



**You and Your**



Thank you for buying a **Waikato Milking Systems Rotary Loopline** milking system. You have purchased one of New Zealand's finest milking machines which will give you years of good service and will be an asset to your farm.

This guide for service and cleaning will help you get the most out of your new investment.

Your **Waikato Rotary Loopline** has been constructed using the best components made from the best materials. Waikato Milking Systems have combined modern technology with good old fashioned durability and reliability to create a milking system which needs very little service. With a normal scheduled maintenance program you can expect many years of trouble free operation.

Your **Waikato Rotary Loopline** is very easy to clean. Its cleaning system uses water more effectively and efficiently than a standard cleaning system.

All Waikato Milking Systems proprietary components on your milking machine are covered by a 12 month warranty, or you may have accepted an extended warranty program which looks after your Waikato Milking System for two years. (Special conditions apply). The normal manufacturers' warranties apply to all ancillary components.

To ensure you experience trouble free operation of your **Waikato Rotary Loopline** please follow these simple instructions.

If at any time you need technical assistance please do not hesitate to contact the Waikato Milking Systems dealer from whom you purchased your **Waikato Rotary Loopline**, or telephone our office directly. The telephone numbers are listed below.

We wish you many years of happy milk harvesting.

## WAIKATO MILKING SYSTEMS NZ LIMITED

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## WAIKATO ROTARY LOOPLINE OPERATION

The **Waikato Rotary Loopline** is designed for easy operation.

### MILKING

1. **Open** the valve on the milk line.
2. **Close** the air injector valve.
3. Make sure the air injector is turned **off**.
4. Make sure the snap clamp on the rubber tube connecting the sanitary trap to the receiver suction line is **closed**.
5. Insert the plug into the interceptor.
6. Start the vacuum pump/s.
7. Switch the milk pump controller to "**AUTOMILK**". (If a **Waikato** Flow Control System is fitted, switching it to AUTOMILK will automatically turn off the air injector. If a valve actuator is fitted, switching the controller to AUTOMILK will also open the milk line valve.

The plant vacuum will rise and milking can begin.

### WASHING

With the machine at full vacuum

1. Place all clusters into the cluster washers.
2. **Close** the milk line valve/s.
3. Turn **on** the air injector/s.
4. **Open** the air injector valve.
5. **Open** the snap clamp on the rubber tube connecting the sanitary trap to the receiver suction line.
6. Switch the milk pump controller to "**WASH**". (If a **Waikato** Flow Control System is fitted, switching it to WASH will automatically turn on the air injector. If a valve actuator is fitted, switching the controller to WASH will also close the milk line valve.
7. **Open** the valve at the wash tub.
8. Do not start recycling washing solutions until at least 20 litres have been run to waste.

The machine will now wash.

At the completion of washing

1. **Open** the milk line valve/s.
2. **Close** the valve at the wash tub.
3. Turn **off** the air injector/s.
4. **Close** the air injector valve/s.
5. **Close** the snap clamp on the rubber tube connecting the sanitary trap to the receiver suction line.
6. Slowly pull the plug out of the interceptor to lower the vacuum.
7. Turn **off** the vacuum pump/s.
8. Remove the clusters from the cluster washers.

The minimum wash water requirements for your **Waikato Rotary Loopline** are:

Hot Water:	10 litres per cluster
Cold Water:	15 litres per cluster

Waikato Milking Systems recommend that you wash your **Waikato Rotary Loopline** with hot water after each milking. You should use only approved detergents and follow the detergent manufacturers' instructions.

Your Waikato Milking Systems dealer will set up your washing system and run through it with you so that you fully understand its operation.

# WAIKATO ROTARY LOOPLINE MAINTENANCE

## PULSATION

Waikato Milking Systems NZ Ltd recommends that all pulsation options used by Waikato Milking Systems are serviced at least twice a season. Graphing the pulsation wave form is most likely all that is necessary. Waikato Mk 2 Automatic pulsators should have their speeds checked and adjusted if necessary as well.

The pulsators will normally be connected to a filtered air system. If they are not, the sponge filters in the pulsators themselves should be removed at least every week and washed in warm soapy water before being put back.

The internal components of all Waikato pulsators can be washed in warm soapy water.

When removing the rubber pulse tubes from the pulsators be sure to pull directly down on the nipple on the pulsator. Damage to the nipple may result if a sideways pull is used.

**WARNING: *If pulsators are dismantled they must be tested by a registered milking machine tester before the start of the next milking. Failure to do so may result in loss or damage to animal health.***

## REGULATORS

Your **Waikato Rotary Loopleveline** is fitted with a Waikato Supavac regulator which has been designed to give consistent performance over a wide range of vacuum levels. Like all vacuum regulators it can be affected by dust and dirt and its filter should be cleaned at least once a week by removing it and washing it in warm soapy water.

The performance of the regulator should be checked by a qualified milking machine tester at least once a year. The regulator should not be adjusted or altered in any way unless it is checked immediately after using an independent vacuum gauge which has been calibrated against a manometer.

## SANITARY TRAP

Your Waikato Rotary Loopleveline is installed with a sanitary trap containing a ball float. This isolates the receiver from other parts of the machine.

The washing system is designed to allow some water to flow from the receiver through the receiver air line to the sanitary trap during washing. This water drains back into the receiver through a rubber tube which has a snap clamp on it. During washing open the snap clamp. **Make sure the snap clamp is closed during milking.**

## AIR INJECTOR

Your **Waikato Rotary Loopleveline** is equipped with an electronic air injector which injects air into the milk line during washing, causing the wash water to move rapidly around the milk line. The open and closed times for the injector are set at the time of installation of the machines. They should not need any further adjustment.

The air injector has an air filter which should be cleaned once a week by removing it and washing it in warm soapy water.

The air injector is connected to the jetter line as well as the milk line, with a valve between the two. **This valve must be closed during milking and open during washing.**

## **CLUSTER WASHERS**

Your **Waikato Rotary Loopline** is fitted with Waikato G2 or Waikato NRV (non return valve) cluster washers which allow you to place the clusters into the washers under vacuum as you remove them from the last cows. Each unit also has a flow control valve which is adjusted at the time of installation to ensure that sufficient wash water flows through each cluster washer.

The cluster washers have nipples with screw (Waikato G2) or bayonet (Waikato NRV) connections. In the unlikely event of a nipple being damaged simply remove it by turning it anticlockwise and replace it with a new one. The rubber cups are pull off, push on type. They should be replaced as and when they wear out. Air leaking past the rubber cups will adversely affect the wash cycle.

## **VALVE SEALS**

Your **Waikato Rotary Loopline** has one main milk line valve and one jetter suction valve which contain nitrile seals. The receiver and sanitary trap have two seals each. These seals should be inspected annually and replaced if they are damaged.

## **MILK LINE SEALS**

The **Waikato Rotary Loopline** has stainless steel RJT unions containing seals joining the milk line components. Inspect these seals twice a season and replace them if they are damaged.

Check the unions monthly and tighten them if necessary. Air leaking into the milk line through loose unions can cause excessive milk frothing.

## **CLUSTERS**

Waikato Milking Systems NZ Ltd markets a range of claws, each with slightly different maintenance requirements. All claws have rubber or silicone components (seals, shut-off valves) and bowls which should be checked monthly and replaced if damaged. The cluster air admission holes on all claw types should also be checked regularly and cleaned if necessary.

Please consult your Waikato Milking Systems dealer for information on the claws you have chosen.

## **RUBBERWARE**

All Waikato Milking Systems are fitted with top quality rubberware or PVC tubing. Good cleaning will lengthen the life of these products so be sure to follow the cleaning instructions of the manufacturers.

Waikato Milking Systems' proprietary range of liners all have a useful life of 2500 cow milkings.

Generally, change liners and milk pump diaphragms twice a season, long milk tubes (including the bend at the milk line end of the stainless steel tube) and long pulse tubes once a season, and short pulse tubes as required.

## **AUTOMATIC CLUSTER REMOVERS**

Consult your Waikato Milking Systems dealer for support information if your new milking machine is fitted with automatic cluster removers.

## **MILKING MACHINE TESTING**

Waikato Milking Systems NZ Ltd and Waikato Milking Systems dealers recommend that your milking system is tested twice each season by a registered milking machine tester. Contact your dealer for more information.

# ROUTINE MILKING MACHINE MAINTENANCE CHECKS

Waikato Milking Systems NZ Ltd recommends that you carry out the following routine maintenance checks:

## DAILY

- **Cluster Air Admission Holes**  
If blocked clear carefully with a 0.8 mm diameter wire or drill bit. **Do not increase the size of the hole.**
- **Cluster Washers**  
Check for blocked holes. Dismantle and clean if necessary.
- **Pulsators**  
If the sound varies from normal check the pulsator concerned. Clean filters and/or reset rate.
- **Vacuum Pump Oil Level And Condition**  
Top up or replace if necessary.
- **Rubberware**  
Include short and long pulse and milk tubes and liners. Replace any items which have been holed or split.
- **Sanitary trap**  
Check for milk residues. Clean both the sanitary trap and the receiver air line if residues are found, and check the interceptor.
- **Interceptor**  
Check for milk residues. If any are found clean the interceptor and the main airline. If a rotary-vaned vacuum pump is installed clean it according to the manufacturer's instructions. If an oil recycling system is installed replace the oil if milk has contaminated it.
- **Bulk Milk Tank**  
Check all surfaces and valves, bends, etc. for milk residues. Clean if necessary.
- **Milk Pump**  
Dismantle and check for milk residues. Clean if necessary.
- **Milk Filter**  
Dismantle and check for milk residues. Clean if necessary.



## **WEEKLY**

- Pulsator air filters. Remove and wash in warm soapy water.
- Regulator. Remove air filters and wash in warm soapy water.
- Air injector. Remove air filters and wash in warm soapy water.
- Receiver, milk line, milk delivery line, bulk milk tank, milk pump, milk filter. Check for milk residues. Clean the component if residues are found.
- Claws. Check for milk residues around shut-off buttons and seals. Clean the component if residues are found.
- Vacuum pump and milk pump drive belt condition and tension. Tighten if necessary.

## **MONTHLY**

- Check all unions and tighten if necessary.
- Check claw seals, shut-off valves and buttons, and bowls. Replace if necessary.
- Open the cooler, inspect each plate and clean if necessary.

## **TWICE A SEASON**

- Change liners, milk pump diaphragms.
- Check the seals in all tubing which carries milk and replace if necessary.
- Have a registered milking machine tester who holds a current practising certificate test the milking machines.

## **ANNUALLY**

- Replace the rubber long milk and pulse tubes, and milk line inlet bends.
- Check the seals in all unions and replace if necessary.
- Check the seals in the receiver, sanitary trap, and milk filter and replace if necessary.
- Check the seals in all valves and replace if necessary.

## **AS REQUIRED**

- Replace any perished or split rubberware.