HOW TO INSTALL A SCOTT DRAKE UNDER-DASH WIRING HARNESS ON AN EARLY MUSTANG

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Whether it's flickering dash lights, inconsistent starting or possibly a battery that constantly drains the charge, an old wiring harness in a vintage car can present annoying problems. It's a matter of sheer age. Over the years the insulation becomes brittle and breaks off, possibly leading to a short that could spark a fire. Also, cars that have been stored a long time can have damaged wiring due to rodents chewing on the insulation. Any exposed wiring can lead to corrosion.

Before problems get too severe, installing a replacement wiring harness is the ideal preventative solution. This strategy also improves the value of the vehicle, and it's not a very difficult project when working on older vehicles and muscle cars that don't have computers or complex connectors.

Consider the condition of this 1965 Ford Mustang fastback. The most noticeable problem to the owner was the high beams not working. But the owner had installed and removed an 8-track player and CB radio in the '70s in addition to swapping out three different radios and adding stereo side speakers. Not only was the harness aging and showing signs of wear, it had simply been hacked up too much.

Two summers ago, the 289 Hi-Po engine was rebuilt, and the under hood engine harness was replaced at that time. That left the under dash harness and the taillight harnesses that were still 56 years old and needing replacement.

While completely rewiring a vehicle from scratch can be an intimidating task, installing a replacement harness from Scott Drake is rather straightforward.

On the left is the under-dash replacement harness from Scott Drake, and the company's taillight harness is on the right. The installation also included a new dimmer foot switch and an instrument voltage regulator. The installation also included a new bezel, instrument lens and hardware.

"It's all about patience and attention to detail," says Casey Barrett of Dakota Battery & Electric in Rapid City, South Dakota. "Be sure to document every step as you take out the old harness. Then match up the old and new harnesses. If

the old one has 10 bulb holders, make sure the new one has 10. If a connector has six wires, make sure the new on has six wires. And also double check the color coding of the wires to all the components."

Making the job even easier is the Scott Drake replacement harness that not only matches up with the stock harness in appearance and color coding, but it comes with a modern 12-circuit ATC fuse block and relays to improve reliability. No more old style SFE glass-tube fuses; this new fuse block features conventional ATC blade-style fuses. There are also spare hot and keyed terminals in the fuse block for connecting new electrical components.

Each Scott Drake harness is specific to different Mustang packages from the early years, including 2- or 3-speed heaters and body styles. This Mustang had the 2-speed heater and needed the taillight harness engineered for the fastback.

"Go with a dedicated replacement harness, if you can," advises Barrett. "A universal harness may be cheaper but you'll spend more on labor in the long run to get it installed."

The factory Rally Pac was removed from the steering wheel and unplugged from the main harness. After that, just a few screws are removed that keep the instrument bezel and cluster in place.

Basic hand tools are all that's required to change the harness on a vintage vehicle. Some specialty tools are handy when removing switches, and it's a good idea to have a power probe to help trace any problems that may occur. Finally, most popular vintage cars have wiring diagrams or schematics available online or from a restoration supply store.

The basic game plan is to carefully remove the old harness, taking notes of all the connections and wire colors. The old and new harnesses are compared and all the switches and light bulbs are cleaned or replaced. When installing the new harness, Barrett likes to apply a light touch of dielectric grease to the connections and the light bulbs to help hold moisture out and improve the connection efficiency.

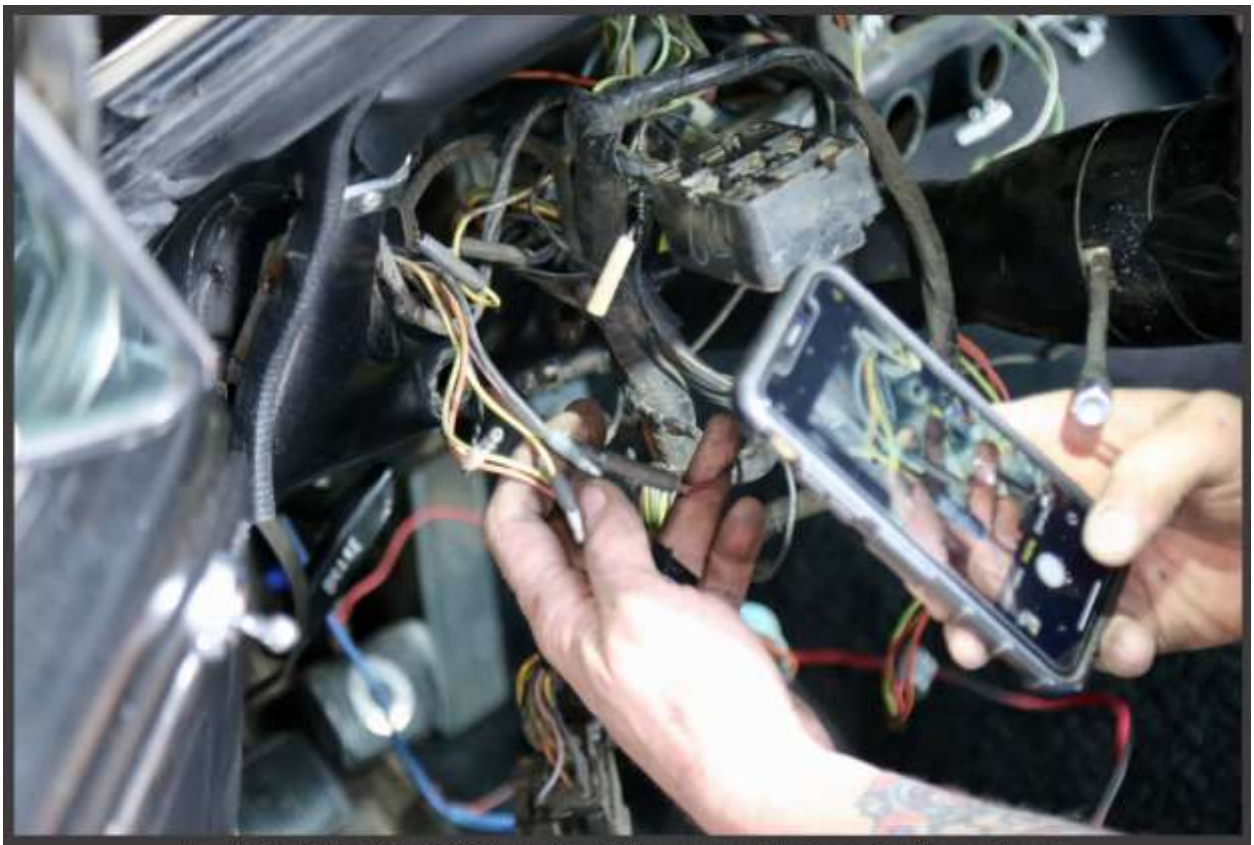
In addition to upgrading the wiring harness, the owner also brightened up the dash with a new instrument panel bezel and lens, and retrofitted blue LED dash lights for night time driving, all sourced from Scott Drake. For more information about Scott Drake products or any other products for your vehicle, visit www.stang-aholics.com.

Using a permanent marker, Casey Barrett of Dakota Battery & Electric marks the wire colors and their position on the instrument panel housing. Note the worn and brittle condition of the wires and connectors.

The disassembly continues by removing the wiper, headlight and other switches on the dash. Here, Barrett is using a small flathead screwdriver to turn and walk the internals out of the housing. Special tools are available to help remove or install some vintage switches.

Pretty soon there's a spaghetti bowl of wires secured by a ground connection on a dash brace.

The high beams weren't working, so the floor-mounted dimmer switch was removed and disconnected. Note that the left sill plate and kick panel have already been removed, which also exposed the connection for the taillight harness down in the rocker area. The firewall plug leading to the engine harness is disconnected.



Barrett took cellphone photos of critical connections to help ensure correct hookups on the replacement harness.

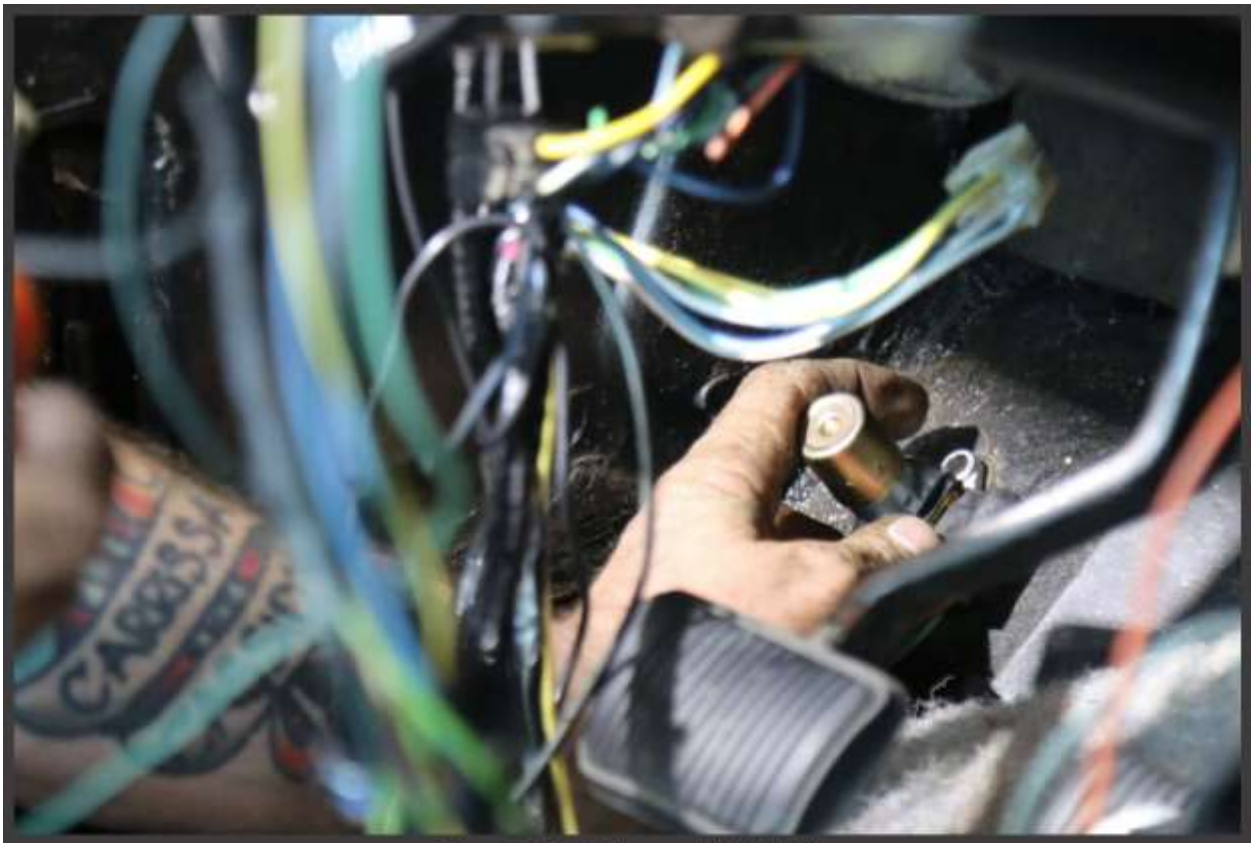
The old harness is compared to the Scott Drake harness on a large table. The type of connections and the colors of the wires were confirmed.

Here's a side-by-side view of the factory fuse box and the upgraded ATC fuse block in the Scott Drake harness.

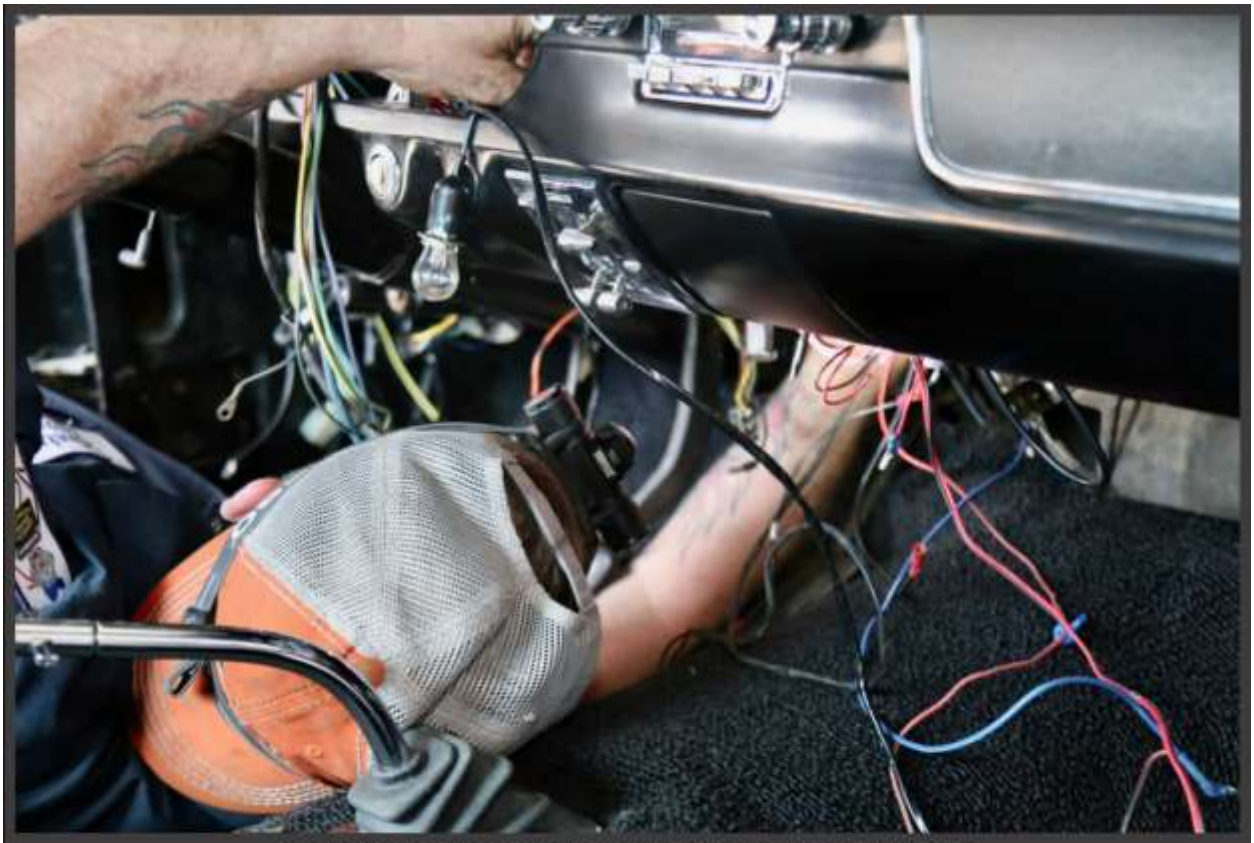
A couple of the switches were cleaned while others, such as the ignition and headlight, were replaced.

Some of the instrument panel lights were replaced with blue LEDs from Scott Drake. The alternator and oil warning lights were fitted with replacement incandescent bulbs because they are behind red lenses on the instrument panel. Also, the high-beam bulb was left incandescent because it's behind a green lens.

The new harness is carefully positioned over the steering to help facilitate the start of reconnecting the leads. Wires for the switches are identified and connected as the switches are installed.



The new Scott Drake dimmer switch is installed.



As more connections are made, the harness eventually is fully positioned under the dash.

The ground wires are secured with a new fastener.

Under the right side of the dash, the speaker and door jamb dome light switch are connected, and the under dash courtesy light is also installed with a new bulb.

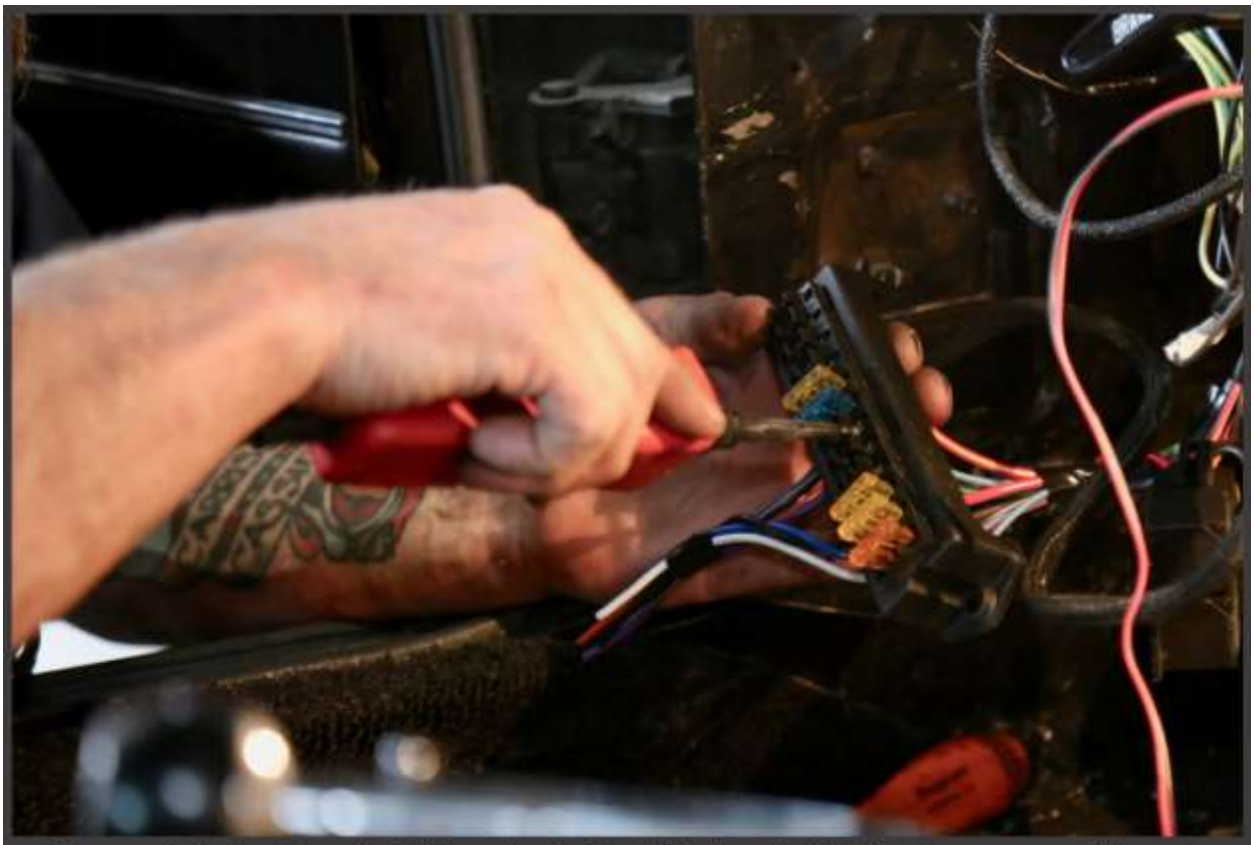
The instrument gauge is removed from the old bezel and dusted off with a light blast of compressed air before being fitted with a new bezel and lens.

One end of a new speedometer cable and the appropriate gear were installed in the Toploader transmission before the gauge panel reassembly began. All the connections were made using the notes and wire color coding.

The gauge panel was positioned in the dash but not secured until a check of all the systems were conducted.

Removing the sill plate reveals the taillight harness. A "snake" needs to be attached to it, and then it's pulled from the trunk. Wiring for the two interior lamps on the fastback models also need to the snaked when removing the harness.

Here's the new Scott Drake harness ready to be pulled with the snake from the trunk. Once positioned, the taillights were easily connected along with the wires to the interior lamps on each side.



The battery was hooked up and Barrett checked the operation of each electrical function on the dash. At first, there was no power to the instrument panel and the problem was traced to an unseated connection at the ignition switch. A professional probe helped check the power leads.

All the connections were finalized, and the insulations on some needed heat shrinking.

The instrument panel is secured with new hardware.

Scott Drake does provide a template to help mount the fuse panel, but it didn't work with the speakers. So, when the kick panel was replaced, the fuse panel was mounted to it near the stock location just above the speaker. Any loose wiring was wrapped with electrical tape and tucked up safely under the dash.

The final step was to install the Rally Pac cluster and to see the fruits of our labor, all lit up. The looks are great, but knowing that fresh wiring had replaced the old, brittle original equipment is the better part of this swap.