MICHIGAN MILLERS® INSURANCE
Backing the Best in Business

Damaged Power Cords

SAFETY TALKS TOOLKIT

While a seemingly trivial problem, frayed and damaged power cords or cords that have had their ground prong removed pose a significant risk to employees. Damaged and ungrounded cords pose a threat of electric shock, present a fire hazard, and are a violation of safety codes.

Power cords can become frayed or damaged from heavy use and age and should be inspected regularly. Frequently, mishandling (such as pulling a plug from a socket by jerking the cord rather than removing the plug carefully by hand) causes the most significant damage to a cord over time, tearing the external protective sheathing or detaching it from the plug head and exposing energized wires.

Less obvious than damaged and frayed cords is the threat posed by missing ground prongs, the rounded third prong on electrical plugs. These ground prongs often break off from mishandling or are removed intentionally to fit a plug into two-prong outlets. Ungrounded plugs – especially on kitchen appliances like refrigerators and dishwashers – can pose a significant electrocution risk.

Pictured is a power cord for a shop appliance. The cord has been sliced open, exposing the energized wires. The appliance was still plugged in and still in use.

Common Hazards to Avoid with Power Cords

- Using power cords with frayed or damaged external sheathing, and sheathing torn away from the plug head, or ground prongs removed
- Pulling a plug from a socket by jerking the cord rather than removing the plug carefully by hand

The power cord above has had its protective sheathing torn away from the plug head, exposing energized wires.

Regulations Related to Damaged and Ungrounded Power Cords

- The Code of Federal Regulations (CFR 1910.303) states that electrical insulation shall be free from recognized hazards that cause death or serious physical harm to employees
- The Code of Federal Regulations (CFR 1910.334(a)(2)(ii)) requires damaged or defective power equipment to be removed from service until repairs are made and tests show the equipment is safe
- Missing ground prongs are a violation of Occupational Safety and Health Administration (OSHA) regulations and the National Electric Code. As required by CFR 1910.334(a)(3)(ii), attachment plugs and receptacles may not be connected or altered in a manner which would prevent proper continuity of the grounding conductor