



## **SERVICE BULLETIN**

### **Overview:**

ETI has been advised by Copeland Application Engineering that Copeland Scroll Compressors do not require a start capacitor or start relay to ensure reliable operation. For this reason, ETI will be shipping all single phase compressor units beginning **November 01, 2011** without start capacitors and start relays.

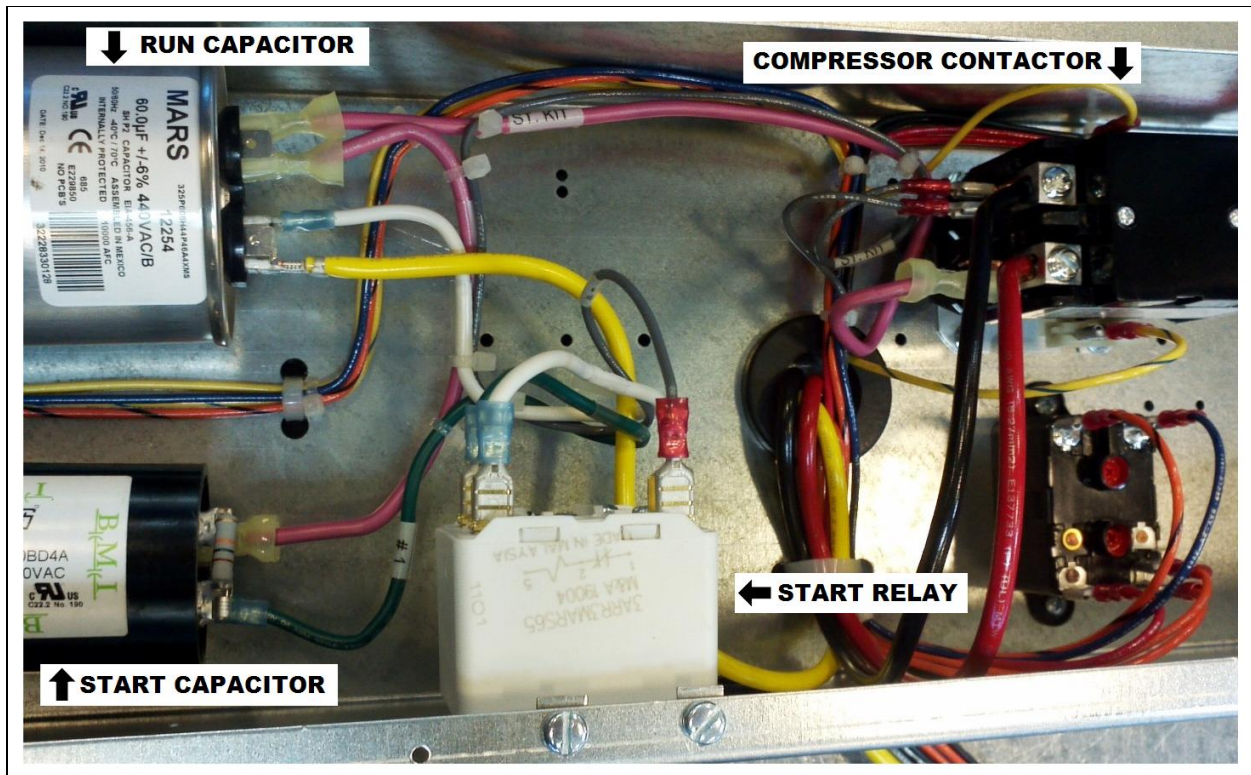
In addition, for the purpose of enhancing compressor unit reliability, ETI will provide AmRad run capacitors on all single phase compressor units, beginning with shipments on **November 01, 2011**.

**To enhance reliability of existing R-407C and R-22 EarthLinked® compressor units already in service and equipped with Copeland Scroll Compressors, ETI recommends that dealers implement the following additional service actions when providing seasonal maintenance or responding to a customer service call for an EarthLinked® system.**

### **Field Actions:**

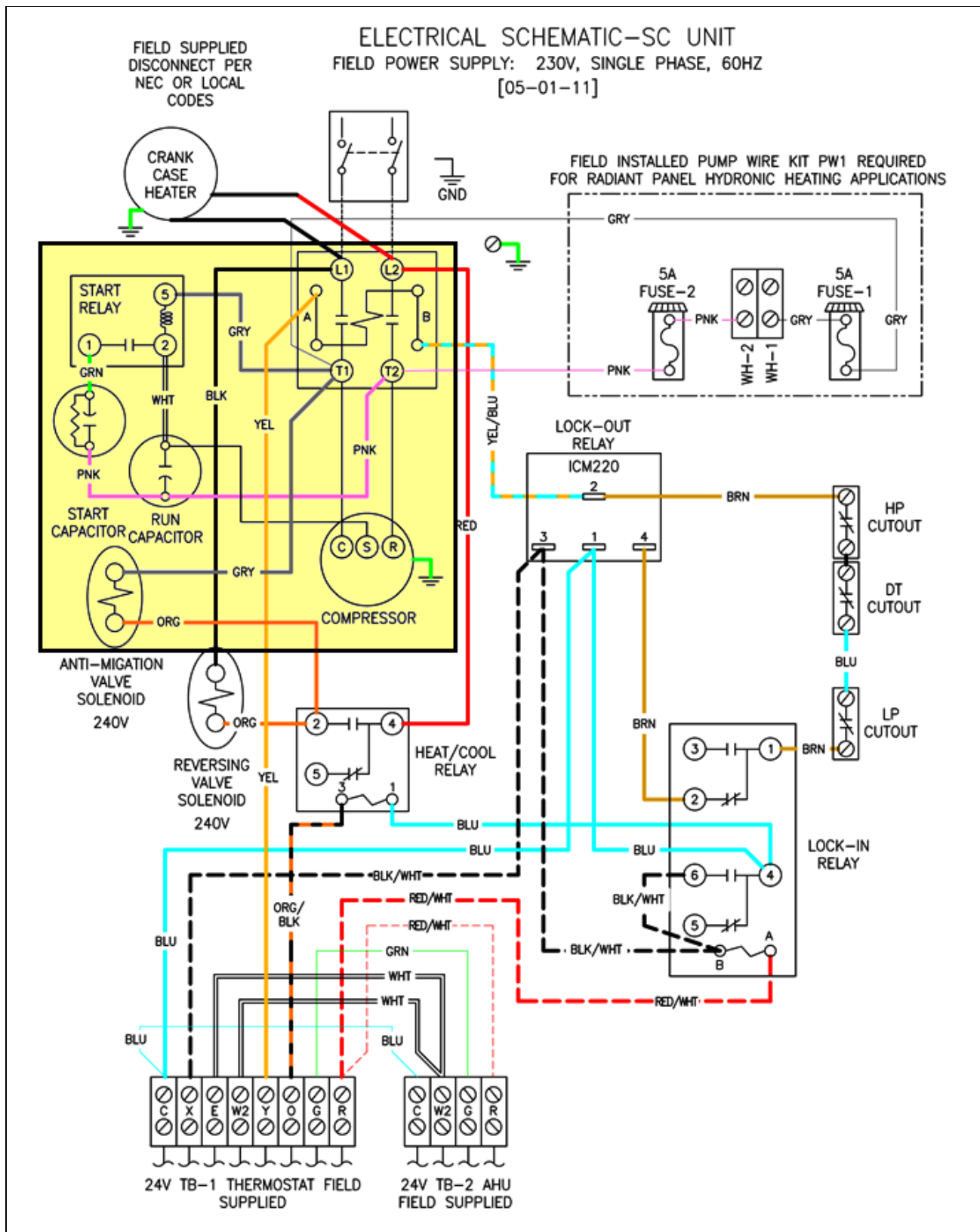
#### **(A) Remove the Start Capacitor and the Start Relay**

1. Turn OFF all power to the compressor unit
2. Remove compressor cabinet cover from unit
3. Remove electric box cover
4. The key components for this procedure are identified in Figure 1



**Figure 1. Typical SC Compressor Unit Electric Box Components**

5. Electrically discharge the Start and Run Capacitors with an insulated conductor contacting both terminals, before proceeding.
6. Follow the Start Capacitor and Start Relay removal procedure in the highlighted area of the SC Compressor Unit Electrical Schematic in Figure 2.



**Figure 2. SC Electrical Schematic (230-1-60)**

7. Gray wire from terminal 5 on Start Relay to terminal T1 on the Compressor Contactor: Remove from terminal T1.
8. White wire from terminal 2 on Start Relay to terminal on Run Capacitor: Remove from Run Capacitor.
9. Pink wire from terminal on Start Capacitor to terminal on Run Capacitor: Remove from Run Capacitor.
10. Unscrew the Start Relay (2 screws) and cut the wire tie on the Start Capacitor. Carefully remove both components and the attached pink, gray and white wires.
11. Dispose of components in accordance with applicable local, state and federal codes.

#### **(B) Remove and Replace the Run Capacitor**

1. Be sure to have the correctly sized AmRad Run Capacitor available. See the Table in this bulletin for the Run Capacitor size appropriate for the compressor unit size. A field-supplied wire tie is required to fasten the AmRad Run Capacitor.
2. Remove the pink wire and the yellow wire from the existing Run Capacitor terminals. Reference Figure 1.
3. Cut the wire tie holding the existing Run Capacitor in the electric box. Replace with the correct AmRad Run Capacitor. See Table for correct size. Install new wire tie to secure AmRad Run Capacitor in electric box.
4. Re-connect the pink and yellow wires to the correct AmRad Run Capacitor terminals. See Figure 3 for a typical installation.



**Figure 3. Typical AmRad Run Capacitor Installation**

5. Check all wiring connections for accuracy and ensure good electrical contact.
6. Re-install electric box cover. Turn compressor unit power ON and start system.
7. Re-install compressor unit cabinet top cover.
8. Dispose of removed components in accordance with applicable local, state and federal codes.

**Benefits:**

By removing the start components and replacing the run capacitor on EarthLinked® compressor unit equipped with Copeland Scroll Compressors, the performance and reliability of the Earthlinked® system will be improved.

**Service Parts:**

The service part required in this action is the appropriate AmRad run capacitor. AmRad capacitors can be purchased at over 2000 wholesalers in the USA and Canada, or can be purchased from ETI.

To find your AmRad wholesalers, call **Global, The Source** @ 1-800-531-5967, or **AmRad Engineering** @ 1-800-445-6033.

To purchase Amrad run capacitors from ETI or a wholesaler, **for use with R-407C and R-22 Compressor units (SC,SD,SCW,SW,HC,HCW,HW,HWW) equipped with Copeland Scroll Compressors (ZR Series only)**, use the following information:

<b><u>Comp.Unit</u></b>	<b><u>Run Cap. Size</u></b>	<b><u>ETI Part #</u></b>	<b><u>ETI List Price</u></b>	<b><u>AmRad Part#</u></b>
-018	35/440	CAP-35440A	\$35	USA2214
-024	35/440	CAP-35440A	\$35	USA2214
-030	45/440	CAP-45440A	\$60	USA2216
-036	50/440	CAP-50440A	\$65	USA2217

-042	60/440	CAP-60440A	\$80	USA2219
-048	60/440	CAP-60440A	\$80	USA2219
-060	80/440	CAP-70440A	\$100	USA2229
-072	80/440	CAP-80440A	\$100	USA2229

**Warranty:**

The removal of the start capacitor and start relay and the replacement of the run capacitor **are not covered** for materials or labor by ETI In-Warranty Allowances.

**Contact:**

To place an order, call ETI Customer Service. For technical assistance, call ETI Technical Service. Call either at 1-863-701-0096.