

Sample - Inspection Checklist - Power and Extension Cords

Disclaimer: The specific needs, practices, form of government and other operational procedures of your governmental entity may impact whether this example is appropriate for your use. PennPRIME recommends that you review the final product before using it, and adapt it as necessary.

DATE:	INSPECTORS:	OK	NOT OK	NA	CORRECTIVE ACTION	Date Done/ Initials
	Power cords and extension cords being used are the proper type and size for the task. Specific cords approved for wet locations are used when necessary.					
	All extension cords are grounded cords, with the grounding pin intact.					
	All power cords and extension cords are in good repair, without damage to the outer jacket insulation, plugs, or pins.					
	Inline or built-in GFCI devices are used when cords are used in wet locations or during construction activities.					
	Extension cords are used for temporary purposes only, and not as a replacement for permanent building wiring. Extension cords are not zip-tied or otherwise connected to existing conduit or other building features.					
	Power cords and extension cords are not run through doorways, windows, or unprotected openings or holes in walls.					
	Power cords and extension cords are run so that they do not create tripping hazards.					
	All equipment with damaged cords have been removed from service.					
	Any repairs to power cords or extension cords have been made by a qualified person, and the repairs have the same or greater protective qualities as the original cord or plug.					

Power Cord and Extension Cord Guidance

While cordless power tools are quickly replacing corded tools in the workplace, there are still many situations that require the use of a corded tool or electrical extension cord. Used properly, these tools make the job quicker and easier, but used improperly, electrical cords can be very dangerous. The key to keeping employees safe when using electrical cords is to ensure the proper cords are selected and used, and that they are kept in good condition. The guidelines below represent the minimum requirements for flammable storage.

Tool and Equipment Power Cord - Flexible power cords are used to minimize the likely hood of damage or wear from repeated movement or vibration of the equipment it's attached to, or when a tool or piece of equipment needs to be portable. Tools are typically designed with power cords that will safely handle the amount of current the tool requires without heating or shorting. When using a tool or piece of equipment with a power cord, make sure that the power source is properly rated for the tool or equipment to be used.

A power cord will be made of two or more inner conductive wires with rubberized insulation around each wire, covered by an outer casing or jacket of rubberized plastic that protects the inner insulation. Depending of the type of equipment, the cord may or may not have a ground conductor. Hand-held tools that are manufactured with non-metallic cases are called "double-insulated". If approved by nationally recognized testing laboratory (NRTL) such as Underwriter's Laboratory (UL Approved), they do not require grounding under the National Electrical Code. Although this design method reduces the risk of grounding deficiencies, a shock hazard can still exist. Other equipment that has metal as part of its housing is required to have a ground wire and grounding pin on the plug of the cord. This grounding pin cannot be removed, and a 3-to-1 plug adaptor cannot be used with the equipment.

Extension Cords - These cords, also called "temporary flexible cables", are used when power is needed at a location that does not have an outlet within reach of a tool's or light's power cord. The key word to remember about extension cords is "temporary". These cords are to be used for temporary purposes such as maintenance or repair work, or during construction activities. These cords are not designed or allowed to be used as permanent wiring. In workplace settings, all extension cords must be grounding cords. This means that they have to have a power (or Hot) wire, a neutral wire, and a ground wire. Usually the power wire is black, the neutral wire is white, and the ground wire is green, but this might not be the case in all pieces of equipment.

Care should be given when using extension cords so that the cords do not create tripping hazards. Extension cords should not be run across walkways or aisle ways where they could cause a hazard or where they could be damaged by vehicles or material handling equipment such as forklifts.

Both power cords and extension cords should be free of any visible damage including:

- cut or torn outer insulation jacket or inner insulation,
- dry rot,
- cracked, or worn outer insulation jackets,
- exposed inner insulation,
- outer jacket pulled from the cord end,
- missing ground pin,
- Spring-liked or coiled appearance (caused by repeated overheating of the conductors)

If repairs become necessary on equipment power cords or extension cords, the repaired cord must have the same protective rating as the original cord. This means that an "electrical tape repair" is not allowed since it does not provide the same level of protection as the original out jacket insulation. If a power cord's outer jacket is compromised, the tool should be removed from service and the entire cord should be replaced. If the rubber strain relief provided where the cord enters the tool becomes damaged or is missing, the tools should be removed from service until the strain relief can be replaced. If the plug of a cord becomes damaged, either by having the outer jacket insulation pulled out of the plug, or the grounding pin is loose or missing, the tool should be taken out of service until the plug can be replaced. Any repairs to power cords should be done by a competent person that has been trained on how to select the correct replacement parts and how to properly install them.