

# CLEANSTAR

Model 2500-CW Ultra

## Operating, Troubleshooting and Repair Manual

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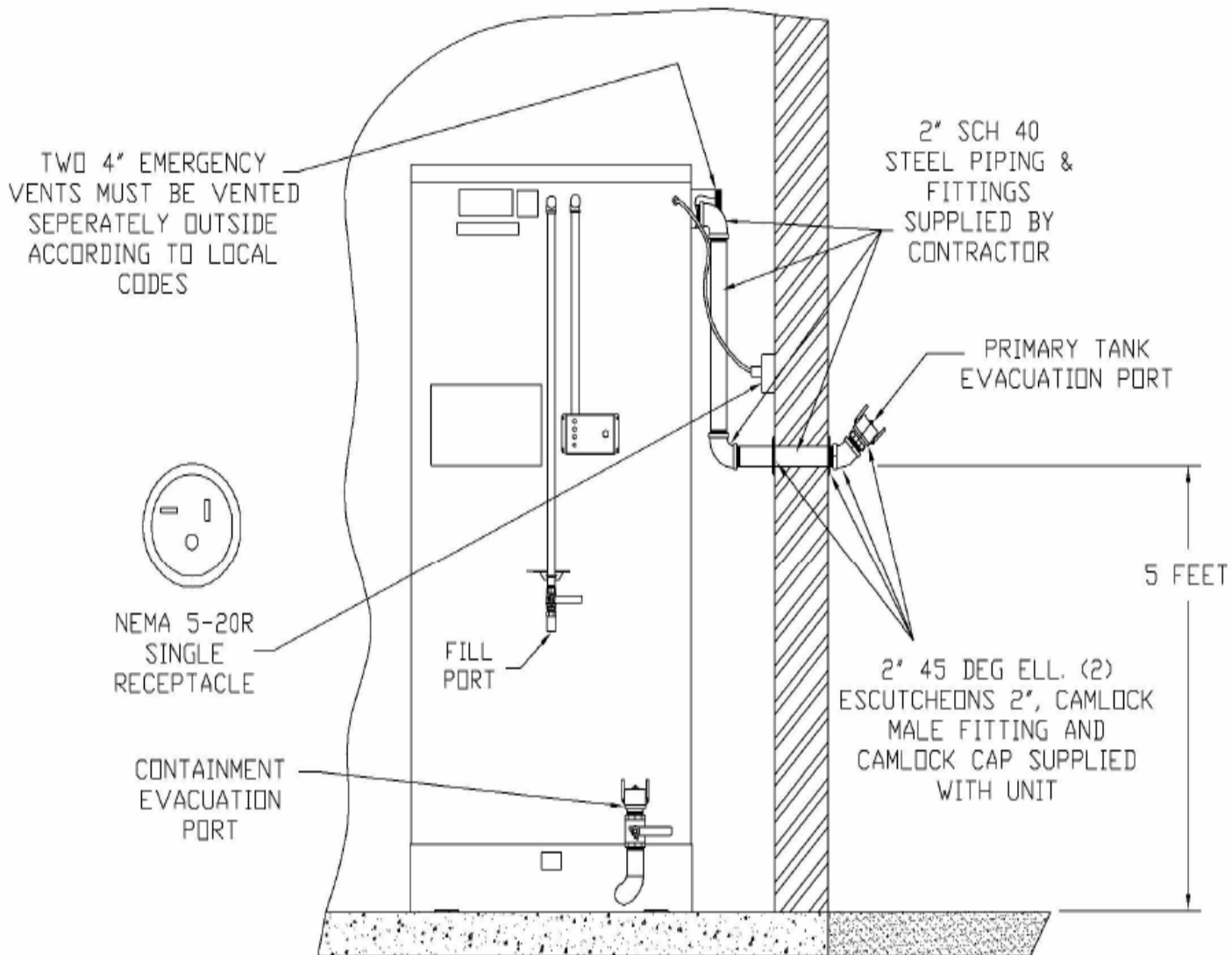
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# Table of Contents

Tank Diagram.....	3
Operating instructions.....	4-5
Troubleshooting.....	6-9
Repair.....	10-15
Wiring Diagram.....	16

# 2500CW Installation Drawing



# Operating Instructions for the 2500-CW Ultra

NEVER clean fryers or discard shortening unless you have been properly trained!  
Minimize the water being put into the Cleanstar system

NEVER use the Cleanstar caddy without the filter screen or when the oil is cold!



1. Always wear proper safety equipment



2. Turn off the fryers



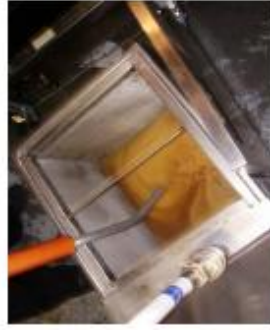
3. Reduce the temperature of the fryers to 150 degrees



4. Remove fryer strainers



5. Make sure the filter screen is in the caddy



6. Pump the oil from the fryer filter pan into the caddy, then roll the caddy to the Cleanstar tank



7. Pull back on the collar to release the hose from the caddy



8. Connect the hose to the Cleanstar tank or pump station

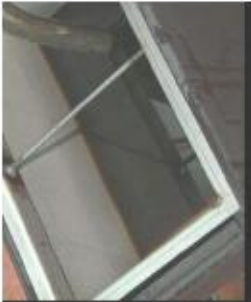


9. Plug the caddy into the underside of the control panel



10. Push the button on the control panel and hold





11. Hold the button until the caddy is completely empty and the sound of the pump changes



12. **WAIT!** Do not touch the hose and coupler without your safety gloves!



13. With your insulated gloves on, disconnect the hose from the tank or pump station



14. Return the hose connection to the caddy and push the button on the panel for 5 seconds to clear the hose



15. Once the filter screen has cooled remove the screen from the caddy and clean the food particles from the screen



16. Never use metal or sharp utensils on the filter screen



17. Rinse the filter screen and return it to the caddy



18. Store the caddy



19. When the yellow light on the control panel is on, call your service provider to pick up the oil

20. When the word **FULL** is displayed on the control panel the tank is full and the pump will stop pumping

# Troubleshooting

This section will cover issues you may encounter using the 2500-CW. This section cannot cover every scenario you may encounter. If this section does not resolve the issue you are facing, contact Darling International Inc. for further assistance.

## **Issue: The alarm on the control panel is sounding:**

The control panel is equipped with an alarm to indicate when the 2500-CW tank has lost power. If power is lost the green light on the panel will NOT be illuminated. The 9-volt battery for the alarm is located in a battery holder on the underside of the control panel. To access the holder, remove the two nuts and the small cover plate.



<b>Symptom</b>	<b>Possible Cause</b>	<b>Corrective Action</b>
<p><b>Green power light is off</b></p> <p>(Power loss alarm will sound)</p>	<p>No power to the tank</p>	<p>Plug unit into wall outlet</p> <p>Reset circuit breaker on the front of the control panel</p> <p>Restore power to the wall outlet</p>
<p><b>Motor runs but pump will not pump</b></p>	<p>Hose quick connects are not completely connected</p>	<p>Connect fittings securely</p>
	<p>Oil in caddy has cooled and thickened</p>	<p>Remove excess cold oil from the caddy. Add hot oil to caddy to melt the cold oil</p>
	<p>The hose is plugged with cold oil or solids</p>	<p>Warm the hose with hot water and pump directly back into the caddy using the hose fitting on the top of the caddy</p>
	<p>The pump is blocked with solids</p>	<p>Open pump and clean. Follow the instructions located later in this manual. (see pg. 11)</p>
<p><b>The motor will not run</b></p> <p>(continued on next pg)</p>	<p>No power to the tank (Green light on control panel is off)</p>	<p>Restore power to the tank</p>
	<p>The red full light is on</p>	<p>The tank is full. Call your collection company to empty the tank</p>

<b>Symptom</b>	<b>Possible Cause</b>	<b>Corrective Action</b>
<b>The motor will not run</b> (continued from previous pg)	The caddy is not plugged into the control panel	Plug the caddy into the control panel
	The toggle switch on the motor is in the off position	Turn the switch to the on position
	The thermal overload has tripped in the motor (This is usually caused by pumping cold thick oil)	Remove the cold oil and push the black reset button located on the side of the motor near the safety toggle switch
	The power cord is damaged	Replace the cord
	Solids are lodged in the pump gears	Open the pump and clean. Follow instructions located later in this manual. (see pg. 11)
<b>Oil overflows into the secondary containment</b>	The heaters are not operating and cold oil has disabled the level probe	Restore power to the unit
		Replace defective heater assembly (see pg. 15)
	Level probe is not sending a signal to the red full light and the pump shut-down relay located in the control panel	Remove the probe and clean any residue that has formed
		Replace defective level probe (see pg. 14)



<b>Symptom</b>	<b>Possible Cause</b>	<b>Corrective Action</b>
<b>The service truck cannot remove the oil from the tank</b>	Heaters are not operating and the oil is cold	Diagnose the heater problem and restore the heaters to operating condition
	Air leak in the evacuation pipe to the outside	Tighten or replace the defective pipe
	The power cord is damaged	Replace the cord
	The evacuation port on the tank was not properly plumbed outside by the contractor	The 2-inch evacuation port is located on the tank between the two 4-inch emergency vents. This port should be plumbed outside for easy access by the collection driver. (See drawing on pg. 3)

# Repair

This section is intended to guide a service technician through basic repairs to the CleanStar system.

It is assumed that the service technician has general knowledge of the use of tools and common equipment service procedures. The user should be familiar with their equipment and follow the manufacturer's guidelines to ensure safety. The use of safety glasses and gloves is highly recommended.

The service technician must read and completely understand these directions prior to performing any repairs on the system. Failure to understand and follow the directions completely may result in injuries to the service technician, operator and/or bystanders.

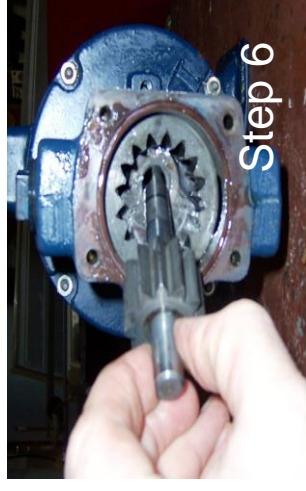
**Note: Remember to unplug the system's power cord from the wall outlet prior to performing any service work**

## Caddy Pump Cleaning



**Remove end cover by rotating back and forth or tapping from the back of the cover**

**Loosen and remove the end cover bolts**



**The end cover has a seal called a square ring, Do not lose or damage this seal. If it is damaged replace it**

**Remove pinion assembly**



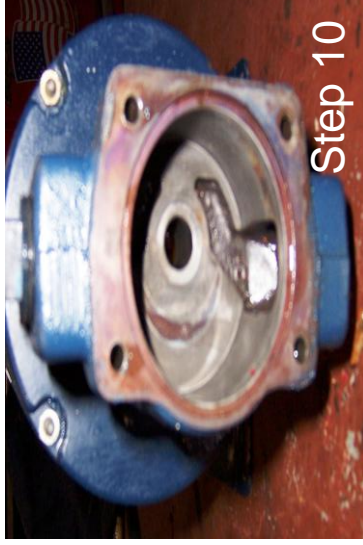
**Remove rotor**



**Locate and remove food particles. Be careful particles do not fall into the inlet tube**



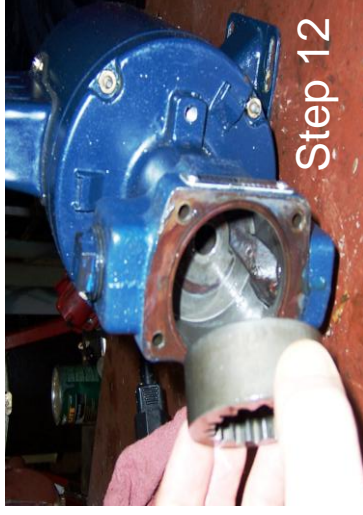
**Using a screwdriver to make sure all ports are clear**



**This is an example of a clean pump housing**

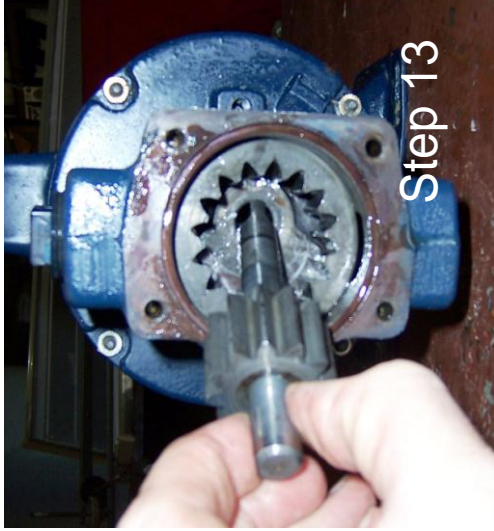


**Clean the teeth on the pinion and the rotor**

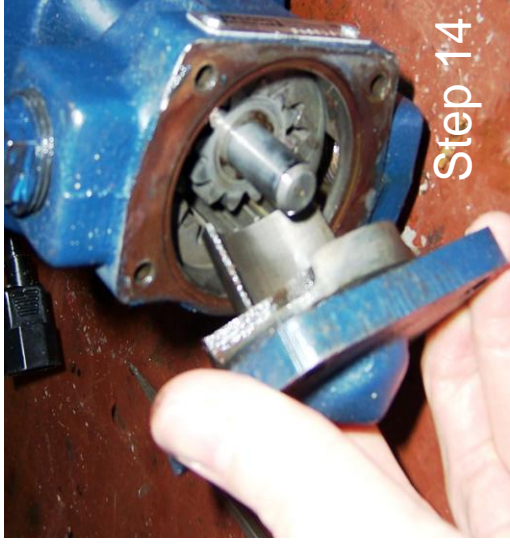


**Lubricate the rotor with gear lube or cooking oil and reinstall**





**Lubricate the pinion assembly with gear lube or cooking oil and reinstall**



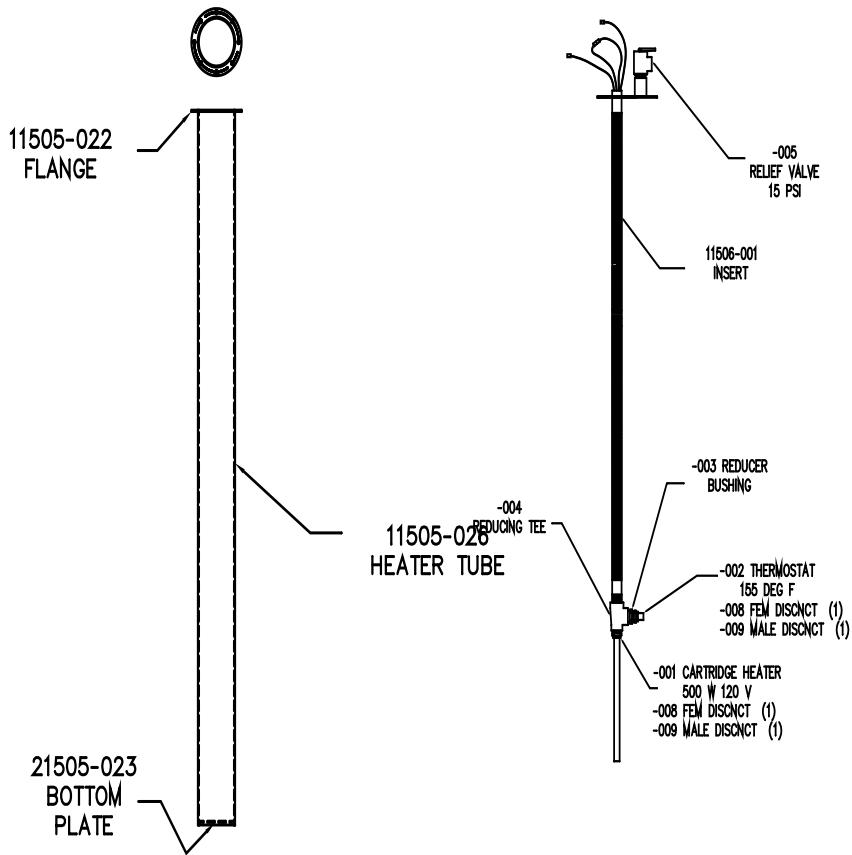
**Reinstall the end cover. It should slide on without forcing. If it will not install easily, make sure the pinion assembly is seated into the motor shaft**



**Reinstall the end cover bolts. Do not over tighten as this will bind the pump**



# Heater Tube Assembly



1. Disconnect power to the Cleanstar.
2. Remove the lid from the tank.
3. Disconnect the wire leads to the heater.
4. Remove the nuts from the heater plate.
5. Lift the heater assembly from the heater tube.
6. Before installing the new assembly check the Glycol & water solution in the tube. It should be 12 inches from top. Use only Propylene glycol.
7. Install the new assembly and connect the wire leads.
8. Install the nuts to the heater plate.
9. Install the tank lid and connect power.

