

TECHNICAL Corner



The Shocking Truth about Your Concession Electrical Cords

By Wayne Kochanek, ACS Enterprises, Inc.

At'tention! Grab a flashlight. It's time for a concession safety audit that focuses on power. Relax, we're not strapping on tool belts, pulling equipment apart or taking electrical current readings, no matter how fun that may be. It's the common problems surrounding electrical cords we're after. Leaving these guys unattended can lead to costly repairs or safety issues. *The shocking truth is we take electrical cords for granted.* They come in many shapes, sizes, lengths and every piece of motorized equipment in our stands has them.

Here's what to look for:

Shielding condition: Is the exterior shielding damaged, cracked or cut open? Are the inner wires exposed? Are they slimed with oils, syrups, grease or cleaning solvents? Those items can slowly swell and split an electrical cord's exterior. Are they brittle? Cords can dry out from surrounding equipment producing heat, this causes them to lose flexibility and crack when twisted or reworked into a different configuration.

Countertop Machines: Cords run through countertops and often get frayed at the entry point, especially if the top is stainless steel. Plastic grommets should be installed. Silicone can prevent grommets from popping off and deter fluids from leaking under them and down the cords.

Large Floor Machines – Wheels roll over cords, pinching or peeling the outer shielding leaving the inner wires ripe for shorts. I have seen exposed wires from large machines sitting in water... Hmm, we'll name that machine Sparky. Rolling machines out can pull cords tight leaving the plugs, strain relief devices or outlets damaged. Take a minute and check these connections. (Note: Assure all switches are in the off position when plugging in or unplugging any unit.)

Electrical Outlets and Plugs: Look for damaged prongs or weak connection in the outlet. Do the cords stay in or droop in the receptacle? Weak connection can lead to electricity arcing, which produces heat, which melts cords.

Are the ground pins on the plug still there? Ground pins are an important part of your safety net, so to speak. If a machine were to have an electrical short the ground pin would signal the breaker to shut off preventing the operator from getting an

electrical shock. This is called *tripping* the breaker. Do not operate the machine without a ground pin. Can you replace just the plug portion of the cord? Many times the answer is NO. Often concession machines are required to have molded plugs. What is a molded plug? Answer; the whole cord and plug are one piece, the rubber exterior covers everything including the end plug leaving no open gaps. This prevents moisture from entering and acts as a strain relief. Replace it with a matching molded plug.

Extension cord abuse: I know... I know... who designed this stand! There are just not enough outlets. Nothing an extension cord or six pack can't solve. **No! Stop!** In most states adding extension cords to concession equipment is just not code. There are strict guide lines for equipment makers on the length of a cord they can put on a machine. It's set by UL and assures the machine gets the right amount of power. Suffice to say, adding extension cords to kitchen equipment is not considered safe. The connection points can be compromised by fluids. The extension cord of choice may have inadequate gauge wires. Poor inter-locking devices can pull apart... You get the point. Seek out a qualified electrician and get the proper power you need.

Breakers: Assure your breakers are labeled. If a machine were to trip a breaker, never reset it without checking the equipment on that circuit. The breaker tripped for a reason - find out why. Resetting breakers over and over can be extremely dangerous. It can ruin equipment and turn a simple repair into wasted dollars. Do make copies of the breaker panel's circuit sheet... just in case it gets lost. There's nothing fun about testing every piece of equipment multiple times to track unknown circuits. Never turn a breaker off and on with equipment in the on position. Why? Electrical current can jump the contacts and damage the breaker or piece of equipment on that circuit.

Fire Extinguishers: Assure they are in place, filled and dated.

As always, if you are repairing in-house be safe. Understand your equipment and never guess at proper installation. Call a qualified technician. "Quick" fixes and poor installation only lead to more repairs. ▼

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