



## Compressor Checklist

Approximately one-third of all air conditioning and refrigeration compressors returned under warranty are NFF (No Fault Found). (*Emerson Climate Technologies-achrnew.com-03-30-2009 edition*)

It is for this reason that we have implemented a policy that requires a Compressor Checklist to be completed in the field at the time of compressor failure diagnosis. This checklist will aid the technician with operational and non-operational tests that can be performed to confirm the failure. We have experienced several occasions when the use of this checklist has resulted in a misdiagnosed compressor.

If your technician concludes a compressor on a ClimaCool chiller has failed, and it is under warranty, we require that you forward the completed Compressor Checklist to [Dsparks@climacoolcorp.com](mailto:Dsparks@climacoolcorp.com). Once determination has been made that the technician's diagnosis is accurate, we will proceed with the warranty process.

After the compressor has been replaced, the technician will use the same checklist to confirm the health of the system and return the completed form to [Dsparks@climacoolcorp.com](mailto:Dsparks@climacoolcorp.com). We welcome the opportunity to discuss all the data collected to assist in determining the root cause of failure and make recommendations to correct a system problem that may be at fault.

We appreciate your continued support as we work together developing effective service tools benefiting our valued Reps, our mutual customers and ClimaCool.

# Compressor Checklist

Fill out checklist as complete as possible to confirm failure; also after replacement to help determine root cause.

Project Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City/State: \_\_\_\_\_  
 Start-up Dt: \_\_\_\_\_  
 Todays Dt.: \_\_\_\_\_

Contractor Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City/State: \_\_\_\_\_  
 Phone: \_\_\_\_\_

### Module

Model#: \_\_\_\_\_  
 Serial #: \_\_\_\_\_  
 Chiller #: \_\_\_\_\_ Bank #: \_\_\_\_\_

### Compressor

Model #: \_\_\_\_\_  
 Serial # 1: \_\_\_\_\_  
 Serial # 2: \_\_\_\_\_

- ▶ All wiring terminations in module panel, safeties and compressors tightened:  Yes  No
- ▶ Rotation of scroll compressor is correct:  Yes  No
- ▶ Phase Monitor installed and properly connected:  Yes  No

### Resistance Reading of Compressor Windings

(Be sure to remove power, lock out and tag out before performing test)

L1 / L2 \_\_\_\_\_ L1 / L3 \_\_\_\_\_ L2 / L3 \_\_\_\_\_  
 L1 / Ground \_\_\_\_\_ L2 / Ground \_\_\_\_\_ L3 / Ground \_\_\_\_\_

Motor thermistor resistance: \_\_\_\_\_ NOTE: (If > 2750 OHMS allow compressor motor time to cool and recheck)  
 Is compressor hot to the touch? \_\_\_\_\_ See compressor motor PTC instructions for further troubleshooting information

### Phase to Ground Voltage

MEASURE VAC ON LOAD SIDE OF FUSES OR CB

L1 \_\_\_\_\_ L2 \_\_\_\_\_ L3 \_\_\_\_\_

### Phase to Phase Voltage

MEASURE VAC AT LOAD SIDE OF CONTACTOR

L1/L2 \_\_\_\_\_ L2/L3 \_\_\_\_\_ L1/L3 \_\_\_\_\_

**NOTE: If Compressor Is Operable, Proceed With Steps Listed Below.  
 Complete the Section for the Affected Circuit.**

### Compressor Circuit #1

Amperage: L1 \_\_\_\_\_ L2 \_\_\_\_\_ L3 \_\_\_\_\_  
 HEAT COOL  
 Sight Glass Oil Level: \_\_\_\_\_  
 Suction Pressure: \_\_\_\_\_  
 Suction Line Temperature: \_\_\_\_\_  
 Compressor Superheat: \_\_\_\_\_  
 Discharge Pressure: \_\_\_\_\_  
 Discharge Line Temperature: 220 max \_\_\_\_\_  
 Discharge Gas Superheat: 50 min \_\_\_\_\_  
 Liquid Line Temperature: \_\_\_\_\_  
 Liquid Subcooling: \_\_\_\_\_  
 Evaporator Entering Water Temp.: \_\_\_\_\_  
 Evaporator Leaving Water Temp.: \_\_\_\_\_  
 Condenser Entering Water Temp.: \_\_\_\_\_  
 Condenser Leaving Water Temp.: \_\_\_\_\_  
 Evaporator Pressure Drop: \_\_\_\_\_  
 Condenser Pressure Drop: \_\_\_\_\_

### Compressor Circuit #2

Amperage: L1 \_\_\_\_\_ L2 \_\_\_\_\_ L3 \_\_\_\_\_  
 HEAT COOL  
 Sight Glass Oil Level: \_\_\_\_\_  
 Suction Pressure: \_\_\_\_\_  
 Suction Line Temperature: \_\_\_\_\_  
 Compressor Superheat: \_\_\_\_\_  
 Discharge Pressure: \_\_\_\_\_  
 Discharge Line Temperature: 220 max \_\_\_\_\_  
 Discharge Gas Superheat: 50 min \_\_\_\_\_  
 Liquid Line Temperature: \_\_\_\_\_  
 Liquid Subcooling: \_\_\_\_\_  
 Evaporator Entering Water Temp.: \_\_\_\_\_  
 Evaporator Leaving Water Temp.: \_\_\_\_\_  
 Condenser Entering Water Temp.: \_\_\_\_\_  
 Condenser Leaving Water Temp.: \_\_\_\_\_  
 Evaporator Pressure Drop: \_\_\_\_\_  
 Condenser Pressure Drop: \_\_\_\_\_

**Comments:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_