



NYCTM

Buildings



CONSTRUCTION ADVISORY:

**FIRE PUMP
TESTING 2014
CODE**

ISSUE: 2023-004

06.26.23

**FIRE PUMPS ARE
SUBJECT TO DIFFERENT
TESTING REQUIREMENTS**

WHAT IS A FIRE PUMP AND WHY DO FIRE PUMPS NEED TO BE SUBJECTED TO FLOW TESTING?

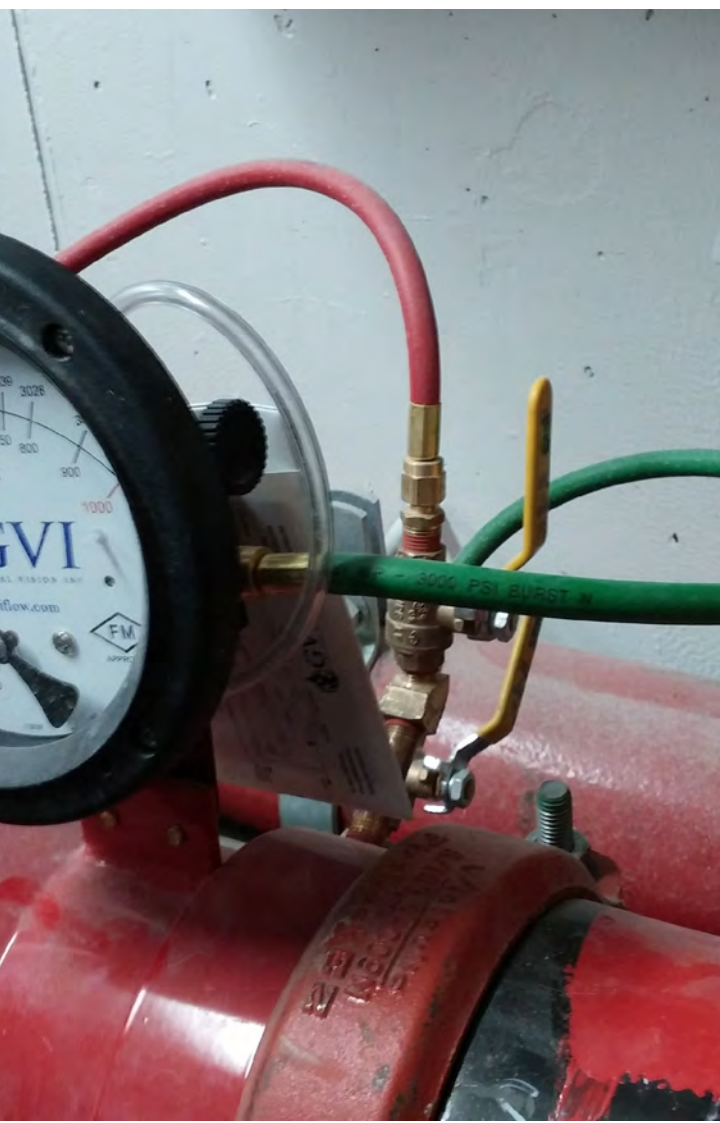
Fire pumps are used as part of many water-based fire protection systems to increase the pressure of a water source when such water source pressure is not adequate. Fire pump field acceptance tests which include flow testing, are required by NFPA 20, as amended by BC Appendix Q 106. Flow testing of fire pumps are required to be conducted to verify that such pump can provide the required flow and pressure to meet the building's standpipe and sprinkler systems demand.

WHAT ARE THE FIRE PUMP TESTING REQUIREMENTS?

Fire pumps are subject to different testing requirements including Fire pump field acceptance testing. Fire pump field acceptance testing requirements are set forth in **NYC Building Code Chapter 9** and **NFPA 20**, as modified by **BC Appendix Q**. Other fire pump testing requirements such as periodic inspection, testing, and maintenance requirements are set forth in **NFPA 25**.

Fire pumps that are part of the water supply that serve a standpipe system must be operational during the standpipe systems testing. Standpipes are regulated by Chapter 9, Chapter 33, and NFPA 14 as modified by Appendix Q. Standpipe systems shall be tested in accordance with NFPA 14, as modified by BC Q105.

For more guidance on the fire pump testing requirements, see the [Requirements for Installation of Stationary Pumps for Fire Protection Systems](#).



WHAT SHOULD YOU KNOW WHEN CONDUCTING A FLOW TEST FOR A FIRE PUMP FIELD ACCEPTANCE TEST AND FLOW TEST FOR STANDPIPE SYSTEM ACCEPTANCE TEST?

The **Fire Pump Field Acceptance Test Flow Test** consists of running the fire pump at minimum (churn) rated (100%) and peak (150%) flows. After the pump flow is set, then the pressure at the test header shall be recorded for each flow. A copy of the manufacturer's certified pump test curve must be available during the flow test to identify the proper minimum (churn), rated (100%) and peak (150%) flows to be set during the test. *The flow test results shall be comparable to the manufacturer's certified pump test curve.*

When conducting **Standpipe Systems Acceptance Test** on a standpipe system served by a fire pump, the fire pump shall be in operation. If the operator decides to conduct the fire pump field acceptance flow test during standpipe systems testing, the flow and pressure of the fire pump at minimum (churn) rated (100%) and peak (150%) flows shall be recorded. *Please note that fire pump field acceptance test flow test results obtained shall not be used to verify standpipe system demand.*

The standpipe system shall be tested to verify system demand in accordance with NFPA 14, as modified by BC Q105. To avoid confusion when conducting the fire pump field acceptance test and standpipe system acceptance test, two separate test forms have been developed to replace the current Standpipe Fire Pump Test Form (FP85):

1. Fire Pump Field Acceptance Test Form: Flow Test

This test form is to be used to record test data obtained during the fire pump field acceptance test for fire pumps serving fire protection systems other than the standpipe system.

2. Fire Pump Field Acceptance and Standpipe System Acceptance Test Form: Flow Test

This test form is to be used to record test data obtained during the fire pump field acceptance test for fire pumps serving the standpipe system or combination of sprinkler and standpipe system. This form allows the user to record flow test data from the standpipe or combined standpipe and sprinkler system to verify the system demand as required by NFPA 14, as modified by BC Q105.

WHAT SHOULD YOU DO TO PREPARE FOR A FIRE PUMP FIELD ACCEPTANCE TEST?



- Complete all pump and control panel wiring before the test. (NFPA 20-2007 section 14.2.3)
- When required, give advance notice of the fire pump test to FDNY and the local police precinct with the test date, time, and location in case they receive complaints. (NFPA 20-2007 Section 14.2.2)
- The permit holder or their authorized representatives shall be present for the field acceptance test are responsible for having the approved plans on site. (NFPA 20-2007 section 14.2.1)
- Only conduct a fire pump test after the hydrostatic test and walk-through inspection have been completed. Standpipe hydrostatic tests are conducted at no less than 300 psi for 1 hour (Local Law 63/09). (NFPA 20-2007 Sections 14.1.2 and 14.1.3)
- Confirm an authorized representative from the fire pump manufacturer is on site at the time of the test. (NFPA 20-2007 Section 14.2.1)
- **At the option of the permit holder, the fire pump field acceptance test may be witness by a DOB inspector or professional certified.**
- Use the applicable forms to record your test results. See the instructions for information on how to use the [Fire Pump Field Acceptance Test Form: Flow Test](#) form and the [Fire Pump Field Acceptance and Standpipe System Acceptance Test Form: Flow Test](#) form.
- After completion of the field acceptance test, the completed test forms and all required documentation shall be uploaded in DOB NOW.