

Got a question for John? Email him at ceeditor@amosautomotive.com

Harness Protection For The Chain Smoker

READER'S QUESTION: ONE OF THE AREAS WHERE I TOOK A DEDUCTION THE LAST TIME I HAD MY '65 JUDGED WAS MY LIGHTER. IT ONLY HEATED PARTIALLY DURING THE OPERATIONS CHECK AND DIDN'T "POP" BACK LIKE IT SHOULD HAVE—IT COST ME 25 VALUABLE POINTS. IT'S PRETTY WORN AND A LITTLE RUSTY INSIDE, SO I NEED TO REPLACE IT. I RECALL READING SOMETHING A YEAR OR TWO AGO THAT SAID NEW REPLACEMENT LIGHTERS CAN CAUSE BURNED HARNESSSES ON MIDYEARS UNLESS THEY'RE REWORKED, BUT I DON'T REMEMBER WHERE I READ IT. CAN YOU FILL ME IN?

RESPONSE: You remember correctly, and here's the story. Midyear Corvettes (and many other cars and trucks up through the '90s) originally used lighter

housing P/N 3986869, made by Casco (who also made the heating element, knob and retainer and supplied the complete assembly).

Several years ago the 3986869 housing was changed and became P/N 11516142, and virtually every Corvette parts supplier stocks this same housing. The change resulted from drivers using more and more in-car electronic devices powered from the lighter receptacle, from phones to CB radios, coolers, navigation devices, coffee cup heaters, etc.

To avoid overloading the lighter

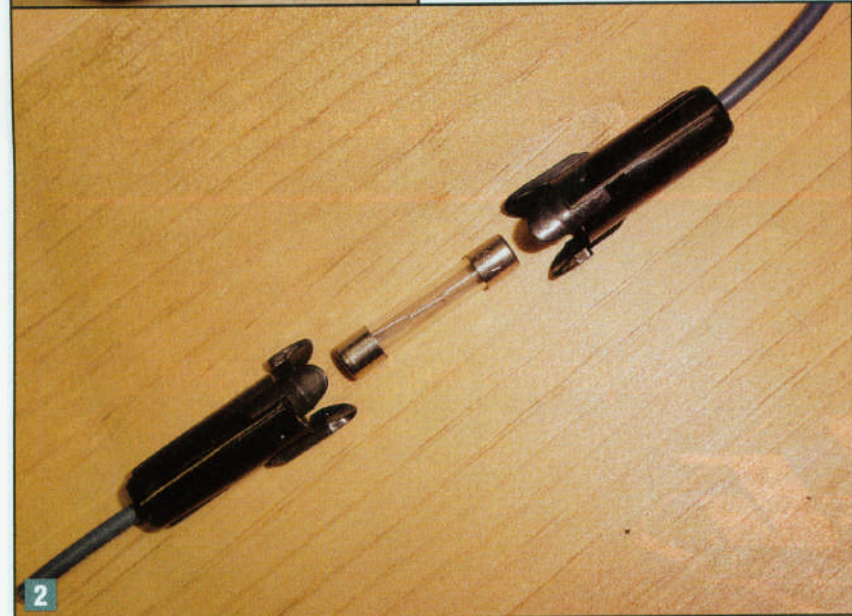
circuit, a "U"-shaped bimetallic element was added to the new housing's power feed terminal. If extended heavy use of the lighter receptacle as a power source heats up the terminal, the sides of the added bimetallic element expand and touch the housing, dead-shorting the lighter, and blowing the lighter fuse, protecting the feed circuit.

The Corvette-related problem is that there was no fuse on the lighter circuit in Corvettes until 1967. If the new 11516142 housing with the bimetallic element is used in a pre-'67 Corvette and is subjected to heavy power draw, when the added element shorts the lighter, it also dead-shorts the un-fused hot side of the instrument panel harness, which can burn the harness and potentially result in a fire.

The cure is simple—if you have the new housing with the "U"-shaped bimetallic element, unscrew the nut retaining it on the terminal, remove the element, and reinstall the nut. Even if you don't regularly draw high loads from the lighter receptacle, it's a good idea to add an in-line 10-amp fuse to that red feed wire on a pre-'67 Corvette, as that circuit has zero protection from the factory.

Also, although the heating element section of the new lighter assembly will work just fine, it will be marked "78 Casco 12V" (or later) on the outside of the barrel, and the interior judges will expect to see an element marked "63 Casco 12V" for full originality credit.

Additionally, you can "tune" the length of time the lighter remains depressed and heating and how it "pops" by gently bending the two spring retainers at the bottom of the receptacle with a small screwdriver. Make sure you disconnect the lighter or the battery while tuning, or you'll be greeted by a large spark (and a blown fuse) when the screwdriver slips and touches the housing and spring retainer at the same time.



1 The revised P/N 11516142 lighter housing with the "U"-shaped bimetallic element added on the feed terminal; remove the element to avoid dead shorts that can fry harnesses in pre-'67 Corvettes.

2 It's a good idea to add an in-line 10-amp fuse holder to any pre-'67 Corvette lighter feed, as that circuit has zero protection from the factory.