

**Compressor Change-out
Field Assistance Request Form**



It is recommended that when a compressor is being replaced a complete evaluation of the part and system be made. Changing the compressor is one of the larger repairs that a service technician can encounter during the repair of a heating and cooling system. This checkout form has been developed to help guide the technician through the repair process.

Testing the existing compressor

Important Note: Before making any electrical checks disconnect all electrical power to system including Indoor and outdoor power sources.

To make the following tests disconnect power wiring going to compressor!!

Is the compressor single \emptyset Is the compressor 3 \emptyset 208/230v Is the compressor 3 \emptyset 460v

Winding ohm readings

The diagram shows a circular terminal block with three terminals. Arrows point from labels to each terminal: 'Common winding Terminal #1' points to the top terminal, 'Run winding Terminal #3' points to the bottom-left terminal, and 'Start winding Terminal #2' points to the bottom-right terminal.

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Compressor Winding Information

Ohm Ω Reading between terminal 1 and 2 = _____ Ω (Ohm reading)
Between terminal 2 and 3 = _____ Ω
Ohm reading between terminal 1 and 3 = _____ Ω
Ohm reading between terminal 1 and ground _____ Ω
Ohm reading between terminal 2 and ground _____ Ω
Ohm reading between terminal 3 and ground _____ Ω
Winding reading (1,3) + (1,2) = (3,2) <i>if not compressor winding is damaged</i>

Note: A reading of infinity to ground should be detected between each terminal to ground. **If not**, test for short to ground at the compressor windings.

Capacitor testing

Run capacitor value _____ mfd. Did capacitor test good with capacitor tester or volt ohm meter <input type="checkbox"/> yes <input type="checkbox"/> no

Other Inspections

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Inspect all wiring, is there any damage to wire or wire terminals yes no

Inspect compressor contactor, are the contact points burned yes no

Has the compressor failed any of the winding tests yes no, if so than an acid test must be made of the compressor oil

Has acid been detected in the compressor oil yes no

Whenever the system is opened to the Atmosphere, it is required that a replacement Liquid line drier be installed at the outdoor unit. When Acid is detected in a system utilizing a acid test kit, a Suction Line Filter Drier must be installed!!!

Compressor Mechanical Tests

Note: before the mechanical testing can be completed the compressor and the unit wiring must be reconnected as per unit electrical wiring diagram.

With the unit connected to electrical power, will the compressor operate yes no

If no: revert back to compressor winding information and collect information again.

Compressor Pressure Information

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Discharge pressure at compressor _____ psig

Suction pressure at compressor _____ psig

Superheat at suction tubing at outdoor unit _____ F°

Sub cooling at the liquid line leaving the outdoor unit _____ F°

Amp draw at run winding _____ a. Amp draw at start winding _____ a.

Amp draw at common winding _____ a

Voltage at compressor contactor terminal T1 and T2 _____ v.(single phase)
T1, T2, _____ v. T2, T3, _____ v. T1, T3 _____ v. (3Ø)

If the Compressor will not operate:

What is the lock rotor amp rating on the listed for that unit _____ amp?

What is the lock rotor amp draw on the common wire to the compressor _____ amp?

What is the lock rotor amp draw on the run winding _____ amp?

What is the lock rotor amp draw on the start winding _____ amp?

For additional compressor pressure and temperature testing questions refer to the A/C and/or Heat Pump Field Assistance Request Form!

Technician's name: _____ Date: _____