



**PRINCE GEORGE'S COUNTY, MARYLAND
FIRE/EMERGENCY MEDICAL SERVICES DEPARTMENT GENERAL ORDER**

General Order Number: 02-43	Effective Date: November 1, 2018
Division: Apparatus and Equipment	
Chapter: Fire Hose Numbering, Inspection and Testing	
By Order of the Fire Chief: Benjamin M. Barksdale <i>BB</i>	Issue Date: November 1, 2018

POLICY

To establish and define the expectations on fire hose numbering, inspection and testing for the Department. Hose testing shall occur each calendar year in the months of September, October and November.

DEFINITIONS

N/A

PROCEDURES / RESPONSIBILITIES

I. Responsibilities

- A. The management of fire hose inspection, testing, and documentation is part of the many duties of fire station management. Volunteer Fire Chiefs are responsible to ensure such management at their respective stations. For those fire stations that are not under the direction of a Volunteer Fire Chief, the assigned station Captain will be responsible for fire hose management.

II. Hose Numbering

- B. All hose shall be marked with a five (5) digit number in order to properly identify the hose and the station to which it is assigned. Each section of hose shall be numbered with a five-digit number, indicating the station, hose size, and hose section number.

Example: 01 7 01
 (Station) (Size) (Section)

- 1. The first two digits shall designate the station number.

Example: "01" for Fire Station 1
 "23" for Fire Station 23

- 2. The third digit shall designate the size of the hose.

Example:
 1 for 1 ½" 6 for 2 ½"
 2 for 2" 7 for 1 ¾"
 3 for 3" 8 for 1"
 4 for 4" 9 for 3 ½"
 5 for 5"



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3. The last two digits will be the hose number. In cases where a station has more than 99 sections of any one size hose, the 99th section and onwards will restart at "00" and shall be followed by the letter "A."

Example: "01" for number 1
"00A" for number 100
"59" for the number 59
"71A" for number 171

4. Numbering of hose sections shall begin with number 01 for all hose sizes. Numbering shall continue with consecutive numbers until all hose sections of equal diameter are numbered.
5. Hose shall be numbered two feet from each end with two-inch numerals, applied with the proper stencil equipment.

III. Hose/Coupling Inspection

- B. Per NFPA 1962, all hose shall be physically inspected annually to determine if the hose has been damaged, vandalized, is free of debris, no evidence of mildew, rot or damage by chemicals, burns, cuts, abrasions or vermin.
- C. Inspection of the interior of the hose will need to be performed to ascertain if any linear delamination has occurred.
- D. Couplings will need to be physically inspected to ensure no damage to the threads, corrosion, out-of-round, connections not rotating freely, missing gaskets, locking devices working properly and missing lugs.

IV. Hose Records

- A. It shall be the responsibility of the Station Captain or the Volunteer Chief to ensure all hose in their station and on their apparatus is properly marked and records are maintained, using the attached Annual Hose Test record, documenting all testing done on each section of hose.
- B. These records shall be kept either electronically or in hard copy, but shall be accessible and available for review upon request by the Department at any time.
- C. The following information shall be included for each length of hose:
 1. Station identification number
 2. Size of hose
 3. Initial test date
 4. Subsequent test dates



5. Date removed from service
6. Remarks

D. If the section of hose is removed from service, the hose record for that particular section of hose can be deleted.

V. Service Test Procedures

- A. Service tests will be conducted annually during the months of September, October, and November. The Volunteer Chief or Career Station Commander will ensure this task is accomplished.
- B. Per NFPA 1961, there is no hose life expiration; if it passes the hose test, it is deemed service-ready. If a hose passes a service test but the Career Station Commander or Volunteer Chief still have a concern as to its safe usage, a written report documenting the concern should be submitted to Logistics.
- C. Because there is a potential for catastrophic failure during the service testing of fire hose, it is vital that safety precautions identified below be taken to prevent exposure of anyone to this danger.

VI. Service Test Using a Pump on a Fire Department Apparatus

- A. A hose test valve consisting of a fire department gate valve with a 1/4-inch opening drilled through the gate and designed to withstand the service test pressures shall be used between the pump and the hose test layout.
- B. The test layout shall be connected to the hose test valve.
- C. 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.
- D. 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.
- E. 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 non-twist shutoff shall be permitted to be used.
- F. With the hose test valve open and the test cap valve or nozzle open, the pressure shall be gradually raised to 45 psi.
- G. 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.



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- H. 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.
- I. The nozzle or test cap valve shall be closed slowly, and then the hose test valve shall be closed.
- J. The hose directly behind the test cap or the nozzle shall be secured to avoid possible whipping or other uncontrolled reactions in the event a hose bursts.
- K. With the hose at 45 psi, it shall be checked for leakage at each coupling and the couplings tightened with a spanner wrench, where necessary.
- L. 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.
- M. All personnel other than those persons required to perform the remainder of the procedure shall clear the area.
- N. The pressure shall be raised slowly at a rate not greater than 15 psi (1 bar or 103 per second) until the service test pressure is attained and then maintained for 3 minutes.
- O. While the test layout is at the service test pressure, the hose shall be inspected for leaks.
- P. If the inspecting personnel walk the test layout to inspect for leaks, they shall be at least 15 feet from either side of the nearest hose line in the test layout.
- Q. Personnel shall never stand in front of the free end of the hose, stand closer than 15 feet on either side of the hose, or straddle a hose in the test layout during the test.
- R. 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.
- S. Test pressures:
 - 1. 1" to 3 ½" hose lines: 300 psi.
 - 2. Booster/forestry hose shall be tested to 110% of its maximum working pressure. If the maximum working pressure cannot be determined, then it shall be tested to 110% of the normal highest working pressure as used in the system.
 - 3. 4" and 5" hose lines: 200 psi.



- T. Maximum test length for all hose line sizes shall be 300 feet.
- U. The hose test lengths shall be in a straight line without any kinks or twists.

VII. Failures and Updating

- A. If a hose fails during the test, or couplings start to separate from hose jacket, that hose should be taken out-of-service and sent for repair or destroyed.
- B. All sections of hose that either pass the hose test, or fail the test, shall be properly documented in the station hose records.
- C. Repairs of hose and replacement hose shall be handled through the volunteer corporation or Logistics.

REFERENCES

NFPA 1962 – Standard for the Care, Use, Inspection, Service Testing and Replacement of Fire Hose, Couplings, Nozzles and Fire Hose Appliances.

NFPA 1961 – Standard on Fire Hose

ATTACHMENTS

Annual Hose Test Record

