Toolbox talk | Year-round | 5 minutes

Extension Cord Safety Toolbox Talk

Inspect every extension cord from plug to connector before energizing it. If the ground pin is missing, the jacket is cut or crushed, a plug is cracked or burned, or the cord may have internal damage, tag it and remove it from service; GFCI protection does not make a damaged cord safe.

English safety review completed by Ben Sleeman, Credentialed safety reviewer; professional US construction-Spanish review completed by Ben Sleeman, Credentialed safety reviewer.

READ ALOUD (ABOUT 5 MINUTES)

Before anyone plugs in a cord today, inspect it from one end to the other. Check the male plug, every grounding pin, the strain relief, the full outer jacket, and the female connector. If you find a cracked body, loose blades, burn marks, exposed conductor, a deep cut, a crushed section, or a plug pulling away from the jacket, do not try it “just once.” If the cord was run over, pinched, soaked, or gave anyone a shock, treat possible internal damage seriously.

Extension cords are temporary wiring exposed to traffic, sharp edges, water, heat, and constant handling. That makes them easier to damage than fixed wiring. In 2024, BLS recorded 52 fatal injuries in private construction from exposure to electricity, including 13 from direct exposure at 220 volts or less. Those statistics do not identify how many involved extension cords, but they show that ordinary jobsite voltage can be deadly.

Use the right cord for the work. OSHA construction rules require extension-cord sets used with portable tools and appliances to be three-wire type and designed for hard or extra-hard usage. Confirm the service marking, voltage, amperage, environment, and tool load. Use equipment listed for wet or outdoor locations when those conditions exist. Never remove a grounding pin or use an adapter to defeat it. An underrated cord can overheat, and several cords connected in series add vulnerable connections and voltage drop. Use one properly rated cord of adequate length whenever practical.

Plan the route before energizing the cord. Keep cords out of walkways, stairs, doorways, standing water, vehicle paths, and material-handling routes. Protect them where a crossing cannot be avoided. Keep them away from sharp corners and pinch points. OSHA prohibits using worn or frayed cords and prohibits fastening extension cords with staples, hanging them from nails, or suspending them with wire. Pull the plug by its body, not by yanking the cord, so the conductors and terminals are not strained.

If damage is found, disconnect the cord when that can be done safely, apply the site's “Do Not Use” tag, and place it where no one can retrieve it for the next shift. Electrical tape is not a field repair for a worn, deeply cut, or frayed cord. Federal OSHA allows only limited repairs under specific conditions for hard-service flexible cord No. 12 or larger, and the repair must preserve the cord's original insulation, outer-sheath properties, flexibility, and usage characteristics. Workers should not decide that a taped cord is ready for service; send it through the employer's authorized evaluation and repair process.

Know the site's ground-fault protection plan. For the specified 120-volt, single-phase, 15- and 20-amp receptacles used by employees, federal construction rules require the employer to use approved GFCIs or a compliant assured equipment grounding conductor program. Under the assured-grounding option, covered cords, plugs, receptacles, and equipment are visually inspected before each day's use and undergo documented continuity and terminal tests on the required schedule and after suspected damage. OSHA separately recommends pre-use inspection as a safe practice on every site. Test portable GFCIs as directed by the manufacturer. A GFCI reduces ground-fault risk, but it does not repair bad insulation, replace the grounding conductor, or protect against every line-contact hazard.

Finally, take every tingle, shock, hot plug, burning smell, or repeated GFCI trip seriously. Stop using the equipment, keep others away, and report it. Do not reset and continue until the cause has been evaluated. Today, identify the cord route, the source of GFCI or assured-grounding protection, and the location where defective equipment will be secured.

INCIDENT EXAMPLE

Documented incident - NIOSH FACE 91-05: NIOSH investigated a Virginia waterfront-bulkhead project where a 19-year-old laborer used two 100-foot extension cords to power a drill near the water. One cord had been damaged and improperly repaired: its polarity was reversed and the equipment-grounding wire had pulled loose. The receptacle had no GFCI, and workers had reported shocks from the cord days earlier. After the laborer energized and began laying out the damaged cord, investigators concluded that he apparently contacted its connector and was electrocuted; he was later found in the lake. The case shows why shock reports, missing grounding continuity, improper repairs, and lack of ground-fault protection must never be normalized. Source: NIOSH FACE 91-05, published 1991, https://stacks.cdc.gov/view/cdc/164328.

CONTROLS TO COVER

- Inspect the plug, grounding pin, strain relief, jacket, and connector before use and after any event that may have damaged the cord.
- Use a correctly rated, three-wire, hard- or extra-hard-service cord suited to the load and location.
- Route cords away from water, traffic, stairs, sharp edges, and pinch points; protect unavoidable crossings.
- Tag and secure defective cords out of service; do not cover significant damage with tape or return a cord without authorized evaluation.
- Use the site's required GFCI or assured-grounding protection and test portable GFCIs as instructed.
- Avoid daisy-chaining and overloading; use one adequately rated cord of sufficient length when practical.

CREW DISCUSSION

1. Which cord routes today cross water, doors, walkways, vehicle paths, or material-handling areas?
2. How do we confirm the GFCI or assured-grounding protection for each temporary-power source?
3. Where will a damaged cord be tagged and secured so another worker cannot reuse it?

QUICK QUIZ

1. Does a GFCI make a cut or crushed cord safe?
   No. Remove the damaged cord from service; GFCI protection is an additional layer, not a repair.
2. What should happen after a cord is run over?
   Remove it from use and have it inspected and, where applicable, tested before it returns to service.
3. Can a missing grounding pin be bypassed with an adapter?
   No. Tag and remove the cord from service.

Reference: 29 CFR 1926.404(b)(1), 1926.405(a)(2)(ii) and (g), and 1926.416(b)(2) and (e) - BLS counted 52 fatal occupational injuries in private construction from exposure to electricity in 2024; 13 were classified as direct exposure at 220 volts or less. These are broad electrical categories, not extension-cord counts.
Sources: 29 CFR 1926.404 - GFCI and assured-grounding alternatives; 29 CFR 1926.405 - cord type, protection, splices, and strain relief; 29 CFR 1926.416 - routing and damaged-cord prohibitions; OSHA: Flexible Cords; OSHA 4496-02 2026: Electrical Safety in Construction; NIOSH FACE 91-05: Damaged Energized Extension Cord; BLS CFOI Table A-9, 2024

Toolbox Talk Sign-In Sheet

Attendance record for the talk above. Reviewers (OSHA, GC, ISNetworld/Avetta) expect topic, date, presenter identity, and attendee signatures.

Project / location

Date and time

Topic: Extension Cord Safety Toolbox Talk

Presenter (print)

Presenter signature

NAME (PRINT)	COMPANY / TRADE	SIGNATURE

Concerns raised and follow-up actions (owner, due date)