Air Conditioning Compressor Checklist

Model # _____
Serial # _____

Confirm proper Airflow

- Correct rotation of blower motor(s) and condenser 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	1 Phase
Confirm voltage at disconnect • L1 to L2 _____ • L2 to L3 _____ • L1 to L3 _____ • Required voltage (from Data plate) _____	Confirm Voltage at Disconnect • L1 to L2 _____ • Require Voltage (from Data Plate)_____
Confirm voltage at compressor terminals • L1 to L2 _____ • L2 to L3 _____ • L1 to L3 _____	Confirm Voltage at Compressor Terminals • C to R _____ Should be equal to line voltage • C to S _____ Should be higher than line voltage
Disconnect power and wires from compressor Resistance Readings (All should be equal) • L1 to L2 _____ • L2 to L3 _____ • L1 to L3 _____	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
• L1 to ground _____ • L2 to ground _____ • L3 to ground _____ All should read OL or Infinite resistance	• C to ground _____ • R to ground _____ • S to ground _____ All should read OL or Infinite Resistance

Air Conditioning Compressor Checklist

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 x 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 <u>running</u> compressor these readings must be taken

_____ Fixed OR _____TXV

Determine the <u>REQUIRED</u> Readings.

- R/A Web Bulb _____
- R/A Relative Humidity _____
- Outdoor Temperature _____

Acquire the <u>OPERATING</u> Readings

Suction Pressure _____

Suction Line Temperature _____
- Evap. Sat. Temp _____
= Superheat _____

Head Pressure _____

Cond. Sat. Temp _____
- Liquid Line Temp _____
= Subcooling _____