

## *From past participants*

"The demonstrations are the key to learning and made the class even more enjoyable. They're extremely effective for seeing results."

"It's a must-attend seminar if you want to become more professional in the business."

"The lab setting is very conducive for learning."

"The best part of the seminar? For me, all of it!"

"Prepared, thought-out and experienced seminar."

"Very informative with excellent demos and other examples."

"Great explanations for what to look for during failures."

"I especially liked the staff's ability to demonstrate actual failures."

"The instructors were very open to questions."

"Very enlightening, both from basic education and from the discussion of ways people cause accidental and intentional damage."



## Investigation of Gas and Electric Appliance Fires

*An intensive in-lab program for fire investigators.*

*Now in its 29th year! Only one session in 2020.*

**November 3-6, 2020**

Optional testing toward CFI certification available (30 hours) and continuing education credits (2.8 CEUs) available.

- ✓ Learn how appliances and electrical components work, fail and cause fires.
- ✓ Spend four days with experts on-site at Fire Findings' laboratory.
- ✓ Examine actual appliances and appliance components that have failed, causing fires.
- ✓ Witness fire-causing demonstrations involving:
  - Gas furnaces
  - Gas water heaters
  - Gas and electric clothes dryers
  - Dishwashers
  - Ranges and microwave ovens
  - Refrigerators
  - Toasters, space heaters and other small appliances

*(Note: The appliance fires class concentrates only on appliances, how they work and how they fail. For discussions about high resistance connections, floating neutrals, causes of electrical failures, etc., join us for the three-day session, "Residential Electricity for Fire Investigators." Session dates and more information is available at [www.firefindings.com](http://www.firefindings.com).)*

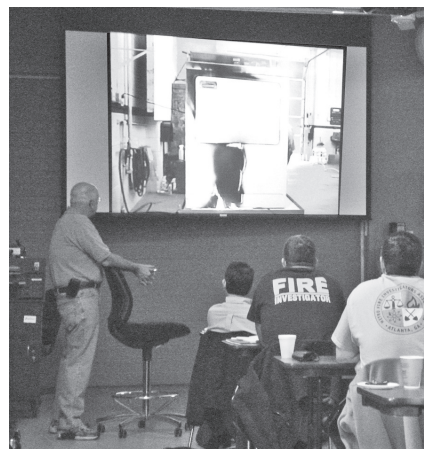
Held on-site at Fire Findings' laboratory testing facility, 2026 Plaza Drive, Benton Harbor, Michigan, 49022.

*Just 40 minutes from South Bend (Indiana) or Kalamazoo (Michigan) airports and 2 hours from Chicago airports.*

*St. Joseph/Benton Harbor is located along the southern shores of Lake Michigan — a gorgeous area to visit and home of the 2018 and 2020 Senior PGA Championship!*

Tuition is **\$895** per person for the four-day session. MCOLES approved.

*It's not too soon to sign up!  
Class sizes are limited.*



Video projection of artifacts allows everyone in the class to see exactly what instructors are discussing.

### ***Who should attend?***

- ✓ In-the-field fire investigators.
- ✓ Fire and police department investigators.
- ✓ Insurance investigators and attorneys responsible for origin and cause determinations.

This course is practical, hands-on learning for fire investigators.

### ***Why attend?***

“Investigation of Gas and Electric Appliance Fires” is different from traditional fire schools because you see dozens of actual demonstrations of fire-causing failures in a laboratory setting.

Then, you apply your new-found knowledge by examining items from fires, photos and background histories to test your ability to reason out the cause of each fire.

## **Course background**

“Investigation of Gas and Electric Appliance Fires” is a hands-on learning experience conducted in the Fire Findings laboratory. You’ll learn how appliances work, fail and cause fires, as well as how to examine them.

Jim Finneran and Jack Sanderson, experts in fire origin and cause, created this investigation course 29 years ago to satisfy the need for hands-on technical experience that can’t be achieved in a traditional classroom setting. They developed the curriculum, wrote and illustrated the course notebook and designed and built more than 25 product-failure demonstrations.

During the 4-day course, you’ll test yourself by examining normal, failed and tampered-with components and appliances to gain practical experience for field examinations. You’ll analyze actual case studies from your instructors’ files and see how X-ray examinations provide an introduction to nondestructive testing.

Optional test credits toward CFI certification are available along with continuing education credits.

## **About your instructors**

**Nathan P. Dwyer**, *Fire Findings’* electrical expert, is a certified fire investigator (CFI) specializing in electrical fire investigation and fire-involved appliance analysis. He has been a speaker at various regional seminars and International Association of Arson Investigators (IAAI) conferences. As an instructor, he is known for making complicated subjects easier to understand.

**Jack L. Sanderson**, *Fire Findings’* founder and CFI, is a nationally recognized speaker, author and expert with more than 30 years of in-the-field experience. He specializes in appliance failures and product testing / analysis and has completed Honeywell, Whirlpool, Maycor and National Propane Association factory training. Dwyer and Sanderson also team up to present the widely acclaimed seminar, “Residential Electricity for Fire Investigators,” in our lab.

**James M. Finneran**, of ElectroTek Consultants, Inc., specializes in electrical failures and fires and has been involved in several product recalls by the U.S. Consumer Product Safety Commission (CPSC). He has testified in product failure fire cases throughout the United States and serves on the National Fire Protection Association (NFPA) 921 Technical Committee on Fire Investigations.

Dwyer, Sanderson and Finneran have instructed thousands of investigators, attorneys and insurance representatives. The Bureau of Alcohol, Tobacco, Firearms & Explosives (ATF), the CPSC and numerous state chapters of the IAAI have called on them to present training sessions.



Displayed artifacts recovered from actual fire scenes or preserved from testing illustrate instructors’ lessons.

# Course outline

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## *Gas appliance topics*

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High- and low-order explosion demonstrations  
Natural vs. LP gases  
Potential gas piping failures  
Gas regulator functions with demonstration of cut-a-way regulators  
Excessive and inadequate pressure demonstration  
Operation of combination gas valves  
Safety shutoff demonstration  
    Ignition of gas leaking through shutoffs  
Operation of water heaters  
    Demonstrations of water heater failure modes  
    How to examine failed water heaters  
    Investigation of possible water heater fires

Operation of standard and high-efficiency furnaces  
    How to examine components  
        (high limits, fan switches, thermostats)  
Demonstrations of furnace failure modes  
    How to examine failed furnaces  
    What to look for in suspected furnace fires  
Water heaters and furnaces as incendiary devices  
Operation of clothes dryers  
    Examination of components (high limits, heating elements, timers)  
    Role of lint  
    Failure modes  
    Examination of failed dryers – what to look for  
    Investigation of suspected dryer fires  
    How to identify a dryer's manufacturer

... and more!

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## *Electric appliance topics*

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Ranges: Did the range come on by itself or did someone leave it operating?  
    Infinite control switches – how they work and how to examine them post-fire  
    Fire-causing failure modes: unzipping a range's heating elements, control panel fires  
Refrigerators: Too cold to burn? Obviously not.  
    Examination and identification of components – where and what they are  
    Appreciation of a refrigerator's contribution to a fire: fuel!  
    Fire-causing failure modes  
Dishwashers: What was that about not combining electricity and water?  
    Examination and identification of components – where and what they are  
    Heating element, timer, limit and float switches  
    The role of rinse-aid  
    The dangers of mixing electricity and water

Microwave ovens: What's inside? Examination and identification of components  
    Fire-causing failure modes  
    Incendiary devices  
Small appliances fires

As time permits, fans, toasters (today's toaster is not the same as your mother's appliance), clothes irons (they seem like obvious fire causes but maybe not), space heaters and coffeemakers, etc.  
What is and isn't a fuel when it comes to appliances  
Using fire investigation principles on a macro-scale – adapting arc-mapping to appliance fire analysis  
Avoiding spoliation claims using nondestructive methodology  
Does a product recall make a fire cause? Doesn't no recall mean the appliance didn't start the fire?

**Lots of  
pertinent  
material!**

*Hot coffee or tea, juice and continental breakfast at 8 a.m. daily.  
Snacks and beverages throughout the day. Friday lunch included.*

*Classes start at 8:30 a.m. and end at 4:30 p.m. daily,  
except the last day  
when the seminar ends promptly at 2 p.m. with the presentation of certificates.*

Visit the Fire Findings website for photos, seminar details and on-line registration.

**[www.firefindings.com](http://www.firefindings.com)**

### **What you get**

Your \$895 tuition to "Investigation of Gas and Electric Appliance Fires" includes:

- ✓ 4 days of intensive, in-lab, hands-on instruction, case histories and live demonstrations.
- ✓ Deluxe continental breakfast and snack breaks all days; snacks and beverages anytime.
- ✓ Lunch on the last day.
- ✓ Answers to your questions about appliance failures and investigating appliance fires.
- ✓ A certificate recognizing your participation.
- ✓ Optional CFI test credits and CEUs available.

## **Easy registration for 'Investigation of Gas and Electric Appliance Fires,' November 3-6, 2020**



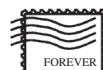
**Fax**

*your completed enrollment and credit card or government voucher number to 269-925-2204.*



**Phone**

*for information and openings, 269-925-2200.*



**Mail**

*this completed enrollment to:  
Fire Findings LLC  
2026 Plaza Drive  
Benton Harbor, MI 49022-2212.*

**On-line registration available at [www.firefindings.com](http://www.firefindings.com).**

### **Who will attend?**

Name \_\_\_\_\_

Title \_\_\_\_\_

Organization \_\_\_\_\_

Street \_\_\_\_\_

City/State/ZIP \_\_\_\_\_

Ph \_\_\_\_\_ FAX \_\_\_\_\_ E-mail \_\_\_\_\_

Years of experience in fire investigation \_\_\_\_\_

Number of hours of origin/cause investigation classes \_\_\_\_\_

Brief description of your present career responsibilities \_\_\_\_\_

***Just one session in 2020!***

☐ November 3-6, 2020

### ***How do you prefer to pay your tuition?***

☐ Check enclosed    ☐ Government voucher or purchase order enclosed  
*Please make payable to Fire Findings, LLC (Fed ID # is 38-3282454)*

☐ Bill my credit card (*check one*)    ☐ MasterCard    ☐ Visa    ☐ Discover    ☐ AmEx

Card # \_\_\_\_\_ Code \_\_\_\_\_ Exp. date \_\_\_\_\_  
(security code)

Cardholder name (*please print*) \_\_\_\_\_

Cardholder signature \_\_\_\_\_

***Hurry! The session is limited to the first 48 registrants.***

For more information and seminar openings, call (269) 925-2200 or fax (269) 925-2204. Check seminar availability before making hotel, auto or flight reservations.

***Special lodging rates are available.***

Comfort Suites, Stevensville, Michigan, (269) 428-4888, offers a special rate of \$84 per night for queen or king suites. All rooms have microwave ovens and refrigerators. Enjoy hot breakfast buffet, fitness center and spa / indoor pool. We'll email you a link for this special rate with your seminar registration confirmation, or mention Fire Findings if making a reservation by phone.

For a free visitor information packet and area maps, call the Southwestern Michigan Tourist Council at (269) 925-6301.