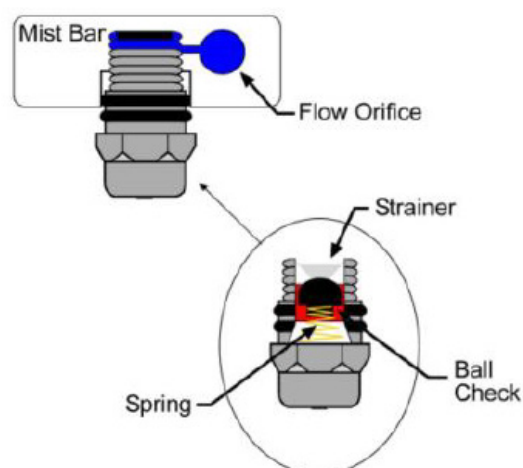


9124350

Service manual Misting system

Aviga 36-D



- NOTICE -

This service manual is prepared to be used by trained Service Technicians and should not be used by those not properly qualified. If you have attended a training for this product, you may be qualified to perform all repair procedures, replacements and adjustments described in this service manual.

The information presented in this document is only valid for standard Custom Convenience Counters, configurations and is not intended to be all encompassing. The individual specifications may differ.

Procedures for which you do not have the necessary tools, instruments or skills should not be performed by you.

Technical data and specifications mentioned in this manual are subject to amendment without prior notice.

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1. Introduction

1.1 General

This manual is intended for trained technicians, performing repairs on the Misting system used in the Custom Counter.

The features and controls are being described, along with directions for the safest and most efficient way to service these units.

All pictograms, symbols and drawings in this manual apply to all available models.

1.2 Identification of the unit

The identification plate can be found on the outside of the machine, and contains the following data:

- Name of the supplier or the manufacturer
- Model
- Serial number
- Year of construction
- Voltage
- Frequency
- Power consumption

1. Introduction

1.3 Pictograms and symbols

In this manual, the following pictograms and symbols are used:



WARNING

Possible physical injury or serious damage to the unit, if the instructions are not carefully followed.



WARNING

Risk of Fire.



WARNING

Hazardous electrical voltage.



WARNING

Danger of getting injured by hot surfaces.



SAFETY

Wear safety gloves for installation and dismantling.



SAFETY

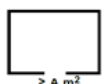
Wear eye protection when working on the refrigeration system.



Suggestions and recommendations to simplify indicated actions.



Recycling symbol.



Minimum room floor area.

2. Installation

3.1 Water Supply

Connect the water supply. After placement of the unit, cut a section of green 1/4" tube. Insert one end of tubing into the QC and the other end into the system market "INLET" (Green). Make sure the tubing is inserted all the way into the QC collets to lock the tubing and to avoid leaks



Important:

When cutting tubing, make sure the cut is straight to ensure a proper seal. A tube cutter is recommended.

3.2 Drain Hookup

Connect a red 3/8" drain tube to the port market "DRAIN" (Red). Run the other end to the drain supply. If draining into a floor sink drain, a 5" air gap is required. Secure drain lines to existing PVC drain pipes or case frame using 12" nylon ties, and/or black electrical tape. Make sure tubing is protected from sharp edges and there are no kinks in the lines. If installed in the back room, secure lines to the wall using 6" nylon ties.

Note:

The air gap is required for sanitation reasons when draining into a floor sink drain.

3.3 Mist Bar Feed Line

Install mist bar into display case using mounting clips. Run the 3/8" mist tube from the system to the far end of the mist bar (see layout diagram). Using the 1/4" tubing and 3/8" x 1/4" reducer connect mist line to the mist bar elbow. Cut the 3/8" mist tubing in places next to each feed port on a bar run. Then using the 3/8" x 1/4" tee and 1/4" tubing, attach to every feed port on a mist bar run. Check for kinks in the line.

Secure feed lines to the case using cable ties and self drilling screws. Refer to mist bar installation guide for installing mist bar.

2. Installation

3.4 Power Supply



Connect the low voltage power supply adapter from transformer in the female connector. Check the transformer input voltage tag located on the top of the transformer to make sure the appropriate step-down transformer matches the proper voltage supplied. Next plug the transformer power cord into the power supply receptacle (100V, 120V, or 230V 50/60 Hz).

Warning:

The unit is operating under 24V DC, therefore only the dedicated transformer should be used.

3.5 Test System

Turn ON water supply. Turn On power switch, the power LED light will illuminate when ON.

The booster pump should start pressurize water to the tank and pump LED light will illuminate.

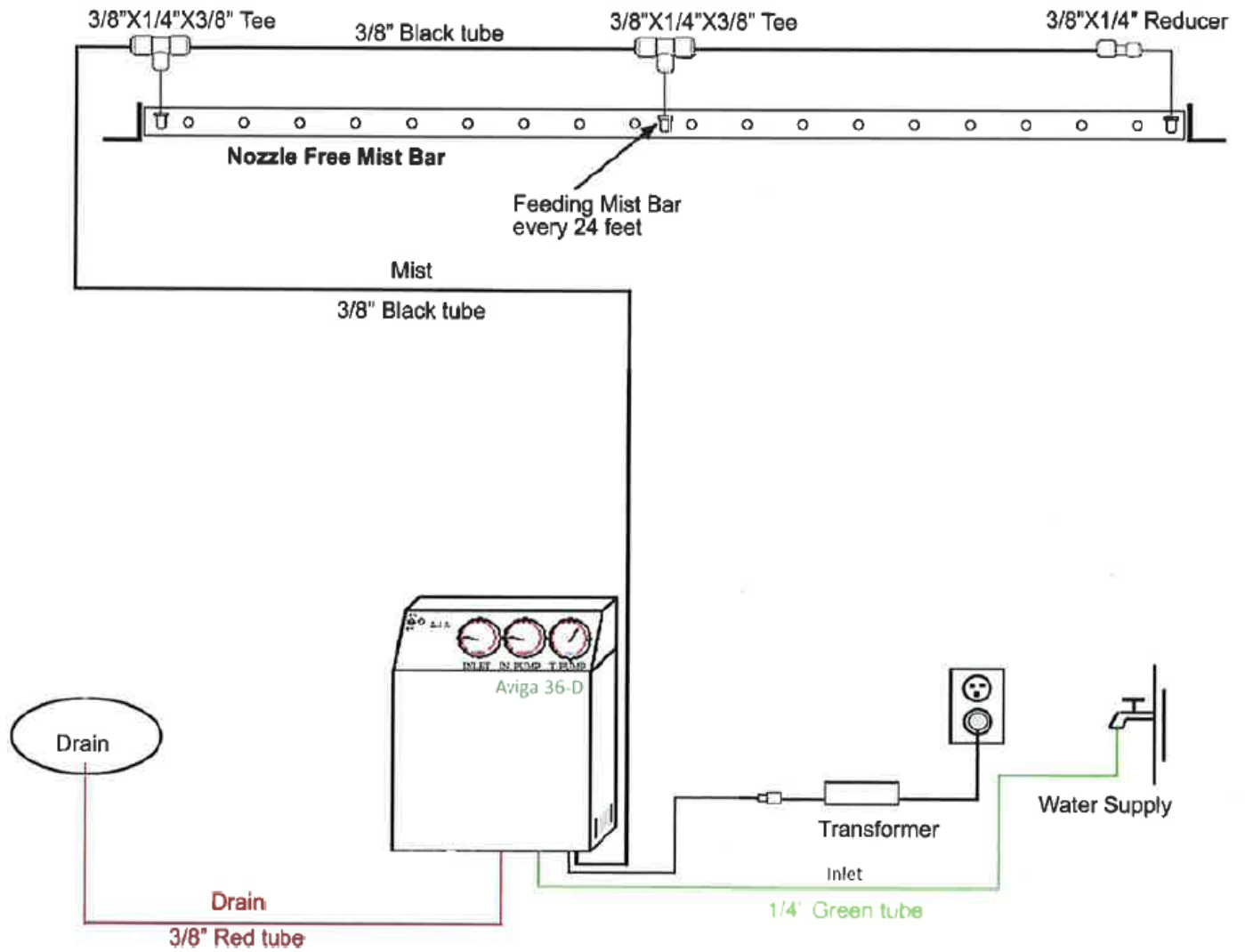
The Pump will turn OFF once the product pressure reached 140psi and will turn back ON when the product pressure drops below 110 psi.

Note:

When system is turned ON for the first time it might take about 15-20 Minutes to charge the system.

(in some cases, if the system is too far from the mist bar, it could take more than 30 minutes).

2. Installation



3. Operation

Working Description

The inlet of the misting system is permanent connected to the water supply, connected from the R.O. water filter.

The water inlet pressure must be between 1 and 4 Bar.

Once the misting system is switched on, the inlet water goes to the inlet low flow pump and this pumps up the water to the tank low flow pump.

From this tank the water is pumped to the accumulator black tank where it is stored.

The misting system is set on the following values:

Misting time	1,5 seconds
Misting interval	6 minutes
Purge (depressurizing)	4 seconds.

After 6 minutes the mist valve will open for 1,5 seconds and the water will be lead to the misting nozzles and this mist will cover the products with a small layer.

After this 1,5 seconds the mist valve will close and the purge valve will open for 4 seconds to depressurize the system and to avoid leakage through the nozzles.

A very small amount of water will go to the drain.

Inlet pressure	1-4 Bar
Inlet pump	3-9 Bar
Tank pump	6-9 Bar

4. Maintenance

Maintenance Requirments

During a visit for any reason, the following should be checked.

1. Mist times are set to achieve full coverage of produce.
2. Inlet steamer in picture number 1 (exploded view) is removed and cleaned.

Note:

First inlet water supply must be turened off.

3. All mist tips are functioning properly, if not replace them.
4. Tank pump gauge is operating approximately between 110 to 140 psi.
5. Red purge line does not have continuous water running (Some, briefly after mist cycle).
6. System is reviewed for any leaks.



Note:

Mist times are to be short cycles, typically on 2 or 3 seconds and off for only two or three minutes for best hydration.

5. Trouble Shooting

Problem	Solution
<p>Some tips are dripping after mist cycle.</p> <p>Most of the tips are dripping after mist</p>	<p>Replace tips with new ones. Bad ball checks.</p> <p>This suggests purge valve is not opening or a line restriction exist. Verify that no tubing is kinked between the system and the bar, along with no kinks in the red tubing.</p> <p>Check red Drain/Purge line to verify water is dumping to release pressure in the mist bar after each mist cycle.</p> <p>Adjust the purge valve ON time to at least 2 seconds to see if the issue is resolved.</p> <p>Check to see if valve is getting an electric pulse after mist cycle. If not check wiring connections or replace timing module. If electric 24V pulse exists then purge valve will need to be replaced.</p> <p>If water is existing in the red line after each mist then a line restriction must exist. This will sometimes cause a slowon for mist as well.</p> <p>This could be caused by feed ports on mist bar being overtightened. They are supposed to be loose without leaking.</p> <p>About two full turns is all. If not search for a pinched line going to the mist bar, or possible the purge valve is not open fully.</p>

5. Trouble Shooting

Problem	Solution
Solenoid Valve is buzzing or skipping mist cycles .	In this case the solenoid valve need to be replaced. First check to see if the valve is recieving approximately 24V signal from timer, if not, timer should be replaced.
Timing for mist times is inconsistent.	Replace timijng module. In rare cases it may require the replacement of the dial pot for OFF time.
Pump never turns off.	If product pressure (tank pump pressure) gauge rises substaintially above 160psi, replace high pressure switch. If pumps never reach normal operation pressure (110-140psi) and inlet water water exists then replace the faulty pump(s)
Pumps never turn on.	Check fuse, high pressure switch, transformer, or replace the faulty pump(s). (Check electrical outlet power)
Mist for split second and begins dripping or only drips.	Watch tank pump gauge during mist. If it drops near 0 psi, then pressure tank has lost air pressure. All water will need to be drained from the tank and refilled with air to 65 psi. If the air pressure is not holding, replace the tank.

6 Technical Specifications

Model	Aviga 36-D
Maximum length for mist on	10 meter (36 feet)

Location requirements	
Electrical source	100 / 115 / 230 V AC, 50-60 Hz
Water Supply	½" FPT Adapter with Shutoff Valve
Inlet Pressure	30 psi (2bar) minimum
Drain	Floor Drain or ½" Drain pipe

Specifications	
Height	47,5 cm (18,7 inch)
Width	35,5 cm (14 inch)
Depth	12,7 cm (5 inch)
Weight	16,8 kg (37 lbs.)
Operating voltage	24 V DC
Unit power consumption	120V, 4A / 480W 230V, 2A / 460W
Pressure tank	680g (24 oz)
Pumps	Diaphragm

Solenoid valve	
Mist	Plastic ¼" FPT
Purge	Plastic ¼" FPT

Tubing	
	Color coded
	Polyethylene
	High pressure rated

Mist Bar	
Materials	PVC – UV Stabilized
Dimensions	1,27 H x 2,54 W cm (0,5 H x 1 W inch)
Bar flow Orifice	Approx. 0,156 cm (5/32")

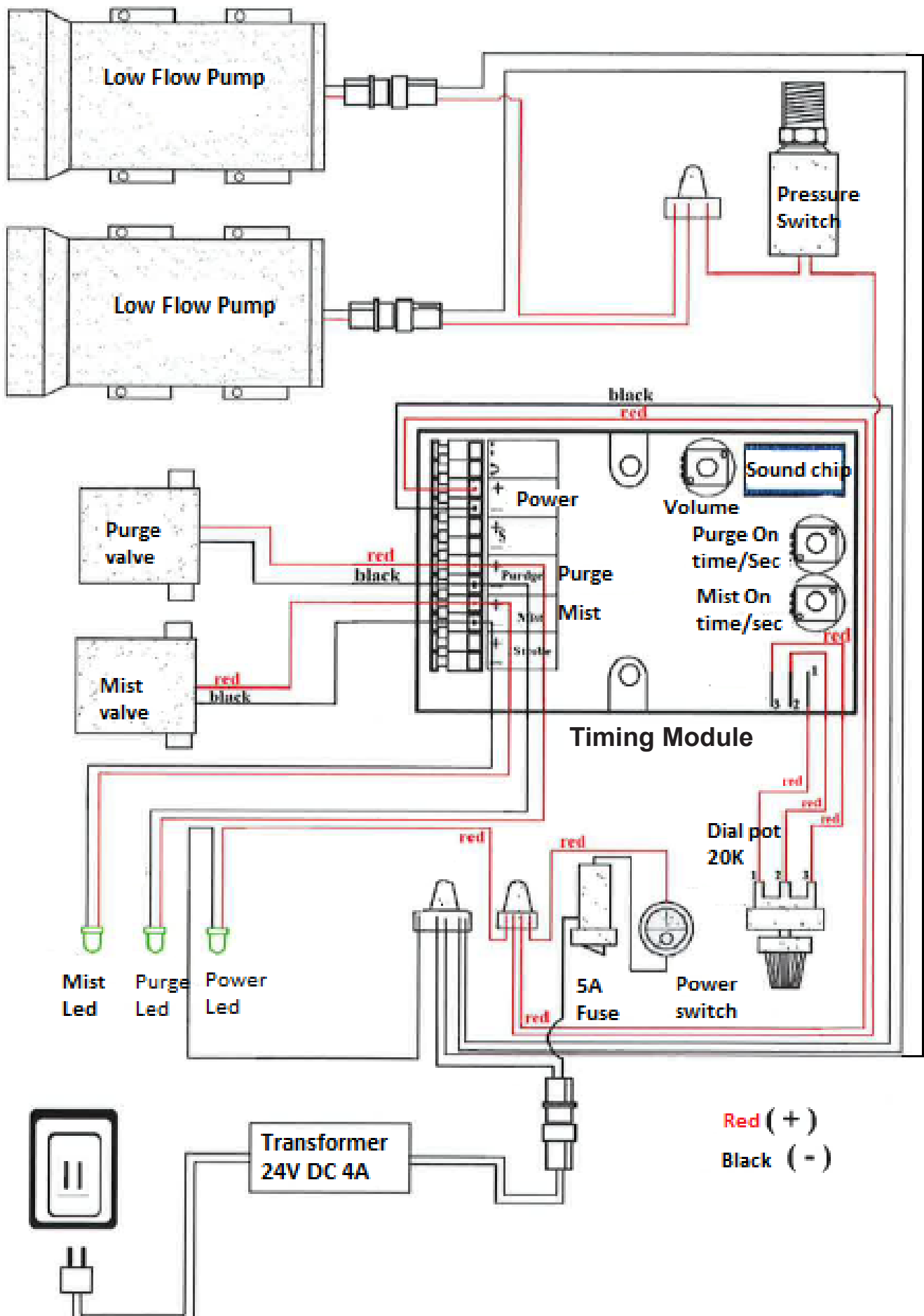
Mist Tips Materials	
Tip	Polyacetal Plastic
Check Valve	Rubber
Spring	Stainless steel
Valve seat	Nylon Plastic
O-Rings	Rubber
Header tube	Polypropylene

7. Exploded view



1. Inlet Stainer
5. Power switch
6. 5A breaker
7. Green LED 's
8. Inlet gauge
9. Inlet pump gauge
10. Tank pump gauge
11. Dial pot 20K
12. Accumulator black tank
13. Black flow restrictor
14. Tank low flow pump
15. Inlet low flow pump
16. One way check valve
17. Pressure switch
18. Mist valve
19. Purge valve
20. Timer module (see next page)

8. Electrical schematic





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