



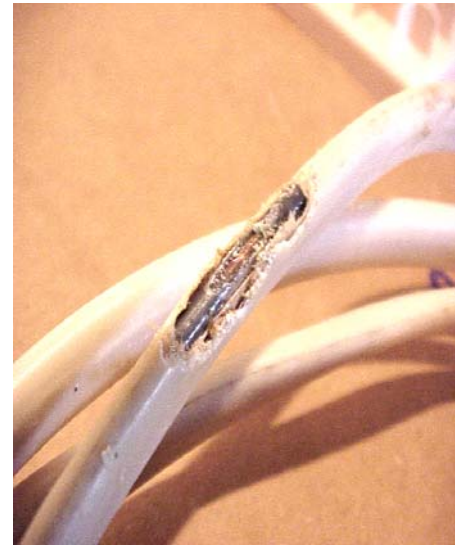
Quarterly Newsletter

Volume 5 Issue 1

Winter 2001

Faulty Workmanship or Rodents? Insight Behind A Possible Fire Cause

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During the course of processing a structure fire claim, one must take into consideration potential electrical causes and failures as the origin and cause. However, recent documented events have shed new light on this topic where the actual cause may have been from the activities of a rodent instead of the alleged wiring improprieties of an electrician.

While admittedly this is an unusual and often unlikely cause for a fire, as shown in the pictures above and through other documentation, such events can and do occur. Therefore, confirmation and or negation of this potential cause can significantly enhance any potential subrogation claim.

It is well known and documented that rodents have an affinity for many plastics, especially Poly-Vinyl

Chloride (PVC), which is the most common form of wiring insulation found. There have been numerous studies on this issue, but there still has not been a clear answer as to why this phenomenon exists. The end result, however, is that damaged wiring can lead to electrical shorting or resistance heating, and can eventually result in a fire.

Rural properties and outbuildings, such as barns and sheds, are the most common structures to suffer this type of problem. However, with recent population growth and urban development into former rural areas, this phenomenon is becoming more prevalent. No longer are old structures the only ones involved, new structures are just as susceptible.

Many organizations and public agencies have recommended that

individuals attempt to protect such wiring from rodents, including the US Army, Bell Telephone Labs, etc. There are even research papers on the subject describing the design and testing of rodent and lightning protective sheathing for fiber optic cables, composed by researchers at NASA in 1983.

Some of the questions which need to be answered, are:

- 1) Identify any and all past rodent problems.
- 2) Identify methods used to either protect the wiring or control the pests.
- 3) Have there been regular inspections, when possible, of areas where there have been known electrical problems?
- 4) Has an electrician checked out and examined any areas where rodent nests or problems have been identified?

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5) Has there been regular inspection, when possible, of all available wiring in the structure?

These questions and considerations can significantly assist the investigator in determining potential causes for a fire.

As rodents try to make nests out of whatever available surrounding materials, many times the physical evidence needed to prove the fire case has completely been consumed by the fire. In these cases, it is highly recommended that additional areas be inspected (if possible) for similar damage to conductors. If found, documentation of these areas can significantly help one corroborate one's theories, and offer the "proof" to others who are less than convinced.

Additionally, as shown on the previous page, under some circumstances there may be physical re-



mains of such rodent activities on the wiring itself, even though the rodent may no longer be around. Such evidence can be found in the form of actual conductor damage in the form of gnaw marks. Over time, such damage to the conductor can result in resistance heating of the conductor, and possibly result in a fire.

Based upon firsthand experience with this issue, it has been observed that the most prevalent wiring damage found occurs to conductors with PVC type of plastic insulation. It is important to note however, that given the difficulty of finding such conditions prior to a fire is nearly impossible, there can be no confirmation at the time of this phenomenon occurring with other types of plastics.

Although normally considered unlikely, unique events can and do occur which can cause fires.

CJB Fire Consultant:
<http://cjbfire.com>

Both my associate, Joe Bloom of Bloom Fire Investigation, and I have online websites where you can find more information, including copies of our CV's and published articles on various topics of fire investigation. You will also find a links page with connections to other online web pages loaded with important information on fires.

Should you have any questions on any topic of fire



Bloom Fire Investigation:
<http://rvfires.com>

investigation, or fires in general, please feel free to e-mail this office at cjbfire@home.com

Please include in the email: your company name, contact telephone number, claim number, e-mail address and any relevant information you might have surrounding the loss. As a large number of emails are received daily, it may take up to two business days to review your message and respond.

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The CD also contains 4 articles on various aspects of Vehicle Fire Investigation, as well as a partial list of suggested questions to ask witnesses.

As of this date, over 70 different governmental and private agencies across nine (9) countries have requested these materials. In addition, the IAAI International and US BATF have requested the materials for incorporation into training materials.

There is a minimal charge for the materials, covering only the duplication costs and shipping and handling charges. (\$13.50 within US, \$19.00 USD outside the US.)

To get a copy for your library or training department, feel free to contact me via email or telephone.