Title 1: A/C Compressor Just Quits For No Discernible Reason!

Title 2: Sometimes You Can't Worry "Why" It Failed; You Just Gotta Make It Work For The Customer!

By Ignacio "Nacho" Corella

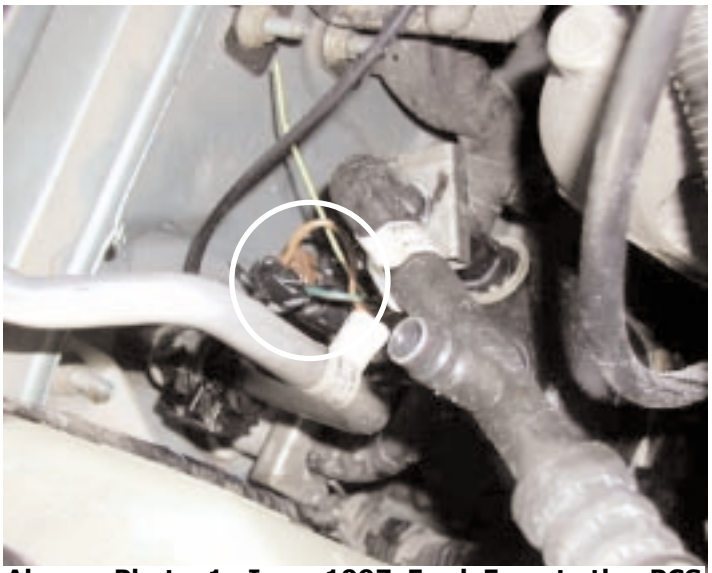
Mystery electrical disease affects compressor clutches of several late model Fords, but especially Escorts and Tracers.

An easy fix may not satisfy your technician's curiosity for the cause, but it does get cold air flowing back through your customer's vents in a hurry.

For reasons yet unknown, we've been seeing 1997 and later Ford Escorts and Mercury Tracers coming in with electrically dead A/C compressors. You check out the system and it's always the same: the refrigerant level is fine and all fuses and relays are OK. Jumping the low pressure safety switch does nothing. We picked up a couple of these jobs second hand because the first shop was unable to find the problem. Of course, right away they had tried to sell the customer a new compressor and a lot more.

Suspected cause: Though we don't yet know exactly why, electric current is interrupted between the low pressure safety switch and the compressor. We suspect that excessive heat within the harness is damaging a connector or maybe even the wires themselves.

The Fix: It may not be pretty, but our "quick fix" is to reestablish the connection the old-fashioned way: run a direct wire between the correct terminals. In all cases this has overcome the problem. Of course, we found this problem originally by doing a quick jump. We now feel that our wiring job will last as long as Ford's, and it's a lot cheaper than buying an OE harness.



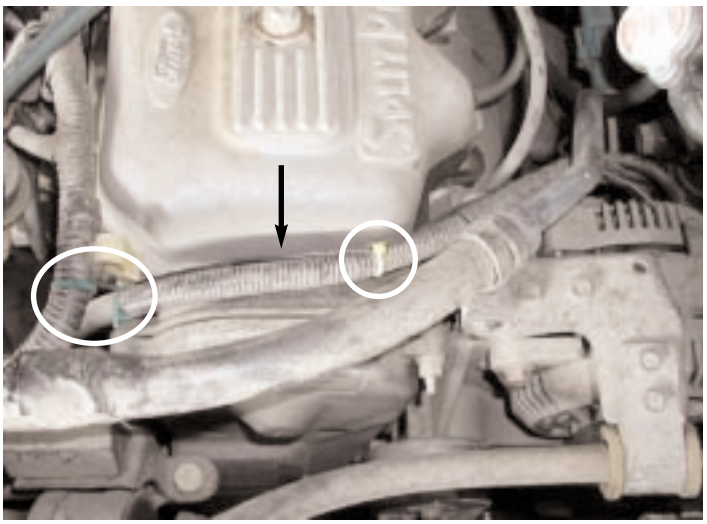
Above: Photo 1. In a 1997 Ford Escort, the PCS (low pressure safety switch), circled, is located in the engine compartment on the right-hand side of the firewall.

The bypass wire has already been attached in this photo.

Get the right wire. Here's where the benefit of color-coded wires pays off really well. With your jumper wire, all you have to do is tap into the "green with red tracer" wire at the low pressure cycling switch. Run that wire all the way down to the compressor. The wire can be inserted into a tube or tapped into the existing wire. We tape it to protect it from damage. Now tap into the blue wire at the compressor clutch. Secure it also with insulation tape and the customer will again enjoy cold air!

We used the Ford Escort as an illustration because the car

Above: Photo 2. Closeup of taped tap of jumper wire into the "green with red tracer" wire of a '97 Ford Escort (within the ellipse).



Above: Photo 3. PCS to compressor wire (arrow) routing attached externally (circled) to the original housing.

and the problem are very popular. However, we've found it to occur in many other Fords. Just bear in mind that the wire colors are going to be different.

Don't bypass the safety switch. The trick is to make sure the compressor runs while leaving the low pressure cycling switch fully functional. To do that, be sure to avoid the common error of tapping into the wrong side of the switch (the one that is always hot when the A/C is on) and feeding the compressor from there. Naturally, that defeats the low pressure cycling switch; the compressor will always run whether or not the pressure is low. A multimeter or test light can easily check for the correct connection.

I hope this hint has helped your business. If you have suggestions or comments, please contact me directly, or Cool Profit$ Magazine. **$$$**

Nacho Corella is the owner of CEKSA Autoclimas, an automotive repair facility in Hermosillo, Mexico specializing in air conditioning service. Contact Nacho at: 52-662-210-3501 (Country Code: 011); Fax: 52-662-210-1607.
Email: icorella@autoclimas.com.mx
www.autoclimas.com.mx.