# Attachment 2

## Compressor Evaluation Form

<table>
<thead>
<tr>
<th>Warranty Tag #:</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outdoor Unit Model:</td>
<td>Indoor Coil Model:</td>
</tr>
<tr>
<td>Outdoor Unit Serial:</td>
<td>Indoor Coil Serial:</td>
</tr>
<tr>
<td>Date Installed:</td>
<td>Date Installed:</td>
</tr>
<tr>
<td>Date Failed:</td>
<td></td>
</tr>
<tr>
<td>Compressor Model</td>
<td>Homeowner Name</td>
</tr>
<tr>
<td>Compressor Serial</td>
<td>Original Homeowner</td>
</tr>
<tr>
<td>Name of Person Filling out Form</td>
<td>Person’s Company</td>
</tr>
</tbody>
</table>

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
Attachment 2
Compressor
Evaluation Form

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.

<table>
<thead>
<tr>
<th>Terminal Locations for winding resistance readings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run winding Terminal R</td>
</tr>
</tbody>
</table>

**Compressor Winding Resistance Information**

<table>
<thead>
<tr>
<th>R to C</th>
<th>S to C</th>
<th>R to S</th>
<th>C to Ground</th>
<th>R to Ground</th>
<th>S to Ground</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ω</td>
<td>Ω</td>
<td>Ω</td>
<td>Ω</td>
<td>Ω</td>
<td>Ω</td>
</tr>
</tbody>
</table>

Use the $\infty$ 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.
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 ☐ 50 ☐
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
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: ____________________________

Signing this claim indicates you have reviewed the information and agree to its authenticity and accuracy.

Failure Description Comments: __________________________________________
____________________________________________________________________

Check the Appropriate Defect Code

☐ 71 Compressor/Electrical
☐ 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.
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!