THERMO KING

Klinge

PTI Form for TCR-110 Z2 Dual System Hazardous Area

Record Date:	**Time:**	**Job #:**
Location:	**Technician Name:**	
Unit Model #:	**Container #:**	
System 1 Unit Serial #:	**System 2 Unit Serial #:**	
System 1 Control Box Serial #:	**System 2 Control Box Serial #:**	

System 1 General Inspection:	Initial = **OK**
Check the unit and control box that the hold-down bolts as well as pipe connections are not loose.	
Visually inspect the unit and control box for physical damage. Remove covers or internal viewing.	
Inspect power cable and component cables for signs of damage.	
Check condenser coil for cleanliness and clean if required.	
Check for signs of glycol and refrigerant leaks and address as needed.	
Check the glycol sight glass (PVC inlet hose) at the unit to ensure that the glycol can be easily seen. If the tubes are cloudy or not able to easily see through the tube should be replaced.	
For Non-Pressurized systems, check the glycol level in the expansion reservoir, it should be 1/2 - 3/4 full at ambient temperature. For Pressurized systems refer to manual for glycol level checking.	

System 2 General Inspection:	Initial = **OK**
Check the unit and control box that the hold-down bolts as well as pipe connections are not loose.	
Visually inspect the unit and control box for physical damage. Remove unit covers for internal viewing.	
Inspect power cable and component cables for signs of damage.	
Check condenser coil for cleanliness and clean if required.	
Check for signs of glycol and refrigerant leaks and address as needed.	
Check the glycol sight glass (PVC inlet hose) at the unit to ensure that the glycol can be easily seen. If the tubes are cloudy or not able to easily see through the tube should be replaced.	
For Non-Pressurized systems, check the glycol level in the expansion reservoir, it should be 1/2 - 3/4 full at ambient temperature. For Pressurized systems refer to manual for glycol level checking.	

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System 1 Operational Check:		Initial = **OK**
Connect Main power plug to power source.		
Measure and record voltage and frequency of power source.	Volts:	Hertz:
Start the Refrigeration Unit and perform a Function Tester as per the manual instructions. Please note that since you are starting only System 1, you will be receiving an "A42" alarm. The reason for this alarm is that System 2 is not currently turned and there is system communication until both systems are turned on.		
Confirm function test completed properly without error and unit continues to normal operation.		
Set the set point 5 degrees colder than current tank temperature.		
Record current Cargo Temperature		
Record current Glycol Temperature		
Check the refrigerant level in the coil receiver sight glass, it should between the upper and		
Check both of the moisture indicators on the coil receiver for "Dry" indication (Green in color).		
Check the flow in the glycol sight glass at the pump inlet for bubbles. If excessive bubbles are present vent the system of air or add additional glycol.		
Check the current Cargo Temperature and Glycol Temperature against the previously recorded temperatures to ensure proper cooling. Please note that since the tank is empty or has a large product mass the Cargo Temperature may not have reduced much.		
Turn off System 1.		
System 2 Operational Check:		Initial = **OK**
Start the Refrigeration Unit and perform a Function Tester as per the manual instructions. Please note that since you are starting only System 2, you will be receiving an "A42" alarm. The reason for this alarm is that System 1 is not currently turned and there is system communication until both systems are turned on.		
Confirm function test completed properly without error and unit continues to normal operation.		
Set the set point 5 degrees colder than current tank temperature.		
Record current Cargo Temperature:		
Record current Glycol Temperature:		
Check the refrigerant level in the coil receiver sight glass, it should between the upper and lower sight glasses.		
Check both of the moisture indicators on the coil receiver for "Dry" indication (Green in color).		
Check the flow in the glycol sight glass at the pump inlet for bubbles. If excessive bubbles are present vent the system of air or add additional glycol.		
Check the current Cargo Temperature and Glycol Temperature against the previously recorded temperatures to ensure proper cooling. Please note that since the tank is empty or has a large product mass the Cargo Temperature may not have reduced much.		
Turn off System 2.		

System Switch Over Testing and General Shut Down:	Initial = **OK**
At the conclusion of the Operation Testing of both System 1 and System 2, cycle the power to both systems and ensure that System 1 is turned on first and assumes the Primary Role.	
Once System 1 is in normal operation with System 2 in Standby Mode, turn the power to System 1 off.	

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After approx. 3 minutes System 2 will begin operation as the Primary System. You will be able to tell it is the primary system since the temperature will display on the Touch Pad. Please note that since you are starting only System 2, an "A42" alarm will be shown on the display panel for System 2 as there will be no available communication to System 1 until that system is turned on.	
At this time leave System 2 running and turn the power to System 1 back on.	
After approx. 4 minutes turn the power to System 2 off.	
After approx. 3 minutes System 1 will begin operation as the Primary System. You will be able to tell it is the primary system since the temperature will display on the Touch Pad. Please note that since you are starting only System 1, an "A42" alarm will be shown on the display panel for System 1 as there will be no available communication to System 2 until that system is turned on.	
Turn off power to both units and disconnect power plug. Secure power cable and refasten any covers that have been removed.	
If the system is an ATEX System, ensure that the Control Box Bolts are torqued to the proper setting as per the Operations Manual.	
Check that all cable glands are tight.	
If equipped with Data Logger, check for accurate temperature reading, printer operation, and supply of printer tape.	

By signing this form, we are acknowledging that any discrepancies in the recorded data have been noted and accepted.

Notes:	
Signature	**Date**

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