

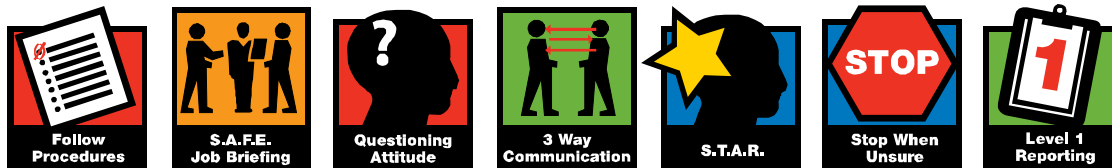


ERROR PREVENTION WORK ZONE KIT

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ERROR PREVENTION TOOLS associated with this Work Procedure



SEE THE ERROR PREVENTION ICON QUICK REFERENCE GUIDE IN THE INTRODUCTION SECTION FOR A DETAILED EXPLANATION OF EACH ACTION

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I. SCOPE

The Error Prevention Work Zone Kit is a collection of barriers, flagging and specialty tools. The barriers and flagging shall be used in conjunction with SPCWP 4700 Isolation and Barrier Process When Testing Relay and Control Equipment.

II. DEFINITIONS

- A. Barriers-** A device used to identify and deter the operation of equipment or prevent personnel from entering in-service panels during maintenance activities. Also used to cover or protect exposed energized components. (Orange)
- B. Critical Work Zone-** A work zone designated by the Relay Technician where tedious testing activities are being performed without distractions. A means to prevent other individuals from entering the area are commonly put into place.
- C. Flagging-** Signage, safety tape or any device used to identify the equipment that is included as part of the testing or maintenance activity. (Pink)
- D. Isolation-** The act of separating circuits to prevent operation of equipment.
- E. Work Zone-** Panels, racks or areas where the associated relays, meters and equipment are located.

III. SAFETY

Job Briefing/Risk Assessment:

Prior to starting work and during the planning process, the Job Site Supervisor shall conduct a Job Briefing. This briefing shall include PPE Requirements and a Risk Assessment to identify potential risks and determine methods to mitigate hazards. **(REFER TO AND FOLLOW THE BGE SAFETY MANUAL, SECTION VI C., JOB BRIEFING (S.A.F.E. FORM) FOR INFORMATION.)**

The entire crew shall conduct an EVENT-FREE CHECK as part of their pre-job safety brief. Error trap identification shall be included in the EVENT-FREE CHECK. (Refer to Event-Free Performance Tool Book.)

Follow the requirements for station entry. Assure that the proper permit and tagging requirements have been met before starting work. Customer reliability constraints and preparations also apply.

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IV. ERROR PREVENTION WORK ZONE KIT

A. Color Code

1. Barriers = Orange
2. Flagging = Pink
3. Specialty Tools = Yellow

B. Barriers

1. Orange Electric Tape (3 rolls each - ¾ and 1 ½ inch)
 - a. **Required use** as an insulating barrier for electrical connectors and test provisions.
2. Terminal Barriers (6 single & 6 Double)
 - a. **Required use** as a barrier for electrical connections on terminal blocks.
3. Current Isolators (12 – Orange)
 - a. **Required use** as a barrier from current transformers at test provisions.
4. Orange Masking Tape (4 – 1” Rolls)
 - a. **Required use** as a barrier to identify panels and equipment that shall not be accessed during maintenance or testing activity.
5. Work Zone Sign Barrier (4 - 18”x48” Orange signs with plastic grommets)
 - a. **Recommended use** as a barrier for large areas such as panels.

C. Flagging

1. Individual Numbered Isolation Cards (25 - Pink)
 - a. **Required use** as a means to identify abnormal test provisions during maintenance or testing activities only. Note that a caution tag may be placed on test provisions used to isolate failed equipment or used to isolate equipment for other organizations.
 - b. Each Card used shall be recorded on the Equipment / Maintenance Alteration Log (See SPCWP4700).
 - c. All cards shall be accounted for at the end of the job as recorded on the Equipment / Maintenance Alteration Log (See SPCWP4700).

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2. Pink Dots (2 Boxes of 1000)
 - a. **Required use** as a means to identify panels that may be accessed during maintenance or testing activities located outside of the work zone. The Pink Dots may be used in conjunction with or separate from Relay Test Card.
3. Relay Test Card with Pink Dot (50 – 4"x4")
 - a. **Required use** as a means to identify panels that may be accessed during maintenance or testing activities located outside of the work zone. The Relay Test Card may be used in conjunction with or separate from Pink Dots.
4. Magnetic Caution Sign (1 – Pink)
 - a. **Recommended use** as a means to identify panels and/ or outdoor equipment that may be accessed during maintenance or testing activities located outside of the work zone.
5. Wire Identification Clip (25 - Yellow Clips)
 - a. **Recommended use** as a means to identify wires that may be lifted or tested during maintenance or testing activities.
 - b. All clips shall be accounted for at the end of the job.

D. Specialty Tools

1. Error Prevention Work Zone Kit Quick Reference Guide
 - a. **Required use** as reference only.
2. Push Button Fused Jumper (1 – Yellow)
 - a. **Required use** as a means to connect 2 test points when actuating a device during maintenance or testing activities.
 - b. Required Actions
 - i.* Identify the test points necessary to actuate the device on the print.
 - ii.* Connect the Push Button Fused Jumper to the test points.
 - iii.* Use peer verification to assure that the Push Button Fused Jumper is connected to the correct test points as shown on the print to actuate the device.
 - iv.* Depress the Push Button Fused Jumper and monitor expected results.
 - v.* Remove Push Button Fused Jumper.

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3. Yellow Jumpers (6- 24", 2- 48", 4- 72")
 - a. **Required use** as a means to connect 2 test points that do not actuate a device during maintenance or testing activities.
 - b. All Yellow Jumpers shall be accounted for at the end of the job.
4. Yellow Wire Caps (25 each size - .25, .281, .375)
 - a. **Required use** as a temporary insulator to identify ring terminal connectors and wires that have been lifted during testing activities.
5. Extreme Standing Pad (1 Orange Pad)
 - a. **Recommended use** as a means to identify panels that may be accessed during maintenance or testing activities.
6. Yellow Safety Tape (2 Rolls)
 - a. **Recommended use** as a means to prevent other individuals from entering a critical work zone.
7. Velcro Straps (20 – 18" Straps)
 - a. **Recommended use** as a means to attach Work Zone Barrier Signs

V. REFERENCES

- A. Event – Free Performance Tool Book
- B. SPCWP4700 Isolation and Barrier Process When Testing Relay and Control Equipment
- C. Permit and Tagging Manual
- D. SAFE Form

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