



Electrical System Problems

HSB, a Munich Re company, is a technology-driven company built on a foundation of specialty insurance, engineering, and technology, all working together to drive innovation in a modern world.

Why preventive maintenance is more important than ever

Electrical-related fires occur frequently and can cause severe losses.

Like the country's aging and overburdened electrical infrastructure, buildings and electrical systems are aging. Many systems may not be designed to handle the load that businesses need as they add more equipment.

Inadequately maintained electrical systems also are a leading cause of business interruption, poor energy efficiency, equipment wear-out and breakdown – all costly problems.

An effective electrical preventive maintenance program can reduce your risk of an unscheduled outage by as much as 66% according to statistics from the Institute of Electrical and Electronics Engineers.

What you can do to keep your electrical system safe

Focus your electrical preventive maintenance program on the most common and frequent problems leading to electrical fires and equipment failure. That includes inspection and preventive measures to ensure electrical apparatus is kept clean, cool, dry and tight.

Keep It Clean

- Electrical apparatus and equipment rooms should be free of excessive dust and dirt accumulation.
- Don't use electrical equipment rooms for storage.
- Limit access to authorized operations and maintenance personnel.
- Maintain proper lighting to ensure correct and efficient operation and maintenance.



Electrical equipment rooms used for storage create property and liability exposures.



Infrared thermographers look for hot spots that could indicate loose connections and other electrical problems.

Keep It Cool

- Prevent excessive heat buildup in electrical apparatus enclosures and equipment rooms. Exceeding design temperatures could be a fire hazard, and can also shorten the life of equipment.
- Maintain cooling fans or blowers installed on equipment to provide adequate cooling.
- Keep ventilation openings in equipment enclosures clean and free from obstruction.
- Change or clean any installed filters according to the manufacturer's recommendations.

Keep It Dry

- Keep equipment rooms dry and protect equipment from moisture. Persistent exposure and direct contact with moisture can cause equipment to fail prematurely.
- Check equipment for moisture contamination. If found, examine equipment for damage and get necessary repairs made. Identify and eliminate the source of moisture.

Keep It Tight

- Loose connections are the most common source of electrical equipment failure.
- Check all connections and ensure they are kept tight.
- Follow any applicable manufacturer's instructions for tightening.
- Get an infrared imaging survey to test for loose connections.
- Use manufacturer's recommended environmental ratings (IP ratings) for the enclosure.

Where to begin with a maintenance program

The first step in conducting electrical equipment maintenance is following applicable jurisdictional code requirements and specific manufacturers' recommendations.

Regular and routine maintenance is extremely important. Preventive maintenance should be performed according to the manufacturer's NETA-MTS or NFPA 70B recommendations.

It takes qualified and competent maintenance personnel to properly, safely and effectively maintain electrical equipment.

Electrical system maintenance increases safety and decreases losses. Reduce your risk of fire, equipment breakdown, business interruption, equipment inefficiency and premature wear-out with a preventive maintenance program.