



Troubleshooting Guide

CN-IC1-09

Title: i-Controller REV.200 Alarms (Troubleshooting)

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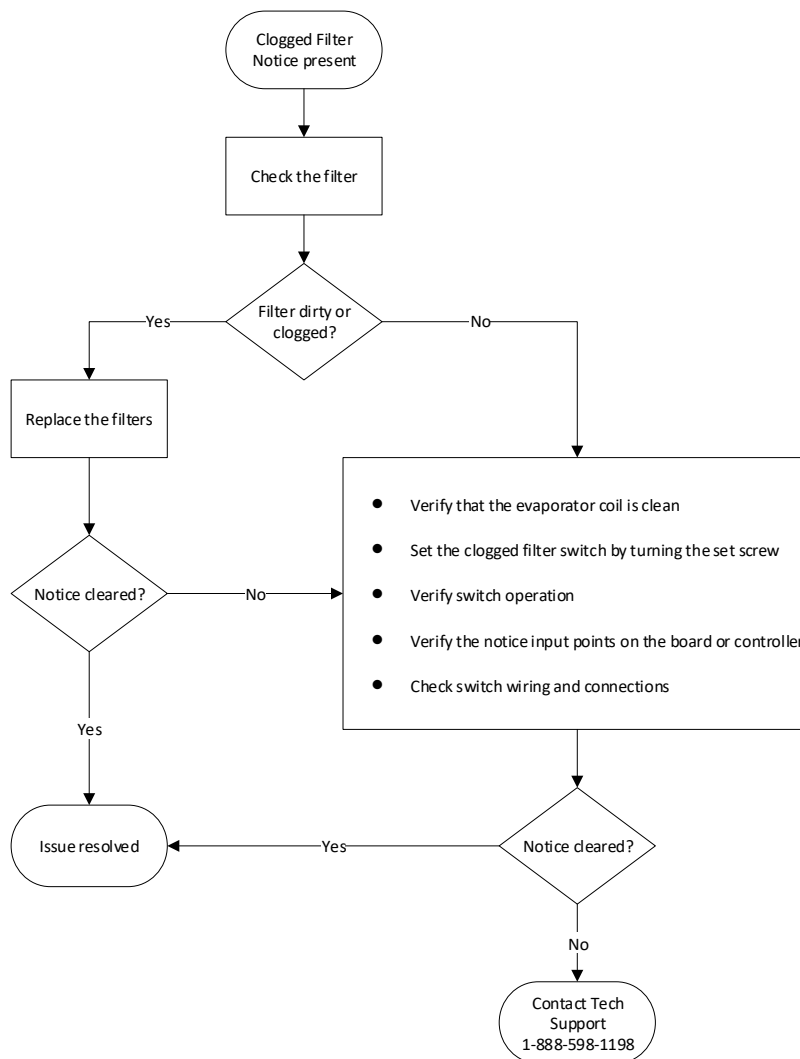
Overview

The following document is used to troubleshoot controller alarms. When an i-Controller alarm exists, you can refer to this document to understand the condition.

Clogged Filter Notice

The clogged filter notice is generated when the filters in the unit become blocked and possibly need to be replaced. When a clogged filter notice is generated, “NOTICE” will be displayed next to “**Clogged Filtr Status**” on the **Alarms** screen.

This notice is generated by a switch that senses a pressure drop across the filter bank and cooling coil. The sensor’s range of adjustment is 0.17 to 5.0 in. W.C. with contact closure on rise. The switch is mounted in the fan compartment with terminal connections in the low voltage control section. Normally open dry contacts are provided for clogged filter indication. This advisory will only be generated during OCCUPIED hours to prevent nuisance alarms during UNOCCUPIED.

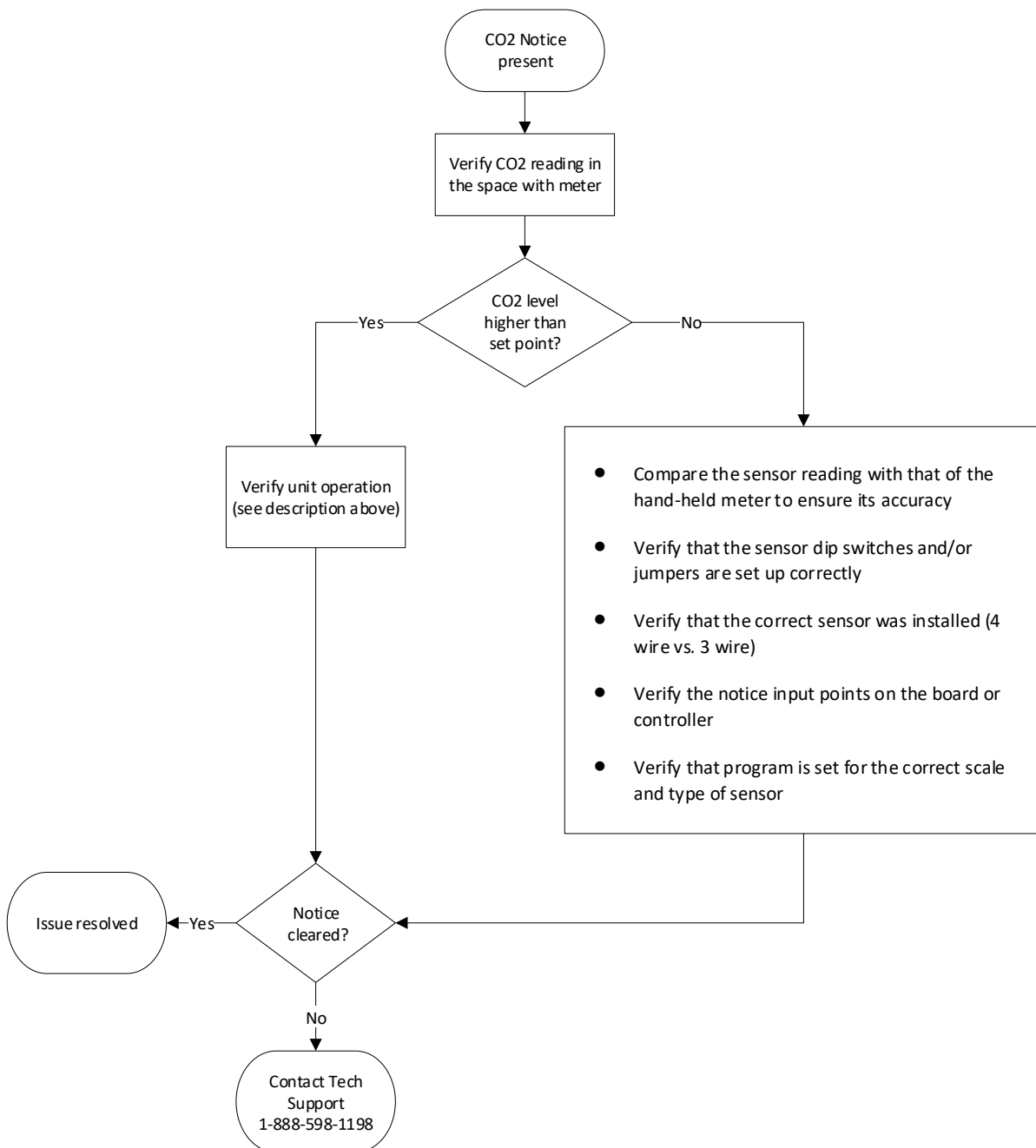


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CO₂ Notice (if equipped)

The CO₂ notice is generated when the CO₂ level in the space is too high. When a high CO₂ level is detected, “**Hi Lvl**” will be displayed next to “**CO₂ Level Status**” on the **Alarms** screen.

This notice is generated when the CO₂ sensor, located in the space or return air stream, exceeds the specified ppm limit, typically 1,000 ppm. The notice will cause the outside air damper (OAD) to open an additional maximum specified percentage, set to 15% by default. Once the CO₂ level in the space is lowered, the unit will resume regular operation.

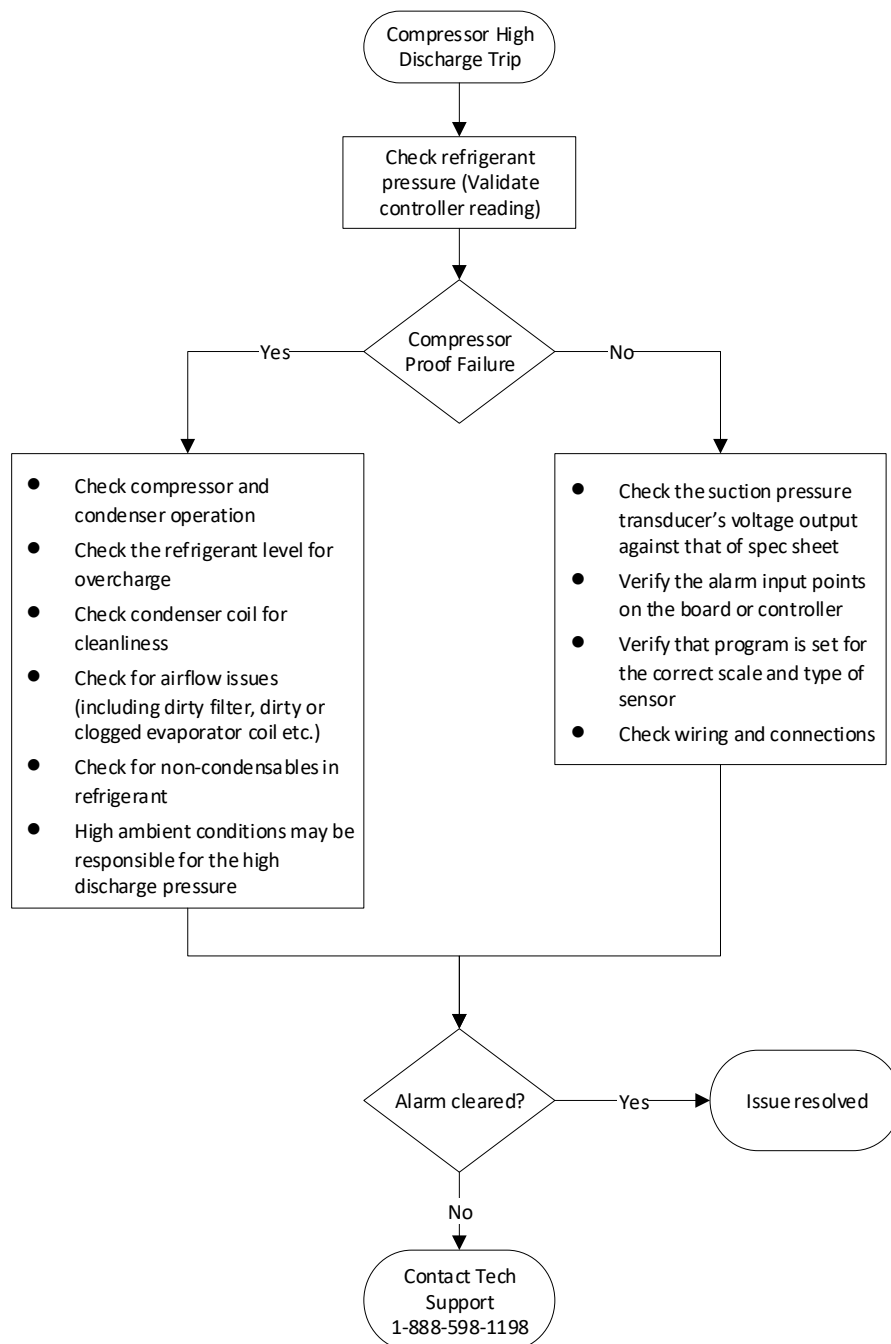


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Compressor High Discharge Trip Alarm

The high discharge trip is generated when a high discharge pressure condition is present and compressor proof fails. When a high discharge trip alarm is generated, **“ALARM”** will be displayed next to **“COMP High Dis Trip”** on the **Alarms** screen.

When the discharge pressure decreases, and the compressor proof is made, the compressor high discharge trip will automatically reset.

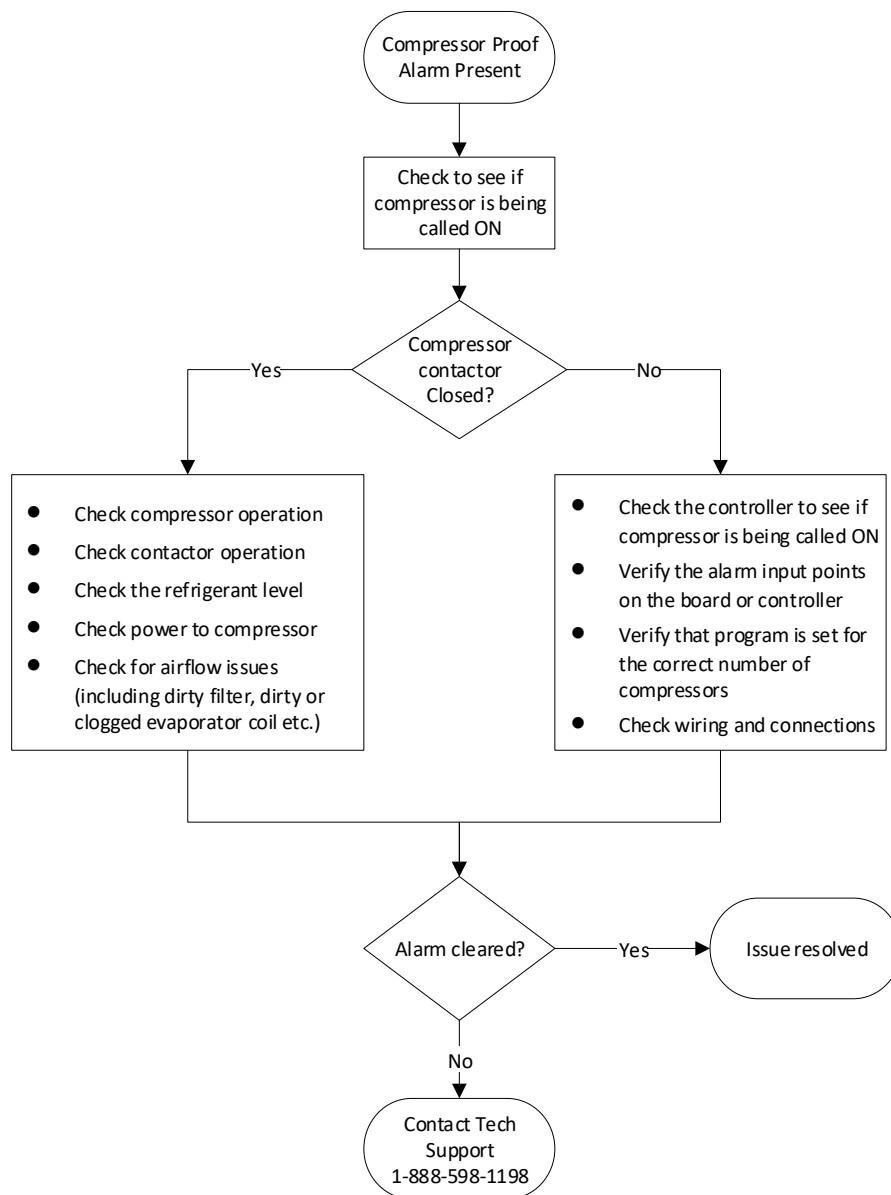


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Compressor Proof Alarm

The compressor proof alarm is generated when a specific compressor is not running when enabled by the controller. If a digital compressor is at 50% capacity and the discharge pressure minus suction pressure is less than 20psi, a compressor proof alarm will be generated. If a fixed compressor is on and the discharge pressure minus suction pressure is less than 40psi a compressor proof alarm will be generated. When a compressor proof failure is detected, **“No Comp Proof”** will be displayed next to **“COMP”** on the **Alarms** screen.

When a successful proof signal is received by the controller, the compressor proof alarm will automatically reset.



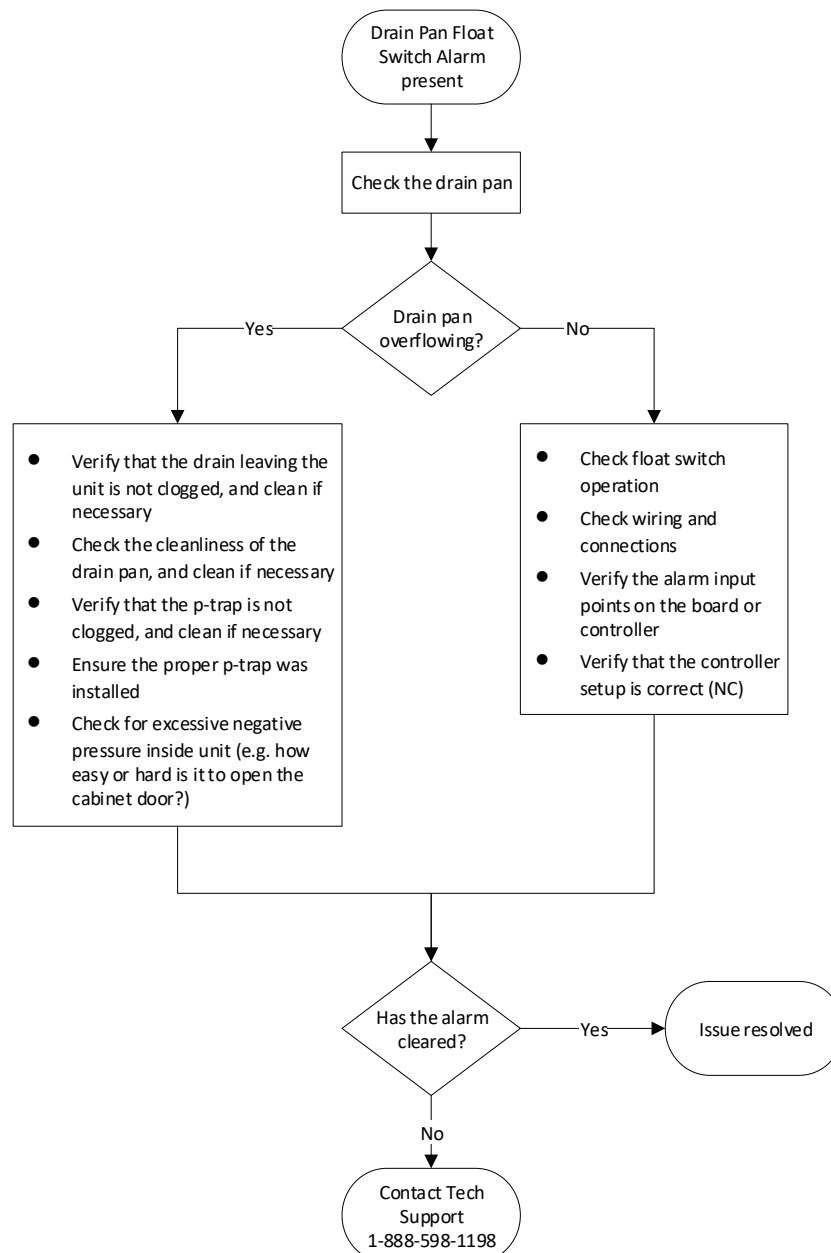
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Drain Pan Overflow Alarm

The drain pan overflow alarm is generated when the drain pan float switch detects an elevated level of water in the condensate drain pan. When an overflow alarm is generated, **“ALARM”** will be displayed next to **“Overflow Status”** on the **Alarms** screen.

The normally closed float switch, located in the condensate drain pan and will open if the water level is too high. After a 30 second delay, the FLō unit will shut down to prevent the water from overflowing out of the drain pan.

When the water level in the drain pan decreases and the float switch input closes, the drain pan overflow alarm will automatically reset.



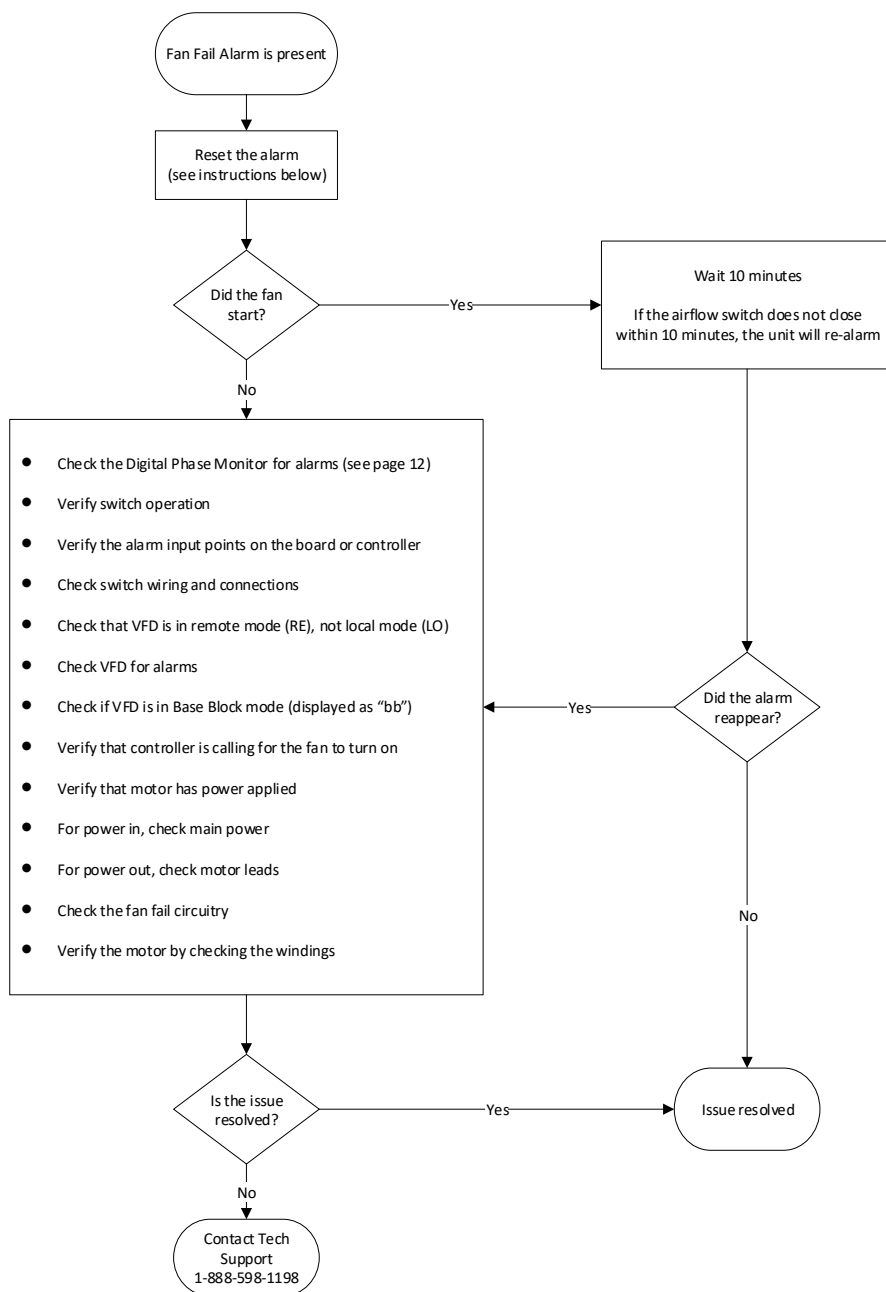
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Fan Fail Alarm

The fan fail alarm is generated when a fan fails to start for more than 10-minutes when enabled by the controller. When a fan fail alarm is generated, “**ALARM**” will be displayed next to “**Fan Status**” on the **Alarms** screen.

This alarm is generated when the digital airflow switch, located in the fan cabinet, detects a loss of airflow and switches from normally open to closed. The Fan Fail alarm may also be generated during a Phase Loss alarm.

When a fan fail alarm occurs, the FLō unit will be shut down. The fan fail alarm must be manually reset using the i-Controller Visograph display.

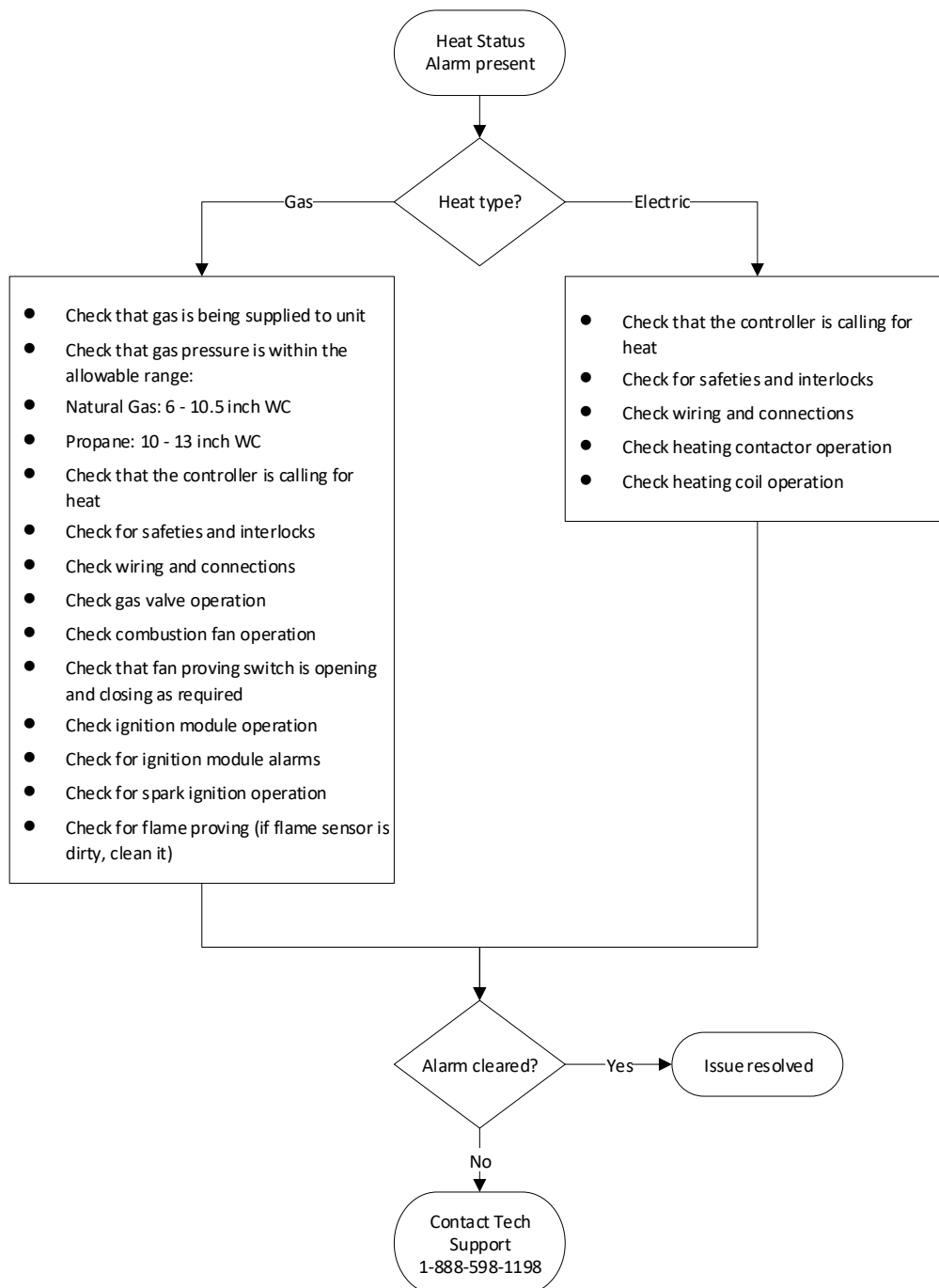


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Heat Alarm

The heat status alarm is generated after 15-minutes if the supply temperature has not increased by at least 5°F when heat mode has been enabled. When a heat status alarm is generated, “**ALARM**” will be displayed next to “**Heat Status**” on the **Alarms** screen.

When heat mode is disabled, the heat status alarm will automatically reset.

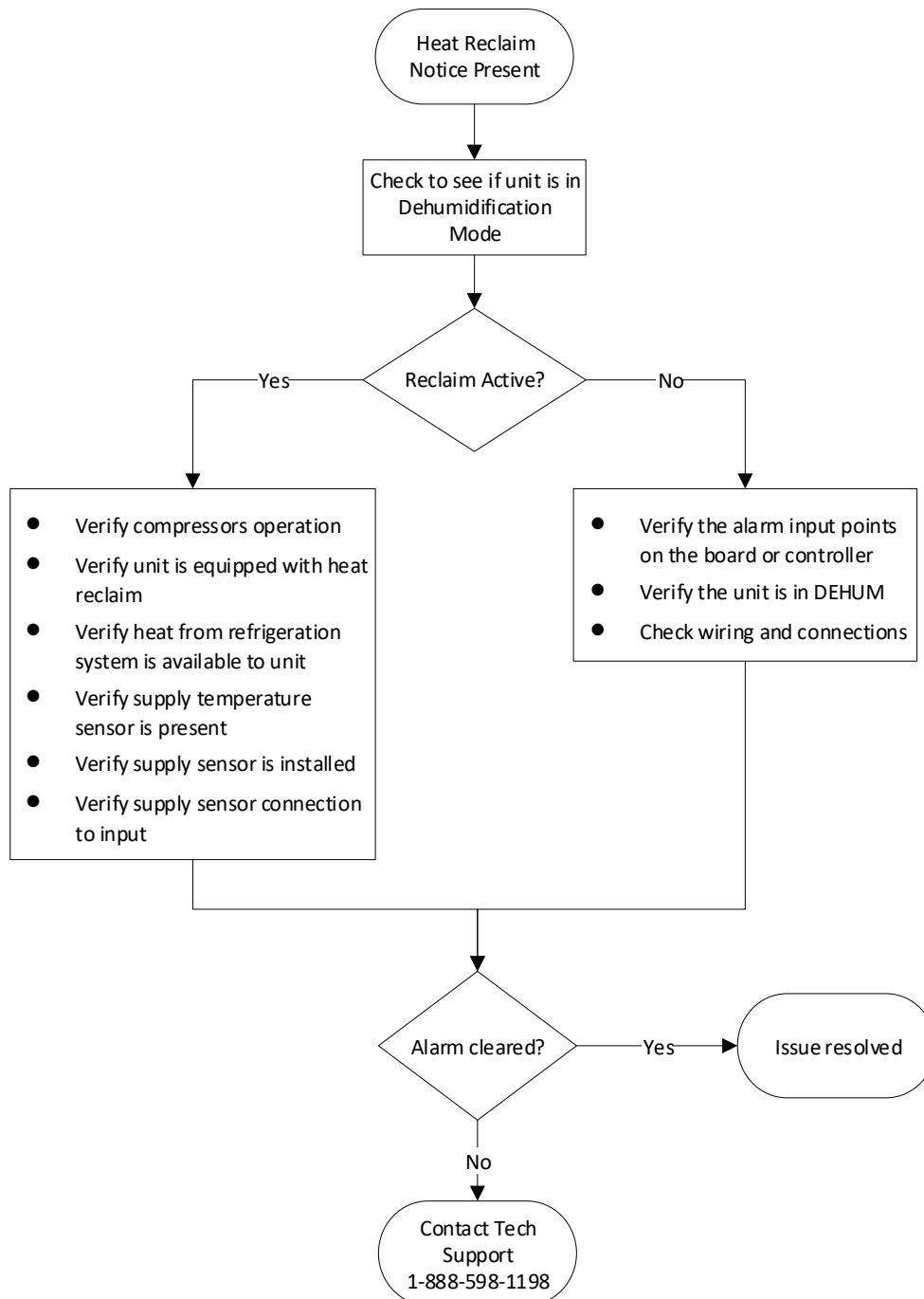


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Heat Reclaim Notice (if equipped)

A heat reclaim or reheat notice is generated when the supply temperature has not increased at least 5°F after heat reclaim or reheat has been enabled for 15-minutes. When a heat reclaim notice is generated, “**YES**” will be displayed next to “**Reclaim Proof**” on the **Alarms** screen.

When heat reclaim has been disabled, the heat reclaim notice will automatically reset.

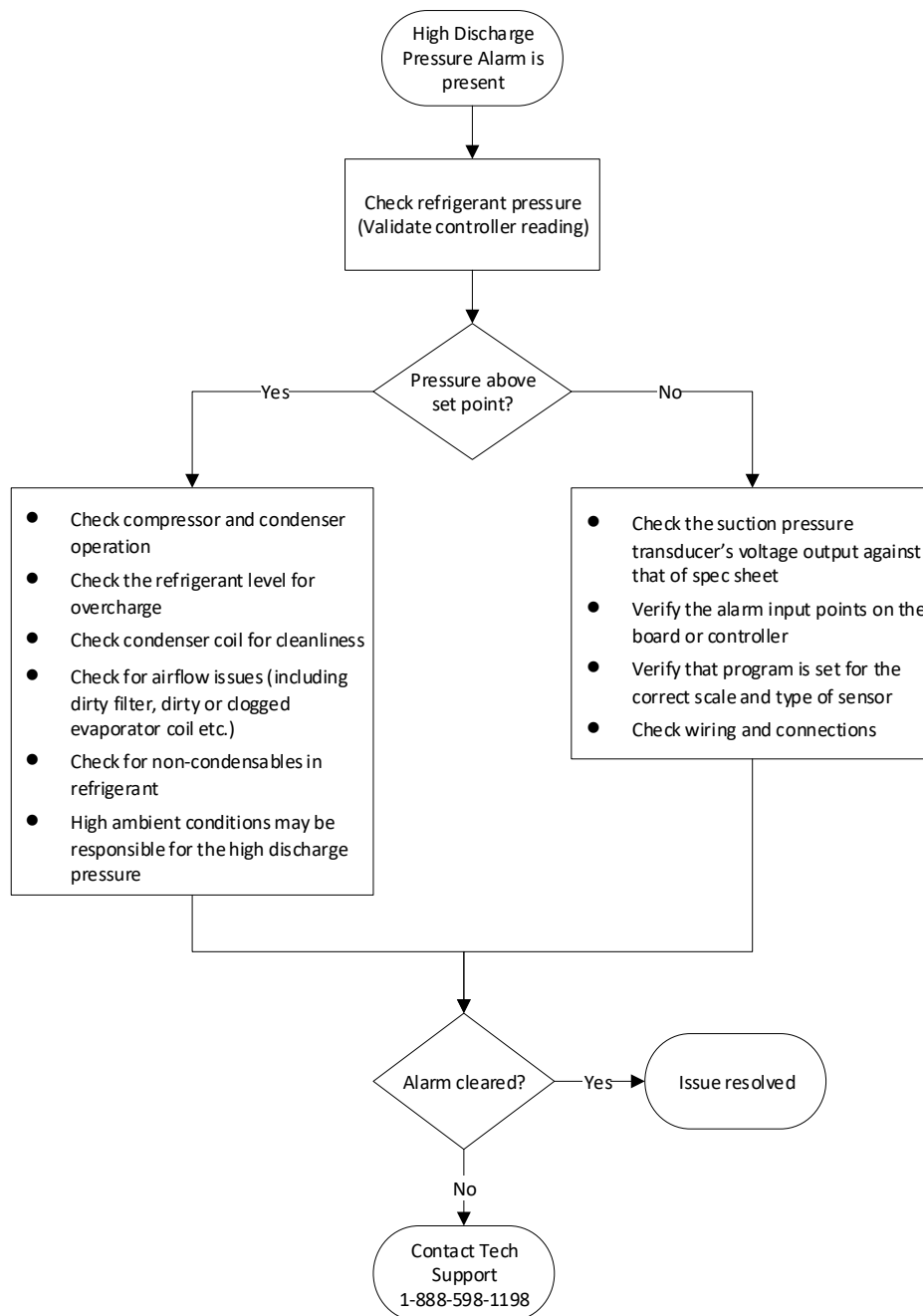


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High Discharge Pressure Alarm

The high discharge pressure alarm is generated when the discharge pressure increases above 500psi for 5-minutes while a compressor is enabled throughout dehumidification or cooling mode. In the event of controller failure, a mechanical cut-out will occur at 600 psi. When a high discharge pressure alarm is generated, **“High Dis Press”** will be displayed next to **“COMP 1 Status”** on the compressor status screen.

When the discharge pressure decreases below 450psi and there has been a compressor proof for at least 5 minutes, the high discharge pressure alarm will be automatically reset.

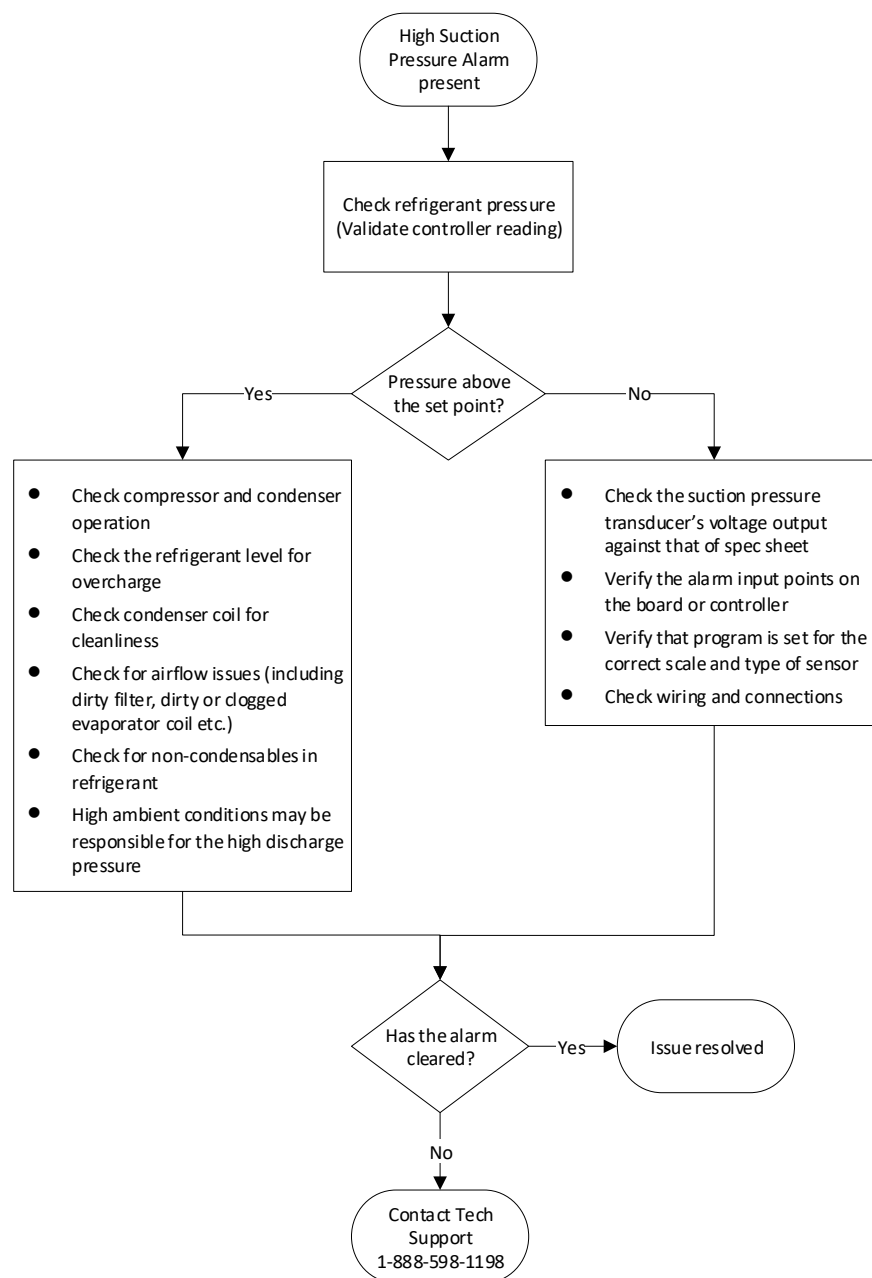


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High Suction Pressure Alarm

For a digital compressor, the high suction pressure alarm is generated when the suction pressure increases above 140psi for 10-minutes when a compressor is enabled during dehumidification or 170psi in cooling mode. For a fixed compressor the high suction pressure alarm is generated with the suction pressure increases above 160psi and reset when the pressure decreases below 150psi. When a high suction pressure alarm is generated, “**ALARM**” will be displayed next to “**High Suct Press**” on the *Alarms* screen.

When dehumidification and cool mode are disabled, or if the suction pressure falls below the 130psi during dehumidification or 160psi during cooling, the high suction alarm will automatically reset.

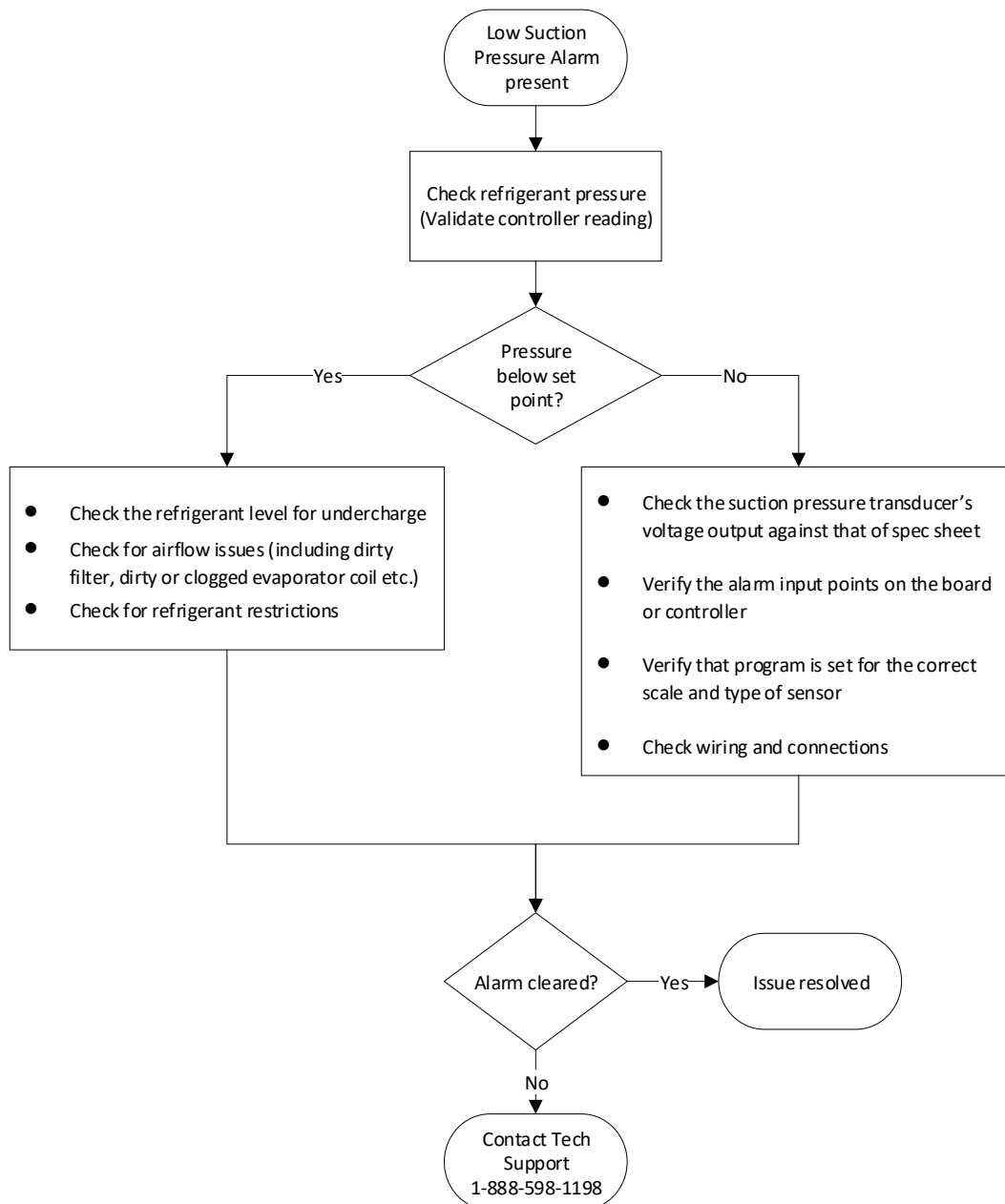


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Low Suction Pressure Alarm

The low suction pressure alarm is generated when the suction pressure decreases below 80psi throughout dehumidification or cooling modes for more than 10-minutes. In the event of controller failure, a mechanical cut-out will occur at 60 psi. When a low suction pressure alarm is generated, “**ALARM**” will be displayed next to “**Low Suct Press**” on the **COMP Status** screen.

When suction pressure increases above 100psi, the low suction pressure alarm will automatically reset.



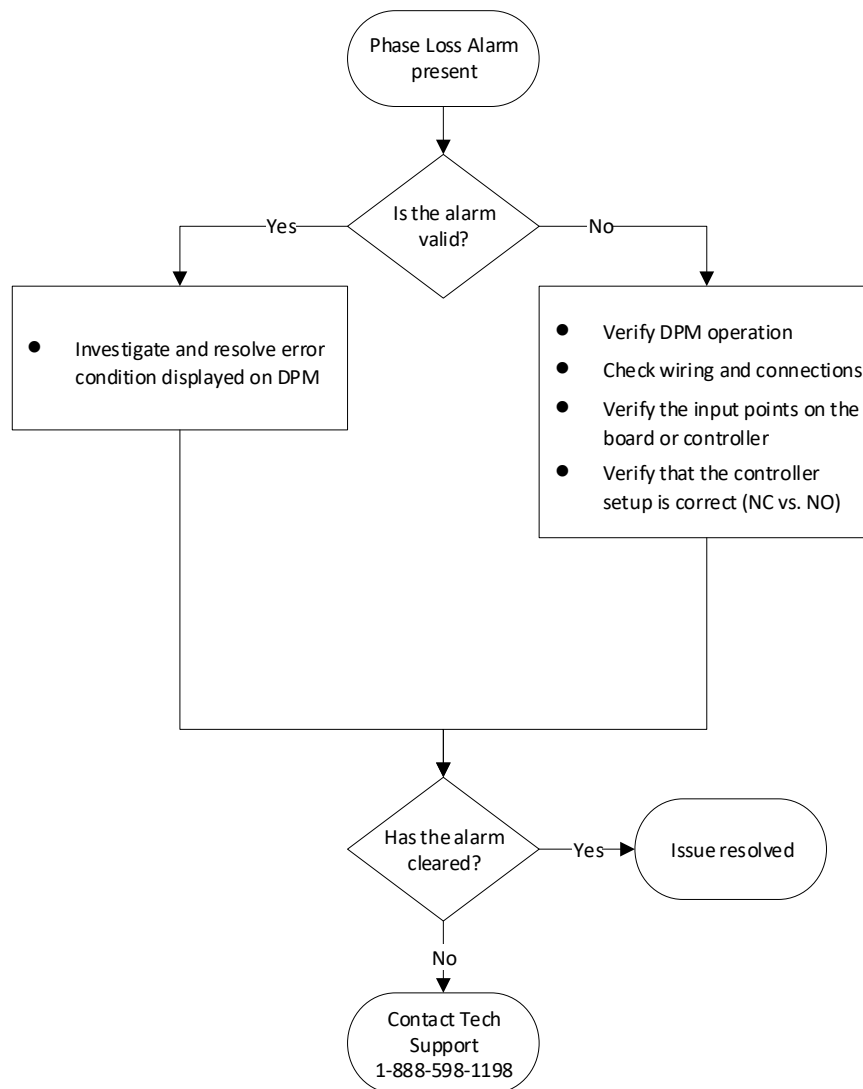
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Phase Loss Alarm

The phase loss alarm is generated when the unit is not receiving proper power and to protect the motors and compressors from voltage imbalance, over/under voltage or improper electrical phasing for 30-seconds. When a phase loss alarm is generated, “**ALARM**” will be displayed next to “**Phase Loss Status**” on the **Alarms** screen.

This alarm is generated when the phase monitor detects that the electrical phases are more than 10% out of balance, the voltage is 10% higher or lower than design voltage, or phases are reversed. Upon detection of one or more of these conditions, the monitor opens the secondary 24VAC circuit disabling the control circuit of the FLO Unit. A phase loss alarm may generate a fan fail alarm. Additional information will be displayed on the Phase Loss Monitor display (a smaller blue monitor, located in the control cabinet). The phase loss alarm triggers an emergency shutdown of the unit.

When the normally closed phase loss input is closed, the phase loss alarm will automatically reset.

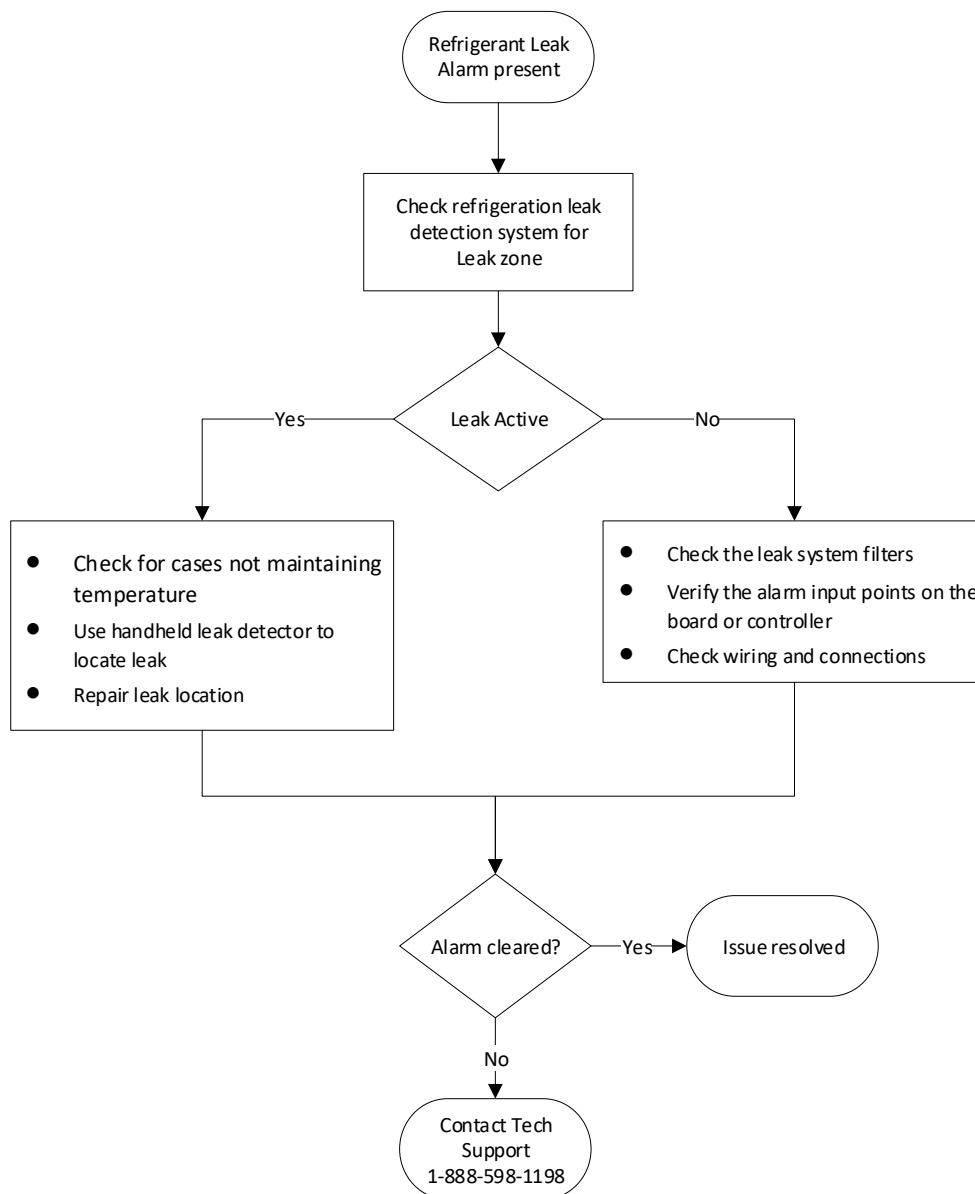


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Refrigerant Leak Notice (if equipped)

The refrigerant leak notice is generated if a refrigeration leak in the space is detected by the leak detection system and the leak signal via digital closure is sent to the i-Controller. Once the signal is received by the i-Controller, the OAD of the FLō unit will open to 100% to flush the space with fresh air. When a refrigerant leak notice is generated, “**Notice**” will be displayed next to “**Ref Lk Status**” on the **Alarms** screen.

When the refrigerant leak is no longer signaled by the refrigeration system and the digital input is opened, the i-Controller and OAD will return to normal operation and the refrigerant leak notice will automatically reset.

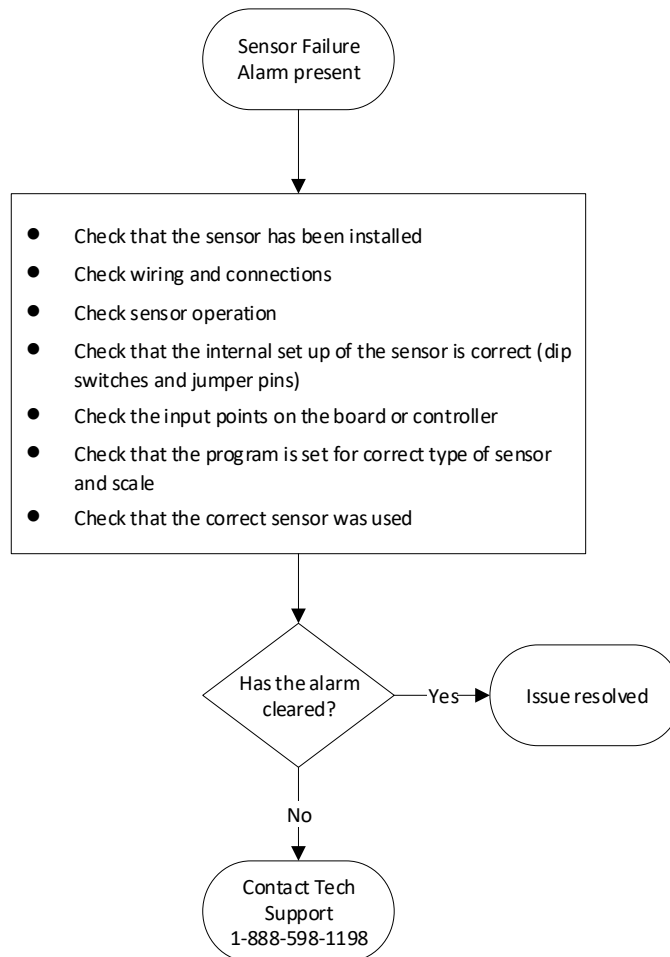


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Sensor Failure Alarm

The sensor failure alarm is generated when one or more of the temperature, transducer, humidity or CO2* sensors are faulty. When a sensor failure alarm is generated, “**FAIL**” will be displayed next to the corresponding sensor on the **Sensor Status** screen. To see which sensor has failed, navigate to the alarms menu and select sensor status.

When the failed sensor condition has been corrected, the sensor failure alarm will automatically reset.



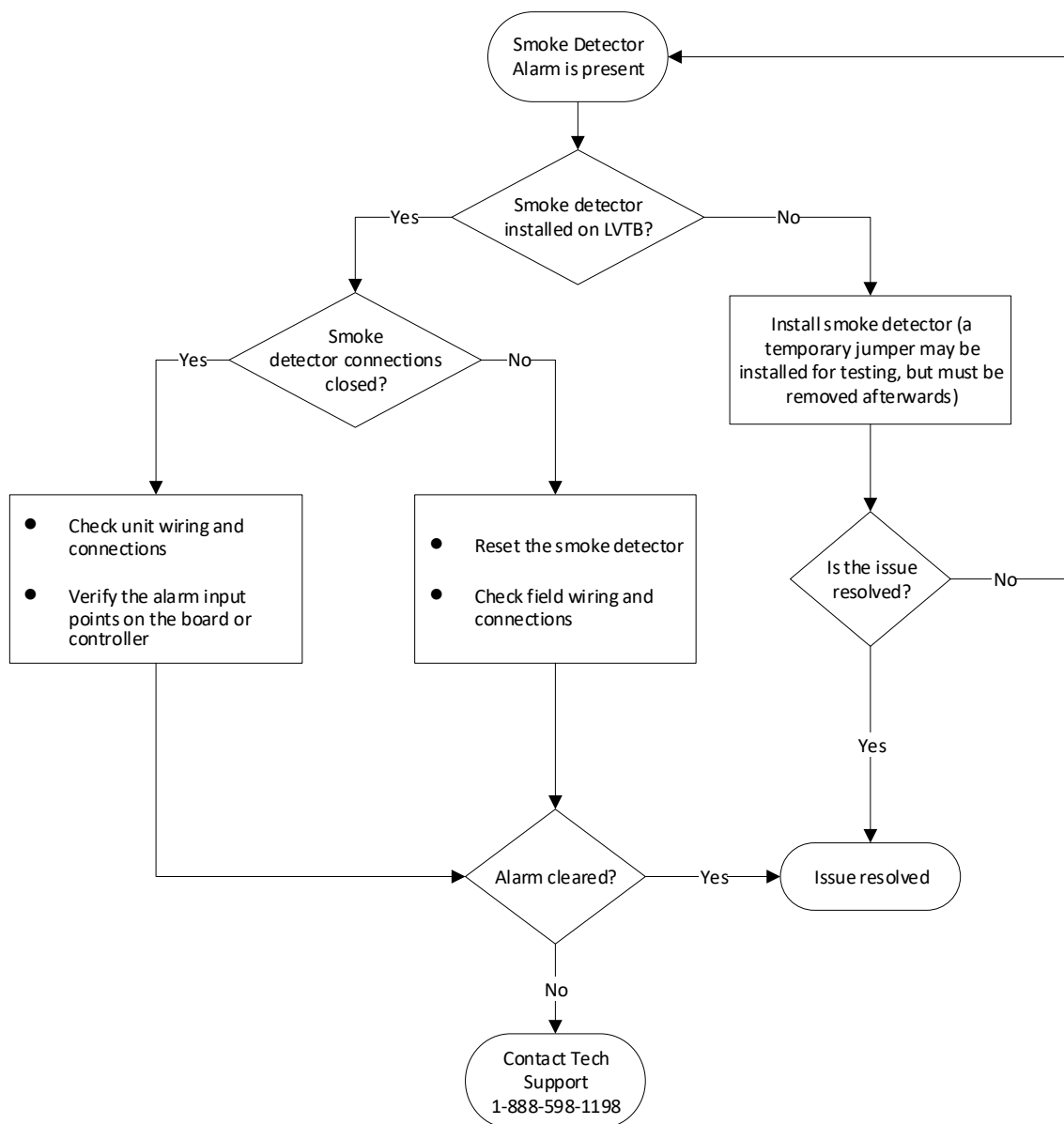
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Smoke Detector Alarm

This smoke detector alarm is generated when smoke is detected in the unit or air stream. When the smoke detector alarm is generated, “**ALARM**” will be displayed next to “**Smoke Det. Status**” on the **Alarms** screen.

This alarm is generated via the opening of the normal closed smoke detector circuit and will trigger an emergency shutdown of the unit.







When the smoke detector circuit is closed, the alarm will automatically reset.



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i-Controller Alarm Reset Instructions:

1. Using the  and  buttons (T4 and T6, respectively) to ensure that the “**OFF**” value is highlighted.
2. Press the  (T5) button and the value should blink.
3. Using the  and  buttons increase and decrease the value until “**ON**” appears.
4. Once the desired value has been reached press the  button to set the value.
5. Once the value has been set to “**ON**” the fan fail alarm has been reset and the fan is ready for operation.
6. The value will automatically reset to “**OFF**” after 5 seconds.