First Revision No. 1-NFPA 302-2022 [Global Input]

Remove “ANSI” and “Standard for” in all UL document references.

Submitter Information Verification

Committee: MOR-AAA

Submittal Date: Tue Oct 18 09:08:06 EDT 2022

Committee Statement

Committee Statement: Many years ago, UL preferred the ANSI/UL reference because there was a transition of traditional UL standards towards an ANSI standards development process.

Now, years later, a large majority of UL Standards are ANSI approved and follow the ANSI development and maintenance process. However, sometimes readers are confused because they don’t understand the standards are actually UL standards, not developed by ANSI. There are many other references to standards promulgated by other standards development organizations where they are considered ANSI approved but do not include ANSI in the reference.

The terms “Standard for” or “Subject” are redundant and unnecessary. All references to UL are standards.

Response Message: FR-1-NFPA 302-2022

Public Input No. 17-NFPA 302-2022 [Global Input]

First Revision No. 2-NFPA 302-2022 [Global Input]

Add UL 723, *Test for Surface Burning Characteristics of Building Materials*

where ASTM E 84, Standard Test Method for Surface Burning Characteristics of Building Materials is used.

Locations would be: 4.1.6.1, 4.1.6.2, 5.5.3.2.1, 5.5.3.2.2, 8.2.1, 10.13.1

Submitter Information Verification

Committee: MOR-AAA

Submittal Date: Tue Oct 18 09:14:38 EDT 2022

Committee Statement

Committee Statement: The purpose of this revision is to include reference to UL 723 as an alternate to ASTM E 84. These two Standards describe the same test method. The specifications for the test apparatus and test procedure are identical between the two standards. As such, identical test results would be obtained from tests conducted using each of these methods. UL 723 is an ANSI approved standard.

The inclusion of this alternate test method would provide the authority having jurisdiction with the flexibility to accept listed and labeled products evaluated in accordance with ASTM E 84 or UL 723.The purpose of the test is to determine the comparative burning characteristics of the material under test by evaluating the spread of flame over its surface and the density of the smoke developed when exposed to a test fire, and thus to establish a basis on which surface burning characteristics of different materials are compared.

Response Message: FR-2-NFPA 302-2022

Public Input No. 20-NFPA 302-2022 [Global Input]

First Revision No. 4-NFPA 302-2022 [Section No. 2.2]

2.2 NFPA Publications.

National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 10, *Standard for Portable Fire Extinguishers,* ~~2018~~ 2022 edition.

NFPA 12, *Standard on Carbon Dioxide Extinguishing Systems,* ~~2018~~ 2022 edition.

NFPA 12A, *Standard on Halon 1301 Fire Extinguishing Systems,* ~~2018~~ 2022 edition.

NFPA 52, *Vehicular Natural Gas Fuel Systems Code,* ~~2019~~ 2023 edition.

NFPA 70®, National Electrical Code®, ~~2020~~ 2023 edition.

NFPA 72®, National Fire Alarm and Signaling Code®, 2025 edition.

NFPA 303, *Fire Protection Standard for Marinas and Boatyards,* ~~2016~~ 2021 edition.

NFPA 701, *Standard Methods of Fire Tests for Flame Propagation of Textiles and Films,* ~~2017~~ 2019 edition.

NFPA 780, *Standard for the Installation of Lightning Protection Systems,* ~~2020~~ 2023 edition.

NFPA 2001, *Standard on Clean Agent Fire Extinguishing Systems,* ~~2018~~ 2022 edition.

NFPA 2010, *Standard for Fixed Aerosol Fire-Extinguishing Systems,* 2020 edition.

Submitter Information Verification

Committee: MOR-AAA

Submittal Date: Thu Oct 20 10:38:33 EDT 2022

Committee Statement

Committee Statement: This revision updates the edition dates for the NFPA documents that are referenced in the Standard at the time of the First Draft.

Response Message: FR-4-NFPA 302-2022

First Revision No. 5-NFPA 302-2022 [Section No. 2.3]

2.3 Other Publications.

2.3.1 ABYC Publications.

American Boat & Yacht Council, Inc., 613 Third Street, Suite 10, Annapolis, MD 21403.

ABYC A-24, *Installation of Carbon Monoxide ~~Detection Systems~~ Detectors and Alarms*, ~~2015~~ 2020 .

ABYC A-28, *Galvanic Isolators*, ~~2014~~ 2019 .

ABYC A-31, *Battery Chargers and Inverters*, ~~2015~~ 2020 .

ABYC E-11, *AC and DC Electrical Systems on Boats*, ~~2015~~ 2021 .

ABYC H-25, *Portable Marine Gasoline Fuel Systems*, ~~2016~~ 2019 .

ABYC TE-4, *Lightning Protection*, ~~2006~~ 2019 .

ABYC TH-23, *Design, Construction, and Testing of Boats in Consideration of Carbon Monoxide*, ~~2017~~ 2022 .

2.3.2 AMCA Publications.

Air Movement and Control Association International, Inc., 30 West University Drive, Arlington Heights, IL 60004-1893.

AMCA/ANSI 210, *Laboratory Methods of Testing Fans for Certified Aerodynamic Performance Rating*, ~~2007~~ 2016 .

2.3.3 ANSI Publications.

American National Standards Institute, Inc., 25 West 43rd Street, 4th Floor, New York, NY 10036.

CSA/ANSI Z21.57, *Recreational Vehicle Cooking Gas Appliances*, 2010, revised 2021 .

2.3.4 ASTM Publications.

ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959.

ASTM A463/A463M, *Standard Specification for Steel Sheet, Aluminum-Coated, by the Hot-Dip Process*,2015.

ASTM A653/A653M, *Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process*, 2015e1.

ASTM B96/B96M, *Specification for Copper-Silicon Alloy Plate, Sheet, Strip, and Rolled Bar for General Purposes and Pressure Vessels*, 2016.

ASTM B122/B122M, *Standard Specification for Copper-Nickel-Tin Alloy, Copper-Nickel-Zinc Alloy (Nickel Silver), and Copper-Nickel Alloy Plate, Sheet, Strip, and Rolled Bar*, 2016.

ASTM B127, *Standard Specification for Nickel-Copper Alloy (UNS N04400) Plate, Sheet, and Strip*, 2005, reapproved 2014.

ASTM B152/B152M, *Standard Specification for Copper Sheet, Strip, Plate, and Rolled Bar*, 2013.

ASTM D471, *Standard Test Method for Rubber Property-Effect of Liquids*, 2016a.

ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*, ~~2018~~ 2021a .

2.3.5 NEMA Publications.

National Electrical Manufacturers Association, 1300 North 17th Street, Suite 900, Arlington, VA 22209.

NEMA/ANSI WD-6-~~2016~~ , *Wiring Devices — Dimensional ~~Requirements~~ Specifications* , ~~2016~~ 2021 .

NEMA/ANSI 250-~~2014~~ , *Enclosures for Electrical Equipment (1000 Volts Maximum)*, ~~2014~~ 2020 .

2.3.6 SAE Publications.

SAE International, ~~400 Commonwealth Drive, Warrendale, PA 15096~~ Society of Automotive Engineers, 901 15th Street, NW, Suite 520, Washington, DC 20005 .

SAE J378, ~~*Recommended Practice for*~~ *Marine Propulsion System Wiring*, ~~2011~~ 2018 .

SAE J1127, ~~*Standard for*~~ *Low Voltage Battery Cable*, ~~2015~~ 2020 .

SAE J1128, ~~*Standard for*~~ *Low Voltage Primary Cable*, ~~2015~~ 2020 .

SAE J1171, *External Ignition Protection of Marine Electrical Devices*, 2016.

SAE J1928, *Devices Providing Backfire Flame Control for Gasoline Engines in Marine Applications*, ~~2012~~ 2020 .

SAE J2006, ~~*Standard on*~~ *Marine Exhaust Hose*, 2013.

SAE J2031, ~~*Standard for*~~ *High Tension Ignition Cable*, ~~2012, reaffirmed 2014~~ 2020 .

2.3.7 UL Publications.

Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096.

~~ANSI/~~ UL 21, ~~*Standard for*~~ *Safety LP Gas-Hose*, 2014, revised ~~2015~~ 2017 .

~~ANSI/~~ UL 94, *Tests for Flammability of Plastic Materials for Parts in Devices and Appliances*, 2013, revised ~~2016~~ 2022 .

~~ANSI/~~ UL 103, ~~*Standard for*~~ *Factory-Built Chimneys for Residential Type and Building Heating Appliances*, 2017.

~~ANSI/~~ UL 217, ~~*Standard for*~~ *Safety for Single and Multiple Station Smoke Alarms*, 2015, revised ~~2016~~ 2021 .

~~ANSI/~~ UL 248, *Series of Standards for Safety for Low Voltage Fuses*, 2011.

UL 268, *Smoke Detectors for Fire Alarm Systems* , 2021.

~~ANSI/~~ UL 310, ~~*Standard for*~~ *Safety for Electrical Quick-Connect Terminals*, 2014, revised 2019 .

~~ANSI/ UL 474 *Standard for Safety for Dehumidifiers* , 2014.~~

~~ANSI/~~ UL 489, ~~*Standard for*~~ *Safety for Molded-Case Circuit Breakers, Molded-Case Switches, and Circuit-Breaker Enclosures*, 2016.

~~ANSI/~~ UL 498, ~~*Standard for*~~ *Safety for Attachment Plugs and Receptacles*, ~~2016~~ 2017, revised 2021 .

UL 723, *Test for Surface Burning Characteristics of Building Materials* , 2018.

~~ANSI/~~ UL 817, ~~*Standard for*~~ *Safety for Cord Sets and Power-Supply Cords*, ~~2016~~ 2015, revised 2021 .

~~ANSI/~~ UL 858, ~~*Standard for*~~ *Safety for Household Electric Ranges*, 2014, revised ~~2017~~ 2019 .

~~ANSI/~~ UL 943, ~~*Standard for*~~ *Safety for Ground-Fault Circuit-Interrupters*, 2016, revised 2017 .

~~ANSI/~~ UL 1059, ~~*Standard for*~~ *Safety for Terminal Blocks*, ~~2001~~ 2019 , revised ~~2011~~ 2021 .

~~ANSI/~~ UL 1077, ~~*Standard for*~~ *Safety for Supplementary Protectors for Use in Electrical Equipment*, 2015, revised ~~2016~~ 2021 .

UL 1128, ~~*Standard for*~~ *Safety for Marine Blowers*, 1997.

UL 1129, ~~*Standard for*~~ *Safety for Wet Exhaust Component for Marine Engines*, 1999.

UL 1426, ~~*Standard for*~~ *Safety for Electrical Cables for Boats*, 2010, revised ~~2015~~ 2019 .

UL 1500, ~~*Standard for*~~ *Safety for Ignition-Protection Test for Marine Products*, 1997, revised 2007.

~~ANSI/~~ UL 4248, *Series of Standards for Safety for Fuseholders*, 2011.

UL 60335-2-40, *Household and Similar Electrical Appliances, Part 2: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and Dehumidifiers* , 2019.

2.3.8 U.S. Government Publications.

U.S. Government Publishing Office, 732 North Capitol Street, NW, Washington, DC 20401-0001.

Title 33, Code of Federal Regulations, Part 183, “Boats and Associated Equipment.”

Title 46, Code of Federal Regulations, Chapter I, Subchapter M, “Towing Vessels.”

2.3.9 Other Publications.

Merriam-Webster’s Collegiate Dictionary, 11th edition, Merriam-Webster, Inc., Springfield, MA, ~~2003~~ 2020 .

Submitter Information Verification

Committee: MOR-AAA

Submittal Date: Thu Oct 20 10:46:13 EDT 2022

Committee Statement

Committee Statement: This revision to 2.3 Other Publications updates publication reference numbers, publication titles, and edition dates for the documents that are referenced in the Standard at the time of the First Draft. This revision incorporates the revision that was presented in Public Input No. 8-NFPA 302-2022. This revision incorporates the revisions that were accepted in First Revision No.1-NFPA 302-2022 which removes “ANSI” and “Standard for” in all UL document references; and

Public Input No. 18-NFPA 302-2022, and include: UL 474 was withdrawn by UL and replaced by UL 60950-1; and UL 723 has been added in light of Global Public Input 20.

There were no revisions made to 2.3.8 and 2.3.9.

The source for 2.3.1 ABYC Publications’ title and revision date changes: https://abycinc.org/page/StandardsSupp58

The source for 2.3.2 AMCA Publication date change: https://www.amca.org/publish/publications-and-standards/amca-standards/amca-%EF%BB%BFstandard-210-07-laboratory-methods-of-testing-fans-for-certified-aerodynamic-performance-rating.html

The source for 2.3.3 ANSI Publications revision date change: https://www.csagroup.org/store/product/2701561/

The source for the 2.3.4 ASTM Publications revision date change is Public Input No. 8-NFPA 302-2022.

The source for 2.3.5 NEMA Publications document title and revision date changes:

https://www.techstreet.com/nema/standards/ansi-nema-wd-6-2021?product_id=2259677#jumps

https://www.techstreet.com/nema/searches/35247483

The source for 2.3.6 SAE Publications changes to titles and revision dates: https://www.sae.org/standards

The source for the 2.3.7 UL Publications revisions is Public Input No. 18-NFPA 302-2022.

Response Message: FR-5-NFPA 302-2022

First Revision No. 6-NFPA 302-2022 [Section No. 2.4]

2.4 References for Extracts in Mandatory Sections.

NFPA 10, *Standard for Portable Fire Extinguishers,* ~~2018~~ 2022 edition.

NFPA 70®, National Electrical Code®, ~~2017~~ 2023 edition.

NFPA 2001, *Standard on Clean Agent Fire Extinguishing Systems,* ~~2018~~ 2022 edition.

Submitter Information Verification

Committee: MOR-AAA

Submittal Date: Thu Oct 20 12:19:18 EDT 2022

Committee Statement

Committee Statement: This revision updates the edition dates for the NFPA documents from which extracts are used in the Standard at the time of the First Draft.

Response Message: FR-6-NFPA 302-2022

First Revision No. 7-NFPA 302-2022 [Section No. 3.3.8]

3.3.8 Clean Agent.

Volatile or gaseous fire extinguishant that is electrically nonconducting and that does not leave a residue upon evaporation. [**2001,**~~2018~~ 2022]

~~**A.3.3.8** Clean Agent.~~

~~Although commonly referred to as a clean agent in the marine industry, for the purposes of NFPA standards, CO 2 is not considered a clean agent.~~

Submitter Information Verification

Committee: MOR-AAA

Submittal Date: Thu Oct 20 12:27:23 EDT 2022

Committee Statement

Committee Statement: The explanatory note for clean agent is removed.

The definition for clean agent appears in the first edition of NFPA 2001, Clean Agent Fire Extinguishing Systems, that was issued by the Standards Council on 14 January 1994 with an effective date of 11 February 1994. As of the date of the first draft meeting for NFPA 302, this definition in the source document has not changed.

The definition for “clean agent” first appears in NFPA 302, in the 1998 edition of that

Standard. "Electrically nonconducting, volatile, or gaseous fire extinguishant that does not leave a

residue upon evaporation. The word ‘‘agent’’ as used in this document means ‘‘clean

agent’’ unless otherwise indicated."

The Annex Note in NFPA 302, "A.3.3.8 Clean Agent. Although commonly referred to as a clean agent in the marine industry, for the purposes of NFPA standards, CO2 is not considered a clean agent.", first appears in the 2004 edition of the Standard. There is no rationale that can be found for the explanatory note in either the Annual 2003 Report on Proposals or the 2003 Annual Report on Comments. Furthermore there is no documentation found to support the statement made in the explanatory note. To the contrary, NFPA 12, Standard on Carbon Dioxide Extinguishing Systems, Annex G - General Information on Carbon Dioxide G.1 (third paragraph) notes the following: “For fire-extinguishing applications, carbon dioxide has a number of desirable

properties. It is noncorrosive, nondamaging, and leaves no residue to clean up after the

fire...."

Based on these findings the Technical Committee has removed the explanatory note in

A.3.3.8.

Response Message: FR-7-NFPA 302-2022

First Revision No. 8-NFPA 302-2022 [Section No. 3.3.22]

3.3.22* Ground-Fault Circuit Interrupter (GFCI).

A device intended for the protection of personnel that functions to de-energize a circuit or portion thereof within an established period of time when a ground-fault current ~~to ground~~ exceeds the values established for a Class A device. [**70: ,** ~~100~~ 2023]

A.3.3.22 Ground-Fault Circuit Interrupter (GFCI).

See UL 943, *Ground-Fault Circuit Interrupters* , for further information. Class A ground-fault circuit interrupters trip when the ground-fault current ~~to ground~~ is 6 mA or higher and do not trip when the ground-fault current ~~to ground~~ is less than 4 mA. ~~For further information, see ANSI/UL 943, *Standard for Ground-Fault Circuit Interrupters* .~~ [**70: ,** ~~100~~ 2023]

Submitter Information Verification

Committee: MOR-AAA

Submittal Date: Thu Oct 20 12:50:32 EDT 2022

Committee Statement

Committee Statement: This revision aligns with the current text in the 2023 edition of NFPA 70, Article 100, which is the source for this extracted text.

This revision incorporates the revisions proposed in Public Input No. 28-NFPA 302-2022 and Public Input No. 29-NFPA 302-2022.

Response Message: FR-8-NFPA 302-2022

First Revision No. 22-NFPA 302-2022 [Section No. 3.3.27]

3.3.27 Hydrostatic Testing.

Pressure testing of the extinguisher cylinder and certain hose assemblies to verify ~~its~~ strength against unwanted rupture. [**10,**~~2018~~ 2022]

Submitter Information Verification

Committee: MOR-AAA

Submittal Date: Mon Nov 14 12:20:47 EST 2022

Committee Statement

Committee Statement: This revision updates the definition NFPA 302 to that of the definition found in the source document for this extract.

Response Message: FR-22-NFPA 302-2022

First Revision No. 10-NFPA 302-2022 [Section No. 8.10]

8.10 Portable Dehumidifiers.

8.10.1

Portable dehumidifiers shall ~~shall meet the requirements of ANSI/UL 474, *Standard for Safety for Dehumidifiers* , and be so listed.~~ be listed and labeled in accordance with UL 60335-2-40, *Household and Similar Electrical Appliances, Part 2: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and Dehumidifiers* .

8.10.1.1

Portable dehumidifiers shall be designed to operate on 120 VAC current.

8.10.1.2

Portable dehumidifiers shall draw no more than 9 amperes at maximum capacity.

8.10.2

Portable dehumidifiers may be permitted to operate unattended only if connected to a dedicated outlet and the shore power inlet connection has been physically examined within the last month.

Submitter Information Verification

Committee: MOR-AAA

Submittal Date: Thu Oct 20 14:11:19 EDT 2022

Committee Statement

Committee Statement: UL 474 has been withdrawn and replaced with UL 60335-2-40. Where appliances and equipment are required to be listed, they should also be required to be labeled, which is the means to determine if the appliance or equipment in the field has been listed.

Response Message: FR-10-NFPA 302-2022

Public Input No. 21-NFPA 302-2022 [Section No. 8.10]

First Revision No. 14-NFPA 302-2022 [Section No. 13.3]

13.3 Smoke Detection.

All vessels ~~with accommodation spaces intended for sleeping~~ shall be equipped with ~~a single-station~~ smoke alarm(s) or smoke detector(s) that are appropriate for the space(s) served ~~that is listed to ANSI/UL 217, *Standard for Safety for Single and Multiple Station Smoke Alarms* , for marine or recreational vehicle use and is installed and maintained according to the device manufacturer's instructions~~ .

~~**A.13.3**~~

~~It is recommended on commercial vessels 39.37 ft (12 m) and larger that engine room fire detection equipment be installed with notification capability at the helm.~~

~~Engine room fire suppression is not a substitute for engine room fire detection. Occupants of most vessels 39.37 ft (12 m) and larger are typically too far from the engine room to detect a fire without the assistance of properly installed detection equipment. The occupants of the vessel can be placed in further peril when it becomes necessary to escape the fire by entering the water. Engine room fires need to be detected early in order to reduce the dangers to the vessel's occupants and damage to the vessel. Heat and/or smoke alarms should be listed to appropriate standards for the device and installed according to the device manufacturer's instructions.~~

13.3.1

Smoke alarms or smoke detectors shall be installed in every accommodation space.

13.3.2

If an accommodation space is protected with a smoke detector rather than a smoke alarm, then an audible fire alarm shall also be installed in that accommodation space.

13.3.3

All smoke alarms, smoke detectors, and audible fire alarms shall be interconnected so that if smoke is detected in any accommodation space, then the smoke alarms, smoke detectors, and audible fire alarms in every accommodation space will also sound.

13.3.4

All smoke alarms shall be listed and labeled in accordance with UL 217, *Safety for Single and Multiple Station Smoke Alarms* .

13.3.5

All smoke detectors shall be listed to UL 268, *Smoke Detectors for Fire Alarm Systems* .

13.3.6

All audible fire alarms that are not a part of a smoke alarm that is listed in accordance with UL 217, *Safety for Single and Multiple Station Smoke Alarms* , shall comply with NFPA 72.

13.3.7

Smoke alarms, smoke detectors, and audible fire alarms shall be installed and maintained according to the device manufacturer's instructions, except that smoke alarms installed in dry locations shall not be required to comply with the requirements for recreational boats in UL 217, *Safety for Single and Multiple Station Smoke Alarms* .

Submitter Information Verification

Committee: MOR-AAA

Submittal Date: Mon Oct 24 15:26:29 EDT 2022

Committee Statement

Committee Statement: There have been numerous incidents of fire on recreational vessels and vessels for hire where a system of interconnected smoke alarms or smoke detectors would have saved many lives and property (Example: Dive Boat Conception). Interconnected smoke alarms are inexpensive, readily available, simple to install, and would not present an unreasonable burden on vessel builders or vessel for hire charterers.

Also, the wording of the present edition of 302 has no provision for commercial grade smoke detectors connected to a central alarm center.

With the requirement applicable to "all vessels", the Annex A explanatory note that recommends that engine room fire detection equipment be installed with notification capability at the helm for commercial vessels 39.37 ft (12 m) and larger is removed.

The ANSI and "Standard for" are removed from UL publications as per Global First Revision No. 1-NFPA 302-2022. Where appliances or equipment are required to be listed, they need to be labeled to show that the appliance or equipment is listed.

Response Message: FR-14-NFPA 302-2022

Public Input No. 4-NFPA 302-2022 [Section No. 13.3]

First Revision No. 15-NFPA 302-2022 [Section No. E.1]

E.1 Introduction.

This annex is provided as an aid to the user of NFPA 302 by identifying those portions of NFPA standards that pertain to inspection and frequency of maintenance of fixed extinguishing systems and portable fire extinguishers. It is not intended that this annex provide complete information regarding all aspects of servicing fire protection equipment. It is important to note that this information was not copied using NFPA's extract policy and is not intended to be a part of the requirements of NFPA 302 unless specified in Chapter 1 through Chapter 13. While the 2022 ~~2018~~ edition of NFPA 10, the ~~2018~~ 2022 edition of NFPA 12, the ~~2018~~ 2022 edition of NFPA 12A, and the ~~2018~~ 2022 edition of NFPA 2001 were the most current at the time of the publication of this edition of NFPA 302, more recent editions might have been issued.

Submitter Information Verification

Committee: MOR-AAA

Submittal Date: Mon Oct 24 16:36:18 EDT 2022

Committee Statement

Committee Statement: The reference to the edition year for NFPA Publications are updated to the current edition at the time of these revisions for the First Draft of NFPA 302.

Response Message: FR-15-NFPA 302-2022

First Revision No. 23-NFPA 302-2022 [Section No. E.3.2.4.1]

E.3.2.4.1

Personnel making manual inspections shall keep records of all fire extinguishers inspected, including those found to require corrective action. [**10:**~~7.2.4.1.3~~ 7.2.4.1.4]

Submitter Information Verification

Committee: MOR-AAA

Submittal Date: Mon Nov 14 14:04:17 EST 2022

Committee Statement

Committee Statement: The extract reference is updated to the correct reference number within NFPA 10.

Response Message: FR-23-NFPA 302-2022

First Revision No. 16-NFPA 302-2022 [Section No. E.5.3.1 [Excluding any Sub-Sections]]

US Department of Transportation DOT, Canadian Transport Commission CTC, or similar design Halon 1301 cylinders shall not be recharged ~~without a retest if more than 5 years have~~ without retesting if the requalification period specified by the regulating authority for the container has elapsed since the date of the last test and inspection. [**12A:**6.2.1]

Submitter Information Verification

Committee: MOR-AAA

Submittal Date: Mon Oct 24 16:50:35 EDT 2022

Committee Statement

Committee Statement: Revisions to E.5.3.1 is made to be consistent with the text that is found in the source document, NFPA 12A: Standard on Halon 1301 Fire Extinguishing Systems, 2022 Edition.

Response Message: FR-16-NFPA 302-2022

First Revision No. 24-NFPA 302-2022 [Section No. E.5.3.1.1]

E.5.3.1.1

The retest shall be permitted to consist of a complete visual inspection as described in ~~the~~ 49 CFR~~, Title 49~~ . [**12A:**6.2.1.1]

Submitter Information Verification

Committee: MOR-AAA
Submittal Date: Mon Nov 14 14:07:32 EST 2022

Committee Statement

Committee Statement: Extracted text is revised to duplicate what is found in the source document.
Response Message: FR-24-NFPA 302-2022

First Revision No. 17-NFPA 302-2022 [Section No. E.5.3.1.2]

E.5.3.1.2

~~In Canada, the corresponding information shall be as set forth by the Canadian Transportation Agency~~ A cylinder shall be permitted to be requalified at any time during or before the month and year that the requalification is due . [**12A:**6.2.1.2]

Submitter Information Verification

Committee: MOR-AAA

Submittal Date: Mon Oct 24 17:01:11 EDT 2022

Committee Statement

Committee Statement: Revisions to E.5.3.1.2 is made to be consistent with the text that is found in the source document, NFPA 12A: Standard on Halon 1301 Fire Extinguishing Systems, 2022 Edition.

Response Message: FR-17-NFPA 302-2022

First Revision No. 18-NFPA 302-2022 [Section No. E.6]

E.6 Inspection and Tests of Clean Agent Systems.

E.6.1 Training.

All persons who could be expected to inspect, service, test, or maintain fire extinguishing systems shall be trained and kept trained in the functions they are expected to perform. [**2001:**~~8~~ 11 .8]

E.6.2 Safety.

Safe procedures shall be observed during installation, servicing, maintenance, testing, handling, and recharging of clean agent systems and agent containers. [**2001:**~~8~~ 11 .1.1]

E.6.3 Inspection and Service.

E.6.3.1 Monthly Inspection. [2001:11.2] ~~.~~

E.6.3.1.1

At least monthly, a visual inspection shall be conducted in accordance with the manufacturer's listed maintenance manual or owner's manual. [**2001:**~~8~~ 11 .2.1]

E.6.3.1.2

At a minimum, the inspection shall include verification of the following, as applicable:

(1) Releasing panel is powered and is free of supervisory, trouble, or alarm conditions.

(2) Manual controls are unobstructed.

(3) System shows no physical damage or condition that could prevent operation.

(4) Pressure gauges are in the operable range.

(5) Protected equipment and/or hazard has not been changed or modified.

(6) Any previously noted deficiencies have been corrected.

[**2001:**~~8~~ 11 .2.2]

E.6.3.1.3

If any deficiencies are found, appropriate corrective action shall be taken immediately. [**2001:**~~8~~ 11 .2.3]

E.6.3.1.4

Where the corrective action involves maintenance or repair, it shall be conducted by a fire protection service technician, in accordance with ~~8.1.2~~ 11.1.2 of NFPA 2001. [**2001:**~~8~~ 11 .2.4]

E.6.3.1.5

When inspections are conducted, a record verifying that the inspection was completed shall be maintained by the owner. [**2001:**~~8~~ 11 .2.5]

E.6.3.1.5.1

The record shall include the date the inspection was performed and the initials of the person performing the inspection. [**2001**:~~8~~ 11 .2.5.1]

E.6.3.1.5.2

The record shall include any deficiencies that were found. [**2001**:~~8~~ 11 .2.5.2]

E.6.3.1.5.3

The records shall be retained until the next semiannual service and inspection. [**2001:**~~8~~ 11 .2.5.3]

E.6.3.2 Annual Inspection and Service. [2001:11.4]

E.6.3.2.1

At least annually, all systems shall be inspected, serviced, and tested for operation by qualified personnel, in accordance with ~~8.1.2~~ 11.1.2 of NFPA 2001. [**2001:**~~8~~ 11 .4]

E.6.3.2.1.1

Discharge tests shall not be required. [**2001:**~~8~~ 11 .4.1]

E.6.3.2.1.2

A service report with recommendations shall be filed with the owner of the system. [**2001:**~~8~~ 11 .4.2]

E.6.3.2.1.3

The service report shall be permitted to be stored and accessed using paper or electronic media. [**2001:**~~8~~ 11 .4.3]

E.6.3.2.1.4 System Hoses. [2001:~~8.4.4~~ 11.4.4.]

(A)

All system hoses shall be examined annually for damage. [**2001:**~~8 .4.4.1~~ 11.4.4]

(B)

If visual examination shows any deficiency, the hose shall be immediately replaced or tested as specified in Section ~~8~~ 11 .7 of NFPA 2001. [**2001:**~~8~~ 11 .4.4.2]

E.6.3.3 Hose Test. [2001:11.7]

All hoses shall be tested or replaced every 5 years. [**2001:**~~8~~ 11 .7.1]

E.6.3.4 Semiannual Service and Inspection.

At least semiannually, the agent quantity and pressure of refillable containers shall be checked. [**2001:**~~8~~ 11 .3]

E.6.3.4.1

For halocarbon clean agents with a means of pressure indication, if a container shows a loss in agent quantity of more than 5 percent or a loss in pressure (adjusted for temperature) of more than 10 percent, it shall be refilled or replaced. [**2001:**~~8~~ 11 .3.1]

E.6.3.4.2

For inert gas clean agents, if a container shows a loss in pressure (adjusted for temperature) of more than 5 percent, it shall be refilled or replaced. [**2001:**~~8~~ 11 .3.4]

E.6.3.4.3

Where container pressure gauges are used to comply with ~~8.3.4~~ 11.3.4 of NFPA 2001, they shall be compared to a separate calibrated device at least annually. [**2001:**~~8~~ 11 .3.5]

E.6.3.4.4

Where the amount of agent in the container is determined by special measuring devices, these devices shall be listed. [**2001:**~~8~~ 11 .3.6]

E.6.3.4.5

Halocarbon clean agent removed from containers during service or maintenance procedures shall be recovered and recycled or disposed of in accordance with any applicable laws and regulations. [**2001:**~~8~~ 11 .3.3]

E.6.3.4.6

For halocarbon agent containers without a means of pressure indication, if a container shows a loss in agent quantity of more than 5 percent, it shall be refilled or replaced. [**2001:**~~8~~ 11 .3.2]

E.6.3.4.7

The following information shall be recorded on a tag attached to the container:

(1) Date of inspection

(2) Person performing the inspection

(3) Type of agent

(4) Gross weight of the container and net weight of agent *(halocarbon clean agents only)*

(5) Container pressure and temperature *(halocarbon clean agents with a gauge and inert gas clean agents)*

[**2001:**~~8~~ 11 .3.7]

E.6.3.5 Containers.

E.6.3.5.1

U.S. Department of Transportation (DOT), Canadian Transport Commission (CTC), or similar design clean agent containers shall not be recharged without retesting if ~~more than 5 years have~~ the requalification period specified by the regulating authority for the container has elapsed since the date of the last test and inspection. [**2001:**~~8~~ 11 .6.1]

E.6.3.5.2

For halocarbon agent storage containers, the retest shall be permitted to consist of a complete visual inspection as described in 49 CFR. [**2001:**~~8~~ 11 .6.1.1]

E.6.3.5.3

Containers continuously in service without ~~discharging~~ need for refill or repair shall be given a complete external visual inspection every 5 years, or more frequently if required. [**2001:**~~8~~ 11 .6.2]

E.6.3.5.3.1

The visual inspection shall be in accordance with Section 3 of CGA C-6, *Standard for Visual Inspection of Steel Compressed Gas Cylinders* , except that the containers need not be stamped while under pressure. [**2001:**~~8~~ 11 .6.2.1]

E.6.3.5.3.2

The results of the inspection shall be recorded on both of the following:

(1) A record tag permanently attached to each ~~cylinder~~ container

(2) A suitable inspection report

[**2001:**~~8~~ 11 .6.2.2]

E.6.3.5.3.3

A completed copy of the container inspection report shall be furnished to the owner of the system or an authorized representative. [**2001:**~~8~~ 11 .6.2.3]

E.6.3.5.3.4

These records shall be retained by the owner for the life of the system. [**2001:**~~8~~ 11 .6.2.4]

E.6.3.5.3.5

Where external visual inspection indicates that the container has been damaged, additional strength tests shall be required in accordance with applicable transportation regulations . [**2001:**~~8~~ 11 .6.2.5]

E.6.4 Enclosure Inspection. [2001:11.4.5]

E.6.4.1

The protected enclosure shall be inspected annually or monitored by a documented administrative program for changes in barrier integrity or enclosure dimensions. [**2001:**~~8~~ 11 .4.5.1]

E.6.4.2

Where changes could result in the inability of the enclosure to maintain the clean agent concentration, the conditions shall be corrected. [**2001:**~~8~~ 11 .4.5.2]

E.6.5 Maintenance. [2001:11.5]

E.6.5.1

These systems shall be maintained in full operating condition at all times. [**2001:**~~8~~ 11 .5.1]

E.6.5.2

Actuation~~, impairment, and restoration of this protection~~ of the clean agent system shall be reported ~~promptly~~ immediately to the authority having jurisdiction. [**2001:**~~8~~ 11 .5.2]

E.6.5.3

~~Any impairments~~ Impairments shall be ~~corrected~~ addressed in accordance with Chapter 12 of NFPA 2001 . [**2001:**~~8~~ 11 .5.3]

E.6.5.4

Any penetrations made through the enclosure protected by the clean agent shall be sealed immediately. [**2001:**~~8~~ 11 .5.4.1]

E.6.5.5

The method of sealing shall restore the original fire resistance rating of the enclosure. [**2001:**~~8~~ 11 .5.4.2]

Submitter Information Verification

Committee: MOR-AAA

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Committee Statement

Committee Statement: Revisions to Section E.6, “Inspection and Tests of Clean Agent Systems”, are made to be consistent with the text that is found in the source document, NFPA 2001: Standard on Clean Agent Fire Extinguishing Systems, 2022 Edition.

Response Message: FR-18-NFPA 302-2022

First Revision No. 19-NFPA 302-2022 [Section No. F.1.1]

F.1.1 NFPA Publications.

National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 10, *Standard for Portable Fire Extinguishers*, ~~2018~~ 2022 edition.

NFPA 12, *Standard on Carbon Dioxide Extinguishing Systems*, ~~2018~~ 2022 edition.

NFPA 12A, *Standard on Halon 1301 Fire Extinguishing Systems*, ~~2018~~ 2022 edition.

NFPA 58, *Liquefied Petroleum Gas Code*, ~~2020~~ 2023 edition.

NFPA 70®, *National Electrical Code®*, ~~2020~~ 2023 edition.

NFPA 72®, *National Fire Alarm and Signaling Code®*, ~~2019~~ 2025 edition.

NFPA 2001, *Standard on Clean Agent Fire Extinguishing Systems*, ~~2018~~ 2022 edition.

Submitter Information Verification

Committee: MOR-AAA

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Committee Statement

Committee Statement: The edition year of the NFPA Codes and Standards presented in F.1.1 are updated to the current edition at the time of the First Draft meeting for NFPA 302.

Response Message: FR-19-NFPA 302-2022

First Revision No. 20-NFPA 302-2022 [Section No. F.1.2]

F.1.2 Other Publications.

F.1.2.1 ABYC Publications.

American Boat & Yacht Council, Inc., 613 Third Street, Suite 10, Annapolis, MD 21403.

ABYC A-4, *Fire Fighting Equipment*, ~~2008~~ 2018 .

ABYC A-32, *AC Power Conversion Equipment and Systems*, ~~2017~~ 2022 .

ABYC E-11, *AC & DCElectrical Systems on Boats*, ~~2015~~ 2021 .

ABYC TE-4, *Lightning Protection*, ~~2006~~ 2019 .

ABYC TH-22, *Educational Information About Carbon Monoxide*, ~~2017~~ 2022 .

ABYC TH-23, *Design, Construction, and Testing of Boats in Consideration of Carbon Monoxide*, ~~2017~~ 2022 .

F.1.2.2 ASTM Publications.

ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959.

IEEE/ASTM SI 10, *American National Standard for Metric Practice*, 2016 edition.

F.1.2.3 CGA Publications.

Compressed Gas Association, ~~14501 George Carter Way, Suite 103, Chantilly, VA 20151-2923~~ 8484 Westpark Drive, Suite 220, .McLean, VA, 22102

CGA C-6, *Standard for Visual Inspection of Steel Compressed Gas Cylinders*, ~~2013~~ 2019 .

F.1.2.4 FSSA Publications.

Fire Suppression Systems Association, 3601 E. Joppa Road, Baltimore, MD 21234. (www.fssa.net)

FSSA *Application Guide Detection & Control for Fire Suppression Systems*, ~~January 2014~~ (DCG-01), 2010. .

F.1.2.5 SAE Publications.

~~SAE International, 400 Commonwealth Drive, Warrendale, PA 15096.~~ Society of Automotive Engineers, 901 15th Street, NW, Suite 520, Washington, DC 20005.

SAE J378, ~~*Recommended Practice for*~~ *Marine Propulsion System Wiring*, ~~2011~~ 2018 .

SAE J1171, *Recommended Practice for External Ignition Protection of Marine Electrical Devices*, 2016.

SAE J1191, *Recommended Practice for High Tension Ignition Cable Assemblies—Marine*, ~~2011~~ reaffirmed 2018 .

SAE J1223, *Recommended Practice for Marine Carburetors and Fuel Injection Throttle Bodies*, 1993, reaffirmed ~~2012~~ 2020 .

SAE J1294, *Recommended Practice for Ignition Distributors—Marine*, stabilized 2016.

SAE J1428, *Recommended Practice for Marine Circuit Breakers*, stabilized 2013.

Global FR-1

F.1.2.6 UL Publications.

Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096.

~~ANSI/~~UL 217, ~~*Standard for* *Single and Multiple Station Smoke Alarms*~~, ~~2015~~2010, revised ~~2016~~2021.

~~ANSI/~~UL 268, *Smoke Detectors for Fire Alarm Systems*, 2016, revised 2021.

~~ANSI/~~UL 943, ~~*Standard for* *Ground-Fault Circuit-Interrupters*~~, 2016, revised 2017.

~~ANSI/~~UL 1971, ~~*Standard for* *Signaling Devices for Hearing Impaired*~~, 2002, revised ~~2013~~2018.

F.1.2.7 U.S. Government Publications.

U.S. Government Publishing Office, 732 North Capitol Street, NW, Washington, DC 20401-0001.

Title 33, Code of Federal Regulations, Part 183, “Boats and Associated Equipment.”

Title 46, Code of Federal Regulations, Parts 110–113, 181.

Title 49, Code of Federal Regulations, Parts 170–190.

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Committee Statement

Committee Statement: The edition year of the publications presented in F.2.1 are updated to the current edition at the time of the First Draft meeting for NFPA 302. These updates were obtained as noted below:

Source for ABYC Publications’ title and revision date changes - https://abycinc.org/page/StandardsSupp58

Source for CGA Publication revision date change - https://portal.cganet.com/Publication/Details.aspx?id=C-6

Source for FSSA Publication number and revision date - https://www.fssa.net/shopfssa

Source for SAE Publications’ title and revision date changes - https://www.sae.org/standards

Source for UL Publications - The edition year UL Publications are updated as per Public Input No. 19-NFPA 302-2022. The label “ANSI” and “Standard for” in the titles of UL publications is deleted as per First Revision no. 1-NFPA 302-2022. The addition of UL Publications (UL 1058; UL 2127; UL2166; and UL 2775) was not done. These publications are presented in the Public Input No. 25-NFPA 303-2022 for the explanatory note in Annex (A.12.1.3.4). PI-25 is included in Committee Input No. 12-NFPA 303-2022. A Task Group will review CI-12 (and PI-25). The Task Group will consider adding these references to A.12.1.3.4.

Response Message: FR-20-NFPA 302-2022

First Revision No. 21-NFPA 302-2022 [Section No. F.3]

F.3 References for Extracts in Informational Sections.

NFPA 10, *Standard for Portable Fire Extinguishers,* ~~2018~~ 2022 edition.

NFPA 12, *Standard on Carbon Dioxide Extinguishing Systems,* ~~2018~~ 2022 edition.

NFPA 12A, *Standard on Halon 1301 Fire Extinguishing Systems,* ~~2018~~ 2022 edition.

NFPA 70®, *National Electrical Code®*, ~~2020~~ 2023 edition.

NFPA 2001, *Standard on Clean Agent Fire Extinguishing Systems,* ~~2015~~ 2022 edition.

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