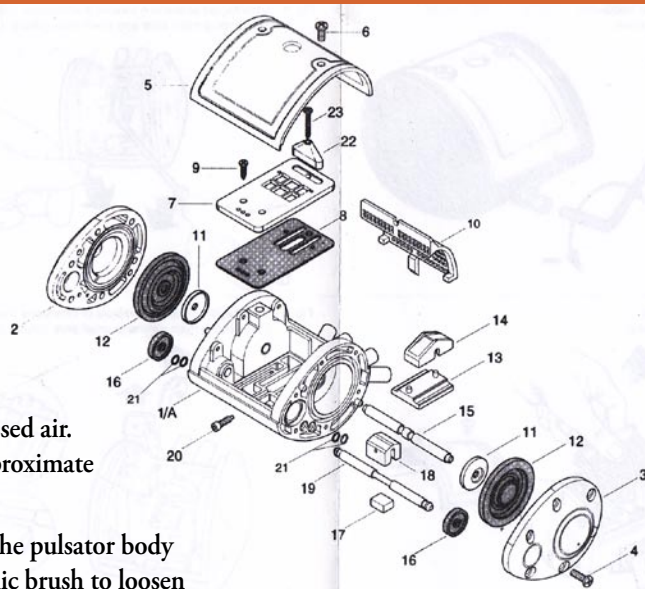


Fig. 1 - Regolazione frequenza  
Rate adjustment

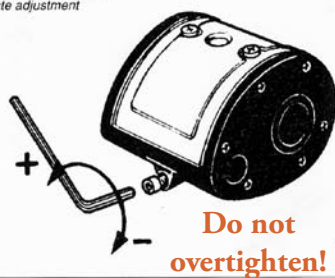


Fig. 3 - Smontaggio cassetto e valvola di inversione (fase 1)  
Dismantling main slide and small slide (phase 1)

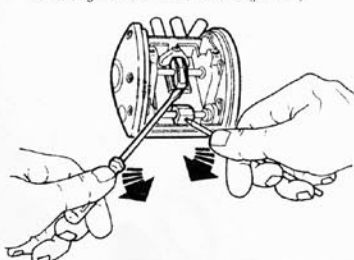


Fig. 5 - Estrazione (A) e inserimento (B) cassetto principale  
Main slide removal (A) and insertion (B)

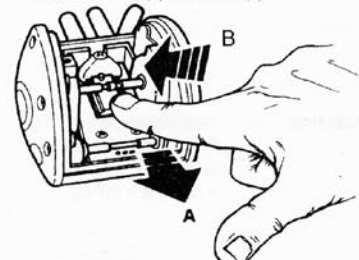


Fig. 2 - Pulizia filtro  
Filter cleaning

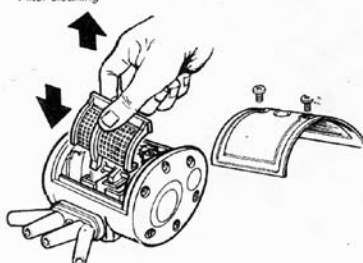


Fig. 4 - Smontaggio cassetto e valvola di inversione (fase 2)  
Dismantling main slide and small slide (phase 2)

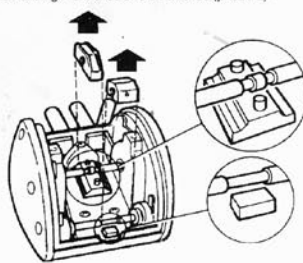


Fig. 6 - Pulizia  
Cleaning





# Order List for our most popular Dairy Supplies



*Nitrile Milking  
Gloves*

Nitrile Milking Gloves with aloe .....	Small .....	1169-990
Nitrile Milking Gloves with aloe .....	Med .....	1169-991
Nitrile Milking Gloves with aloe .....	Large .....	1169-992
Nitrile Milking Gloves with aloe .....	XLg .....	1169-993



*Strip Cup with  
black screen*

Nitrile Milking Gloves plain.....	Small .....	407-TA576
Nitrile Milking Gloves plain.....	Med .....	407-TA586
Nitrile Milking Gloves plain.....	Large .....	407-TA596
Nitrile Milking Gloves plain.....	XLg .....	407-TA597



*CMT Kit*

Strip Cup with black screen.....	1180-030
CMT Kit.....	1180-025
CMT Concentrate Refill .....	1180-026



*Milk Check  
Teat Wipes*

Milk Check Teat Wipes.....	bucket of 700 .....	1041-070
Milk Check Teat Wipes.....	refills 4 x 700 .....	1041-071
Sanisure Cloth Dairy Towel .....	each .....	1041-067E



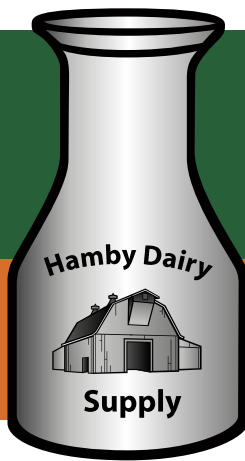
*DermaSept  
Teat Dip*

Hamby Dairy Supply Side Dipper Teat Dip Cup .....	HDC
Teat Kote 10/111 Pre or Post dip Iodine Teat Dip .....	1 gallon ..... 7751-0241-434G
Teat Kote 10/111 Pre or Post dip Iodine Teat Dip .....	5 gallon ..... 7751-0041-435
DermaSept Sanitizing Teat Conditioner / Winter Teat Dip .....	1 gallon ..... 7751-0240-340



*Dynamint  
Udder Cream*

Dynamint Udder Cream w/ <i>peppermint oil, eucalyptus oil &amp; tea tree oil</i> .....	1180-020
Kendall Udder Cream .....	28 oz. .... 1180-002
.....	4.5 pound pail..... 1180-003

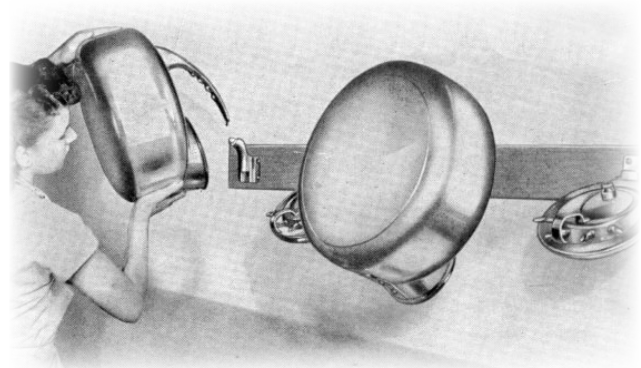


# 3 piece Hanger Kit for Surge Bucket Milker

*A Hamby Dairy Supply exclusive  
reproduction of the original Surge hangers!*

## Product Details:

- Hanger Kit for Surge Bucket  
(SKU: 1088 - \$39.95)
- All stainless steel!
- Allows your Surge Bucket, lid  
and vacuum hose to completely  
drip dry by hanging upside  
down after washing.
- Items available individually at  
[hambydairysupply.com](http://hambydairysupply.com).
- See image at right for correct  
use of the hangers.
- This item is a Hamby Dairy  
Supply exclusive reproduction  
of the original Surge hangers.



Order Online 24 hours a day! *We do not have a printed catalog.*

Order by phone: 1-800-306-8937 ● International order: 816-449-1314 ● Fax: 816-449-1311

Pay by: MasterCard, Visa, Discover, PayPal, check or money order

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