

# ELECTRIC TOOLS – BASIC SAFETY

## IDENTIFY

The main hazards with electric tools are the following:

- Lack of grounding or double insulation
- Broken or disarmed safety devices such as retractable guards
- Unfamiliarity with the tool
- Failure to hold tool securely
- Failure to secure work
- Injuries to hands and eyes
- Faulty tool cords and extension cords
- Failure to use ground fault circuit interrupters (GFCIs) with tools operated outdoors or in wet or damp locations indoors, as outlined in the Workplace Safety and Health Regulation Part 38.11

## COMMUNICATE AND CONTROL

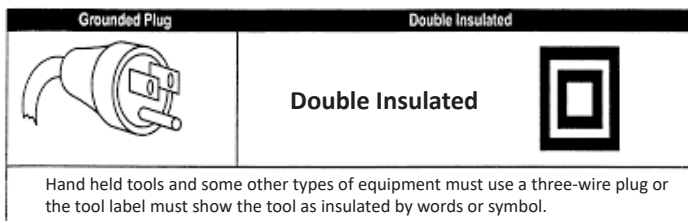
The basic rule is simple: consider all electrical wires and equipment live until they are tested and proven otherwise.

### Grounding

Make sure the tool is grounded and cord polarized or double-insulated. “Grounded” means an approved three-wire cord with a three-prong plug. Use the tool only in a three-pole outlet. You can identify two-pronged polarized tools because one prong is larger than the other.

Never cut off or bend back the ground pin on a three-prong plug or use a two-prong cheater or adapter to make the plug fit in a two-pole outlet.

Double-insulated tools are labelled as such. The label will feature a D, a D inside a square, a double square, and so on. Make sure that casing of a double-insulated tool is not cracked, split, or broken.



## Cords

Inspect tool cords and extension cords daily for damage:

- Inspect tool cords and extension cords daily for damage.
- Keep cords clear of the tool during use.
- Replace any open-front plugs with dead-front plugs. Dead-front plugs are sealed. They present less danger of shock or short circuit.
- Inspect tool cords and extension cords for kinks, cuts, cracked or broken insulation, and makeshift repairs.
- Don't use the cord to lift, lower, or carry an electric tool.
- Don't disconnect the tool by yanking or jerking on the cord. You will damage the cord, loosen connections, and run the risk of shocks and short circuits.
- Protect cords from traffic. Run them through conduit or between planks along either side. If necessary, run cords overhead above work or travel areas.
- If any cord feels more than warm to the touch, check the circuit for overloading.
- Report any shocks from tools or cords to your supervisor. Tag the tool and don't use it.
- Outdoors or in damp or wet locations indoors, use a Type A GFCI. That's the law. GFCIs detect any current leaking to ground from a tool or cord and quickly cut off power before damage or injury can occur.

## Tools

- Use only tools that are polarized or double insulated.
- Make sure the casings of double-insulated tools are not cracked or broken.
- Always use a Type A ground fault circuit interrupter (GFCI) with portable electric tools operated outdoors or in damp or wet locations. GFCIs detect current leaking to ground from a tool or cord and shut off power before damage or injury can occur.
- Any shock or tingle, no matter how small, means that the tool or equipment needs to be checked and repaired.
- Take defective tools out of service.
- Before drilling, nailing, cutting or sawing into walls, ceilings, and floors, check for electrical wires or equipment.

## COMMUNICATE AND CONTROL

### Panels

- Temporary panel boards must be securely mounted in a lockable enclosure protected from weather and water. The boards must be accessible to workers and kept clear of obstructions.
- Receptacles must be GFCI-protected
- Use only generators with neutral bonded to frame.



## THE QUIZ

1. Which of the following hazards are associated with electrical tools?
  - a) Injuries to hands and eyes
  - b) Failure to secure work
  - c) Faulty tool cords and extension cords
  - d) Failure to use ground fault circuit interrupters
  - e) All of the above
2. It is important to make sure the tool is grounded and the cord polarized or double-insulated:  
TRUE \_\_\_\_\_ FALSE \_\_\_\_\_
3. "Grounded" means an approved two-wire with a two-prong plug:  
TRUE \_\_\_\_\_ FALSE \_\_\_\_\_
4. You can identify two-pronged polarized tools because one prong is larger than the other:  
TRUE \_\_\_\_\_ FALSE \_\_\_\_\_
5. It's okay to cut off or bend back the ground pin on a three prong plug to make the plug fit in a two-pole outlet:  
TRUE \_\_\_\_\_ FALSE \_\_\_\_\_
6. If a casing is double-insulated there is no hazard:  
TRUE \_\_\_\_\_ FALSE \_\_\_\_\_
7. Inspect tool cords and extension cords daily for damage:  
TRUE \_\_\_\_\_ FALSE \_\_\_\_\_
8. Keep cords clear of the tool during use:  
TRUE \_\_\_\_\_ FALSE \_\_\_\_\_
9. Inspect tool cords and extension cords for kinks, cuts, cracked or broken insulation, and makeshift repairs:  
TRUE \_\_\_\_\_ FALSE \_\_\_\_\_
10. Cords cannot be crushed or damaged if run over by equipment so there is no need to protect them:  
TRUE \_\_\_\_\_ FALSE \_\_\_\_\_

1. e; 2. TRUE; 3. FALSE; 4. TRUE; 5. FALSE; 6. FALSE;  
7. TRUE; 8. TRUE; 9. TRUE; 10. FALSE

ANSWERS: