QUICK SKILL - HOSE TESTING

Warning! Testing fire hose under pressure is a dangerous task and safety precautions should be followed. Helmets, eye protection and gloves shall be worn when testing hose.

All fire hose currently in service with your department shall be inspected and tested annually.

Each piece of fire hose should be visually inspected for physical damage. Any hose with holes in the outer jacket larger than one inch in diameter, or any hose where both the inner and outer jacket have been damaged, shall be removed from service and forwarded for repair in accordance with this procedure. Physical inspection shall determine that the hose, couplings have not been vandalized, are free of debris, and exhibit no evidence of mildew, rot, or damage by chemicals, burns, cuts, abrasion and vermin. Additionally, couplings shall be visually inspected for the following defects:

1 Damaged Threads
2 Corrosion
3 Slippage on the hose
4 Out-of round
5 Swivel not rotating freely
6 Missing lugs
7 Loose external collar
8 Other damage that impair operation

SERVICE TEST PROCEDURE:

1. The service test pressure for hose shall be 250 psi (5" shall be tested at 200 psi).

2. Each length of hose to be tested shall be inspected in accordance to this procedure.

3. The total length of any hose line in the test layout to be service tested shall not exceed 300 feet. The hose test layout shall be straight, without kinks or twists.

4. Nozzles shall be attached to the free end of each hose in the layout.

5. With the nozzle open, the pressure shall be raised gradually to 45 psi ± 5 psi. After the hose 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. The nozzles can then be closed slowly. **It is important to remove all of the air from the hose. Air under pressure becomes greatly compressed, and the hose can whip violently if the pressure is suddenly released by a hose burst.**

6. With the hose at 45 psi ± 5 psi, it shall be checked for leakage at each coupling and the couplings tightened with a spanner wrench where necessary.

7. Each hose shall then be marked at the end or back of each coupling to determine, after the hose has been drained, if the coupling has slipped during the test.

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

9. The pressure shall be raised slowly at a rate not greater than 15 psi per second until the test pressure is attained and then maintained. The hose layout shall hold the service pressure for 5 minutes.

10. While the hose test layout is at the service pressure, it shall be inspected for leaks. If inspecting personnel walk the test layout to inspect for leaks, they shall be at least 15 feet 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, **the hose will initially roll to the right should a rupture occur**. **Personnel shall never stand in front of the free end of the hose, on the right side of the hose, or closer than 15 feet on the left side of the hose, or straddle a hose in the test layout during the test.**

11. If the hose test layout does not hold the service test pressure for the 5 minute duration, the service test shall be terminated, the length(s) of failed hose removed, and the service test restarted.

12. After 5 minutes at the service test pressure, lower the pressure on the hose layout and slowly bleed the pressure from the hoses. Each test nozzle shall be opened to drain the layout.

13. The marks placed on the hose at the back of the couplings shall be observed for coupling slippage. If the coupling has slipped more than ⅛", the hose shall have failed the test.

14. All hose which has passed the inspection and testing process should have the last two digits of the year of testing marked within 12 inches of the female coupling on both sides of the hose in characters no less than 1 inch high, with a broad tip permanent marker.

15. Booster hose shall be tested to 250 psi for 5 minutes.

RECORDING HOSE TEST RESULTS:

The results of the testing will be entered into the Department's computer system. Each Battalion will be responsible for testing all hose in their Battalion and entering the results into the "Hose Testing" folder located on the Department's "S" Drive.

To find the hose testing records:

1. Open the "Hose Testing" folder on the "S" Drive.
2. Open the 2010 Hose Testing excel file.
3. Select your Battalion from the tabs on the bottom of the spreadsheet.
4. Enter the test data for each section of hose tested.

Damaged Hose

Any hose that is damaged or fails hose testing will be taken out of service. The hose will be tagged with the hose identification number, station location, Company Officer and the reason that the hose is being taken out of service (i.e. hole in outer jacket, etc.). Do not paint the hose or the couplings, as this is difficult to remove if the hose is repairable.

Any time a length of hose is damaged and removed from service it must be documented in the Hose Testing folder by placing an "X" under the "FAILED" column with an explanation why the hose failed.

Each battalion will collect all damaged or unserviceable hose. The damaged, tagged, hose will be taken to Support Services with a written explanation why the hose failed. The Fleet Director will make a determination to either re-couple/repair hose and return to the appropriate battalion/ warehouse or send the hose for disposal. The Fleet Director will notify the appropriate Battalion Chief if the hose identification number needs to be removed from the Department's inventory.