

Fire pump (electric or diesel) annual maintenance checklist

The annual fire pump service is the deep pass: the measurements, cleanings and tests a quarterly round doesn't reach. This checklist keeps the full service on record with the photos that make it defensible later. Work is commonly verified against NFPA 20, NFPA 25. Confirm the edition your authority having jurisdiction has adopted.

Who runs it: The fire protection service lead, coordinated with the water utility or a flow test crew. When: Once a year, scheduled around water availability and often combined with the sprinkler system's annual test.

Before the flow test

- ☐ **Monitoring company and owner notified before flow testing**
Monitoring company told pump running and flow signals are expected, the owner told the test window and where test water will discharge, both logged. No photo required
- ☐ **Owner's impairment procedure followed for the flow test**
Impairment opened under the owner's procedure, fire watch set up where it calls for one, and the discharge route for test water agreed. No photo required

Full flow test

- ☐ **Pump run through churn, rated and overload flow points**
Pressure and flow readings at each point plotted against the pump's factory curve, not just churn. 3 photos required
- ☐ **Suction and discharge gauges verified for accuracy**
Gauge readings cross-checked with a calibrated test gauge; any drift replaced. 1 photo required
- ☐ **Test results compared against the prior year**
Percentage of rated capacity trended year over year to catch gradual wear before it's a failure. 1 photo required
- ☐ **Pump speed recorded at each flow point**
Tachometer reading taken at churn, rated and overload flow so the results can be corrected to rated speed before plotting. 1 photo required
- ☐ **Driver load read at each flow point**
Electric: voltage and current within the nameplate range, read under the site's energized-work procedure. Diesel: speed, oil pressure and coolant temperature normal. 1 photo required
- ☐ **Suction pressure held above its minimum at peak flow**
Suction gauge watched at overload flow and kept above the minimum the water authority or acceptance test sets, with any drop below it reported to the owner in writing. No photo required
- ☐ **Controller locked and tagged out once flow testing ends**
Locked and tagged at the controller, pump unable to start before a guard comes off; a running check uses the procedure's temporary release and the pump is re-locked after. 1 photo required

Mechanical

- ☐ **Coupling alignment and driver inspected**
Coupling alignment within tolerance, no excess vibration, lubrication fresh on bearings. 2 photos required
- ☐ **Packing gland or mechanical seal checked**
Steady drip from packing (if packed) or dry mechanical seal, no excessive leakage. 1 photo required

Diesel fuel system (where applicable)

- ☐ **Fuel tank, lines and day tank inspected**
The driver's own dedicated fuel tank at an adequate level, no water in the sample, lines free of cracking or weeping.
- No photo required
- ☐ **Battery, charger and starting system tested under full-load run**
Batteries hold voltage through the extended run, charger recovers them afterward without fault.
- No photo required

Returned to service

- ☐ **Guards refitted and locks removed by the person who hung them**
Coupling guard fastened, lock and tag removed by the person who hung them, controller back in automatic and the pump started once to prove it.
- 1 photo required
- ☐ **Monitoring company and owner told the system is back in service**
Signals confirmed clear with the monitoring company, the owner closes the impairment and gets the test readings, and the call is logged.
- No photo required