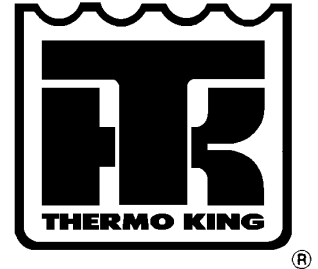




Service Bulletin



SUBJECT: MP4000 Warning Descriptions

BULLETIN: C 099

DATE: June 19, 2013

WARNING LIST

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WARNING DESCRIPTIONS

Each warning is described with the reason / description and the recommended corrective action. Some warnings are special related to specific customer requests and may not be active for standard settings.

If the specific warning depends on special customer options it is noticed in the description setting.

Warning #0001 HIGH PRESS CUT OUT – CHECK WATER COOLING	
Description	Corrective Action
- When: - If HPCO is detected and the configuration is set to water cooled condenser: - Indicates: - Poor cooling water supply.	- Controller auto clears message 10 minutes after compressor start-up. - Water cooled condensing may be wrongly selected.

Warning #0006 HIGH PRESS CUT OUT – CHECK COND PROBE	
Description	Corrective Action
- When: - Unit stops due to high pressure cutout and the condensing temperature regulation has not activated the condenser fan. - Indicates: - Wrong location of condenser probe.	- Controller auto clears message 10 minutes after compressor start-up. - Check location of condenser probe.

Warning #0008 HIGH PRESS CUT OUT – PLEASE WAIT	
Description	Corrective Action
- When: - Unit stops due to high pressure cutout and the condensing temperature regulation has activated the condenser fan. - Indicates: - Poor cooling of the refrigerant.	- Controller auto clears message 10 minutes after compressor start-up. - Check for high ambient temperature. - Check condenser fan rotation. - Check for blocked condenser coil.

Warning #0013
EVAP HIGH TEMP – CHECK HEATER SYSTEM

Description	Corrective Action
- When: - If the state “Hot Evaporator Section” is active and the control calls for heat the warning is set. - The state “Hot Evaporator Section” is defined either by: - RA probe error and Defrost probe error. - RA, SA or defrost probe is above 50C. - The warning is held by a 60 second timer after the conditions disappear. - Indicates: - Evaporator section temperatures are high. - Supply Air, Return Air and Defrost, indicates high temperature.	- Enter Manual Function Test menu and test (operate) heating element. Check volts and amps to determine problem. - Use DATA menu to evaluate evaporator section sensors.

Warning #0020
LOW VOLTAGE ON LINE – UNIT STOPPED

Description	Corrective Action
- When: - Low voltage observed, voltage has been below 330 VAC and has not risen above 340VAC yet. - After 30 minutes this warning will set the low voltage alarm. - Indicates: - Poor quality of power source.	Enter Manual Function Test menu and test (operate) components to load the power source. Check volts and amps to help determine the problem.

Warning #0021
CURRENT TOO HIGH – CHECK COMPRESSOR AND FANS

Description	Corrective Action
- When: - When the component current draw exceeds expected. 50% above expected for 4 minutes. - Indicates: - Digital Control valve malfunction. - Compressor, evaporator fans motor, condenser fan motor or heater current too high. - Defective volt or amp meter on power module. - Power supply voltage too low.	- Enter Manual Function Test menu and test (operate) each component. Check volts and amps to determine which component has high amp draw. - Check power supply volts. - Check volt and ampere meter. - When the warning is set the current power consumption is logged in the event log.

Warning #0022
CURRENT TOO LOW – CHECK COMPRESSOR AND FANS

Description	Corrective Action
- When: - When the component current draw exceeds expected. 50% below expected for 4 minutes. - Indicates: - Defective or open high pressure cutout switch. - Defective or open motor internal high temperature protection switch. - Unit on water-cooled condensing with no water flow. - Defective condenser coil sensor or sensor location.	- Check Display for High Pressure Cutout message. - Enter Manual Function Test menu and test (operate) each component. Check volts and amps to determine which component has low amp draw. - Check volt and ampere meter.

Warning #0023
SUPPLY TEMP TOO HIGH – CHECK SENSORS

Description	Corrective Action
- When: - During Chill or Frozen Mode: Supply air temperature is too high compared to return air temperature under operating conditions. The state will by time request defrost or/and probe test. - Indicates: - Low refrigerant charge. - Incorrect connection or location of supply or return air sensor. - Air leakage at supply air sensor cable. - Ice or frost on evaporator coil. - Incorrect evaporator fan operation.	- Using DATA menu inspect readings. - Enter Manual Function Test menu and operate evaporator fan at high speed to evaluate probe spread.

Warning #0024
SUPPLY TEMP TOO LOW – CHECK EVAP COIL

Description	Corrective Action
- When: - During Chill or Frozen Mode: Supply air temperature is too low compared to return air temperature under operating conditions. The state will by time request extended defrost, defrost or/and probe test. - Indicates: - Incorrect connection or location of supply or return air sensor. - Air leakage at supply air sensor cable. - Incorrect evaporator fan operation.	- Using DATA menu inspect readings. - Enter Manual Function Test menu and operate evaporator fan at high speed to evaluate probe spread.

Warning #0025
EVAP TEMP TOO HIGH - CHECK EVAP SENSOR

Description	Corrective Action
- When: - During Chill or Frozen Mode: Evaporator coil temperature is too high compared to return air temperature under operating conditions. - Indicates: - Probe spread, misplaced probes.	- Using DATA menu inspect readings. - Enter Manual Function Test menu and operate evaporator fan at high speed to evaluate probe spread.

Warning #0026
EVAP TEMP TOO LOW - CHECK EVAP SENSOR

Description	Corrective Action
- When: - During Chill or Frozen Mode: Evaporator coil temperature is too low compared to return air temperature under operating conditions. The state will by time request extended defrost, defrost or/and probe test. - Indicates: - Ice on the evaporator coil, need for defrost. - Probe error.	- Using DATA menu inspect readings. - Enter Manual Function Test menu and operate evaporator fan at high speed to evaluate probe spread.

Warning #0027
SYSTEM LOW PRESSURE - CHECK REFR CHARGE

Description	Corrective Action
- When: - The warning is related to the capacity surveillance system which observes the reefer machine capability to create a temperature drop between return air and supply air when expected to be running at high capacity. - Action: - If the expected delta temperature is not reached the warning are set and the evaporator fans stopped to prevent heating the cargo. - Indicates: - Lack of refrigerant.	- Check Refrigerant level. - Check for refrigerant flow through the system, look for restrictions.

Warning #0028
FROZEN SET POINT - CHECK AIR EXCHANGE

Description	Corrective Action
- When: - If AVL door is open in frozen set point mode. - Indicates: - Air ventilation ought to be in position closed when running within frozen mode.	Check air ventilation door position

Warning #0030
HIGH PRESS CUT OUT - PLEASE WAIT

Description	Corrective Action
- When: - Unit stop due to high pressure cutout signal from the HPCO switch. - The warning will go away when the input signal indicates normal condition. - Indicates: - Poor or missing cooling of the refrigerant. - Action - The state will stop / remove the compressor run signal. - The state will overrule regulation of the condenser fan and starts the fan. - This state will activate and hold warning #31 as long as the input signal indicates HPCO.	- Controller clears message on compressor start-up. - No direct alarm action based on this situation. - If the state continues: - Checkup for airflow through the condenser coil, air flow might be blocked. - Checkup for condenser fan rotation and direction, must such air through the coil and blow air out through the grill.

Warning #0031
HPCO TIMER HOLD - PLEASE WAIT

Description	Corrective Action
- When: - The warning is a timer based warning to protect the compressor from starting at high pressure. The warning will go away when the holding time after HPCO gets normal has run out. - Indicates: - HPCO present or has just been present. - Action - The state will stop / remove the compressor run signal. - The state will overrule regulation of the condenser fan and starts the fan. - This state will activate and hold warning #31 as long as the input signal indicates HPCO.	- Controller clears message on compressor start-up. - No direct alarm action based on this situation. - If the state continues: - Checkup for airflow through the condenser coil, air flow might be blocked. - Checkup for condenser fan rotation and direction, must such air through the coil and blow air out through the grill.

Warning #0032
LOW PRESS CUT OUT - PLEASE WAIT

Description	Corrective Action
- When: - Unit stops due to low pressure cutout signal from the HPCO switch or the suction pressure reading (if present). - If suction pressure sensor is mounted the signal level for LPCO is below -0,27BarR to activate LPCO state and above +0.38BarR to clear the state. - The warning will go away when the input signal indicates normal condition. - Indicates: - Possible causes include low refrigerant charge, defective low pressure cutout switch or open circuit, block TXV or suction line restriction etc. - Action - The state will stop / remove the compressor run signal. - This state will activate and hold warning #33 as long as the input signal indicates LPCO.	- Controller activates Alarm Code 31 after 5 minutes. - Controller clears message after compressor start-up.

Warning #0033
LPCO TIMER HOLD - PLEASE WAIT

Description	Corrective Action
- When: - The warning is a timer based warning to protect the compressor from starting before the pressure has risen from low pressure. The warning will go away when the holding time after LPCO gets normal has run out. - Indicates: - LPCO present or has just been present.	- Controller clears message on compressor start-up. - No direct alarm action based on this situation.

Warning #0034
COMP TOO HIGH TEMP TIMER - PLEASE WAIT

Description	Corrective Action
- When: - If the compressor temperature gets above 148C, the warning is set. - The warning will go away when the compressor temperature has been below 137C for 60 seconds. - The warning will (also) go away when the compressor temperature gets below 132C. - Indicates: - Compressor stops because discharge temperature is above 148 C (300 F). Message remains in display until discharge temperature decreases to normal. - Action - The state will stop / remove the compressor run signal. - The state will overrule regulation of the condenser fan and starts the fan.	The warning clears itself when the compressor temperature gets normal.

Warning #0035
COMPRESSOR HIGH TEMPERATURE

Description	Corrective Action
- When: - If the compressor temperature gets above 138C, the warning is set. - The warning will go away when the compressor temperature gets below 132C. - Action: - Compressor running at high discharge temperature results in economizer/vapor injection will be active until discharge temperature decreases to normal. - In temperature log the state will be represented by the char 'c' (small c)	The warning clears itself when the compressor temperature gets normal.

Warning #0036
AVL OPEN - CHECK FAE AND CA SETTINGS

Description	Corrective Action
- When: - If configuration is AVL, the setting is below 125CMH and the AVL sensor indicates full open / dismantled door, the warning is set. - Indicates: - Wrongly dismantled air ventilation door.	Check air exchange position vs. setting.

Warning #0037
CO2 READING STUCK FOR >24HOURS

Description	Corrective Action
- When: - With AFAM+ option the Co2 level is constantly monitored. If the reading does not change / fluctuates minimum 0.1% within 24 hour the warning is set. - The warning will clear itself 10 minutes after a change has been observed. - Indicates: - Problems with the gas analyzer. Action: - When the warning is set the event "Gas reading surveillance - Co2 reading stuck for 24H at: x.x%" is made in the event log.	Check gas analyzer readings.

Warning #0038
HIGH VOLTAGE ON LINE

Description	Corrective Action
- When: - High voltage observed, voltage has been above 515 VAC. The Warning will clear when voltage gets below 500 VAC. - Action: - When the warning is set a power line value log is made in the event log. I.e: "CURR: 0.2A PH1: 0.2A PH2: 0.2A PH3: 0.3A VOLT: 529V FREQ: 63Hz "	- Enter Manual Function Test menu and test (operate) components to load the power source. Check volts and amps to help determine the problem. - Possible cause for the problem is a wild running generator set.

Warning #0039
BATTERY CHARGER/HEATER – CHECK BATTERY

Description	Corrective Action
- When: - The data logger battery charger reports battery charging suspended due to low temperature and the battery internal heater has been on for 2 hours the warning is set. - Indicates: - Fault in the data logger battery circuit.	Check for battery position, placement and wiring.

Warning #0040
12V SENSOR PSU PROBLEM

Description	Corrective Action
- When: - If the sensor supply (+ 12VDC) for the humidity or pressure transducers is not able of supplying the 12VDC. - Indicates: - Too high load on the sensor supply.	Check humidity sensor or transducer