

Title 19 Regulations Changes Effective October 1st, 2013
Incorporating changes that include updates from NFPA10 2007 & 2010 Editions

*The wording that is ~~struck out~~ is existing wording that is eliminated
and wording that is underlined is wording that has been added.
Wording in Boxes is CALSAFE commentary*

557.4. "D" Definitions.

(b) ~~Dry Chemical Closed Recovery System. A system that provides for the transfer of dry chemical agent between extinguishers and recovery containers that is constructed in a manner that prevents the introduction of foreign material into the agent being recovered. It shall also have a means of visually inspecting the recovered agent for contaminants and is closed to prevent the loss of agent to the atmosphere.~~
Dry Chemical Closed Recovery System. A system that provides for the transfer of dry chemical agent between extinguishers and recovery containers that is constructed in a manner that prevents the introduction of foreign material into the agent being recovered. It shall also have a means of visually inspecting the recovered agent for contaminants and is closed to prevent the loss of agent to the atmosphere.

This is a mixture of the current Title 19 language and NFPA10 3.3.6.1. New to this wording in Title 19 is the requirement of having a means of visually inspecting the recovered agent. Make sure whichever system you are using for dry chemical discharge meets this definition of closed recovery in which it is preventing the introduction of "foreign material", so an open bucket won't work, and provides the means to inspect the agent for contaminants.

557.5. "E" Definitions.

(d) Electronic Monitoring. A method of electronic communication (data transmission) between an in-place fire extinguisher and an electronic monitoring device/system.
~~(e)~~ (e) Employee. Those persons who work directly for a licensed concern in the business of servicing portable fire extinguishers for a fee or are employed by and work directly for a public or private company not engaged in the business who service their own portable fire extinguishers
~~(f)~~ (f) Empty. To completely remove all contents from a portable fire extinguisher except the expellant cartridge.
~~(g)~~ (g) Extinguisher. See Section 557.16(c), Portable Fire Extinguisher.
~~(h)~~ (h) Extinguisher Cabinet. An identifiable and readily accessible fire extinguisher housing device designed to store and protect fire extinguishers.

Two new "E" definitions have been added.

Electronic Monitoring: This wording is the same as NFPA10 3.3.10. While there already are references in Title 19 in Table 4, and under 574.2 Inspection Procedures, to Electronic Monitoring there was not an actual definition. There now is one and while there is one model currently on the market, others will need to meet this definition to allow the inspection exception in the regulation.

Extinguisher Cabinet: This wording is the same as NFPA10 3.3.12 with the exception that the last word in the NFPA document reads fire "equipment" where this definition will read fire "extinguishers". Note that the unit must be designed to store and protect extinguishers as well as being "identifiable and "readily" accessible. Not just any "enclosure" will satisfy this definition.

557.8. "H" Definitions.

(b) ~~Halon Halogenated Closed Recovery System. A system that provides for the transfer of halon between extinguishers, supply containers, and recharge and recovery containers in compliance with U.L. Standard 2006. A system that provides for the transfer of halogenated agents between fire extinguishers, supply containers and recharge/recovery containers so that none of the halogenated agent escapes to the atmosphere. The system's supply or recharge and recovery container shall be capable of maintaining the agent in a sealed environment until it is reused or returned to the agent manufacturer. Closed recovery systems for halogenated agents with an ozone depleting potential (ODP) of 0.2 or greater shall be listed for use with that agent.~~
Halogenated Closed Recovery System. A system that provides for the transfer of halogenated agents between fire extinguishers, supply containers and recharge/recovery containers so that none of the halogenated agent escapes to the atmosphere. The system's supply or recharge and recovery container shall be capable of maintaining the agent in a sealed environment until it is reused or returned to the agent manufacturer. Closed recovery systems for halogenated agents with an ozone depleting potential (ODP) of 0.2 or greater shall be listed for use with that agent.

This wording is taken, but rearranged, from NFPA10 3.3.6.2. Halogenated agents already defined in Title 19 include not only Halon 1211 and 1301 (557.8(a)(1)), but also other Halocarbon clean agents (557.38(a)(2)), such as Halotron and FE36 (Cleanguard). This revised wording in 557.8 (b) requires that all Halogenated agents be transferred using a closed recovery system. This system must keep the agent from escaping into the atmosphere. This wording still requires those agents with a ODP of .2 or greater, such as Halon, use a listed system.

Title 19 Regulations Changes Effective October 1st, 2013
Incorporating changes that include updates from NFPA10 2007 & 2010 Editions

557.13. "M" Definitions.

(b) Master Gauge, Low Pressure Test Equipment. A master gauge is a pressure indicating device that is used as a calibration standard and has an inherent accuracy equal to or better than the requirement for the pressure indicating device being verified. Master gauge calibration shall comply with the Section 12500 of the California Business and Profession Code by a third party using a dead weight test device or an electronic pressure measuring device of appropriate accuracy. A master gauge shall not be used as a pressure indicating device.

~~(b)~~ (c) Marketing. The act of selling. (See Section 557.19.(a))

~~(e)~~ (d) Mild Steel Shell. Except for stainless steel and steel used for high pressure cylinders, all other steel shells are defined as "mild steel" shells.

The Master Gauge is a new definition to Title 19. While a Master Gauge is referenced in NFPA10 8.2.1.5, NFPA10 does not include a definition nor make reference where or how it is to be used. This definition was designed to be used in conjunction with a new requirement in 594.3 of Title 19 that will be discussed later. Note that this Master Gauge as used in Title 19, is something associated with the "low pressure" hydrostatic test equipment and is used to calibrate its pressure gauge. The Master Gauge has to be able to be calibrated by a third party. This is similar to what DOT requalification facilities do with their test gauges. Brooks equipment is one supplier of these certified gauges and they also perform the required calibrations.

557.23. "W" Definitions.

(a) Water Mist Fire Extinguisher. A fire extinguisher containing distilled or de-ionized water and employing a nozzle that discharges the agent in a fine spray.

This is a new definition for Title 19 and is exactly the same as NFPA10 3.4.8. Water Mist fire extinguishers have been in the California market for a number of years and are now being addressed in different sections of Title 19 so a definition was needed. Note that these extinguishers require special types of water to be used for refilling.

561.2. Fire Test and Performance Standards.

(1) Fire Test Standards:

(A) ANSI/UL 711, Standard for Fire Extinguishers, Rating and Fire Testing ~~6th Edition, 2002~~ 7th Edition, 2009.

(B) UL Subject 711A, Fire Test Method for Portable Hand-Held Extinguishers Intended For Use on Residential Cooking Equipment, July 21, 2005.

(2) Performance Standards:

(A) CO2 Types: ANSI/UL 154, Standard for Carbon Dioxide Fire Extinguishers, ~~8th Edition, 1995~~ 9th Edition, 2009.

(B) Dry Chemical Types: ANSI/UL 299, Standard for Dry Chemical Fire Extinguishers, 10th Edition, ~~2002~~ 2009.

(C): UL Subject 299D, Dry Chemical Fire Extinguishers for Residential Cooking, July 9, 2010 as amended

Amended Section as follows:

7.1 An extinguisher complying with the requirements in this Outline shall be marked "Residential Kitchen Fire Extinguisher" "Special Purpose – For Residential Cooking Media Fires" this statement shall appear immediately below the operating instructions on the nameplate in a font size no less than the font used for the operating instructions. In addition to the other markings required by UL 299.

~~(C)~~ (D) Water Types: ANSI/UL 626, Standard for Two and One-Half Gallon Stored-Pressure, Water-Type Water Fire Extinguishers, ~~7th Edition, 1995~~ 8th Edition, 2007.

~~(D)~~ (E) Halon Types: ANSI/UL 1093, Standard for Halogenated Agent Fire Extinguishers, 5th Edition, 1995.

~~(E)~~ (F) Foam Types: ANSI/UL 8, Standard for Foam Water Based Agent Fire Extinguishers, ~~5th Edition, 1995~~ 6th Edition, 2005.

~~(F)~~ (G) Clean Agent Types: ANSI/UL 2129, Standard for Halocarbon Clean Agent Fire Extinguishers ~~4ST Edition, 1999~~ 2nd Edition, 2005.

~~(G)~~ (H) Loaded Stream/ K-Class Types: ANSI/UL 8, Standard for Foam-Water Based Agent Fire Extinguisher, ~~5th Edition, 1995~~ 6th Edition, 2005.

Most of these changes are updates to reference newer editions of test standards. The two new sections have to do with Residential Cooking Extinguishers. These sections will allow a new residential cooking fire extinguisher to be marketed in California. Currently Kidde has a new unit that will meet these standards which is intended for residential use only. You will notice that there is a California requirement that these extinguishers be clearly marked as a "Residential Kitchen Fire Extinguisher" and "Special Purpose – For Residential Cooking Media Fires" so that it will not be confused with or used commercially. Title 19 does not address residential extinguishers in any other section.

Title 19 Regulations Changes Effective October 1st, 2013
Incorporating changes that include updates from NFPA10 2007 & 2010 Editions

567. Distribution of Fire Extinguishers.

(k) Portable fire extinguishers containing halogenated agents shall conform to confined space volume requirement warnings contained on the fire extinguisher nameplates.

(l) Wheeled fire extinguishers shall be used for hazard protection in areas in which a fire risk assessment has shown the following:

(1) High hazard areas are present.

(2) Limited availability of personnel is present; thereby requiring an extinguisher that has the following features:

(A) High agent flow rate

(B) Increased agent stream range

(C) Increased agent capacity

~~(k)~~ (m) Where wheeled extinguishers are installed, aisles and doorways through which such extinguishers are to be moved shall have a clear and unobstructed width not less than one foot (1 ft.) wider than the overall width of the extinguisher.

These are two new subsections (k & l) are added to section 567 under the Distribution of Fire Extinguishers. The new subsection (k) contains the same basic language of NFPA10 5.3.2.6.1. Halogenated agents present a health concern at certain concentrations. These extinguishers' nameplates show the Minimum area requirements for that size extinguisher. These MUST be taken into consideration when these extinguishers are installed. Don't forget that multiple extinguishers located in the same area may be discharged at the same time therefore you must be taken into consideration the combined minimum requirements when making the final required minimum area calculation. The service tech should also make the extinguisher owner aware of existing installations that violate this agent to room size calculation. The new subsection (l) adds, for the first time, language as to when a wheeled fire extinguisher should be considered.

567.8. Installation Temperatures.

~~Water type (water, AFFF, FFFP) Fire extinguishers shall not be installed in areas where temperatures are outside the range of 40°F to 120°F (4°C to 49°C). Other types shall not be installed in areas where temperatures are outside the range of -40°F to 120°F (-40°C to 49°C). Fire extinguishers shall not be exposed to temperatures outside of the range shown listed on the fire extinguisher label or in the service manual.~~

~~EXCEPTION No. 1: Where fire extinguishers are installed in locations subject to temperatures outside these ranges, they shall be of a type approved and listed for the temperature to which they are exposed, or they shall be placed in an enclosure capable of maintaining the stipulated temperature range.~~

~~EXCEPTION No. 2: Fire extinguishers containing plain water only can be protected to temperatures as low as -40°F (-40°C) by the addition of an antifreeze stipulated on the extinguisher nameplate. Calcium chloride solutions shall not be used in stainless steel fire extinguishers.~~

~~EXCEPTION No. 3: Some fire extinguishers are approved or listed for use at temperatures as low as -65 F (-54 C).~~

This section was reworded to make its language simpler. The wording which is almost identical to NFPA10 6.1.3.11 refer the reader to the requirements shown on the extinguisher label or in the service manual.

Title 19 Regulations Changes Effective October 1st, 2013
Incorporating changes that include updates from NFPA10 2007 & 2010 Editions

573. Fire Extinguisher Size and Placement for Commercial Cooking Operations.

(d) A placard shall be conspicuously placed near the extinguisher that states that the fire protection system shall be activated prior to using the fire extinguisher.

(e) All solid fuel appliances with fire boxes of 5 ft³ (0.14 m³) volume or less shall have at least one 1.6 gal (6 L) wet chemical fire extinguisher listed for Class K fires in the immediate vicinity of the appliance.

*Two subsections were added to 573 under extinguisher placement for commercial cooking operations. The first (d) is a requirement that a placard be conspicuously placed near where class K extinguishers are installed that protect commercial cooking operations. This placard is to instruct that the system is to be activated prior to using the portable extinguisher. This placard has been being supplied by many manufacturers for a number of years and is also readily available from your aftermarket suppliers. This will be a requirement anywhere there is an automatic system installed along with a Class K portable. **This applies to existing as well as new installations**. This wording is the same as what appears in NFPA10 5.5.5.3
The second subsection (e) is essentially the same wording as found in NFPA10 6.6.3 and requires solid fuel appliances with fire boxes less than 5 cu ft of volume to be protected by a 6 Liter Class K extinguisher.*

574.4. Non-rechargeable Extinguishers.

When an inspection of any non-rechargeable fire extinguisher reveals a deficiency in any of the conditions listed in (3), (4), (5), (6), (7) or (9), of Section 574.2(b), it shall be discharged and removed from service.

EXCEPTION: Non-rechargeable extinguishers containing a ~~halon~~ halogenated agent shall be removed from service, not discharged, and returned to the manufacturer or local fire extinguisher distributor having the capability of recovering the ~~halon~~ halogenated agent.

Just about everywhere the regulation made reference to halon it has been changed to the broader term "halogenated". This is appropriate everywhere the reference is not addressing halon as a specific agent. All of these changes will not be highlighted in this presentation. Other places it was changed are in 575.1, 578.6,

Title 19 Regulations Changes Effective October 1st, 2013
Incorporating changes that include updates from NFPA10 2007 & 2010 Editions

575.3 Maintenance Procedures.

(a) Maintenance procedures shall include a thorough examination of the three basic elements of an extinguisher:

- (1) mechanical parts
- (2) extinguishing agent
- (3) expelling means

EXCEPTION: During annual maintenance, it is not necessary to internally examine ~~non-rechargeable fire extinguishers, carbon dioxide fire extinguishers, stored pressure dry chemical or dry powder fire extinguishers that require a 12 year hydrostatic test, halogenated agent fire extinguishers, wet chemical fire extinguishers or AFFF/FFFP fire extinguishers that use a pre-mixed charge.~~ the following extinguisher types :

1. Non-rechargeable
2. Carbon dioxide
3. Stored pressure dry chemical or dry powder that require a 5 or 12 year hydrostatic test
4. Halogenated agent
5. Wet chemical or AFFF/FFFP that use a pre-mixed charge
6. Pressure water type
7. Water mist type

However, such extinguishers shall be thoroughly examined externally in accordance with the applicable items of 575.3 (a) (1) and Table 4.

(b) Fire extinguishers shall be thoroughly examined externally and the appropriate corrective action performed in accordance with the applicable items of Table 4, External Examination Maintenance Checkpoints.

(1) For Stored Pressure Dry Chemical and Dry Powder Fire Extinguishers, see Section 575.4

(2) For Carbon Dioxide Fire Extinguishers, see Section 575.5

(3) For Stored Pressure Halogenated Agent Fire Extinguishers, see Section 575.6

(4) For Stored Pressure Water Type Fire Extinguishers, see Section 575.7

(5) For AFFF and FFFP Fire Extinguishers that use a pre-mixed charge, see Section 575.8.

(6) For Stored Pressure Wet Chemical and Water Mist Fire Extinguishers, see Section 575.16.

(7) For Antifreeze and Loaded Stream Fire Extinguishers, see Section 575.13

(f) All removable extinguisher boots, foot rings, and attachments shall be removed to accommodate thorough annual cylinder examinations.

(g) Hoses on wheeled-type extinguishers shall be completely uncoiled and examined for damage.

Part of this change was simply to re-format the items of the exception from a sentence format to a list format. The new additions to the list of extinguishers that do not have to be internally examined on an annual basis include:

Item 3; the wording of the exception for the dry chemical or dry powder stored pressure (dcp) types now include those that require a 5 year hydrostatic test. With the addition of the 5 year to the 12 year allowance, vehicle dcp extinguishers will no longer require an annual internal examination (no annual tear down), so they will now have their internal examination every 5 years when their hydrostatic test is performed.

Item 6; Pressure Water Type is new to the list. PW's will no longer require an annual tear down.

Item 7; Antifreeze and Loaded Stream fire extinguishers are also new to the list.

The list of the various section references for extinguisher maintenance was moved to sub-section (b). Water Mist was included in item (6) and a new reference to 575.13 for Antifreeze and Loaded Stream was added as (7).

Subsection (f) was added to incorporate the wording from NFPA10 7.3.2.3. Note that this is for "removable" items.

Subsection (g) was added to include wheeled unit hose assembly examination to the annual maintenance procedure.

Title 19 Regulations Changes Effective October 1st, 2013
Incorporating changes that include updates from NFPA10 2007 & 2010 Editions

575.6 Halogenated Agent Extinguishers.

(b) The removal of Halon 1211 from fire extinguishers shall only be done using a listed halon closed recovery system. ~~in compliance with the 1997 3rd Edition of the UL Standard 2006, Standard for Halon 1211 Recovery/Recharge Equipment.~~ The removal of agent from other halogenated agent fire extinguishers shall only be done using a closed recovery system.

This wording leaves in force the requirement that a Listed closed recovery system be used to remove Halon 1211 from fire extinguishers. If you are transferring using a non listed tank to tank gravity feed system you have been and are still in violation of the regulation. This wording is the same as NFPA10 7.3.1.2.1.2

575.8. AFFF and FFFP Extinguishers.

AFFF and FFFP fire extinguishers shall be ~~maintained in accordance with the following:~~

~~(a) Pre-Mix: These Extinguishers shall be externally examined annually, and broken down and the agent replaced every three years.~~

~~(b) Solid Type:~~

~~(1) Cartridge shall be removed and the extinguisher serviced in accordance with Section 575.3, and the cartridge re-installed.~~

~~(2) Cartridges shall be replaced with a new one every five years.~~

Solid type AFFF & FFFP cartridges, which have been unavailable for years, are now obsolete and therefore are not allowed to be serviced so the reference to them in this section has been removed.

575.13. Antifreeze and Loaded Stream Solution Fire Extinguishers.

Internal maintenance of antifreeze and loaded stream fire extinguishers shall be performed annually.

Antifreeze solution for antifreeze extinguishers shall be put through a fine strainer prior to placing it into the extinguisher so as to prevent any possibility of undissolved salts impairing the normal function of the extinguisher. The antifreeze or loaded stream solution shall not be reused unless permitted by the manufacturer's service and maintenance manual and performed according to their specifications.

This additional wording mandates that Antifreeze and Loaded Stream extinguishers undergo annual internal maintenance which is also a requirement in NFPA10 7.3.1.2.2. While Antifreeze solution was already permitted to be reused in Title19, if properly strained, a new provision has been added that this is only permitted when allowed by the manufacturer.

575.16. Wet Chemical and Water Mist Fire Extinguishers

Internal maintenance of wet chemical and water mist fire extinguishers shall be performed every 5 years at the time of hydrostatic test in accordance with the manufacturer's recommendations.

Water Mist was added to Wet Chemical in 575.16 requiring a 5 year internal maintenance which is the same cycle as its hydrostatic test.

Title 19 Regulations Changes Effective October 1st, 2013
Incorporating changes that include updates from NFPA10 2007 & 2010 Editions

577.2. Obsolete Fire Extinguishers.

The following types of fire extinguishers are considered obsolete and shall be removed from service:

- (1) Soda acid types
- (2) Chemical foam (excluding AFFF and FFFP)
- (3) Vaporizing liquid (e.g., carbon tetrachloride)
- (4) Cartridge-operated water
- (5) Cartridge-operated loaded stream
- (6) Copper or brass shell fire extinguishers (excluding pump tanks) joined by soft solder or rivets
- (7) Stored pressure water extinguishers with fiberglass shells
- (8) Solid charge-type AFFF extinguishers (paper cartridge)
- (9) Pressurized water fire extinguishers manufactured prior to 1971
- (10) Any extinguisher that needs to be inverted to operate
- (11) Any stored pressure extinguisher manufactured prior to 1955
- (12) Any extinguishers with 4B, 6B, 8B, 12B, and 16B fire ratings
- (13) Dry chemical stored pressure extinguishers, other than wheeled type, manufactured prior to October 1984 shall be removed from service at the next 6-year maintenance interval or the next hydrostatic test interval, whichever comes first.

Several extinguisher types have been added to the obsolete fire extinguisher list. While this list isn't exactly the same as NFPA10 4.4, many that have been missing in Title19 in the past have now been added.

These are the additions:

(8) AFFF solid charge, charges of which have been not been available since the early 1990's are now officially obsolete while the premix AFFF are still viable extinguishers

(9) All pre-1971 Pressurized water type. In 1971 pressurized water extinguishers were required to have stainless steel shells. Prior to that dissimilar metals were allowed which led to shell failures during testing or recharging making them unsafe.

(10) Any Inverting type extinguisher. There were more inverting type extinguishers than the old Soda Acids. Inverting type extinguishers were delisted in 1969 by UL. The 1994 Title 19 section 592.5 listed this type as obsolete, but by the 2003 edition only Soda Acid remained on the list. This entry returns them to the list.

(11) All pre-1955 dry chemical stored pressure extinguishers. Dry chemical extinguishers were still a developing extinguisher prior to 1955. 1955 ushered in a number of new requirements including a new rating system that make the pre-'55 extinguishers obsolete. Additionally there are no parts available for these units which also render them obsolete.

(12) Extinguishers with the old B ratings, specifically 4B, 6B, 8B, 12B and 16B. These extinguishers which include many extremely old CO2 type extinguishers achieved these ratings under very different scenarios than how B class ratings are achieved today. They should not be used to meet current Title19 B class requirements and with no parts available they are considered obsolete.

(13) Pre-1984 Stored Pressure Dry Chemical extinguishers. Note, this does not include Wheeled Extinguishers. Major changes were made to the UL standards in 1984 that impacted not only the requirements for their manufacturing and labeling but also for their testing. Some of those included:

- extinguishers that carried a 2A and a 20B rating or larger had to be equipped with a hose assembly
- a new minimum discharge duration of 13 seconds was required
- pull pins were required to have a maximum of 30 pounds of force to remove
- and the pull pin had to be visible from the front unless noted by the operating instructions
- there were new requirements for the operating instructions that included the use of pictograms
- service manuals were mandated

PLEASE READ THIS CAREFULLY! *These units are to be replaced WHEN they come due for their next six year maintenance or hydrostatic test!!! **Don't consider this a mandate to replace all of them immediately.** This has been a requirement in NFPA10 since the 2007 edition and nationwide many of these units have already come up for their next 6 year or hydrostatic test and been replaced. This will be new to the California regulations so it will likely be the full six years before all of these units have been removed.*

Title 19 Regulations Changes Effective October 1st, 2013
Incorporating changes that include updates from NFPA10 2007 & 2010 Editions

591.6. Examination of Cylinder Condition.

When an extinguisher cylinder or shell has one or more conditions listed in this section, it shall be destroyed by the owner or at the owner's direction:

(d) When the extinguisher has been ~~burned in~~ exposed to excessive heat or flame from a fire.

Wording was altered in 591.6 (d) from "when the extinguisher has been burned in a fire" to "when the extinguisher has been exposed to excessive heat or flame from a fire". This wording was changed after considering the wording of NFPA10 8.4.2. It was decided to modify the existing Title 19 language to include the exposure to the heat and fame of a fire which can also cause severe damage to the extinguisher.

592.2. Hose Assemblies.

(a) A hydrostatic test shall be performed on extinguisher hose assemblies which are equipped with a shutoff nozzle at the end of the hose. and high-pressure and low-pressure accessory hoses used on wheeled extinguishers. The test interval shall be the same as specified for the extinguisher on which the hose is installed.

(b) Test pressures for hose assemblies shall be as follows: (1) Carbon Dioxide - 1,250 psi

(2) Dry Chemical - 300 psi or at service pressure, whichever is higher.

(3) Accessory hose used on wheeled extinguishers shall be tested in accordance with the manufacturer's service manual.

Hydrostatic testing for high pressure and low pressure accessory hoses used on wheeled extinguishers were not previously addressed in Title 19. They are addressed in NFPA10 8.3.3.2, 8.3.3.3, 8.6.3.3 and 8.3.3.4. It was decided to add them to the hose assembly testing requirement in 592.2 (a), as well adding them (3) under the Test pressures subsection (b). In (b)(3) the regulation refers back to the test pressure requirements of the manufacturer as specified in their manual.

593.1. Test Pressures, High Pressure Cylinders.

~~(a) Carbon dioxide extinguishers shall be tested at 5/3 the service pressure as stamped into the cylinder. EXCEPTION: Carbon dioxide extinguishers having cylinder specification ICC3 shall be tested at 3,000 psi (20,685 kPa).~~

~~(b) Nitrogen cylinders and carbon dioxide cylinders used with wheeled extinguishers shall be tested at 5/3 the service pressure as stamped into the cylinder.~~

All high pressure DOT specification cylinders shall be tested at pressures in accordance with the applicable DOT regulations.

The Type E or A license that permits hydrostatic test of high pressure fire extinguisher cylinders in California, require that the concern be a DOT approved cylinder requalification facility ref: Title 19 595.5A(a)(5). As such that facility is required to follow DOT requirements set out in CFR49 relating to the test procedures and pressures of these DOT spec cylinders. There was a decision to refer all references concerning the testing of high pressure cylinders to these DOT requirements rather than try to reproduce all of them in Title 19. So beginning with 593.1 you will see the regulations refer the reader to DOT for specific requirements.

Title 19 Regulations Changes Effective October 1st, 2013

Incorporating changes that include updates from NFPA10 2007 & 2010 Editions

594.3. Test Equipment for Low Pressure Non-D.O.T. Specification Cylinders and Hose Assemblies.

(a) The required equipment for testing low pressure non-D.O.T. specification cylinders and hose assemblies consists of the following:

(5) Test pressure gauges shall be capable of indicating 90 percent to 110 percent of the test pressure. The accuracy of this gauge is to be checked by means of a master gauge quarterly and recorded on a log that is to be maintained for 13 years.

Under 594.3, Test Equipment for low pressure non-DOT spec cylinders and hose assemblies, Title19 listed 4 items:

1. *A protective cage or shield.*
2. *A test pump capable of not less than 150% of the test pressure with appropriate check valve & fittings.*
3. *A flexible connection with necessary fittings.*
4. *Proper licensing.*

The first three are the same list that NFPA10 8.24 has. What is not specifically addressed in either list, probably because it is considered a part of #2 is the test gauge. (a)(5) was added to require that equipment include a test pressure gauge capable of indicating 90 to 110% of the test pressure.

An additional requirement was added that requires the test gauge's accuracy to be checked quarterly by means of a "master gauge", defined earlier, and record its calibration on a log that is to be maintained for 13 years. Our recommendation is to add this to your non-DOT test records that will now also be required to be kept for 13 years. See section 594.5 (c) (4).

594.4. Testing Procedures.

(a) D.O.T. specification cylinders.

~~(1) In addition to the visual examinations required prior to test as stated in Section 591.6, an internal examination shall be made prior to the hydrostatic test. The procedures for this internal examination shall be in accordance with the requirements of the Standard for Visual Inspection of High Pressure Aluminum Compressed Gas Cylinders (CGA C-6.1), published by the Compressed Gas Association.~~

~~(2) The hydrostatic testing of D.O.T. specification cylinders shall be in accordance with the procedures specified in the pamphlet Methods for Hydrostatic Testing of Compressed Gas Cylinders (Pamphlet C-1), published by the Compressed Gas Association.~~

Cylinders and cartridges bearing D.O.T. markings shall be retested in accordance with the applicable D.O.T. regulations.

This change to 594.4 is another example of a change from specific requirements to a referral to DOT requirements.

(b) Low Pressure Non-D.O.T. Specification Cylinders.

~~(4) All hose shall be removed from cylinders prior to hydrostatic testing. On wheeled extinguishers of the stored-pressure water, loaded stream, or cartridge-operated types, the discharge nozzle shall be removed and the complete remaining assembly, including the hose, then tested as described in Section 592.2.~~

(8) The test liquid supply to the test pump is to be turned on and the extinguisher then filled to the top of its collar. Air or other gases shall not be used as the sole medium for pressure testing.

594.4 (b) has two changes to note.

(4) The new wording requires that the hose of an extinguisher has to be removed prior to hydrostatic testing. This is the same requirement of NFPA10 8.8.2.2. If the removed hose has a shut off nozzle it would then be tested separately as stated in 592.2. If the hose does not have a shut off nozzle it does not need to be tested, but still has to be removed. The old practice of testing through the hose assembly can no longer be done.

(8) Wording is added that prohibits the use of air or other gases as the sole medium for pressure testing. Air or other gasses should NEVER be introduced into the cylinder during testing; they can only be used to pressurize the liquid for testing. This is also stated in NFPA10 8.1.4.1 and should be obvious for safety reasons. A ruptured cylinder during hydrostatic test only filled with air can create a very violent and dangerous result.

Title 19 Regulations Changes Effective October 1st, 2013
Incorporating changes that include updates from NFPA10 2007 & 2010 Editions

594.5. Recording of Tests.

(c) Low Pressure (non-D.O.T.) Cylinders. Extinguisher shells of low-pressure non-D.O.T. cylinders that pass a hydrostatic test shall have the test information recorded on a suitable metallic label or equally durable material. The label shall be affixed by a heatless process to the shell. These labels shall be self-destructive when removal from an extinguisher shell is attempted. The label shall include the following information.

(4) A written or electronic log shall be maintained of all low-pressure (non-D.O.T.) cylinders which are hydrostatically tested. The log information shall be patterned after the D.O.T. recording requirements and shall include, but will not be limited to; the date, location of extinguisher, type, rating, brand, serial number and the name and EE# of individuals performing the service and the E# of the company they work for. This log shall be made available for a period of 13 years.

There is an additional requirement added under 594.5(c)(4) regarding low pressure non-DOT test records. Those records will now have a requirement that the log be made available for a period of 13 years, 1 year longer than the 12 year hydro cycle that many of the extinguishers have. The additional requirement for the logging of quarterly Test Gauge by the Master Gauge can be incorporated on this same log. A sample of a typical log sheet with that modification is available on the CALSAFE website. Low pressure DOT cylinders, like the Amerex 4b cylinders, are to be recorded on DOT acceptable logs. A sample of a typical "Modified (Proof) Hydrostatic Requalification" log that can be used for low pressure DOT cylinders is also available on the website.

595.5. Fire Extinguisher License Types.

(a) Types of licenses are as follows:

(7) Type L. (Limited). A class of license, limited to public or private entities that are not engaged in the business of servicing fire extinguishers and which only maintain their own portable fire extinguishers. A Type L licensee may only perform external annual maintenance on all fire extinguishers. ~~of stored pressure dry powder and dry chemical fire extinguishers, water type and wet chemical type fire extinguishers and external annual maintenance of halogenated agent and carbon dioxide fire extinguishers.~~

EXCEPTION: A California State Fire Marshal Type L (limited) Concern licensed prior to January 1, 2013 may continue to conduct internal maintenance of stored pressure dry powder and dry chemical, water type and wet chemical type fire extinguishers.

*There is an important change to 595.5 (a) (7) Type L limited license. The wording as it was stated in Title19 prior to this change allows an L license holder to perform maintenance on stored pressure dry chemical and powder extinguishers. That allowed them to perform a 6 year tear down which was never the original intent of the L license. This change in wording fixes that error. An exemption was also added to allow those who already have the L license, acquired the proper equipment, tools, parts, had technicians certified and are currently performing internal maintenance on these extinguishers correctly to continue to do so. The OSFM made site inspections on each of those who fall under this exemption to insure they are properly equipped and trained to continue to do the work. **New L License holders will not be allowed to perform internal maintenance.***

Title 19 Regulations Changes Effective October 1st, 2013
Incorporating changes that include updates from NFPA10 2007 & 2010 Editions

595.5. Fire Extinguisher License Types. (con't)

(f) A prospective licensee must provide written proof of their service experience in order to be licensed. The prospective licensee shall provide written documentation that they have at least 24 months of experience in ~~the servicing, maintenance, recharging, repairing, hydrostatic testing and installation of portable fire extinguishers.~~ with portable fire extinguishers in all the following areas:

- (1) Servicing.
- (2) Maintenance.
- (3) Recharging.
- (4) Repairing.
- (5) Hydrostatic testing and
- (6) Installation.

This shall be accomplished by having their fire extinguisher service employer submit letter (s) on their letter head attesting to this experience. This correspondence shall indicate their length of employment, an estimate of the number and type of portable fire extinguishers that they have experience with and a statement that the individual has the necessary experience to obtain a license. Additional documentation may include training certificates from the various fire extinguisher manufacturers and college classes related to Fire Science.

EXCEPTION: An applicant for a Limited License does not need to meet the 24 month of experience but shall submit their work experience and lesson plan/work instructions for performing an annual external maintenance in lieu of the 24 month requirement.

Most of the changes to subsection (f) of 595.5 is wording clean up. It took the areas that a Concern license applicant must show experience in out of a sentence structure that was not well constructed and rearranged it in a list format. There is however a new exception added at the end that allows an applicant for a limited license to submit their work experience and their lesson plan/work instructions to perform the external annual maintenance allowed by the license.

596. General.

(a) Annual Maintenance Tags, Verification of Service Collars, and Hydrostatic Test Labels required in accordance with this chapter shall be approved by the State Fire Marshal and shall conform with the provisions of this Article. Tags, collars, or labels shall not contain false and misleading statements as determined by the State Fire Marshal. Tags, collars, or labels approved by the State Fire Marshal shall not be used for any purpose other than to reflect servicing or selling of an approved portable fire extinguisher. At no time shall anything be attached to the front of the approved tag, collar, or label when installed on the portable fire extinguisher.

(b) Annual Maintenance Tag.

(1) Each fire extinguisher that has undergone annual maintenance as required in this Chapter shall have an Annual Maintenance Tag attached in accordance with this Article.

(c) Verification of Service Collar.

(1) Each extinguisher that has undergone maintenance, which includes internal examination or has been recharged as required in this chapter shall have a Verification of Service Collar attached in accordance with this Article.

EXCEPTION: Cartridge/cylinder-operated and carbon dioxide type fire extinguishers do not require a Verification of Service Collar.

Two changes to note under the Article 9 on Tagging, Marking Labeling etc. Under section 596 an additional line was added that states that there is never to be anything attached to the front of one of the approved tags, collars or labels when installed on an extinguisher. The rationale is that nothing should be placed on any of those items that may obstruct the required information. This seems obvious but this wording was needed because of someone's creative practice of placing their call for service label over one or all of these required tabs and labels. The second is adding carbon dioxide type fire extinguishers to the EXCEPTION for the Verification of Service Collars. This was a long standing problem since the requirement in (c)(1) that requires a new collar anytime an extinguisher had been recharged. It is not a practice to remove the valve of a CO₂ extinguisher when it is recharged. The hydrostatic test date becomes the verification of the internal maintenance for CO₂ extinguishers.

NOTE: CO₂ extinguishers no longer require a verification of service collar!