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SYSTEMSHIELD™ COMPONENT WEAR INDICATORS – INSPECTION & REPLACEMENT GUIDELINES

PURPOSE

This document provides inspection criteria to identify worn, compromised, or unsafe SystemShield™ Grounding Kit components. It is used during routine maintenance, post-installation audits, or corrective action procedures to determine whether components must be re-torqued, reseated, or replaced.

GENERAL INSPECTION FREQUENCY

Event	Inspection Required?
Final installation sign-off	Yes
Annual preventive maintenance	Yes
Equipment relocation or rebuild	Yes
Post-lightning strike or short event	Yes
Kit exposed to moisture or UV	Yes
Inspector or supervisor request	Yes

SECTION 1 – WIRE CONDITIONS

Indicator	Action Required
Insulation discoloration, fading, or cracking	Replace wire
Wire jacket nicked or cut	Replace wire
Exposed copper strands near lug	Replace wire
Kinked or bent at lug barrel	Replace wire
Wire pulled from crimped barrel	Replace wire

SECTION 2 – LUG CONDITIONS

Indicator	Action Required
Lug loose at termination	Retorque or replace
Deformation (warped, crushed, twisted)	Replace lug
Surface oxidation (light white dust)	Clean, inspect crimp, retorque
Rust or green corrosion near contact area	Replace lug
Missing inspection window visibility	Reinspect crimp or replace
Mounting hole stripped or deformed	Replace lug and fastener

SECTION 3 – FASTENER CONDITIONS

Indicator	Action Required
Hardware movement under hand pressure	Retorque immediately
Washer cracked or bent	Replace washer
Rust on threads or washers	Replace all affected hardware
Thread stripped or screw head deformed	Replace screw or bolt
Fastener cannot reach torque spec	Replace hardware

SECTION 4 – TERMINAL BUS BAR CONDITIONS

Indicator	Action Required
Bent mounting surface	Remove and remount or replace bus bar
Loose bus bar after torque	Check fasteners, lock washers, or replace
Threaded hole stripped	Use alternate mounting method or replace panel section
Surface oxidation	Clean bonding surface and re-seat all lugs

SECTION 5 – ZIP TIE & CABLE MANAGEMENT

Indicator	Action Required
Zip tie dry, brittle, or cracked	Replace
Tie tension too loose	Replace
Bundle pulled or drooping from support	Reroute and resecure

REPLACEMENT NOTES

- Always use factory-spec SystemShield components when replacing any part
 - Do not field-crimp or substitute hardware unless authorized by documentation
 - If three or more parts show wear in a single kit, contact SystemShield for review
 - Log all replacements using a **Defect Report Form** and note in the **Installation Log**
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SUPPORT

For questions about wear thresholds, replacement sourcing, or warranty coverage:

Email: systemshieldgrounding@gmail.com

Website: www.systemshield.tech

Distributor Portal: <https://systemshield.tech/distributor-access>