



Portable Vacuum System



Installation & Operation Manual

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General Information and Installation

This vacuum pump system ships via truck freight. Since there is minimal assembly required, it should be ready to plug into 110 volts upon arrival. In most cases the unit is shipped with the handle detached. To assemble handle to unit tighten the union on bottom of handle with a small pipe wrench

This unit has a vapor oil vane vacuum pump. Check oil level upon arrival, and before each use. The oil level gauge is the small piece of clear hose in a U-shape on the side of the pump. Oil must always be visible in this tube while pump is running. To add oil simply pop out the black plastic plug on top of oil tank. Refill with high quality 10w40 motor oil. Press the plug back into place once oil level is full. Do not fill above the oil wick.

As the oil runs thru the vacuum pump it is discharged into the exhaust chamber in the back portion of the tank. The oil will settle to the bottom and the air will be exhausted thru the $\frac{3}{4}$ " pipe elbow toward the top of chamber. If the pump is run for a long period of time in the same position, a small amount of oil may accumulate on the floor directly below the elbow. This is normal as it is the vapor of oil. If this creates a problem a small piece of cardboard can be placed under the elbow.

The metal tank under the pump is a moisture trap and vacuum storage tank. Milk or water that gets drawn into the tank should drain out the duckbill drain in the bottom of the tank after pump is shut down. If too much water or milk enters the tank, the pump will need to be flushed. See the maintenance section for instructions on flushing the vacuum pump.

Adjusting Vacuum Level

The ideal vacuum level for milking cows is between 14 and 15 inches of vacuum. To adjust level, loosen the nut on top of the regulator and turn the main body to adjust. Turn the body clockwise to increase and counter-clockwise to decrease vacuum level. Tighten the nut when the desired vacuum level is reached.

Cleaning the Bucket Milker

Cleaning instructions for the bucket milker

Keeping your milking machine clean and sanitary is important for producing healthy milk that will keep without spoiling. The milker should be cleaned immediately after each use.

1. **Warm Rinse:** Draw two gallons of warm water (100F) through the inflations and hoses with the vacuum pump on. Discard this water.
2. **Hot Wash:** Mix a mild dish wash solution with a few gallons of hot water.(160 to 180 degrees Fahrenheit) Draw the water through the milker as in step one. Repeat this step at least three times using the same water.
3. **Rinse:** Fill a bucket with warm water. Draw this through the milker as in step one at least twice. Now pull the milker hose off the pipe on top of lid and hang the unit on a hook to drain and dry. Take the lid gasket out from under lid and hang up to dry. The pulsator should be taken off the lid so the lid can be washed in a tub of water – Do not submerge the pulsator in water. Hang all components so they can drip dry in a sanitary, clean place. Store all buckets and pails upside down on an open rack so they can drain and dry out.
4. **Cold Sanitize:** Sanitize your equipment with a cold chlorine solution 15 minutes before milking.

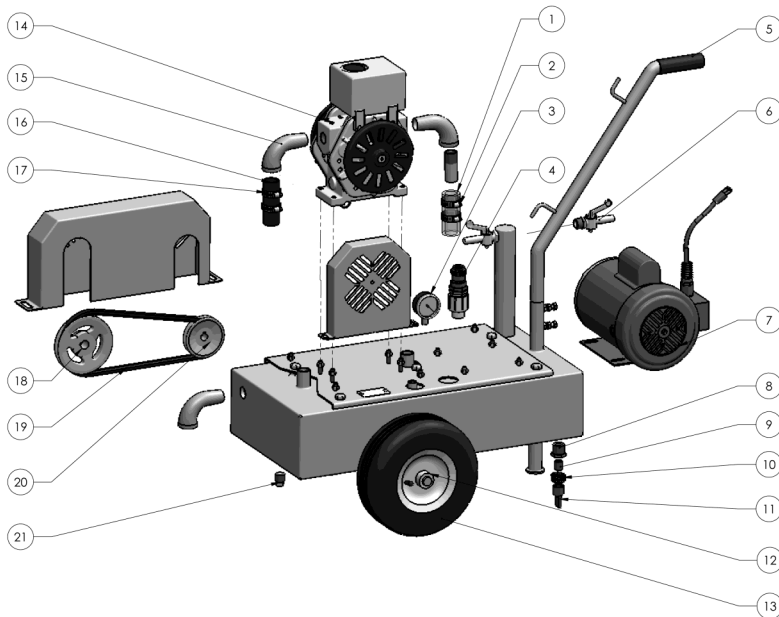
Maintenance

What to do if milk enters the vacuum pump

If too much water or milk gets into the tank, it will be drawn into the vacuum pump. If this occurs, it will need to be flushed out.

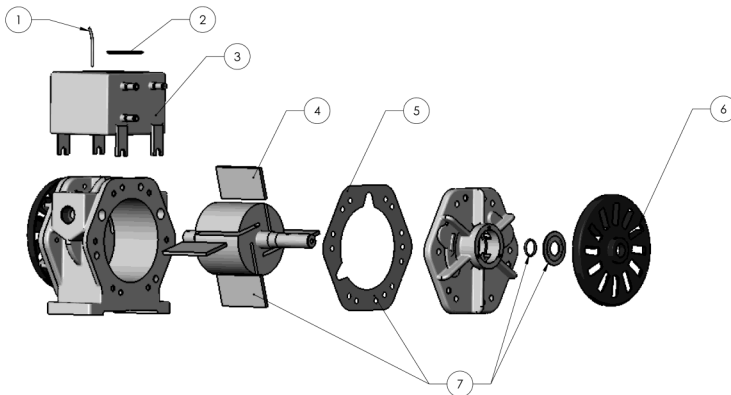
1. Locate the oil tube and remove at the oil reservoir.
2. Remove the plug on the bottom of exhaust chamber
3. (This is to drain chamber after flushing process is complete)
4. Kerosene or fuel oil works best for the flushing process. **DO NOT** use gasoline or any other highly flammable liquid to flush the vacuum pump. Start the pump and insert the tube into the cleaning fluid. Allow the pump to draw the fluid in. Periodically let air enter the tube along with the fluid. You may need up to a gallon of fluid to fully clean the pump.
5. Once the cleaning fluid is gone, use the same method to draw about 5 ounces of 10w40 motor oil into the pump to complete the flushing process.
6. Put plug back in exhaust chamber and allow pump to run at normal vacuum level for 15 to 30 minute to flush out.

Vacuum Pump Parts Breakdown



#70100
Deluxe model portable pump only

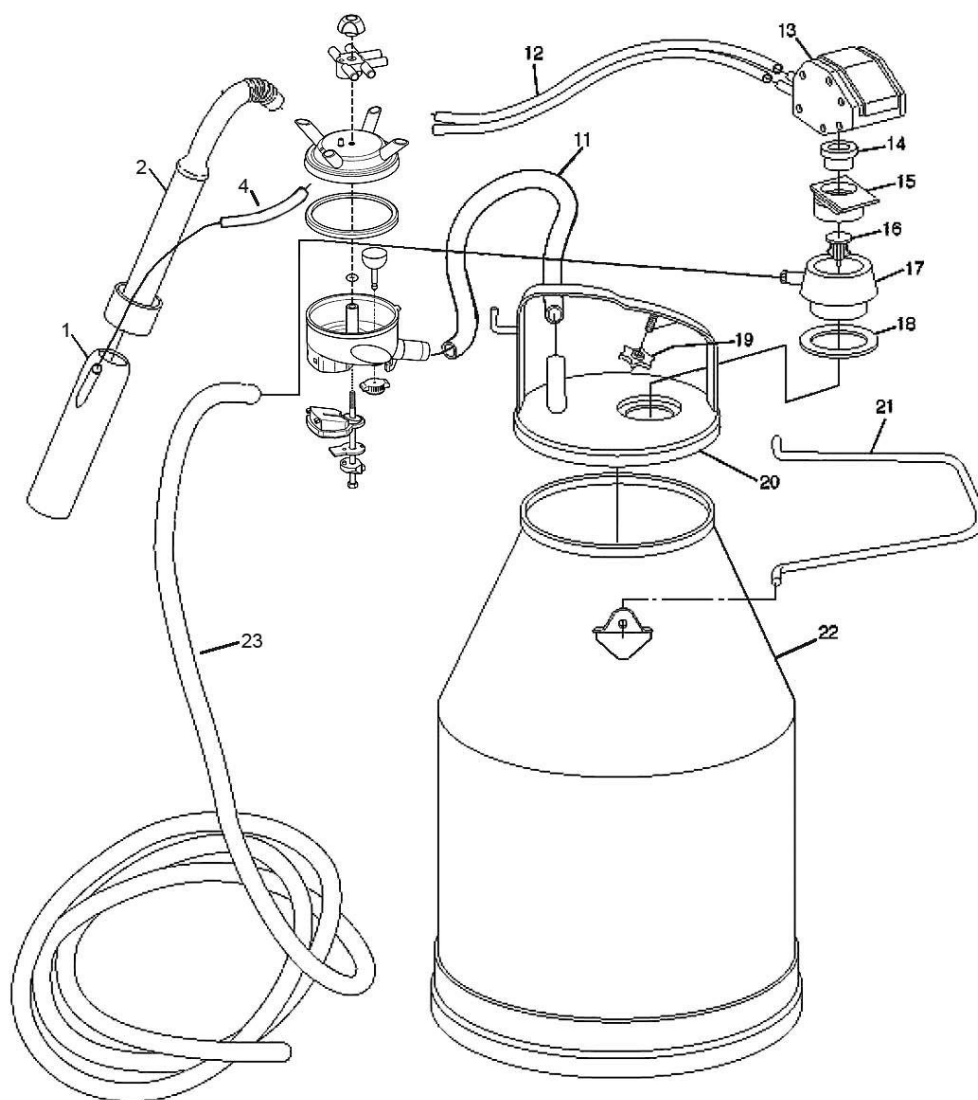
ITEM	PART NUMBER	DESCRIPTION	QTY
1	25237	1" CLEAR tubing, Glitex	1
2	NS70100-4	1 3/4" hose clamp	2
3	67224	Small vacuum gauge, 2"	1
4	67223	Vacuum release valve	1
5	NS70100-17	1" X 4 1/2" Black Vinyl Nubbed Grip	1
6	23855	Straight 3/8" lever stallcock	2
7	67125	U.S. Electric 1 HP, 1800 RPM motor, 56 frame	1
8	65808	3/4" x 3/8" hex bushing	1
9	65540	3/8" x close galvanized nipple	1
10	NS17780-5	1 1/16" clamp	1
11	18037	Duckbill drain	1
12	NS70100-1	Shaft collar	2
13	70104	10" air tire for deluxe unit	2
14	70105	1 HP Conde # 3 pump head, with oiler	1
15	65724	3/4" galvanized 90 deg street elbow	3
16	NS70100-20	Portable pump hose - 1" diameter	1
17	NS70100-7	1 1/2" hose clamp	2
18	65071	MA50X34 Pulley	1
19	65069	A-32 Belt	1
20	65070	MA35X58 Pulley	1
21	66004	1/2" steel square head plug	1



#70105
1 HP Conde # 3 pump head, with oiler

ITEM	PART NUMBER	DESCRIPTION	QTY
1	70109	Wick	1
2	70103	Rubber oil plug with vent	1
3	70097	Oil reservoir with hoses	1
4	70107	Vane for Conde # 3 pump	4
5	70098	Endplate gasket	2
6	70108	Metal fan	2
7	70106	Rebuild kit	

Bucket Parts Breakdown



- | | |
|--|--|
| 1: #10010 Rolled edge shell | 17: # 23031 Chamber housing |
| 2: # 25003 KF-01 inflation | 18: # 23028 Chamber gasket |
| 4: # 25150 9" air tube | 19: # 33004 Plastic lid nut |
| 5: # 14300 new style claw w/valve | 19: # 33002 Stainless lid nut |
| 11: # 25145 32" x 5/8" clear milk hose | 20: # 33000 Stainless lid |
| 12: # 25143 37" x 9/32" twin rubber hose | 20A: # 25195 Lid gasket |
| 13: # 20360 D#95 pulsator assembly | 21: # 30151 Stainless handle, short |
| 14: # 23029 Chamber seal | 22: # 30165 65 pound bucket |
| 15: # 23040 Chamber slide | 23: # 25141 6' x 1/2" rubber vac. hose |
| 16: # 23027 Check valve for chamber | 23A: # 25140 14' x 1/2" clear vac hose |



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