

Hoisting and Rigging: Inspection and Maintenance Requirements

URL: <http://www-group.slac.stanford.edu/esh/eshmanual/references/hoistingReqInspect.pdf>

Revision Record: [https://www-](https://www-internal.slac.stanford.edu/esh/docreview/reports/revisions.asp?ProductID=435)

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Department: Field Safety and Building Inspection

Program: Hoisting and Rigging

Authority: [ESH Manual, Chapter 41, Hoisting and Rigging](#)

Date Effective: 15 September 2009

1 Purpose

The purpose of these requirements is to ensure that hoisting and rigging (H&R) equipment is safe to operate.

2 Scope

These requirements cover inspections and maintenance over the life of H&R equipment.

Requirements are listed in terms of

- Types of inspection (initial, pre-use, frequent, periodic, and third party) and maintenance (preventative, operational testing, and load testing)
- Responsibilities (person who ensures that the inspection was performed and person performing the inspection)
- Documentation requirements
 - *HRED* refers to the H&R Equipment Database, which is maintained by the H&R inspector. Submit inspection and maintenance data to this inspector to stay in compliance.
 - *CR* refers to custodian records, which are maintained by the equipment custodian.

Details on what to look for and how to conduct the inspection are listed in Department of Energy Standard 1090, “Hoisting and Rigging” ([DOE-STD-1090-2007](#)).

3 Applicability

These requirements apply to all classes of employees and non-employees and to all H&R equipment.

4 Prerequisites

Inspectors and custodians must be current in training as specified in [Chapter 41, “Hoisting and Rigging”](#).

5 Requirements

Requirements are listed in the table below.

6 References

- *SLAC Environment, Safety, and Health Manual* (SLAC-I-720-0A29Z-001), [Chapter 41, “Hoisting and Rigging”](#)
- H&R Equipment Database
 - [Crane Information Database](#)
 - [Rigging Equipment Database](#)
- Hoisting and Rigging: Review of Conformance Form (SLAC-I-730-0A21J-021) [pdf](#) or [Word](#)
- Hoisting and Rigging: Visual Structural Weld Inspection Criteria and Form (SLAC-I-730-0A21J-020) [pdf](#) or [Word](#)
- Hoisting and Rigging: Pre-use Inspection Checklist for Floor-operated Cranes (SLAC-I-730-0A21J-019) [pdf](#) or [Word](#)
- [Hoisting and Rigging: Pre-use Inspection Criteria for Below-the-Hook Lifting Devices, Slings, and Rigging Hardware and Accessories](#) (SLAC-I-730-0A21S-036)
- Hoisting and Rigging: Pre-use Inspection Checklist for Hand-operated Hoists (SLAC-I-730-0A21J-018) [pdf](#) or [Word](#)
- Hoisting and Rigging: Pre-use Inspection Checklist for Electrical or Air Powered Hoists (SLAC-I-730-0A21J-023) [pdf](#) or [Word](#)
- [Hoisting and Rigging: Mobile Crane Pre-use Inspection Form](#) (SLAC-I-730-0A21J-030)
- [Hoisting and Rigging: Crane and Hoist Monthly Inspection Form](#) (SLAC-I-730-0A21J-031)
- Department of Energy Standard 1090, “Hoisting and Rigging” ([DOE-STD-1090-2007](#)) and third-party standards referenced therein
- Title 8, *California Code of Regulations*, Section 5022, “Proof Load Test and Examination of Cranes and Their Accessory Gear” ([8 CCR 5022](#))

Hoisting and Rigging: Inspection and Maintenance Requirements

Type	Equipment	Frequency	Person Responsible for Ensuring Inspection is Performed and Documented	Person Qualified to Perform the Inspection	Documentation Requirements
Initial Inspections¹					
	Cranes, hoists, and miscellaneous lifting devices	Initial	Equipment custodian	Crane inspector	HRED
	Miscellaneous lifting devices (such as portable A-frames)	After disassembly and reassembly	Equipment custodian	Qualified person	CR
	Below-the-hook lifting devices	Initial	Equipment custodian	H&R inspector or designee	HRED
	Wire rope and chain slings	Initial	Equipment custodian	H&R inspector or designee	HRED
	Synthetic slings	Initial	Equipment custodian	Qualified person	CR
	Rigging hardware and accessories for critical lifts	Initial	Equipment custodian	H&R inspector or designee	HRED
	Rigging hardware and accessories excluding rigging hooks	Initial	Equipment custodian	Qualified person	None
	Rigging hooks	Initial	Equipment custodian	H&R inspector or designee	HRED
Pre-use Inspections					
	Cranes, mobile cranes, hoists, and miscellaneous lifting devices ²	Each shift used	Operator	Operator	CR
	Below-the-hook lifting devices	Before each use	Operator	Operator	None
	All slings	Before each use	Operator	Operator	None
	Rigging hardware and accessories for critical lifts	Before each use	Operator	Operator	None
	Rigging hardware and accessories excluding rigging hooks	Before each use	Operator	Operator	None
	Rigging hooks	Before each use	Operator	Operator	None
Frequent Inspections of cranes and hoists over one ton³					

1 The initial inspection is documented in the HRED as part of the H&R review of conformance. See Hoisting and Rigging: Review of Conformance Form [pdf](#) | [Word](#)

2 Use the appropriate pre-use checklist.

3 Use the [Hoisting and Rigging: Crane and Hoist Monthly Inspection Form](#)

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Type	Equipment	Frequency	Person Responsible for Ensuring Inspection is Performed and Documented	Person Qualified to Perform the Inspection	Documentation Requirements
	Wire rope, running	Monthly	Equipment custodian	Crane and hoist inspector	CR
	Chains	Monthly	Equipment custodian	Crane and hoist inspector	CR
	Hooks	Monthly	Equipment custodian	Crane and hoist inspector	CR
Periodic Inspections					
	Cranes, hoists, and miscellaneous lifting devices	Annually	Equipment custodian	Crane inspector	HRED
	Below-the-hook lifting devices	Annually	Equipment custodian	H & R inspector or designee	HRED
	Wire rope and chain slings	Annually	Equipment custodian	H & R inspector or designee	HRED
	Synthetic slings	Annually	Equipment custodian	Equipment custodian or designee	CR
	Rigging hardware and accessories for critical lifts	Annually	Equipment custodian	H & R inspector or designee	HRED
	Rigging hardware and accessories excluding rigging hooks	Annually	Equipment custodian	Qualified person	None
	Rigging hooks	Annually	Equipment custodian	H & R inspector	HRED
	All cranes that are idle more than 6 months	Prior to startup	Equipment custodian	Crane inspector	HRED
Third-party Inspections					
	Plate V certification for cranes with a rated capacity greater than 3 tons (see 8 CCR 5022)	Initially and then every four years Fixed cranes: after relocation	Crane inspector	Third-party Plate V inspector	HRED
	Plate V certification for mobile cranes	Initially and then annually	Crane inspector	Third-party Plate V inspector	HRED
Maintenance					
Preventive maintenance	All cranes, hoists, and miscellaneous lifting devices	In most cases every 6-12 months	Facilities crane maintenance supervisor	Facilities crane maintenance personnel	HRED
Operational testing	All cranes, hoists, and miscellaneous lifting devices	After maintenance or repair	Facilities crane maintenance personnel	Facilities crane maintenance personnel	HRED
Load test	All cranes, hoists, and miscellaneous lifting devices for which a load bearing part has been altered or repaired	After alteration or repair	Facilities crane maintenance personnel	Crane inspector	HRED