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Chapter 4 Care, Use, Inspection, Service Testing, and Replacement of Fire Hose

4.1 Attack Hose, Supply Hose, and Forestry Hose.

4.1.1 Hose shall be inspected in accordance with Section 4.5 when it is placed in service.

4.1.2* Hose that is in service shall be service tested as specified in Section 4.8 at least annually.

4.1.3 Hose shall be service tested in accordance with Section 4.8 the later of 1 year after its date of manufacture or before it is placed in service for the first time.

4.1.4 Hose held in storage for longer than 1 year shall be service tested in accordance with Section 4.8 before it is placed in service.

4.1.5* Only clean, dry hose shall be placed in service.

4.1.6* Hose carried on fire apparatus shall be loaded in such a way that air can circulate under the hose load to eliminate or reduce the growth of mildew in the hose jackets and rust and corrosion in the hose compartment.

4.1.7* Hose shall be removed from the apparatus and reloaded so that the folds occur at different positions with sufficient frequency to prevent damage and the setting of permanent folds in the rubber lining.

4.1.8 Large-diameter hose used to supply a pump from a hydrant shall be protected from chafing with chafing blocks or similar protection where it comes in contact with pavement or curbing.

4.1.9 When connecting a pump to a hydrant, the hose shall be bent slightly to avoid kinks when the water is turned on.

4.1.10 Supply Hose.

4.1.10.1* Hose marked SUPPLY HOSE shall not be used at operating pressures exceeding 185 psi (12.8 bar or 1275 kPa).

4.1.10.2* Discharge Relief Devices.

4.1.10.2.1 A relief device that discharges to atmosphere shall be used on the discharge side of the pump when pumping into supply hose.

4.1.10.2.2 The relief device shall be set so that the discharge pressure does not exceed the service test pressure of the hose being used.

4.1.10.2.3 The relief device shall be capable of dumping enough water to atmosphere to prevent the pressure in the discharge hose from exceeding the service test pressure of the hose if the flow is shut off downstream of the device.

4.1.10.3 Only slow-operating valves shall be used with supply hose.

4.1.10.4 Relay Operations.

4.1.10.4.1 Where supply hose is used in relay operations between pumps on fire department apparatus, the intake of each receiving pump shall be equipped with a relief valve.

4.1.10.4.2 The maximum pressure setting of the relief valve(s) shall be not more than 10 psi (0.7 bar or 69 kPa) over the static pressure of the water source to which it is connected or not more than 10 psi (0.7 bar or 69 kPa) over the discharge pressure of the supply pump in the relay.

4.1.10.4.3 In no event shall the relief valve be set to relieve at a pressure that exceeds 90 percent of the service test pressure of the hose used with the system.

4.1.11 Damage Prevention.

4.1.11.1* Hose, while in use, shall be positioned to minimize mechanical damage and heat exposure.

4.1.11.2* Vehicles shall not be driven over charged or uncharged fire hose unless the hose is bridged and the vehicle has sufficient ground clearance to cross the bridged hose.

4.1.11.3* Nozzles and valves shall be opened and closed slowly to prevent pressure surges and water hammer that can burst the hose and in turn cause injury to people or damage to the pump.

4.1.11.4 Care shall be taken to prevent the hose from chafing.

4.1.11.5 Care shall be taken to avoid dragging large-diameter fire hose, but if the hose must be dragged, it shall be dragged when flat.

4.1.11.6* When hose is in use during subfreezing weather, care shall be taken to prevent water from freezing inside the hose.

4.1.11.6.1 To help prevent freezing once the water is turned on, some water shall be left running through the hose.

4.1.11.6.2 When the hose line is no longer needed, it shall be uncoupled and drained before the water freezes.

4.1.12* Hose that has frozen during use shall be thawed and service tested as specified in Section 4.8 before being put back in service or in storage.

4.1.13* After each use and before being placed in storage or back in service, the hose shall be drained, cleaned, dried, and inspected as specified in Sections 4.5 and 4.6.

4.2* Occupant-Use Hose.

4.2.1 Occupant-use hose shall be inspected in accordance with Section 4.5 when it is placed in service.

4.2.2 In-service hose designed for occupant use only shall be removed and service tested as specified in Section 4.8 at intervals not exceeding 5 years after the date of manufacture and every 3 years thereafter.

4.2.3 When hose is taken out of service for testing, replacement hose shall be installed on the rack, on the reel, or in the storage area until the tested hose is returned to service.

4.2.4 In-service hose shall be unracked, unreeled, or unrolled and physically inspected as specified in Section 4.5 at least annually. The hose shall be reracked, rereeled, or rerolled so that any folds do not occur at the same position on the hose.

4.2.5 Damage Prevention.

4.2.5.1* Hose stored on racks or reels shall be protected from the weather and any local environmental condition potentially harmful to the hose.

4.2.5.2 Hose shall be protected from mechanical damage and exposure to heat.

4.2.5.3* Enclosures for occupant-use hose shall be constructed and the hose stored in accordance with NFPA 24, *Standard for the Installation of Private Fire Service Mains and Their Appurtenances*.

4.2.6 In areas where rodents can pose a problem, the hose shall be visually inspected more frequently for rodent damage.

4.2.7 After each use and before being placed back in service, the hose shall be inspected as specified in Section 4.5, service tested as specified in Section 4.8, and cleaned and dried as specified in Section 4.6.

4.3 Booster Hose.

4.3.1 Booster hose shall be inspected in accordance with Section 4.5 when it is placed in service.

4.3.2 Booster hose that is in service shall be service tested as specified in Section 4.9 at least annually.

4.3.3 Booster hose shall be service tested in accordance with Section 4.9 the later of 1 year after its date of manufacture or before it is placed in service for the first time.

4.3.4 Booster hose held in storage for longer than 1 year shall be service tested in accordance with Section 4.9 before it is placed in service.

4.3.5* Hose shall be stored out of direct sunlight and as recommended by the manufacturer.

4.3.6 Hose shall not be stored kinked and, if stored on a reel, care shall be taken to avoid twisting the hose when rolling it onto the reel.

4.3.7 Covered hose that has exposed reinforcement either shall be removed from service, repaired, and service tested or shall be condemned.

4.4 Suction Hose.

4.4.1 Suction hose shall be inspected in accordance with Section 4.5 when it is placed in service.

4.4.2 Suction hose that is in service shall be service tested as specified in Section 4.10 at least annually.

4.4.3* Hose shall be stored out of direct sunlight and as recommended by the manufacturer.

4.4.4 Hose that has exposed or damaged reinforcement either shall be removed from service, repaired, and service tested or shall be condemned.

4.4.5 Foreign objects of any kind, including items of equipment, shall not be carried inside the hose.

4.4.6* Suction hose shall not be used under positive pressure unless it has been specifically designed for such use.

4.5 Hose Inspection.

4.5.1 Physical inspection shall determine if the hose and couplings have been vandalized, are free of debris, and exhibit no evidence of mildew, rot, or damage by chemicals, burns, cuts, abrasion, and vermin.

4.5.2 During the inspection, a check shall be made to determine if the service test of the hose is current.

4.5.3 Liner Inspection.

4.5.3.1 The interior of the hose at each end shall be visually inspected for any physical signs of liner delamination.

4.5.3.2* If the liner shows signs of delamination, the hose shall be condemned.

4.5.4 If the hose fails the physical inspection (see 4.5.1), it shall be removed from service and either repaired as necessary and service tested as specified in Section 4.8, Section 4.9, or Section 4.10, as appropriate, or condemned.

4.5.5 The couplings shall be inspected as specified in 7.1.3 and 7.1.4.

4.5.6 Where nozzles are required on occupant-use hose, they shall be inspected as specified in Section 5.2.

4.6 Cleaning and Drying.

4.6.1* After each use, all hose shall be cleaned.

4.6.2 If dirt cannot be thoroughly brushed from the hose or if the hose has come in contact with harmful materials, the hose shall be washed.

4.6.3 If, during use, the hose has been exposed to hazardous materials, it shall be decontaminated by the method approved for the contaminant.

4.6.4 Covered hose shall be permitted to be wiped dry.

4.6.5* Hose shall not be dried on hot pavements or under intense sunlight.

4.7* Storage.

4.7.1 Hose shall be kept out of direct sunlight and in a well-ventilated location.

4.7.2 All hose shall be drained and thoroughly dried before being placed in storage.

4.7.3 Hose shall be stored only after it has been inspected in accordance with Section 4.5 and has been cleaned and dried.

4.7.4 Hose that is out of service for repair shall be tagged as specified in 4.11.1.6 and 4.11.3.6 and kept separated from any hose in storage that is ready for service.

4.8 Service Testing Attack, Supply, and Forestry Hose.

4.8.1 Hose manufactured prior to July 1987 to meet the requirements of the 1979 and previous editions of NFPA 1961, *Standard on Fire Hose*, shall be removed from service.

4.8.2* Hose manufactured during July 1987 or after that date to the 1987 or subsequent editions of NFPA 1961 shall be service tested as specified in Section 4.8.

4.8.2.1 Attack fire hose shall be service tested to a minimum of 300 psi (20.7 bar or 2070 kPa) or a pressure not to exceed the service test pressure marked on the hose.

4.8.2.2 Supply fire hose shall be service tested to a minimum of 200 psi (13.8 bar or 1380 kPa) or a pressure not to exceed the service test pressure marked on the hose.

4.8.2.3 Forestry fire hose shall be service tested to a minimum of 300 psi (20.7 bar or 2070 kPa) or a pressure not to exceed the service test pressure marked on the hose.

4.8.2.4 Occupant-use hose shall be tested to the service test pressure marked on the hose.

4.8.2.5 Proof pressure tests for hoses shall be conducted only at the point of manufacture

or at a facility equipped to perform those tests.

4.8.2.6 Tests in the field shall not subject the hose to its proof test pressure.

4.8.3 After the correct service test pressure has been determined for each length of hose to be tested, the service test shall be conducted as specified in Section 4.8.4.

4.8.4 Service Test Procedure.

4.8.4.1 Each length of hose to be service tested shall be inspected as specified in Section 4.5.

4.8.4.2 Any length of hose that fails the inspection shall be removed from the service test area and repaired as necessary or condemned.

4.8.4.3 All lengths of hose in the same hose line shall be of the same service test pressure.

4.8.4.4* The total length of any hose line in the hose test layout to be service tested shall not exceed 300 ft (91 m).

4.8.4.5 The hose test layout shall be straight, without kinks or twists.

4.8.4.6* All 3 1/2 in. (89 mm) and larger diameter hose shall be service tested while lying on a horizontal surface.

4.8.4.7* A test location shall be selected that allows connection of the hose testing apparatus (pressure source) to a water source.

4.8.4.8* A hose testing machine, a stationary pump, or a pump on a fire department apparatus shall be used as a pressure source.

4.8.4.8.1 If a hose testing machine is used, the procedure defined in 4.8.5 shall be used.

4.8.4.8.2 If a stationary pump or a pump on a fire department apparatus is used, the procedure defined in 4.8.6 shall be used.

4.8.4.9 At the conclusion of the test, the hose records specified in Section 4.11 shall be updated to indicate the results of the service test for each length of hose tested.

4.8.4.10* Any hose that fails the inspection defined in Section 4.5, bursts or leaks during the service test, or has couplings that leak or are otherwise found defective as defined in 7.1.3 shall be tagged as required in 4.11.1.6 or 4.11.3.6 and removed from service.

4.8.4.10.1 If the hose leaks or the hose jacket fails inspection, a distinguishing mark noting the location of the defect(s) shall be placed on the hose.

4.8.4.10.2 If the couplings fail or are defective, they shall be repaired or replaced.

4.8.4.10.3* If the hose cannot be repaired, the couplings shall be removed from both ends.

4.8.4.11 If the hose is repaired, or the couplings are repaired or replaced, the hose shall be service tested in accordance with Section 4.8 before being placed back in service.

4.8.4.12 After testing, all hose shall be thoroughly cleaned, drained, and dried as specified in Section 4.6 before being placed in service or in storage.

4.8.5 Service Test Using a Hose Testing Machine. The procedure defined in this subsection shall be used when hose is service tested using a hose testing machine.

WARNING: Because there is a potential for catastrophic failure during the service testing of fire hose, it is vital that safety precautions be taken to prevent exposure of anyone to this danger. Do not deviate from the procedures prescribed herein.

4.8.5.1 Hose Testing Machine Integrity. The condition of the hose testing machine shall be thoroughly checked daily before each testing session and before the machine is used after being transported to a new testing site.

4.8.5.1.1 The hose testing machine shall be carefully examined for damaged components that might fail during the test.

4.8.5.1.2 If any damage is discovered, the hose testing machine shall not be used until the damaged component(s) is repaired or replaced.

4.8.5.1.3 A pressure leak integrity test shall be performed on the machine to determine whether the pressurized outlet side of the machine and its related components are leak-free.

4.8.5.1.3.1 The fire hose outlet connection(s) of the machine shall be capped or otherwise closed.

4.8.5.1.3.2 Pressure shall be applied through the machine using the integral pump to a level that is 10 percent higher than the highest service test pressure needed for the hose to be tested.

4.8.5.1.3.3 The pressure shall be held for 3 minutes with the pump turned off.

4.8.5.1.3.4 If leaks are detected, the testing machine shall not be used until the leaking component(s) is repaired or replaced.

4.8.5.1.4 The test gauge that is used to read the test pressure shall have been calibrated within the previous 12 months.

4.8.5.1.5 If the hose machine incorporates elevated outlets for water supply that are higher than the inflated diameter of the hose from the testing surface, a means to vent trapped air shall be provided between the hose and the outlet valve.

4.8.5.2 Conducting the Test.

4.8.5.2.1 The test layout shall be connected to the outlet side of the water supply valve on the hose testing machine.

4.8.5.2.2 A test cap with a bleeder valve shall be attached to the far end of each hose line in the test layout. If a test cap is not available, a nozzle with a nontwist shutoff shall be permitted to be used.

4.8.5.2.3 With the test cap valve or the nozzle open, the pressure shall be raised gradually to 45 psi \pm 5 psi (3.1 bar \pm 0.35 bar or 310 kPa \pm 35 kPa).

4.8.5.2.4* After the hose test layout is full of water, all the air in each hose line shall be exhausted by raising the discharge end of each hose line above the highest point in the system.

WARNING: All air must be removed from the hose before the valve in the test cap or the nozzle is closed and the pressure raised. The development of test pressures introduces the potential for a serious accident if air remains in the system.

4.8.5.2.5 If the hose testing machine incorporates elevated outlets for water supply that are higher than the inflated diameter of the hose from the testing surface, air shall be vented next to the water input end.

4.8.5.2.6 The nozzle or test cap valve shall be closed slowly, and then the outlet water supply valve shall be closed.

4.8.5.2.7* The hose directly in back of the test cap or the nozzle shall be secured to avoid possible whipping or other uncontrolled reactions in the event of a hose burst.

4.8.5.2.8 With the hose at 45 psi \pm 5 psi (3.1 bar \pm 0.35 bar or 310 kPa \pm 35 kPa), it shall be checked for leakage at each coupling and the couplings tightened with a spanner wrench where necessary.

4.8.5.2.9* Each hose shall then be marked around its full circumference at the end or back of each coupling or collar to determine, after the hose has been drained, if the coupling or collar has slipped during the test.

4.8.5.2.10 All personnel other than those persons required to perform the remainder of the procedure shall clear the area.

4.8.5.2.11 The pressure shall be raised slowly at a rate not greater than 15 psi (1 bar or 103 kPa) per second until the service test pressure is attained and then maintained, by pressure boosts if necessary, for the duration of the stabilization period.

4.8.5.2.12 The stabilization period shall be not less than 1 minute per 100 ft (30 m) of hose in the test layout.

4.8.5.2.13 After the stabilization period, the hose test layout shall hold the service test pressure for 3 minutes without further pressure boosts.

4.8.5.2.14 While the hose test layout is at the service test pressure, the hose shall be inspected for leaks.

4.8.5.2.14.1 If the inspecting personnel walk the test layout to inspect for leaks, they shall be at least 15 ft (4.5 m) to the left side of the nearest hose line in the test layout. The left side of the hose line shall be defined as that side that is to the left when facing the free end from the pressure source.

4.8.5.2.14.2 Personnel shall never stand in front of the free end of the hose, on the right side of the hose, or closer than 15 ft (4.5 m) on the left side of the hose, or straddle a hose in the test layout during the test.

4.8.5.2.15 If the hose test layout does not hold the service test pressure for the 3-minute duration, the service test shall be terminated.

4.8.5.2.15.1 The length(s) of hose that leaked shall have failed the test.

4.8.5.2.15.2 The test layout shall be drained and the defective hose removed from the test layout.

4.8.5.2.15.3 The service test shall be restarted beginning with the procedures required in 4.8.5.2.1.

4.8.5.2.16 After 3 minutes at the service test pressure, each test cap or nozzle shall be opened to drain the test layout.

4.8.5.2.17 Coupling Slippage.

4.8.5.2.17.1 The hose and any marks placed on the hose at the back of the couplings or at external collars shall be observed for coupling slippage after completion of the service test and after the hose has been drained.

4.8.5.2.17.2 If the hose assembly shows any sign of coupling slippage, the hose assembly

shall have failed the test.

4.8.6 Service Test Using a Stationary Pump or a Pump on a Fire Department Apparatus. The procedure given in 4.8.6.1 through 4.8.6.16.2 shall be used when hose is to be service-tested using a stationary pump or a pump on a fire department apparatus.

WARNING: Because there is a potential for catastrophic failure during the service testing of fire hose, it is vital that safety precautions be taken to prevent exposure of anyone to this danger. Do not deviate from the procedures prescribed herein.

4.8.6.1 The test gauge that is used to read the test pressure shall have been calibrated within the previous 12 months.

4.8.6.2* A hose test valve consisting of a fire department gate valve with a $\frac{1}{4}$ in. (6.4 mm) opening drilled through the gate and designed to withstand the service test pressures shall be used between the pump and the hose test layout.

4.8.6.3 The test layout shall be connected to the hose test valve.

4.8.6.3.1 If a pump on a fire apparatus is used, the hose test valve shall not be attached to any discharge outlet at or adjacent to the pump operator's position.

4.8.6.3.2 The hose test valve end of the hose line shall be secured with a belt tie-in or rope hose tool at a point 10 in. to 15 in. (250 mm to 400 mm) from the coupling.

4.8.6.4 A test cap with a bleeder valve shall be attached to the far end of each hose line in the test layout. If a test cap is not available, a nozzle with a nontwist shutoff shall be permitted to be used.

4.8.6.5 With the hose test valve open and the test cap valve or nozzle open, the pressure

shall be gradually raised to 45 psi \pm 5 psi (3.1 bar \pm 0.35 bar or 310 kPa \pm 35 kPa).

4.8.6.6* After the hose test layout is full of water, all air in each hose line shall be exhausted by raising the discharge end of each hose line above the highest point in the system.

WARNING: All air must be removed from the hose before the valve in the test cap or the nozzle is closed and the pressure raised. The development of test pressures introduces the potential for a serious accident if air remains in the system.

4.8.6.7 The nozzle or test cap valve shall be closed slowly, and then the hose test valve shall be closed.

4.8.6.8* The hose directly in back of the test cap or the nozzle shall be secured to avoid possible whipping or other uncontrolled reactions in the event a hose bursts.

4.8.6.9 With the hose at 45 psi \pm 5 psi (3.1 bar \pm 0.35 bar or 310 kPa \pm 35 kPa), it shall be checked for leakage at each coupling and the couplings tightened with a spanner wrench where necessary.

4.8.6.10* Each hose shall then be marked around its full circumference at the end or back of each coupling or collar to determine, after the hose has been drained, if the coupling or collar has slipped during the test.

4.8.6.11 All personnel other than those persons required to perform the remainder of the procedure shall clear the area.

4.8.6.12 The pressure shall be raised slowly at a rate not greater than 15 psi (1 bar or 103 kPa) per second until the service test pressure is attained and then maintained for 3 minutes.

4.8.6.13 While the test layout is at the service test pressure, the hose shall be inspected

for leaks.

4.8.6.13.1 If the inspecting personnel walk the test layout to inspect for leaks, they shall be at least 15 ft (4.5 m) from either side of the nearest hose line in the test layout.

4.8.6.13.2 Personnel shall never stand in front of the free end of the hose, stand closer than 15 ft (4.5 m) on either side of the hose, or straddle a hose in the test layout during the test.

4.8.6.14 If, during the test, a section of hose is leaking or a section bursts, the service test shall be terminated.

4.8.6.14.1 The length(s) of hose that leaked or burst shall have failed the test.

4.8.6.14.2 The test layout shall be drained and the defective hose removed from the test layout.

4.8.6.14.3 The service test shall be restarted beginning with the procedures required in 4.8.6.3.

4.8.6.15 After 3 minutes at the service test pressure, the pump shall be shut down, the hose test valve opened, the pressure allowed to equalize with the source, the pump discharge gates closed, and each test cap valve or nozzle opened to drain the test layout.

4.8.6.16 Coupling Slippage.

4.8.6.16.1 The hose and any marks placed on the hose at the back of the couplings or at external collars shall be observed for coupling slippage after completion of the service test and after the hose has been drained.

4.8.6.16.2 If the hose assembly shows any sign of coupling slippage, the hose assembly shall have failed the test.

4.9 Service Testing Booster Hose.

4.9.1* Booster hose shall be tested in accordance with 4.8.4 to 110 percent of its maximum working pressure.

4.9.2 If a maximum working pressure cannot be determined for the hose, it shall be tested to 110 percent of the normal highest working pressure as used in the system.

4.10* Service Testing Suction Hose.

4.10.1 Suction hose shall be dry-vacuum tested using the following procedure:

- (1) The hose shall be attached to a suction source.
- (2) The free end shall be sealed with a transparent disk and connected to an accurate vacuum measuring instrument.
- (3) A 22 in. mercury (0.75 bar or 74.5 kPa) vacuum shall be developed.
- (4) While holding the vacuum for 10 minutes, the interior of the hose shall be inspected through the transparent disk.
- (5) There shall be no signs of physical damage or collapse of the lining into the waterway.

4.11 Hose Records.

4.11.1 Attack Hose and Supply Hose Records.

4.11.1.1* Accurate hose records shall be established and maintained.

4.11.1.2* Each length of hose shall be assigned an identification number for use in recording its history throughout its service life.

4.11.1.2.1* The identification number shall be stenciled on the jacket or cover using an ink or paint that is not harmful to the hose.

4.11.1.2.2* The identification number shall be permitted to be stamped on the bowl or swivel of the female coupling in a manner that prevents damage to the coupling.

4.11.1.3* Records of hose used by fire departments shall be kept as part of the department's or individual company's complete equipment inventory.

4.11.1.4 Records for hose on racks or reels or in enclosures shall be kept at the hose location or at a control location on the premises where the hose is located.

4.11.1.5* The following information, if applicable, shall be included for each length of hose:

- (1) Assigned identification number
- (2) Manufacturer and part number
- (3) Vendor
- (4) Size (internal diameter of waterway)
- (5) Length
- (6) Type of hose
- (7) Construction
- (8) Date received and date put in service
- (9) Date of each service test and the service test pressure
- (10) Repairs and new length if shortened
- (11) Actual damage
- (12) Exposure to possible damage
- (13) Reason removed from service
- (14) Reason condemned
- (15) Indication that the hose has been removed from service or condemned within the warranty period because of an in-warranty failure

4.11.1.6* Hose removed from service for repair or because it has been condemned shall be tagged with a distinctive tag with the reason for removal from service noted on the tag.

4.11.1.7 Personnel responsible for the repair and maintenance of fire hose shall ensure that a report of the work performed to repair each length is recorded on the permanent hose record.

4.11.2* **Forestry Hose Records.** The authority having jurisdiction shall determine the records necessary to achieve an effective hose management program for forestry hose and

implement such a record-keeping system.

4.11.3 Occupant-Use Hose Records.

4.11.3.1 A record for each length of occupant-use hose, whether on a rack or reel or in an enclosure, shall be kept on a tag attached near the female end of the hose.

4.11.3.2 The tag shall be fastened in a manner that does not restrict the hose from deploying properly and will not damage the hose.

4.11.3.3* The tag shall contain at least the following information for each length of hose:

- (1) Manufacturer and part number
- (2) Date put in service
- (3) Date of each inspection and person/agency performing the inspection
- (4) Date of each service test and person/agency performing the service test

4.11.3.4* An inspection checklist maintained on file or in an electronic method (e.g., bar coding) that provides a permanent record shall be permitted to be used in place of a tag to track inspection and service test data, provided each length of hose is assigned a unique identification number that is fastened to or recorded on the hose or female coupling and the information required by 4.11.3.3 is recorded.

4.11.3.5* Where records are kept electronically, the electronic record shall be available at the facility where the hose is in service.

4.11.3.6* Hose removed from service for repair or because it has been condemned shall be tagged with a distinctive tag, with the reason for removal from service noted on the tag.

4.11.4 Booster Hose Records.

4.11.4.1 Accurate hose records shall be established and maintained.

4.11.4.2 Each length of booster hose shall be assigned an identification number for use in recording its history throughout its service life.

4.11.4.2.1 The identification number shall be stenciled on the jacket or cover using an ink or paint that is not harmful to the hose.

4.11.4.2.2 The identification number shall be permitted to be marked on the bowl or swivel of the female coupling in a manner that prevents damage to the coupling.

4.11.4.3 Records of booster hose used by fire departments shall be kept as part of the department's or individual company's complete equipment inventory.

4.11.4.4 Records for booster hose on racks or reels or in enclosures shall be kept at the hose location or at a control location on the premises where the hose is located.

4.11.4.5 The following information, if applicable, shall be included for each length of booster hose:

- (1) Assigned identification number
- (2) Manufacturer and part number
- (3) Vendor
- (4) Size (internal diameter of waterway)
- (5) Length
- (6) Type of hose
- (7) Construction
- (8) Date received and date put in service
- (9) Date of each service test and the service test pressure
- (10) Repairs and new length if shortened
- (11) Actual damage
- (12) Exposure to possible damage
- (13) Reason removed from service
- (14) Reason condemned
- (15) Indication that the hose has been removed from service or condemned within the warranty period because of an in-warranty failure

4.11.4.6 Hose removed from service for repair or because it has been condemned shall be tagged with a distinctive tag with the reason for removal from service noted on the tag.

4.11.4.7 Personnel responsible for the repair and maintenance of fire hose shall ensure that a report of the work performed to repair each length is recorded on the permanent hose record.

4.11.5 Suction Hose Records.

4.11.5.1 Accurate hose records shall be established and maintained.

4.11.5.2 Each length of suction hose shall be assigned an identification number for use in recording its history throughout its service life.

4.11.5.2.1 The identification number shall be stenciled on the jacket or cover using an ink or paint that is not harmful to the hose.

4.11.5.2.2 The identification number shall be permitted to be marked on the bowl or swivel of the female coupling in a manner that prevents damage to the coupling.

4.11.5.3 Records of suction hose shall be kept as part of the fire department's or individual company's complete equipment inventory.

4.11.5.4 The following information, if applicable, shall be included for each length of suction hose:

- (1) Assigned identification number
- (2) Manufacturer and part number
- (3) Vendor
- (4) Size (internal diameter of waterway)
- (5) Length
- (6) Type of hose

- (7) Construction
- (8) Date received and date put in service
- (9) Date of each service test and the service test pressure
- (10) Repairs and new length if shortened
- (11) Actual damage
- (12) Exposure to possible damage
- (13) Reason removed from service
- (14) Reason condemned
- (15) Indication that the hose has been removed from service or condemned within the warranty period because of an in-warranty failure

4.11.5.5 Hose removed from service for repair or because it has been condemned shall be tagged with a distinctive tag with the reason for removal from service noted on the tag.

4.11.5.6 Personnel responsible for the repair and maintenance of fire hose shall ensure that a report of the work performed to repair each length is recorded on the permanent hose record.

4.12* Fire Hose Replacement. Fire hose users and the authority having jurisdiction shall establish a replacement schedule for their fire hose that takes into consideration the use and age of the hose and testing results.