

## “KEEPING PACE” - #21

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### UNUSUAL FIRE:

As he was pulling into his own driveway, the driver gunned the engine of the automobile shown below. A fire immediately broke out at its rear for no apparent reason. P.A.C.E. tests showed that there was no leak anywhere in the fuel system. There also was no short circuit melt in the few wires at the rear of the car. Neither was there enough combustible insulation there to cause this much damage. So what was the cause? Arson came to mind, but the driver of the car is a sales agent for the insurance company. P.A.C.E. could only conclude in its report that a quantity of gasoline had been pushed out the end of the exhaust pipe when the engine was gunned, and that the engine should be examined again after repairs were complete. When the engine was started after these repairs, another (small) fire developed at its carburetor. This confirmed our opinion that the fuel system and exhaust system were operating while greatly overloaded with fuel.



### DASHBOARD SHORT:

The next photograph shows the remains of an obvious dashboard short circuit fire. As in about 2% of our vehicle short circuit cases, the energy expended by the short did not leave a melt anywhere on the electrical conductors. We included this information in our report and the manufacturer still paid 100% of the claim. P.A.C.E. has obtained a copy of a letter whereby this same manufacturer states that they are able to start vehicle short circuit fires without popping a 20 ampere fuse. In the opinion of P.A.C.E, using a 10 ampere fuse in place of a 20 ampere fuse in new designs would not just reduce the available short circuit heating energy by two, or four times, but rather by a factor of hundreds. We will be trying to publish our supporting data for this opinion in the near future, and we will be trying to encourage manufacturers to reduce the size of their fuses, many of which are needlessly large anyway.

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### SHORT CIRCUIT FIRE IN DASHBOARD

#### BOAT WIRING SHORT:

The photograph below shows the wiring in a brand new \$140,000 river cruiser in which a short circuit occurred. The estimate for the repairs to this wiring, which was only damaged in a circle three feet in diameter, was about \$30,000.



Sincerely,

Frederick F. Franklin, P.E  
Forensic Engineer