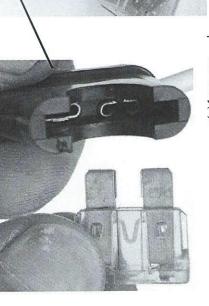
stalled in have a long it blade, male / nsure a low design, which e small, male / connection will nal of the fuse. etrical contact terminal of the pe of fuse is it the fuse m is likely to be m with these se too. e same oblem than the n to be less this writing. ervice for about type of fuse, systems.

> accessories, such as electric radiator fans often supplied with "after-market/add-on" line fuse holders for the ATO fuses are Yet, because they are simple, in-

many of these weak areas on the Hot time periods, would quickly expose much of the year, and daily use for long because the car is not in constant use. like an electric radiator fan system, only type of fuse arrangement for something Hot Rodders will get by with using this Life in a southern state, with hot weather It's a situation where most of the

fusible link should be installed to protect is a small gauge fusible link wire. The powerful as an electric radiator fan system protection for something so important and certainly fail. The more reliable circuit run warm, and we continue to use it, it will the main power-up ("load") circuit to the If the fuse holder ever begins to



testing the fuse with a circuit test light or voltmeter, without connected to power at the "input" and "output" sides of the The "ATO" fuse has small, exposed, metal tabs, which are then we better have power on the other side of the fusefuse. (see arrows at photo to left) These tabs provide for Power at only one side of the fuse indicates a blown fuse removing the fuse. If we have power on one side of the fuse

only occur in circuits, which are used for fuse holders have formed a consistent operation circuits. But of course these are "momentary' never seen this type of problem with a extended periods of time. The author has noticed that these "meltdown" problems pattern. Over the years, the author has power seat, or power antenna system horn circuit, nor with a power window, Okay. So these melted fuses and

all systems where a cartridge type fuse is continuous duty" systems. And they are common examples of "high amperage/ wire, and electric radiator fans, are and the dash area main harness power-up likely to have this type of problem. driven for long periods of time are more Even then, vehicles that are frequently likely to have this meltdown problem. (especially if the car is in southern states), Lighting, air conditioning

and only has thirty thousand miles of short equipped car, which is twelve years old be good as new, on an identically on it. Yet consistently, the same part will which already has twenty thousand miles with equipment on a six-month-old car, drives may put more total hours of drives on it. (Although years of short These types of failures may occur

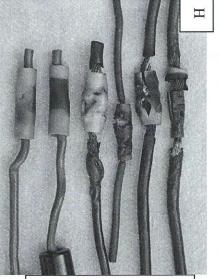
> operation on circuits, the circuits were connections.) never "ON" long enough to overheat

don't have this meltdown problem. (Ever when they are switched "ON.") Brief over more than a "continuous duty" system.) systems, which are "inductive type" loads problem-Because "momentary" operation load caused by initial in-rush is not the large surge of power for a very short time clutches and solenoids. (These are switching on electric motors, magnetic result from "initial in-rush" associated with though they may be switched "ON/OFF" "inductive loads," and they will draw a The problems obviously did not

of operation. But cartridge type fuses prone to this type of "slow-burn," type fuses. fusible link wires, rather than cartridge why for some applications we use are famous for the problem. That's (meltdown) problem, with long periods Fusible Link Wires are not at al

Towever, unless we take

connections, with the installation of fusible special care to minimize resistance at link wires, we're not yet home free.



getting pretty warm, all of the crimped on butt connectors in this photo over-heated. Ranging from glowing orange hot, to

fuses, "thermal runaway" was the problem. The same as with the previously discussed

only a short distance from the connector. was excessive. The wires at both sides of these butt connectors had never been hot, The heat was focused where the resistance

view of each The next series of photos shows a close-up