

Refrigeration Breakdowns – Predictable & Preventable...

The Issue...

In a marketplace as competitive as the retail food industry, every additional strain on your bottom line inhibits your ability to compete in a business landscape that is being challenged by large national chains. In light of this and other challenges, business-owners must explore every possible source of potential revenue, and investigate every potential source of loss.

Often overlooked, the effect of a single refrigeration breakdown can seriously threaten a traditional store's ability to compete. Some types of refrigeration breakdowns are virtually unavoidable – lightning damage in the middle of the night, for instance. But most refrigeration losses are, to some degree, predictable, and therefore, preventable. Although we don't know exactly when a refrigeration breakdown is going to occur, we know that over time, system components become worn or damaged and need to be repaired or replaced. Through simple, inexpensive, preventive maintenance, the majority of the refrigeration breakdowns in the grocery industry can be avoided.

Preventive maintenance is generally accepted as a sound business practice with many types of equipment. Commercial vehicles, for instance, are typically maintained according to the auto manufacturer's recommendation. Fire protection equipment is usually maintained according to NFPA standards. Display cases and checkout stands are impeccably maintained because a damaged case or fixture is obvious to customers. But many grocers tend to neglect refrigeration equipment until a breakdown occurs. And insurance is usually purchased to cover the product loss and the repair or replacement of the damaged equipment. However, the uninsured costs that are subtracted directly from a business' bottom line are often hidden.

Consider This...

- Most forms of food spoilage and equipment breakdown insurance require a deductible.
- A record of frequent or costly refrigeration breakdowns may result in higher insurance premiums.

- The costs of product removal, cleanup, inventory, re-stocking, and claim filing generally are not covered.
- Lost sales during most breakdowns are not covered and when customers don't find what they want, they shop elsewhere.

A Simple PM Program...

Every year, Avant Supermarket Group handles numerous claims related to the failure of refrigeration units. With the exception of external power failures, nearly all refrigeration breakdowns can be prevented by implementing a simple, cost-effective preventive maintenance strategy. To help you reduce your exposure to refrigeration loss, we offer the following recommendations, which can be applied to most commercial refrigeration systems.

As with all types of equipment, specific manufacturer recommendations should be followed, but at a minimum, business owners should take the following steps to keep their equipment operating properly and efficiently at all times.

Daily

1. Check and record temperatures in all refrigerated areas frequently. Obviously, this will identify any breakdown. If a display case seems to be warming slowly over a two or three-day period, it may need to be defrosted. Improperly defrosted systems have to work harder to cool, thus shortening the life span of the refrigeration equipment and increasing utility bills.

Monthly

1. Inspect compressors, cooling fans, and compressor areas for general cleanliness and ventilation.
2. Inspect electrical connections to identify deterioration, loose connections, and corrosion. All wiring should be contained in conduit and junction boxes.
3. Check electrical circuits to assure proper overload protection.
4. Inspect visible refrigeration lines and condenser units for corrosion, leakage, oil, and loose clamps.
5. Check moisture indicators to detect the presence of moisture within the system. If

moisture is present, filter dryers should be installed or changed. More importantly, the source of the moisture should be identified and corrected.

6. Check cooling fans and motor mounts for correct operation, cracks and tightness.
7. Check refrigerant level.
8. Check systems, oil levels and operation of oil recovery system.
9. Check operation of alarm system (if applicable).

Every Three Months

1. Clean indoor and outdoor condenser units thoroughly with air hose or water. Dirty condensers operate less efficiently, shortening the life span of the compressor units and increasing the electricity needed to maintain case temperature.

Annually (To be performed by a qualified technician)

1. Check expansion valve and other controls.
2. Perform a spectrochemical analysis to determine the quality of the oil. If oil is not in good condition, it should be replaced.
3. Inspect motor magnetic contactor and replace if needed.
4. Check crankcase heater circuits on outdoor units.
5. Test low-pressure cutoff switch against manufacturer's recommendations.

NOTE: Refrigeration systems come in a wide variety of types and capacities. The recommendations above refer to most of the systems used in retail grocery stores today. If your system is unique or if you do not recognize some of the component names used here, contact your refrigeration service company for Preventive Maintenance recommendations.

Avant Supermarket Group specializes in providing insurance and risk management services to the retail grocery industry. If you would like to know more about safety and loss prevention in the retail grocery industry, contact our Loss Control Team at (913) 948-8170 or (405) 919-8334.