

FIREHOUSE[®]

Weekly Drill

DRILL #60: LADDER TESTING

Introduction

As firefighters, keeping our equipment in good working order is essential. Ladders are one of those tools that need to have an annual service test done. In preparing for this process, we should be thinking about the safety of the firefighter who will be conducting the test. Gloves and eye protection are a must.

Record keeping is also an important part of the ladder testing process. Your fire department should determine what information they wish to have captured on the ladder test form.

Extension Ladders

The horizontal bend test for an extension ladder calls for the ladder to be fully extended with the locks engaged. Once this is done, place the ladder on a set of saw horses so the ladder extends six inches past the ends of the saw horse.

Before beginning the weight test, check the ladder for any missing or damaged rivets or bolts. If the ladder is in good condition, the test can begin. Find the center of the ladder and place the board used to hold the weights onto the center of the ladder.

Begin by placing 350 pounds of weight on the board and leaving it for one minute. Remove the weight and take a measurement from the bottom of the ladder beam to the floor. Take readings on both sides of the ladder. Next, place 500 pounds on the board and allow it to remain for five minutes. Remove the weights and allow the ladder to sit for five minutes before take another measurement. Take all measurements at the same location on the ladder for accuracy.

Record the difference in the measurements using your department's form. The allowable differences between measurements are:

- ½ inch for ladders 25 feet or less
- 1 inch for ladders 26 feet to 34 feet
- 1½ inch for ladders 35 feet and longer

Combination and Collapsible Ladders

The horizontal bend test for combination and collapsible ladders is similar to the extension ladder, check the ladder for damage before beginning the test. The



major difference is the weights that will be used. Once the ladder is correctly mounted on the saw horses and the board is positioned, 250 pounds of weights is used; the weight is the same for both time periods during this test.

The next portion of the test is for the hardware and locks on the ladder. This test requires 1,000 pounds of pressure to be applied to the locks. Apply pressure for one minute then release the tension and inspect the ladder locks for any damage. Record a pass or failure of this test on the form. Conducting this test will be somewhat challenging.

The final inspection is that of the heat sensor labels. First check the expiration date on the label; if past due or missing, replace them. Each section of the ladder requires four labels, one at each corner. This means an extension ladder will have four labels on each section. In addition to the heat sensors, an instruction label for the heat sensor is required on each section as well.

Roof Ladders

Roof ladders require the hooks be tested as well. Using a T-square, locate and make a mark on the beam of the ladder where the T-square and hooks meet. Apply 1,000 pounds to the hooks for one minute then remove the pressure and take another measurement. There should not be any deformations from the first measurement. A good practice is to replace the roll pins after this test is done. Again record the results.

—Prepared by Russell Merrick