## INSPECTION, MAINTENANCE, TESTING, AND RECHARGING PERIODS FOR PORTABLE FIRE EXTINGISHERS

FLS has organized the following information to serve as a timetable for any inspection, maintenance, recharging, and testing of portable fire extinguishers. All of the following information and paragraph numbers can be found in the 2002 edition of the National Fire Protection Association, Standard for Portable Fire Extinguishers, NFPA-10.

Type	Extinguisher	Inspection*	Maintenance **	Recharging ***	Hydrostatic Testing*
Carbon Dioxide   30 Days   1 Year   6 Years   (6.3.1)   6 (6.3.1)   6 Years   (7able 7.2)	Type				
Carbon Dioxide   30 Days   1 Year   (6.3.1)   (6.4.3.4)   (7able 7.2)				Empty and internally	
Carbon Dioxide         30 Days (6.2.1)         Maintenance and "ensure conductivity exists" (6.4.1.1, 6.4.3.9, & (7able 7.2))         5 years (6.4.5.1)           Water (Stored pressure)         30 Days (6.2.1)         1 Year (6.3.1.2, 6.3.1)         1 Year (5.4.2.1 & 6.4.3.10)         5 years (7able 7.2)           (Stored pressure)         30 Days (6.2.1)         1 Year (6.3.1)         5 years (6.4.2.1 & 6.4.3.10)         5 years (7able 7.2)           (Stainless Steel)         (6.2.1)         (6.3.1)         (6.4.2.4)         (7able 7.2)           Dry Chemical (Cartridge)         30 Days (6.2.1)         1 Year (6.3.1)         6 Years (7able 7.2)           (Cartridge)         (6.2.1)         (6.3.1)         (6.4.3.4)         (7able 7.2)           Wet Chemical (Cartridge)         30 Days (6.2.1)         1 Year (6.3.1)         5 Years (7able 7.2)           Wet Chemical (Cartridge)         30 Days (6.3.1)         1 Year (6.4.2.3)         5 years (7able 7.2)           AFFF (Liquid charge (6.2.1)         (6.3.1)         (6.4.2.3)         (7able 7.2)           FFFP (Liquid charge type)         (6.2.1)         (6.3.1)         (6.4.2.3)         (7able 7.2)           Dry Powder (6.2.1)         20 Days (6.3.1)         1 Year (6.3.1)         1 Year (6.4.2.3)         1 Year (7able 7.2)           Bry Powder (6.2.1)         20 Days (6.3.1)         20 Days (6.3	(Stored pressure)		1 Year	inspect @	12 years
Carbon Dioxide         30 Days (6.2.1)         Maintenance and "ensure conductivity exists" (6.4.1.1, 6.4.3.9, & (1.4.5.1)         5 years (6.4.5.1)           Water (Stored pressure)         30 Days (6.2.1)         1 Year (6.3.1.2, 6.3.1)         1 Year (6.4.2.1 & 6.4.3.10)         5 years (Table 7.2)           Dry Chemical (Stainless Steel)         30 Days (6.2.1)         1 Year (6.3.1)         5 years (5 years (7 able 7.2)           Dry Chemical (Cartridge)         30 Days (6.2.1)         1 Year (6.3.1)         6 Years (7 able 7.2)           Wet Chemical (Cartridge)         (6.2.1)         (6.3.1)         6 Years (7 able 7.2)           Wet Chemical (Cartridge)         30 Days (6.2.1)         1 Year (6.3.4.4)         5 years (7 able 7.2)           Wet Chemical (Cartridge)         30 Days (6.2.1)         1 Year (6.4.3.11)         5 years (7 able 7.2)           Wet Chemical (Cartridge)         30 Days (6.3.1)         1 Year (6.4.3.11)         5 years (7 able 7.2)           Wet Chemical (Cartridge)         1 Year (6.3.1)         3 Years (7 able 7.2)         5 years (7 able 7.2)           Wet Chemical (Cartridge)         6 Years (6.3.1)         6 Years (7 able 7.2)         1 Year (6.3.1)         1 Year (6.4.3.11)         1 Year (7 able 7.2)           Wet Chemical (Cartridge)         1 Year (6.3.1)         1 Year (6.4.3.11)         1 Year (7 able 7.2)         1 Year (7 able 7.2)		(6.2.1)	(6.3.1)	6 Years	(Table 7.2)
Carbon Dioxide         30 Days (6.2.1)         "ensure conductivity exists" (3.1.2, 6.3.1)         5 Years (6.4.1.1, 6.4.3.9, & 6.4.5.1)         5 years (Table 7.2)           Water (Stored pressure)         30 Days (6.2.1)         1 Year (6.3.1.2, 6.3.1)         1 Year (6.4.2.1 & 6.4.3.10)         5 years (Table 7.2)           Dry Chemical (Stainless Steel)         30 Days (6.2.1)         1 Year (6.3.1)         5 Years (5 years (5 years (5 years (5 years (6.4.3.4)))         5 Years (7 years (6.4.3.4))         5 Years (7 years (6.4.3.4))         5 Years (7 years (6.4.3.4))         6 Years (7 years (6.3.3), 6.4.3.4)         1 Year (6.3.1)         6 Years (7 years (6.3.3, 6.4.3.4))         1 Year (6.3.3, 6.4.3.4)         1 Year (6.3.3, 6.4.3.4)         1 Year (6.3.3, 6.4.3.4)         1 Year (6.3.3, 6.4.3.4)         1 Year (7 years (7 yea				(6.3.3 & 6.4.3.4)	
Conductivity exists			Maintenance and		
Conductivity exists'	Carbon Dioxide	30 Days	"ensure	5 Years	5 years
Water (Stored pressure)         30 Days (6.2.1)         1 Year (6.3.1.2, 6.3.1)         1 Year (6.4.2.1 & 6.4.3.10)         5 years (Table 7.2)           Dry Chemical (Stainless Steel)         30 Days (6.2.1)         1 Year (6.4.2.1 & 6.4.3.10)         5 years (Table 7.2)           Dry Chemical (Cartridge)         30 Days (6.2.1)         1 Year (6.3.1)         Empty and internally internally internally inspect @ (6.3.3, 6.4.3.4)           Wet Chemical (Cartridge)         30 Days (6.2.1)         1 Year (6.3.1)         5 Years (7able 7.2)           Wet Chemical (6.2.1)         30 Days (6.3.1)         1 Year (6.4.3.11)         5 Years (7able 7.2)           AFFF (Liquid charge (6.2.1)         (6.3.1)         1 Year (6.4.2.3)         5 years (7able 7.2)           FFFP (Liquid charge (6.2.1)         1 Year (6.3.1)         3 Years (6.4.2.3)         5 years (7able 7.2)           Dry Powder         30 Days (6.2.1)         1 Year (6.3.1)         Empty and internally inspect @ 12 years (7able 7.2)           Bury Powder         1 Year (6.3.1)         Empty and internally inspect @ 12 years (7able 7.2)           Bury Powder         1 Year (6.3.3, 6.4.3.4)         Empty and internally inspect @ 12 years (7able 7.2)           Bury Powder         1 Year (7able 7.2)         Empty and internally inspect @ 12 years (7able 7.2)			conductivity exists"	(6.4.1.1, 6.4.3.9, &	
Water (Stored pressure)         30 Days (6.2.1)         1 Year (6.3.1)         1 Year (6.4.2.1 & 6.4.3.10)         5 years (Table 7.2)           Dry Chemical (Stainless Steel)         30 Days (6.2.1)         1 Year (6.3.1)         5 Years (6.4.3.4)         5 years (Table 7.2)           Dry Chemical (Cartridge)         30 Days (6.2.1)         1 Year (6.3.1)         Empty and internally inspect @ (6.3.3, 6.4.3.4)         12 years (6.3.3, 6.4.3.4)           Wet Chemical (Cartridge)         30 Days (6.2.1)         1 Year (6.3.1)         5 Years (6.4.3.11)         5 years (Table 7.2)           AFFF (Liquid charge (6.2.1)         30 Days (6.3.1)         1 Year (6.4.2.3)         3 Years (7able 7.2)         5 years (Table 7.2)           FFFP (Liquid charge (6.2.1)         (6.3.1)         (6.4.2.3)         (Table 7.2)           Dry Powder         30 Days (6.2.1)         1 Year (6.3.1)         Empty and internally inspect @ (7able 7.2)           Bry Powder         30 Days (6.2.1)         1 Year (6.3.1)         Empty and internally inspect @ (7able 7.2)           Bry Powder         30 Days (6.2.1)         1 Year (6.3.1)         Empty and internally inspect @ (7able 7.2)           Bry Powder         30 Days (6.2.1)         1 Year (6.3.1)         Empty and internally inspect @ (7able 7.2)				6.4.5.1)	,
Water (Stored pressure)         30 Days (6.2.1)         1 Year (6.3.1)         1 Year (6.4.2.1 & 6.4.3.10)         5 years (Table 7.2)           Dry Chemical (Stainless Steel)         30 Days (6.2.1)         1 Year (6.3.1)         5 Years (6.4.3.4)         5 years (Table 7.2)           Dry Chemical (Cartridge)         30 Days (6.2.1)         1 Year (6.3.1)         6 Years (6.3.3, 6.4.3.4)         12 years (Table 7.2)           Wet Chemical (Cartridge)         30 Days (6.2.1)         1 Year (6.3.1)         5 Years (6.4.3.11)         5 years (Table 7.2)           AFFF (Liquid charge (6.2.1)         30 Days (6.3.1)         1 Year (6.4.2.3)         3 Years (7able 7.2)         5 years (7able 7.2)           FFFP (Liquid charge (6.2.1)         1 Year (6.3.1)         3 Years (6.4.2.3)         5 years (7able 7.2)           Dry Powder         30 Days (6.2.1)         1 Year (6.3.1)         6 Years (7able 7.2)         1 Year (6.3.3, 6.4.3.4)           Bry Powder         30 Days (6.2.1)         1 Year (6.3.1)         1 Year (6.3.3, 6.4.3.4)         1 Year (7able 7.2)           Bry Powder         30 Days (6.2.1)         1 Year (6.3.1)         1 Year (6.3.3, 6.4.3.4)         1 Year (7able 7.2)           Bry Powder         30 Days (6.3.1)         1 Year (6.3.1)         1 Year (6.3.3, 6.4.3.4)         1 Year (7able 7.2)           Bry Powder         30 Days (6.3.1)         1 Year (6.3.1) </th <th></th> <th></th> <th></th> <th></th> <th></th>					
Stored pressure	Water	30 Days		1 Year	5 years
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(Stainless Steel)         (6.2.1)         (6.3.1)         (6.4.3.4)         (Table 7.2)           Dry Chemical (Cartridge)         30 Days (6.2.1)         1 Year (6.3.1)         6 Years (1able 7.2)           Wet Chemical (6.2.1)         30 Days (6.2.1)         1 Year (6.3.1)         5 Years (6.4.3.4)           Wet Chemical (6.2.1)         1 Year (6.3.1)         5 Years (1able 7.2)           AFFF (Liquid charge type)         (6.2.1)         (6.3.1)         (6.4.2.3)         (Table 7.2)           FFFP (Liquid charge type)         (6.2.1)         (6.3.1)         (6.4.2.3)         (Table 7.2)           Dry Powder (6.2.1)         1 Year (6.3.1)         1 Year (6.4.2.3)         1 Year (1able 7.2)           Dry Powder (6.2.1)         20 Days (6.3.1)         1 Year (6.3.4)         1 Year (6.3.3, 6.4.3.4)           Halogenated (30 Days (1 Year (6.3.1))         1 Year (6.3.3, 6.4.3.4)         1 Year (1able 7.2)		30 Davs	1 Year	5 Years	5 years
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Wet Chemical         30 Days (6.2.1)         1 Year (6.3.1)         5 Years (6.4.3.11)         5 years (Table 7.2)           AFFF (Liquid charge type)         30 Days (6.2.1)         1 Year (6.3.1)         3 Years (6.4.2.3)         5 years (Table 7.2)           FFFP (Liquid charge type)         30 Days (6.2.1)         1 Year (6.3.1)         3 Years (6.4.2.3)         5 years (Table 7.2)           Dry Powder         30 Days (6.2.1)         1 Year (6.3.1)         Empty and internally inspect @ (7able 7.2)           Halogenated         30 Days (6.3.1)         1 Year (6.3.3, 6.4.3.4)         Empty and internally inspect @ (7able 7.2)			* * * * * * * * * * * * * * * * * * * *		
Wet Chemical         30 Days (6.2.1)         1 Year (6.3.1)         5 Years (6.4.3.11)         5 years (Table 7.2)           AFFF (Liquid charge type)         30 Days (6.2.1)         1 Year (6.3.1)         3 Years (6.4.2.3)         5 years (Table 7.2)           FFFP (Liquid charge type)         30 Days (6.2.1)         1 Year (6.3.1)         3 Years (6.4.2.3)         5 years (Table 7.2)           Dry Powder         30 Days (6.2.1)         1 Year (6.3.1)         Empty and internally inspect @ (7able 7.2)         12 years (6.3.3, 6.4.3.4)           Halogenated         30 Days         1 Year inspect @ (12 years (6.3.3, 6.4.3.4))         Empty and internally inspect @ (12 years (6.3.3, 6.4.3.4))	(Cartridge)	(6.2.1)	(6.3.1)	0	(Table 7.2)
(6.2.1)		20.70	4.77		_
AFFF (Liquid charge type)         30 Days (6.2.1)         1 Year (6.3.1)         3 Years (6.4.2.3)         5 years (Table 7.2)           FFFP (Liquid charge type)         30 Days (6.2.1)         1 Year (6.3.1)         3 Years (6.4.2.3)         5 years (Table 7.2)           Dry Powder         30 Days (6.2.1)         1 Year (6.3.1)         Empty and internally inspect @ (7able 7.2)         12 years (6.3.3, 6.4.3.4)           Halogenated         30 Days         1 Year inspect @ (12 years)         12 years	Wet Chemical	•			
(Liquid charge type)         (6.2.1)         (6.3.1)         (6.4.2.3)         (Table 7.2)           FFFP (Liquid charge type)         30 Days (6.2.1)         1 Year (6.3.1)         3 Years (6.4.2.3)         5 years (Table 7.2)           Dry Powder         30 Days (6.2.1)         1 Year (6.3.1)         Empty and internally inspect @ (6.3.3, 6.4.3.4)         12 years (6.3.3, 6.4.3.4)           Halogenated         30 Days         1 Year inspect @ (12 years)         12 years		(6.2.1)	(6.3.1)	(6.4.3.11)	(Table 7.2)
(Liquid charge type)         (6.2.1)         (6.3.1)         (6.4.2.3)         (Table 7.2)           FFFP (Liquid charge type)         30 Days (6.2.1)         1 Year (6.3.1)         3 Years (6.4.2.3)         5 years (Table 7.2)           Dry Powder         30 Days (6.2.1)         1 Year (6.3.1)         Empty and internally inspect @ (6.3.3, 6.4.3.4)         12 years (6.3.3, 6.4.3.4)           Halogenated         30 Days         1 Year inspect @ (12 years)         12 years	AFFF	30 Days	1 Year	3 Years	5 years
type)         30 Days         1 Year (6.3.1)         3 Years (6.4.2.3)         5 years (Table 7.2)           Uiquid charge type)         (6.2.1)         Empty and internally inspect @ (6.3.1)         12 years (6.3.3, 6.4.3.4)           Dry Powder         30 Days (6.2.1)         1 Year (6.3.3, 6.4.3.4)         Empty and internally inspect @ (12 years)           Halogenated         30 Days         1 Year inspect @ (12 years)	(Liquid charge		(6.3.1)	(6.4.2.3)	
FFFP (Liquid charge type)         30 Days (6.2.1)         1 Year (6.3.1)         3 Years (6.4.2.3)         5 years (Table 7.2)           Dry Powder         30 Days (6.2.1)         1 Year (6.3.1)         Empty and internally inspect @ (7able 7.2)         12 years (6.3.3, 6.4.3.4)           Halogenated         30 Days         1 Year         inspect @ (12 years)         12 years (7able 7.2)					
(Liquid charge type)         (6.2.1)         (6.3.1)         (6.4.2.3)         (Table 7.2)           Dry Powder         30 Days (6.2.1)         1 Year (6.3.1)         Empty and internally inspect @ (7able 7.2)           Halogenated         30 Days         1 Year         Empty and internally inspect @ (12 years)           Halogenated         30 Days         1 Year         inspect @ (12 years)		30 Days	1 Year	3 Years	5 years
Dry Powder         30 Days (6.2.1)         1 Year (6.3.1)         Empty and internally inspect @ 12 years (7able 7.2)           Halogenated         30 Days         1 Year         Empty and internally inspect @ 12 years	(Liquid charge		(6.3.1)	(6.4.2.3)	
Dry Powder   30 Days   1 Year   inspect @ 12 years   (6.2.1)   (6.3.1)   6 Years   (7able 7.2)   (6.3.3, 6.4.3.4)					,
Dry Powder         30 Days (6.2.1)         1 Year (6.3.1)         inspect @ (7able 7.2)         12 years (7able 7.2)           Halogenated         30 Days         1 Year         Empty and internally inspect @ 12 years	- <b>V E</b> - 7			Empty and internally	
(6.2.1) (6.3.1) 6 Years (Table 7.2)  (6.3.3, 6.4.3.4)  Empty and internally inspect @ 12 years	Dry Powder	30 Days	1 Year		12 years
(6.3.3, 6.4.3.4)   Empty and internally	22, 20, 401				
Halogenated 30 Days 1 Year Empty and internally inspect @ 12 years		(3.2.1)	(5.5.1)		(=====, ,=,
Halogenated 30 Days 1 Year inspect @ 12 years					
	Halogenated	30 Days	1 Year	1 1	12 years
(1141011)					
(6.3.3, 6.4.3.4)	(Halon)	(0.2.1)	(0.5.1)		(14010 7.2)

<sup>\*</sup> The time periods indicated in the above table are to be viewed as the maximum period for each activity.

Periodic inspection of fire extinguishers shall include a check of at least the following items (NFPA-10-6.2.2):

- 1. Location in designated place.
- 2. No obstructions to access or visibility.
- 3. Operating instructions on nameplate legible and facing outward.

<sup>\*\*</sup> For maintenance procedure see NFPA-10 and Annex I of NFPA-10.

<sup>\*\*\*</sup> Recharging is also required to take place after every use and if the need is identified during maintenance or inspection.

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- 4. Safety seals and tamper indicators not broken or missing.
- 5. Fullness determined by weighing or "hefting."
- 6. Examinations for obvious physical damage, corrosion, leakage, or clogged nozzle.
- 7. Pressure gauge reading or indicator in the operable range or position.
- 8. Condition of tires, wheels, carriage, hose, and nozzle checked (for wheel units).
- 9. Label in place.

Maintenance procedures shall include a thorough examination of the basic elements of a fire extinguisher (NFPA-10-6.3.2):

- 1. Mechanical parts of all fire extinguishers.
- 2. Extinguishing agent of cartridge- or cylinder-operated dry chemical stored chemical, stored pressure, loaded stream, and pump tank fire extinguishers.
- 3. Expelling means of all fire extinguishers.

Internal examination during annual maintenance is not required for non-rechargeable fire extinguishers, carbon dioxide fire extinguishers, or stored pressure fire extinguishers, except for those types specified in 6.3.1.1, see below. These fire extinguishers are to be thoroughly examined externally in accordance with the applicable items of NFPA-10 section 6.3.2.1.

NFPA 10 section 6.3.1.1: Stored pressure types containing a loaded stream agent shall be disassembled on an annual basis and subjected to complete maintenance. Prior to assembly, the fire extinguisher shall be fully discharged to check the operation of the discharge valve and pressure gauge. The loaded stream charge shall be permitted to be recovered and re-used provided it is subjected to agent analysis in accordance with the manufacturer's instructions.

Maintenance is to be performed by a trained person who has undergone the instructions necessary to reliably perform maintenance and has the manufacturer's service manual. (NFPA-10-6.1.2)

Maintenance, servicing, and recharging, are to be performed by trained persons having available the appropriate servicing manual(s), the proper types of tools, recharging materials, lubricants, and manufacturer's recommended replacement parts or parts specifically listed for use in the fire extinguishers (NFPA-10-6.1.4)

Maintenance is to be performed in full compliance with the maintenance requirements of NFPA-10.

The following types of fire extinguishers are considered obsolete and shall be removed from service: (NFPA-10-1.5.4):

- 1. Soda acid
- 2. Chemical foam (excluding film-foaming agents)
- 3. Vaporizing liquid (e.g. carbon tetrachloride)
- 4. Cartridge-operated water
- 5. Cartridge-operated loaded stream
- 6. Copper or brass (excluding pump tanks) joined by soft solder or rivets
- 7. Carbon Dioxide extinguishers with metal horns
- 8. Solid Charge-type AFFF extinguishers (paper cartridge)

During the time period that fire extinguishers are removed from service for maintenance or recharge a replacement fire extinguisher suitable for the type of hazard being protected and of at least equal rating is to be provided. (NFPA-10-6.3.1.4)

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