

One Hundred And Ten Volts Killed Him

He grabbed a light fixture chain so the bucket would not hit it.

10 MIN

NFPA 70E Art. 110 · OSHA GFCI / assured equipment grounding

NIOSH FACE 85-47

WHAT HAPPENED

1985 · Indiana · General contractor, ironwork · 18-year-old apprentice, 6 weeks on the job

Crews were installing a wind screen in the gable end of a 65-foot-high airport hangar. At afternoon break, a truck-mounted aerial bucket picked up the scaffold crew to lower everyone to the floor. As the bucket descended through the roof trusses it came near a metal light fixture hanging on a 20-foot chain. The 18-year-old apprentice reached out and grabbed the chain to keep the bucket from striking it. He was electrocuted at 110 volts. The source was a shorted receptacle inside the aerial bucket. Investigators found extension cords with bad splices, missing grounds and reversed polarity, an ungrounded drill, and the bucket receptacle with reversed polarity and its cover removed.

WHY IT HAPPENED

Neither a GFCI nor an assured equipment grounding conductor program was protecting the cord-and-plug equipment or the receptacle in the bucket. The fixture had been known faulty for at least five months.

WHAT THE STANDARD REQUIRES

- GFCI protection, or a documented assured equipment grounding conductor program. Pick one and run it.
- Inspect cords, plugs, and tools before use. Remove damaged equipment from service and mean it.
- Field modifications are made by a competent person — not with whatever is in the truck.
- Known electrical faults get corrected now, not on the next shutdown.

TALK ABOUT IT — DO NOT SKIP THIS PART

1. One hundred and ten volts. Who here still thinks of 120 as the safe one?
2. Grab the nearest extension cord. Check the ground pin and the jacket. What did you find?
3. What is on our site right now that we know is faulty and have not fixed?

WHAT WE WILL DO DIFFERENTLY HERE

ATTENDANCE

PRINT NAME	SIGNATURE	PRINT NAME	SIGNATURE