

P-307 Reference Section	RCDR Topic	RCDR Number
Appendix D item 21a	Clarification of crane grounding verification	19-001

QUESTION

Q1: Is acceptable to hang a weight on the hook during the NAVFA P-307 Appendix D item 21a crane grounding verification test in an effort to improve the resistance readings?

Q2: Do the requirements for strain relief grounding tests apply only to strain relief cables or any strain relief mechanism?

ANSWER

A1: A weight shall not be used to perform the NAVFAC P-307 Appendix D item 21a grounding test. In the past, several instances were reported where an operator received an electrical shock due to poor bonding/grounding of a crane. In these incidents there was a combination of a deficient condition providing a voltage source and a poorly bonded/grounded crane. The deficient condition did not render the cranes inoperable and could not have been detected by the operator. The trolley frames were bonded/grounded through the wheels and the tracks they rode on, as permitted by the NFPA 70, Section 610.61 at the time of construction. As the operator conducts numerous operations without a weight on the hook, this configuration should be used during ground checks as it has the highest potential for improper grounding. Adding a weight to the hook to perform the required NAVFAC P-307 testing changes the configuration of the crane from its normal unloaded condition, potentially masking an unsafe condition.

A2: Crane grounding verification tests apply to all conductive strain relief mechanisms (e.g., strain relief chain), not just strain relief cables. The intent of performing the ground verification on the metallic strain relief mechanisms is to ensure all non-current carrying metal parts of the crane are satisfactorily bonded. The type of metallic strain relief is irrelevant and appropriate ground checks would apply to chain, cable or any other conductive mechanisms.