

WINE-MATE Cooling Unit

Service Manual

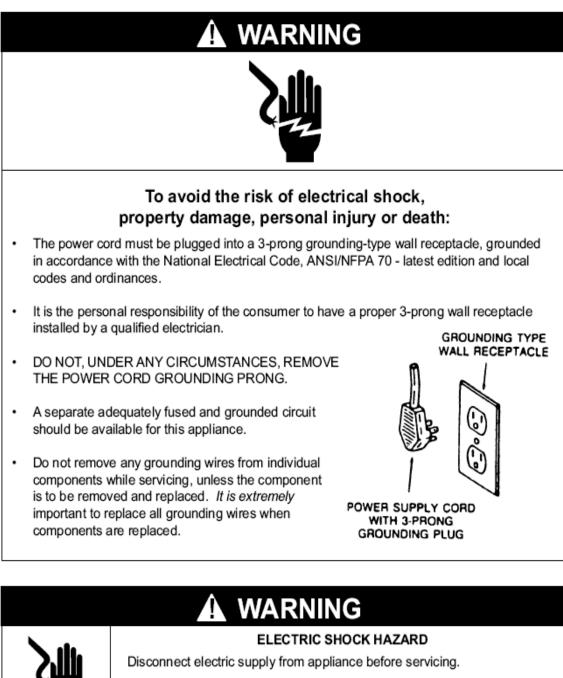
VINO-3500HZD VINO-4500HZD VINO-6500HZD VINO-8500HZD



Vinotemp International Inc. <u>www.vinotemp.com</u> <u>www.winemate.com</u>

READ AND SAVE THESE INSTRUCTIONS

SAFETY INFORMATION



Replace all panels before operating.

Failure to do so could result in death or electrical shock.

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1. Introduction

VINOTEMP assumes no responsibility for any repairs made on products by anyone other than authorized service technician

This manual has been prepared to provide the information on installing, servicing, troubleshooting and repairing procedures for the WINE-MATE VINO3500HZD, 4500HZD, 6500HZD and 8500HZD cooling units.

I. Goals and Objectives

The goal of this manual is to provide detailed information that will enable the service personnel to properly install and repair the cooling unit, and troubleshoot and diagnose malfunctions.

The objectives of this manual are that the service personnel will

- Fully understand the proper safety precautions
- Successfully install the cooling unit
- Successfully troubleshoot and diagnose malfunctions
- Successfully perform necessary repairs
- Successfully return the cooling unit to proper operational status

II. R134a Refrigerant Service Information

This cooling unit uses R134a refrigerant. This refrigerant requires synthetic ester oil in the compressor. This cooling system does not tolerate contamination from any of the following:

- Other refrigerants
- Moisture
- Petroleum-based lubricants
- Silicone lubricants
- Cleaning components
- Rust inhibitors
- Leak detection dyes
- Any other types of additive

As a result, the following precautions shall be observed:

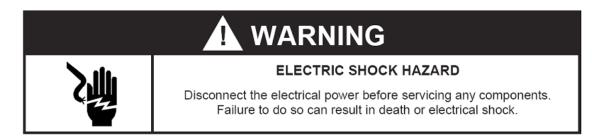
- Use equipment dedicated to R134a sealed system only.
- Use R134a refrigerant for back-flushing.

- Use dry nitrogen to purge the system.
- Do not overcharge the refrigeration system.
- Do not leave replacement compressor open to the atmosphere for more than 10 minutes.
- Do not operate the compressor without refrigerant charge in the system.
- Do not use the compressor if the rubber plugs on the replacement compressor appear to have been tampered or removed.
- Always replace the filter-drier when performing any repairs on the sealed system.
- The filter-drier must be cut from the sealed system. Never unbraze the filter-drier from system tubing. Applying heat will drive moisture back into sealed system.

Allowable Overall Exposure Limit	1,000 ppm
Vapor Exposure to Skin	No Effect
Liquid Exposure to Skin	Can cause frostbite
Vapor Exposure to Eyes	Can cause very slight irritation
Liquid Exposure to Eyes	Can cause frostbite
Above Minimum Exposure Limit	Can cause asphyxiation, tachycardia and cardiac arrhythmia's. Wear appropriate skin and eye care.
Spill Management	Combustible sources. Evacuate or ventilate area. May decompose if in contact.
Fire and Explosion Hazards	Made with flames and heating elements. Container may explode if heated due to pressure rise. Combustion products are toxic.
Storage Conditions	The procedures/rules for R12 also apply to R134a. Reclaim

Table 1-1 Health and Safety Handling of R134a

2. Component Information and Access



This section provides you the component information and access inside the cooling unit. The components and their locations are shown Figures 2-1 through 2-11 below.

I. Model Number & Serial Label

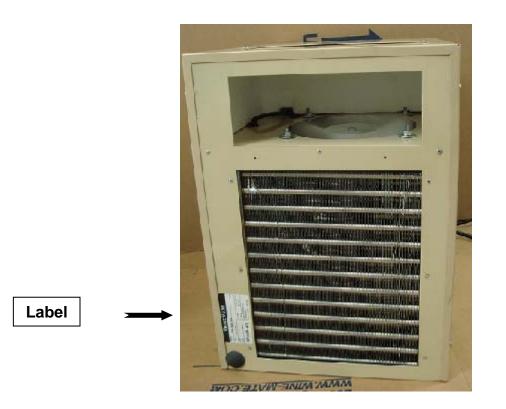


Figure 2-1

II. Component Access

1) Removing the Outer Cover

- 1. Unplug the cooling unit or disconnect power.
- 2. Remove the cooling unit from the wine enclosure.
- 3. To remove the outer cover, remove all screws from each side.



Figure 2-2

2) Removing the Inner Styrofoam

Once the outer cover is removed, this will expose the inner styrofoam pieces. The top large styrofoam seals off the condenser and evaporator fan compartments. To gain access to the other components, the styrofoam will need to be removed. To separate the top styrofoam, a knife can be used to cut along the seam and through the seal. Take care as not to damage any wirings or the upper middle and side styrofoam pieces.



Figure 2-3



Figure 2-4



Figure 2-5

3) Removing the Fan Plate

- 1. Disconnect the power cord, compressor cord and temperature controller wires from the terminal block.
- 2. Remove the 6 rivets on the front and rear sides.
- 3. Remove the fan plate



Figure 2-6



Figure 2-7

4) Removing the Temperature Controller

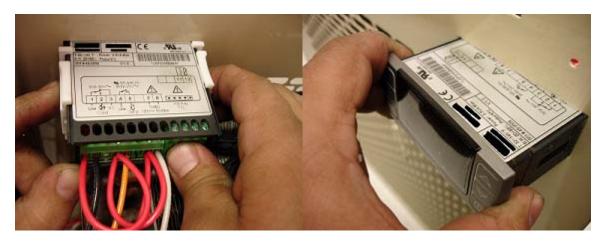


Figure 2-8

- 1. Unplug the cooling unit or disconnect power.
- 2. Remove the outer cover.
- 3. Remove all the lower side styrofoam pieces.
- 4. Disconnect all the wires from the temperature controller.
- 5. Press the 2 snappers to release the controller and then pull it out of the opening.

5) Removing the Thermistor

- 1. Unplug the cooling unit or disconnect power.
- 2. Remove the outer cover.
- 3. Remove all the upper and lower side styrofoam pieces.
- 4. Remove the fan plate.
- 5. Disconnect the thermistor from the temperature controller.
- 6. Remove the thermistor from the mounting clip on the front of the evaporator.

6) Removing the Fans



Figure 2-9

The 2 condenser and evaporator fans are attached to the horizontal fan plate. They are the same and all powered up at the same time.

- 1. Unplug the cooling unit or disconnect power.
- 2. Remove the outer cover.
- 4. Remove all the upper and lower styrofoam pieces.
- 5. Disconnect the two wires at the terminal block.
- 6. Remove the four screws holding the fan to the plate.

8) Removing the Start Relay and Overload Protector

- 1. Unplug the WINEMATE cooling unit or disconnect power.
- 2. Remove the outer cover.
- 3. Remove all the lower styrofoam pieces.
- 4. Remove the terminal cover from the compressor.
- 5. Remove the start relay by pulling straight out away from the compressor terminal.

6. Remove the overload protector by pulling straight out away from the compressor terminal.



Figure 2-10

9) Removing the Compressor



Figure 2-11

- 1. Unplug the cooling unit or disconnect power.
- 2. Remove the outer cover.
- 3. Remove all the upper and lower styrofoam pieces.
- 4. Remove the fan plate.

- 5. Place piercing valves onto the process tubes and discharge the refrigerant into an approved R134a recovery system.
- 6. Use a tubing cutter to remove the suction line and discharge line from the compressor.
- 7. Remove 4 nuts (11mm) from the feet of the compressor.
- 8. Remove the compressor

Note: Any time the sealed system is accessed the filter-drier must be replaced. It is best to cut the drier out of the system, then braze on a new one.

10)Removing the Condenser

- 1. Unplug the cooling unit or disconnect power.
- 2. Remove the outer cover.
- 3. Remove all the upper and lower styrofoam pieces.
- 4. Remove the fan plate.
- 5. Place piercing valves onto the process tubes and discharge the refrigerant into an approved R134a recovery system.
- 6. Use a tubing cutter to remove the hot gas line and liquid line from the condenser.
- 7. Remove 4 rivets from the condenser.
- 8. Remove the condenser

10) Removing the Evaporator

- 1. Unplug the cooling unit or disconnect power.
- 2. Remove the outer cover.
- 3. Remove all the upper and lower styrofoam pieces.
- 4. Remove the fan plate.
- 5. Place piercing valves onto the process tubes and discharge the refrigerant into an approved R134a recovery system.
- 6. Cut the capillary line and suction line from the evaporator.
- 7. Remove 4 rivets from the evaporator.
- 8. Remove the evaporator.

3. Servicing and Diagnosis

WARNING



Always check wiring harness connections before initiating any test procedures.

Disconnect electric power from the appliance before performing any maintenance or repairs.

Voltage checks should be made by inserting meter probes beside the wires in the connector blocks with the electric power source on and the connector block plugged in.

Resistance checks should be made on components with the electric power off and the connector block disconnected.

This section instructs you how to service each component inside the cooling unit.

I. Component Checking

1) Terminal Block

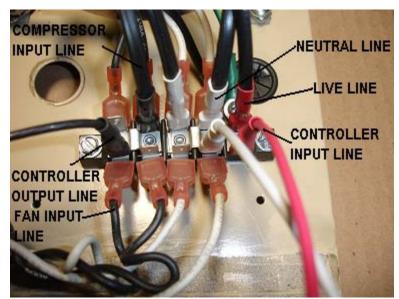


Figure 3-1A (3 button controller)

- A. Live Line (115VAC/60Hz): red shrunk wire from the power line;
- B. Neutral Line: white shrunk wire from the power line;
- C. Compressor Wires: black shrunk wire from the compressor terminal connecting the black wire from the controller compressor output; white shrunk wire from the compressor terminal connecting the neutral line;

D. Fan Wires: black shrunk wire from the fan terminal connecting the black wire from the controller compressor output; white shrunk wire from fan terminal connecting the neutral line;

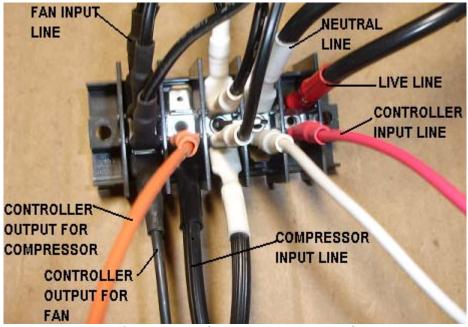
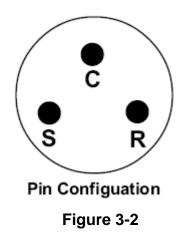


Figure 3-1B (5 button controller)

- A. Live Line (115VAC/60Hz): red shrunk wire from the power line
- B. Neutral Line: white shrunk wire from the power line;
- C. Compressor Wires: black shrunk wire from the compressor terminal connecting the orange wire from the controller compressor output; white shrunk wire from the compressor terminal connecting the neutral line;
- D. Fan Wires: black shrunk wire from the fan terminal connecting the black wire from the controller fan output; white shrunk wire from the fan terminal connecting the neutral line;

2) Compressor

The compressor acts as a pump, forcing refrigerant through the sealed system.



A. Resistance

- 1. Unplug WINEMATE cooling unit or disconnect power.
- 2. Remove the terminal cover from the compressor.
- 3. Remove the start relay and overload protector from the compressor. If wiring is removed from the start relay and/or overload protector, carefully label each wire according to its proper location.
- 4. Set the ohmmeter scale to the lowest setting.
- 5. Touch and hold one ohmmeter probe to the C (common) terminal, then touch and hold the other probe to the R (Run) terminal. The ohmmeter shall show a reading of 0.5-1.5 ohms. If not, the compressor is bad.
- 6. Touch and hold one ohmmeter probe to the C terminal, then touch and hold the other probe to the S (Start) terminal. The ohmmeter shall show a reading of 2.5-7.5 ohms. If not, the compressor is bad.
- 7. Touch and hold one ohmmeter probe to the R terminal, then touch and hold the other probe to the S terminal. The ohmmeter shall show a reading of sum of the last two measurements. If not, the compressor is bad.
- 8. Touch and hold one ohmmeter probe to the C, or R or S terminal, then touch and hold the other probe to the ground on the compressor. The ohmmeter shall read infinity. Any resistance indicates a shorted compressor.
- 9. If the compressor tests ok, but does not start, check start relay, overload protector and live voltage.

B. Live Voltage

- 1. Unplug WINEMATE cooling unit or disconnect power.
- 2. Remove the terminal cover from the compressor
- 3. The WINEMATE unit needs to be plugged in and turned on.
- 4. Locate the terminals on the start relay and the overload protector.
- 5. Set the voltmeter to the AC 200 scale.
- 6. Touch and hold one voltmeter probe to the terminal on the start relay, then touch and hold the other probe to the terminal on the overload protector.
- 7. The voltmeter shall show a reading of 115 volts.
- 8. If the test is good and the compressor does not start, check the start relay, overload protector, and measure the resistance.

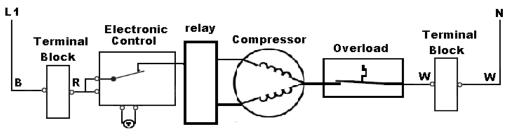


Figure 3-3

3) Start Relay

A start relay's function is to energize and de-energize the compressor's start winding. The coil of the current type relay is connected in series with the run winding. When current flows through the coil, a magnetic force is produced, pulling the relay plunger up. With the relay plunger up, it connect the start winding and the run winding at the same time and the compressor starts. As the compressor reaches its running speed, there is not enough current flowing through the relay coil to keep the plunger up (because of gravity), the start winding is disconnected.

- 1. Unplug the WINEMATE cooling unit or disconnect power.
- 2. Remove the terminal cover from the compressor.
- 3. Disconnect and remove the relay.
- 4. Set the ohmmeter scale to the lowest setting.
- 5. Make sure the relay with the letters "TOP" facing up.
- 6. Place and hold one ohmmeter probe in one terminal, then place the other ohmmeter probe into the other terminal. The ohmmeter shall show an open circuit. If not, the start relay is bad and needs replacing.
- 7. Turn the relay upside down.
- 8. Place and hold the ohmmeter probe in one terminal, and place the other ohmmeter probe in the other terminal. The ohmmeter shall show zero resistance. If not, the start relay is bad and needs replacing.
- 9. If the start relay is good, reinstall and reconnect the relay with the letters "TOP" facing up.

4) Overload Protector

The overload protector is a bi-metal that protects the compressor. If the compressor gets too hot the overload protector opens and stops the compressor. Once it has cooled the overload protector contacts close.

- 1. Unplug WINEMATE cooling unit or disconnect power.
- 2. Remove the terminal cover from the compressor.
- 3. Disconnect and remove the overload protector
- 4. Set the ohmmeter scale to the lowest setting.
- 5. Touch and hold one ohmmeter probe to one terminal on the overload protector, then touch and hold the other probe to the other terminal.
- 6. The ohmmeter shall show a reading of zero resistance. If not, the overload protector needs replacing.
- 7. Reinstall and reconnect the overload protector.

5) Temperature Controller

The temperature controller allows the customer to select a temperature form 50 °F to 65 °F. When the thermistor senses a temperature above the setting value,

the temperature controller will turn on the compressor and fan motors. Once the selected temperature is sensed, the controller will turn off the cooling unit.

A. Resistance

- 1. Unplug WINE-MATE cooling unit or disconnect power.
- 2. Disconnect the red and white wires connected to the input 7 and 8 of the temperature controller.
- 3. Touch and hold one ohmmeter probe to one terminal on the temperature controller, then touch and hold the other probe to the other terminal.
- 4. The ohmmeter shall show a reading of $600\Omega \pm 10\%$.
- 5. Reconnect the wire connector to the temperature controller.

B. Input Live Voltage

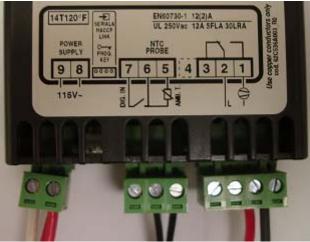


Figure 3-4A (3 button controller)

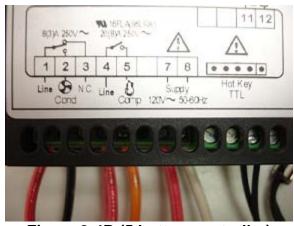


Figure 3-4B (5 button controller)

Figure 3-4

- 1. The WINE-MATE unit needs to be plugged in.
- 2. Locate the red and white wires going to the temperature controller input 7 and 8.
- 3. Set the voltmeter to the AC 200 scale.
- 4. Touch and hold one voltmeter probe to one of the wire terminals, then touch and hold the other probe to the other wire terminal
- 5. The voltmeter shall show a reading of 115 volts.

C. Output Live Voltage

- 1. In order to test the output of the temperature controller, the WINE-MATE cooling unit must be plugged in and powered up.
- 2. The input voltage must read at least 115 volts.
- 3. Set the temperature 5° F above the ambient temperature.
- 4. Set the voltmeter to the AC 200 scale, and the voltmeter shall read 0 volts.
- 5. Now warm the thermistor by hands for a while until the cooling unit starts.
- 6. Locate the orange and black wires leaving from the temperature controller output 2 and 5.
- 7. Touch and hold one voltmeter probe to the orange or black wire, then touch the other probe to the white wire.
- 8. Now the voltmeter shall read 115 volts.
- 9. If the readings are both correct the electronic controller is good.

6) Thermistor

- 1. Disconnect the thermistor connector from the temperature controller.
- 2. Set ohmmeter to the R x 10K scale.
- 3. Immerse the tip of the thermistor into ice water for five minutes
- 4. Touch the ohmmeter probes to the wire terminals on the connector. The meter shall indicate $27 \pm 10\%$.
- 5. Reconnect the thermistor.

7) Fans

The WINEMATE 3500-8500 HZD units use each fan to pull air across the condenser and evaporator coils. The safest way to check one of the motors is doing a resistance check. An alternate method is checking with live voltage.

A. Resistance

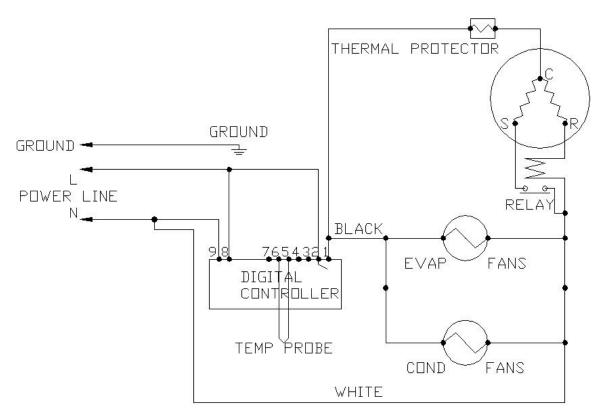
- 1. Unplug WINEMATE cooling unit or disconnect power.
- 2. Disconnect the fan motor wiring from the terminal block, remove one wire at a time, and carefully label each wire.
- 3. Set the ohmmeter scale to the lowest setting. Touch and hold one ohmmeter probe to one of the wire terminals, then touch and hold the other probe to the other wire.

- 4. The ohmmeter shall show a reading of tens ohms.
- 5. Reconnect the wires to the proper terminals as previously marked.

B. Live voltage

- 1. The WINEMATE unit needs to be plugged in and turned on.
- 2. Locate the black and white wires from the fan motor being tested and follow them back to the terminal block.
- 3. Set the voltmeter to the AC 200 scale.
- 4. Touch and hold one voltmeter probe to one of the wire terminals, then touch and hold the other probe to the other wire.
- 5. The voltmeter shall show a reading of 115 volts.

II. Wiring Diagram





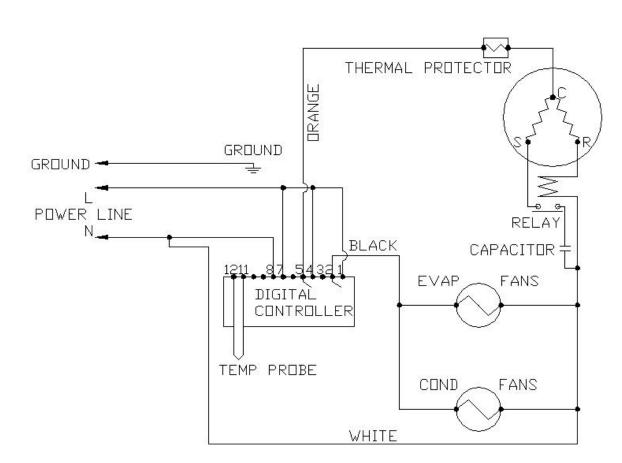


Figure 3-5B (5 button controller)

III. Troubleshooting Chart

This Troubleshooting Chart is not prepared to replace the training required for a professional refrigeration service person, not is it comprehensive.

Table 3-1	Troubleshooting Chart

Complaint Possible Causes		Response
1. Unit not	a. Power cord not plugged	a. Check power cord
running	b. No power from supply	b. Check receptacle and fuses
. annig	c. Incorrect or loose wirings	c. Check all wirings and connections
	d. Low voltage	d. Contact an authorized electrician
	e. Setting higher than ambient temperature	e. Lower temperature setting
	f. Cut-in too high	f. Reduce Hy
	g. Defrost light blinking	g. Unit is under defrost mode
	h. Compressor light blinking	h. Unit is under anti-short cycle delay
	i. Defective controller	i. Call service for diagnosis
2. Unit not	a. Anti-short cycle	a. Reset AC
starting , but		
temperature		

rising high		
3. Temperature fluctuating	a. Air probe	 a. When using an air probe, the wine bottle temperature is mainly controlled by the average air temperature. If the set-point is 55°F with the differential 4F, the cooling unit turns on at 59°F of air temperature (It may be higher than 59°F if it is in anti-short cycle or defrost cycle) and turns off at 55°F of air temperature is 57°F, and then the wine temperature is around 57+/-0.5°F. The air is light enough to change so quickly that it maintains relatively constant average temperature that would prevent wine bottle temperature from fluctuating.
4. Temperature high, unit stopping and starting normally	a. Temperature setting high	a. Lower the setting
5. Temperature high, unit stopping and starting with short	 a. Air probe touching the evaporator coil, displaying temperature ok b. Short circuit of air flow between cold-air supply and cellar-air return, displaying temperature ok 	a. Move the air probe away from the evaporatorb. Deflect the supply air down
running time	c. Failed controller and probe	c. Call service for diagnosis
6. Temperature high or not cooling and running continually	 a. Improper cellar insulation & seal b. Cellar too large c. Ambient temperature too high d. Exhaust restricted 	 a. Check insulation, gasket and door opening b. Check for excessive size c. Check installation location d. Leave minimum 3 feet clearance for the hot air exhaust side and leave minimum 1 foot clearance for the fresh air intake side
	e. Malfunctioning fansf. Evaporator or condenser airflow	e. Check for both evaporator and condenser fansf. Check for air restrictions, air short-
	 g. Dirty Condenser h. Iced evaporator i. Refrigeration system restriction j. Refrigerant leak k. Undercharge or overcharge l. Failed components 	 circulation, grille directions, dir short- circulation, grille directions g. Clean condenser h. Defrost and reset temperature i. Call service j. Call service k. Call service l. Check compressor windings, start relay and overload protector
7. Unit running too long	a. Improper cellar insulation & sealb. Cellar too large	a. Check insulation, gasket and door openingb. Check for excessive size

	c. Ambient temperature higher >	c. Check for installation location
	90°F	
	d. Exhaust restricted	d. Leave minimum 3 feet clearance for
		the hot air exhaust side and leave
		minimum 1 foot clearance for the
		fresh air intake side
	e. Dirty Condenser	e. Clean condenser f. Check for fan and air short
	f. Improper condenser air flow	circulation
8. Fan motor	a. Post-compressor fan running	a. Check fan running time FON
running but	mode	
compressor	b. Incorrect or loose wirings	b. Check all wirings and connections
not running	c. Failed components	c. Check start relay, start capacitor, overload protector, compressor.
j	d. Liquid refrigerant in the	d. Call service.
	compressor	
9. Compressor	a. Fan blade stuck	a. Check for proper clearance
running but	b. Incorrect or loose wirings	b. Check all wirings
fan not	c. Failed motors	c. Call service
running		
10.Temperature	a. Failed components	a. Check compressor windings, start
high,		relay and overload protector.
•	b. Improper condenser airflow	b. Check for condenser fan
compressor	c. Dirty condenser	c. Clean condenser
stopping	d. Overcharge of refrigerant	d. Call service for removing refrigerant
and starting	e. Discharge or suction pressure	e. Call service for information
but very	too high	
short		
running time	a Doot compressor for running	a. Reset FON
11.Fan running	a. Post-compressor fan running mode for humidity modulation	a. Reset FON
too long	-	- Deise the setting
12.Temperature	a. Low temperature settingb. Low ambient temperature	a. Raise the settingb. Move to another location
low	c. Air probe fault	c. Change a new one
	d. Temperature controller fault	d. Change a new one
13.Evaporator	a. Evaporator air flow restriction	a. Check for fans and air flow
freezing up	b. Low temperature setting	b. Check for set-point
	c. Low ambient temperature	c. Change defrost cycle
	d. Defective controller or probe	d. Check for controller and probe
	e. Not stopping due to air leak, high	e. Check for seal, door opening, ambient temperature and condenser
	ambient temperature, condenser air flow restriction or pull-down	air flow
	cooling	
	f. Initially working then stopping,	f. Call service
	moisture in the system	
	g. Refrigerant low or leaking	g. Call service
	h. Capillary tube or expansion valve	h. Call service
	blockage	a. Chack for sin look
14.Water leak	blockage a. Air leak in the wine cellar causing	a. Check for air leak
14.Water leak	blockage a. Air leak in the wine cellar causing excessive condensate	
14.Water leak	blockage a. Air leak in the wine cellar causing	a. Check for air leakb. Use drain line

	1
	d. Water passages restricted d. Clean the drip tray
	e. Drip tray leak (No water overflow e. Seal the leak using silicone sealant but water leak)
15.Excessive	a. Air leak in the wine cellar causing a. Check for any air leak
condensate	excessive condensate
in wine	b. High humidity causing excessive b. Use drain line condensate
cellar	c. Water passages restricted c. Clean the drip tray
16.Circuit	a. Incorrect fuse or breaker a. Check for proper fuse or breaker
tripping	b. Incorrect wirings b. Check for wirings and connections
a ipping	c. Failed components c. Call service
17.Noisy	a. Mounting area not firm a. Add support to improve installation
operation	b. Loose parts b. Check fan blades, bearings, washers, tubing contact and loose screws.
	c. Compressor overloaded due to c. Check for airflow high ambient temperatures or airflow restriction
	d. Defective components d. Call service for checking internal loose, inadequate lubrication and incorrect wirings

4. Customer Support

If you still have problems, please contact us at:

Vinotemp International 17631 South Susana Road Rancho Dominguez, CA 90221 Tel: (310) 886-3332 Fax: (310) 886-3310 Email: info@vinotemp.com

5. Warranty

I. Limited Warranty

VINOTEMP warrants its products to be free from defects due to workmanship or materials under normal use and service, for twelve months after the initial sale. If the product is defective due to workmanship or materials, is removed within twelve months of the initial sale and is returned to VINOTEMP, in the original shipping carton, shipping prepaid, VINOTEMP will at its option, repair or replace the product free of charge. Additionally VINOTEMP warrants all parts to be free from defects for a period of sixty months after initial sale.

This warranty constitutes the entire warranty of the VINOTEMP with respect to its products and is in lieu of all other warranties, express or implied, including any of fitness for a particular purpose. In no event shall VINOTEMP be responsible for any consequential damages what is so ever. Any modification or unauthorized repair of VINOTEMP products shall void this warranty.

Service under Warranty

This service is provided to customers within the continental UNITED STATES only. VINOTEMP cooling units are warranted to produce the stated number of BTU/H. While every effort has been made to provide accurate guidelines, VINOTEMP can not warranty its units to cool a particular enclosure.

In case of failure, VINOTEMP cooling units must be repaired by the factory or its authorized agent. Repairs or modifications made by anyone else will void the warranty.

Shall a VINOTEMP cooling unit fail, contact the dealer for instructions, do not return the unit to the factory without authorization from VINOTEMP. If the unit requires repair, re-pack it in the original shipping carton and return it to the factory, shipping prepaid. VINOTEMP will not accept COD shipments. If the unit is determined to be faulty and is within the twelve month warranty period VINOTEMP will, at its discretion, repair or replace the unit and return it free of charge to the original retail customer. If the unit is found to be in good working order, or beyond the initial twelve month period, it will be returned freight collect.

II. Limitation of Implied Warranty

VINOTEMP'S SOLE LIABILITY FOR ANY DEFECTIVE PRODUCT IS LIMITED TO, AT OUR OPTION, REPAIRING OR REPLACING OF UNIT.

VINOTEMP SHALL NOT BE LIABLE FOR:

DAMAGE TO OTHER PROPERTY CAUSED BY ANY DEFECTS IN THE UNIT, DAMAGES BASED UPON INCONVENIENCE, LOSS OF USE OF THE UNIT, LOSS OF TIME OR COMMERCIAL LOSS, ANY OUTER DAMAGES, WHETHER INCIDENTAL, CONSEQUENTIAL OR OTHERWISE.

THIS WARRANTY IS EXCLUSIBE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR INPLIED, INCLUDING BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

While great effort has been made to provide accurate guidelines VINOTEMP cannot warrant its units to properly cool a particular enclosure. Customers are cautioned that enclosure construction, unit location and many other factors can affect the operation and performance of the unit. There for suitability of the unit for a specific enclosure or application must be determined by the customer and cannot be warranted by VINOTEMP.