


# Inside Fire

WHITEMORE
FIRE CONSULTANTS, INC.

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## The Ford Motor Fix, Failed to Fix the Cruise Control Problem by David Yarosh, Attorney at Law


David Yarosh

In November of 2008, a fire occurred in the garage of a home located in rural Cold Spring, Minnesota. At the time of the fire, the homeowner's 1999 Ford F-150 was in the right (east) stall of his two-car garage, where it had been parked without being driven for four days. No vehicle was parked in the left stall of the garage. The insured had several battery-operated power tools in the bed of his Ford F-150 as well as a couple of propane tanks, gas cans filled with gas, and a propane heater stored in the garage at the time of the fire. Only the cords for two separate garage door openers and an overhead light were plugged in outlets in the garage at the time of the fire. The fire consumed the entire garage and a portion of the attached residence. The smoke, soot and toxins from the fire resulted in the destruction or replacement of virtually all of the contents contained within the garage and residence and prevented the insured from returning to his property for nearly 8 months while his new home was being built.

The homeowner's insurer retained Brian Haag, CFI of Whitemore Fire Consultants, Inc. to investigate the origin and cause of the fire. Investigator Haag arrived at the residence in late November 2008 and found the scene noted below. Not only had the Ford F-150 been severely burned from bumper to bumper, but most of the north wall, as well as the entire east wall of the garage had collapsed during the fire. The two aluminum garage doors located at the south end of the garage had also been consumed by the fire. The difficulty of determining the fire's origin was compounded by the fact that there had been at least three rekindles of the original fire

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which occurred inside the engine compartment of the F-150. As the entire garage and only the eastern part of the attached residence was burned by the fire, investigator Haag preliminarily concluded that the origin of the fire was somewhere in the garage. As his investigation turned toward the garage, he found that a significant amount of the attic's structural materials and insulation had dropped onto the F-150 and floor of the garage during the fire. Further complicating his origin opinion was the fact that the consumption of the garage doors during the fire likely provided ventilation for the fire from the south, creating burn patterns that at first blush appeared inconsistent with a vehicle origination. Nonetheless, the significant charring of the structural members of the remaining north wall of the garage coupled with the collapse of the walls comprising the northeast corner of the garage focused investigator Haag's investigation toward the northeast corner of the garage at or near the front end of the Ford F-150. He then examined the engine compartment of the F-150 and, while many of the burn patterns had been obscured due to the intensity of the fire, drop down from the attic materials and ventilation from the collapsed walls and garage doors, the totality of the patterns led him to opine that the fire originated in the driver's side engine compartment of the F-150 near the area of the master cylinder. Investigator Haag then arranged for a tarp to be placed over the front end of the F-150 and the surrounding area of the garage floor in order to preserve the area of origin for future investigation.

Investigator Haag returned to the fire scene a couple weeks later along with John Pagels, an electrical engineer retained by the homeowners carrier. Engineer Pagels was brought in not only to rule out any electrical wiring or other electrical components in the garage as a cause of the fire, but also to examine the remains of the engine compartment of the F-150 in order to determine whether there was an electrical cause for the fire to be found within investigator Haag's defined area of origin. Fortunately, investigator Haag had properly preserved the area of origin, as 8 inches of fresh snow had to be removed from the tarp covering the F-150 and surrounding garage floor prior to this inspection.

During his investigation, engineer Pagels found that there was no wiring within the north or east walls of the garage that could have caused the fire, and otherwise ruled out any other electrical cause for the fire within the garage structure. His examination of the engine compartment of the F-150, however, revealed internal wires along the top of the brake booster that showed signs of melting/arcing indicative of failure. He found no other electrical evidence of the cause of the fire during this inspection. Knowing that several Ford model vehicles had been recalled due to a defect within the Speed Control Deactivation Switch (SCDS), coupled with their knowledge that this switch was installed by Ford at the master cylinder of the Ford F-150, investigators Haag and Pagels searched for any remains of the SCDS which may have survived the fire. They were able to find one component of the switch on the garage floor underneath the driver's side engine compartment, the "hexport," which is made of cast iron steel. They therefore retained the hexport and other fire debris from the area of origin for further examination. They did not search for, or retain, the remains of the propane tanks, gas cans or propane heater that had been in the garage at the time of the fire, as these items were outside the area of origin as determined by investigator Haag.

> ...several Ford model vehicles had been recalled due to a defect within the Speed Control Deactivation Switch (SCDS) . . .

The function of the SCDS is to deactivate the cruise control during driving by pressing the brake pedal. The SCDS is a small component consisting of a hydraulic section which pumps brake fluid into the switch via the hexport when the brake is pressed, causing the copper contacts contained within the electrical section of the switch to open and deactivate the cruise control. A synthetic "Kapton Seal" separates the hydraulic and electrical portions of the switch. Over time, this seal can crack due to vacuum pressure applied when braking, thus allowing brake fluid to enter the electrical portion of the switch. This event has been found to cause fires due to the overheating which occurs when the copper contacts of the switch become contaminated and corrode from exposure to brake fluid. As the SCDS is always energized, fires resulting from a failed SCDS often occur when the car is parked and the engine is off. Ford ultimately recalled over 14 million vehicles due to the propensity of the SCDS to cause fires. With respect to the 1999 Ford F-150, the recall "fix" was to install a wire harness with a 2-amp fuse into the same circuit as the switch, thus limiting the current flowing into the switch to no more than 2 amperes (24 watts of power). Ford did not replace the original switch as part of this recall fix. In this case, the insured received a recall notice from Ford and did have the 2-amp fused jumper harness installed by a local Ford dealer in March of 2006, approximately 2 ½ years prior to the fire.

The above evidence convinced Yost & Baill and its experts that the fire was caused by the defective SCDS, notwithstanding the 2-amp fuse "fix" designed by Ford Motor Company. Even though Ford did not have a representative attend the fire scene investigation and no alternative cause for the fire was presented, the case did not settle.

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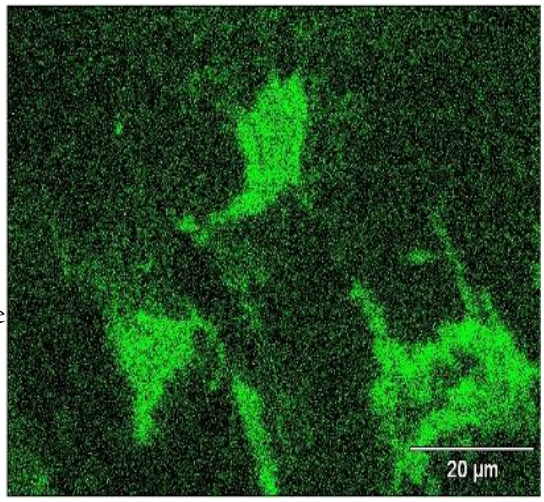
Yost & Baill thus commenced suit on behalf of the homeowners carrier and its insured seeking reimbursement of the damages paid by the carrier, as well as for out-of-pocket expenses incurred by its insured. Ford defended the case by asserting that the 2-amp jumper harness "fix" pursuant to the recall cured the problem with the defective SCDS and thus the SCDS could not have caused the fire. While the local dealer that installed the switch was initially a named defendant in the suit, the parties agreed to dismiss the dealer as the evidence in the case revealed that the dealer correctly installed the 2-amp fused jumper harness per Ford's specifications during the recall work performed in 2006.

Ford took a "no holds barred" approach to the litigation, conducting voluminous discovery of its own, as well as inundating Yost & Baill with literally tens of thousands of documents in response to its discovery requests. During depositions, Ford's counsel insinuated that investigator Haag's and engineer Pagels' focus on the SCDS as the cause of the fire skewed their investigation with respect to other possible ignition sources that were in the garage at the time of the fire. While the physical evidence was strong, the lack of clear burn patterns in the F-150's engine compartment and the dearth of scientific research regarding the possibility of the SCDS igniting fire with as little as 2 amps of current were a concern to Haag and Pagels. On the other hand, Ford did not produce any testing that it or any other entity performed which showed that the installation of the 2 amp fused jumper harness was a fail-safe "fix" of the known SCDS defect. When the case still did not settle at mediation, Yost & Baill was advised that Ford was bringing in its national counsel from Michigan to try the case. Prior to trial, Ford filed 17 separate motions in limine (Yost & Baill filed five) in an effort to limit or exclude evidence at trial. The case was ultimately tried to a jury in St. Cloud, Minnesota with David Yarosh of Yost & Baill acting as lead trial counsel.




Above photo is a SEM shot of the hexport showing the copper deposits in green, which was key to the case.

During trial, attorney Yarosh called Brian Haag, John Pagels and Larry Hanke, a metallurgist to testify as expert witnesses along with Jeff Morrill, a certified fire investigator out of Atlanta, Georgia who specializes in the investigation of SCDS fires. However, as this case arose out of a fire that occurred **after** the 2 amp fused jumper harness was installed per the recall, the trial court judge significantly limited investigator Morrill from testifying as to his past experiences investigating SCDS fires. This case thus turned on the physical evidence obtained from the scene and metallurgical examinations, and testimony elicited from the experts. Investigator Haag was the first expert to testify, candidly explaining the difficulties of determining a conclusive area of origin in a fire of this magnitude. While he agreed with opposing counsel that "drop down" from the attic and the rekindles that occurred could obscure burn patterns, investigator Haag nonetheless held firm regarding his opinion that the totality of the burn patterns led to an origin of the fire at the driver's side engine compartment of the F-150. He also explained that he did not look for or retain any remains of the propane tanks, heater, gas cans or tools that were in the garage at the time of the fire as none of these items were in the area of origin or were otherwise ignition sources in and of themselves.

Engineer Pagels testified that his fire scene investigation allowed him to rule out any and all potential electrical causes of the fire within the garage structure, and that the melting/arcing found on the wires draped along the brake booster were consistent with investigator Haag's opinion that the fire originated within the driver's side engine compartment of the F-150. He further testified that the finding of copper on the hexport of the SCDS by metallurgist Hanke was strong evidence of the SCDS being the cause of the fire. While on cross-examination, engineer Pagels acknowledged that he was unaware of any specific testing revealing the minimum amperage needed to ignite a SCDS, he did state that the combination of time, elements, and contamination leading to dendritic (branch-like) growth of oxides within the electrical section of the SCDS could cause

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Just recently, a court decision pertaining to Ford Motor Company SCDS recall "fix" was determined not to have "fixed" the problem. This is a landmark decision on behalf of all insurers. I want to congratulate Brian Haag, CFI of Whitemore Fire Consultants, Inc., John Pagels, of Pagels Engineering, Larry Hanke of Materials Evaluation & Engineering, Inc. and David Yarosh of Yost & Baill for the outstanding job they did in preparing for and presenting this case for trial. This was a collaborative effort by all experts and legal counsel that had a very positive result on behalf of the client. It is our goal and commitment to each of our clients to provide the same diligent approach to their investigation needs.

We are proud of our commitment and contribution to this investigation and are pleased with the decision in our client's favor.

Congratulations to all involved. Great job!

Robert B. Whitemore, CFI
President
Whitemore Fire Consultants, Inc.

## The Ford Motor Fix, Didn't Fix the Problem >>>

heating sufficient for ignition despite only 2 amps flowing through the switch. This testimony was in stark contrast to the opinions of Ford's one and only expert, Mark Hoffman, a "Design Analysis Engineer" employed by Ford for over 30 years. Engineer Hoffman pointed to several components within the engine compartment at or near the master cylinder which, in his opinion, should have shown deeper burning or even been destroyed had the fire started at the SCDS. However, he admitted during cross-examination that "drop down" and ventilation (as testified to by Brian Haag earlier in the trial) could have played a role in the lack of burning of these components. Engineer Hoffman also failed to address the key issues of the melting/arcing on the wiring draped across the brake booster or the source of the copper found on the hexport face. While he testified that it takes "20 to 30 amps" of current to get an SCDS to fail, no testing or other documentation was introduced by Ford to support this assertion. In fact, engineer Hoffman testified upon cross examination that it is "possible" for an electrical component that has been properly fused to nonetheless fail in some circumstances.

After four days of trial and approximately 2 hours of deliberations, the jury returned a verdict in favor of the Plaintiff. Specifically, they found that the "product" (SCDS with 2 amp fused jumper harness) was defectively designed, that this defective design caused the fire at the insured's residence, and awarded 100% of the claimed damages. As Yost & Baill filed an offer of judgment before trial which was less than the jury's verdict, Plaintiff is entitled to recover double its trial costs above and beyond the jury verdict. This is the first and only verdict in the country of which we are aware finding Ford Motor Company liable for a fire and resulting damages due to a defective SCDS where the recall "fix" had been performed.

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David Yarosh is a partner at the law firm Yost & Baill of Minneapolis, Minnesota. For more information please visit the firm's website at www.yost-baill.com

## Whitemore Fire Consultants, Inc. Awards Leadership Scholarships

**(left to right) Ryan Mestnik, Leah Dungan, Chelsea Cash, Maria Gerdes & Daniel Unruh of Prior Lake High School**

This year Whitemore Fire Consultants, Inc. awarded six deserving senior high students with our "Leadership By Example" scholarship. The students, representing two schools, Prior Lake High School in Prior Lake, Minnesota and Annandale High School in Annandale, Minnesota all are continuing their education at a community or four-year college in the fall.

Each of these scholarship winners exhibits "leadership by example" qualities and have been actively involved in their school's extracurricular activities, graduating from their respective high schools in the top 10%.

This year, we are pleased to award our scholarships to Leah Dungan, Maria Gerdes, Chelsea Cash, Ryan Mestnik, Daniel Unruh and Breanna Haag. We are especially happy and proud to recognize one of our own, Breanna Haag, the daughter of Brian Haag (of Whitemore Fire Consultants, Inc.) and Rose Haag of Annandale, Minnesota.

Congratulations to all of our award winners. 2011 marks the 11th year of the scholarship program sponsored by Whitemore Fire Consultants. We have awarded over $20,000 in continuing education to area senior high students who have exhibited leadership qualities in their communities and schools since 1996.

**Breanna Haag of Annandale High School**

## New Home Sprinkler Requirements Draw Debate

Seven out of 10 fatal fires in the United States occur in the homes, according to the National Fire Protection Association. Most of the victims are young children and older adults. This proliferation of home fires brings questions of whether installing fire sprinklers in new homes is worth the cost, would save lives, and whether sprinklers systems should be required in all new homes.

The International Code Council (ICC) has recommended that fire sprinkler be installed in new multi-residential (two or more) family homes. Most cities, counties and states adopt the codes, but they are not required to do so.

Here are the pros and the cons:

Pros: One authority says at $1.61 per square foot in a home, the investment for homeowners equals that of granite countertops or stainless steel appliances, but this upgrade saves lives. The Home Sprinkler Coalition claims that much of the property damage in a home fire is caused by firefighters' hoses. They send out 200 gallons of water per minute. A sprinkler system sends out 10-15 gallons a minute and only in rooms where the fire is present. About 90% of the fires are contained by one or more sprinkler heads.

Cons: Consumers without children or elderly people living with them think they don't need the protection. Some builders feel the price of a new home is already high, and the cost of adding sprinklers could make some customers decide not to build at all.

For a 2,200 square foot house, the cost of would be $3,542.00.

## News About Us >>>

Congratulations to Doug Noah, CFI, who recently was recognized by the Minnesota State Fire Department Association for his service. Doug served as Secretary of this organization from 2007 until 2011. Prior to his being elected secretary, Doug served as Regional Director.

Congratulations to Brian Haag, CFI for a recent court decision in Minnesota regarding the Ford Motor Speed Control Deactivation Switch Recall Fix. For a complete story on this ruling, please refer to Page 1 of this newsletter.

Congratulations to Robert Whitemore and the entire staff of Whitemore Fire Consultants, Inc. July 15, 2011 will mark our 17th anniversary of providing origin and cause investigation services.

Congratulations to Mark McCue, CFI. Mark will be starting his 16th year as an investigator with Whitemore Fire Consultants, Inc. Happy Anniversary!

Brian R. Whitemore, represented Whitemore Fire Consultants, Inc. at the IA/NE IASIU conference & seminar in Council Bluffs, Iowa May 2—4, 2011.

## Why CFI? , by Douglas A. Noah, CFI

Over the past several years, I have been working towards a goal, the goal was to become CFI-certified with the International Association of Arson Investigators. Today, I can proudly say that I have attained my goal. Some people ask me "Why CFI?" Well, here's the reason and my journey..

Douglas A. Noah, CFI

The application process is complex, with each previous job experience, every training hour and every education class needing to be documented either through a certification of completion or by personal letter. The application was certainly more time consuming than I had imagined, but was nothing compared to the requirements needed to even fill out the application.

To challenge the exam for the Certified Fire Investigator program, the applicant is required to accumulate a minimum of 150 points from the areas of training, education and experience as it relates to the fire investigation field.

Earning the CFI certification has been my main goal since becoming a fire investigator, but it has taken 17 years in the fire service – including two years as fire chief and two years as assistant chief – as well as three years of fire investigation in the private sector to even qualify to take the test.

The IAAI - Certified Fire Investigator Program is truly the gold-standard in measuring an investigator's qualifications, and is the reason it is a required level of expertise for all Whitemore Fire Consultants investigators.

The CFI program was developed by the International Association of Arson Investigators in 1986 to "resolve a national concern," according to the IAAI website. "The CFI program is an established process for identifying and recognizing a fire investigator's expertise."

The Certified Fire Investigator Program has four main objectives, as outlined in the application packet:

- Recognition of professional standards of achievement in fire investigation theory and practice by government and private sector fire investigators.
- Encouragement of continued education and training in the field of fire investigation.
- Increased professional standing in the fire investigation field.
- Identification of the sources of professional knowledge for the theory and practice of fire investigation, related fields and the laws and regulations governing or affecting fire investigation.

The first category of the application – education – requires the applicant to achieve a minimum of a high school degree, with additional points awarded for higher levels of learning. Those with doctoral degrees in a field related to fire investigations can obtain the maximum number of points in this category. The next category – experience (full/part time) - awards points for each year the applicant has worked as a full- and/or part-time investigator. A minimum number of points is required to qualify for the exam.

"Other Experience" is the next section of the application, with points awarded to supervisors of fire investigators, to non-fire criminal investigators, to fire fighters and police officers, evidence technicians, non-fire private investigators, and fire insurance adjusters. Points are also awarded for books and articles published relating to the fire investigation field, lectures taught and membership in professional organizations directly related to fire investigation.

The next section of "Other Experience" is the requirement that in my opinion separates the CFI from other certification programs. In this section, an applicant is required to testify at least twice to obtain the minimum number of points. For those who may never have that opportunity, like public fire investigators, the IAAI created the Expert Witness Courtroom Testimony Course. Once completed, this 40-hour, college level course will provide the applicant with the minimum number of points in this section of the application.

I took the Expert Witness Testimony Course last summer in Grand Forks, N.D., and learned extremely valuable lessons on preparing for trial and on effective ways to testify. Approximately six weeks prior to the start of class, we were given a very weak case of which we were required to formulate an origin and cause opinion, and to defend that opinion. Not only did this class teach us valuable testifying tips, it also drove home the importance of thorough scene investigations.

The final section of the application is training, with points awarded to those with firefighter certifications, certified police academy training, and IAAI-Fire Investigator Technician designations. The final points are awarded based on fire investigation classes taken, with tested courses providing higher points than non-tested courses. The National Association of Fire Investigators (NAFI) has its own certification program, known as the Certified Fire and Explosion Investigator program. The main difference in the two certifications is that the NAFI application is not based on points, rather is "attained following an acceptable review of an applicant's documentation of his/her professional education, training and experience by the Board and subsequent

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## Why CFI? , by Douglas A. Noah, CFI (continued)

successful completion of a comprehensive proctored, written certification evaluation," according to the application packet. I obtained this certification early in my career, when I had not yet received the required points for the IAAI – CFI application.

NAFI also requires that its applicants retain membership in it's association, while the IAAI does not have that same requirement. Both organizations do, however, require continuing education in order to retain the certification.

Although I'm proud to have achieved the CFEI designation, the next logical step in the advancement of my career was to become an IAAI Certified Fire Investigator.

My career goal was to become an IAAI Certified Fire Investigator. The comprehensive background that is required in order to even qualify to challenge the exam speaks volumes about why it is important to the fire investigator. And it is the same reason why Whitemore Fire Consultants requires its investigators to reach this level of achievement.

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Douglas A. Noah, CFI is an investigator with Whitemore Fire Consultants, Inc. and recently completed his achievement of CFI through the International Association of Arson Investigators, which is a requirement for all investigators with WFC. Congratulations Doug!

# Recalls

## Aquarium Lamps Recalled

The Consumer Product Safety Commission in cooperation with Nantucket Distributing Company of Middleboro, Massachusetts has recalled the Animated Safari and Aquarium Lamps due to fire and shock hazards. Approximately 35,000 units were sold Christmas Tree Shops stores primarily in New England, Mid-Atlantic and Midwest Regions from December 2009 through May 2011 for between $7.00 and $8.00.

This recall involves Safari and Aquarium themed lamps with UPC numbers 000015556905, 000015618955, 000015821591 and 000015821607 printed on the price label on the cardboard packaging. The decorative lamps are silver and feature rotating films with aquatic and safari scenes. While there are no brand markings directly on the product, "Made in China" is printed on the bottom of the lamp.

The hazard includes defective wiring in the lamps that can cause an electrical short, posing fire and shock hazards to consumers.

Christmas Tree Shops has received three reports of sparking. No injuries or property damage has been reported.

Consumers should immediately stop using the recalled lamps and return them to Christmas Tree Shops store for a full refund. For additional information, contact Christmas Tree Shops toll-free at (888)287-3232 or visit their website at www.christmastreeshops.com.

# *final* thoughts...

As we celebrate Independence Day, please be aware and know how your family can stay safe and which fireworks are allowed in your state if fireworks are part of your July 4th celebration. Never assume that a fireworks device is safe based on its size and never allow young children to play with or light fireworks. By knowing the dangers of all types of fireworks, consumers can prevent tragedies."

It's EASY . . . Go to our website:
www.whitemorefire.com

Click on "Submit a Loss" tab . . .

Answer the questions on the form, press "submit" and you will receive an electronic confirmation of receipt of your loss as well as a response from the on-call representative.


Contact us at **952-461-7000 OR**
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## When Things Go Boom in the Night Featured in The Subrogator Magazine

Robert B. Whitemore, CFI has an abbreviated article appearing in the Summer Edition of "The Subrogator" Magazine by the National Association of Subrogation Professionals (NASP).

Bob's article, "When Things Go "Boom" in the Night" discusses origin and cause investigation of explosions. For more information or a copy of the article in its entirety, please go to our website: www.whitemorefire.com. If you are not a member of NASP and would like to learn more on how to become a member, please visit their website at www. subrogation.org.