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Inadvertent Activation of Stove Controls Accident or Design Defect

By Craig Rice, Kyle Bowell, and Robert Longseth

When investigating inadvertently activated rangetop fires, we have encountered many hypotheses, videos, and heard many complaints about how the stove control was accidentally turned on. Quantitative research by the authors demonstrated a significant number of online complaints for this specific issue⁴; even news stations have reported 'range controls that bump on too easily'⁵.

In our experience, traditionally the standard operating procedure for a kitchen range fire was to cease the investigation once it was determined a stove control was in the 'ON' position. Job done, it seemed. But, over the past five to ten years the authors of this article have been working to continue the failure analysis process where it had been prematurely stopped before. As we have worked through this process many times and conducted testing with a variety of experts across the country, finding an agreeable testing methodology has been difficult.

Finding a stove control in the 'ON' position is now a start. We are now asking a more critical question: did the stove control get turned to the 'ON' position? Certainly, consumers routinely intentionally turn a stove control to cook food and use their ranges and ovens. However, an accident can happen, an accident that is not intended.

age levels and physical limitations of users, and contingencies that might occur as a result of reasonably foreseeable misuse or abuse of the product. It is advisable that the criteria distinguish substantial safety hazards from product deficiencies that do not involve risks of injury or impairment of health."⁷ (underline added for emphasis)

Inadvertent operation of the kitchen range is certainly foreseeable and involves a substantial risk to the user, even if they didn't intend to use the kitchen range, and especially when they are only considered a "user" by merely existing in the same room as the range. The Human Factors Design Handbook warns that "Adults are often absentminded or easily distracted, and they often forget to be careful. Products that have hazard potential should have safety lock-out features and/or protective features that will minimize the hazard in the event the user turns a wrong knob, for example." It also states that "Users often turn things into things in their own minds."

THE PROBLEM OF INADVERTENT ACTIVATION

the northern exposure



Beyond
When
Age



Providing an expert opinion on cause and origin in fire litigation is challenging at the best of times as evidentiary issues are an inherent part of these cases. Much of the evidence quite literally goes up in flames during the incident itself. When faced with missing evidence or severely compromised evidence, there are important considerations for experts seeking to provide credible and reliable opinion evidence that is of assistance to the Court. The case of *Child v CNH America LLC, 2025 ABKB 180* presents a situation where the evidence was not only compromised by the fire itself, but it also became lost, corroded, and faded through the passage of time. This case provides us a great opportunity to address with our readers some of the key challenges that may arise when providing an expert opinion in the face of compromised evidence.

BACKGROUND

This case originated with an incident in 2011 where a tractor caught fire while being operated to prepare the field. The tractor's cab was quickly destroyed. The fire was caused by a short circuit in the driveshaft of the tractor. The fire was caused by a short circuit in the driveshaft of the tractor. The fire was caused by a short circuit in the driveshaft of the tractor.

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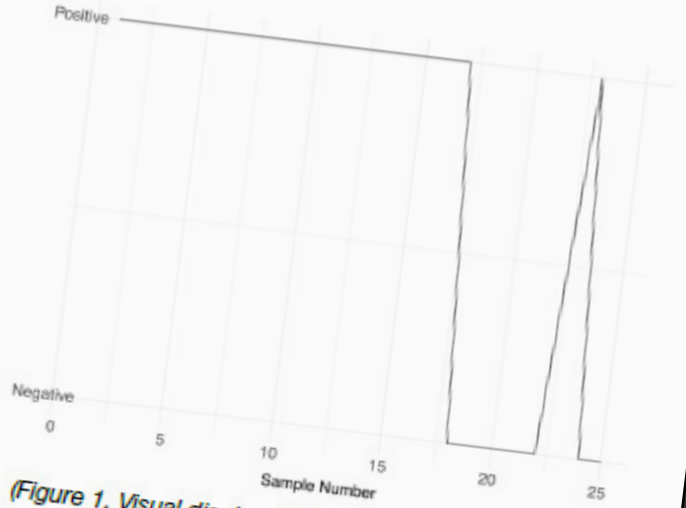
Simple Changes to Improve Laboratory Confirmation Rates with Canines

By Doug Byron, Michael Koster, Laura Hernandez



In the early 1980's, the ATF started investigating the possibility of training dogs to detect ignitable liquids [1]. Since that time, the use of canines to help investigators detect residual ignitable liquids in a fire scene has shown to reduce the time needed to select appropriate areas to sample. Classical conditioning techniques, first described by Ivan Pavlov, allow the association of the scent of an ignitable liquid with an uncontrollable response, such as increased saliva production. While canine handlers know this association is strong because their hands are frequently covered in dog saliva, it does not produce the desired effect when signaling an alert. Turning to operant conditioning, canines are trained to use a physical behavioral change, such as sitting, when signaling an alert.

Canines who emerge from a formalized training program have high success rates. Over time, the laboratory confirmation rate can decline (Figures 1 and 2). Excluding physical issues affecting the canine, such as disease, age, and other physical factors, the decline in success rate is often due to a change in the handler's behavior. This change in behavior can be addressed through training and conditioning.



(Figure 1. Visual display of the laboratory results for the cases soon after a handler received training.)



Training Calendar

International Classes

- Electrical Aspects of Fire Investigation
February 24 - February 26, 2026
Ocean City, MD
- March 10 - March 12, 2026
Sharonville, OH
- July 7 - July 9, 2026
Conshohocken, PA
- Evidence Collection
May 13, 2026
Riverton, WY
- October 17, 2026
Orlando, FL

Evidence Collection Technician (IAAI-ECT®)

- February 20, 2026
Ashland, OH
- February 27, 2026
Albuquerque, NM
- February 28, 2026
Tampa, FL
- March 16, 2026
Marietta, GA
- April 18, 2026
State College, PA
- April 30, 2026
St. Louis, MO
- October 18, 2026
Orlando, FL
- October 21, 2026
State College, PA

Motor Vehicle Fire Investigation

- March 16 - March 17, 2026
Irving, TX
- March 10 - March 12, 2026
Muskogee, OK
- May 12 - May 14, 2026
San Marcos, TX

For a full training calendar and more information, visit www.IAAITraining.com