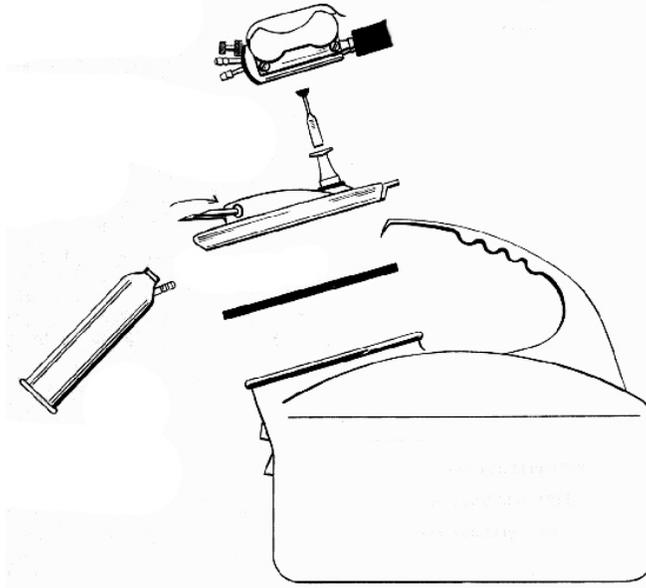


Instruction Manual Surge Bucket Milker



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- Milking ProceduresPage 1-7
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- Replacement partsPage 9
- Maintenance.....Page 10-12
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HAMBY DAIRY SUPPLY

2402 SW Water St. Maysville, MO. 64469

1-800-306-8937 ● 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

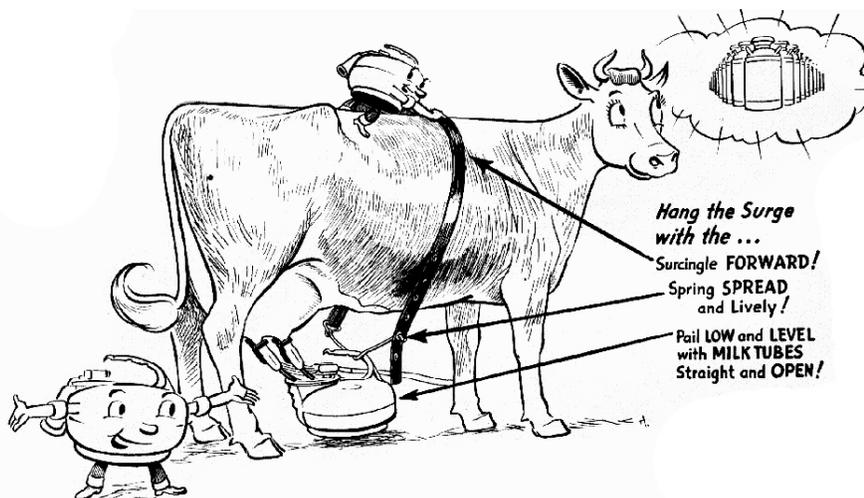
3

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

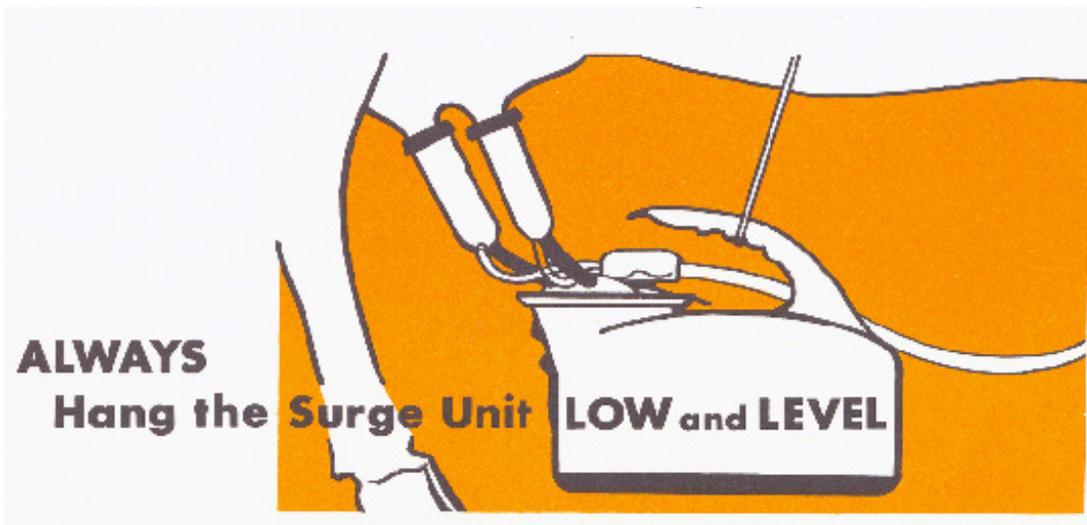
1

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.



RULE

2

Pull the Surcingle Well Forward



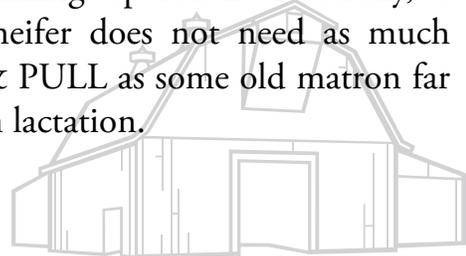
Not all cows are built the same way - they have various kinds of teats and udders. On some teats the teat cups have very little hold - on others they anchor themselves to the teat with a firm grip.

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.

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.

Note!

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Supply

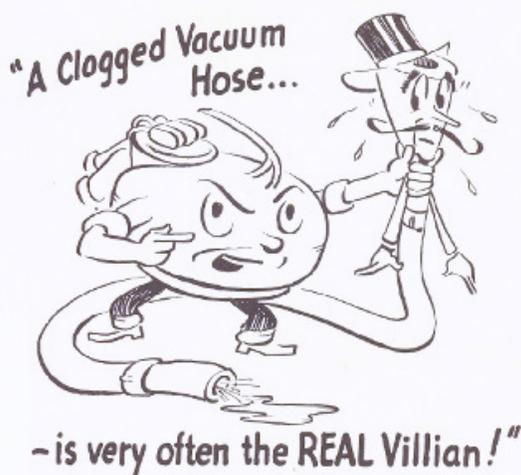
“Rinse the milker immediately. The first and all important rule is: never let a milking machine get dirty. Milk is clean as it comes from the cow. It does not dirty the milker unless it is allowed to stay in the milker and dry on. Thus the first step in never letting the milker get dirty is to rinse 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!

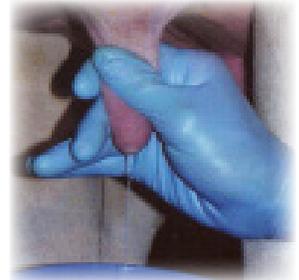
Clean hose daily and replace approximately every six months.

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*

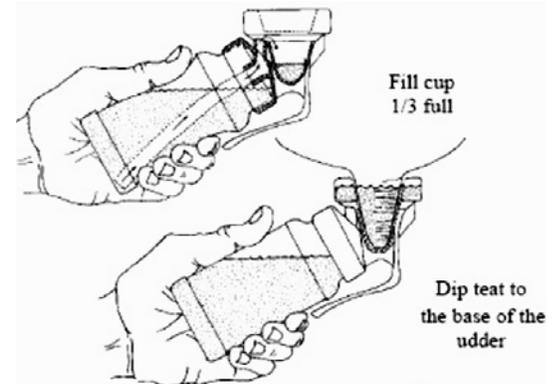
9. Adjust milking unit so it hangs square with out twisting the teats. A little forward tension will provide faster milkout.
10. The cow is finished milking when the large volume of milk flow drops off to a trickle. Milk out time should be 5 to 10 minutes on most cows. Pinch off the rubber milk tubes 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.



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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.



Here's how to wash your Surge Bucket

Note!

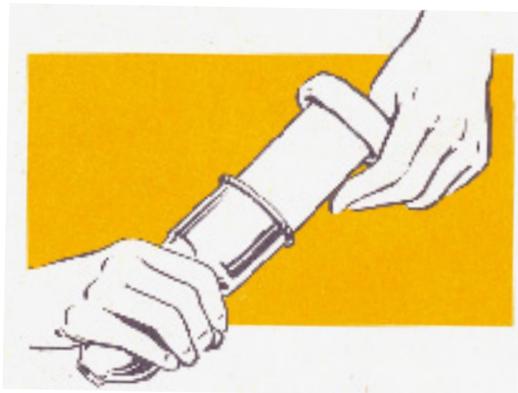
Instructions to wash claw milking units are very different than the following instructions, which are used in washing your surge bucket!



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

Hamby Dairy

Replacement Parts Kit - Cow

Includes choice of Surge cow inflations, air tubes, original thick lid gasket, and vacuum hose
 4694 Wide Bore Inflations
 4663 Narrow Bore Inflations

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)

4320

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

4310 Pulsator Rebuild Kit

1035 O-ring for under pulsator

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.....4320

Replacement Interpuls

Mounting Adaptor4323

Surge Check Valve..... 1084

Pulsator Oil..... 4312

Lid Gasket thin generic 1047

Lid Gasket Original Surge-thick and long life 7750-2902-455

96" Surcingle with Triangle 1175

Surcingle Spring 1176

Vacuum Hose 8 foot HD clear plastic 4328

Vacuum stall cock with lever 7856

Vacuum Regulator Brass for 1/3 to 1.5 hp pumps..... 7121

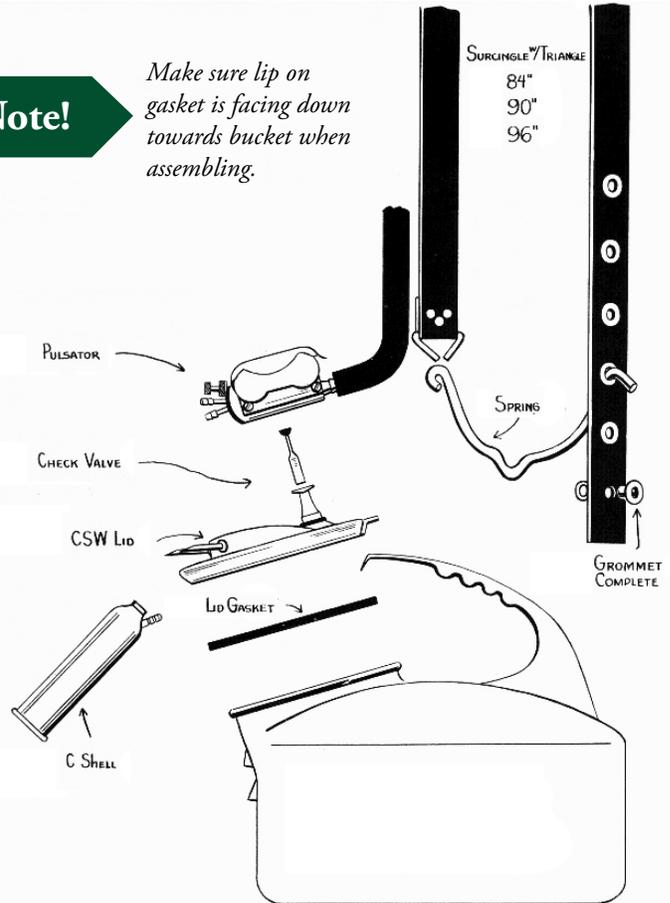
Short Air Tubes (4)

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

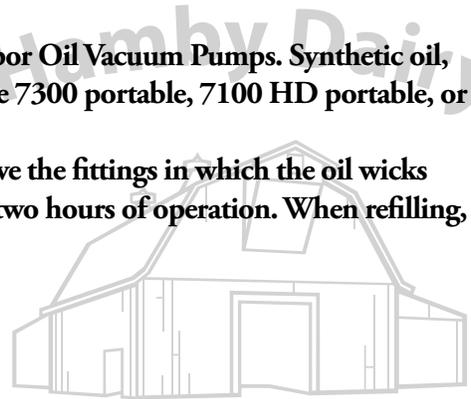
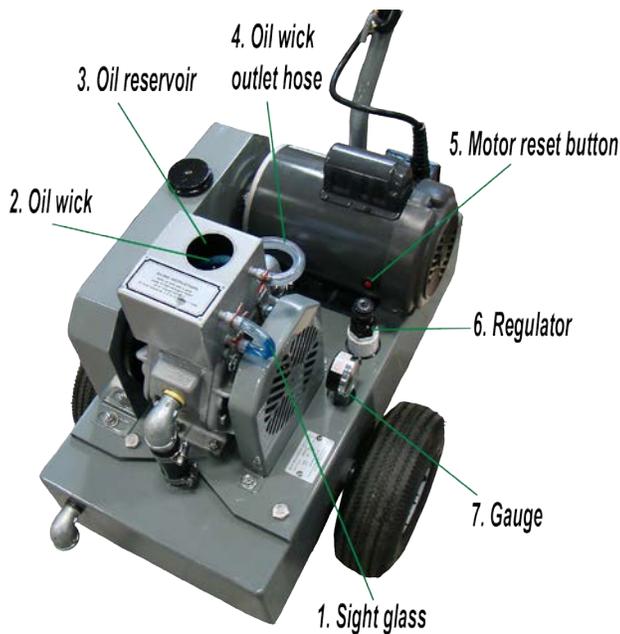
Inflations

7750-2902-094.....	Uses Surge C Shell	
7750-2902-063.....	Uses Vac Saver Shell	
M282		
Medium bore for C shell.....	Uses Surge C Shell	
M221		
Narrow bore for vac saver shell.....	Uses Vac Saver Shell	
0398.....	Uses Jet Flo Shell	
4317.....	Jet Flo Shell	

Conde Vapor Oil Vacuum Pumps - Start up & Maintenance

Use a high detergency 10w-40 motor oil for all Conde Vapor Oil Vacuum Pumps. Synthetic oil, like Mobil 1, is recommended by Conde. This includes the 7300 portable, 7100 HD portable, or Model 6 stationary pump sold by Hamby Dairy Supply.

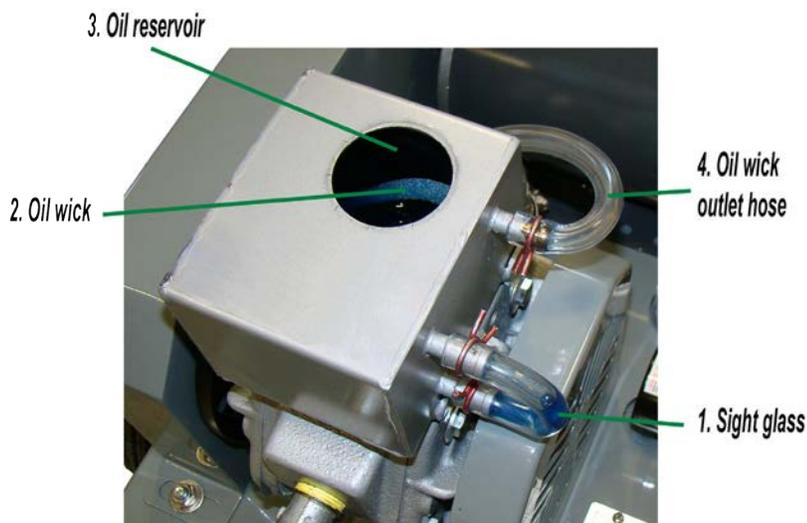
When starting a new vapor oil pump, fill oil reservoir above the fittings in which the oil wicks are inserted. This will give the pump extra oil for the first two hours of operation. When refilling, fill to just below oil wick.



Supply

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.



Adding oil to the oil reservoir.

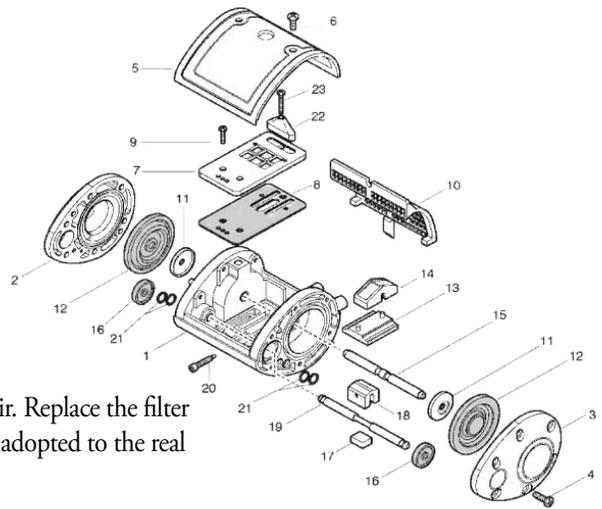
L-80 Pulsator Instructions

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)

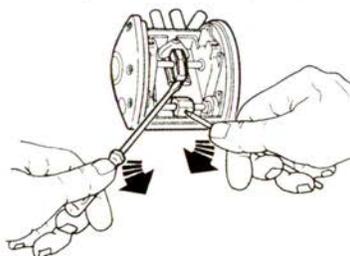


Fig. 4 - Smontaggio cassetto e valvola di inversione (fase 2)
Dismantling main slide and small slide (phase 2)

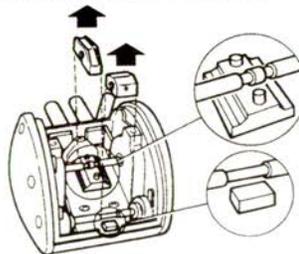


Fig. 5 - Estrazione (A) e inserimento (B) cassetto principale
Main slide removal (A) and insertion (B)

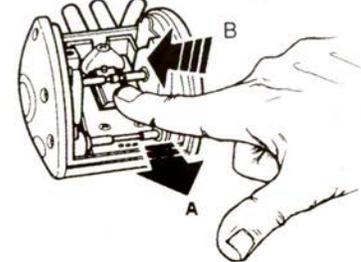
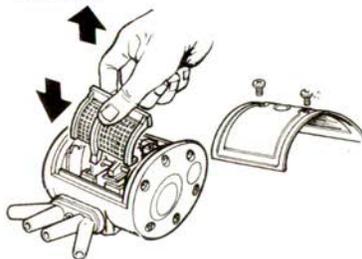


Fig. 6 - Pulizia
Cleaning



Fig. 2 - Pulizia filtro
Filter 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.....	5030
CMT Kit.....	5025
CMT Concentrate Refill	5026



Milk Check
Teat Wipes

Milk Check Teat Wipes	bucket of 700	5070
Milk Check Teat Wipes	refills of 700	5071
Sanisure Cloth Dairy Towel.....	each.....	1041-067E



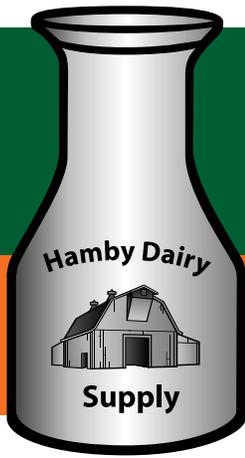
DermaSept
Teat Dip

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 7751-0240-340G



Dynamint
Udder Cream

Dynamint Udder Cream w/ peppermint oil, eucalyptus oil & tea tree oil.....	DM0500HB
Kendall Udder Cream	28 oz. 1180-002
Kendall Udder Cream	4.5 pound pail..... 1180-003

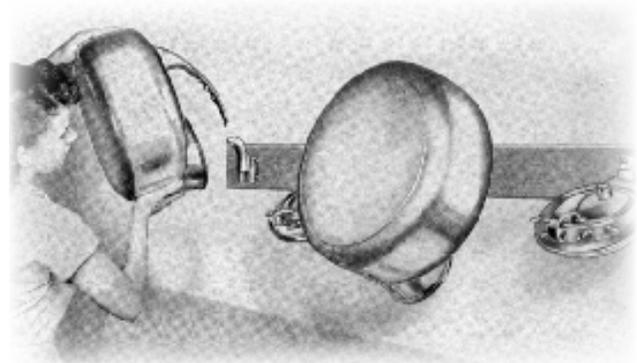


3 piece Hanger Kit for Surge Bucket Milker

*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.
- 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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