

I performed a post repair flow test (21.1) on HFD Engine 5 in accordance with NFPA 1911, Chapter 21, to ensure flow rated capacity of the pump from a draft (21.3.1) or hydrant with needed flow capability (21.3.2).

Environmental conditions of 21.4 were met during test which took place behind 2623 Dixwell Ave Hamden, CT.

Hydrant was connected to a 8" circulating main (unknown Williams Hazens Coefficient) which provided 145psi static pressure.

Test apparatus is a 2017 Spartan Smeal with a pump plate rating stating operation capacity of 1500 gpm @ 150 psi

Test set up

One 5" 50ft section and one 3" 25 foot section were connected from hydrant to pump
100ft of 5" was run to a tower ladder raised out of bed with no extension, 2" tip pumped at 85psi for theoretical flow of 840gpm

Engine 5:

1. 1 Elkhart chief combo 1.75 rated 150gpm/75psi on a discharge port for a theoretical flow of 185gpm
2. 1 Elkhart 1 1/8 2.5 smooth bore on another discharge port for a theoretical flow of 266gpm
3. aerial raised out of bed with no extension flowing a combination master stream nozzle with readings of 700 @ 80 psi per flow master gauge

Available psi

Starting 145psi

- 1.75 combo – under 5psi, 140 psi residual on gauge
- 2.5 smooth bore 5psi, 135 psi residual on gauge
- Tower ladder master stream 65 psi, 70 psi residual on gauge
- Engine 5 master stream 55 psi, 10 psi residual on gauge

Engine temperature 183

Pump was cool to touch

Theoretical Flow 1991 gpm with 10% error rate 1792 gpm

Relief Valve

Relief valve was cycled three times to trigger open position with light on and then closed again in normal operation and light off.

Charles Lubowicki

Training/EMS Officer

Hamden Fire Department