

Refrigeration System Check List

by Art Sutherland

In order to function properly a refrigeration system must have the following three conditions.

1. The chiller must have the correct level of refrigerant.

If the refrigerant level is low, check for:

- Refrigerant leaks
- Obstruction or failure of liquid level valves and controls.

If the refrigerant level is high, check for:

- Failure of liquid level valves and controls
- Overcharge of refrigerant
- Oil in chiller.

2. The liquid refrigerant must be at the correct pressure. If the refrigerant suction pressure is low, check for:

- Low refrigerant level in chiller
- Insufficient or lack of secondary coolant flow
- Incorrect control settings (i.e. thermostat set too cold)
- Faulty gauges.

If the refrigerant suction pressure is high, check for:

- Problems with compressor
- Problems with condenser
- Secondary coolant warmer than normal
- Faulty gauges.

3. There must be the correct flow of secondary coolant. If there is insufficient flow of secondary coolant (as indicated by low brine pressure and/or low suction pressure), check balance tank to see if there has been a leak in the system.

- Brine pump might have failed
- Brine header nipples could be fouled over
- Chiller tubes could be fouled over.

Proper maintenance and knowing what to look for will extend the life of your refrigeration system and enhance its efficiency.

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