

Klinge Corporation
PTI form for all NMF-372 models

Date:	Serial number:	Location:
Date of last pre trip inspection if known:	Container number:	

Note: Manual available on www.klinge.com; unit revision number found on data plate.

Note: Operational Test – It is important that equal loading be maintained on each of the redundant systems. As such it is required that the unit used for pull down (Unit A) alternates between each maintenance session. For archival purposes, record the following referencing the actual “Unit” identity:

UNIT A = “Unit _____”
UNIT B = “Unit _____”

Trained Operator and Date:

PRE-OPERATION TEST – conduct on each system	Initial = OK			
1. With NO POWER to the unit(s), check unit visually for physical damage:				
a. Refrigeration unit(s) frame for corrosion, structural or defective damage				
b. Piping – no corrosion or physical damage to impede operation				
c. Compressor/Fans – no broken components and no appearance in defect of structural integrity				
d. Coils – no visible damage or bent/broken fins				
e. Probes – securely mounted in proper locations and in good condition				
2. Open control box cover and check that all electric components are secured:				
a. Wires/ferrules are secure and in good condition – no cracks, splits, or bare conductors				
b. Contactors/breakers/overloads operate properly – no sticking, easy release				
3. Check the gasket on control box covers. Be sure the latches hold the covers tightly closed.				
4. Check cleanliness of the condenser coils and steam or air clean if necessary.				
5. Check all refrigerant joints and connections thoroughly for traces of oil or stains indicating small refrigerant leak.				
Supply power to Unit(s) and close CB1 for each Unit, for the following:				
6. Turn Unit A ON and scroll to pressure readings for R23 HIGH and R134 HIGH, record values				
a. R23 Stand-by: _____ R-134A Stand-by: _____				
Turn Unit A OFF				
7. Turn Unit B ON and scroll to pressure readings for R23 HIGH and R134 HIGH, record values				
a. R23 Stand-by: _____ R-134A Stand-by: _____				
Turn Unit B OFF				
OPERATIONAL TEST - Connect main power. (See NOTE above)	System			
Conduct the following test with only ONE Unit on at a time.				
1. Turn Unit A ON, and unit “boots” on display. Alarm horn and light sound.				
a. Put Unit in STANDBY mode, scroll to COMMANDS and select RUN AUTO TEST				
i. AUTO TEST completes without errors.				
2. On Unit A, adjust Set Point to -40 °C. and allow to start operation.				
a. Check the rotation of all fans. See arrows marking correct direction				
3. After 30 minutes operation, record the following information: Should be within following ranges:				
Compressor 1	5 - 8 Amps	L1	L2	L3
Compressor 2	5 - 8 Amps	L1	L2	L3
Compressor 3	6 – 10 Amps	L1	L2	L3
Condenser Fan	0.5 – 2 Amps	L1	L2	L3
Evaporator Fan	.4 – 1.5 Amps	L1	L2	L3
4. At -5°C put unit on Manual Defrost. (Enter “Manual Defrost” through the COMMAND menu)				
a. Compressor(s) 1 & 2 stop, Evaporator fans stop, condensing fan stops.				
b. Compressor 3 remains operating.				
c. Defrost terminates when Defrost temperature reads 14.0°C				
d. Check R23 high pressure reading on display – 250-300 PSI (17-21 Bar)				
5. After defrost terminates, run unit down to set point.				
6. Allow the unit to achieve set point and cycle 2 times. After 2 nd cycle. Stop Unit A and proceed to Step 7.				
a. Record pressures on Display, during first cycle:				

i. R23 HIGH: LOW:							
ii. R134 HIGH: LOW:							
7. Turn Unit B ON, and unit “boots” on display. Alarm horn and light sound.							
a. Scroll to COMMANDS and select RUN AUTO TEST							
i. AUTO TEST completes without errors.							
8. On Unit B, adjust Set Point to -42 °C. and allow to start operation.							
a. Check the rotation of all fans. See arrows marking correct direction							
b. Record pressures on Display after 5 minutes:							
i. R23 HIGH: LOW:							
ii. R134 HIGH: LOW:							
9. After 10 minutes operation, record the following information: Should be within following ranges:							
Compressor 1	5 – 8 Amps	L1		L2		L3	
Compressor 2	5 – 8 Amps	L1		L2		L3	
Compressor 3	6 – 10 Amps	L1		L2		L3	
Condenser Fan	0.5 – 2 Amps	L1		L2		L3	
Evaporator Fan	.4 – 1.5 Amps	L1		L2		L3	
10. After 20 minutes put unit on Manual Defrost. (Enter “Manual Defrost” through the COMMAND menu)							
a. Compressor(s) 1 & 2 stop, Evaporator fans stop, condensing fan stops.							
b. Compressor 3 remains operating.							
c. Defrost terminates when Defrost temperature reads 14.0°C							
d. Check R23 high pressure reading on display – 250-300 PSI (17-21 Bar)							
11. After defrost terminates, run unit down to set point.							
12. Allow the unit to run for minimum 20 minutes.							
13. Turn both units off and proceed to next section to test Switch Over System							
14. Turn Primary Selector Switch to the “1” position. Then turn “Unit 1” on followed by “Unit 2”. Note the following:							
a. BOTH alarm lights illuminate and the horn sounds for 30-45 seconds.							
b. BOTH displays show “BOOTING” designation and “ON” lights are lit after being turned ON.							
c. After 30-45 seconds the alarm light and horn stop, and “Unit 2” display and “ON” light turn off.							
d. “Unit 1” proceeds into normal operation.							
15. After “Unit 1” operates for 5 minutes turn the “Unit 1” power switch to OFF. Note the following							
e. “Unit 1” Alarm light illuminates and horn sounds.							
f. “Unit 2” display comes ON, displays BOOTING.							
g. “Unit 2” goes into start up procedure and then starts operation.							
h. After “Unit 2” starts operating the Alarm light and horn shut-off.							
16. While “Unit 2” is operating, flip the Primary Selector Switch to the “2” position and turn “Unit 1”							
i. “Unit 2” continues operation without interruption							
j. “Unit 1” display shows “BOOTING” and “ON” illuminates for approximately 30 seconds then turns off. “Unit 1” does not start normal operation.							
17. Turn “Unit 2” off and Note:							
k. Alarm light illuminates and horn sounds							
l. “Unit 1” goes into start-up procedure and then begins normal operation							
18. Turn OFF system, PTI complete.							
NOTES:							

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Test Operator Signature	Date	Quality Control Signature	Date

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