



Electrical Panel Box Safety Awareness Training

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Training Outline

- Purpose
- Scope
- Background
- What is an Electrical Panel Box?
- General Rules to Follow for Electrical Panel Boxes
- Review
- Summary



Purpose

- Increase your awareness to potential electrical hazards associated with electrical panel boxes and to satisfy one of the objective established for CY16 Command Safety Goal #2.
- Provide you important information on electrical panels boxes and explain how you can prevent shock or fire hazards in the workplace and at home.



Scope

- This training is not designed to teach you to work on electrical equipment.
- You will not be qualified to work on electrical equipment.
- If you see problems with electrical equipment, notify your supervisor or consult with a qualified electrician.



Background



CY16 Command Safety Program Goals MCLB Albany



GOAL #2: Increase Electrical Panel Box Safety Awareness

Background: Familiarity with electrical panel boxes will increase safety awareness for employees who work near electrical panel boxes and provide relevant safety information that can be applied to home electrical panel boxes. In addition, a recent change to the National Fire Protection Association standard for electrical safety in the workplace requires specific warning labels be placed on electrical panel boxes.

References: 29 CFR 1910.335 and NFPA 70E – 2015 Section 130.5

Goal: Provide training for employees on electrical panel box safety and affix hazard warning labels to all electrical panels in facilities occupied by the command.

Target Date: 16 December 2016

Goal Leader: Command Safety Officer

Goal Progress Reporting: Division Directors and HQ Company Commander will brief the progress of this goal at the Commanding Officer's Quarterly Safety Council.

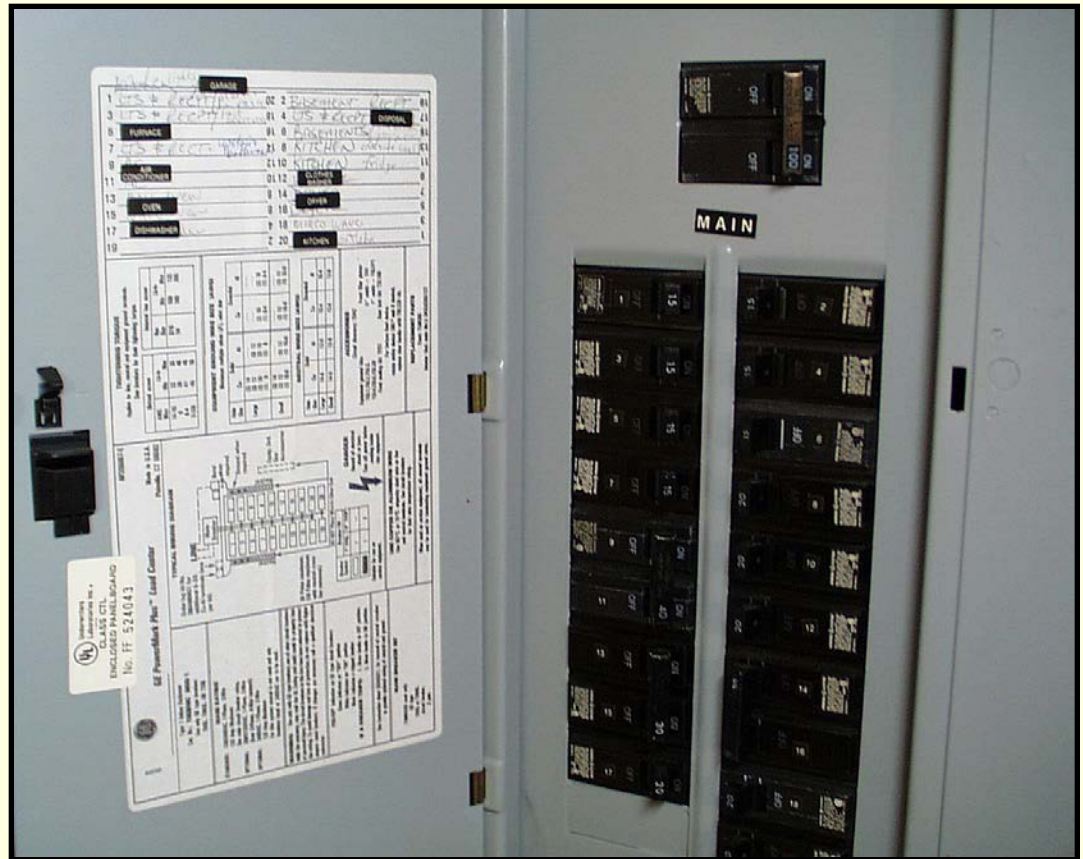
	Objective	Objective Leader	Completion Date
1	Marines and Civilian Marines will view the electrical panel box training briefing prepared by the Risk Management Office as part of the 101 Critical Days of Summer Safety stand down.	Division Directors, Special Staff and HQ Company Commander	27 July 2016
2	Divisions will validate the Public Works Office inventory of electrical panel boxes in non-warehouse facilities occupied by the installation command. The inventory will include a confirmation of the asset tag and that a 30" clearance is maintained for each electrical panel box.	Division Directors, Special Staff and HQ Company Commander/PWO	27 July 2016
3	Working with the Risk Management staff and unit safety officers, PWO will ensure that the appropriate arc flash and shock hazard warning label is affixed to each electrical panel box identified in the division's inventory.	PWO	16 December 2016

What is an Electrical Panel Box?

An **electrical panel** is a steel box that holds multiple circuit breakers wired to circuits that distribute power in a building at work or your home.

An electrical panel is also known as:

- breaker panel
- load center
- service panel or
- breaker box





What is an Electrical Panel Box?

The electrical panel operates like the human's body. Circuits and wires carry electricity throughout the home like veins and arteries carry blood to organs and limbs.

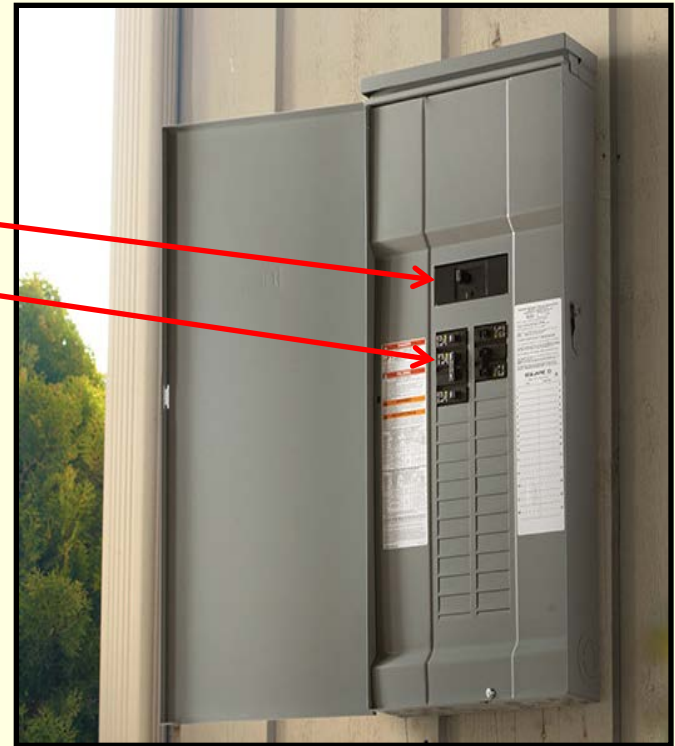
Blood cannot travel throughout a body unless its heart is pumping, and electricity cannot travel throughout a home unless the electrical panel is operating properly.





What is an Electrical Panel Box?

- An electrical panel usually consist of two types of breakers:
 - Main breaker
 - Circuit breakers
- Main breaker is a large double pole circuit breaker that limits the amount of electricity coming in from outside to protect the circuits it feeds.
- Circuit breakers turn the power to your home/building on and off to protect wiring from damage by “tripping” when an electrical short or overcurrent occurs.



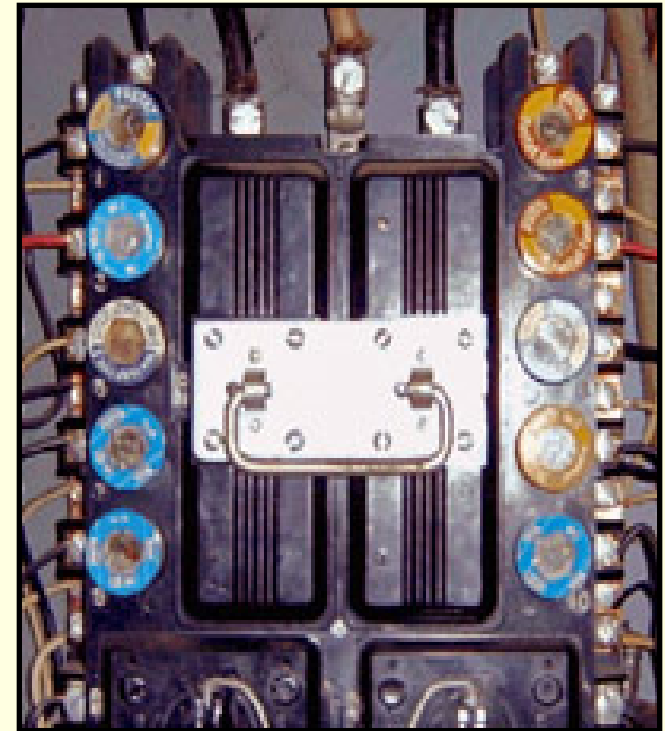


What is an Electrical Panel Box?

There are many type of electrical panel boxes. On the installation most of these electrical panel boxes or sub panel boxes are up to current codes. However, there are three types of electrical panels that potentially put homeowners at more risk:

- **Federal Pacific Electric** panels;
- certain **Zinsco** panels and;
- other **outdated** panels (prior to 1980).

Outdated Panel



What is an Electrical Panel Box?

If you suspect that you may have a Federal Pacific Electric, Zinsco, or an outdated circuit breaker panel in your home, or in any event, you have not had your panel inspected recently, we encourage you to consider upgrading or contact a licensed electrical contractor in your area for an inspection.

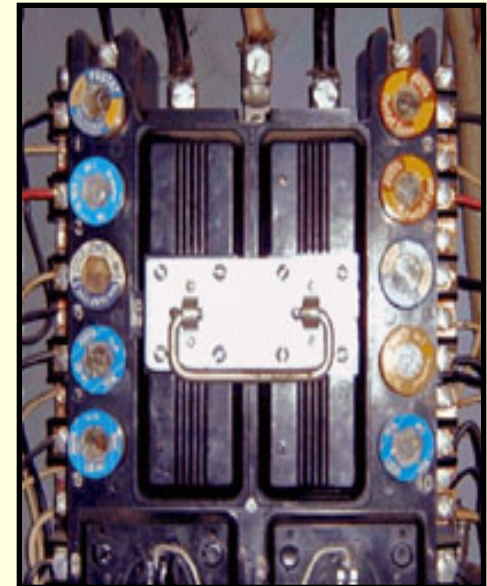
Federal Pacific Electric Panel



Zinsco Panel



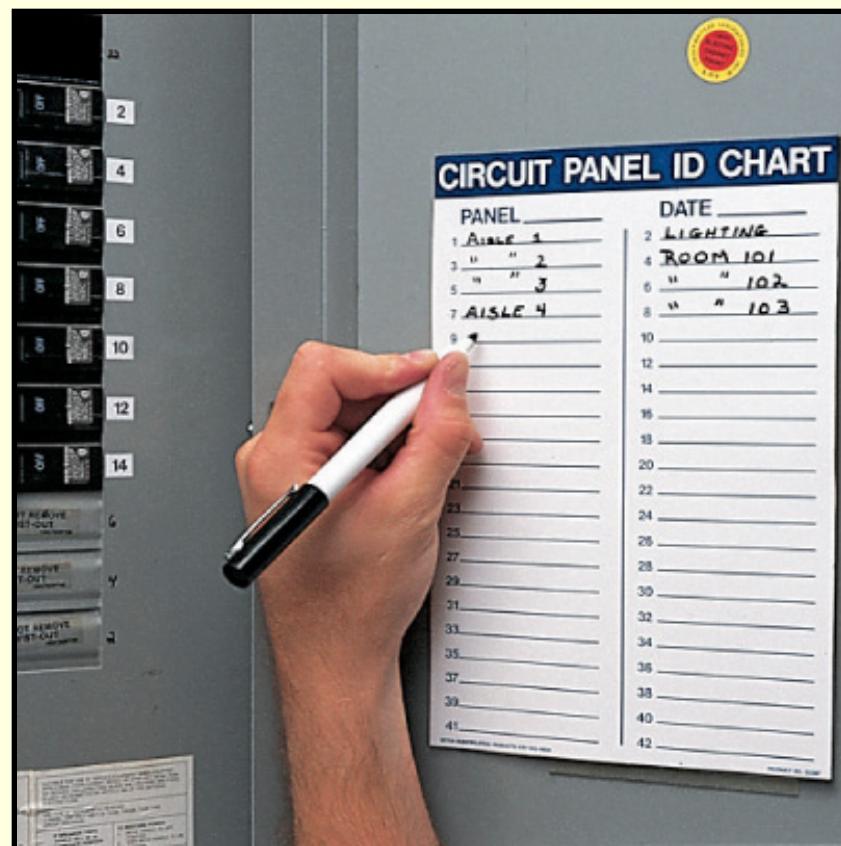
Outdated Panel





General Rules to Follow for Electrical Panel Boxes

- Identify the location of your electrical panel box and inform your family members.
- Ensure each circuit breaker is marked for its purpose.
- Visibly inspect the electrical panel boxes for:
 - access
 - openings
 - missing knockout
 - burns
 - damages
 - corrosion, etc.





General Rules to Follow for Electrical Panel Boxes

- Keep electric panels clear of any obstructions at all times.
- Don't store items in a electrical panel room. Find another place for storage of materials, products, etc.

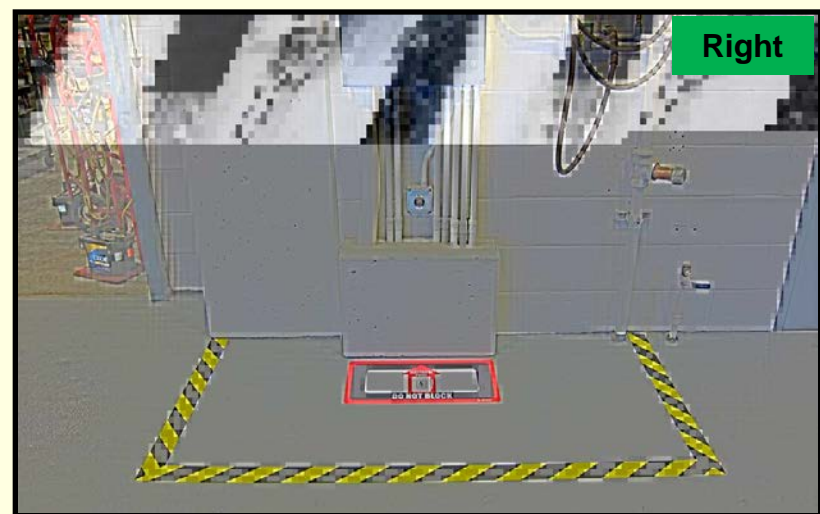




General Rules to Follow for Electrical Panel Boxes

There are two equally important reasons for keeping electrical panel boxes clearance:

1. Sufficient access and working space maintained to permit ready and safe operation and maintenance of equipment.
2. Safety of your home and family. If there is an electrical accident and for various reasons that the break does not trip (poor grounding, improper installations or faulty equipment), seconds can mean the difference between life and death or your house burning down.





General Rules to Follow for Electrical Panel Boxes

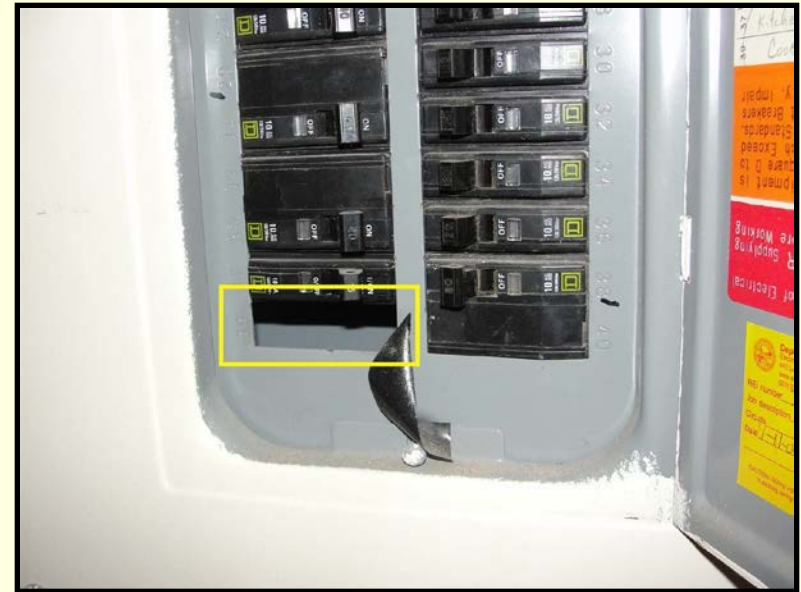
- Never bypass, bridge or otherwise disable any circuit-protection device.
- Always replace a fuse with an exact duplicate. Make sure that the new fuse has the same rating.
- Never put a penny or conducting device into a fuse socket to replace a fuse that keeps blowing.
- Don't replace the fuse or reset the breaker a second time until you find and correct the problem.
- If you have to reset an electrical panel box, always wear shoes to minimize potential electrical shock.
- Stand to the side when resetting a tripped circuit breaker.





General Rules to Follow for Electrical Panel Boxes

- Ensure junction boxes, pull boxes, and fittings have an approved covers in place.
- Ensure unused openings in cabinets, boxes, and fittings are closed (no missing knockouts).
- If you are at work, report these situations to your supervisor otherwise consult a qualified electrician.



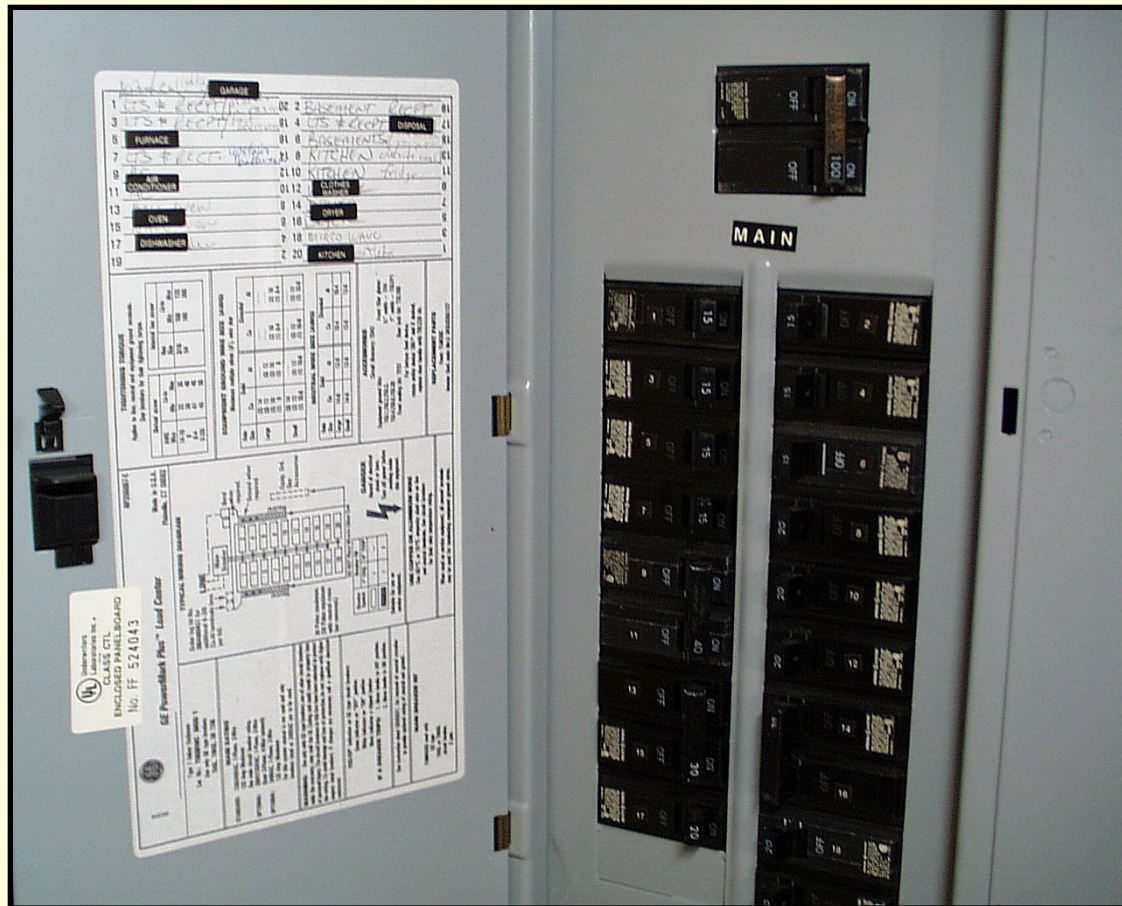
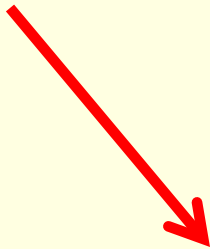
Covering these openings helps to prevent accidental shocks (think of kids), helps to prevent hot sparks from escaping if something goes wrong inside the enclosure, and helps to prevent pests from entering.





General Rules to Follow for Electrical Panel Boxes

Click on photo to view video





Review

- Identify the location of your electrical panel boxes and inform your family of the location.
- Maintain proper clearance of electrical panel boxes.
- Visibly inspect the electrical panel boxes for opening, missing knockout, damages, corrosion, etc.
- Ensure each circuit breaker is marked for its purpose.
- If you have to reset an electrical panel box, always wear shoes to minimize potential electrical shock.
- Stand to the side when resetting a tripped circuit breaker.
- Don't replace the fuse or reset the breaker a second time until you find and correct the problem. Consult a qualified electrician if necessary.
- Always replace a fuse with an exact duplicate.



Summary

Increasing your electrical panel box safety awareness is important to you at work and home. Your participation in this training should help you identify problems associated with electrical panel boxes and help you protect your family at home.

