

CFSA CANADIAN FIRE SAFETY ASSOCIATION NEWS



Fire Safety is Everybody's Business

WINTER 2021

Making the Most of Annual Life Safety System Inspection Reports





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Editor: Lesley-Anne Coleman

The CFSA News Magazine is published 4 times per year: Winter, Spring, Summer and Fall.

Advertising Rates

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President's Message

And we're off: With the start of 2021 well underway, I am happy to report that we are moving forward with an aggressive plan to deliver more Technical Sessions than ever before. With the requirements for many to work from home, why not learn from home too! These Technical Sessions will range in topics and span many different subject areas such as Fire Proofing needs, Enclosure Integrity Testing, National Building Code updates, Various ULC standards, and will include a special webinar designed for our newest group of CFSA members; our students.

In 2020 we saw a noticeable increase in membership. This increase was across all areas of membership from Corporate, Individual Companies, and within Individual memberships and students. This is not entirely unexpected as the CFSA has been focusing its efforts on providing more value within its membership offerings. With increased Technical sessions, Newsletter articles, and related content; we can provide a broad spectrum of information that is as broad as our membership.

Within this season's CFSA Newsletter, we have interesting articles for many different building life safety systems, Code updates as well as related tips for Winter safety, storage of combustible materials, and hand sanitizer.

The planning for the 2021 CFSA Scholarships also continues and we are excited to be seeing so many of our existing donor companies continue their pledge to support our students. This Scholarship program has never been more important to our student base as the financial needs and challenges continue to become more and more difficult. I would strongly recommend that any company that is looking to hire for Part-Time or summer work to reach out now and begin your recruiting efforts. Job postings can also be shared on the CFSA website to help amplify your hiring needs.

Be sure to follow or connect with us using Twitter **@CFSA_NextGen** along with **@CFSA_Canada**. Please feel free to contact me at any time **President@CanadianFireSafety.com**

Stay safe,

Scott Pugsley
CFSA President



What is The CFSA?

The Canadian Fire Safety Association is a non-profit organization established in 1971, to promote fire safety through the use of seminars, safety training courses, information newsletters, scholarships, and regular meetings.

Our Mission Statement

“To disseminate fire and life safety information and promote a fire safe environment in Canada.”

www.canadianfiresafety.com

CFSA NEWS

The Canadian Fire Safety Association (CFSA) produces a quarterly News magazine which is distributed electronically to all members and is available for download from the CFSA website.

The CFSA News provides articles on industry related information, updates on codes & standards and overviews of various CFSA educational seminars provided throughout the year. In addition, Corporate Members and their selected representatives are recognized.

Click on a cover below to view that issue online ...



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Seneca College
416-491-5050 ext. 22525 | scott.pugsley@senecacollege.ca

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416-221-0093 | ocarroll@innovativefire.com

SECRETARY: Alex Yarmoluk
ARENCON Inc.
905-615-1774 # 230 | ayarmoluk@arencon.com

DIRECTORS

Lesley-Anne Coleman [NEWSLETTER]
Toronto Fire Services
416-338-9376 | leslyann.coleman@toronto.ca

Alana Detcherry, Toronto Community Housing
647-455-4011 | Alana.Detcherry@torontohousing.ca

Janet O'Carroll, Innovative Fire Inc
416-221-0093 | ocarroll@innovativefire.com

Randy Panesar, Durham College
905-721-2000 ext. 3456 | randy.panesar@durhamcollege.ca

Murray Pham, Matteo Gilfillan & Associates
647-946-2475 | mpham@gmacodes.com

Kathryn Schramm [SCHOLARSHIP]
Barrie Fire & Emergency Service
705-739-4220 ext. 3228 | Kate.Schramm@barrie.ca

CFSA OFFICE

2800 14th Avenue, Suite 210, Markham, ON L3R 0E4
416-492-9417 | Fax: 416-491-1670

ADMINISTRATION: Melonie Hart
operations@canadianfiresafety.com

EVENT COORDINATOR: Rachel Gilmour
rachel@associationconcepts.ca



Fire Department Connection Hydrostatic Testing

By: Jere Riberdy, P.Eng

In March of 2018 the Ontario Fire Code (OFC) was amended to include new requirements for periodic hydrostatic testing of fire department connection (FDC) pipe systems. A FDC allows firefighters to hookup their water pumping trucks to a building's standpipe and sprinkler systems to pump water into the systems if the building water supply is insufficient, compromised, or the building's own fire pump fails.

This article is written to provide insight regarding the processes, findings, and challenges of this new OFC requirement as experienced and practiced by sprinkler and fire protection contractors operating throughout the GTA.

Hydrostatic testing involves filling FDC piping with water and boosting the pressure to a specific level, isolating the supply of water and recording pressure loss over a duration of time. Any pressure loss observed during that time means there is a leak in the system and it must be located and repaired.

The OFC change was enacted due to several recent failures of FDC piping as responding firefighters attempted to use a building's FDC connection and found it to be inoperable. Since the FDC piping remains free of pressure (except when pressurized by the responding pumper trucks) any leaks and/or existing leaks are not known until the FDC piping is pressurized by water pumping trucks during a real-life fire event and when it really counts! The building has a one-way check valve on each FDC which allows water to be pumped into the sprinkler and standpipe systems but

also prevents the backflow of water from the building out of the FDC.

Previously, FDC piping needed to only be hydrostatically tested when it was replaced, modified, or first installed as an acceptance test. The main issue that has arisen is that over time the existing steel piping can corrode, pipe coupling gaskets dry out and in extreme cases the piping can rot or corrode so severely that the piping ruptures upon use rendering the FDC inoperable.

The new OFC clause 6.4.3.7 now requires the FDC piping to be hydrostatically tested every 5 years once the building (or piping) reaches 30 years of age. The testing criteria are to expose the FDC piping and components to at least 1050 kPa of pressure for at least a 2 hour time duration with no pressure loss. The OFC specified that this testing was to be completed by January 1, 2019 for all buildings in Ontario that are 30 years old or greater.

There were many logistical issues with performing these newly mandated tests,

including:

1. Many FDC connections first required modifications and replacements of their check valves in order to perform this testing in the first place. Many FDC check valves are hidden in finished ceilings and walls in inaccessible areas.
2. Most buildings had not budgeted for the modifications needed, the cost of the testing or the cost of the subsequent repairs which can be in the tens of thousands of dollars depending on the scope of work.
3. Many older FDC connection systems required immediate repairs due to major failures upon testing.
4. Most FDC connections require at least some minor repairs to pass the testing, very few are passing on the first attempt.
5. The sprinkler industry was suddenly overloaded with this additional modification, testing, and repair work that became mandatory for tens of thousands of buildings at the same time.

continued...

Fire department connections

6.4.3.7. (1) The dry portion of the fire department connection piping of a standpipe system shall be hydrostatically tested at a pressure of not less than 1050 kPa (gauge) for 2 hours at intervals of not more than five years where

- (a) the fire department connection piping has been in service for more than thirty years, or
- (b) the age of the fire department connection piping cannot be determined.

(2) Despite Sentence (1), if, on July 1, 2018, fire department connection piping has not been hydrostatically tested within the previous five years, the first test required by Sentence (1) shall be completed before January 1, 2019.

continued...

Hydrostatic Testing Cont'd

Even though the deadline has passed, there is still a large backlog of buildings requiring FDC hydrostatic testing and repairs. With only a few manufacturers of the actual FDC connections themselves, it is not uncommon to wait 8-12 weeks for shipments of FDC connection components required in order to perform these repairs.

Performing the Test:

There are several different methods to perform the hydrostatic testing of FDC piping. We will start by describing what, in our perspective is a correct method, followed by describing a short-cut method that is commonly used and the pitfalls of that method.

In order to perform FDC piping hydrostatic testing a one-way valve (check valve) must be located, removed, flipped to the opposite position and re-installed to allow water flow into the FDC piping. We first flow water out of the FDC hose connections on the outside of the building to flush the FDC piping which can accumulate rust, debris, bird's nests or garbage over time. Caps are installed on the FDC connection hose ports intended to keep debris out of the piping however these caps often are tampered with and anything deposited into the hose connection ports will be pushed into the building's standpipe or sprinkler system the next time the pumper truck pressurizes the building systems. Pictured below is an FDC hose connection point with its protective caps missing.



FDC hose connection point with its protective caps missing.



Corroding FDC pipe which was recently replaced.

After flushing is performed, blank testing plugs are installed in the hose connections outside to contain the water inside the FDC piping. With the piping filled with water, a hydrostatic testing pump and gauge are attached to the piping and the pressure is pumped up to 1050 kPa. The hydrostatic test pump is then isolated from the FDC piping and sprinkler fitters will examine the entire FDC piping system for leaks while watching for any pressure loss over a 2 hour period.

Once the hydrostatic testing is completed and a pass or fail is determined, the water is drained from FDC piping and the system check valve is again removed, flipped around, and re-installed back to the proper direction so that water does not flow into the FDC piping and the sprinkler and standpipe systems are restored to proper operation. The main reason many hydrostatic tests are failing is due to the existing FDC pipe installation practices of the past and those who did so did not foresee the future problems it created. For instance, existing FDC piping often runs below grade from the sprinkler room in the basement level, through the building's foundation wall into the soil underground, then turning up above grade and mounted where fire trucks can connect to them. Since the below grade piping is exposed to wet soil for over 30 years, corrosion occurs weakening the pipe and often leaves splits or cracks which leads to subsequent failures.

The picture on the left is an example of a corroding FDC pipe which was recently replaced. The gaping portion of the pipe was buried in the soil and it is clear why the hydrostatic testing has failed in this instance.

The solution at this building was to excavate the soil to expose the failed FDC piping and replace it with new galvanized piping from the check valves in the sprinkler room, through the foundation wall and up to the new FDC connection points.

Galvanized piping is steel pipe that has been dipped in a protective zinc coating to help prevent corrosion and rust. Also, at this building, we installed a corrugated barrier to keep the moist soil away from the new piping, extending its life greatly which will save the owner costs in the long run.



Corrugated barrier.



Although the excavation and repair at this building illustrated in the pictures above were relatively minor in nature, they can be quite intensive depending on the original installation practices. At one site recently, approximately 120' of trenching was required under a busy

driveway and sidewalk in order to replace the failed FDC piping.

Alternate testing methods:

Though it is strongly recommended to backflush the FDC piping during the process of hydrostatic testing, some contractors are not performing this step. An alternate hydrostatic testing method is to leave the FDC check valve in place and fill the FDC piping with water from outdoors and boost the entire sprinkler and standpipe system in the building up to 1050kPa of pressure along with the FDC connection piping. While this method may meet the intent of the OFC requirements for pressure testing, any rust, debris or garbage in the FDC piping will be pushed through the check valves into the building's sprinkler and standpipe systems causing other problems.

This alternate method is much quicker than that of the perspective correct method mentioned earlier, which results in a lower cost testing method. However, in our experience, the majority of FDC hydrostatic tests that we have performed have revealed garbage, rust, and debris inside the FDC piping at the check valve. By removing the check valve, it is possible to perform an internal inspection of the valve and piping and clean out any foreign objects that otherwise would be unseen.

It is our position that it should be mandatory to perform the internal inspection of the piping and check valve at the time of hydrostatic testing. Pictures to the right illustrate the internal conditions observed during a recent hydrostatic test at a building roughly 35 years of age.



Internal piping on building side of the FDC check valve.



Internal condition of FDC check valve itself.

Presently, the OFC states that backflushing of the FDC connection piping is required only when the protective caps are found missing or when conditions warrant (meaning if debris, garbage, rust, pipe scale are observed). The issue with this requirement is that without removing the FDC check valve one can only look into the FDC piping from the outdoors through the hose connection ports. It is possible to confirm that the first 5-10 feet of FDC piping are clear of debris but it is extremely difficult to examine the entire length of the FDC connection piping from the

hose connections outdoors. Over the years, each time the fire department pumper truck pressurizes the FDC connection, any foreign objects in the piping are pushed towards the FDC check valve and normally accumulate at the check valve itself and out of sight of any scope camera inserted into the hose connection ports outdoors.

Removal of the FDC check valve during testing allows these foreign objects to be removed as part of the FDC hydrostatic testing process, which means they are not pushed into the building's sprinkler and standpipe systems next time the FDC connection is used by the Fire Department. If the foreign objects are large enough, they can plug sprinkler heads, piping or fire hose valves and prevent the discharge of water when needed.

Below, are some pictures of the types of debris and foreign objects often found inside the FDC piping right at the FDC check valve which further supports the suggestion that the check valve **MUST** be removed as part of the hydrostatic testing procedure. This FDC otherwise appeared "clean" when scoped from the hose connection points on the exterior of the building!

It is our intent that this article will prove useful to educating building owners and others on the reason for the new FDC hydrostatic testing requirements and to explain that failure of the building's fire dept connection system is a real issue. While it may present additional expenses for testing and repairs, it will help to minimize the risk of the fire department connection failing in a real emergency situation.

continued...

Fire department connections

6.4.1.3. (1) Except when in use or being **inspected** in accordance with Article 6.4.3.7., **fire department** connections shall be equipped with plugs or caps that are secured wrench-tight.

(2) If plugs or caps are missing, the **fire department** connections shall be examined for obstructions, back-flushed when conditions warrant and the plugs or caps replaced.



Since the enactment of the new requirement, of the 331 buildings whose FDC's we have hydrostatically tested showed a failure rate over 50% (many with immediate repairs required due to major failures).

This article was written and prepared by Jere Riberdy, P.Eng, Vice President of Trace Fire Protection in Markham, Ontario. Jere is a licensed Professional Engineer as well as a red seal Sprinkler and Fire Protection Installer (427A Sprinkler Fitter). ♦

New Building Code Amendments

On December 16, 2020 the Ministry of Municipal Affairs and Housing filed Ontario Regulation 762/20 that amended the Ontario Building Code (Ontario Regulation 332/12).

The amending regulation includes a number of housekeeping changes to correct minor errors and omissions. The housekeeping changes harmonize with the National Building Code (NBC) and in general:

- Correct errors in equations and data taken from the NBC,
- Add information, such as references and names of organizations, that was omitted,
- Support public safety, and
- Reduce redundancies.

As well, two spent provisions related to the Emergency Management and Civil Protection Act were deleted. These amendments do not add any new technical requirements to the Building Code or change the intended meaning of the provisions.

In addition, updates were made to the applicable law sections to align with the passage of the *Building Transit Faster Act, 2020*.

The amendments can be found in the consolidated version of the Building Code, available at: www.ontario.ca/laws/regulation/120332.

Has Surge Protection on Emergency Systems Been Forgotten?



By: Maxim Beaugard, Eng.Jr. CEO
and Aurie Fayad B.Eng., M.Sc. Int'l Business COO
Armada Surge Protection

In the past decade, a lot of research has shown that voltage surges are not only damageable for all electrical equipment but is also a serious fire hazard threatening human lives. According to a recent study made by the National Electrical Manufacturers Association (NEMA), and sponsored by The Fire Protection Research Foundation, the most common causes for surges are lightning and utility switchingⁱ. These causes for surges are of particular interest here as they are often responsible for life safety equipment damage, fires, and personal injuries. In fact, facility managers have confirmed through a survey the catastrophic failure and damage of electrical and electronic equipment initiated by lightning or a voltage surge event, included the failure of life safety and fire protection equipment. These types of events are bound to increase in the future as the average annual number of lightning storms in Canada are continuously increasing (2.25 million on average between 1999 et 2018)ⁱⁱ.

This article provides an overview of what surges are and their effects followed by a brief on building's emergency electrical systems and how they can be affected by voltage surges. The latter will lead to outline the recent changes in regulations and to the Na-



Figure 1 - Circuit Breaker Failure Caused by Surge Voltage¹

tional Fire Protection Association (NFPA) codes and standards, as well as introduce a newly listed Canadian surge protective device (SPD) that meets all relevant regulations with regards to this matter.

Surge fundamentals

A voltage surge is an electrical phenomenon corresponding to a higher voltage than normal which affects electrical equipment and electronics. Small surges, otherwise known as internal or minor surges, can cumulatively damage equipment and cause nuisance tripping.

On the other hand, large, external, or major surges immediately damage and often destruct equipment and components in the electrical system. Figure 1 shows destruction of a circuit breaker following a major surge. A surge's duration is not strictly specified but it is typically known to be less than a few milliseconds.

As mentioned above, the two most common causes for voltage surges are lightning and utility switches. In the case of lightning, even if the energy surplus

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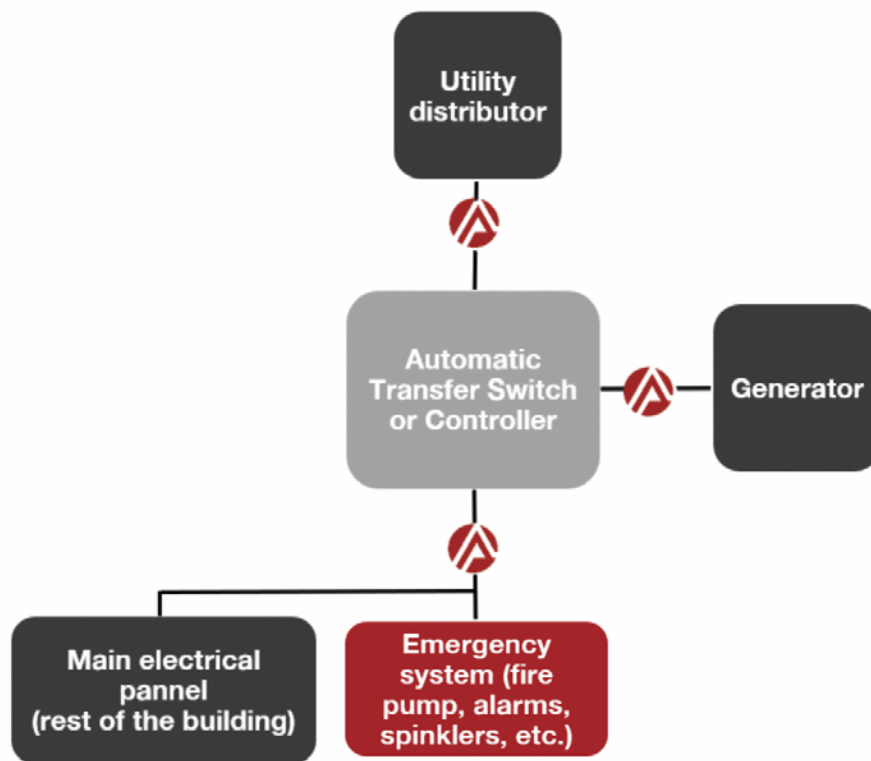


Figure 2 - Illustration of standard electrical system

happens outside of a building, voltage overload can be carried into the facility via connected conductive paths and thus provoke a large surge. Furthermore, utility switches refers to how utility configurations are occasionally changed, for example in the case of a power source being switched from the utility distributor to a generator. This type of operation can produce transients that momentarily exceed equipment voltage ratings, thus creating small surges and in the long run damaging equipment.

Figure 2 illustrate the standard electrical system of a building. As shown, the power normally enters the system from the utility distributor and when needed, the controller switches it to the generator.

Along the same line, fire pumps operate as critical and essential components for many fire protection systems such as

sprinkler and standpipe. Moreover, the controller is expected to transfer to the alternate power source whenever utility power becomes unavailable. A very important point to note is that in the majority of cases, all emergency systems are strategically placed at the entrance of building in order to be accessible and reduce cabling as well as to save cost. However, that makes critical equipment vulnerable to surges coming from the utility power feed, the generator and the transformer which are known to be unstable and induce significant transients.

A way of making sure a building is properly protected is to have surge protection at the heart of it such as at the emergency electrical system, transfer switch, and generator as shown by the red circles on Figure 2. By protecting these crucial components and the entrance of the building at the same time, you ensure that the whole electrical sys-

tem is protected and ready to respond in case of fire caused by a potential large surge such as lightning. This method of protection is not only firmly enforced by the NEMA Surge Protection Institute, but it also procures a safer and less costly protection than individually protecting every item of the system.

Surge protection for a building greatly reduces risks of electrical fire. It is more than a matter of protecting electrical investments; it is a matter of protecting lives and property.

Statistics

Every year there are pervasive anecdotal reports from institutions and homeowners about the various damage done to electrical and electronic equipment resulting from electrical surges.

No one is immune to the serious consequences that can result from power surges. An example of this is a 911 call centre in the province of Quebec. They were put offline for months due to a single surge. Having no protection at the entrance of the building resulted in the automatic transfer switch (ATS) going up in smoke after experiencing a major surge. This caused the backup batteries, also known as UPS to be greatly damaged as they only protect against small day to day surges. Given the critical importance of this type of institution, delays have not only been financially costly but also presented fire safety risks for the lives of the individuals who depend on them. A surge protector, which protects against both minor and major surges, could very well have prevented this 911 call centre from being in this position. This is why it is essential to adequately protect critical systems such as ATS, UPS and fire pumps in all types of buildings.

On a similar note, NEMA's survey as-

sessing losses related to voltage surges have shown damage or failure of the following types of life safety equipment:

- Smoke detector (34.7%)
- CO2 detector (18.7%).
- Fire alarm system (41.3%).
- Security system (49.3%).
- Emergency lighting (32.0%)
- Emergency generators or backup power (33.3%).
- Fire pumps (12.0%).
- Elevators or escalators (24.0%).

Additionally, 10.7% have reported direct or indirect personal injury as a result of a voltage surge.

The NEMA survey is major in that it shows the effect of surges on components of emergency systems and the potential impact to personnel in a facility.

Figure 3 illustrates how major surge can have disastrous consequences, including fire and failure of life safety equipment.

Codes, Standards and Regulations

Surge protection is a very serious matter, but too often the Standards and Regulations are omitted or ignored. Indeed, surge protectors are frequently forgotten or sidelined as it is a less known electrical product and it is rarely put in the forefront. However, its importance remains paramount. The alarming statistics presented above have served to show the importance of such a product and have contributed to the recent updates in the NFPA codes.

NFPA70 was a start in 2014 when they included a new article for surge protection. In fact, Article 700.8 – Surge Protection – states that “a listed SPD shall be installed in or on all emergency systems switchboards and panelboards”ⁱⁱⁱ. Additionally, Article 695.15 demands

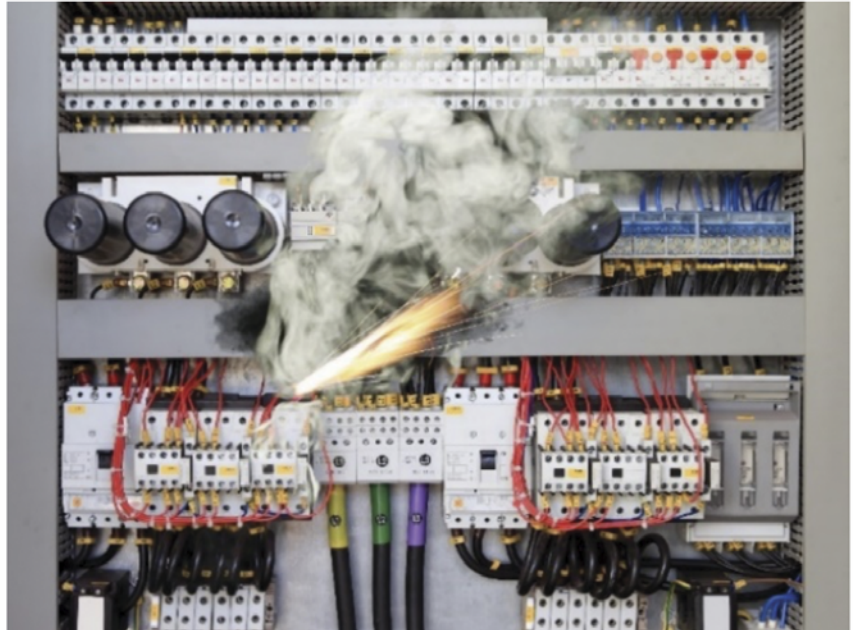


Figure 3 - Example of a major surge causing fire inside an electrical panel

that a listed surge protective device be installed in or on fire pump controllers.ⁱⁱⁱ

Similarly, NFPA20 which is in effect throughout Canada has also reviewed the need for surge protection on all fire safety systems. According to Article 10.4.1.1, a voltage surge arrester is required either in or at the fire pump controller. Since 2017, this article covers all fire pump installations regardless of their characteristics^{iv}.

Surge Protection

Manufacturers of SPD's often offer advice regarding the installation, ratings, and recommended applications, as opposed to the industry Codes and Standards which sometimes offer limited guidance. When choosing an SPD, it is essential to look for a UL 1449 listed product as well as making sure that the protector is designed to safeguard the systems against both minor and major

continued...



Figure 4 - Armada Galeos Serie 6, SPD for 347/600 V



Figure 5 - Armada Galeos Serie 2+, SPD for 120/240 V

surges. Many of the products on the market today protect against small day to day surges but leave equipment vulnerable when it comes to larger surges like lightning.

Armada Surge Protection which is a Canadian company offers a large range of products, all operating with new PowerPressure™ patented technology and listed under UL1449 4th edition. Their products are designed to contain the short circuit generated by even

major surges, store the abnormal energy, and then safely dissipate it. This innovation, without a fuse or electronic circuit is entirely fireproof and protects the life safety of people, property and all critical and emergency systems against all type of surges.

Figure 4 and 5 present two models designed for industrial and residential use, respectively.

In summary, installing an SPD outside emergency equipment rather than integrating it also secures protection for the rest of the building and the alternate power. It is equally important to make sure the listed product is effective against both major and minor surges.

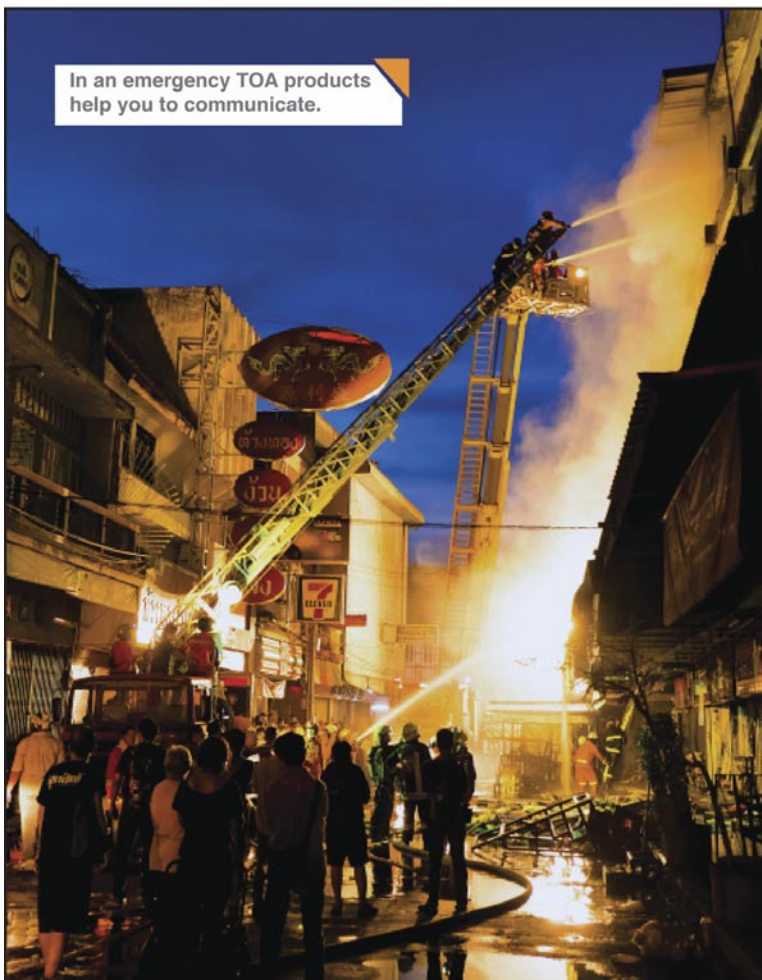
To obtain more information regarding SPD's, contact aurie@armadasurge.com or maxim@armadasurge.com. ♦

ⁱ Eddie Davis; Nick Kooiman; Kylash Viswanathan, Data Assessment for Electrical Surge Protection Devices, Phase 1 Final Report, The Fire Protection Research Foundation, October 2014, .

ⁱⁱ Canada, Environnement et Changement climatique. « Cartes et statistiques : la foudre au Canada ». AEM, February 3rd, 2010, .

ⁱⁱⁱ « Top Seven 2017 NEC Changes You Need to Know ». Control Engineering, June 1st, 2017,

^{iv} « NFPA 20: Changes to the Fire Pump Standard ». Consulting - Specifying Engineer, November 14th, 2017, <https://www.csemag.com/articles/nfpa-20-changes-to-the-fire-pump-standard/>.



DO YOU HAVE A FIRE COMMUNICATIONS PLAN?

You never know when an emergency will strike. Is your company prepared to communicate and save lives?

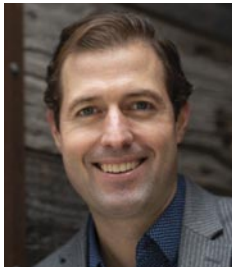
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Making the Most of Annual Life Safety System Inspection Reports

By: Gerry Bourne, P. Eng., Partner, CodeNext Inc.



Although the annual inspection records can be large and comprehensive documents, there are a few key areas to look at and questions to ask that can tell a story as to whether the annual inspections have been performed properly. **As practitioners, we can help owners to understand their responsibilities** and to identify when something observed on site indicates to us that the maintenance, testing and inspection program may be inaccurate or noncompliant.

It is important to realize that in most cases, the way we imagine a building will function when we review the drawings, permits, reports etc. (which are created for construction) can be very different from the reality of the occupied building and how it is maintained over time.

An owner is required to confirm that the original design intention, whether relating to life safety, accessibility or inclusion, is still being met from a functional, safety and user-based standpoint. The only way to accomplish this is through a regular inspection, testing, and maintenance program.

This post will:

- Introduce how the Codes regulate testing, inspection, and maintenance programs, and
- Share hints for identifying common flaws in annual

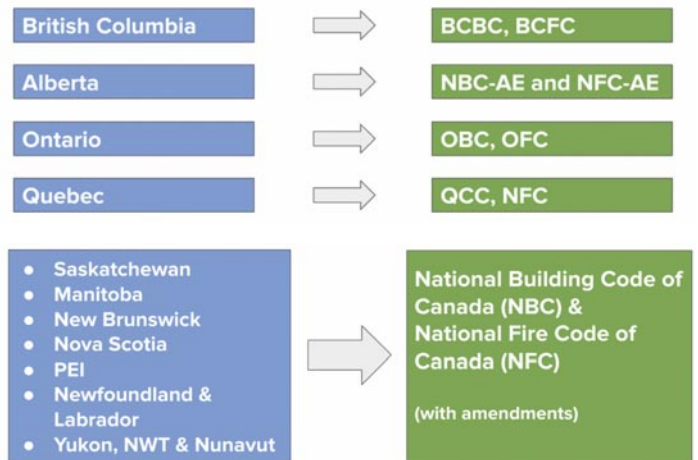
inspection reports to understand if the building systems perform the way that they were intended.

Code Application

The types of life safety systems installed in a building and that typically require inspection, testing and maintenance per the Fire Codes are:

- Fire Alarm and Voice Communication Systems for Life Safety
- Sprinkler Systems, Fire Pumps and Standpipe Systems
- Monitoring of Fire Alarm and Sprinkler Systems
- Emergency Lighting and Exit Signage
- Fire Extinguishers and Hose Cabinets
- Fire Doors, Egress Routes and Exits
- Emergency Power Systems (Generators)
- Private Fire Hydrants
- Special Suppression Systems (Kitchen Hood, Clean Agent, Gas and Foam Systems)

Depending on the part of the country you are in, the various Building and Fire Codes will apply as illustrated below:



Being based in Ontario, I am going to use the Ontario Fire Code references in this post – but be sure to check that you are using the appropriate reference for your province.

continued...

Responsibilities:

When considering how to apply the Fire Code requirements for inspection, testing and maintenance, it is important to determine the roles and responsibilities for the program:

Owners (and operators) are responsible for achieving and maintaining compliance with the Fire Code per OFC Article 1.2.1.1., Division A, which states that "Unless otherwise specified, the **owner** is responsible for carrying out the provisions of this Code". While it is incredibly important to select experienced vendors to undertake the technical elements of the inspections, testing and maintenance program, it is critical for owners to understand their responsibilities and the value that these programs provide.

It is required that the building owner keep copies of inspection and test reports – including corrective measures and operational procedures and are required at the building premises for 2 years. Some inspection vendors provide a certificate; however, this is not recognized by the Fire Code and is not necessary. For example – fire alarm testing, per OFC Clause 6.3.2.2.(4)(a): "a record of each device, component and circuit of the fire alarm that is tested shall be kept in accordance with above". The Fire Code requires the location sheets be provided, with details for the inspected devices, not just a generic certificate.

Unless otherwise stated, any test mandated by the Fire Code is required at a minimum to record: what was done and the date and it was undertaken. This minimum record-keeping can be applied to the monthly requirements in most cases and can range from detailed monthly reports to simply initials in the fire log book for the date and type of inspection performed. It is considered best practice to have an electronic copy and a hard copy on site of all required fire protection and life safety system design and inspection, testing and maintenance documents. Ideally the records are organized per system type and year, and are easily accessible to authorized persons.

What to look for in Annual Inspection Reports:

The following are some quick observations that you can make of an inspection report that can indicate that more digging is required to verify that the inspections are being undertaken to Code.

My list isn't intended to be comprehensive, and I'm not implying that any one of these observations would mean that a Vendor hasn't undertaken their job responsibly – errors can

happen. However, if you're observing numerous issues, and if you can't find a clear reason then there may be a bigger problem that needs to be investigated. Of critical importance – the life safety and fire protection systems may not have been maintained properly and their integrity and reliability may be in question. As practitioners we can help owners to navigate these investigations and provide our expertise regarding what the Codes require and how the systems are supposed to be tested, inspected and maintained.

- Are there sections in the report that are blank that shouldn't be, sections left out, systems not noted that are actually in the building? – *This could reflect a lack of attention to detail and may mean that parts of the building systems are not being inspected properly, or at all.*
- Are Vendors referencing the wrong standards or incorrect editions? – *It's a quick check to see if the standard referenced on their forms matches the current Fire Code edition.*
- Where smoke sensitivity or battery testing is completed, are readings different year over year or does it look like the values are identical to the last year or other detectors in the building? – *Repetitious entries could reflect that testing is not being undertaken properly or that devices have been skipped.*
- Do device type legends match the device labels on the location sheets (e.g., does the brand, type and part number in the legend correspond with the information on the location sheet or what is actually in the building)? – *Again, this may mean that parts of the building systems are not being inspected properly, or at all.*
- Is the technician CFAA or ASTTBC number present on the report and do the credentials check out?
- Was testing completed on the same day for areas of a building that usually require special access? (e.g., a detector in a hydro vault that typically requires the building owner to organize access shows as tested, but the building owner never scheduled that access?) – *Is there reason to believe that the inspection report is not factual.*
- Was a time delay recorded for flow switch, and is the delay consistent with typical system expectations?
- Where the sprinkler zones are listed, do they match sprinkler zones identified on the building fire alarm report(s)? – *Inspection reports that rely on templates may not suit the building or design of a specific system, it is important that the inspection report reflects the actual design.*
- In a comparison of year over year reports, are there noted inconsistencies? (e.g., a floor that had a note that

a speaker had been removed one year and then the next year its marked as operational) – *Again, this may mean that parts of the building systems are not being inspected properly, or at all.*

- Are the notes and wording on the report identical year over year when that doesn't make sense? – *Were there different inspectors, or had there been changes to building components?*
- Are there recurring deficiencies year over year.?– *If there is something that shows up as a deficiency one year it is important to look back and see if this deficiency has shown up in past inspections, perhaps a few years back under a different service provider)*
Deficiencies that are pointed out on one report that have not been rectified by the following year report are of concern.

Understanding Deficiencies

Are no deficiencies a good thing? It might be counterintuitive to think that you want to see deficiencies after your annual inspection, but it's important to remember that you can expect

to have regular items year over year that need maintenance or devices and systems that need to be altered due to the normal changing of how a building is used.

Is it possible that year over year there are no problems in a facility, or is it that things are getting passed over or missed?

Is a building owner more likely to have a vendor back that repeatedly identifies deficiencies or gives a "clean bill of health" year after year? Perhaps, but the thought of a clean bill of health may be misguided. The constant maintenance and repair work identified in an inspection may reflect a building with correctly maintained fire protection and life safety equipment – what would we like to see in a 'healthy' building?

It is also important to be critical of a report. History has shown that in some cases, the skill set of an annual inspection provider can be limited in terms of the types of deficien-

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UNDERSTANDING, ACCELERATED



cies that they can repair: reprogramming of the fire panel, replacement of a sprinkler valve, water supply repairs, etc. It can occur that vendors may only point out deficiencies that they can repair easily themselves and not extensively point out deficiencies that would require them to call in a competitor to complete the service. As such, it is very important that building owners are educated and involved with their service providers to understand the deficiencies listed and how they will be fixed.

Another thing to note is that just the fact that a provider has returned to repair some deficiencies, doesn't mean that they have completed all of them. The building owner needs to follow up and have documentation that shows all of the deficiencies listed have actually been repaired.

After the Report

Once an inspection report has been provided, it's completeness and accuracy reviewed, and the deficiencies understood – it is very important that the building owner understands their responsibilities. Receiving the report is just the beginning, as I mentioned earlier – the building is like a living environment and the fire protection and life safety systems need to perform throughout the lifetime of that building. The are actions that an owner should do once they receive an annual inspection report:

- The owner needs to ensure that any deficiencies identified in a report are resolved and that building managers and operators understand their responsibility versus the responsibility of the Vendor.
- The owner needs to examine if deficiencies coming from external vendors are consistently observed as being in their area of expertise and be sure to explore other options for repairs.
- The owner needs to understand the importance of knowing what fire protection and life safety systems are in the building and the Code requirements from an inspection and maintenance standpoint.
- The owner needs to ensure building managers understand, use and value an up to date Fire Safety Plan.
- The owner needs to create a binder (or electronic) filing system for all fire protection and life safety system inspection, testing and maintenance report documents and the system must be easily accessible and up to date. ♦

UPCOMING CFSA EVENTS

CFSA STUDENT MEMBER WEBINAR 2021

Wednesday, February 3, 2021

CFSA Online Learning

9:00 am - 10:00 am

This session is rescheduled from January 13. If you registered for the January 13 session, your registration will automatically be transferred to this new date

[MORE INFORMATION AND TO REGISTER](#)

OVERVIEW OF ULC STANDARDS, TESTING & CERTIFICATION PROGRAMS

Wednesday, February 10, 2021

CFSA Online Learning

9:00 am - 10:00 am

Presenter: **Theresa (Tess) Espejo,**
ULC Standards

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COMING ATTRACTIONS: NATIONAL BUILDING CODE 2021

Wednesday, March 17, 2021

CFSA Online Learning

9:00 am - 10:00 am

Instructor: **Tony Crimi, P.Eng., MASc.**
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September 10, 2020



2020-16

Use of Alcohol-Based Hand Sanitizer in Schools

The use of alcohol-based hand sanitizer has become a common method to combat the spread of viruses and is identified as a strategy for maintaining hand hygiene for staff and students in response to the COVID-19 outbreak in the [Guide to re-opening Ontario's schools](#). With the use of hand sanitizer becoming more prevalent, compliance with Fire Code requirements and the adoption of safe practices are key to maintaining fire safety in schools.

Hand sanitizers contain various active ingredients and are typically categorized as either alcohol-based or non-alcohol-based products. Hand sanitizer products typically recommended in preventing the spread of COVID-19 are those with 60 per cent to 90 per cent alcohol. Due to their high concentration of alcohol, these products may be classified as flammable liquids, as defined in Article 1.4.1.2. of Division A of the Ontario Fire Code (Ontario Regulation 213/07, as amended). To determine classification of a hand sanitizer product, refer to the product (Material) Safety Data Sheet.

Where a hand sanitizer meets the classification of a flammable liquid, storage, handling and use in schools are subject to the requirements of Sections 4.1 and 4.2 of Division B of the Fire Code. Examples of provisions in Section 4.1 that may apply include ratings for portable fire extinguishers, control of ignition sources, spill control measures, ventilation requirements, and fire safety plan changes to address storage, use and dispensing of product. While Section 4.2 includes additional requirements such as maximum quantities and storage locations, a hand sanitizer as a pharmaceutical product may be exempt from many of these requirements when used and stored in small quantities. Fire departments are encouraged to work together with school administrators to consider implementing additional safe practices to further minimize fire risk in school settings. Some examples of safe practices for the use of alcohol-based hand sanitizers in schools are included below.

For assistance with evaluating options to address fire safety, please contact your local fire protection adviser.

Safe Practices for the Use of Alcohol-Based Hand Sanitizer in Schools

1. Sources of Ignition

Exercise caution when using hand sanitizer. Read and follow product warning labels. Avoid exposure to open flames and other heat sources. When using hand sanitizer, rub hands together until they are completely dry and exercise caution in areas where open flames or other sources of heat may be present. In a school setting, this includes hazardous classrooms such as science laboratories and shop classes. **Hand sanitizer**, containing a high concentration of alcohol, is flammable and may emit vapours that could ignite if exposed to an ignition source.

continued...

2. **Spacing**
Maintain a minimum 1.2 m horizontal centre to centre spacing between dispensers where more than one dispenser is provided, such as in a corridor.

3. **Quantity in Rooms and Corridors**
Ensure the capacity of individual dispensers in corridors and classrooms does not exceed 1.2 L, with no more than one dispenser provided at each egress door or exit from a classroom.

4. **Supervised Areas**
Locate dispensers in areas that are supervised to reduce the risk of misuse. This may include locations such as the school entrance where the main office is located and classrooms where school staff are typically present to observe any misuse or spillage.

5. **Obstructions**
Ensure dispensers do not obstruct the required width of a means of egress.

6. **Carpeted Areas**
Avoid installation of dispensers directly over carpeted surfaces except if the floor area is sprinklered or measures are taken to control accumulation of the product in the carpet.

7. **Excess Stock**
Store excess stock of hand sanitizer in accordance with Fire Code requirements where applicable. As the quantities outlined in the Fire Code are not specific to hand sanitizer products, the presence of any other flammable and combustible liquids must also be taken into consideration when assessing total volume.

8. **Dispenser Operation**
Test dispensers according to manufacturer's instructions after each refill and limit the quantity of product dispensed upon activation to the required amount as specified by the manufacturer. Regularly check dispensers to ensure they are maintained in operating condition and are not activated accidentally or maliciously. Clean spilled / residual hand sanitizer product to prevent accumulation.

9. **Fire Safety Plan**
Review and update the school fire safety plan to conform with Fire Code requirements to reflect fire safety procedures that may be required as a result of the use and storage of hand sanitizer products. Depending on volume of product being stored, procedures may be required to address items such as the control of fire hazards and product spills.

10. **Disposal**
Immediately dispose of empty hand sanitizer containers in a non-combustible receptacle and on a daily basis, move waste to an outdoor receptacle to prevent accumulation.

For additional information, see [OFM-TG-02-2011 Safe Practices for the Use of Alcohol-Based Hand Rub](#).

Winter Fire Safety Tips

NO ICE IS SAFE ICE – conditions can change in an instant. Pay attention to warning messages and stay off frozen waterways if possible!

Many factors affect ice thickness including: type of water, location, the time of year and other environmental factors such as:

- Water depth and size of body of water.
- Currents, tides and other moving water.
- Chemicals including salt.
- Fluctuations in water levels.
- Logs, rocks and docks absorbing heat from the sun.
- Changing air temperature.
- Shock waves from vehicles traveling on the ice.

Ice thickness should be:

- 15 cm for walking or skating alone
- 20 cm for skating parties or games
- 25 cm for snowmobiles.

Check with local authorities before heading out. Avoid going out on ice at night.

Fireplaces

- Do not remove fireplace embers or ash, or if you do, place them in a metal container with a lid and cover them with water. Do not place them in a plastic or paper bag or other container that is not fire-resistant. Do not dispose of them indoors or close to your home or another structure.
- Use care with "fire salts," which produce colored flames when thrown on wood fires. They contain heavy metals that can cause intense gastrointestinal irritation and vomiting if eaten. Keep them away from children.
- Always use a screen in front of the fireplace to protect against flying sparks.
- Never use gasoline or any other flammable liquids to start a fire.
- Use only seasoned and dried wood.
- Never leave the fire unattended or let it smoulder.
- Clean the ashes regularly. Place the ashes in a metal container and store outside away from flammable materials.
- Don't use Christmas trees for firewood.

Candles

- Extinguish candles when leaving the room or going to sleep. Keep lit candles away from items that can catch fire
- Place candles in sturdy, burn-resistant containers that won't tip over and are big enough to collect dripping wax.



- Don't place lit candles near windows, where blinds or curtains may close or blow over them.
- Never leave children or pets alone in a room with lit candles.
- Do not allow older children to light candles in their bedrooms. A forgotten candle or an accident is all it takes to start a fire.
- During power outages, exercise caution when using candles as a light source. Many destructive fires start when potential fire hazards go unnoticed in the dark.
- Keep candle wicks short at all times. Trim the wick to one-quarter inch (6.4 mm).
- Extinguish taper and pillar candles when they burn to within two inches of the holder, and container candles before the last half-inch of wax begins to melt.
- Use extreme caution when carrying a lit candle, holding it well away from your clothes and any combustibles that may be along your path.

Heating

- Keep anything that can burn at least three-feet away from heating equipment, like the furnace, fireplace, wood stove, or portable space heater.
- Have a three-foot "kid-free zone" around open fires and space heaters.
- Never use your oven to heat your home.
- Have a qualified professional install stationary space heating equipment, water heaters or central heating equipment according to the local codes and manufacturer's instructions.
- Have heating equipment and chimneys cleaned and inspected every year by a qualified professional.
- Remember to turn portable heaters off when leaving the room or going to bed.
- Always use the right kind of fuel, specified by the manufacturer, for fuel burning space heaters.
- Be sure all furnace controls and emergency shutoffs are in proper working condition.

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- Leave furnace repairs to qualified specialists. Do not attempt repairs yourself unless you are qualified.
- Check the flue pipe and pipe seams. Are they well supported, free of holes, and cracks? Soot along or around seams may be an indicator of a leak.
- Is the chimney solid, with cracks or loose bricks? All unused flue openings should be sealed with solid masonry.
- Keep trash and other combustibles away from the heating system.

In the Kitchen

Unattended cooking is the number one cause of home fires in Ontario, so be extra careful when cooking.

- Be on alert! If you are sleepy or have consumed alcohol don't use the stove or stovetop.
- Stay in the kitchen while you are frying, grilling, or broiling food. If you leave the kitchen for even a short period of time, turn off the stove.
- If you are simmering, baking, roasting, or boiling food, check it regularly, remain in the home while food is cooking, and use a timer to remind you that you are cooking.
- Keep anything that can catch fire – oven mitts, wooden utensils, food packaging, towels or curtains – away from your stovetop.

- Have a “kid-free zone” of at least 3 feet around the stove and areas where hot food or drink is prepared or carried.

If grease in a pot or pan catches fire:

- Smother the flames by covering the pan with a lid. Do not remove the lid until the pan is completely cooled.
- Turn off the heat immediately.
- Use baking soda (flour can be explosive) on shallow grease fires.
- Never turn on the overhead fan, as this could spread the fire.
- Never throw water on a grease fire.

Important Tip:

Ensure all entry/exits in your home are cleared from snow to ensure you can get out in case of a fire. Make sure all windows are not frozen in case you need to use these as an escape mechanism.

If there is a fire hydrant near your home you can assist the fire department by keeping the hydrant clear of snow so in the event it is needed, it can be located. ♦

TOP TEN Real Excuses expressed by Fire Alarm Technicians at Training Seminars.

When asked if they test: End of Lines, Fault Isolators and Fixed Temp Heat Detectors.

10. I don't test End of Lines because it damages the wall paint.
9. Fixed Temp Heats don't have to be tested.
8. We don't test End of Lines because we don't quote to test them.
7. We don't test End of Lines because they are a pain in the ass.
6. I don't know how to test a Fault Isolator. I just copy the last guys report.
5. We don't test Fault Isolators because our Boss told us that if you short them you will fry them.
4. I don't test anything that requires me getting a ladder out to test.
3. It's faster to just put a checkmark down then test them.
2. Why bother, Fire Inspectors can't tell if I didn't test them.
1. Who cares, it's just a waste of time testing those things.

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Dry, Dunk, Dispose to Safely Treat Oil-Soaked Rags

By: Ryan Harper, Marketing Lead Canada, Retail & Industry Underwriters Laboratories of Canada

Think those oily rags from working on the car or refinishing the deck are harmless? Most people do – and they are dangerously mistaken. Oil-soaked rags can cause some serious damage if they're not disposed of properly. A pile of oily rags thrown together in a corner of the garage or stored in a box can spontaneously self-ignite.

That's right – the rags can slowly create heat, ignite on their own and create a fire. The fire can then quickly spread to the surrounding area. This may seem unbelievable except UL and the fire department of Wilmette, Illinois, partnered up for a [demonstration](#).

What kind of oils are we talking about?

First, let's start with the kinds of oils that pose a threat. Think of the types of do-it-yourself projects you might tackle at home: changing the oil in your car, using oil-based paint primers on cabinets, staining furniture or refinishing your backyard deck. While all oil-soaked rags are a fire hazard, there are certain types of oils, like linseed oil, are more likely to self-ignite. Also, the rags you use to clean up spills and wipe off tools with should be disposed of properly.

Common combustible oils:

- Linseed oil and other drying oils
- Wood stain
- Alkyd enamel resins (a common binder in oil-based coatings)
- Motor fuels and lubricants

- Oil-based products such as primer, sealer, paint, white-pigmented shellac, paint thinner, turpentine, mineral spirits and denatured alcohol

The science behind it

"Rags that are soaked with combustible oils create and release energy and heat," said Bob Backstrom, fire research manager of Retail and Industrial Research and Development at UL. "When rags are tightly packed in a confined space, there's an effect of insulating the pile. The energy and added heat can't dissipate fast enough and the temperature of the oil-soaked rags increase."

Backstrom continued, "Think of an active child strapped in car seat on a long road trip. The child undergoes an emotional response, energy builds and builds, and eventually it's so stressed a reaction happens. In the case of a child, they vent by crying and having a tantrum because they want out. With oil-soaked rags, the oils undergo a chemical reaction through combustion creating excessive heat, which ignites into fire. This happens without an external source of ignition, such as heat from surrounding environment or an external flame."

It happens more than you know

According to the [National Fire Protection Association](#) (NFPA), an average of 900 home fires per year are started when oily rags catch fire; Also, an aver-

age of 1,700 home fires are caused by instances of spontaneous combustion or chemical reactions.

The steps to prevent fires from oil-soaked rags

If you remember anything from reading this article, let it be these three words: **dry, dunk, dispose**. Any time you've finished with a rag that was used to apply or clean up chemicals or oils, use the dry, dunk, dispose method to discard of them safely. Having a UL safety certified, oily waste container on hand also reduces the fire hazard.



Dry

Lay the rags out individually on the driveway, garage floor or sidewalk or hang them out to dry. Provide at least a half of a foot of space between each one. If you're indoors, make sure there's proper ventilation. Let the oils dry out. This helps the heat and energy release into the air.

continued...

Dunk

Once dry, get them wet again, this time with water. Dunk each rag individually in a container of water. This could be an empty coffee can, empty paint can or bucket of water. You can also flood them with the garden hose or drench them in a utility sink.

Dispose

If you used an old coffee or paint can to dunk the rag, discard the oily water. Refill it with clean water, submerge the rag inside and close the top. If you don't have an old can, fill a resealable bag with water, submerge the rag inside and seal the bag. Then, contact your local garbage facility to find the nearest hazardous waste disposal drop off. If that was a lot to take in, here's a video

to help you remember the most important parts. Brought to you by UL and the Wilmette, Illinois fire department.

Video link:

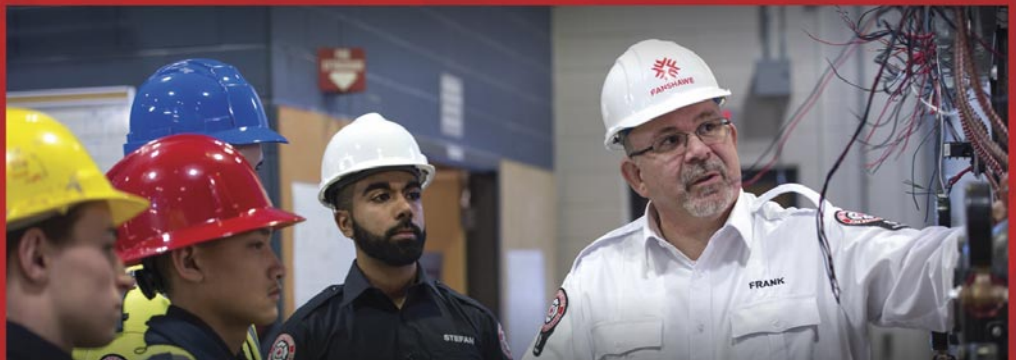
<https://www.ul.com/news/dry-dunk-dispose-safely-treat-oil-soaked-rags>

Top Three Tips:

1. Remember the dry, dunk, dispose method next time you work with oily rags.
2. Dunk each rag individually then remember to dunk them again in clean water.
3. Contact your local waste management service to find out where you can drop off oily rags.



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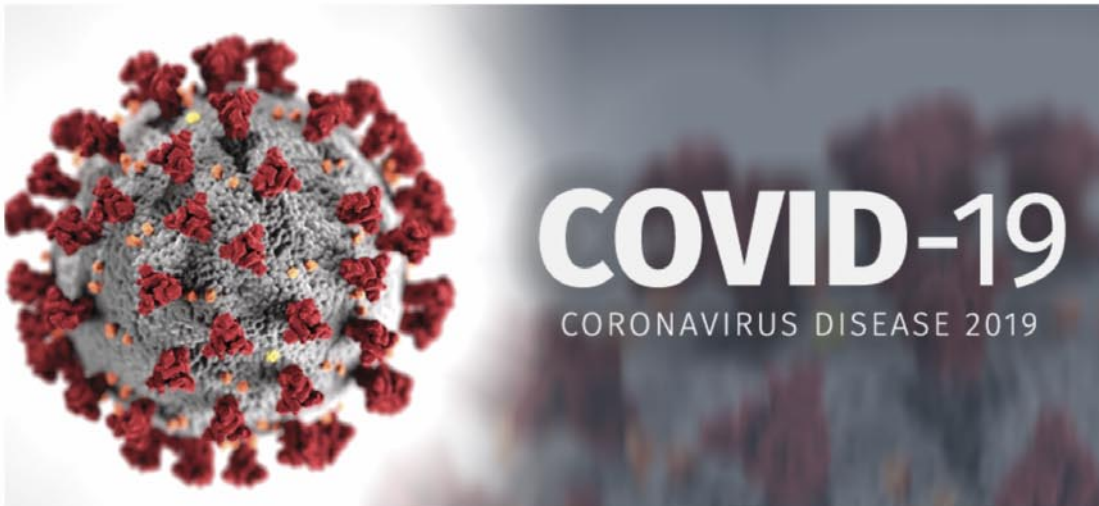
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COVID-19



A reminder from the Government of Canada regarding COVID-19



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Markham, ON
905-479-7116

Fire Monitoring of Canada Inc.

Member Since 2001
Kevin Allison
Jim Asselstine
St. Catharines, ON
1-800-263-2534
www.fire-monitoring.com

Fire Safety One

Member Since 2009
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St. Catharines, ON
905-988-7734

Fire Sprinkler Podcast

Member Since 2020
Chris Logan
Corunna, ON
519-360-6518

Firetronics 2000

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Peter Teolis
Markham, ON
905-470-7723
www.firetronics.ca

Government of Nunavut

Member Since 2020
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Ted Clouter 867-975-5310
Paul Dainton 867-975-5329
Josh Doyle 867-975-5434
Frederick Morrison 867-975-5369
Iqaluit, NU

Graziani + Corazza Architects

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Mississauga, ON
905-795-2601

Greater Toronto Airports Authority

Member Since 2001
Todd Aitken
Sandra Duncan
David Hollett
Toronto, ON
416-776-5170

continued...

The advertisement features a green header with the Durham College logo and the text "Career ready graduates". Below the header is a photograph of two women shaking hands, with a circular orange graphic containing the text "HIRE A GRAD". To the right of the photo is a list of program areas: Firefighter – Pre-service, Education and Training; Fire and Life Safety Systems Technician; and Justice and Emergency Services Workshops. Below the list is contact information for Randy Panesar. At the bottom left of the advertisement is a photograph of firefighters in full gear.

DURHAM COLLEGE
SUCCESS MATTERS

Career ready graduates

HIRE A GRAD

OUR PROGRAMS ARE DESIGNED TO MEET FIRE INDUSTRY STANDARDS AND EMPLOYER DEMANDS WHILE PREPARING GRADUATES FOR THE CAREERS OF TOMORROW.

- Firefighter – Pre-service, Education and Training
- Fire and Life Safety Systems Technician
- Justice and Emergency Services Workshops

TO HIRE A GRADUATE OR LEARN MORE ABOUT PROGRAMS CONTACT, **RANDY.PANESAR@DURHAMCOLLEGE.CA**
905.721.2000 EXT. 3456.

H.H. Angus & Associates

Member Since 2009
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Jeanette James 416-443-8337
Ted Mavraidis 416-443-8200
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Hanlon Consulting

Member Since 2020
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Caledon East, ON
647-465-1409

Harding Fire Protection

Member Since 1999
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Toronto, ON
416-292-0599

Harding Fire Protection

Member Since 1999
Grant Petre
Toronto, ON
416-292-0599

Ignis Building Solutions

Member Since 2020
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Sanj Patel
Blake Smith
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www.ignisinc.ca

Independent Plumbing & Heating Contractors Association

Member Since 2005
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Toronto, ON
416-248-6213
www.iphca.ca

Innovative Fire

Member Since 2009
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Toronto, ON
416-221-0093

Jensen Hughes Consulting Canada

Member Since 1998
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Vanessa Figliomeni 647-361-1930
Matt Porter 647-977-8446
Anthony Rago 647-557-3671
Toronto, ON
www.jensenhughes.com/canada

Liberty Mutual

Member Since 2019
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Toronto, ON
416-307-4381

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Member Since 1986
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Eric Esselink
Mike Power
Gary Robitaille
Jon Winton
Toronto, ON
416-515-9331
www.lrifire.com

M-L Fire & Burglary Alarms

Member Since 2009
Michael Lonergan
Aurora, ON
905-889-8276

Matteo Gilfillan & Associates Inc.

Member Since 2020
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Rita Cherniavskaya 647-946-2483
Matteo Gilfillan 647-926-5634
Murray Pham 647-946-2475
David Vickers 647-946-2465
www.mgacodes.com

Messenger Affordable Fire Protection

Member Since 2018
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Hamilton, ON
647-293-7083

Mircom

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Stouffville, ON
905-660-4655 Ext 3141

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Member Since 2010
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Mississauga, ON
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Member Since 1995
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Markham, ON
Dana Scherf
Nepean, ON
www.morrisonhershfield.com

Nadine International Inc.

Member Since 1992
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Karim Gebara
Mississauga, ON
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www.nadineintl.com

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Russell Thomas 613-993-9775
Ottawa, ON
www.nrc-cnrc.gc.ca

North River Fire Brigade

Member Since 2020
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902-893-6480

Northbridge Financial Corporation

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Toronto, ON
416-350-4070
www.nbfc.com

Oakville Fire Department

Member Since 1999
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Jonathan O'Neil
Gary Laframboise
Oakville, ON
905-845-6601
www.oakville.ca

Office of The Fire Marshal & Emergency Management

Member Since 1998
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Randy De Launay
Mary Prencipe
Toronto, ON
647-329-1241
www.mcscs.jus.gov.on.ca

Offside Technologies Corp

Member Since 2020
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Stephen Ainsworth 905-903-5688
Oshawa ON

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Member Since 1998
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Cale McLean
Jeff Ough
Barrie, ON
705-728-5289
www.ofsgroup.com

Origin and Cause Inc.

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Mississauga, ON
905-712-4100

Plympton-Wyoming Fire Department

Member Since 2017
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Wyoming, ON
519-845-3939
www.plympton-wyoming.com

Port Colborne Fire Department

Member Since 2009
Thomas Cartwright
Port Colborne, ON
905-835-2900

Pro-Firestop

Member Since 2001
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Jeffrey Zamora
Toronto, ON
416-293-0993
www.profirestop.com

R.K. Fire Systems Inc.

Member Since 2009
Tony Velji
Toronto, ON
416-694-5753

Red Maple Technology

Member Since 2010
Rabih Melki
Woodbridge, ON

Rubes Code Consultants

Member Since 2009
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Toronto, ON
647-955-6760
www.rubescodes.com

Ryan North Consulting

Member Since 2011
Ryan North
Toronto, ON
647-961-5341

Seneca College, School of Fire Protection Engineering Technology

Member Since 1971
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Sarah Osborne
Scott Pugsley
William Sault
Aneetha Vairavanathan
Toronto, ON
416-491-5050
www.senecacollege.ca

Siemens Canada Limited

Member Since 1971
Manuel Lopes
Jeffry Tondang
Mississauga, ON
905-465-7208
www.siemens.com

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Seneca | SCHOOL OF
FIRE PROTECTION

Hire Top Quality Technicians.

Our graduates prepare for the career of a lifetime at the college that's set Canadian standards for more than 45 years. Seneca's renowned School of Fire Protection provides the full, intensive academic component for the Canadian Fire Alarm Association Certification.

Join the list of Canadian employers who continue to hire our graduates.

OUR GRADUATES HAVE:

- Top quality training
- Hands-on experience in state-of-the-art labs
- Knowledge of fire alarm and sprinkler systems
- An understanding of Canadian codes and standards

Find out more...

Scott.Pugsley@senecacollege.ca
416.491.5050 ext. 22525

senecacollege.ca/fire

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Member Since 2013
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Apopka, FL
407-880-2532
www.jci.com

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Member Since 2018
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Calgary, AB
403-463-5646

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Member Since 2010
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905-354-9543

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Robert Corby
Scott Gobbi
Mitchell Olszewski
Melody Parham
Susan Petersen
Daniel Rosales
Carolina Ruiz
Priscilla Weber
Carl Whitmire
Atlanta, GA
1-800-229-2326

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Member Since 2019
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Tim Daley 416-677-5317
Alana Detcheverry
Michelle Laita 416-981-4430
Flora Pannunzio 416-990-3610
Toronto, ON

Toronto Fire Services

Member Since 1988
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Adrian Ratuszniak 416-209-3566
W.T. Sproule
James Stoops 416-338-9102
Toronto, ON
www.toronto.ca

Town of Grimsby

Member Since 2020
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Paul Nickerson 905-309-2020
Grimsby, ON

Tyco Thermal Controls

Member Since 2010
Rick Florio
Woodbridge, ON
905-553-1836

Underwriters Laboratories of Canada

Member Since 1998
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Brian McBain 416-288-2269
Toronto, ON
Brian Murphy 289-251-0160
Cobourg, ON
www.canada.ul.com

University Health Network

Member Since 2010
John Chartrand 416-340-4800
Vito D'Amico 647-203-2722
Ed Riley 416-603-5800
Toronto, ON
www.uhn.ca

University of Waterloo

Member Since 2017
Beth Weckman
Kitchener, ON
(519) 888-4567 Ext 33345

Vaughan Fire & Rescue Services

Member Since 2000
Doug Best 905-832-8585
Jon Caruso 905-832-8531
Vaughan, ON
www.vaughan.ca

Associate Members

Canadian Wood Council

Member Since 2015
Marc Alam
Ottawa, ON
613-747-5544 Ext 232
www.cwc.ca

Canterbury Fire Department

Member Since 2009
Clifton Furrow
Canterbury, NB
506-279-2220

Condominium Management Services

Member Since 2019
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Windsor, ON
519-919-5799

Prince Fire Safety Solutions

Member Since 2020
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Edwards, ON
613-618-1976

Services Techniques Centurion

Member Since 2012
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450-638-5558
www.goцентurion.com

Technorm Inc.

Member Since 2019
Marc-Andre Langevin
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514-861-1940

Voyageur Technologies

Member Since 2020
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Toronto, ON

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Sawyer Turpin
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Bilal Zaidi
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Fanshawe College

Chris Drummond
DJ Moore
Raeanne Pouw

Seneca College

Mohamed Ali Abdul Wahab
Cassidy Adams
Dario Agius
Assib Ahmad
Ali Alaidaros
Eduardo Alvarez
Erick Araujo
Andrew Bartram
Macenzie Boettger

Jesse G Buckingham
Andrew Catchpole
Gokul Chandran
Zhenyu Chen
Leo Chung
Makayla Craig
Hari Dahal
Hayrettin Danisman
Shauna Evans
Madison Fletcher
Mitchell Fortier
Marissa Hamelin
Cheng Han
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Ryan Harley
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Brandon Hope
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Logan Kieswetter
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Longyi Li
Donny Lin
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Julia Malczewski
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Aaron Marovitz
Elias Martinez-Sorto
Sarah McNeil
Pedro Moreira
Sean Morgan
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Samantha Murray
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Hassan Patel
Fabian Penafiel
Marco Pereira
Yordan Petrov
Niroshan Ponnampalavanar
Chiara Pugh
Ashfiq Ur Rahman
Kyle Rasing
Philip Remillard
Josh Roberts

Juan Jesus Saenz Guzman
Ayomide Sarumi
Keyron Simon
Sebastian Smierka
Sian Steindl
Jack Straw
Wenbo Sun
Wenbo SUN
Alireza Taghvaei
Laurel Taylor
Diana Therrien
Christine Underwood
Mahdi Vallante
Jayden Vaughan
Eduardo Vitoretta Guerra
Mahmmdaezaj Vohra
Chris Woodliffe
Mingying Xu
Bowen Yang
Ty Yusko

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Corporate Members

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Niagara Falls, ON

Sinai Health
Hamilton, ON

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London, ON

Victor Malaiu
London, ON

Ryan Poroznik
King City, ON

Alexandre Stockler
Welland, ON



CFSA

Membership Application Form

Why Corporate Membership?

Corporate Membership is cost effective because it allows any number of individuals from your organization to participate in the many functions provided by CFSA throughout the year. Any number of persons can attend our monthly dinner meetings/ technical sessions or our annual conference at the preferred member's rate. Your advertisement in the CFSA journal is circulated to CFSA's membership of over 250 professionals in the Fire Safety Industry.

Corporate

Includes 5 individual memberships; Company recognition in each of the four issues of the CFSA journal.

Corporate Plus

Includes 10 individual memberships; Company recognition and a 1/2 page advertisement in each of the four issues of the CFSA journal.

Individual Member:

Includes four issues of the CFSA journal and discounted rates at Association functions.

Student Member:

Includes four issues of the CFSA journal and discounted rates at Association functions.

Associate Member:

For individuals and companies located beyond a radius of 150 km from the Greater Toronto Area. Includes four issues of the CFSA journal and discounted rates at Association functions.

Provincial/Territorial Chapter:

For groups of members within a province or territory. Includes 4 individual memberships; member rate for all staff at dinner meetings, technical seminars and Annual Education Forum; Recognition in each of the four issues of the CFSA journal. Contributes articles in CFSA journal.

canadianfiresafety.com

CFSA Application for Membership

Name _____

Company/Affiliation _____

Title _____

Address _____

City _____

Prov. _____ Postal Code _____

Business Phone _____

Business Fax _____

e-mail _____

Web site _____

Please indicate how you first heard about CFSA

Please indicate in the appropriate box the category that best describes your vocation:

- Architect
- Building Official
- Insurance Industry
- Fire Protection Manufacturer/Supplier
- Building Owner/Developer/Manager
- Other (please specify) _____
- Engineer
- Fire Official
- Fire Consultant

	Rate	+13%HST	Total Rate
<input type="radio"/> Corporate Plus (C3)	\$ 790.00	\$ 102.70	\$892.70
<input type="radio"/> Corporate	\$ 406.00	\$52.78	\$458.78
<input type="radio"/> Individual	\$ 82.00	\$10.66	\$92.66
<input type="radio"/> Student	\$ 25.00	\$3.25	\$28.25
<input type="radio"/> Retired	\$ 25.00	\$3.25	\$28.25
<input type="radio"/> Associate	\$ 56.00	\$7.28	\$63.28
<input type="radio"/> Chapter	\$ 180.00	\$23.40	\$203.40

Method of Payment:

Cheque Enclosed \$ _____

Account # _____

Expiry Date _____

Signature _____

Please make cheques payable to:

Canadian Fire Safety Association
2800 - 14th Avenue Suite 210. Markham, ON L3R 0E4
Telephone (416) 492-9417 Fax (416) 491-1670