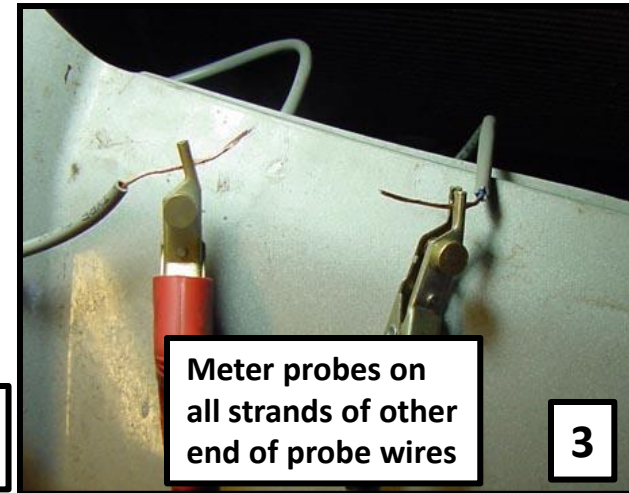
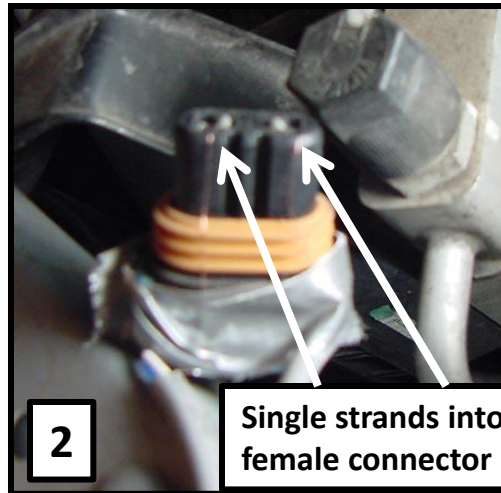
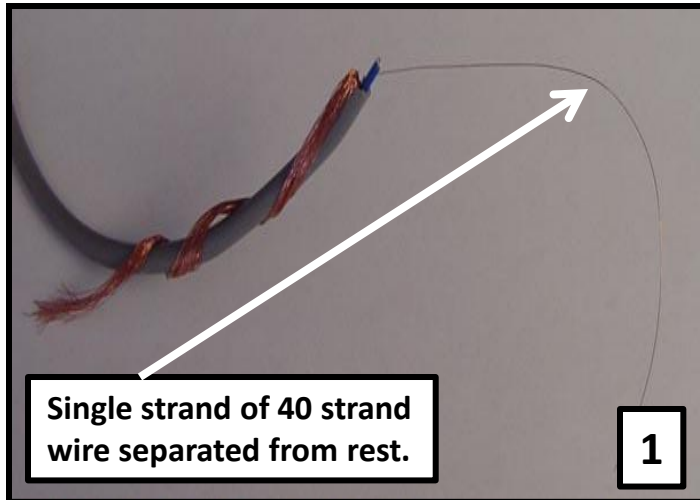


Diagnosing With Joe's "Hairline Test Tap"



It is becoming somewhat more difficult to determine if an area to be "back-probed" contains a resistor that could be damaged by the back-probing T-pin or "acupuncture probe". Two examples would be on the Honda 5-wire "Lean Air Fuel" sensors, and on some Saturn wide range air fuel sensors. A resistor used in the circuit for calibration is located in the 8-pin Honda connector between terminals 3 and 4, and on the Saturn a "trim resistor" in their wide range air fuel sensor, in one application, is located between pins 1 and 6. Back-probing into an area that contains such a resistor could damage the resistor. Such damage would disable the accuracy of the circuit. To avoid this possibility and other "back-probing" damage, possibly to a weather-pack connector, and also to avoid piercing delicate wires, which will eventually result in corrosion, I suggest the following method of diagnosis.

I use what I call the "hairline test tap". Just a name I made up, but it is really nothing more than a fine single strand of copper wire separated from the rest of the strands in a multi-stranded conductor. I have used a stranded copper wire that contains 40 strands. A single strand measures only .005" thick. You can find stranded wire containing 60 strands where each strand measures .0025". These thicknesses allows me to do the following as illustrated.

The first photo shows the single strand separated from the rest of the strands. The second photo shows two different wires with single strands inserted into the female terminals I want to test. I have taped these wires in place to keep them from falling out. Another use for duct tape. Once your wires are in place, simply reconnect the female and male terminals. The last photo shows my voltmeter probes on the other ends of each of my "hairline test tap". A scope as well could be hooked up to pick up a signal. Here you keep all of the strands intact; this will pick up the single strand.

With this method, I avoid piercing wires, avoid back-probing damage to weather pack terminals, and most importantly, I am actually beyond the connector and at the very source where I want to test for a voltage, or a signal to some component, or a signal from some component. The diameter of the single strand will determine how strong it is before it breaks. I have had good success using this method of getting to the source I wish to test.

WWW.Vestest.com The Vehicle Voltage Drop Website