

Attachment 2 Compressor Evaluation Form



Warranty Tag #:		Date	
Outdoor Unit Model:		Indoor Coil Model:	
Outdoor Unit Serial:		Indoor Coil Serial:	
Date Installed:		Date Installed:	
Date Failed:			
Compressor Model		Homeowner Name	
Compressor Serial		Original Homeowner	<input type="checkbox"/> yes <input type="checkbox"/> no
Name of Person Filling out Form		Person's Company	

This form is to be completed by either the distributor or dealer personnel whenever a request for unit replacement is made under the terms of Operating Letter 730. A Technical Service Advisor (TSA) Level 3 or Level 4 is authorized to sign and approve a replacement. All other approvals require a Technical Service Manager (TSM) to approve the replacement. In this case, this form should be completed and forwarded to the distributor's TSM for authorization.

Comfort Alert Diagnostic

Is the Comfort Alert module powered on the unit. yes no

Enter the diagnostic flash code from the Comfort Alert Module: _____
(when Comfort Alert is available on the product)

For your reference here is a listing of the flash codes

- **Green "POWER"** Module has power Supply voltage is present at module terminals.
- **Red "TRIP"** Thermostat demand signal Y1 is present, but the compressor not running.
- **Yellow "ALERT"**
 - **Flash Code 1: Long Run Time.** Comp. running extremely long run cycles.
 - **Flash Code 2: System Pressure Trip.** Discharge or suction pressure out of limits or compressor overloaded.
 - **Flash Code 3: Short Cycling,** Compressor is running only briefly.
 - **Flash Code 4: Locked Rotor**
 - **Flash Code 5: Open Circuit**
 - **Flash Code 6: Open Start Circuit,** Current only in run circuit
 - **Flash Code 7: Open Run Circuit,** Current only in start circuit
 - **Flash Code 8: Welded Contactor,** Compressor always runs
 - **Flash Code 9: Low Voltage,** Control circuit < 17VAC

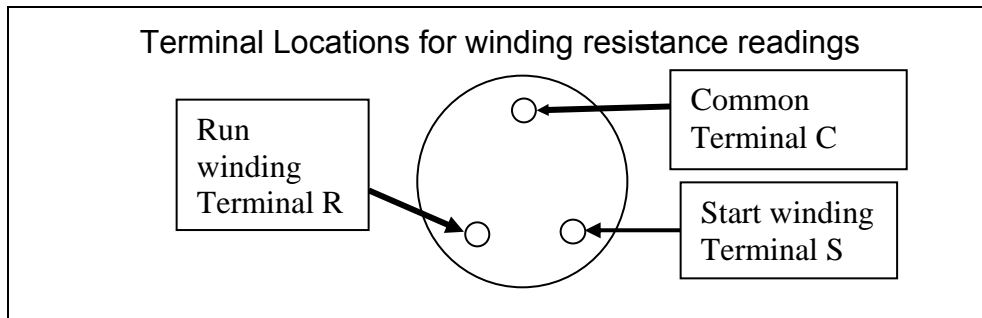
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Proof of Compressor Electrical Failure

(Defined as Compressor windings electrically open, shorted or winding resistance measurements not correct. If electrically open, the internal overload may be open and steps must be taken to determine if a problem external to the compressor is the cause of the overload trip.)

Important Note: Prior to testing the compressor, disconnect all electrical power to system, including indoor and outdoor power sources.



Compressor Winding Resistance Information

R to C	S to C	R to S	C to Ground	R to Ground	S to Ground
Ω	Ω	Ω	Ω	Ω	Ω

Use the ∞ symbol for Open circuit

The sum of the start and run winding resistances should be equal to the value measured between "R" and "S". Resistance reading (R to C) + (S to C) = (R to S) **if not, compressor winding is damaged**

If R to C and S to C are open circuit and R to S has resistance, the internal overload is open. The compressor needs time to cool to allow the internal overload to close. If the overload has opened, then other problems may be present in the refrigerant system that needs to be evaluated. Some possible causes of an open internal overload include insufficient refrigerant charge, restriction in the refrigerant circuit, and power supply problems. Replacing the unit may not solve these problems.

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Proof of Compressor Mechanical Failure

(Defined as Compressor electrically correct, but either will not operate or will operate but not pump refrigerant. **Noisy or vibrating units DO NOT QUALIFY for No Hassle Replacement coverage.**)

Note: this portion of the test procedure requires electrical power be supplied to the unit. Caution should be used to prevent personal injury due to electrical shock.

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

Line voltage at contactor between L1 & L2: _____ Volts. 60 \emptyset 50 \emptyset
Control Voltage across contactor coil: _____ Volts
Amp draw at run winding _____ A.
Amp draw at start winding _____ A.
Amp draw at common terminal _____ A
Voltage at compressor contactor terminal T1 and T2 _____ Volts.

If Compressor Operates

Pressure at liquid service valve: _____, suction service valve _____
Temperature of Liquid Line: _____ °F, Suction Line: _____ °F

Other Inspections

Inspect all wiring. Is there any damage to wire or wire terminals? yes no
Inspect compressor contactor. Are the contact points burned? yes no
Does the capacitor have the correct capacitance for the compressor? yes no

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

Printed Name of Level 3 or 4 TSA:		Name of Distributor:	
TSA Level 3 or 4 signature: _____ Date: _____			
OR			
ICP TSM signature: _____ Date: _____			
<u>Signing this claim indicates you have reviewed the information and agree to it's authenticity and accuracy</u>			
Failure Description Comments: _____			
Check the Appropriate Defect Code	<input type="checkbox"/> 71 Compressor/Electrical	<input type="checkbox"/> 72 compressor/Mechanical	

DISPOSITION OF PRODUCT

If the compressor has failed within 16 months from the date of the compressor manufacture, the compressor is to be returned to Copeland per Operating Letter 707. **In addition to the compressor, the Comfort Alert module is also to be returned with the compressor.**

Age of Compressor	_____ Months
If 20 Months or less complete below	
Way Bill Number	_____
Date Returned	_____

If the compressor has been returned to Copeland, the unit can be scrapped. If the compressor does not meet the requirement to be returned to Copeland then the unit is to be held at the distributor for 30 days after receipt of credit. If no disposition instructions have been received from ICP after the 30 days, the unit can be scrapped. This time allows for ICP to review the evaluation forms and determine if they have an interest in further analysis of the unit.

**Attachment 2
Compressor
Evaluation Form**



Please attach the rating label for the unit here!
If the compressor is not being returned to Copeland
Attach the compressor rating label here also.
Make sure to identify the unit for further analysis!