






HOW TO LOAD THIS TRAILER

Before you load . . .

- Adjust desired thermostat setpoint using up and down arrow keys  , press **ENTER**  to load.
- Press and hold the  key for 3 to 5 seconds until "Pretrip" appears on the display. Press **ENTER**  to load.
- Pre-cool the trailer 1 to 2 hours or until refrigeration unit cycles off or to low speed.
- Pre-cool the product to desired shipping temperature.

As you load . . .

- Turn off the refrigeration unit whenever the trailer doors are open.
- Do not stack product in a way that prevents the air circulation around all six sides of the load.

After you load . . .

- Turn off the refrigeration unit whenever the trailer doors are open.
- Avoid frequent and lengthy door openings.

HAVING PROBLEMS?

This trailer is designed to maintain product temperatures, not lower them.

Hot products may cause ice build-up on refrigeration coils.

If the unit will not run:

- Remember the unit will automatically cycle off if the refrigeration unit has reached the thermostat setpoint. (Cycle Sentry Mode)
- Check the control panel display for flashing alarm codes. If present press the code key several times and note all codes present. Call the XTRA Lease 24-hour RoadWatch number 800-325-1453, press option #1

If the unit will not cool, check:

- Was the product too hot when it was loaded?
- Are the doors opened frequently or left open several minutes?
- Initiate manual defrost. **NOTE:** Return air temperature must be below 45°F.

Change the Setpoint

1 The Standard Display must be shown. The setpoint shown here is 35° F.

2 Press the up or down arrow keys to change the setpoint to the new setpoint.

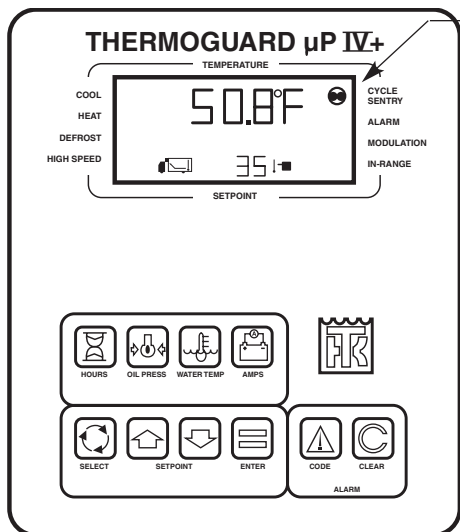
3 When the desired setpoint is shown in the display the ENTER key must be pressed to load the new setpoint into the microprocessor. The display will briefly show [LOAD] and then the new setpoint will appear in the display.

The diagram shows a control panel with a digital display showing 50.8°F and 35°F. The display is labeled 'THERMOGUARD μP IV+' and 'TEMPERATURE'. The display also shows '50.8°F' and '35°F'. The display is surrounded by various function keys: COOL, HEAT, DEFROST, HIGH SPEED, CYCLE SENTRY, ALARM, MODULATION, IN-RANGE, SETPOINT, HOURS, OIL PRESS, WATER TEMP, AMPS, SELECT, SETPOINT, ENTER, CODE, CLEAR, ALARM, ON/OFF, START/PREHEAT, MANUAL/DEFROST, and CYCLE SENTRY/CONTINUOUS.

IMPORTANT: The ENTER key must be pressed in order to change the setpoint! If the ENTER key is not pressed, the setpoint will return to the old setpoint about 10 seconds after the last change is made.

NOTE: If the screen Blanker is enabled, the On/Off switch must be on before the display will appear.

Select Cycle Sentry or Continuous Mode



NOTE: The Cycle Sentry icon will appear when Cycle Sentry mode is selected and the On/Off switch is on.

CONTINUOUS MODE

When Continuous mode is selected, the unit must be preheated and started manually and will run continuously to maintain the setpoint and constant airflow.

CYCLE SENTRY MODE

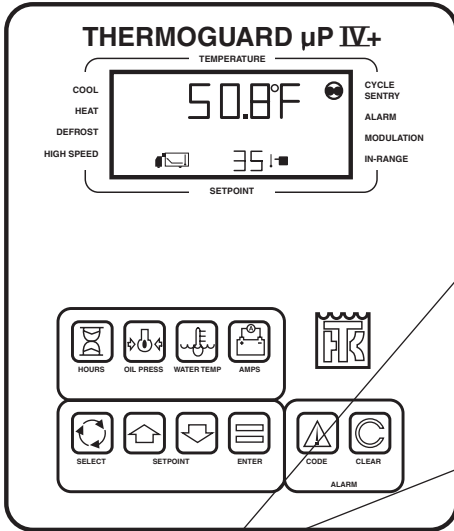
When Cycle Sentry mode is selected, the unit will start and stop automatically as required to maintain the setpoint and to keep the engine warm and the battery charged.



1 Place the Cycle Sentry/Continuous switch in the desired position.

CAUTION: The unit can start automatically any time the On/Off switch is on and the Cycle Sentry/Continuous switch is in the "Cycle Sentry" position.

Start the Diesel Engine

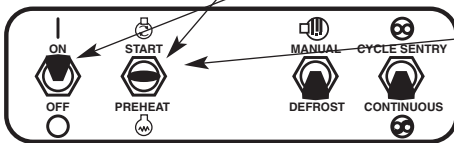


NOTE: When Continuous mode operation is selected, the diesel engine must be started manually.

1 Press and hold the Preheat/Start switch in the "Preheat" position for 10 to 90 seconds, depending on ambient temperature.

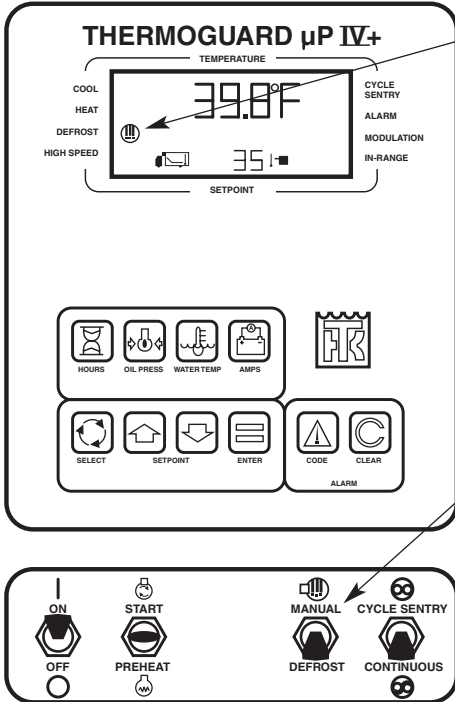
2 Turn the On/Off switch on.

3 Press and hold the Preheat/Start switch in the "Start" position until the engine starts.



CAUTION: Do not crank the engine for more than 15 seconds at a time.

Initiate a Manual Defrost Cycle



NOTE: The Defrost icon will appear whenever the unit is in a Defrost cycle.

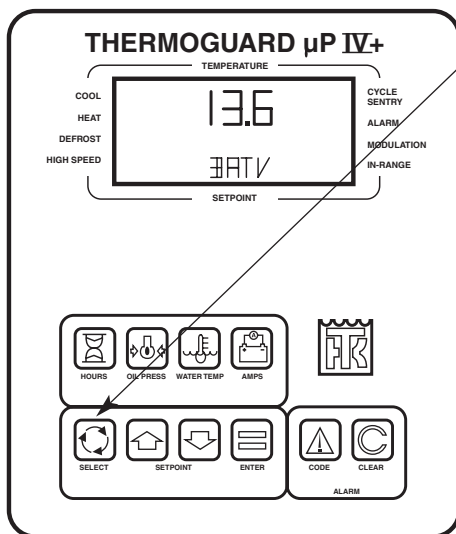
1 The Unit must be on and running in either Continuous or Cycle Sentry mode or shut down in Cycle Sentry Null mode . . . and the coil temperature must be below 45°F (7°C).

2 Lift the spring return Manual Defrost switch to start a Manual Defrost cycle. The unit will enter a Manual Defrost cycle if the coil temperature is below 45°F (7°C). The Defrost Cycle will terminate automatically.

IMPORTANT: The unit will not perform a Manual Defrost Cycle unless:

- The On/Off switch is on.
- The unit is running in Continuous or Cycle Sentry mode.
- The coil temperature is below 45°F (7°C).

View Select Key Display Screens



1

Press the SELECT key to view the display screen desired. The value and description of each display screen will be shown in the display. The display screens appear in the order shown below.

- DIS.A** Discharge Air Temperature
- TPDF** Temperature Differential (ΔT)
- COIL** Evaporator Coil Temperature
- AMB.T** Ambient Air Temperature
- SPR.1** Spare Sensor 1
- SPR.2** Spare Sensor 2
- BATV** Battery Voltage (Shown)
- RPM** Diesel Engine RPM
- DEFI** Defrost Duration In Range
- DEFN** Defrost Duration Not In Range
- DDUR** Defrost Duration
- SMX** Damper Motor or Solenoid
- MVST** Mod Valve Close on Start

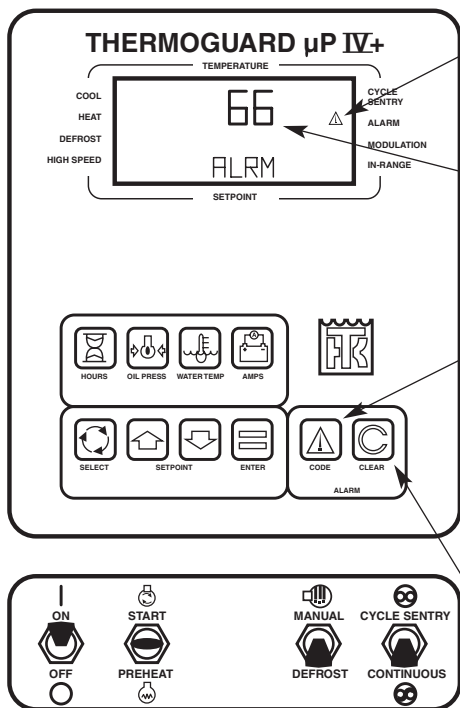
Returns to Standard Display



IMPORTANT: Each display screen will be shown in the display for 10 seconds if no other key is pressed.

LOCKING A DISPLAY SCREEN ON THE DISPLAY: Pressing the ENTER key will lock the display screen currently shown in the display. It will then remain on the display until any other key is pressed.

View and Clear Alarm Codes



NOTE: If an alarm or alarms are present, the Alarm icon will appear. It is possible to have more than one alarm at a time.

NOTE: The alarm code shown here is a code 66 - Low Oil Level alarm.

VIEWING ALARM CODES: If the Alarm icon is present, press the CODE key to display the alarm code. Pressing the CODE key again will display any additional alarm codes that may exist. If the alarm code does not change when pressing the CODE key, then the alarm shown is the only one present. If no alarm codes are present the code [00] appears when the CODE key is pressed.

CLEARING ALARM CODES: After the condition that caused the alarm code has been corrected, press the CODE key to again display the alarm code. While the code is shown in the display, press the CLEAR key to clear the code.

IMPORTANT: Always record all alarm codes that are present.

NOTE: Alarm codes are displayed in the order that they occurred, with the most recent alarm appearing first.

NOTE: If the condition that caused the alarm code has not been corrected, the alarm code will continue to appear.


Run a Full Pretrip Test


The diagram illustrates the control panel of a THERMOGUARD µP IV+ unit. The main display shows 'PrE' and 'TRIP'. The panel includes various function keys: COOL, HEAT, DEFROST, HIGH SPEED, SETPOINT, CYCLE SENTRY, ALARM, MODULATION, IN-RANGE, HOURS, OIL PRESS, WATER TEMP, AMPS, T/K Logo, SELECT, SETPOINT, ENTER, CODE, CLEAR, ALARM, ON/OFF switch, START/PREHEAT, MANUAL/DEFROST, and CYCLE SENTRY/CONTINUOUS.

- 1** Turn the unit On/Off switch on. Be sure the unit is in Cycle Sentry mode. The Cycle Sentry icon will be present.
- 2** Clear all alarms using the CODE and CLEAR keys.
- 3** When the Standard Display appears, press and hold the "T/K Logo" key for at least 3 seconds. The Pretrip prompt screen [PrE TRIP] will appear in the display.
- 4** Press the ENTER key to start a Pretrip Test. The display will briefly show [LOAD] and the unit will then begin a Pretrip Test.

IMPORTANT: The ENTER key must be pressed in order to start a Pretrip test. If the ENTER key is not pressed, the display will return to the Standard Display after about 10 seconds.

NOTE: The Pretrip test should not be interrupted unless absolutely necessary. If the Pretrip test must be halted, turn the On/Off switch off. This will generate one or more alarms, including Alarm Code 28 - Pretrip Abort alarm. This is normal.

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- 00 No Fault
 - 01 Microprocessor Power Up
Reset (data logger only)
 - 02 Evaporator Coil Sensor
 - 03 Return Air Sensor
 - 04 Discharge Air Sensor
 - 05 Ambient Air Sensor
 - 06 Engine Water Temperature
Sensor
 - 07 Engine RPM Sensor
 - 09 High Evaporator Temperature
 - 10 High Discharge Pressure
 - 11 Unit Controlling On
Discharge Air
 - 12 Sensor Shut Down
 - 13 Check Sensor Calibration
 - 14 Defrost Terminated By Time
 - 15 Glow Plug Check
 - 16 Manual Start Not Completed
 - 17 Engine Failed To Crank
(Cycle Sentry)
 - 18 High Engine Water
Temperature
 - 19 Low Engine Oil Pressure
 - 20 Engine Failed To Start
(Cycle Sentry)
 - 21 Cooling Cycle Check
 - 22 Heating Cycle Check
 - 23 Cooling Cycle Fault
 - 24 Heating Cycle Fault
 - 25 Alternator Check
 - 26 Check Refrigeration Capacity
 - 27 Unassigned
 - 28 Pretrip Or Self-Check Abort
 - 29 Damper Circuit
 - 30 Damper Stuck Closed
 - 31 Oil Pressure Switch
 - 32 Refrigeration Capacity Low
 - 33 Check Engine RPM
 - 34 Check Modulation Circuit
 - 35 Run Delay Circuit
 - 36 Electric Motor Failed To Run
 - 37 Check Engine Water Level
 - 38 Electric Motor Failed To Run
 - 39 Water Value
 - 40 High Speed Circuit
 - 41 Engine Water Temperature
Check
 - 42 Unit Forced To Low Speed
 - 43 Unit Forced To Low Speed
Modulation
 - 44 Fuel System Check
 - 45 Hot Gas Circuit
 - 46 Air Flow Check
 - 50 Reset Clock
 - 51 Shutdown Circuit
 - 52 Heat Circuit
 - 54 Test Mode Timeout
 - 55 Check Engine Speeds
 - 61 Battery Check
 - 62 Ammeter Out Of Calibration
Range
 - 63 Engine Stopped -
Reason Unknown
 - 64 Pretrip Reminder
 - 66 Low Oil Level
 - 70 Hourmeters Exceeded 99999
 - 71 Maintenance Hour Meter #4
Exceeds Set Limit
 - 72 Maintenance Hour Meter #5
Exceeds Set Limit

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- 73 Maintenance Hour Meter #6
Exceeds Set Limit
 - 74 Microprocessor Reverted To
Default Settings
 - 76-78 Internal Fault Code
Factory Or Dealer Set
 - 79 Data Log Overflow
 - 80 Compressor Temp Sensor
 - 81 High Comp Temp
 - 82 High Comp Temp Shutdown
 - 83 Low Coolant Temp
 - 84 Restart Null
 - 85 Forced Unit Operation
 - 86 Discharge Press Transducer Fail
 - 87 Suction Press Transducer Fail
 - 88 Unassigned
 - 89 Electronic Throttling
Valve Circuit
 - 90-104 Unassigned
 - 105 Receiver Tank Pressure Solenoid
 - 106 Purge Valve
 - 107 Condensor Inlet Solenoid
 - 108 Door Open Timeout
 - 109 High Discharge
Pressure/ Sensor
 - 110 Suction Line Solenoid
 - 111 Unit Not Configured Correctly
 - 112 Remote Fan Zone 2-3
 - 113 Electric Heat
 - 114 Multiple Alarms, Can Not Run

**NOTE: NOT ALL CODES APPEAR IN
SOME VERSIONS OF SOFTWARE**