

## Air Conditioning Compressor Checklist

**Model #** \_\_\_\_\_

**Serial #** \_\_\_\_\_

### Confirm proper Airflow

- Correct rotation of Blower motor(s) and Cond. fan motor(s)
- All Grilles/Diffusers are open and unobstructed
- Filters are clean
- All Coils are clean
- Belts, Pulleys, and/ or Bearings in good condition

### Compressor electrical readings

Before condemning any compressor these readings must be taken  
3 phase

Confirm voltage at disconnect

- L1 to L2 \_\_\_\_\_
- L2 to L3 \_\_\_\_\_
- L1 to L3 \_\_\_\_\_
- Required voltage (from Data plate) \_\_\_\_\_

Confirm voltage at compressor terminals

- L1 to L2 \_\_\_\_\_
- L2 to L3 \_\_\_\_\_
- L1 to L3 \_\_\_\_\_

Disconnect power and wires from compressor

Resistance Readings

- L1 to L2 \_\_\_\_\_
- L2 to L3 \_\_\_\_\_
- L1 to L3 \_\_\_\_\_

All should be near equal

- L1 to ground \_\_\_\_\_
- L2 to ground \_\_\_\_\_
- L3 to ground \_\_\_\_\_

All should read OL or Infinite resistance

## Compressor electrical readings

Before condemning any compressor these readings must be taken

### 1 phase

Confirm voltage at disconnect

- L1 to L2 \_\_\_\_\_
- Required voltage (from Data plate) \_\_\_\_\_

Confirm voltage at compressor terminals

- C to R \_\_\_\_\_ Should equal line voltage
- C to S \_\_\_\_\_ Should be higher than line voltage

Disconnect power and wires from compressor

Resistance Readings

- C to R \_\_\_\_\_ Should be Lowest reading
- C to S \_\_\_\_\_ Should be Higher reading
- R to S \_\_\_\_\_ Should be close to sum of CR and CS

- C to ground \_\_\_\_\_
- R to ground \_\_\_\_\_
- S to ground \_\_\_\_\_

All should read OL or Infinite resistance

## Run Capacitor check

- Turn off power
- Mark where wires are connected
- Discharge run capacitor with 20,000-ohm resistor
- Disconnect wires from Capacitor
- Connect capacitor tester across both terminals (C and Herm if a dual run capacitor)
- Capacitor uf reading should be approx 6% +/- of what is printed on the capacitor.

Example:

- Reading was 47.6 uf
- Rated on capacitor was 45 uf
- Multiply  $45 \times 6\% = 2.7$
- $45 + 2.7 = 47.6$
- $45 - 2.7 = 42.3$
- Capacitor is good if it reads between 42.3 and 47.7

## Refrigerant Readings

Before condemning any running compressor these readings must be taken

Fixed \_\_\_\_\_ OR \_\_\_\_\_ TXV \_\_\_\_\_

### *Determine the Required Readings*

R/A Wet Bulb \_\_\_\_\_ R/A Relative Humidity \_\_\_\_\_ Outdoor Temp \_\_\_\_\_

### *Acquire the Operating Readings*

Suction Pressure \_\_\_\_\_

Head Pressure \_\_\_\_\_

Suction Line Temp \_\_\_\_\_

Cond. Sat Temp \_\_\_\_\_

Evap. Sat Temp \_\_\_\_\_  
-

Liquid Line Temp \_\_\_\_\_  
-

Superheat \_\_\_\_\_  
=

Subcooling \_\_\_\_\_  
=