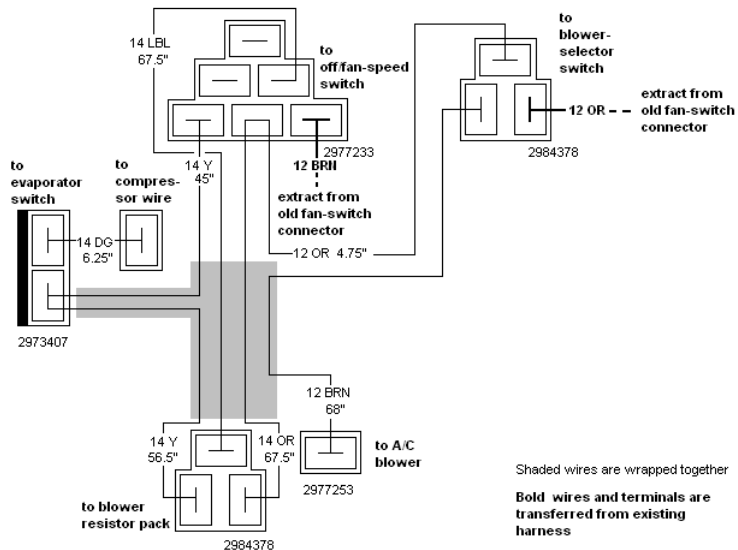


**Newsletter of Air 'Vair, the CORSA Chapter for Air Conditioned Corvairs
Spring 2009**

Erratum

All you readers who picked up on the instructions in last quarter's **COOL AIR** on making an add-in harness for your Late Model's A/C left a wire out of the main wrap if you followed the picture exactly. The wire left out is the 12-gauge brown one that runs from the blower-selector switch to the blower in the trunk. What a mess (that loose 68-inch wire hanging out from your beautiful new harness). Here's a corrected diagram to show you how you *should* have wrapped that puppy up, and how you still can, just in case you haven't done it yet. Procrastination has its rewards!



Terminal Selection

It turns out that there is an extensive art and science to the selection of terminals (the small metal parts) for the ends of harness wires, as may be inferred from the fact that the Delphi Electronics Web site lists no fewer than *seventy-eight* different types of terminals in the series of connectors (known as Series 56) that inhabit all our Corvairs, along with all other cars and trucks made by General Motors in the Sixties.

Obviously, the different gauges of conductor that get crimped into the terminals might (and do) call for different terminals for each, but other factors combine to multiply four sizes (each for a range of conductor sizes) into the seventy-eight mentioned. Some, such as provision for the thicker insulation required on wires conducting higher voltages, are not represented among the terminals in the harness at issue, but at least one of these multiplying factors is present in the harness.

This factor concerns terminals into which more than one conductor is crimped—there are two of these in our harness. Where two conductors are crimped into a terminal, a different terminal is called for. In the connector to the evaporator switch, two yellow 14-gauge wires are crimped into one terminal, and in the connector to the off/fan-speed switch, an orange 14-gauge and an orange

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12-gauge wire are crimped into one terminal. For these positions (see drawing), a different terminal is recommended: Number 2965467, available under that number from Mouser Electronics. Mouser supplies three other suitable terminals, but those are supplied on stems that are intended to facilitate feeding of the terminals to machinery that produces terminations in high volume at high speed in mass manufacturing such as was probably deployed for Corvairs in the years in which they were so produced.

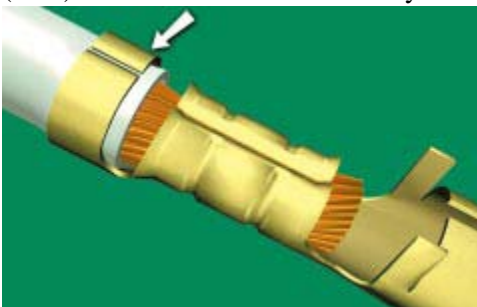
So, for those two connections, get and use Number 2965467. If you inspect any of your existing harnesses, you'll note that those terminals accommodating two wires crimp each conductor side-by-side under a separate "wing" of the terminal—that is, they are parallel and *not* twisted together, as it might occur to the uninitiated to do. The photo shows what I believe to be a factory crimp of two wires to one terminal. All the dual crimps I've inspected, by the way, have their conductors tinned. That is, the conductors are *coated with solder*—they do not appear to be soldered to the terminal.

These terminations, obviously, can't be done with any hand crimper—they must be done by "hand"—that is, by carefully shaping each of the terminal's four wings with a pair of needle-nose pliers. Make sure to get at least ten of these terminals so you don't have to settle for an inferior result for mere lack of (inexpensive) materials.

Another variation giving rise to the multiplicity of terminals is tin plating. The numbers given in last quarter's newsletter for the terminals will get you tin-plated terminals. But the original terminals in our harnesses are bare metal—brass in my observation. Terminal Number 2962447 is bare brass for the 14-gauge conductors, while Number 2962574 is bare copper for the 12-gauge conductors. Sorry, the 2965467 mentioned above for two wires is tin-plated— I haven't been able to find a bare one for the purpose anywhere. Even 2962574 (for a single 12-gauge conductor) isn't available from Mouser—it is in the AuVeCo product line as their Number 17001, and should be available through any of the many dealers in that line.

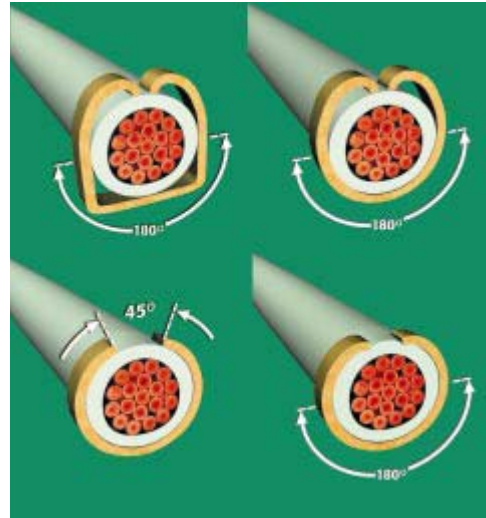
Terminal Crimping

That should terminate the matter of different types of terminals. But there is another subtle point concerning the crimping of terminals that can improve the reliability and extend the life of your harnesses if you learn and apply it. This concerns the crimping of the pair of wings on each terminal that surround the insulation of the wire—the larger pair that is located at the extreme (wire) end of the terminal. The way it is to be crimped is quite different from the way the pair (in the middle) for the conductor is to be crimped.



Where the pair for the conductor is crimped down around and onto the conductor quite forcefully, the pair for the insulation should barely touch the insulation and absolutely *not* penetrate the insulation at any point. While the conductor pair of wings does the whole job of retaining the wire in the terminal, the pair for the insulation merely keeps the conductor from *bending* too sharply at the conductor crimp. So the end wings merely surround (touching) the insulation, but do *not* “grab” it.

Crimpers like the T-11 discussed in last quarter’s newsletter contain distinctive circular bays that are intended for exactly this use. For gauges for which I lack a crimper, I arrange something approaching this pretty closely using: (a) the correct-size terminal (see above); and (b) a proud possession of mine that not everyone has: a set of sixty numbered drill bits, which enables me to choose a diameter to match that of the insulation of the wire I’m working with, with great precision. *Before* inserting the wire itself, then, I crimp the insulation wings down around the selected drill bit, then insert the stripped wire so the insulation just passes beyond the insulation wings and crimp down the wings for the conductor. It may seem a lot of trouble, but I only have to do it once for each terminal, and the results are permanent. They look good and work well, too.



Swan Song

Your **COOL AIR** editor has run out of hot air. I’ve got no more stories to tell, nor even half-baked “advice” to offer on air conditioning for Corvairs. I’ve concentrated too much on Late Models, because that’s the only Corvair I own, and I hope to be succeeded by someone who can compensate a bit for that with emphasis on Early Models. Please let Air ‘Vairs President Mark Corbin know of your interest in starting with the Summer 2009 issue at his e-mail address on our masthead.

Air ‘Vairs Meeting?

Yes, Virginia, Air ‘Vairs actually *meets* once a year, at the CORSA National Convention, which this year will be held in Jacksonville, Fla. The meeting is scheduled for Tuesday, July 14 from 7:00PM to 8:30PM at the convention hotel. I’m planning to attend, as the immediate *past* editor of **COOL AIR**, but I might accompany my successor (if he or she attends the convention) to the Chapter Newsletter Editors Meeting scheduled for the next day, just to find out if I did this right over the past four years. Along with being the first National Convention I’ve ever attended, this will also be the first time I get to meet any member of Air ‘Vairs. And vice-versa, so I hope to see *you* there!

COOL AIR

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