



Airways

Hamilton Chapter No. 037

<http://www.vaxxine.com/ashrae/>

American Society of Heating, Refrigeration and Air Conditioning Engineers

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Our 45th Year

November 2003

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Tuesday November 11, 2003

Vehicle Fire Investigation

Tonight's Speaker:

Kenneth D. Byers, P.Eng., CFEI, CVFI

Ken is a professional mechanical engineer and is a part owner of Origin and Cause Inc., a Forensic Consulting Engineering and Fire Investigation firm. He is a Certified Fire and Explosion Investigator and in 2002 was among the first to be designated as a Certified Vehicle Fire Investigator. He is a member of 10 engineering and technical societies, including the International Association of Arson Investigators, the National Association of Fire Investigators and the Canadian Association of Fire Investigators and of course, ASHRAE. Over the last 17 years he has carried out more than 1300 investigations, which includes nearly 700 vehicle fires. He specializes in transport truck and bus fires but also investigates fires in automobiles, motor homes, construction equipment, farm machinery, logging equipment and occasionally, refrigeration equipment. He has been qualified in court many times as an expert witness for vehicle fire investigations. His industrial experience in failure analysis and metallurgy has been a significant asset in the investigation of vehicle fires. Ken benefited from being a volunteer firefighter with the Ancaster Fire Department for three years.

Besides having done investigations for most insurance companies in Ontario and a few in the United States, he has done vehicle fire investigations for manufacturers including Honda, Ford, Toyota, Volvo, BMW, Mercedes, MCI Bus, Orion Bus, Western Star Trucks including military truck fires, International Trucks, Kenworth Trucks and Volvo Trucks. He is currently the Canadian and Eastern United States fire investigator for Freightliner LLC, doing Freightliner, Western Star, Sterling, American LaFrance trucks and motor homes with chassis from Freightliner CCC (Custom Chassis Corp.). For fire investigations he has traveled from St. John's NFLD to Vancouver, New York City to Los Angeles and from north of Sioux Lookout to New Orleans, and many places in between.



Royal Hamilton Yacht Club
North End of McNab, On Hamilton Harbour

5:00 PM Social Hour & Technical Session

6:00 PM Dinner & Business Meeting

7:00 PM Technical Program / Speaker Presentation

Chapter Members \$ 27.00 • Guests \$ 32.00 • Students \$ 20.00 • Meal Plan \$ 130.00



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This space Could Be Yours!

**Business Card Ad
\$75 For one year**

If you are interested, contact Brian Beninger
brian@beninger.ca

On November 11, Ken will be presenting some of his experiences with tractor trailer fires. If you have ever wondered what causes vehicle fires, how to reduce the risk of having one yourself, or how the cause is investigated, or if you are a fan of the current CSI series of TV programs, this presentation should be of interest to you.

Tonight's Technical Session: Fire Dampers

The National Fire Protection Association (NFPA) Standard 90A defines a fire damper as "a device, installed in an air distribution system, that is designed to close automatically upon detection of heat, to interrupt migratory airflow, and to restrict the passage of flame. "

Although curtain fire dampers restrict flame and airflow passage as described in the NFPA definition, they are virtually transparent to heat and therefore ineffective for use in openings in fire-rated ceiling assemblies.

Openings in vertical fire separations i.e.: walls and partitions, require a vertical mount fire damper (duct runs horizontally). Gravity causes the blades to drop closed (static rated dampers). Openings in horizontal fire separations i.e.: floors, require a horizontal mount fire damper (duct runs vertically). Horizontal mount fire dampers utilize springs to pull the blades closed. Dynamic rated fire dampers utilize closure springs in both vertical and horizontal applications to ensure the blades close fully under airflow conditions.

Static fire dampers were designed for use in HVAC systems that shut down (fan off) in the event of a fire alarm. They have not been tested to ensure closure while air is moving in the duct. Dynamic fire dampers have been tested under specific airflow and static pressure conditions in order to ensure that the damper will close in today's HVAC designs that utilize 'fans on' smoke management systems. Generally, a dynamic rated damper can be used in both static (fans off) or dynamic (fans on) type systems, but a static rated fire damper can only be used in a 'static' system (fans shut down during alarm).

Fire dampers must be mounted in a steel sleeve. The damper / sleeve assembly is held in place in the wall, partition or floor by use of retaining angles on each side of the wall etc. Ductwork shall connect to the sleeve on either side, as required, providing a connection that can 'break away' should the ductwork fall during a fire. This allows the damper / sleeve assembly to remain in the wall etc., maintaining the integrity of the fire barrier.

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If you are interested, contact Brian Beninger
brian@beninger.ca

NFPA 90A requires that fire barriers of less than 3 hours utilize a 1 1/2 hour rated fire damper. Fire barriers of 3 hours or more require a 3 hour rated fire damper.

Denka Mortella, National Sales Manager with Nailor for 16 years will discuss the wide array of controls require for protection of structure, whether a dynamic or static type HVAC system is utilized. In addition, Denka will provide samples for our members to inspect. Nailor Industries commenced operations in 1971 manufacturing a single air control device – the curtain fire damper.

A message from the TEGA Chair

A few quick notes from the TEGA Chair:

1. We still need people to review handbook chapters and standards.
2. We need people to report on what they have reviewed. A 10-15 min. presentation would be great.
3. Are you aware that you can view technical articles on line. Start at WWW.ashrae.org and follow the links.
4. If you wish to submit a research paper for publication (up to 6000 words) in the ASHRAE Journal, go to the above web site and click ASHRAE Manuscript Central or for more information contact Reinhard Radermacher :
ashraeresjour@glue.umd.edu.
5. To have an applications oriented article published, they should be fewer that 3000 words with a maximum of four illustrations. Contact :
fturner@ashrae.org.
6. Don't forget the ASHRAE Winter Meeting Jan 24-28 in Anaheim Calif.

Steve Glover, Hamilton Chapter TEGA Chair 03/04

2003 - 2004 Meeting Schedule

This year's meeting schedule is summarised below. Except for some special events, all meetings will be held at the **Royal Hamilton Yacht Club, North end of McNab St. on Hamilton Harbour - If you need a map, check out our web site at <http://www.vaxxine.com/ashrae/>**. During the 5:00 PM to 6:00 PM Social Hour, a half hour "technical session" on the basics of a particular subject relating to our industry is presented. If a session sounds interesting to you, feel free to attend. Presentations are made by our members and this forum is open to all who wish to share his or her expertise. New products and/or services are presented informally via a "table top demonstration". After dinner, the main topic of the evening is presented by a "feature speaker". If you are interested in presenting a technical session, book the table top space to promote your product or service, or if you have a suggestion for a feature subject and/or speaker, please contact please contact Chris McClelland, our Programs Chair. There is a charge of \$ 75.00 for "Table Top" demonstration space, and this includes a business card ad for two months.

2003 – 2004 ASHRAE HAMILTON CHAPTER PROGRAM ACTIVITY				
Month/Date	Theme	Tech Session 5:00 – 6:00 p.m.	Table Top Presentation	Guest Speaker/Main Topic
November 11, 2003	Fire	Fire Damper Installation (Denka Mortella from Nailor Industries)	Nailor Industries & Wilson & Cousins	Vehicle Fire Investigation (Ken Byers of Origin and Cause Inc)
December 6, 2003	Family	TBA		TBA
January 13, 2004	Energy	Computer A/C - Canatal	Canatal	LEED Energy Conservation
February 10, 2004	Arena Design	Desiccant Dehumidification Bryair	Bryair	CIMCO Ice Rink Refrigeration
#March 2, 2004#	Water	Residential Water Purification	Zenon	Zenon
April 13, 2004	DL	Distinguished Lecturer – Richard Hayter Joined by London & Toronto Chapters		Tour of the New Federal Building
May 11, 2004	ASHRAE Future	ASHRAE Current Operations (Steve Glover)	History of the Chapter	President of ASHRAE
June 9, 2004	Research	Annual Golf Tournament Benefits of ASHRAE and Membership		
September 14, 2004	Programs	Under Floor Air Distribution	York	Gas Fired Refrigeration

Date moved to the first Tuesday of the month due to March Break.

Did you say that you wanted to sit in the "GOLDS"?

Attention all ASHRAE members who would like to bring guests to an ASHRAE meeting. Special "ASHRAE" meeting "GUEST DINNER TICKETS" are available at the special price of \$100.00 for a book of 4 tickets. These tickets allow you to treat a special friend or customer to a meeting. They will work even though you may not be able to attend! These special tickets will insure that your guest is properly introduced to ASHRAE. Pick up yours today! Contact a member to the executive or see your sales rep at the next meeting!!

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