



HBACA Builder Safety Committee Extension & Flexible Cord Safety Awareness

Initiative & Stand Down Kit December 2019

Suggested Discussion Materials, Action Items & Event Schedule



To kick off the HBACA Builder Safety Committee new Monthly Safety Awareness Initiative, we are proud to present this inaugural Initiative and Stand Down Kit for December 2019 addressing Extension & Flexible Cord Safety Awareness!

Elements of the Kit:

- **Suggestions for Implementation**

A summary of the game plan for this first ever HBACA Safety Committee Monthly Awareness Initiative and Group Stand Down Event with some “added touches” you may want to consider.

- **Flexible Cord Tool Box Talk #1 – *Am I in Danger?***

The first of four Tool Box Talks planned for December, featuring information and tables taken directly from OSHA.GOV. This Tool Box Talk covers *Am I in Danger?*, *How Electrical Current Affects the Human Body*, *How Shocks Occur*, and *Burns & Other Injuries*. This Tool Box Talk introduces and answers the question “Why?” (Unfortunately, a Spanish language version is not readily available.)

Distribution Network:

Committee Member Field Employees and, at each member builder’s discretion, their Trade Partners. Builders are encouraged to distribute these accordingly and organize brief safety meetings/discussion sessions throughout their communities.

Distribution/Implementation Dates:

Week of December 1 - 7, 2019

- **Flexible Cord Tool Box Talk #2 – *Best Safety Practices (English and Spanish)***

Also derived directly from OSHA.GOV, this bi-lingual talk addresses Best Safety Practices including strain relief, preventing cord damage, proper cord ratings/durability, grounding, and working in wet conditions.

Distribution Network:

Committee Member Field Employees and, at each member builder’s discretion, their Trade Partners. Builders are encouraged to distribute these accordingly and organize brief safety meetings/discussion sessions throughout their communities.

Distribution/Implementation Dates:

Week of December 8 - 15, 2019

- **Flexible Cord Tool Box Talk #3 – *Electrical Safety for Non-Electricians (English and Spanish)***

This Tool Box Talk is courtesy of CPWR – The Center for Construction Research and Training, a consortium of universities and other organizations with strong ties to the National Institute for Occupational Safety and Health (NIOSH), dedicated to making the construction workplace safer. This Tool Box Talk combines two of their documents, which they freely and openly share with anyone who wants to use them. For more information go to www.cpwr.com.

All Committee Members are encouraged to coordinate distribution of Tool Box Talk #3 in conjunction with our member-sponsored valley-wide Builder Safety Committee Stand Down Event on December 16, 2019. See Stand Down Event Poster for details.

- **Flexible Cord Tool Box Talk #4 – *NAHB Talk – Electrical Safety (English and Spanish)***

This Tool Box Talk comes from NAHB.

Distribution Network:

Committee Member Field Employees and, at each member builder's discretion, their Trade Partners. Builders are encouraged to distribute these accordingly and organize brief safety meetings/discussion sessions throughout their communities.

Distribution/Implementation Dates:

Week of December 22 - 28, 2019

□ ***Stand Down Event Information Poster (English & Spanish)***

Let's get everyone's attention! Here's a poster our Committee membership can post advertising our event at all our respective communities throughout the month of December 2019.

FREQUENT SAFETY COMMUNICATION = SAFETY AWARENESS = SAFETY RESULTS!

□ ***Additional Resources (Optional)***

- ***ADOSH ADVOCATE FAQs, Q4-2019 Edition – "Can I repair my electrical cord?"***
- ***OSHA Letter of Interpretation RE: Cord Repairs – 4/4/10***
- ***Related Safety Video Links***



HBACA Builder Safety Committee Extension & Flexible Cord Safety Awareness Initiative & Event December 2019



Suggestions for Implementation

Let's Get Started!

As we've discussed in our recent meetings, one goal of the HBACA Builder Safety Committee is to coordinate a monthly safety initiative that heightens awareness of a critical residential construction safety issue. To implement this program member-companies team up and take turns spearheading each monthly initiative. For this first initiative, we take on Extension & Flexible Cord Safety. We hope you are as excited about this as we are!

What We've Planned

For each of four consecutive weeks in December 2019, we've prepared a series of Tool Box Talks for the distribution and implementation of our Committee membership and their field staff. The idea is to set aside approximately 20 to 30 minutes a week to raise awareness of this safety challenge. Include your field staff, make it a series of events at each community, invite your trade partners if you are comfortable doing so, and/or implement the program however you see fit!

For the third week of the initiative we suggest that you coordinate Tool Box Talk #3 as part of either one centralized or a series of "Stand Down Events" in your communities, all taking place member-wide on a coordinated date of December 16, 2019.

Objectives of Tool Box Talks

- Making time to communicate the dangers of electrical cord misuse.
- Making time to communicate best practices to avoid injury.
- Making time to recognize and remind all of us that our profession is a potentially dangerous one with real hazards that can cause real injuries, human suffering, and even death!
- Making a united and unequivocal statement: "We care about you and your safety and we want you to come home to your loved ones each and every night healthy and happy!"

Objectives of Stand Down Event

- On December 16, 2019, all Committee Builders will speak with one voice simultaneously in unison sending a consistent message to all our collective employees and trades – Flexible Cord Safety is Important! YOU ARE IMPORTANT!
- Send a message to all who participate: "Arizona Builders care about safety and take action to prevent injuries!"
- Set the tone for upcoming planned Monthly Safety Initiatives.

Additional Suggestions to Consider:

- Distribute and post the Stand Down Event Posters (English and Spanish) in all your locations starting December 1, 2019
- Consider posting copies not only in your Construction Offices but also in key locations throughout your communities where workers will see them – Examples: J-Johns doors, storage sheds, on existing lot or safety signs, etc.
- Have your CMs ask the lunch truck drivers to post them on their trucks.
- LET'S GET THE WORD OUT THERE!
- Prior to distributing Tool Box Talks, print them on card stock or have them laminated so that they're not just a "throw-away item."
- Make food part of the Stand Down Event! Pizzas or a barbecue with burgers and hot dogs goes a long way towards relationship building. Spending \$50 or \$100 per community is money well spent!
- Turn the event into a Safety/Holiday/Year-End/Trade Partner Appreciation celebration!

Improper Use of Extension & Flexible Cords – Am I in Danger?

IMPROPER USE OF EXTENSION AND FLEXIBLE CORDS

Am I In Danger?

The normal wear and tear on extension and flexible cords at your site can loosen or expose wires, creating hazardous conditions. [Flexible Cords] Cords that are not 3-wire type, not designed for hard-usage, or that have been modified, increase your risk of contacting electrical current.

How Do I Avoid Hazards?

- Use factory-assembled cord sets.
- Use only extension cords that are 3-wire type.
- Use only extension cords that are marked with a designation code for hard or extra-hard usage.
- Use only cords, connection devices, and fittings that are equipped with strain relief.
- Remove cords from receptacles by pulling on the plugs, not the cords.
- Continually audit cords on-site. Any cords found not to be marked for hard or extra-hard use, or which have been modified, must be taken out of service immediately.

Additional Information:

- 29 CFR 1926 Subpart K, Electrical. OSHA Standard.
 - 1926.405, Wiring methods, components, and equipment for general use
 - 1926.405(g)(1)(iii), Prohibited uses
- [Electrical Contractors Industry](#). OSHA Safety and Health Topics Page. Provides information about the hazards that electrical workers may experience as a part of their jobs.
- [Electrical Safety: Safety and Health for Electrical Trades Student Manual](#). US Department of Health and Human Services (DHHS), National Institute for Occupational Safety and Health (NIOSH) Publication No. 2009-113, (2009, March).



These cords are improperly wired directly to the electrical circuit, are not protected by a GFCI, and are two-wire cords that are not grounded and not rated for hard- or extra-hard service.



Improper Use of Extension and Flexible Cords

How Electrical Current Affects the Human Body

HOW ELECTRICAL CURRENT AFFECTS THE HUMAN BODY

Three primary factors affect the severity of the shock a person receives when he or she is a part of an electrical circuit:

- Amount of current flowing through the body (measured in *amperes*).
- Path of the current through the body.
- Length of time the body is in the circuit.

Other factors that may affect the severity of the shock are:

- The voltage of the current.
- The presence of moisture in the environment.
- The phase of the heart cycle when the shock occurs.
- The general health of the person prior to the shock.

Effects can range from a barely perceptible tingle to severe burns and immediate cardiac arrest. Although it is not known the exact injuries that result from any given amperage, the following table demonstrates this general relationship for a 60-cycle, hand-to-foot shock of one second's duration:



Current level(Milliamperes)	Probable Effect on Human Body
1 mA	Perception level. Slight tingling sensation. Still dangerous under certain conditions .
5mA	Slight shock felt; not painful but disturbing. Average individual can let go. However, strong involuntary reactions to shocks in this range may lead to injuries.
6mA - 16mA	Painful shock, begin to lose muscular control. Commonly referred to as the freezing current or "let-go" range.
17mA - 99mA	Extreme pain, respiratory arrest, severe muscular contractions . Individual cannot let go. Death is possible .
100mA - 2000mA	Ventricular fibrillation (uneven, uncoordinated pumping of the heart.) Muscular contraction and nerve damage begins to occur. Death is likely .
> 2,000mA	Cardiac arrest, internal organ damage, and severe burns. Death is probable.

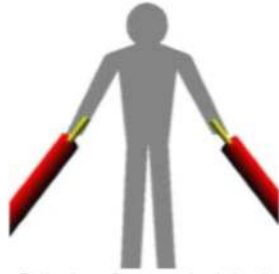
References

- NIOSH [1998]. *Worker Deaths by Electrocution; A Summary of NIOSH Surveillance and Investigative Findings*. Ohio: US Health and Human Services.
- Greenwald EK [1991]. *Electrical Hazards and Accidents - Their Cause and Prevention*. New York: Van Nostrand Reinhold.

How Shocks Occur

HOW SHOCKS OCCUR

Electricity travels in closed circuits, normally through a conductor. Shock results when the body becomes part of the electrical circuit; current enters the body at one point and leaves at another. Typically, shock occurs when a person contacts:



Both wires of an energized circuit.



One wire of an energized circuit and the ground.



A metallic part in contact with an energized wire while the person is also in contact with the ground.

Metallic parts of electric tools and machines can become energized if there is a break in the insulation of their wiring. A low-resistance wire between the metallic case of the tool/machine and the ground - an equipment grounding conductor - provides a path for the unwanted current to pass directly to the ground. This greatly reduces the amount of current passing through the body of the person in contact with the tool or machine. Properly installed, the grounding conductor provides protection from electric shock.

Burns & Other Injuries

BURNS AND OTHER INJURIES

⚠ Please be advised these images are of a graphic nature. ⚠

Shock-related injuries include burns, internal injuries, and injuries due to involuntary muscle contractions.

Burns

The most common shock-related injury is a burn. Burns suffered in electrical incidents may be one or more of the following three types:

Electrical burns cause tissue damage, and are the result of heat generated by the flow of electric current through the body. Electrical burns are one of the most serious injuries you can receive and should be given immediate attention.

Photo Example

High temperatures near the body produced by an electric arc or explosion cause arc or flash burns. They should also be attended to promptly.

Photo Example

Thermal contact burns occur when skin comes in contact with overheated electric equipment, or when clothing is ignited in an electrical incident.

Photo Example

Internal Injuries

Excessive electricity flowing through the human body can cause serious damage to internal organs. Resulting medical problems include hemorrhage (or internal bleeding), tissue destruction, and nerve or muscle damage. These internal injuries may not be immediately apparent to the victim or observers; however, left untreated, they can result in death.

Photo Example

Involuntary Muscle Contraction


Normal muscle contraction is caused by very small amounts of electricity that are created within our bodies. Muscles violently contract when stimulated by excessive amounts of electricity. These involuntary contractions can damage muscles, tendons, and ligaments, and may even cause broken bones. If the victim is holding an electrocuting object, hand muscles may contract, making it impossible to drop the object and prolonging contact with the current. Also, injury or death may result when violent muscle contractions cause workers to fall from ladders and scaffolds or inadvertently strike other objects.

Photo Example



Electrical Cord Best Safety Practices (English and Spanish)

eTools




Construction eTool

Electrical Incidents Falls Struck-By Trenching and Excavation [versión en español](#)


Electrical Incidents » Flexible Cords

With the wide use of power tools on construction sites, flexible extension cords often are necessary. Because they are exposed, flexible, and unsecured, they are more susceptible to damage than is fixed wiring. Hazards are created when cords, cord connectors, receptacles, and cord- and plug-connected equipment are improperly used and maintained.


Strain Relief [29 CFR 1926.405(g)(2)(iv)]:
To reduce hazards, flexible cords must connect to devices and to fittings in ways that prevent tension at joints and terminal screws. Flexible cords are finely stranded for flexibility, so straining a cord can cause the strands of one conductor to loosen from under terminal screws and touch another conductor.




Cord Damage [29 CFR 1926.405(a)(2)(ii)(1)]:
A flexible cord may be damaged by door or window edges, by staples and fastenings, by abrasion from adjacent materials, or simply by aging. If the electrical conductors become exposed, there is a danger of shocks, burns, or fire.



Durability [29 CFR 1926.405(a)(2)(ii)(J)]:
The OSHA construction standard requires flexible cords to be rated for hard or extra-hard usage. These ratings are derived from the National Electrical Code, and are required to be indelibly marked approximately every foot along the length of the cord. Examples of these codes are: S, ST, SO, and STO for hard service, and SJ, SJO, SJT, and SJTO for junior hard service.



Grounding [29 CFR 1926.405(a)(2)(ii)(C)]:
Extension cords must be 3-wire type so they may be grounded, and to permit grounding of any tools or equipment connected to them.



Wet Conditions [29 CFR 1926.405(j)(1)(v)]:
When a cord connector is wet, electric current can leak to the equipment grounding conductor, and to humans who pick up that connector if they provide a path to ground. Such leakage can occur not just on the face of the connector, but at any wetted portion. Limit exposure of connectors and tools to excessive moisture by using watertight or sealable connectors.

Additional Information:

- 29 CFR 1926 Subpart K, Electrical. OSHA Standard.
 - 1926.405, Wiring methods, components, and equipment for general use.
 - 1926.405(g)
- Electrical Safety: Safety and Health for Electrical Trades Student Manual. US Department of Health and Human Services (DHHS), National Institute for Occupational Safety and Health (NIOSH) Publication No. 2009-113, (2009, March).

Source: https://www.osha.gov/SLTC/etools/construction/electrical_incidents/flexiblecords.html



eTool de Construcción

- Incidentes Eléctricos
- Caídas
- Golpes
- Zanjas

versión en inglés

Incidentes Eléctricos » Cables Flexibles

Con el amplio uso de herramientas eléctricas en lugares de construcción, las extensiones eléctricas flexibles a menudo son necesarias. Debido a que están expuestas, son flexibles y no están aseguradas, están más susceptibles a dañarse que el alambrado fijo. Los riesgos se crean cuando los cables, conectores de cables, receptáculos, y equipo de cordón y enchufe son usados y mantenidos incorrectamente.

Alivio de Tensión [29 CFR 1926.405(g)(2)(iv)]:

Para reducir riesgos, los cables flexibles deben estar conectados a dispositivos y a accesorios de manera que se pueda prevenir la tensión en las uniones y tornillos terminales. Los cables flexibles son enhebrados con precisión para su flexibilidad, por lo tanto el ponerle tensión a un cable puede causar que los hilos de un conductor se aflojen debajo de los tornillos terminales y toquen a otro conductor.



Daño a los Cables [29 CFR 1926.405(g)(2)(iv)]:

Un cable flexible puede ser dañado por los bordes de una puerta o una ventana, por grapas y sujetadores, por la raspadura de materiales adjuntos, o simplemente por el tiempo. Si los conductores eléctricos se exponen, hay peligros de descargas, quemaduras, o fuego.



Durabilidad [29 CFR 1926.405(a)(2)(ii)(J)]:

La norma de OSHA para la construcción requiere que los cables flexibles sean clasificados por su uso, es decir, por uso pesado o extra pesado. Estas clasificaciones se derivan del Código Nacional Eléctrico y se requiere que sean marcadas indeleblemente aproximadamente a cada pie a lo largo del cable. Ejemplos de estos códigos son: S, ST, SO, y STO para uso pesado, y SJ, SJO, SJT, y SJTO para uso menos pesado.



Conexión a tierra [29 CFR 1926.405(a)(2)(ii)(C)]:

Las extensiones eléctricas deben ser del tipo de 3-alambres para que estas puedan ser conectadas a tierra, y para permitir la conexión a tierra de cualquier equipo o herramienta conectada a ellas.



Condiciones Húmedas [29 CFR 1926.405(j)(1)(v)]:

Cuando un conector de cable está mojado, la corriente eléctrica puede liberarse hacia el conductor de conexión a tierra del equipo, y hacia humanos que recogen ese conector si ellos proveen un paso a tierra. Tal fuga de corriente puede ocurrir no solamente sobre la cara del conector, sino en cualquier parte húmeda. Limite la exposición a humedad excesiva de equipos y conectores usando conectores herméticos o sellables.

Información Adicional (La información que sigue a continuación se encuentra solamente in Inglés.):

- Normas de OSHA: 29 CFR 1926.405(g)

Source: https://www.osha.gov/SLTC/etools/construction_sp/electrical_incidents/flexiblecords.html

HAZARD ALERT

CPWR
THE CENTER FOR CONSTRUCTION
RESEARCH AND TRAINING

ELECTRICAL SAFETY

FOR NON-ELECTRICIANS

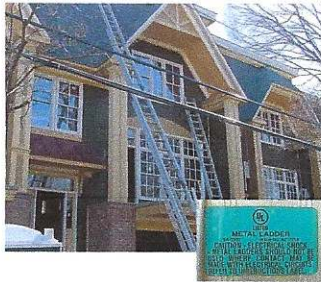


Electrical current is unforgiving.

Electrocutions happen in less than a second. Between 2011 and 2013, 203 construction workers died from electrocutions.*

More than 70% of those killed were not electricians.

A painter was electrocuted when a metal ladder he was moving touched an overhead power line.



Overhead power lines are the main killers.

You can be killed instantly if you are using the following equipment and it comes in contact with an overhead power line.

- Aluminum extension poll for paint rollers
- Backhoes and cranes
- Concrete pumpers
- Long-handled cement finishing floats
- Metal ladders
- Raised dump truck beds
- Scaffolding

Electrical hazards are also at eye level and underground:

- Power tools with bad wiring
- Buried electrical lines
- Bad insulation on wiring
- Cords missing grounding prongs
- Cords damaged by wear

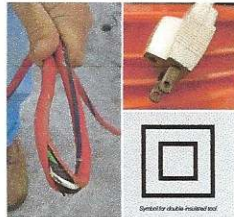
*CPWR Third Quarterly Data Report, 2015.

To learn more about construction hazards,

and receive copies of this Hazard Alert card and cards on other topics

call 301-578-8500

Before beginning work ...



Symbol for double-insulated tool.

1 Inspect equipment and cords for damage

Cords and tools with exposed, frayed, or spliced wiring, a missing prong, or cracked casings should be removed and tagged as "Do Not Use." Use double insulated tools marked with the symbol below.



Competent person testing extension cord.

2 Ask if GFCIs, tools and cords are tested

Ground fault circuit interrupters (GFCIs) save lives on jobsites. OSHA requires your employer to have GFCIs on all temporary wiring. A competent person should test the GFCIs and all cords on tools and equipment to make sure they are safe. You should hit the "test" and "reset" buttons on GFCIs to make sure they are working.



3 Check with your supervisor

OSHA requires your employer to check to see if there are any live electrical circuits where you will be working – overhead or underground power lines or circuits in walls where, for example, you might drill. **If there are, your employer must tell you and your co-workers** where the hazards are and how to work safely.

Once you are working ...

Speak up if you're not sure.

Ask your employer if the electrical systems are grounded. Your employer must check all electrical systems, including wiring and switches, to be sure the path to ground is continuous. Asking a question can save a life – yours.

If you think you are in danger:

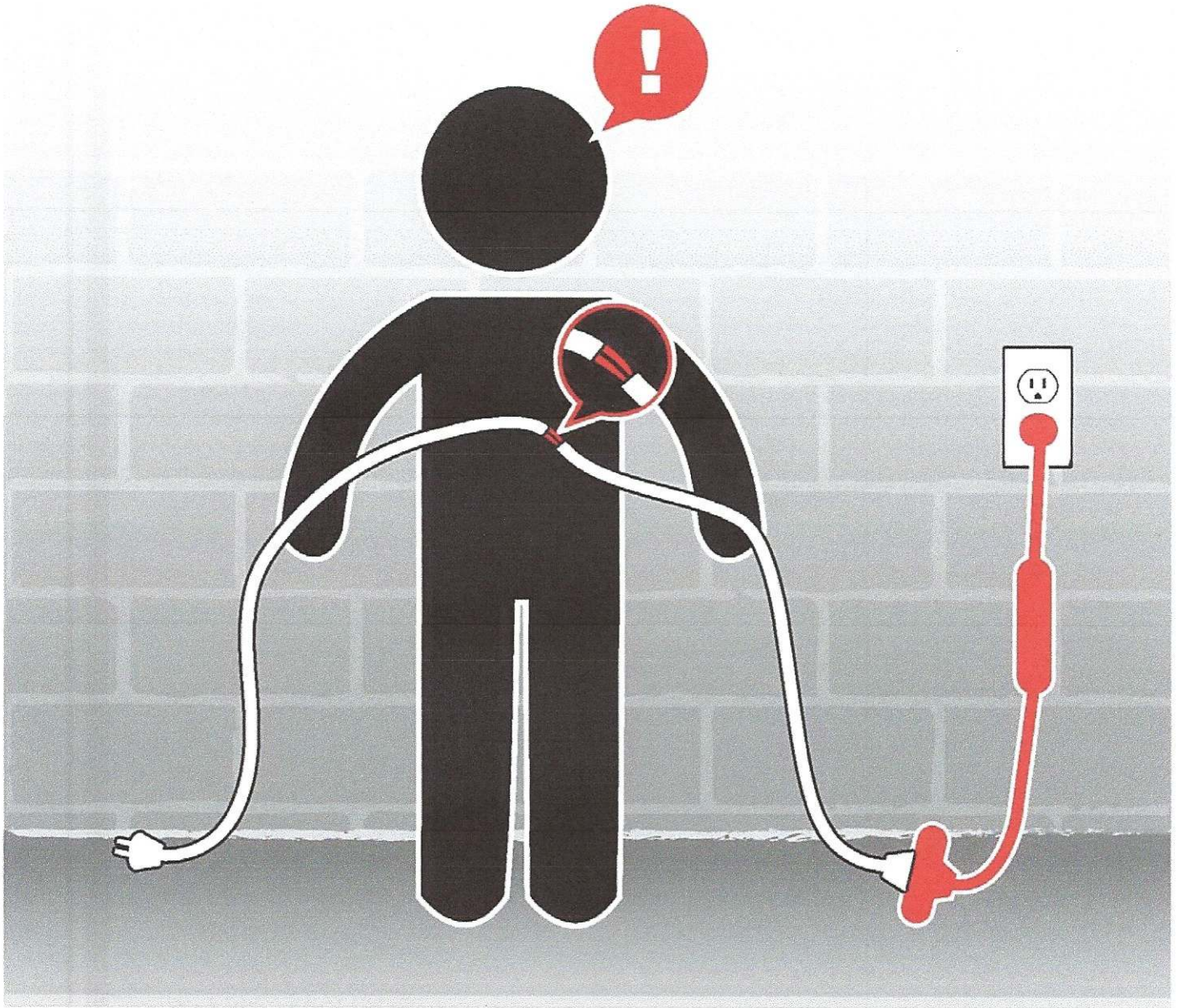
Contact your supervisor.
Contact your union.

Call OSHA
1-800-321-OSHA

Steer clear of water and metal.

In wet or damp areas, use only tools or equipment designed and labeled for that use. Use fiberglass or wooden ladders and keep metal ladders away from live electric current.

Extension Cord Safety



- ✘ Inspect all extension cords daily for damage and missing grounding prongs.
- ✘ Keep extension cords away from foot traffic to prevent tripping and damaging the cord.
- ✘ Use a Ground Fault Circuit Interrupter to protect against any electrical fault.

Electrical Safety

While many workers are exposed to electricity as part of their daily responsibilities, electrical hazards present a unique challenge in construction as electricity is an unseen hazard and many workers are unaware of the risks and hazards present in their workplace.

Common Causes of Injury:

- Contact with overhead or buried power lines and other live parts.
- Lack of or improper ground fault protection.
- Grounding path missing or discontinuous.
- Improper use of extension cords and equipment.
- Working on energized or hot electrical circuits.
- Over head or buried power lines are especially dangerous to workers because they contain very high voltage and are typically uninsulated. Contact with these lines are typically fatal.



Safe Work Practices

- It's important as a worker to do a visual survey of the work area and look for any overhead power lines or buried power lines before starting work.
- Use GFCI protection on 120-volt, 15 and 20-amp receptacles. Use double insulated or properly grounded tools and equipment and follow manufacturers instruction on proper usage.
- Always inspect all equipment and tools before use and remove from service any tool with frayed, damaged cords, missing ground pins, and damaged or cracked tool casings.
- Most electrical tools and equipment have safety features built into them by the manufacturer. However, if used in ways not intended by the manufacturer, operators of such equipment can no longer rely on these features.
- Never work on energized or "hot" electrical circuits until all power is shut off or de-energized and a lockout/tagout system is in place, which protect workers from the dangers of the accidental or unexpected startup of electrical equipment.



For more information, visit nahb.org/toolboxtalks.

Rev. 7.2019



Seguridad Eléctrica

Si bien muchos trabajadores están expuestos a la electricidad como parte de sus responsabilidades diarias, los peligros eléctricos presentan un desafío único en la construcción, ya que la electricidad es un peligro invisible y muchos trabajadores desconocen los riesgos y peligros presentes en su lugar de trabajo.

Causas Comunes de Lesión:

- Contacto con líneas eléctricas aéreas o enterradas y otras partes energizadas.
- Protección contra fallas a tierra faltante o incorrecta.
- Conexión a tierra faltante o discontinua.
- Uso inadecuado de los cables de extensión y equipos.
- Trabajo en circuitos eléctricos energizados o calientes.
- Las líneas eléctricas aéreas o enterradas son especialmente peligrosas para los trabajadores porque contienen un voltaje muy alto y, por lo general, no están aisladas. El contacto con estas líneas suele ser fatal.



Prácticas de Trabajo Seguras

- Es importante que, como trabajador, realice una inspección visual del área de trabajo y busque líneas eléctricas aéreas o líneas eléctricas enterradas antes de comenzar a trabajar.
- Use la protección GFCI en receptáculos de 120 voltios, 15 y 20 amperios. Use herramientas y equipos con doble aislamiento o debidamente conectados a tierra y siga las instrucciones del fabricante sobre el uso adecuado.
- Siempre inspeccione todos los equipos y las herramientas antes de usarlos y retire de servicio cualquier herramienta que tenga cables deshilachados o dañados, clavijas de conexión a tierra faltantes y cubiertas de herramientas dañadas o agrietadas.
- La mayoría de las herramientas y los equipos eléctricos tienen características de seguridad incorporadas por el fabricante. Sin embargo, si se usa en formas no previstas por el fabricante, los operadores de dicho equipo ya no pueden confiar en estas características.
- Nunca trabaje en circuitos eléctricos energizados o «calientes» hasta desactivar o apagar todas las fuentes de alimentación o hasta que se disponga de un sistema de bloqueo/etiquetado que proteja a los trabajadores de los peligros de la puesta en marcha accidental o inesperada de equipos eléctricos.

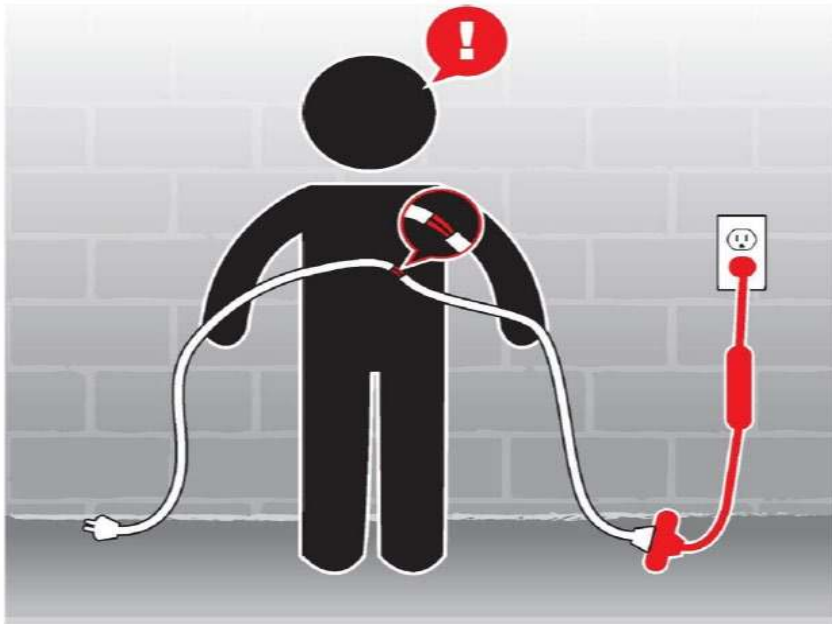


Para obtener más información, visite nahb.org/toolboxtalks.

Rev. 7.2019



Extension Cord Safety



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- ✘ Keep extension cords away from foot traffic to prevent tripping and damaging the cord.
- ✘ Use a Ground Fault Circuit Interrupter to protect against any electrical fault.

DECEMBER 16, 2019 ELECTRICAL CORD SAFETY STAND DOWN!

December 2019 is Electrical Cord Safety Awareness Month!

The HBACA Safety Committee has declared December 2019
ELECTRICAL CORD SAFETY AWARENESS MONTH!

Each of the Committee-Member Builders will be focusing on Electrical Cord Safety throughout the month and holding **Stand Down Events** in their communities on **December 16, 2019!**

See your builder for more details!



Tool Box Talks

Cord Inspections

Best Practices

Safety Communication & Awareness

Hazard Recognition

HBACA

7310 N. 16th St. #305 Phoenix,
Arizona 85020

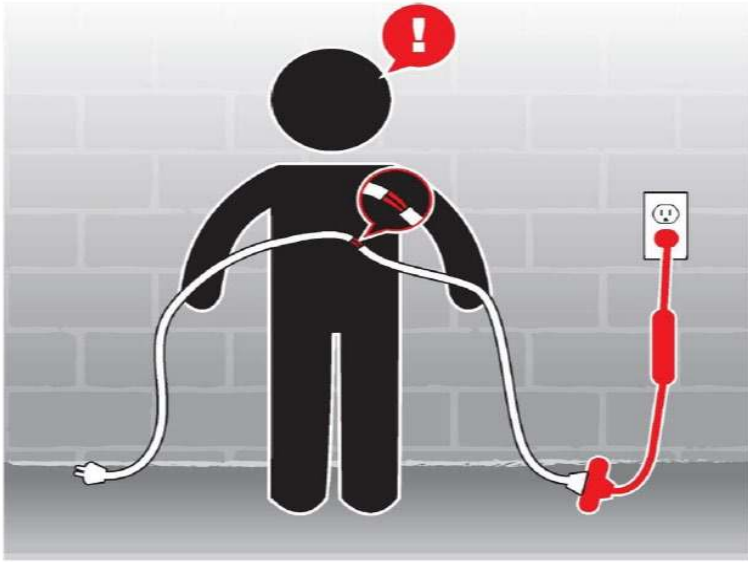
(602) 274-6545

For more info speak to Jackson Moll

Not a member of the HBACA?
Contact Connie Wilhelm, CEO



Extension Cord Safety



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16 DE DICIEMBRE, 2019

REUNIÓN ACERCA DE LA SEGURIDAD DE LOS CABLES ELECTRICOS!

Diciembre 2019 es
Mes de concientización sobre la seguridad
del cable eléctrico!

El comité de seguridad HBACA a declarado diciembre 2019

**EL MES DE CONCIENTIZACIÓN SOBRE LA SEGURIDAD DEL
CABLE ELÉCTRICO!**

Cada miembro del comité de constructores se enfocara en la seguridad
acerca del cable electrico y sostendran **juntas en sus comunidades el
16 de diciembre 2019!**

¡Vea a su constructor para más detalles!

HBACA

Home Builders Association of Central Arizona

Tool Box Talks

Cord Inspections

Best Practices

Safety
Communication &
Awareness

Hazard
Recognition

HBACA

7310 N. 16th St. #305 Phoenix,
Arizona 85020

(602) 274-6545

For more info speak to Jackson Moll

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Additional Resources (Optional) FYI – From the ADOSH ADVOCATE Q4 - 2019

ADOSH Frequently Asked Questions

Continued from page 3

Am I required to have a flammables storage cabinet?

An employer may be required to store flammable liquids in a flammables storage cabinet based on the authority having jurisdiction, i.e. Fire Marshall or local municipality fire code requirements. OSHA standard 29 CFR 1910.106(e) allows up to 25 gallons of Category 1 flammable liquids in containers, 120 gallons of Category 2, 3 or 4 flammable liquids in containers and 660 gallons of Category 2, 3, or 4 flammable liquids in a single portable tank outside of an inside storage room or storage cabinet in a building or in any one fire area (fire resistance rating of at least one hour) of a building. I would certainly recommend that employers with flammable liquids utilize a flammables storage cabinet especially in an unprotected (non-sprinkler) structure, however many employers will use the cabinets to store non-flammable liquids and other ordinary industrial supplies.

Do I need to have to have a written Emergency Action Plan?

An employer must have an emergency action plan whenever an OSHA standard requires one. The best resource for determining whether an employer is required to develop and implement an EAP would be OSHA Compliance Directive CPL 2-1.037 Compliance Policy for Emergency Action Plans and Fire Prevention Plans. Employers who are required to comply with 1910.157 Portable Fire Extinguishers (most building codes require portable fire extinguishers and the use of flammable liquids requires fire control equipment) and require all employees to evacuate during a fire emergency or where some employees fight fire but others evacuate are required to develop an EAP. OSHA has a link under the Expert Advisors section of the E-tools, (https://www.osha.gov/SLTC/etools/evacuation/require_eap.html) that will allow an employer to answer a series of questions that will then tell the employer whether or not they are required to develop an EAP. Within the same section there is a link (<https://www.osha.gov/SLTC/etools/evacuation/expertsystem/default.htm>) that will allow an employer to develop a written EAP.

Can I repair my electrical cord?

In general you can repair any cord so long that it is allowed by the manufacturer . If allowed it will have to follow the same manufacturer's recommendations and limitations for repair and brought up to the same UL specifications as intended. There are several OSHA Letters of Interpretation that address this question that ADOSH follows. The links are; (<https://www.osha.gov/laws-regs/standardinterpretations/2010-04-04>) and (<https://www.osha.gov/laws-regs/standardinterpretations/2014-04-18-0>)

We use double insulated tools with two prong cord connectors. From time to time the plug end is damaged and we replace them with a three prong cord end. Is this acceptable?

No, replacing a double insulated tool two prong cord end with a three prong cord end would defeat the tool's safety measure. I assume by stating a three prong cord end would mean that a ground prong was added where the original cord did not require one. This is due to the tool's design as a double insulated tool which does not require a ground prong. There are a few OSHA Letters of Interpretation that address this practice. The links are; (<https://www.osha.gov/laws-regs/standardinterpretations/2009-03-16-1>) and (<https://www.osha.gov/laws-regs/standardinterpretations/2003-05-19>)

If you or your workforce have questions on these answers, please feel free to contact us using our ADOSH Comments email address, comments@azdosh.gov, or call us at (802) 542-5795. Our Compliance Assistance and Consultation Staff are ready to help!

Source: <https://www.azica.gov/sites/default/files/media/2019%20Q4%20ADOSH%20Advocate%20-%20v2.0.pdf>

Additional Resources (Optional)

<https://www.osha.gov/laws-regs/standardinterpretations/2010-04-04>

Whether extension cords may be repaired and returned to use. | Occupational Safety and Health Administration



UNITED STATES
DEPARTMENT OF LABOR



Occupational Safety and Health Administration

MENU

[Standard Interpretations](#) / Whether extension cords may be repaired and returned to use.

- **Standard Number:** 1926.403 ; 1926.403(a) ; 1926.404 ; 1926.404(b)(1)(iii)(C)

OSHA requirements are set by statute, standards and regulations. Our interpretation letters explain these requirements and how they apply to particular circumstances, but they cannot create additional employer obligations. This letter constitutes OSHA's interpretation of the requirements discussed. Note that our enforcement guidance may be affected by changes to OSHA rules. Also, from time to time we update our guidance in response to new information. To keep apprised of such developments, you can consult OSHA's website at <http://www.osha.gov>.

April 4, 2010

Letter # 20070926-7973

Re: Whether extension cords may be repaired and returned to use.

Question: Where an extension cord being used in construction has been damaged near the plug end, is it permissible to replace the plug with an approved cord cap made for that type of cord, provided the repair is done by a qualified electrician?

Answer: Extension cords used in construction may be repaired, so long as the repair returns the cord to the "approved" state required by §1926.403(a).

This section states, "All electrical conductors and equipment shall be approved."

The repair of cords and cord sets is permitted under 1926.404(b)(1)(iii)(C):

Each cord set, attachment cap, plug and receptacle of cord sets, and any equipment connected by cord and plug, except cord sets and receptacles which are fixed and not exposed to damage, shall be visually inspected before each day's use for external defects, such as deformed or missing pins or insulation damage, and for indications for possible internal damage. Equipment found damaged or defective **shall not be used until repaired.** (Emphasis added.)

Repairs of extension cords are therefore permitted under §1926.404(b)(1)(iii)(C). However, in order to remain compliant with §1926.403(a), the repairs must return the equipment to the state in which it was initially

approved.

Similar repairs are discussed in our May 19, 2003 letter to Barry Cole:

To satisfy the requirements of the OSHA standards, a repair would have to restore the tool to its "approved" condition in accordance with §1926.403(a). Tools ... are approved as complete factory-produced entities. The approval is for the tool as a whole - its design, capacity, materials and construction. This provision precludes the use of an approved tool if its characteristics are materially altered.

If you need additional information, please contact us by fax at: U.S. Department of Labor, OSHA, Directorate of Construction, Office of Construction Standards and Guidance, fax # 202-693-1689. You can also contact us by mail at the above office, Room N3468, 200 Constitution Avenue, N.W., Washington, D.C. 20210, although there will be a delay in our receiving correspondence by mail.

Sincerely,

Bill Parsons, Acting Director
Directorate of Construction



UNITED STATES DEPARTMENT OF LABOR

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HBACA Builder Safety Committee Extension & Flexible Cord Safety Awareness December 2019



Additional Resources (Optional) Related Safety Video Links

- TOOLBOX TALK: ELECTRICAL CORD SAFETY (4:30)
<https://www.youtube.com/watch?v=LH7BQNn0DT0>
- EXTENSION CORD SAFETY (2:51)
https://www.youtube.com/watch?v=y1YjiDLI_3E
- Extension Cord Safety – Supervisor Safety Tip Series (2:36)
<https://www.youtube.com/watch?v=pCzWXRfaF5Y>
- Extension Cords & GFCIs – On the Job Safety Tips with SafeX (3:50)
<https://www.youtube.com/watch?v=4xypw1B0z28>
- GFCI Demonstration (4:21)
<https://www.youtube.com/watch?v=VRREFeM0Pdc>
- ESFI demostracion virtual de seguridad para el generador portatil (Spanish) (2:14)
<https://www.youtube.com/watch?v=wK-KN-dIFfM&list=PL695107E2585590A8&index=3&t=0s>
- Safety Video: Electrical Cords (Spanish) (1:50)
<https://www.youtube.com/watch?v=WUzXBQs4Jw>
- NAHB Safety Toolbox Talks: Electrical Safety (English) (5:38)
<https://www.youtube.com/watch?v=fxoYq5sBP4s>
- NAHB Safety Toolbox Talks: Electrical Safety (Spanish) (5:38)
<https://www.nahb.org/research/safety/video-toolbox-talks/electrical-safety.aspx>