

Timely Revs

How To Make and Install a Rally-Pac Wiring Harness

It is not at all uncommon to discover that the perfect Rally-Pac you found at the last MCA National lacks a wiring harness. Now such items are available from your friendly Mustang parts man, but you can make your own. Perhaps it is a bit more trouble and expense, but if you want to do it *all* on your Mustang, here is how.

You will need the following materials:

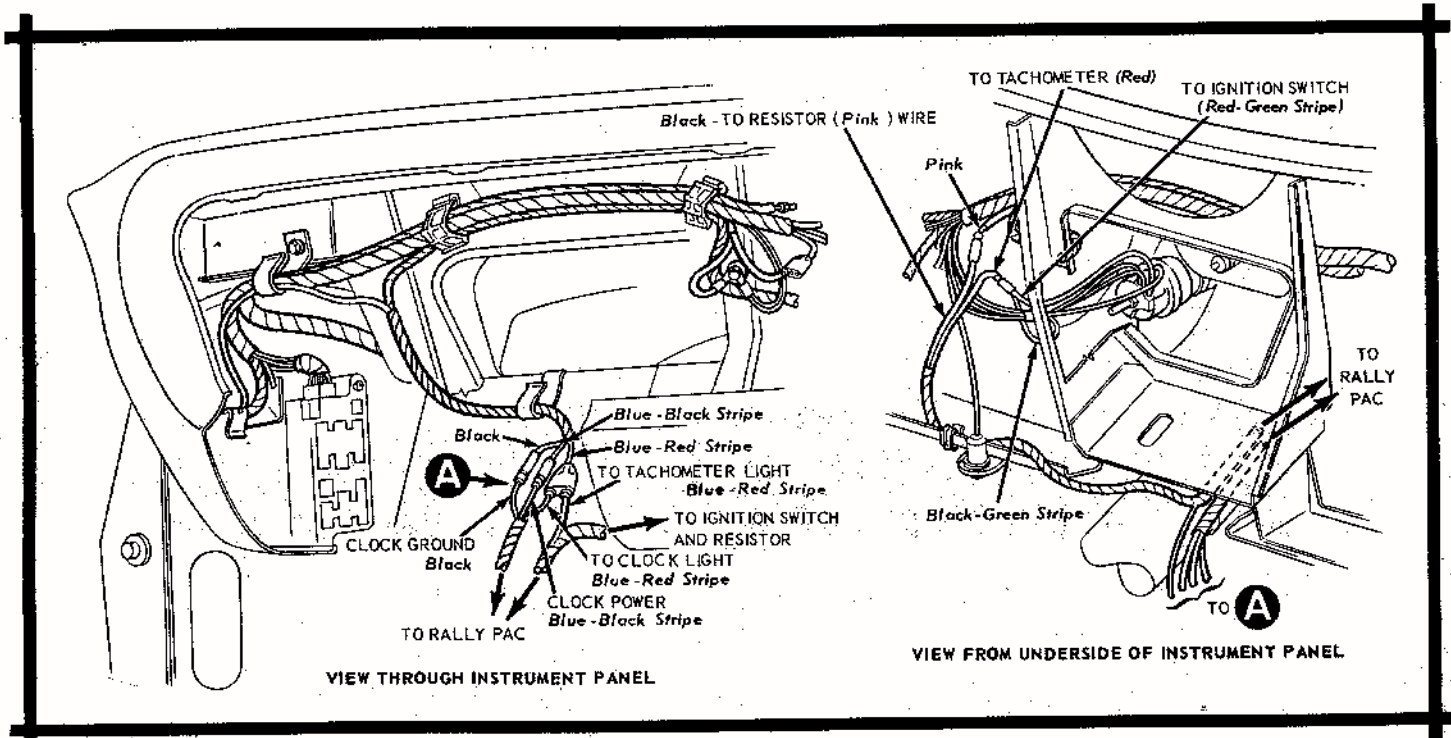
- 1 piece red wire, 16 gauge, 12 inches long
- 2 pieces black wire, 16 gauge, 12 inches and 16 inches long
- 1 piece blue with red stripe wire, 16 gauge, 21 inches long
- 1 piece blue with black stripe, 18 gauge, 30 inches long
- 1 piece green wire, 18 gauge, 3 inches long
- 3 round male plugs, .176 inch diameter
- 1 round male plug, .157 diameter
- 4 round female plugs, for .176 diameter plug
- 1 round female double plug, for .157 diameter plug
- 1 round female plug, for .157 diameter plug
- 1 eyelet, 16 gauge
- Black electrical tape
- Crimping tool

A few notes about the materials needed are in order. The above wiring colors duplicate the original equipment colors of the wiring harness for Rally-Pacs. If you don't particularly care about the authenticity aspect, you can make your wires

any color you darn well please! Most will have a bit of difficulty finding the two striped wires. Try a well-stocked electrical equipment house. You will have to buy a good deal more than you will need for this project, so perhaps your regional group will want to purchase the rolls of special wire and then sell each member as much as he needs for his harness. The club could also purchase and lend out the crimping tool, which should not be the type usually found in your average hardware or auto parts store. The best crimper for this use fastens the plug to the wire by forcing a projection into the terminal, leaving small "hole" in one side. The more usual crimper essentially flattens the terminal onto the wire. The "round female double plug" isn't really round, but sort of rounded rectangular; it accepts four round plugs, two on either end. If this item is not familiar to you, crawl up under your dash and look at the wiring; you should find at least one somewhere.

Now let us begin the construction of the harness. Take the 12 inch red wire and install one of the .176 male plugs on one end. On the other end, install one of the female .176 plugs (which are actually receptables). Repeat these two operations on the 12 inch black wire.

Next take the 16 inch black wire and install a .176 female plug on one end and the eyelet on the other. The eyelet is the



Harness Installation Illustrations

only place that the Rally-Pac harness does not plug into the existing Mustang wiring; it attaches to the car through an existing ground screw.

On the blue with red stripe wire, which should be 21 inches long, install the double female plug on one end and a .176 male plug on the other.

Take the blue wire with black stripe and install a .176 female plug on one end. Take the other end and one end of the 3 inch green wire and twist them together. Install the .157 male plug on the twisted pigtail. On the other end of the short green wire, install the .157 female plug.

You are now ready to assemble your Rally-Pac wiring harness. Take the female end of the red wire, the male end of the 12 inch black wire, the female end of the 16 inch black wire, the double plug end of the blue-red wire, and the female plug end of the blue-black wire and place them together side by side. With the electrical tape, wrap the wires a couple of times about 2 inches below the plugs. Separate the 12 inch red and black wires from the others. Continue wrapping the other wires with tape for about another six inches. This completes your Rally-Pac wiring harness.

Before beginning to install your wiring harness, you should carefully inspect your Rally-Pac unit to see that it has all of its wires intact. There should be two bundles, one from the clock and one from the tachometer. The tach bundle has two male plugs and one female plug. The clock bundle has three male plugs. Replace any of the wires with bad insulation. On original units, the wire lengths vary, but if you replace the wires as you install the Rally-Pac, you can make them long

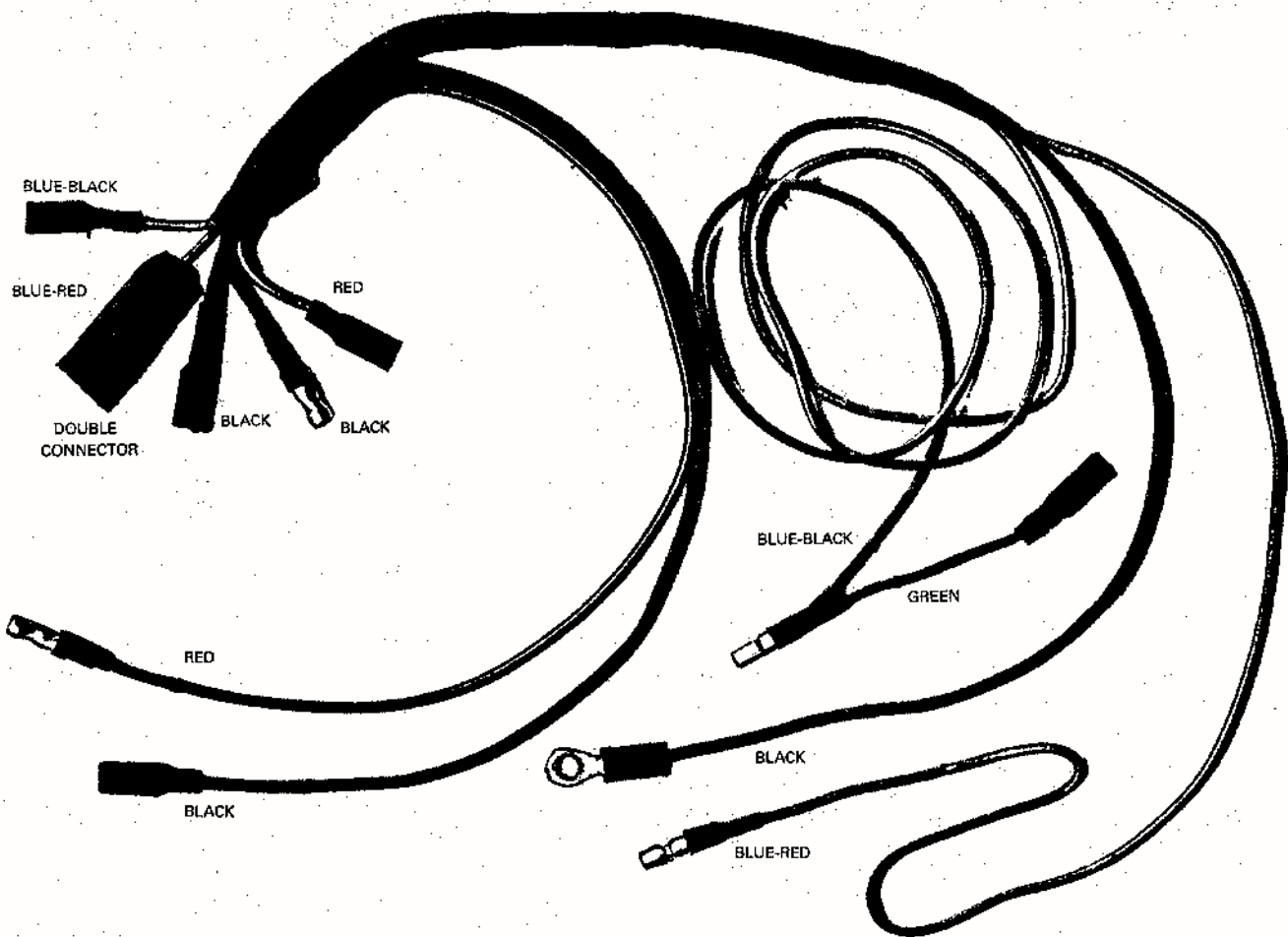
enough to fit. This applies to those units with missing or cut wires as well. All the terminal ends on the wiring coming from the Rally-Pac itself are the .176 size.

The first thing to do before starting to install your Rally-Pac wiring is to disconnect your battery ground cable. Failure to do this can result in a non-working tachometer. (This first step really applies any time you work on your car's electrical system). Then disconnect the speedometer cable at the back of the instrument cluster by unscrewing the ferrule that holds it to the speedo head. Remove the six screws that attach the instrument cluster and pull it away from the dash, exposing the wiring on the back side.

Attach the eyelet end of the black wire to the ground screw at the back center area of the dash opening. There will be several other wires already using this screw. Near the ground screw will be a blue-red wire with a double connector. Attach the male connector of the blue-red wire from the Rally-Pac harness to this double plug. This wire supplies power to the light circuit of the Rally-Pac.

Slide the two wires just connected into the two main harness clips to the left of the ground screw to prevent the wires from chafing (see accompanying illustrations).

Remove the left kick panel. Then pull the courtesy light switch out of the left door frame. Feed the blue-black wire from the Rally-Pac harness out through the hole, following the same path as the light switch wires. Unplug the green-yellow wire from the light switch and install it into the female connector at the end of the short green wire of the Rally-Pac



Harness Construction

harness. Then plug the male plug at the end of the blue-black wire into the light switch and reinstall the switch in its hole. This connection supplies current to the Rally-Pac clock.

The two remaining long wires are the tachometer extensions. Locate near the ignition switch the red-green wire connected to the pink wire. Separate this connector and install the black wire to the pink one, the red wire to the red-green one (see illustrations).

This completes the attachment of the Rally-Pac wiring harness. Replace the instrument cluster, being certain to reconnect the speedometer cable. Now install the Rally-Pac to the steering column, using theft-proof screws in the mounting clamp if you wish (it is a good idea!).

Next connect the wires leading from the Rally-Pac unit into the same color wires of the Rally-Pac (again, refer to the illustrations). Note how the connector bundle is held in place by the wiring clip which should be on your car's firewall. Both of the blue-red wires plug into the double connector. Be certain to check your work, especially making sure that the tachometer leads are correctly attached. The tach is the most

sensitive part of the whole Rally-Pac assembly and the most easily damaged.

If, after reconnecting your battery ground cable, the car will not start, you may have a bad tachometer. Unplug the tach extension wires, either at the ignition switch connection or at the Rally-Pac to harness connection, and reconnect the pink and red-green wires or connect the harness's red and black wires, respectively. With the tachometer thus removed from the ignition circuit, the car should start. If it doesn't, and it did before you began your Rally-Pac installation, then you have other problems not connected to the Rally-Pac. Possibly you shorted other wiring during the installation process.

After starting the car, check for proper operation of the tachometer. Of course, the clock should also be working. This completes your construction of a Rally-Pac wiring harness and the installation of it and your Rally-Pac. Isn't it a satisfying feeling to know that you did it yourself rather than buying a ready-made component?

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