

Think Your Fire Protection System Will Take Care of Itself? Think Again.

It's comforting when your facilities are safeguarded by a world-class fire protection system – but don't get too comfortable. For your system to function at its best – and for you to avoid potentially significant restoration or compliance issues – it's vital to keep your fire protection system on a regular schedule of inspection, testing and maintenance.

What could happen if you didn't? The immediate danger is that your system may not function the way it's supposed to in an emergency. If, for example, a fire alarm speaker had been painted over and was no longer able to emit the right audibility level to alert occupants, it would put lives at greater risk.

The financial danger is no less real. Should fire strike your facility and cause some damage, your insurance company will request your maintenance records as part of the claims process – and if maintenance has not been kept up, the claim could be denied, potentially leaving you with a very large rebuilding bill. Worse yet, if someone got hurt in the fire, you could be targeted in a costly civil suit.

That's why it simply makes sense to adhere to your recommended inspection, testing and maintenance schedules. But here's the good news: the cost is far outweighed by the benefits, and you can perform many of the tasks yourself. And as an added bonus, a properly inspected, tested and maintained life safety system is more reliable and not as prone to nuisance alarms.

What requirements are we talking about?

This is where things get a little tricky. You need to follow two sets of requirements: (1) what your equipment manufacturer recommends; and (2) what your local Authority Having Jurisdiction (AHJ) calls for.

Just like the company that built your car, your fire protection equipment manufacturer provides a set of maintenance tasks to be performed at designated intervals. Follow that schedule closely to ensure your equipment is reliable and ready for any emergency.

Your local AHJ has its own separate set of inspection, testing and maintenance requirements. These are most often based on codes published by the National Fire Protection Association (NFPA) or International Fire Code (IFC). However, codes are updated regularly, and each jurisdiction can decide which version of the code to support. For example, one city might insist on compliance with the 2016 edition of the NFPA 72, *National Fire Alarm and Signaling Code*®, while another city is still using the 2013 edition. Your AHJ might also have its own requirements on top of NFPA or IFC. In addition, your insurance underwriter may have additional requirements above the minimum requirements by NFPA. Bottom line? The only way to know for sure is to consult your local fire marshal and possibly insurance underwriter.

The three dimensions of fire protection system care

Keeping your fire protection system in peak condition requires three things: inspection, testing and maintenance:

- **Inspection** is the easiest and most frequent activity, and you can perform it yourself. Set time aside at least once a month to visually check out every sensor and notification appliance in your environment and observe whether it appears to be functional or not. Be sure to document every inspection you conduct. And don't just check the equipment; also inspect your facility for any environmental fire hazards, such as boxes of paper stored too closely to a space heater.
- **Testing**, according to NFPA 72, must be conducted by a qualified person. NFPA 72 includes guidance on how to evaluate the proposed person's qualifications. Hire a testing service provider to put every device through its paces to see how it will function in an emergency. Again, make sure all testing work is recorded.
- **Maintenance** consists of those physical tasks necessary to keep your products working properly – whether it's lubricating parts or disassembling components to check for corrosion. Follow the maintenance schedule and keep records.



Timing is everything

It's essential to be aware of – and keep up with – the frequency of your inspection, testing and maintenance requirements. Some work is required often, while other tasks can be performed as infrequently as once per decade. Here are some common duties you will likely need to perform more often:



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Monthly visual inspection

- Automatic fire alarms: check for alarm, supervisory and trouble signals
- Sprinklers: check gauges and valves
- Portable fire extinguishers: check for presence, access, tampering, pressure and condition
- Emergency lights and exit signs: ensure functionality



Monthly functional testing

- Automatic fire alarms: test system to ensure functionality, see that battery terminals are clean and lubricated, clamps are secure, and electrolyte levels and specific gravity are correct
- Portable fire extinguishers: ensure proper operating condition
- Emergency lights: perform a 30-second quick check and battery check



Document, document, document!

It's important to inspect and test; it's equally important to record and maintain a log of your work, because it will prove that you are doing what you are required to do. Keeping an inspection, testing and maintenance log will help you stick to your schedule, as well as provide needed documentation in the event of an insurance claim or civil suit. But most importantly, you will need those records whenever your AHJ visits your facility. Make sure you keep two sets of records: one set on-site and another set at a second location or in the cloud. Also make sure any third-party service providers are documenting all of their work.

Use common sense to avoid code violations

While much of fire protection system maintenance involves components of the system itself, there are many common-sense practices you can employ to keep your facility safe for occupants and avoid code violations and help prevent – or better respond to – a fire emergency. For example, here are some great ways to avoid common fire hazards:

- **Keep fire stairs and exits clear.** Never use stairwells as storage areas; this could hinder evacuations in an emergency.
- **Don't keep fire doors propped open.** Fire doors should be kept closed. An open fire door may enable the spread of deadly smoke or fire.
- **Don't overload electrical outlets.** You can help avoid electrical fires by adding new circuits and minimizing the number of devices plugged into power strips.
- **Keep duct smoke detectors clean.** Your building may have smoke detectors installed in air handlers. These can become contaminated quickly if duct filters are not changed regularly.
- **Don't block pull stations.** You may inadvertently be violating your fire code if you obstruct access to a pull station with a plant or signage.

If you learn to be proactive about these potential fire hazards, you can avoid code violations, possibly avert a fire, or avoid greater fire damage or injury.

The best protection of all: expert help

For many organizations, the effort necessary to manage and perform inspection, testing and maintenance

is simply too time-, resource- and knowledge-intensive to handle in-house. Unless you have a staff person with the bandwidth and expertise to manage the program, you may be better served by outsourcing the responsibilities to a qualified service provider under a maintenance contract. There are many benefits to this approach, including faster response to repair requests, less work for your internal team, the assurance of proper documentation, and the confidence that your systems are being maintained by experienced professionals with the latest knowledge, tools and technologies.

Knowledge is power

There's much more to fire protection inspection, testing and maintenance. To ensure you're doing everything you can to keep compliant with regulations and protect your facilities and people, consult your AHJ or visit nfpa.org, iccsafe.org and osha.gov. As one of the world's largest providers of fire protection systems and services, Johnson Controls also offers a complete range of online resources; discover them at www.SimplexFire.com.

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