



MOBILE FIRE - RESCUE DEPARTMENT FIRE CODE ADMINISTRATION

Fire Pump Acceptance Inspection

Date of Review ___/___/_____

BLD201__ - _____

Project Address: _____ Project Name: _____

Numbers following worksheet comments represent an NFPA code section unless otherwise specified.

Pass | Fail | NA **General**

1. ___|___|___ Received fire pump system installation and test certification from installer.
2. ___|___|___ Received fire pump manufacturer pump curve certification test form.
3. ___|___|___ The pump suction pipe is flushed in accordance with NFPA Table 14.1.1(a) or (b).
4. ___|___|___ After the suction pipe is flushed, a 2-hour hydrostatic test is performed on suction and discharge piping, 200 PSI or 50 PSI above maximum static pressure, whichever is greater, 14.1.2.
5. ___|___|___ Pressure and flush test certification is provided before performing the field acceptance test, 14.1.3.
6. ___|___|___ The approved plan is on site.
7. ___|___|___ Fire pump and controller, piping, gauges, jockey pump, and other component locations and design are the same as shown on the approved set of plans.

8. ____ | ____ | ____ Fire pump has nameplate.
9. ____ | ____ | ____ Wire installation to motor, control inner wiring, and jockey pump wiring is correct.
10. ____ | ____ | ____ A pressure gauge not less than 3 ½ in. diameter is near the pump discharge casting, and the pressure range is at least twice the rated working pressure of the pump but not less than 200 PSI, 5.10.1.
11. ____ | ____ | ____ A compound pressure/vacuum gauge not less than 3 ½ in. diameter is connected to the suction pipe and the pressure range is twice the rated maximum suction pressure of the pump but not less than 100 PSI, 5.10.2. This does not apply to vertical shaft-turbine pumps taking a water supply from an open pit or well.
12. ____ | ____ | ____ When provided, all valves (suction valve, discharge valve, bypass valves, backflow prevention device or assembly isolation valves) shall be supervised open by an off-site monitoring company, a local signal, locked open, or by seals, 5.16.
13. ____ | ____ | ____ Pump room has lighting, emergency lighting, heat, ventilation, and floor drain, 5.12.2 through 5.12.6.
14. ____ | ____ | ____ A circulation relief valve is provided on the pump of at least, ¾ in. for less than 2,500 GPM and 1 in. for 3,000 to 5,000 GPM, and it discharges to a drain, 5.11.1. This does not apply to pumps providing cooling water from its discharge to the engine driver.
15. ____ | ____ | ____ Coupling guards are provided for driver to pump connecting flexible couplings or flexible connecting shafts, 5.12.7.
16. ____ | ____ | ____ The operating angle of a flexible connecting shaft does not exceed the manufacturer listing requirements, 7.5.1.8.2.
17. ____ | ____ | ____ When installed, the eccentric taper reducer for suction has the taper on the bottom, 5.14.6.4.
18. ____ | ____ | ____ Suction screening is provided for open source water supplies, verify that its size matches what is detailed on the approved set of plans, 5.14.8.
19. ____ | ____ | ____ When a vortex plate is provided for taking suction from stored water supply, verify that it size and location matches what is detailed on the approved set of plans, 5.14.10.
20. ____ | ____ | ____ A check valve is installed in pump discharge assembly, 5.15.6.

21. ____ | ____ | ____ An indicating gate or butterfly valve is installed on fire protection system side of the check valve, 5.15.7.
22. ____ | ____ | ____ For a centrifugal pump and when provided a pressure relief valve is located between the pump and pump discharge check valve, verify that its location matches what is on the approved set of plans, 5.18.3.
23. ____ | ____ | ____ The test header and the number of hose valves are provided, in accordance with Table 5.25 and their location matches the approved set of plans, 5.19.3.
24. ____ | ____ | ____ The construction of the fire pump room (1- or 2-hour fire-resistive) matches the approved set of plans, 5.12.1, 5.12.2.
25. ____ | ____ | ____ The pressure maintenance (jockey) pump has a check valve in its discharge piping and the isolation valves (indicating butterfly or gate) location match the approved set of plans, 5.24.3.

Operational Tests Are Performed by the Contractor or Manufacturer

26. ____ | ____ | ____ Flow tests for positive displacement pumps are performed and recorded in accordance with Sections 14.2.7.4.3.2 and A.14.2.7.4, using a flow meter in a test loop that discharges the flow back to the supply.
27. ____ | ____ | ____ For the load start test, the engine-driven fire pump, without interruption, will be brought to rated speed providing a discharge equal to peak load, 14.2.7.5.

Controller

28. ____ | ____ | ____ The fire pump controller is tested in accordance with the manufacturer's requirements and Section 14.2.8.
29. ____ | ____ | ____ A minimum 6 manual starts and 6 automatic starts are performed, split the tests between each set of engine batteries and emergency power (only if emergency power is required for operating the pump) and simulate loss of the primary power source to verify the transfer to secondary power source, 14.2.8.2 and 14.2.9
30. ____ | ____ | ____ Each start is no less than a 5 minute run time, and total pump operation shall not be less than 1 hour, 14.2.8.4 and 14.2.12.
31. ____ | ____ | ____ Simulate primary power loss and allow automatic transfer to secondary power supply (only if emergency power is required for operating the pump) while pump is operating at peak load, 14.2.9.1.

32. ____ | ____ | ____ Engines with electronic fuel management control systems will test both primary and alternate control systems, 14.2.13.
33. ____ | ____ | ____ Pump packing drips.
34. ____ | ____ | ____ No overheating.
35. ____ | ____ | ____ No excessive vibration.
36. ____ | ____ | ____ Pump starts on water flow.
37. ____ | ____ | ____ Pump starts on pressure drop.
38. ____ | ____ | ____ Casing relief valve operates.
39. ____ | ____ | ____ Pressure relief valve operates.
40. ____ | ____ | ____ Jockey pump stop point pressure is recorded.
41. ____ | ____ | ____ Jockey pump start point pressure is recorded.
42. ____ | ____ | ____ Fire pump start point pressure is recorded (usually 5 PSI above jockey stop PSI).
43. ____ | ____ | ____ Pump flow tests are conducted at churn (no flow), rated (100 percent of rated capacity), and peak (150 percent of rated capacity) loads, 14.2.7.2.1. Additional test points can be taken.

Electric Driven Pump

44. ____ | ____ | ____ Supervised alarms operate when motor stops running, loss of phase, electric phase reversal and controller trouble.
45. ____ | ____ | ____ Simulated test for phase reversal is conducted.
46. ____ | ____ | ____ Switching from normal power to emergency and back to normal at peak load does not trip the breaker. (NOTE: This test is only required when the electric driver is connected to a emergency or standby source of power).
47. ____ | ____ | ____ Pump started once from manual emergency handle operation.
48. ____ | ____ | ____ Pump start up on emergency power occurs automatically.

Diesel Driven Pump

- 49. ____ | ____ | ____ Audible alarms operate when overspeed (120 percent) causes shutdown, low oil PSI, high temp, battery failure, charger failure, low air or hydraulic PSI, and failure to automatically start.

- 50. ____ | ____ | ____ Audible or visual alarms provided at constantly attended location when engine stops running, controller main switch is turned off, or there is trouble on the controller or engine.

- 51. ____ | ____ | ____ Instrumentation panel includes tachometer, oil PSI gauge, and temperature gauge.

- 52. ____ | ____ | ____ Battery chargers and ampmeters function.

- 53. ____ | ____ | ____ The battery charger is listed for fire protection service; the battery rack is adequately secured and elevated at least 12 in. above the floor level.
- 54. ____ | ____ | ____ Timer set for 30 minute each week run time cycle.

- 55. ____ | ____ | ____ For automatic shutdown after an automatic start, the shutdown occurs in accordance with Section 12.5.5.2.

Well Test and Inspection for Vertical Turbine Pumps

- 56. ____ | ____ | ____ The well’s production capability is verified by a continuous 8 hour test at 150 percent of the pump rated capacity. Test readings are taken every 15 minutes and the test data provides the static and pumping water levels at 100 and 150 percent of the pump’s rated capacity, 7.2.7.

Address: _____

Inspection Date: _____

Fire Code Administration Staff Captain