

▶ *Hanover Risk Solutions*

Equipment Breakdown

Within the document management business there is a critical need to protect the equipment that drives your businesses. This bulletin will discuss the five major exposure areas for equipment breakdown, what the typical exposures are in the records management business and what loss prevention actions would apply to these issues.

Electrical hazards

The most common exposure to loss involves an electrical disturbance. This may be a short circuit, lightning or an artificially induced current created by a component failure. As the electrical system is interconnected, a failure in one component or device can cause damage to other components connected to that circuit. If the damage is contained within the electrical devices, it may not be covered by a traditional property policy. Other exposures are damaged or failed insulation of conductors and overloading or overheating of conductors and terminals.

Electrical losses can cause damage that requires replacement of transformers, wiring, controls and other components that are difficult to access or would require significant labor to remove and replace.

Business income can be affected by a prolonged power outage while components are sourced and installed. Extra expense can be needed to rent generators or provide temporary electrical services.

Losses in this area are common, as electrical equipment is often taken for granted and not properly maintained. Many systems in use today did not originally anticipate the

additional loads that electronics and cooling systems have brought to most buildings.

The most effective control is an electrical preventative maintenance program that makes sure the electrical system keeps up with new loads and is clean, dry and tight. Routine visual inspections and a program to clean and tighten conductors is a key control program.

Proper grounding of the electrical system is also a key factor in proper operation of electrical protective devices. Having properly designed and maintained grounding paths is an important control for electrical exposures. The electrical preventative maintenance program should also address this part of the electrical system.

Infrared thermography can be used to examine an electrical system, under load and detect loose wiring, overloaded conductors and other hot spots. This examination can be coupled with an ultrasonic evaluation that "listens" for the unique signature of arcing and can be used to pinpoint failure prone devices and equipment.

Hanover has an alliance with Hartford Steam Boiler ("HSB") and TEGG Services to offer thermographic and ultrasonic evaluations to our clients at a reduced price.

Air Conditioning and Refrigeration

While we often think of air conditioning as only a comfort issue, we forget that many of our electronic tools require cooling to operate. Loss of air conditioning in an office environment means that the workplace becomes untenable. Since the building was designed for mechanical cooling, simply opening the windows is no longer a viable option.

Record storage areas may require environmental controls to maintain the required humidity and temperature for stored electronic media or paper records.

Mechanical refrigeration systems rely on compressors, chillers, cooling towers, condensers, air handlers and controls to keep the temperature under control. Losses to this equipment can create long interruptions, require cranes to remove equipment and require building owners to take extraordinary steps to protect processes.

Good preventative maintenance is the key to controlling losses related to this equipment. Routine equipment lubrication, testing for leaks and analyzing oil samples from equipment are all parts of a good preventative maintenance program.

Hanover clients can access the programs and services of Hartford Steam Boiler at www.hsb.com to help them control their losses related to air conditioning and refrigeration equipment failure.

Boilers and Pressure Vessels

Boilers may provide hot water or steam for building heating or process heating. The criticality of the boiler is directly related to the end use of the steam or hot water. There are jurisdictional inspection requirements for

these articles and the equipment breakdown policy provides these services.

A loss related to the failure of the boiler can lead to significant property damage and loss of income. The need for equipment breakdown coverage for these perils is an important part of your property insurance program.

Other pressure vessels that can be present at a document management facility include air compressors and associated storage tanks for process air.

Mechanical Equipment

Mechanical equipment can include pumps. Ventilation fans, motors, engines and other equipment needed to process, power, condition or move materials, people and products. Many of these items are computer controlled or have sensitive electronic controls that are subject to electrical surges, disturbances and failure.

Document storage operations may be particularly sensitive to losses related to temperature control, loss of cooling for electronic equipment or changes in humidity in storage areas. Loss of ventilation in a server room for document images can be devastating to the operations.

The HSB loss control team can also provide specialized loss control services that address exposures specific to mechanical equipment. Advice and evaluation around vibration testing, thermography for critical bearings, and electrical evaluations can be provided. These services can help the risk team identify potential failures before they occur and cause a significant loss or interruption.

Computers and Communications

No business can function without its computer systems and communications equipment. Losses that can affect this equipment can be related to electrical disturbance, power surges or a mechanical failure.

Do you have adequate surge suppression on all incoming communication lines? Many losses from power surges are related to items that are connected to phone lines that have not been properly protected for surges and transient voltages.

We often look at surge suppression as being a computer related issue. This control is often overlooked for other electronics such as alarm systems, process control systems and building control systems.

Shredding and Size Reduction Equipment

Many pieces of equipment are used to shred, bale, convey and otherwise destroy equipment to assure data destruction. All of these pieces of equipment share certain characteristics that can lead to a mechanical breakdown. In almost all cases, these events can be prevented by applying some basic loss prevention programs and activities.

Make sure that the feedstock into the machine is the right quality. Adding additional metals or adding metals of a higher strength can cause damage to a shredder or hard drive destruction unit. Shredders

can tolerate only a certain amount of metal without jamming or damaging the shredding mechanism. Balers require routine cleaning and maintenance to keep the hydraulic systems in good order.

Pneumatic conveyors that transport shredded materials require routine maintenance on the main blowers to keep the air flow at transport velocities. Changes in air flow from worn belts or worn drive mechanisms can cause blockages. In extreme cases a blocked or obstructed duct can cause a collapse of that section of your system.

All of the equipment that shreds, bales, or does size reduction can create dust. Dust can create mechanical problems from contaminating rotating bearings or power transmission points. Dust can also enter electrical cabinets and control panels and create electrical disturbances.

Metal and paper dusts can be an explosion hazard. Housekeeping and local dust collection equipment are key controls. Dust control is both a property and a mechanical breakdown control.

Mechanical breakdown exposures take many forms and are often overlooked by building owners and occupants. Recognizing these exposures can help you control your business' exposure to loss.

 **To learn more about Hanover Risk Solutions, visit [hanoverrisksolutions.com](https://tap.hanover.com)**

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