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SYSTEMSHIELD™ LOCKOUT/TAGOUT (LOTO) GROUNDING GUIDELINES

PURPOSE

This document defines the Lockout/Tagout (LOTO) procedures required during installation, testing, or servicing of the SystemShield™ Grounding Kit. These procedures ensure that electrical energy sources are properly isolated and secured prior to handling any component connected to an electrical enclosure, panel, or chassis.

SystemShield kits are installed on equipment that must be verified de-energized before beginning work. LOTO compliance is mandatory under OSHA 1910.147 and NFPA 70E.

WHEN TO APPLY LOTO PROCEDURES

LOTO must be applied before:

- Installing or removing a SystemShield grounding wire or lug
 - Mounting or repositioning the terminal bus bar
 - Torqueing or loosening any hardware on a live panel or rack
 - Performing resistance testing with body contact near bonded surfaces
 - Replacing any damaged SystemShield kit component
 - Conducting inspection, retest, or troubleshooting after fault conditions
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MINIMUM REQUIRED LOTO STEPS

1. **Notify all personnel** in the affected area
2. **Identify all energy sources** associated with the panel, rack, or enclosure
3. **Turn off and isolate power** using the panel disconnect or breaker
4. **Apply LOTO devices** to all energy isolation points:
 - Use keyed lockout devices for mechanical lockout

- Apply a visible, weather-resistant tag indicating installer name, date, and purpose
5. **Verify zero energy state:**
 - Use a non-contact voltage tester or digital multimeter
 - Test each termination point, chassis, and enclosure
 - Confirm all readings are zero before proceeding
 6. **Document lockout** in the project installation log or safety binder
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ACCEPTABLE LOTO EQUIPMENT

Device Type	Description
Circuit breaker lockout	Attaches to panel-mounted breakers or switches
Lockout hasp	Allows multiple locks by different personnel
Tagout label	Must include “DO NOT OPERATE” and personnel info
Padlock	Each technician must apply a unique lock
Multimeter or voltage tester	Calibrated device used to verify de-energization

DO NOT PROCEED IF:

- LOTO cannot be applied due to shared circuit design
- A disconnect is inaccessible, damaged, or improperly labeled
- Zero energy cannot be confirmed
- You are working alone without documented safety observation
- Lock or tag is missing, altered, or unclear

If any of these conditions apply, STOP WORK and contact the safety supervisor or facility lead immediately.

LOTO RELEASE PROCEDURE (AFTER SYSTEMSHIELD INSTALL)

1. **Verify installation is complete and all resistance tests passed**
2. **Remove all tools, wires, and test equipment from the panel or chassis**
3. **Installer removes their own lock and tag**
4. **Supervisor signs off on Final Inspection Sign-Off Sheet**
5. **Power may be re-energized only after sign-off is complete**

COMPLIANCE REFERENCES

- OSHA 29 CFR 1910.147 (Control of Hazardous Energy)
- NFPA 70E – Article 120 (Establishing an Electrically Safe Work Condition)
- NEC Article 250.8 – Grounding connection requirements

TRAINING NOTE

SystemShield does not assume control of jobsite LOTO procedures. It is the responsibility of the installing contractor or site supervisor to follow all local and facility-specific protocols in addition to these guidelines.

SUPPORT

For clarification on grounding isolation, LOTO protocols, or field review of SystemShield installation safety:

Email: systemshieldgrounding@gmail.com

Website: www.systemshield.tech

Secure Access: <https://systemshield.tech/distributor-access>