

## PORTABLE FIRE EXTINGUISHERS

### PURPOSE

This bulletin is to clarify the intent of the National Fire Code – 2019 Alberta Edition (NFC(AE)) and National Fire Protection Agency Standard 10, NFPA 10, “Standard for Portable Fire Extinguishers,” for the inspection, maintenance, recharging, placement, and refurbishing of portable fire extinguishers and the applicable listing and labelling for use in Alberta.

### DISCUSSION

All portable fire extinguishers must be subjected to:

#### 1. Inspection

The inspection of a fire extinguisher is a “quick check” that ensures it is available for use and is in operable condition when required. This is done by verifying that it is in its designated place, that it has not been actuated or tampered with (i.e. it is fully charged and the seal is intact), and that there is no obvious physical damage or condition to prevent its operation.

Fire extinguishers shall be **inspected monthly** by the owner, by an employee designated by the owner, or by a designated representative (i.e. commercial company). More frequent inspections are required when it is obvious that the extinguisher may be subjected to corrosive or damaging environments. If the owner is in any doubt about the condition of a fire extinguisher following inspection, they should contact a certified fire extinguisher servicing company to evaluate the operational integrity of the fire extinguisher.

#### 2. Maintenance

Routine maintenance is intended to give assurance that a fire extinguisher will operate effectively and safely. It includes a thorough examination of the unit for physical damage or conditions that might prevent the extinguisher from operating and identifies necessary repair or replacement work. For example, an examination will usually reveal if hydrostatic testing or internal maintenance is required.

All fire extinguishers shall be maintained at intervals not more than one year apart or when an inspection indicates a fire extinguisher is in need of maintenance.

Only companies certified by an approved fire testing agency and only a qualified person working for the certified fire extinguisher servicing agency shall carry out the maintenance and recharge fire extinguishers (see below for more information on certification).

#### 3. Recharging

Every 6 years, stored pressure fire extinguishers that require a 12-year hydrostatic test shall be emptied and subjected to the applicable internal examination procedures as detailed in the manufacturer’s service manual and as per NFPA 10 standard.

Unless stated otherwise, all Code references in this STANDATA are to Division B of the National Fire Code-2019 Alberta Edition

Issuance of this STANDATA is authorized by  
the Provincial Fire Administrator

*[Original Signed]*  
Tina Parker

The logo for the province of Alberta, featuring the word "Alberta" in a stylized, cursive font with a blue square at the end of the word.

It is important to note that the practice of “topping up” is not permitted.

#### 4. Hydrostatic Testing

Any extinguishers that show evidence of corrosion or mechanical damage shall be hydrostatically tested. However, non-refillable disposable containers and pump tanks do not require hydrostatic tests.

Only servicing companies certified by Transport Canada or its appointee shall carry out hydrostatic testing of high-pressure portable extinguishers.

NFPA 10, Chapter 8, Table 8.3.1. identifies the extinguisher type and the testing intervals required. Access to NFPA 10 may be found at [www.nfpa.org](http://www.nfpa.org).

#### 5. Refurbishing

The only companies allowed to refurbish portable fire extinguishers are those who have specific permission to do so from Underwriters Laboratories of Canada (ULC) and the Original Equipment Manufacturer (OEM). ULC and OEM investigate and monitor the service company for quality control in the same manner as manufacturers. To obtain more information regarding the extinguisher rebuild program, contact ULC at 1-866-937-3852.

#### 6. Placement of fire extinguishers

The NFC(AE) and NFPA 10 advise on the placement and size of fire extinguishers.

The NFC(AE) does not regulate the installation of portable fire extinguishers on vehicles unless these vehicles are:

- i) tank vehicles,
- ii) a motor vehicle operating in an outdoor storage area, as defined by the NFC(AE), or
- iii) a vehicle utilized for the compliance of Variances at remote/unmanned facilities.

(Note: only companies that have received written approval from the Provincial Fire Administrator fall within this category.)

There are, however, organizations that may require you to have portable fire extinguishers on your vehicle in order to gain access to their operating/commercial sites. These requirements are part of their Standard Operating Procedures and may be site specific.

There may also be organizations that require you to have fire extinguishers in or on the vehicles as part of their Occupational Health and Safety plan, and must adhere to the standards set out by the Alberta Commercial Vehicle Safety Regulation.

#### 7. Listed and Labelled

All portable fire extinguishers are to be listed and labelled in accordance with the NFC(AE). They must also be inspected, maintained and tested in conformance to NFPA 10.

Portable Fire Extinguishers that are in conformance with the NFC(AE) are acceptable for sale, use and servicing in Alberta. These fire extinguishers will comply with ALL of the following:

- a) Labels will have metric measures and may have imperial equivalents,
- b) Labels will be bi-lingual in English/French and may represent additional languages,
- c) Labels will indicate which CAN/ULC Standard the portable extinguisher is in conformance with (e.g. CAN/ULC S504),
- d) Extinguishers will exhibit the mark of a Certification Body as being in conformance with one of the referenced National Standards (CAN/ULC). This mark will most typically be that of ULC.

Portable fire extinguishers that exhibit only a UL (Underwriters Laboratories) label are NOT acceptable for sale, use or allowed to be serviced in Alberta. Special dispensation is allowed

for Certified Fire Extinguisher shops to “refill” only vehicle fire extinguishers that have been discharged in an emergency situation from transportation drivers or other travellers from the United States.

All non-compliant (non-Canadian labelled) portable fire extinguishers in Alberta must be taken out of service and rendered inoperable by December 31, 2021 or at the next recharge date, whichever date occurs first.

Note that there are extinguishing devices (i.e. aerosol or a point and spray can) that have received ULC certification to the wetting agent only. However, the device itself is not certified or listed with ULC. These extinguishing devices are NOT acceptable for sale, use and servicing within Alberta.

## 8. Certification of portable fire extinguisher servicing companies to CAN/ULC S532 Regulation of the Servicing of Portable Fire Extinguishers

Information on how to become a certified portable fire extinguisher servicing company can be obtained from one of the following companies:

ULC	1-877-852-5227
Intertek	403-877-0586

Certification is offered in four categories:

*Category 1 - Full extinguisher service including shop servicing of all types of extinguishers, hydrostatic retesting to CTC requirements, reclaiming of Halon 1211, and annual maintenance field inspections.*

*Category 2 - Extinguisher service as in Category 1, but excluding hydrostatic retesting to Transport Canada (TC) requirements or Halon Extinguisher Service.*

*Category 3 - Recharging and annual maintenance field inspections of specific types of extinguishers only, excluding hydrostatic retesting.*

*Category 4 - Annual maintenance field inspections only of extinguishers owned or insured by the service agency.*

Categories 1, 2 and 3 are recognized certification in Alberta. **Category 4 is not a recognized certification in Alberta.**

Fire extinguisher recharge companies that do not have the equipment to undertake hydrostatic testing, or the recharge, of CO2 and Halon (clean agent) extinguishers may contract with another testing and recharge facility, providing the contracted testing facility is certified to a Category 1 or 2. The testing facility will attach their tag to the extinguisher. The tag shall not be tampered with or removed. There is no requirement for the original company to place their service tag on the extinguisher as the recharge tag from the testing facility indicates compliance.

### Fire Extinguisher Technician

Alberta Municipal Affairs does not certify companies or technicians. Anyone wishing to become a fire extinguisher technician in Alberta may contact the following institutions to obtain approved training:

Lakeland College – 1-800-661-6490
SAIT Polytechnic – 1-877-284-7248

## CODE REFERENCES

Article 2.1.3.6. states:

### **2.1.3.6. Inspection, Maintenance and Testing of Fire Safety Devices**

(See Note A-2.1.3.6.)

- 1) Where specific references to the inspection, maintenance and testing of fire safety devices and *building* fire safety features are not made in this Code, such devices and features shall be maintained to ensure they operate as per their design or function according to their original intent.

Article 2.1.5. states:

### **2.1.5.1. Selection and Installation**

- 1) Portable extinguishers shall be installed in all *buildings* except *dwelling units*. (See Note A-2.1.5.1.(1).)
- 2) Except as otherwise required by this Code, portable extinguishers shall be selected and installed in accordance with NFPA 10, "Portable Fire Extinguishers." (See Note A-2.1.5.1.(2).)
- 3) Notwithstanding the requirements of Sentence (2), portable extinguishers used to comply with this Code shall conform to the following performance standards as applicable:
  - a) CAN/ULC-S503, "Carbon-Dioxide Fire Extinguishers,"
  - b) CAN/ULC-S504, "Dry Chemical Fire Extinguishers,"
  - c) CAN/ULC-S507, "Water Fire Extinguishers,"
  - d) CAN/ULC-S512-M, "Halogenated Agent Hand and Wheeled Fire Extinguishers,"
  - e) CAN/ULC-S554, "Water Based Agent Fire Extinguishers," and
  - f) CAN/ULC-S566, "Halocarbon Clean Agent Fire Extinguishers."
- 4) Notwithstanding the requirements of Sentence (2), portable extinguishers shall be rated and identified in conformance with CAN/ULC-S508, "Rating and Fire Testing of Fire Extinguishers."
- 5) Portable extinguishers in proximity to a fire hazard shall be located so as to be accessible without exposing the operator to undue risk. (See Note A-2.1.5.1.(5).)
- 6) Portable extinguishers that are subject to corrosion shall not be installed in a corrosive environment unless they are provided with appropriate corrosion protection.

Article 3.2.9.4.(1) states:

### **3.2.9.4. Portable Extinguishers**

- 1) In addition to the requirements of Part 2, pressurized water portable fire extinguishers having a rating of 2-A or larger shall be installed. (See Note A-3.2.9.4.(1).)
- A-3.2.9.4.(1)** Dry chemical extinguishers are not permitted to be used to fight fires involving ammonium nitrate, but may be used to extinguish fires involving industrial trucks, conveyors, etc.

Article 3.3.2.10 states:

### **3.3.2.10. Portable Extinguishers**

- 1) Any building located in an outdoor storage area shall be provided with portable extinguishers.
- 2) Each motorized vehicle operating in an outdoor storage area shall be equipped with at least one portable extinguisher having a minimum rating of 2-A:30-B:C.

Article 4.10.8.1 states:

**4.10.8.1. Portable Extinguishers**

- 1) Except as permitted in Sentence (2), in maturing warehouses, at least one portable extinguisher having a rating of 4-A:30-B:C shall be located adjacent to each exit.
- 2) Hose stations are permitted to be installed in lieu of portable extinguishers at locations required in Sentence (1), and spaced so that the travel distance to the nearest hose is not greater than 25 m.
- 3) At least one portable extinguisher having a rating of 30-B:C shall be located on each industrial lift truck.

Sentences 4.11.2.1. (1)(2) states:

**4.11.2.1. Portable Extinguishers**

- 1) A *tank vehicle* shall be provided with at least one portable extinguisher having a minimum rating of 80-B:C.
- 2) Portable extinguishers on a *tank vehicle* shall be readily accessible.

Sentences 4.11.3.8. (2) states:

**4.11.3.8. Dispensing into Vehicles**

- 2) Dispensing Class II or IIIA liquids into the fuel tank of vehicles directly from a *tank vehicle* having a capacity greater than 3 000 L shall be permitted only if
  - b) at least 2 portable extinguishers having a minimum rating of 80-B:C are provided on the *tank vehicle*,

Article 6.1.1.5 states:

**6.1.1.5. Records**

- 3) Except as permitted by Sentence (4), each portable extinguisher shall have a tag securely attached to it showing
  - a) the type of extinguisher,
  - b) the size of extinguisher,
  - c) the serial number of extinguisher,
  - d) the date of last annual maintenance,
  - e) the date of last recharge,
  - f) a five-year monthly inspection and annual maintenance record,
  - g) the name of the *owner* of the extinguisher,
  - h) the name, address and telephone number of the service agency,
  - i) the certification number of the *approved* testing agency, and
  - j) the printed name and signature of the service person.

Sentence 6.2.1.1. (1) of states:

**6.2.1.1. Inspection, Testing and Maintenance**

- 1) Portable extinguishers shall be inspected, tested and maintained in conformance with NFPA 10, "Portable Fire Extinguishers."

Article 2.2.3.2. of Division C states:

**2.2.3.2. Fire Extinguishers**

- 1) All agencies servicing, recharging or carrying out the repair and overhaul of fire extinguishing equipment shall have their facilities and equipment certified
  - a) annually by an *approved* fire testing agency, and
  - b) by Transport Canada or its appointee for high-pressure hydrostatic testing equipment.

Article 2.2.4.2. of Division C states:

**2.2.4.2. Portable Fire Extinguishers**

- 1) Only qualified persons shall install, test or perform maintenance on portable extinguishers.
- 2) Persons are considered qualified in the installation and maintenance of portable fire extinguishers when they have acquired an *approved* certificate of training from a public post-secondary educational institution, and they own or are employed by an agency that is certified annually by a recognized certification body as being compliant with CAN/ULC-S532, "Regulation of the Servicing of Portable Fire Extinguishers."

Access to the NFC(AE) may be found at your public library or the [National Research Council](#) for access or purchase options.

You may also contact your local Fire Department/Prevention Branch for further information regarding the application of the NFC(AE) and NFPA 10.

This Bulletin replaces the following:

- 97-FCB-002, "Inspection of Fire Extinguishers"
- 97-FCB-005, "Inspection, Maintenance & Recharging of Fire Extinguishers"
- 14-FCB-001, "Inspection, Maintenance & Recharging of Fire Extinguishers"
- 14-FCB-002, "Portable Fire Extinguishers"