North Kingstown Fire Department

Standard Operating Guidelines		7000 Series
Effective Date:	Hose: Identification, Care, Inspection, Testing, and Maintenance	Maintenance
10/2022		7101
Revision Date:		
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I. PURPOSE

To establish a procedure for the North Kingstown Fire Department (Department) to ensure proper hose identification, care, inspection, testing, and maintenance.

II. DEFINITIONS

A. Attack Hose: Transports water at increased pressure from a pump or standpipe to a nozzle or fire department connection (FDC).
B. Large Diameter Hose (LDH): Three and one-half inch (3 ½") and greater diameter fire hose that is service tested, collapsible, and used to connect a pressurized water source to a fire pump.
C. Hose Leader: Attack hose under twenty feet (20 feet) in length between the fire pump and pre-connected hose lines.
D. Non-Serviceable Hose: Any fire hose that has failed testing, is damaged and unrepairable, or deemed out-of-service for firefighting purposes.
E. Serviceable Hose: Any in-service fire hose that has been service tested (current year) and is free from damage and contamination.
F. Short Shot (A.K.A. Pony Shot): Any LDH Supply Hose or Attack Hose that is less than one-half of the standard hose length for the given diameter.
G. Supply Hose: Any hose the supplies water from a water supply source to an incident. Typical diameter is 3" or 4."
H. Utility Hose: Any hose that is used for pump outs, trash pumps, portable pumps, or other utility needs. Utility hose is *non-serviceable hose* and shall not be used for fire attack.

REFERENCES / AUTHORITY

A. NFPA 1962 Standard for the Care, Use, Inspection, Service Testing, and Replacement of Fire Hose, Couplings, Nozzles, and Fire Hose Appliances
B. Essentials of Fire Fighting, 7th Edition, IFSTA

III. POLICY

It is the policy of the North Kingstown Fire Department to utilize the following policy for the identification, inspection, care, and maintenance of fire department hose consistent with NFPA and departmental procedures.

IV. PROCEDURE

A. Testing

1. All new hose will be measured prior to any testing, identification, or going in service.
    a. All hose measuring under **36 inches** of its manufactured length will be re-rolled and set aside awaiting further instruction from the hose officer.
    b. The hose officer will be notified to determine the disposition of the hose.
2. All new hose will be tested prior to identification to determine serviceability and department acceptance.
3. All in-service hose on all apparatus and unassigned reserve hose will be tested in accordance with NFPA 1962 annually
    a. Annual testing shall occur in the month of October
4. All hose testing shall be documented in the apparatus hose log and in the company logbook at the time of testing.
5. Service Testing Procedure:
    a. A test location shall be selected that allows connection of the hose testing apparatus (pressure source) to a water source.
        i. A hose testing machine, a stationary pump, or a pump on a fire department apparatus shall be used as a pressure source.
    b. The total length of any hose line in the hose test layout to be service tested shall not exceed 300 ft.
    c. The hose test layout shall be straight, without kinks or twists.
    d. All lengths of hose in the same hose line shall be of the same service test pressure. (i.e., The hose test layout shall consist of the same diameter and shall be tested at the same pressure.)
    e. All three and one-half inch (3 ½") and larger diameter hose shall be service tested while lying on a horizontal surface.
    f. 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 and cracking the nozzle valve.
        i. All air must be removed from the hose before the nozzle is closed and the pressure raised.
        ii. The development of test pressures introduces the potential for a serious accident if air remains in the system.
    g. The nozzle valve shall be closed slowly.
    h. Initial test pressure shall be 45 psi ± 5 psi to check for leakage at each coupling.
    i. Couplings shall be tightened with a spanner wrench where necessary.

j. The pressure shall be raised slowly at a rate not greater than 15 psi per second until the service test pressure is attained and then maintained for 3 minutes.
k. Once the service test pressure has been reached, adjust any open discharge valve(s) to ¼ to 1/3 open for the duration of the test.
l. Attack Hose shall be service tested to a minimum of 250 psi or a pressure not to exceed the service test pressure marked on the hose.
m. Supply Hose shall be service tested to a minimum of 200 psi or a pressure not to exceed the service test pressure marked on the hose.
n. The pump operator shall ensure that tank water is circulated between the pump and tank while conducting the test.
o. All personnel other than those persons required to perform the remainder of the procedure shall clear the area.
p. While the test layout is at the service test pressure, the hose shall be inspected for leaks.
q. Inspecting personnel walking the test layout for leaks shall stay at least 15 feet from either side of the nearest hose line.
r. Personnel shall never stand in front of the free end of the hose, stand closer than 15 ft on either side of the hose, or straddle a hose in the test layout during the test.
s. 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.
t. Following three (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 nozzle opened to drain the test layout.
u. If, during the test, a section of hose is leaks or bursts, the service test shall be terminated.
    i. The length(s) of hose that leaked and/or burst shall have failed the test.
    ii. The test layout shall be drained, and the defective hose removed from the test layout and the service test shall be restarted.

B. Identification

1. New Hose
    a. New hose shall be identified by name and number
    b. New hose shall be labelled via stencil and marked "NKFD"
    c. Whenever possible, new hose will be acquired/ordered pre-labelled
    d. Hose shall be numbered as follows:
        i. The numbering system for new hose will be the last two digits of the year purchased, month purchased, and the two-digit ascending number starting with "01".
            a) Example: Hose purchased in July 2021 will be labelled as follows:
                1. NKFD 210701
                2. NKFD 210702
                3. NKFD 210703
                4. Etc.
    e. Effective October 2022, every attempt will be made to number hose consecutively regardless of the size or color.
    f. Different hoses may have the same identification number based on the different size and color of the hose.
        i. For example:
            a) "NKFD 210701 4", "NKFD 210701 1 ¾" or "NKFD 210701 1 ¾ red", "NKFD 210701 1 ¾ blue".
            b) The differentiation will be the size of the hose.
    g. Short Shots and Leaders will be identified following the identification number with the following identifiers:
        i. Short Shot "S"
        ii. Leader hose "L"
            a. Example: NKFD 210701 L
                NKFD 210701 SS
2. Existing (Older) Hose
    a. Existing (Older) Hose
        i. Older hose should have identifying markers such as "NKFD" and an identification number.

C. Documentation

1. Inventory
   a. Each apparatus/company will have a hose log containing that specific apparatus' hose inventory.
      i. The Captain of the apparatus/company and the officer designated as responsible for reserve apparatus shall be responsible for maintaining such a hose log.
      ii. The apparatus/company hose log shall consist of an inventory of all the hose on the apparatus.
      iii. This inventory should identify the size and identification number of all hose on the apparatus.
   b. The inventory will include the following information.
      i. Date of Purchase
      ii. Manufacturer
      iii. Date of manufacturing
      iv. Size
      v. Coupling Type
      vi. Location
      vii. Status
      viii. Disposition
   c. All apparatus/company hose logs will be forwarded to the Captain in charge of hose on a quarterly basis.
   d. The Captain in charge of hose shall maintain a file of all the hose logs for all front-line and reserve apparatus.

D. Maintenance / Repair Request

1. Hose that is damaged or hose that fails the testing process will be documented as follows:
   a. A repair request shall be submitted via SCM under "Hose" and shall include to following:
      i. Date of request
      ii. Nature of the repair request
      iii. Personnel requesting the repair
      iv. Disposition of the hose
   b. Email sent to the apparatus Captain and the Captain in charge of hose identifying the issue, the disposition of the hose, and the replacement hose identification number.

c. Notation within the company logbook including the disposition and replacement or temporary replacement of damaged hose. This information shall include the hose identification number.
d. The Captain in charge of the apparatus/company shall be responsible for updating the apparatus hose log for any change in inventory.

E. Hose Care

1. Hose shall be cleaned and maintained in the manner as indicated by the manufacturer.
2. Hose used in firefighting shall be cleaned after each incident to remove dirt, debris, and products of combustion.
3. All hose shall be removed from the apparatus and reloaded quarterly (Oct, Jan, Apr, Jul) so that the folds occur at different positions with sufficient frequency to prevent damage and the setting of permanent folds in the rubber lining.

F. Hose decommissioning

1. All hose that has identified as non-serviceable and out-of-service may be decommissioned.
2. Decommissioned hose may be disposed of in the following manner:
   a. Documenting such disposition in the hose inventory
   b. Removal of couplings for scrap
   c. Hose may be discarded in the trash
3. The decommissioning shall be the responsibility of the Captain in charge of hose or his or her designee.