

Health and Safety Standard

LOAD HANDLING EQUIPMENT RECORD KEEPING

1 PURPOSE

This standard outlines the minimum requirements for preparation, maintenance, and retention of records related to load handling equipment. Records serve multiple purposes, such as:

- Providing additional means of communicating information about the load handling equipment among workers;
- Supporting worker knowledge base;
- Summarizing equipment condition;
- Demonstrating auditable and effective control of load handling equipment; and
- Promoting safe load handling practices to reduce the frequency and severity of incidents.

2 SCOPE

This standard applies to all types of records associated with load handling equipment used to move loads vertically, horizontally or manipulate their configuration.

This standard does not apply to the records for the following equipment:

- Elevators, fixed personnel lifts or medical lifts;
- Powered mobile equipment being used for excavation or pile driving activities;
- Bulk material handling equipment (e.g. conveyors, concrete pumps, augers, pipelines, pumps, draglines, etc.);
- Engineered systems related to water conveyance structures (e.g. intake gates, spillway gates, etc.);
- Automated and or robotic material handling systems; and
- Aeroplanes.

Additionally, this standard excludes the record keeping requirements mandated by Schedule 1 of *The Trip Inspection Regulations* for commercial vehicles; however, this standard does apply to any load handling equipment mounted on the above-mentioned commercial vehicles.

This standard outlines the minimum requirements that shall be met or exceeded by SaskPower workers and contractors. Failure to comply may result in injuries, damage to equipment and property, environmental harm, performance management or any combination thereof.

The use of the word “shall” within this standard denotes a mandatory action, whereas the use of the word “should” or “may” denotes a recommended action.

3 DEFINITIONS

The following definitions apply to this standard:

Active Records – Records needed to perform current operations, subject to frequent use, and accessible to the user. However, even if a record is rarely accessed, it can still be considered active and "in effect" if it reflects a current business situation, decision, or condition.

Aerial Device – A vehicle-mounted telescoping or articulating unit that is used to position a worker at an elevated worksite, and includes a work basket or bucket, an aerial ladder, an extendable and articulating boom platform, vertical tower and any combination of those devices.

Available – Obtainable at the place of employment.

Crane – Equipment that is designed to lift, lower and move loads horizontally and that consists of a rotating superstructure, operating machinery and a boom.

Elevating Work Platform – A work platform that can be self-elevated to overhead worksites, and includes an elevating rolling work platform, a self-propelled elevating work platform and a boom-type elevating work platform.

Hoist – A machine that consists of a raising and lowering mechanism.

Inactive Records – Records that are no longer needed to perform current operations and or infrequently used.

Lifting Device – A device that is used to raise or lower material or an object, excluding cranes, hoists and rigging.

Material Hoist – A hoist that is designed to raise and lower equipment or material and that has a load-carrying unit that moves within fixed guides, but does not include a hoist that is designed to raise and lower workers.

Mobile Crane – A crane mounted on a truck, wheel or crawler base that can move freely under the crane’s own power without being restricted to a predetermined path.

Personnel Lifting Unit – A work platform suspended by rigging from a crane or hoist that is used to position a worker at an elevated worksite, and includes a manbasket and work basket.

Powered Mobile Equipment – A self-propelled machine or a combination of machines, including a prime mover, that is designed to manipulate or move materials or to provide a work platform for workers.

Readily Available – Immediately obtainable in a place and form that can be reviewed or modified without leaving the equipment’s general location or the involvement of any intermediary person.

Suspended Powered Scaffold – A platform that is suspended from overhead supports by ropes or cables and equipped with winches or pulley blocks so that the scaffold can be moved, and includes a boatswain’s chair, work basket, work cage, swing stage or other similar scaffold.

4 REQUIREMENTS

The record keeping requirements outlined in this standard apply to all personnel involved in the procurement, operation, inspection, maintenance, or testing of load handling equipment on behalf of SaskPower, including, workers and supervisors. This standard applies to all equipment, regardless of ownership, used to perform load handling unless otherwise stated.

4.1 GENERAL REQUIREMENTS

Records may be either physical information or electronic information and shall be legible. Records should only be duplicated where necessary.

All records shall be written in English. Documents may contain multiple languages provided that an English version is also included.

Physical information (paper) conversions that result in the creation of an electronic copy of the record shall be considered the official record of SaskPower if the requirements of the Digital Imaging Procedure are met.

4.1.1 PROCUREMENT OF SERVICES OR EQUIPMENT

SaskPower personnel involved in the procurement of load handling equipment, rental or purchase, or services requiring the use of load handling equipment shall ensure that equipment records of the acquired equipment complies with this standard.

All new load handling equipment shall be supplied with the necessary records to confirm that it is designed, constructed, inspected, tested and installed in accordance with an approved standard and information to allow it to be safely maintained and operated over the useful life. These records shall include any information on the permissible operating conditions and loads, equipment design standard, operation manuals (if applicable, including erecting and dismantling instructions), and inspection, testing and maintenance requirements. If the aforementioned records are unavailable they shall be supplemented by design documents provided by a professional engineer for certification of the load handling equipment design and capability.

In addition to the requirements listed above for new load handling equipment, all previously used equipment shall also be supplied with a log book (if applicable) and the operations and maintenance history pertinent to the safe operation of the equipment. These records shall include any inspection, maintenance and test reports, records of incidents, overload, damage, major repairs, modifications or limitations arising from previous use. If the aforementioned records are unavailable they shall be supplemented by documents provided by a professional engineer for certification of the load handling equipment design and capability.

All custom fabricated load handling equipment shall be supplied with records to confirm that it is designed, constructed, inspected, tested and installed in accordance with an approved standard or certified by a professional engineer that it can be safely operated. Additionally, the party responsible for the design of the custom fabricated load handling equipment shall provide information to allow it to be safely maintained and operated over the useful life. Any custom fabricated load handling equipment that does not have the above records shall be removed from service until such time that it has been reviewed and certified by a professional engineer with supporting records.

4.1.2 DOCUMENTS FOR CERTIFICATION BY PROFESSIONAL ENGINEER

Where the provisions of this standard, the Load Handling (Hoisting) Policy, or *The Occupational Health and Safety Regulations, 2020* (hereafter referred to as the Regulations) require the certification by a professional engineer, the certification shall be in writing and shall bear the official stamp or seal of the engineer (authentication). For example, technical drawings or other necessary documents related to the design or modification of load handling equipment shall be authenticated by a professional engineer.

4.1.3 RETENTION OF RECORDS

Load handling equipment records, owned by SaskPower, in its custody or under its control, which relate to the safe operation of the equipment shall be retained for the full-service life of the equipment and in accordance with the Records and Information Management Policy. If ownership of load handling equipment changes over the service life of the equipment a copy of all records shall be transferred with the equipment.

Records of decommissioned equipment need not be actively maintained until the time it is recommissioned. Records prior to the decommissioning period shall be retained.

All SaskPower owned load handling equipment shall have its records classified according to the Enterprise Classification and Retention Schedule (ECaRS) at the point of creation or receipt.

4.2 RECORD TYPES

Load handling equipment records may include: registries, instructions, manuals, drawings, parts lists, diagrams, load charts/ratings, log books, and documentation of inspection, maintenance, modifications, repairs, and testing.

All inspection, maintenance, modification, repair, and testing records pertaining to load handling equipment shall reference the manufacturer's serial number or the assigned unique equipment number for the specific load handling equipment unit. Unique equipment numbers may be assigned by the employer, but records shall be in place to cross reference this number with the original manufacturer's serial number.

4.2.1 MANUFACTURER'S INFORMATION

All documents provided by the manufacturer pertaining to the safe operation of the equipment shall be retained as load handling equipment records. This shall include all pertinent information on operations, assembly or erection, inspection and maintenance for the specific model of equipment and its components. Additional manufacturer's information such as part breakout drawings, parts lists, safety bulletins, recall information, and repair recommendations should also be retained in the equipment records.

Manufacturer's information shall be available to the workers or supervisors that may require it. Manufacturer's operating manuals shall be available to the equipment operators. Where manufacturer's operating manuals cannot be obtained, the employer shall have an operating manual developed for the equipment.

4.2.2 PREVENTATIVE MAINTENANCE PLANS

A preventative maintenance plan including details of required maintenance and the associated schedule shall be established and recorded for each classification of load handling equipment to ensure that the equipment is in a condition that does not constitute a hazard. This plan shall be developed and if required revised with consideration for the type of equipment, the work environment, the operating history, severity of use, age of the equipment, and manufacturer's recommendations. Preventative maintenance plans should be reviewed periodically and revised as necessary with dated records of the review and revisions recorded. The plans and schedules shall comply with the Regulations, the Load Handling (Hoisting) Policy, applicable adopted industry standard(s), and the manufacturer's recommendations; whichever is most stringent.

Preventative maintenance plans shall be available to equipment operators, maintenance personnel, supervisors and other personnel that are responsible for the safe operation of the equipment.

4.2.3 INSPECTIONS AND MAINTENANCE (INCLUDING REPAIRS AND MODIFICATIONS) RECORDS

A written record of all inspections and maintenance (including repairs and modifications) on load handling equipment shall be retained at the place of employment and made available to the operator. These records shall contain the details of the specific areas or components inspected and maintained and the existing condition or actions taken for maintenance of that component. Records of inspection and maintenance should be recorded in a standard, concise and logical format. All records of inspection or maintenance shall include the name and signature of the person performing the work, the date it was performed, the serial number or unique equipment identification number, and the number of hours of service recorded on the equipment at the time of the work. If the inspections or maintenance is performed by a contracted party, the company name and contact information or the SaskPower issued work order number shall be provided with the records. Inspection and maintenance records should be reviewed by the supervisor on a regular basis. The frequency of the review should be determined based on frequency of use, the type of equipment, the work environment, the operating history, severity of use, and age of the equipment.

If repairs or modifications require consultation from the equipment manufacturer, a professional engineer, or other qualified personnel these recommendations shall be obtained in a written document with the name of the manufacturer or consultant, contact information, the date of issue, and the serial number or unique equipment identification number.

Where required by the Load Handling (Hoisting) Policy or Regulations, records of inspections or maintenance shall be certified by a professional engineer.

Where load handling equipment requires a log book in accordance with this standard, all records of inspection and maintenance shall be contained within it and the requirements mandatory for log books by this Standard shall be followed. Where inspections or maintenance is performed by a person other than the equipment operator the complete record should be kept with the log book or a summary of the work performed with a reference to where the complete record is stored shall be recorded in the log book.

For load handling equipment not required to have a log book a means shall be provided to readily inform the workers that the equipment is available for service pending the preoperational inspection. The means may include an external marking on the individual load handling equipment indicating both periodicity and the satisfactory completion of the required inspection. If an external marking is implemented the means of identification shall not impact the structure or operation of the hoisting equipment.

Where deficiencies are noted that are pertinent to the safe operation of the load handling equipment, the equipment shall be tagged for repair as noted by section 4.2.6.1 of this standard.

4.2.4 LOG BOOKS

Log books, when mandatory shall be prepared, retained, and maintained to provide the employer, supervisors, and operators with means of establishing and maintaining a complete history of the equipment to which it pertains. The log book shall be considered as an integral part of the equipment and shall be kept readily available to workers. Table 1 - Load Handling Equipment Log Book Requirements outlines when log books are necessary.

Log books shall provide the required information in a logical and chronological sequence. Log books shall contain a complete and concise record of any information concerning inspections, tests, maintenance, calibrations, repairs, and modifications that are pertinent to the safe operation of the equipment. The details of any incidents, damage sustained and subsequent repairs shall be recorded in the log book. It shall contain the date on which such work was performed, and by whom, and the total number of hours of service recorded on the equipment at the time of the work. All entries shall be signed and dated by the person performing the work.

Grouping of Equipment	Equipment Type	Log Book Required?
Material Hoists (Overhead Cranes)	Top Running Bridge Cranes	Yes, if rated capacity > 5 tonnes
	Underhung Bridge Cranes	Yes, if rated capacity > 5 tonnes
	Monorails	Yes, if rated capacity > 5 tonnes
	Gantry	Yes, if rated capacity > 5 tonnes
	Jib	Yes, if rated capacity > 5 tonnes
Stationary Cranes	Tower	Yes, if used to hoist workers or rated capacity > 5 tonnes
Mobile Cranes	Articulating Boom Cranes	Yes
	Mobile Lattice & Telescopic Boom Cranes	Yes
Digger Derricks	Digger Derricks	Yes
Vehicle-mounted Aerial Devices	Bucket Truck	Yes
	Aerial Ladder	Yes
Elevating Work Platforms	Suspended	Yes
	Manually Propelled	Yes
	Self Propelled	Yes
	Boom Type	Yes
	Mast Climbing Lifts	Yes
Hoists	Air Chain	Yes, if rated capacity > 5 tonnes
	Air Wire Rope	Yes, if rated capacity > 5 tonnes
	Electric Chain	Yes, if rated capacity > 5 tonnes
	Electric Wire Rope	Yes, if rated capacity > 5 tonnes
	Hand Chain Operated	Yes, if rated capacity > 5 tonnes
	Lever Operated	Yes, if rated capacity > 5 tonnes
	Base-mounted Drum	Yes, if rated capacity > 5 tonnes
	Jacks & Rollers	Yes, if rated capacity > 5 tonnes
	Vehicle	Yes, if rated capacity > 5 tonnes
Powered Mobile Equipment	Forklifts	Yes
	Side Boom Tractors/Pipelayers	Yes
	Earth Moving Equipment	Yes
Personnel Hoists	Personnel Hoists	Yes
Helicopters	Helicopters	Yes
Lifting Devices	Below-the-Hook	No

Table 1- Load Handling Equipment Log Book Requirements

Supplementary information regarding the equipment, such as drawings, engineering reports, certification reports or other information that are pertinent to the safe operation of the equipment should be kept with the log book or a summary of work and reference location shall be made in the log book on the date which the supplementary information was provided.

Where the volume of the content contained within a physical log book becomes too large for practical storage in a readily available location measures may be taken to reduce the log book contents. Inactive records may be retained in another location provided that sufficient information (active records) remains in the log book so as not to impact the safe operation of the equipment. Inactive records removed from the log books shall still be made available to workers or supervisors for review. No relocation of

inactive records shall be performed without consultation with the supervisor and equipment operators or formal procedures are in place that involved consultation of these personnel.

4.2.5 EQUIPMENT REGISTRY

To facilitate equipment management an equipment registry should be developed and maintained for load handling equipment owned by SaskPower. The registry should include, but not necessarily be limited to, the following information: type of equipment, make, model, serial number, unique identification number, capacity, current assignment with contact information, equipment status, and in-service date.

The registry should encompass all existing equipment and, subsequently, be reviewed and updated as the status of equipment changes, excluding the out of service status.

4.2.6 TAGGING EQUIPMENT

Equipment shall be tagged when taken out of service or removed from service to inform workers of the equipment status.

4.2.6.1 OUT OF SERVICE

The load handling equipment shall be taken out of service and a repair tag shall be affixed to the controls when:

- Any deficiency that affects the safe operation of the unit is noted;
- The equipment is overdue for scheduled inspections and maintenance; or
- The equipment is involved in an incident.

The repair tag shall include the date which the deficiency was found, the unique equipment identification number, the nature of the deficiency, and the name and contact information of the person who found it. The tag shall be substantial, legible and conspicuously coloured. SAP Material ID 700014428 is an example of a suitable repair tag.

The same information appearing on the repair tag shall be documented, if applicable, in the log book or inspection records and shall be reported as soon as reasonably practicable. The repair tag shall not be removed until the deficiency has been corrected and appropriately recorded. The repair tag shall be removed by the person who repaired the deficiency.

4.2.6.2 REMOVED FROM SERVICE

When SaskPower owned load handling equipment changes status to “Removed from Service” the equipment shall be tagged at the controls indicating that it has been removed from service. Figure 1 provides a sample layout of a tag that may be used for tagging equipment with a status of “Removed from Service”.



Figure 1 – Sample Tag – Removed from Service

4.3 EQUIPMENT SPECIFIC REQUIREMENTS

Requirements outlined in previous sections of this standard are required for all load handling equipment unless noted otherwise. The additional requirements outlined in the following sections are specific to various groupings of load handling equipment.

4.3.1 SUSPENDED POWERED SCAFFOLD

A suspended powered scaffold system (i.e. swing stage) shall have the following records developed, retained, and maintained. A technical drawing of all primary anchors for attaching the suspension system and for secondary fall arrest anchorage complete locations and details of the anchors and the fall hazard identification, rescue procedures, and a log book with documentation of inspection and maintenance of all load bearing components and hoist components shall be recorded. Instructions for use of the system (i.e. plan drawing showing the permissible access configurations) shall be posted on or near the access door or location. All design documents for the anchorage and use of a suspended powered scaffold shall be reviewed and certified by a professional engineer. Refer to the Regulations and adopted standards for suspended powered scaffolds for further details.

A maintenance and inspection record tag shall be affixed near the operator station that includes the date of last maintenance, the name and signature of the person who performed it, and an indication that the maintenance has been carried out in

accordance with the manufacturer’s recommendations. Figure 2 shows an example of a maintenance and inspection record tag.

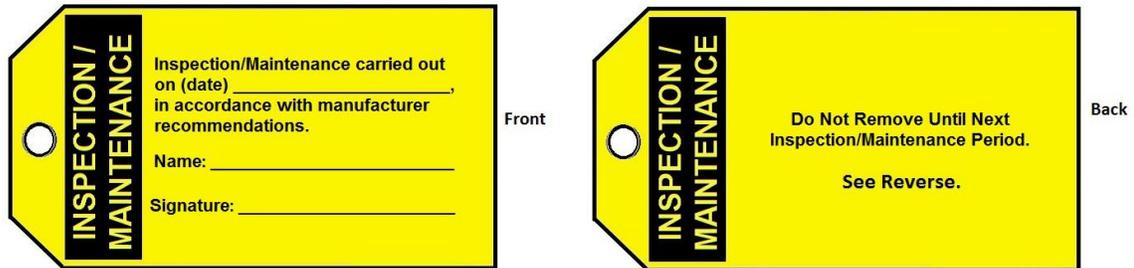


Figure 2 – Example of a maintenance and inspection record tag

4.3.2 AERIAL DEVICES, ELEVATING WORK PLATFORMS AND PERSONNEL LIFTING UNITS

Operating manuals for aerial devices and elevating work platforms shall be kept with the device or platform at all times in a location readily available to the operator.

Aerial devices, elevating work platforms, and personnel lifting units shall have either a log book readily available to the workers or a maintenance and inspection record tag affixed near the operator station that includes the date of last maintenance, the name and signature of the person who performed it, and an indication that the maintenance has been carried out in accordance with the manufacturer’s recommendations.

4.3.3 CRANES, DIGGER DERRICKS, AND HOISTS

Note: For the purposes of the Regulations and this standard a Digger Derrick when used for load handling activities is considered a mobile crane.

The operating manual and a legible and durable indication of the load rating for cranes and hoists of all types (including material hoists) shall be readily available to the operator. Manuals should include a procedure for erecting and dismantling a hoist or crane that includes instruction for safe blocking of any mast, boom or jib and the number and qualifications of workers required to perform the procedure. If this information is not included in the manual, supplementary information shall be provided in accordance with the Regulations.

Log books shall be readily available to the operator and shall be provided for all types of hoists and cranes with a rated capacity greater than five tonnes or for those cranes or hoists to be used for hoisting of personnel (for breakdown by equipment type refer to Table 1). The log book shall be reviewed by the employer on a regular basis and the review shall be recorded in the log book. For SaskPower owned load handling equipment this review shall be documented using the Record of Log Book Review form

(blank copies of the form can be found on SafetyNet). The frequency of the review should be determined based on frequency of use, the type of equipment, the work environment, the operating history, severity of use, and age of the equipment.

Mobile crane and tower crane records of inspection, including non-destructive testing, conducted under the supervision of a professional engineer shall be readily available and current within the intervals specified in the Regulations or Load Handling (Hoisting) Policy, whichever is more stringent.

Any structural repairs or modifications to a hoist or crane shall be documented and authenticated by a professional engineer and these documents should be kept with the log book or a summary of the work performed with a reference to where the complete record is stored shall be recorded in the log book.

4.3.4 LIFTING DEVICES

A legible and durable indication of the load rating shall be readily available to the operator.

4.3.5 POWERED MOBILE EQUIPMENT

Log books shall be readily available to the operator.

Specific to forklifts, a legible and durable load rating chart shall be readily available to the operator.

4.3.6 HELICOPTERS

All records related to helicopters shall be in accordance with the requirements outlined in the *Canadian Aviation Regulations*. If there are discrepancies between requirements in this standard and the *Canadian Aviation Regulations*, the *Canadian Aviation Regulations* shall apply.

5 IMPLEMENTATION

The requirements of this version of the standard are to be met within three months after the approval date.

6 RESOURCES

6.1 INTERNAL RESOURCES

Related Policies:	Load Handling (Hoisting) Policy Records and Information Management Policy
References:	Enterprise Classification and Retention Schedule (ECaRS) Record of Log Book Review form
Related Standards:	Information Management (RIM) Standard
Additional Information:	Digital Imaging Procedure Information Creation and Maintenance Procedure

6.2 EXTERNAL RESOURCES

Related Legislation:	<i>Canadian Aviation Regulations</i> <i>The Occupational Health and Safety Regulations, 2020</i> <i>The Trip Inspection Regulations</i>
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Ownership

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B. Kessler	New Standard	March 3, 2017