



## FIRE PREVENTION AND PROTECTION

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Self Inspections – Electrical Systems – Automatic Sprinkler Systems – Commercial Cooking Fire Suppression Systems – Portable Fire Extinguishers

Loss Control For the  
Retail Grocer

## Self Evaluations

*When conducted regularly, routine visual observations of a facility often detect flaws or defects that will eventually lead to a property loss.*

**M**ost business owners and managers realize the importance of a safe and structurally sound facility, and they have heard and read how fire has reduced many thriving businesses to ashes. Poorly maintained fire protection equipment, faulty electrical wiring, and arson are just a few of the culprits that have led to, or failed to prevent, many fires in the grocery industry. Too often, business owners and managers become so consumed in the day to day business of the store that they ignore many of the most fundamental aspects of fire prevention and protection. These oversights may never return to haunt a business owner, but when they do, the results are devastating.

### Performing Self Evaluations

The simplest and most effective thing a business owner can do to prevent fires is conduct frequent, thorough inspections of their facilities. When correctly performed, self-inspections can help identify areas of concern such as hazardous electrical situations, structural defects, fire protection equipment failure, or imminent fire hazards.

Using the checklist provided in the Appendix of this guide, a competent employee can uncover the overwhelming majority of the situations that can ultimately cause a devastating fire. This form should be completed once each month, reviewed by top management and maintained on file for future reference.

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## Electrical System Safety

*Most grocery store fires are the result of inadequate or faulty electrical systems.*

Often overlooked, poor electrical conditions may go unnoticed until a power failure, or worse, a fire, occurs. Frequent power outages, circuits that are warm to the touch, visible instances of exposed wiring or wire splices, and other obvious flaws should be reported immediately and investigated by a qualified electrician.

Conduct simple electrical system inspections on a monthly basis. The following paragraphs will offer more detailed information as to what a thorough inspection should consist of. But keep the simple acronym **C.C.D.T.** in mind when reviewing your electrical system.

**Clean**

**Cool**

**Dry**

**Tight**

### Outlets and Switch Plates

- Visually inspect all outlets and switch plates. There should be no damage to the covers, and the switches should be in good working condition.
  - Make sure that no extra wiring is protruding from the outlet or switch plate, and that they are secure at their location.
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## **Conduit**

- All wiring in commercial facilities should be contained in conduit or flexible conduit.
- Conduit should be firmly attached to junction boxes, or to equipment. Many times conduit can become detached, potentially cutting through the wiring that it is meant to protect.
- Damaged conduit should be replaced immediately. Broken or severely damaged conduit may be damaging the wiring.

## **Junction Boxes**

- Junction boxes should be inspected for damage or missing covers and repaired or replaced as needed.

## **Plugs and Power Cords**

- All plugs and power cords that supply power to machinery should be checked for damage. This includes damage such as torn plastic, exposed insulation, or exposed wiring. The plug should be inspected for damage such as bent or broken conductors, frayed plastic, exposed insulation or wiring.
  - Avoid the use of extension cords as permanent wiring anywhere in the facility. In many cases, extension cords supply the power for many temporary cases and displays. However, the right type of cord is very important. Refrain from using light, household type extension cords to supply power. These may be fine for lamps and clocks, but the power needed to operate a display freezer or a band saw is much greater than for normal household use. When an extension cord is the only alternative for supplying power, make sure the cord is a heavy-duty, grounded power cord, capable of supplying an appropriate amount of electricity for the equipment or appliance it serves.
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## Automatic Sprinkler Systems

*Emergencies seldom give warning before they strike. Accordingly, fire protection equipment, including automatic sprinkler systems, must function properly at all times.*

**S**prinkler systems are durable and inexpensive to maintain, yet, like any mechanical device, they can deteriorate or become impaired through neglect or improper service. Through proper inspection and maintenance of sprinkler systems, lives can be saved and severe property damage can be avoided.

### Inspection / Maintenance

- According to the National Fire Protection Agency, sprinkler systems should be inspected, tested, and tagged **annually** by a qualified technician. These services are performed to ensure the capability of the system and to maintain the favorable insurance rates afforded to buildings with sprinkler systems. If your system has not been tested and tagged in the last year, your Avant Supermarket Group Loss Control Representative can help locate a service contractor.
  - The main valve should be chained and locked in the “OPEN” position to ensure that the sprinkler can not be accidentally or maliciously turned off.
  - Avoid storing any items near or around the sprinkler main. Not only will this allow access for your sprinkler inspection, but will also allow emergency access in the event the sprinkler activates.
  - Siamese connections can be found on the exterior of nearly every facility that has a sprinkler system. They allow emergency vehicles to provide outside water in the event of an emergency. Sometimes, however, the covers for these connections become lost, or even stolen. Missing covers allow birds to nest inside the connection, and can become makeshift trash receptacles. These obstructions impeded water flow and undermine the sprinkler system’s ability.
  - Maintain a minimum 18” clearance between any storage and the sprinkler head.
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## Commercial Cooking Fire Suppression Systems

*An invaluable line of defense against commercial cooking fires, Fire Suppression Systems are inexpensive to maintain and easy to operate.*

**A**pproximately 50 percent of all commercial cooking fires either occur in, eventually involve, or are spread by the grease collection system for cooking equipment. Nearly all of these could have been prevented through simple maintenance and inspection of the equipment and of the fire extinguishing system.

Commercial cooking fire safety includes:

1. Installation of an approved fire extinguishing system to protect:
  - All cooking surfaces including fryers, ranges, griddles, and broilers, which may be the source of ignition.
  - Hoods, grease removal devices and duct systems.
2. Removal of grease vapors from cooking surfaces.
3. Collecting or holding grease until disposal.
4. Frequent cleaning of grease collection areas and associated exhaust ducts to hold grease accumulation to a minimum.

### Inspection / Maintenance

- According to the National Fire Protection Agency, automatic extinguishing systems must be inspected, serviced, and tagged by a qualified technician **every six months**.
  - Visually inspect the Fuse Link Detection System **monthly** for corrosion, grease build-up, or other obstruction that may prevent the extinguishing system from operating properly. This bracketing system provides positive actuation of the chemical agent upon exposure to heat.
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- Nozzles should be inspected **every two weeks** for corrosion, grease build-up, or other obstructions that may prevent the chemical agent from dispersing properly.
  - One or more portable fire extinguishers should be located in the general vicinity of the cooking equipment.
  - A professional duct-cleaning contractor should thoroughly clean the entire hood and ductwork **every six months** (or as needed based on the amount of cooking performed).
  - Grease filters should be removed and cleaned **every two weeks** or as needed depending on the volume of cooking performed.
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## Portable Fire Extinguishers

*When used properly, portable fire extinguishers can prevent small fires from becoming catastrophic tragedies.*

**A**sk your employees to describe a portable fire extinguisher and they will usually depict a red canister with a black hose; a fair description. Now ask your employees to tell you where they are located in your facility. Does everyone know right away? Better yet, does everyone know how to use them when they find them? Portable fire extinguishers may be the simplest, quickest method of fighting fires, but only if your employees know where they are, can identify a charged extinguisher, and know how to use it.

### Portable Fire Extinguisher Basics

- All portable fire extinguishers should be serviced annually by a certified technician. Portable fire extinguishers that have been used (to fight a fire) should be refilled immediately after each use.
  - A standard supermarket should have one 10-pound, type ABC extinguisher for every 3,000 square feet of total store. Depending on the type of activities being performed at your location, (incinerator use, commercial cooking, etc.) more extinguishers may be needed.
  - Portable fire extinguishers should be located in areas where fire is most likely to occur. Specifically, near the compressor room (inside or outside), near the front of the store to deal with vehicle fires, in or near the employee break room, in bakery/deli areas, outside incinerator rooms, and in any designated smoking areas. You will also want to locate extinguishers on the sales floor and in areas between sales and non-sales areas of the store.
  - Extinguishers should be mounted securely in conspicuous locations where they are not likely to become damaged or covered up. Never store portable fire extinguishers on the floor, as water and other foreign material can quickly corrode the base of the metal canister, making the extinguisher a volatile pressurized vessel. New extinguishers are supplied with mounting hardware. Contact your fire extinguisher service company for replacement hardware.
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- The extinguisher should be clearly labeled so that it can be easily located in an emergency. Your Avant Supermarket Group Loss Control Representative can provide you with the appropriate signage.
- Everyone should be trained on the proper use of portable fire extinguishers. Your local fire department may also be able to provide on-site training for your employees.

**NOTE: EMPLOYEES SHOULD NEVER ATTEMPT TO FIGHT A FIRE THAT JEOPARDIZES THEIR PERSONAL SAFETY! IF IT APPEARS THAT A FIRE CANNOT BE QUICKLY AND SAFELY CONTROLLED USING PORTABLE FIRE EXTINGUISHERS, EVACUATE THE FACILITY AT ONCE!**

## Emergency Action Plan

*The decisions made, and the actions taken during an emergency often mean the difference between life and death.*

**A** proper Emergency Action Plan is needed to protect your employees and customers from serious injury, property loss, or loss of life in the event of a major disaster. A fire, tornado, earthquake, bomb threat, or a hazardous chemical spill may be endured without injury or loss of life, if a business-owner is prepared. Noah didn't wait until it started raining to build the arc – don't wait until an emergency to make an action plan.

### Emergency Action Facts

Preservation of human life is the primary objective of Emergency Action Plan. Whether the threat of disaster is internal (fire) or external (tornado), a plan must be implemented to give your employees and customers the best possible chance of survival. Each scenario is unique, and every employee must know the procedures for dealing with each emergency. The likelihood of a major disaster occurring may be relatively low, but the outcome could be catastrophic if you aren't prepared.

If you would like assistance in designing and implementing an Emergency Action Plan, or if you would like specific emergency guidelines for your location, your Avant Supermarket Group Loss Control Representative can help.

Your local Fire Marshall can also provide you with information that is vital to the safety of your employees and customers such as emergency telephone numbers, how to safely evacuate, where to gather, who should be responsible for the emergency action plan, what warning signs to look for, etc.

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