

## **There Are No Fire Door Police – Right?**

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We are responsible for the fire doors we drop test and reset. You may begin and end this article with that statement if you wish. Asset preservation, life safety, ethical responsibility and liability surely mean something to us if we repair a fire door with generic, unapproved parts. Chances are excellent that these words carry a lot more bite when we are defending ourselves in a liability suit involving that same fire door and a catastrophic event. There are no fire door police to enforce codes, granted, but there is plenty of liability to go around and no compelling reason to go looking for trouble.

It doesn't take a reasonable building owner or property manager long to realize that a fire door drop testing program is an expensive proposition. Expensive if he has old fashioned, labor intensive fire doors and expensive if he ignores the process entirely and suffers a fire loss. It is decidedly expensive for him to entrust the procedure to a discount, flat fee service provider to reliably and correctly inspect, operate, repair, drop test and reset his units when the service provider fails in methodology or ethics of service. He deserves responsible and informed service for a fair price and we deserve his repeat business. We must base our service of fire doors upon knowledge and facts, and never assumptions.

**The first step in the drop test procedure is inspection. NFPA 5.2.5.1:** We must visually and critically inspect the door and its components for damage that may cause failure, and for compliance to manufacturer's intent. Your inspection procedure is vitally important. For a fire door to meet its label requirements there is one unavoidable necessity: The door must be installed and set for operation consistent with the instructions issued in the manufacturer's installation manual.

If you happen to be visiting with an installer or service technician who claims that factory fasteners, repair slats, critical guide spacing dimensions, guide weldments, fusible link location or left-over parts are irrelevant – and are tempted to trust him because he has been installing rolling fire doors for forever and *nobody ever* did it that way – you may still be very wise to get a second opinion. Every manufacturer is different. A professional gets it right in this department, every time, because the stakes are far too high to accommodate egos and guesses.

Having the original manufacturer's installation manual suitable for the door you are inspecting is mandatory for drop testing. Years ago through the American Rolling Door Institute, member rolling steel fire door manufacturers agreed to reciprocally furnish installation manuals upon request for this very purpose. This may still be the case with most manufacturers' older products; however, most manufacturers make their current installation manuals available on their websites. Among several presentations, I have a copy of the 1997 IDEA program presented by the noted panel of Clay Warix, Steve Hahn, Richard Cookson, Joel Bonnell, Jim Kelley and Jeff Gould that is an absolute classic presentation of fire door topics. It includes installation instructions from no less than six manufacturers at the time. I also have a set of manuals collected over 25+ years that includes products and manufacturers long gone – but I

know many of those doors are still out there working today, and these manuals are both indispensable and indisputable when researching questions or settling debates.

The common bottom bar label means that the door is listed by an agency, be it Underwriters Laboratories, Warnock Hersey, Factory Mutual, etc. It means the door is approved for the designated period of fire protection when installed and operational as tested or approved by that agency, and as allowed by the manufacturer's procedural obligations to that agency. You must be aware that installation instructions are part of the agency listing, and every bit as important as the door itself.

A greatly respected friend and mentor from St. Paul once commented to me that *"a door without a label and original manufacturer parts is not a fire door."* Evidence for cause - or contributory cause - of failure is what fire investigators are looking for after an "event". The good ones acquire an installation manual and start researching. Evidence does not, I assure you, disappear in a fire. If a guide angle or bottom bar has been repaired or replaced; if the jamb fasteners don't match what was provided by the manufacturer; if the curtain has substitute repair slats; even if a self proclaimed "expert" installed endlocks with aluminum rivets; somebody will answer for it because it is not compliant with the design as tested or approved. Perhaps the local authority having jurisdiction, (AHJ), has blessed the repair or condition. If so, we would certainly ask for a copy of the written approval for our own file - and to discuss with the manufacturer before proceeding.

Thoroughly inspect and note any variances to the installation manual and any damage to the door or components that may affect operation. Don't get trapped in a cobbled-up job! As a distinguished friend and practicing Pittsburg fire door guru stated to me recently, "If you can't replace it, sometimes it's best to just walk away!" Surely I mentioned the importance of having a copy of the National Fire Protection Association Publication 80, ([www.NFPA.org](http://www.NFPA.org)); the recognized essential guide for fire door standards and code compliance. (The 2010 Edition is due out in October.)

**The second part is the operational test. NFPA-80 5.3.6:** This is as simple as it sounds. Run the door by its primary means: manual push-up, awning crank, chain hoist or motor. The door must be balanced correctly, (DASMA TDS # 272 ), and run from stop to stop without binding or interference of any kind. If motor operated, it must run from limit to limit and stop correctly at the floor and curtain stops. You are responsible for testing reversing edges and photo eyes. If the door binds or has previously unnoticed damage or operational difficulties, you must carefully note your observations. Generally speaking, damaged parts and conditions that may affect the door's ability to drop should be submitted as an estimate for repair to be completed prior to the actual drop test.

Up to this point, we have easily performed two out of the three parts of the drop test procedure in our door guy clothes with our heads, pencil and paper. We have reviewed the installation manual; we are knowledgeable and familiar with the product and we are performing a thorough evaluation of the standing system. Now our skill is put to task projecting this evaluation through the art of negotiation – not in simply beating a low ball fee. This is not a closed invoice nor should it be. The process has no predictable outcome as of yet.

**The third part is the drop test. NFPA 5.2.14.3 and NFPA 5.2.14.3.3:** We arrive with trucks, tools and replacement parts from the original manufacturer. This is the exciting part! We might get to make noise and mysterious adjustments to systems designed by mechanical brain trusts from the days when steel was cheap and attorneys were more focused on wills, divorces and abstracts. We might get to crawl into tiny, hot, moldy, spider infested access spaces boxed in by demonic architectural contortionists who never gave drop testing a passing glance. Modern fire door designs usually don't require much in the way of physical gymnastics, however, older tension release style systems make anything seem possible from governor failure to parts breakage. It seems to always be a crapshoot with the old boys, and some of them can be a real bear to drop test and reset with repeatable results. (The installation instructions are very handy at this point.)

Anything can happen. A cast governor ring may self destruct upon release. A stressed spring casting may explode internally. Electrical release devices and smoke detectors may prove to be ineffective or disabled. We may be there all day wrangling and tuning a system back into a safe, operable and repeatable condition. It may take additional time, patience, parts and expertise over and above what we planned for. In fact, it may prove to never be operable and resettable again!

Flat fee inspection and operational testing makes sense some of the time, but flat fee drop testing for complicated fire protection systems can have serious drawbacks and may impose major limitations. I fear that injudicious flat fee testing promotes shortcuts and oversights in the rush to meet time constraints. These create potentially dangerous, but avoidable, liability profiles for our business. At this stage of the procedure, it is arguably good advice to be billing on a time and materials basis only. Convincing the owner of this logic will surely test your sales acumen, but pay great dividends.

**Remember this:** Our goal is never to simply drop and reset a fire door. Our goal is to faithfully inspect, test and reset a system that is designed to protect property and save lives. It is our professional responsibility and moral obligation to assure a predictable and reliable assembly that will respond when and how it is supposed to. We simply *have* to get it right. With this as our creed, annual fire door drop testing procedure maintains the status it commands, and the respect it deserves.

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