

Classification: Unclassified
Issue purpose: Issue for Implementation

BM Code: SE-ST-A27
November 2005



Sakhalin Energy Investment Company LTD.

Corporate Procedure for Control And Use of Loose Lifting Equipment

0000-S-90-04-O-0288-00-E

Revision 01

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Document History

Filename 0000-S-90-04-O-0288-00-E

Date	Issue	Custodian	Process Owner	Authoriser	Consulted	Distributed
Nov 05	01	HSES Manager, Andrew Pearce <i>Signature</i> 22.11.05	Head of Operational Safety, Meirion Powell <i>Signature</i> APPROVED BY: John Crowder, IPL <i>Signature</i>	General Manager Assets, Leo Lievaart <i>Signature</i> 15/12/05	Sparrows Offshore Services / GMA HSE / IPL / OPF HSE / LNG HSE / Onshore Pipelines HSE / Khomlsk Personnel	All SEIC
		19 Dec 05				

Rev	Location of Change	Brief Description of Change
01	Issue For Implementation	First official issue.

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1.0 Introduction

1.1 Purpose

The control of loose lifting equipment is of paramount importance for any work site in order to ensure all operations are conducted with equipment deemed fit for use only. SEIC have chosen to implement the accepted industry best practice of Rigging Lofts to control the issue, inspection, certification and rejection of loose lifting equipment.

This document details the SEIC requirements for loose lifting equipment control using the Rigging Loft system. It is compliant with all required Russian Federation Regulations. These are referenced in section 4.0.

1.2 Scope

This procedure covers the minimum requirements for the administration, maintenance and control of portable lifting equipment at all SEIC worksites. The procedure also details the responsibilities of the personnel nominated to control the issue of lifting equipment at SEIC sites.

Portable, loose lifting equipment is defined as lifting equipment issued to an installation or work place, which is not part of its establishment. Such equipment can be assigned to a variety of tasks around the work place and is loose or mobile. Examples include Chain Hoists, Lever Hoists, Wire Rope Hoists, Snatch Blocks, Beam Clamps, Shackles and Slings.

1.3 Terminology

Shall – indicates a mandatory course of action.

Should – indicates a preferred course of action.

May – indicates a permitted course of action.



1.3.1 Definitions

The following definitions are used throughout this document.

Becket

Attachment point for rope termination fitted to hook-blocks, sheave blocks or snatch blocks. Usually takes the form of an eyed lug.

Colour Code

A method of marking equipment to give a visual indication of its certification status.

Competent Person

A Competent Person is adjudged to have sufficient knowledge and experience and relevant RF certification to assess lifting issues, and the equipment and / or accessories being used.

Factor of Safety

The ratio of the load that would cause failure of an item of lifting equipment to the maximum load that can be imposed on it in service. This is to allow for detrimental criteria such as wear, tear and dynamic loadings.

Lift Plan

A written document, which will include details of how a lifting operation should be undertaken, the lifting equipment and lifting accessories to be used, how the equipment and accessories should be rigged up and the control measures in place to manage the risks identified in the Risk Assessment.

Lifting Accessory

Any item used to connect a load to a *crane or lifting appliance*, but which is not in itself capable of providing any movement to lift or lower the load. Sometimes the *lifting accessory* is termed as *lifting gear*, however within this document, all references shall be to *lifting accessory*.

Lifting Appliance

Any machine that is able to raise, lower or suspend a load but excluding machines incorporating a guided load, e.g. elevators, and continuous mechanical handling devices, e.g. conveyors.

Lifting Equipment

Any appliance, structure or item used to raise, lower, suspend or transport a load. Lifting Equipment comprises of both Lifting appliances and Lifting Accessories.

RF:

Russian Federation

Rigger

Person competent and qualified to conduct lifting operations with the use of loose lifting equipment. A rigger shall have the necessary knowledge and qualifications as per requirements of the RF.

Rigging Loft

A suitable storage container/area for the control and storage of lifting equipment. The loft should be partitioned for segregation and storage of different rigging items and include suitable quarantine and returns areas.

Rigging Loft Controller

The rigging loft controller a nominated competent person with sufficient knowledge and skill to undertake visual examinations and identify defective equipment. The Rigging Loft Controller is responsible for the control of the rigging loft and contents with responsibilities for withdrawing it from service, putting it in quarantine to prevent further use and maintaining appropriate records.

RosTekhNadzor:

Russian Federation regulatory body responsible for ensuring compliance with all relevant legislation and technical standards for the Russian Federation. Previous body was GosGorTekhNadzor, which has now been replaced by RosTekhNadzor.

Sling

Wire ropes, chains, synthetic web and metal mesh made into forms, with or without fittings, for handling devices.

Safe Working Load (SWL)

The maximum load which an item of lifting equipment may raise, lower or suspend under particular service conditions.

Thorough Examination

An examination carried out by a competent person to arrive at a reliable conclusion as to the condition and safety of the equipment. The competent person will determine the extent of the thorough examination in order to meet legislative, manufacturer's guidelines and company requirements. The thorough examination may involve dismantling and testing.

Working Load Limit (WLL)

The maximum load which an item of lifting equipment is designed to raise, lower or suspend. The WLL does not account for particular service conditions which may affect the final rating of the equipment.



1.4 User Notes

The requirements of this document are mandatory. Non-compliance must be authorised using the deviation procedure described in Chapter 10 of the Corporate Document Control Procedure (000-S-90-01-P-0078-00-E).

This procedure is only applicable for loose lifting equipment. Fixed lifting equipment, including dedicated slings sets, will be subject to the inspection controls as defined in the SEIC Corporate Standard Cranes And Lifting Equipment.

A controlled copy of the current version of this document is **ONLY** available on the SAKHALIN ENERGY Website and the Global Livelink system. Before making reference to this document, it is the user's responsibility to ensure that any hard copy, or electronic copy, is current. For assistance, contact the Document Custodian.

Users are encouraged to participate in the ongoing improvement of this document by providing constructive feedback.

1.5 Review Schedule

This document shall be subject to review in July 2006 or at the conclusion of the EP2005 Lifting & Hoisting Gap Analysis Implementation phase, whichever is soonest. Further reviews will be scheduled at the next review point.

2.0 Risks And Controls

The control of loose lifting equipment is of paramount importance for any work site in order to ensure all operations are conducted with equipment deemed fit for use only. The use of defective or sub-standard lifting equipment is a major contributory factor to world-wide and Sakhalin Energy lifting incidents.

To this end, SEIC have chosen to implement the accepted industry best practice of Rigging Lofts to control the issue, inspection, certification and rejection of loose lifting equipment. This should provide significantly increased control of the quality and standard of the loose lifting equipment used within SEIC operations.



3.0 Responsibilities

Document Custodian

The Document Custodian is responsible for:

- Providing discipline expertise for the creation, revision (including review of deviations and challenges in order to make recommendations to the Process Owner) and retirement of documents relating to the Control of Loose Lifting Equipment to meet the business needs of the Process Owner in accordance with the Corporate Document Control Procedure;
- Ensuring the technical validity of this document and that the document has been signed off to the correct level of technical authority;
- Defining the distribution requirements for this document;
- Keeping a record of user feedback on this document and considering comments at each document review.

Process Owner

The Process Owner is responsible for:

- Specifying the need for this document and delegates the responsibility for creating it;
- Resolving any practical difficulties encountered in applying this procedure;
- Approving the document prior to issue.

Authoriser

The Authoriser is responsible for:

- The content of this document but in practical terms delegates this responsibility to the document Custodian;
- Signing off this document at the highest level prior to issue.

Asset/Project Managers, Line Managers and Department Heads

Asset Managers, Project Managers and Department Heads shall be responsible for implementing this Procedure by ensuring that activities they control are managed in accordance with its requirements.

Supervisors

Supervisors are responsible for ensuring that loose lifting equipment is used and controlled in accordance with the requirements of this procedure for work executed under their supervision. They are responsible for ensuring that staff they supervise understand and implement the controls that are identified in this document.

Lifting Operations Personnel

Lifting operations personnel are responsible for ensuring that loose lifting equipment is used and controlled in accordance with the requirements of this procedure for work they undertake.

Contractors

Contractors are responsible for ensuring that activities undertaken within the scope of their contracts are managed in accordance with the requirements of this procedure.

4.0 References

Applicable Regulations and Standards

The procedures and practices contained in this document are compliant with the following Russian Federation regulations:

RD10-34-93	Standard Manual for Persons Responsible for Safety of Lifting
RD 10-40-93	Standard Manual for Engineering Personnel Responsible for the Safe Operation of Cranes
PB 10-382-00	Regulations on Design and Safe Operation of Cranes
RD 10-33-93	General Purpose Hoisting Slings Design & Safety Requirements
RD 24-SZK-01-01	General Purpose Webbing Slings. Requirements For Design & Safe Use

The practices and procedures are also compliant with the following Shell standards:

EP2005-0264-ST	Lifting and Hoisting HSE
EP2005-0264-GL-01	Planning and Execution of Lifting

The practices and procedures are also compliant with the following SEIC Documents:

0000-S-90-04-O-0264-00-E, SEIC Corporate Standard Cranes And Lifting Equipment
0000-S-90-04-O-0287-00-E, SEIC Personnel Lifting Standard

5.0 Rigging Loft

The rigging loft shall consist of a suitably sized lockable container or area fitted out with the appropriate storage hooks and bin compartments.

Appendix 1 contains the recommended features for the design and layout of a rigging loft.

As a minimum the rigging loft shall have facilities for the following:

- Storage of loose lifting equipment in such a manner to protect and prolong the working life of the equipment.
- Quarantine area to allow segregation of rejected or defective equipment from the ready for issue or returned awaiting inspection items. Items in the quarantine area will be designated and labelled "Hold - Do Not Use".
- Returns area to allow segregation of returned equipment awaiting inspection from the ready for issue items. Items in the returns area will be designated "Hold – Awaiting Inspection".

5.1 Rigging Loft Documentation

As a minimum the rigging loft shall contain the following documentation / certification:

- A register of lifting equipment.
- Certification package for all items. The register is used as the introduction to the Certification Package. The register is then followed by the equipment certificates assembled in equipment categories and then serial number order.
- The rigging loft shall contain a dedicated equipment issue book and a "T" card tracking system.
- The loft will also hold a copy of inspection checks necessary for the issue and return of equipment.
- Copies of the equipment manufacturers manual for safe use and operation as applicable.
- A folder of blank forms to allow records of users and utilisation to be maintained by the Rigging Loft controller.
- An approved rigging and lifting handbook for review by users at the job site.
- The names of all rigging loft controllers will be posted on the door of the rigging loft.



6.0 Register of Lifting Equipment

A record of all items of lifting equipment allocated to the rigging loft shall be maintained in the form of a "Register and Control Document for Rigging Loft".

A copy of associated certification for all items of lifting equipment will be provided in the form of a "Certification Document for Rigging Loft".

The register will be supplied and held in the rigging loft on the offshore or site installation(s). Copy records will also be maintained at SEIC base, as well as an electronic based lifting gear control system being maintained.

7.0 Mandatory Examinations

Procedures for the inspection, testing and recertification of lifting equipment shall be undertaken in accordance the manufacturer's operating and maintenance instructions, RF legislation and, if applicable, the generic equipment type instructions contained within this procedure.

The rigging loft complete with all equipment and documentation will be changed out on a 6 monthly cycle, the contents of the new loft having been overhauled, recertified and prepared immediately prior to mobilisation.

The following inspection schedules shall be followed for all loose lifting equipment:

Wire Rope And Webbing Slings

Prior to every use – visual examination by competent person. Procedure as per appendix 7.0.

On return to rigging loft or every 6 months – full visual examination by competent person in accordance with relevant procedure in appendix 8.0.

Load bearing attachments such as shackles, hooks, master-links

Prior to every use – visual examination by competent person. Procedure as per appendix 7.0.

On return to rigging loft or every 6 months – full visual examination by competent person in accordance with relevant procedure in appendix 8.0.

Loose lifting appliances (Chain-blocks, Pull-lifts, wire rope hoists etc...)

Prior to every use – visual examination by competent person. Procedure as per appendix 7.0.

On return to rigging loft or every 6 months – full visual examination by competent person in accordance with relevant procedure in appendix 8.0.

Load test every 12 months in accordance with manufacturers instructions. In the event that the manufacturer's recommendations for recertification and test are greater than 12 months, the maximum interval between testing shall be 12 months. If recertification and test is required more regularly, then the stated interval will be adhered.



7.1 General Inspection Requirements

Where loose lifting equipment is due for recertification, the following must be checked and ensured.

- Hooks must have a positive locking device, or pinned. Distortion of hooks is not acceptable.
- A competent person will carry out visual inspection.
- A competent person will conduct load test of equipment to prove integrity.
- No welding will be conducted on the lifting equipment.
- Where there is no prescribed inspection / rejection criteria in Russian federation legislation, manufacturers recommendations will be adhered.

The mandatory visual inspection will take place onshore and the rigging loft complete with lifting equipment will be changed out with an equivalent replacement.

All mandatory inspections shall be undertaken by approved third party inspection authorities and shall be carried out in accordance with statutory regulations.

A colour code for each period shall be advised, in accordance with the common colour code in use for the installation. Only equipment marked with the current colour code shall be released for use.

Each individual item of equipment is colour coded to indicate current inspection status.

The current colour code shall be clearly displayed at the entrance to the rigging loft and at strategic points on the installation and Supply Base. This colour code will be displayed on the container prior to shipping offshore.

7.2 Colour Code

All equipment, including the loft and associated lifting arrangements, shall be colour coded in line with the current company colour code as defined in the SEIC Corporate Standard For Cranes & Lifting Equipment.

The current colour code shall be clearly displayed at the entrance to the rigging loft and at clearly visible locations and strategic points throughout the site including the site entrances.

8.0 Equipment Issue

Lifting equipment issue will be recorded by the rigging loft controller in the equipment issue section of the "Register and Control Document" book, detailing the date issued, equipment plant number and description name and company of personnel using the item, date returned and return inspection comments.

All items of equipment including slings, shackles and eyebolts will be registered.

For each shift a nominated responsible person will become the "Rigging Loft Controller" and will hold the key for the rigging loft.

9.0 Lifting Equipment Control System

Details of the current equipment status for all items other than slings, shackles and eyebolts shall be by the "T" card tracking system situated in the rigging loft and administered by the rigging loft controller.

Details of the current status of slings and shackles shall be by the equipment issue record.

The "T" card scheme shall be divided into sections designated "In Use", "In Stock" and "Hold/Inspection".

Upon issue, the "T" card corresponding to the item number shall be removed from the "In Stock" column and placed in the "In Use" section.

Upon its return, the item shall be located in the "For Inspection" area of the rigging loft and the "T" card located in the appropriate hold/inspection section.

Subsequent to satisfactory inspection, the item will be returned to its allocated storage section and the "T" card replaced in the "In Stock" section.

Non-conforming items shall be quarantined in the designated quarantine area of the rigging loft and tagged accordingly. The corresponding "T" card shall be placed in the quarantine section of the rack.



10.0 Returned Equipment Inspection

All returned items shall be subject to a receiving inspection by the rigging loft controller prior to release into the rigging loft stock.

The relevant section within appendix 9.0 details inspection requirements for equipment to meet prior to being deemed suitable for return to service.

Items awaiting inspection will be held in the designated returns area of the rigging loft.

11.0 Planned Maintenance

In addition to the onshore requirements for returned equipment inspection and mandatory examinations, a programme of planned maintenance shall be established. The maintenance shall include treating with corrosion inhibiting lubricator, painting and storage preparations.

The tasks to be carried out in the recertification of lifting gear shall be in accordance with the manufacturers procedures and the requirements of the SEIC Cranes & Lifting Standard.

All item of equipment are subject to inspection and re-use if found to be in acceptable condition including slings, shackles and eyebolts.

12.0 Non-Conformance

All non-conforming items shall be identified using an orange "Hold - Do Not Use" label, endorsed with a Non-Conformance Report number.

All non-conforming items shall be placed in a designated quarantine area.

All items damaged during use or found to be defective whilst in service shall be identified by an orange coloured "Hold - Do Not Use" label. It shall be endorsed on the reverse side with the NCR number and all details of the defect.

A list of scrapped items including description and certificate number will be held in the register. This list will be updated by the Rigging Loft Controller.



13.0 Issue of Lifting Equipment

Only equipment which has been visually inspected by the loft controller shall be deemed available for use.

Equipment will only be issued to competent persons who are recorded in the Lifting register which is updated and held by the Rigging Loft Controller.

Issues for use on the installation shall be recorded in the equipment issue book by the rigging loft controller. This shall also record inspection when gear is returned. Inspection of equipment upon return will be carried out by the Rigging Loft Controller.

Upon issue of items, other than slings or shackles, the rigging loft controller shall update the "T" card tracking system to indicate the current status of the item.

All equipment shall carry the current six monthly colour coding.

All equipment shall be visually checked by the loft controller or his nominee prior to release from the rigging loft.

The lifting equipment will also be inspected by the "user", and upon satisfactory inspection the user will sign for equipment on the appropriate register.

The loft controller shall audit the status of the issued equipment on a weekly basis to confirm that when an item has been "in use" for a period in excess of 30 days, the location and condition can be verified. This will be for tracking purposes only. System Owners/Area Operators (Platform Supervisors) will be advised of rigging equipment currently being used in their areas. It will be the Supervisors responsibility to assess if the rigging is still required or should be returned to the loft.



14.0 Equipment Disposal

All items of lifting equipment which are determined as being non-conforming shall be returned for refurbishment and recertification or disposal as soon as practical and replacement equipment requisitioned accordingly.

A record of equipment returned shall be maintained within the "Register and Control Document".

All items of lifting equipment which are determined as being non-conforming and which cannot be repaired shall be scrapped by the rigging loft controller and replacement equipment requisitioned from supplier.

A record of equipment scrapped shall be maintained within the "Register and Control Document".

Note: Only slings and shackles should be scrapped offshore. All other items should be quarantined and returned in the rigging loft to the supply point.

Before disposal to the offshore installation scrap area, the item shall be damaged in such a way to prevent any further usage, e.g. cutting.

Certification records for equipment which has been scrapped shall be endorsed accordingly and returned to main rigging stores to be retained for a period of 12 months beyond the scrap date to provide traceability.

Upon return of the rigging loft a list of all missing items will be sent to the site / platform rigging loft controller.



15.0 Additional Supply

Where a need for further additional supply or replacement is required, the loft controller shall record the request details on the appropriate form contained in the "Register and Control Document".

The request document shall form both a record of requests and action for supply.

On furnishing additional equipment, revised copies of the relevant "Register and Control Document" sections shall be produced and will be used for update of onshore and offshore documents.

16.0 Rigging Loft Controller Competence

The competence of persons designated as Rigging Loft Controllers shall be assessed against the following requirements:

The function of Rigging Loft Controller shall be carried out by suitable qualified and competent personnel with adequate knowledge in the following areas:

- Awareness of the relevant standards and regulations and site specific requirements and procedures
- Maintenance requirements on all types of Lifting Equipment to be maintained;
- Inspection frequency requirements
- Detailed inspection requirements for all Lifting Equipment
- Discard criteria and disposal processes for failed equipment.

In addition the Rigging Loft Controller shall be certified to RF RD-10107-96, Standard Safety Manual For Slingers, or the relevant RF maintenance certification requirement.



17.0 Pre & Post Change-out Activities

It is recommended that the following planning guidelines are adopted to ensure timely change-out and inspection of rigging lofts and contents.

Key mobilisation event time scales

Timescale	Key actions completed	Responsible person
Change out – 6 weeks	Raise work instruction to mobilise equipment	Site Administrator
	Identify inventory shortfalls	Lifting Services Vendor
Change out – 3 weeks	Assemble container and inventory	Lifting Services Vendor
Change out – 2 weeks	Re-certification	Lifting Services Vendor
Change out – 1 week	Prepare for final inspection	Lifting Equipment Co-ordinator
	Despatch equipment	Logistics co-ordinator
Change out date	Commence use of rigging equipment	On-site Rigging Loft Controller

Note: The rigging loft change out date should be planned to coincide with the site colour code change date whenever possible to avoid the possibility of dual colours on site.

Key demobilisation event time scales

Timescale	Key actions completed	Responsible person
Change out + 1 week	Despatch expired loft from site	On-site Rigging Loft Controller
Delivery to Stores	Despatch expired loft to Lifting Services Vendor	Logistics co-ordinator
Delivery + 2 weeks	Carry out initial inventory check	Lifting Services Vendor
Delivery + 3 weeks	Recover missing items from site	On-site Rigging Loft Controller
	Refurbish mechanisms and return to stock	Lifting Services Vendor
	Thoroughly examine consumable items. Scrap or return to stock	Lifting Services Vendor
	Arrange container repair	Lifting Services Vendor

APPENDICES

APPENDIX 1 – MINIMUM REQUIREMENTS FOR RIGGING LOFTS

This section identifies the requirements to be considered in the provision of a suitable storage container/area for lifting equipment. The container or 'loft' should be partitioned for segregation of different rigging, quarantine area and an area for lifting accessories etc.

Also included in this section are the requirements of a Rigging loft, which are deemed necessary due to the environmental conditions throughout all SEIC construction areas.

Requirements

The following sub-sections identify the minimum requirements of a rigging loft to ensure functionality and safe efficient control of loose lifting equipment.

Fully Enclosed Lockable Container

To ensure all lifting equipment and accessories are preserved in good operational condition, it is necessary to utilize a fully enclosed storage container for loose lifting equipment.

The container must be lockable, and a key held by the nominated responsible person for the issue and control of loose lifting equipment.

Security of the loft is of paramount importance, to prevent unauthorized use of any rigging. Security of the container will also prevent theft.

Certified Lifting Points and 4 Leg Lifting Bridle

If the rigging loft is going to be portable, where change out on regular intervals would be effected moving the complete loft by crane onto the transport introducing the new loft, the lifting points on the container and also the lifting bridle must be certified during the loft replacement by the third party equipment maintainer.

Roof Mounted or High Mounted Welded Hooks / T-Bars

In order to store wire rope slings & fibre slings, there should be high level hooks or T bars which the slings can be looped onto. For ease of control and selection, a number of hooks should be fitted. This will allow segregation of the different SWL and types of slings.

The purpose of storing the slings at high level is to prevent them being in contact with the floor. This could cause increased damage or wear to the slings or they could become a trip hazard.

High Level Rails & Low Level Rails

As chain hoists have a fall of chain that should be stored off the ground, a row of high-level rails should be mounted on a wall of the container. This will ensure the chain hoists are stored effectively, without the chain lying on the ground. (Note – The chain will be coiled onto the block for storage.)

Storage of wire rope hoists, pull lifts and sheave blocks may be hung from the lower rail, as they are not stored with the wire attached. The wire should be coiled and stored on suitable hooks.

Vertical I section Beams

On a wall area, or integral part of the loft structure, beam clamps and plate clamps should be neatly stored by tightening them to the vertical section of beams. The storage of these items on vertical beams is not necessary; however this will reduce storage area and remove any potential trip hazards.

Pigeon Hole Shelving

An area where storage of smaller lifting accessories such as shackles of different SWL, eyebolts of different type & SWL, rigging screws etc should be available.

Quarantine Area

Within the rigging loft a lockable storage facility should be provided. This will be used to contain lifting equipment that is to be scrapped or returned to manufacturer for inspection and repair. A lock is advisable to prevent unauthorized use of the equipment.

Return's Area

There should be a separate area for temporary storage of rigging equipment. This area would contain all returned loose lifting equipment, which is awaiting inspection. Importance of having such an area is to prevent rigging being booked out without receiving inspection. The inspection area would ideally have provision for both hanging loose lifting equipment and a flat surface to lay equipment on for inspection.

Control of Rigging

The issue, return and inspection of loose lifting equipment shall be controlled by a document system. The control document will include usage control, post-use inspection records, quarantine records, and pre-use inspection procedures for reference. The documentation will also contain all certification for each item of lifting equipment. In addition to the document system, a T-Card system should also be implemented for all loose lifting equipment. This system shall quickly and efficiently enable the rigging loft controller to see the status of all lifting equipment from the rigging loft. It will indicate what rigging is on site, what rigging is in the loft ready for use, and which is awaiting post-use inspection.



Colour Coding Scheme

The current colour code shall be clearly displayed at the entrance to the rigging loft, or at a clearly visible location and at strategic points on the site. This colour code will be displayed on the container before transportation to site.

The colour coding scheme shall be uniform throughout all SEIC locations to prevent any possibility of rigging being mistakenly put back into service without a periodical inspection.

Surface Area for Writing

To make the job of the equipment controller easier, an area where the controller can comfortably write in the control register would be advantageous.

Additional Requirements

Where requirements in section 2.1 provide the requirements for the proper control of equipment, additionally and for safety reasons the following should also be provided.

Lighting

Due to the extended periods of darkness during the winter months and the possibility of working out with the normal daylight hours it is strongly recommended a light is fitted within the rigging loft. This will assist in ensuring the safety of personnel issuing, returning and inspecting all rigging.

The container should be well lit, allowing equipment inspections to be conducted in the hours of darkness, and also, to prevent personnel tripping or falling when manoeuvring around in the container.

A suitable gland entry to a fixed power source should be made available, thus allowing permanent power to the container.

Heating

Due to the extreme cold temperatures, combined with the wet at certain times of the year, it is practical for reasons of safety and preservation of equipment that a heater be installed in the rigging lofts.

When a wire rope sling is returned from use and been subjected to wet conditions, the freezing weather will cause the water retained in the sling to expand as it freezes, with the effect of possible damage to the internal fibre core of the wire rope sling.

A heater would provide an opportunity to dry out returned equipment and it will also lower the humidity within the container at times of the year when water content in the air is high. The application of heat will assist in preservation of the loose lifting equipment, which may otherwise be damaged through environmental conditions.

APPENDIX 2 - EQUIPMENT REGISTER



Register of Lifting Equipment

Rigging Loft ID:

Mobilisation Date:

Demobilisation Date:

Location:

Supplier :

Current Colour Code:

Item No	Description	Model	SWL (te)	Dimension (HOL, size etc..)	Serial Number	Cert Number	Last Test Date	Last Inspection Date
1	Chain Hoist	Elephant S100	0.5	3m hol	ABC123	XYZ 123	xx/xx/xx	xx/xx/xx
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
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APPENDIX 3 - ISSUE RECORDS



Rigging Loft Inventory Issue Register

[illegible]



APPENDIX 4 - RECORD OF ADDITIONAL EQUIPMENT REQUESTS



RECORD OF ADDITIONAL EQUIPMENT REQUESTS

Item Description	Quantity	Reason for Supply Request	Requested By	Date	SEIC Authorisation	Date



APPENDIX 5 - RECORD OF EQUIPMENT RETURNED FOR REPAIR / RECERTIFICATION

[illegible]



APPENDIX 6 - RECORD OF EQUIPMENT SCRAPPED ON SITE / PLATFORM



RECORD OF EQUIPMENT SCRAPPED ON SITE / PLATFORM

[illegible]



APPENDIX 7 - PRE- USE LIFTING EQUIPMENT EXAMINATION PROCEDURES



Corporate Procedure for Control And Use of Loose Lifting Equipment

The following checks are the minimum requirements for inspection of loose lifting equipment by the person withdrawing rigging loft inventory items.

CONTENTS

- Procedure 1 Manual Hoists (Chainblocks)
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PROCEDURE 1

(To be used by personnel withdrawing equipment)

MANUAL HOISTS (CHAINBLOCKS)

- (1) Check that the SWL is adequate for the load.
- (2) Check that the colour coding is current and the hoist has a plant number / ID mark.
- (3) Ensure safety catches are fitted.
- (4) Check there are no signs of mis-use, ie stretched hooks, cracked casings, stretched / distorted chain etc.

NOTE:

- (1) If all satisfactory, sign for equipment.
- (2) If any defects found report them to the Rigging Loft Controller.



PROCEDURE 2

(To be used by personnel withdrawing equipment)

LEVER HOISTS (PULLIFTS)

- (1) Check that the SWL is adequate for the load.
- (2) Check that the colour coding is current and the pull-lift has a plant number / ID mark.
- (3) Ensure safety catches are fitted.
- (4) Check there are no signs of miss-use i.e. stretched hooks, cracked casings, stretched / distorted chain etc.

NOTE: A bent operating lever could indicate previous overloading.

- (5) With multi-fall pull-lifts check there are no twists in the chains (usually caused by the bottom block flipping over) between the bottom block and the pull-lift body.
- (6) Check that the ratchet sounds crisp when operating the lever.
- (7) Ensure the dead end chain stop is intact.

(If it is deformed, it can be pulled through the hoist).

- NOTES:
- (1) If all satisfactory, sign for equipment.
 - (2) If any defects found, report them to the Rigging Loft Controller.



PROCEDURE 3

(To be used by personnel withdrawing equipment)

WIRE ROPE HOISTS

- (1) Check that the SWL is adequate for the load.
- (2) Check that the colour coding is current and that the wire rope hoist has a plant number / ID mark.
- (3) Examine the load / pin hook and hook seating in the side casings for wear, distortion or cracking.
- (4) Where hooks are fitted, check operation of safety catch and ensure the hook is free to swivel.
- (5) Check operation of both forward and reverse operating levers and ensure the shear pins are intact. (Sheared or cracked pins indicate overloading).
- (6) Check operation of the release lever / handle.
- (7) Insert a rope and check the stroke of both the forward and reversing lever.
i.e. T508 - 55mm approx.
T516 - 55mm approx.
T532 - 32mm approx.

- NOTES:
- (1) If all satisfactory, sign for equipment.
 - (2) If any defects found, report them to the Rigging Loft Controller.



PROCEDURE 4

(To be used by personnel withdrawing equipment)

PNEUMATIC CHAIN HOISTS

- (1) Check that the SWL is adequate for the load.
- (2) Check that the colour coding is current and that the air hoist has a plant number / ID mark.
- (3) Examine top and bottom hooks and check for stretch / distortion.
- (4) Check function of safety catches.
- (5) Ensure hooks swivel freely in yokes and are secure in their mountings.
- (6) Examine load chain and sheaves, check for wear / distortion and ensure satisfactory seating of load chain in pockets.
- (7) Examine body casing and check for cracks, distortion, missing bolts, screws or any other defect that may interfere with operation or effect the safety of the hoist.
- (8) Examine dead end load chain anchor pins and check for distortion or wear.
- (9) Check direction controls are free from damage and that they function correctly.
- (10) Examine the complete length of load chain and check for stretch, deformed / bent links, nicks, wear and excessive corrosion.
- (11) Where a beam trolley is fitted or is an integral part of the hoist, refer to the relevant examination procedure.

- NOTES:
- (1) If all satisfactory, sign for equipment.
 - (2) If any defects found, report them to Rigging Loft Controller.



PROCEDURE 5

(To be used by personnel withdrawing equipment)

BEAM CLAMPS

- (1) Check that the SWL is adequate for the load.
- (2) Check that the colour coding is current and that the clamp has a plant number/ID mark.
- (3) Examine suspension shackle and check for wear, stretch or distortion.
- (4) Examine suspension load bar and check for wear, bending and distortion.
- (5) Examine inner clamp half and check for wear, distortion and cracking. Check jaws for deformation.
- (6) Examine outer clamp half and check for wear, distortion and cracking. Check jaws for deformation.
NOTE: Where swivel jaws are fitted, ensure they are free to rotate.
- (7) Operating adjusting bar and check straightness and function. Check threads for wear and stretch.
- (8) Examine female screwed knuckles (in each clamp half) and ensure they are not deformed due to over/under tightening of clamp on beam.
- (9) Check tommy bar handle and ensure it is not bent or has any damage which may be injurious to the operator's hands.

- NOTES:
- (1) If all satisfactory, sign for equipment.
 - (2) If any defects found, report them to the Rigging Loft Controller.



PROCEDURE 6

(To be used by personnel withdrawing equipment)

BEAM TROLLEYS

- (1) Check that the SWL is adequate for the load.
- (2) Check that the colour coding is current and that the clamp has a plant number/ID mark.
- (3) Examine side plates and check for wear, distortion and cracks.
- (4) Examine wheels, axles, bearings, wheel tread and flanges.
- (5) If geared travel, check gear teeth on wheel flanges and drive sprocket of hand chain wheel shaft for alignment, broken teeth etc.
- (6) Examine hand chain and hand chain wheel and ensure chain seats properly in the chain sprockets.
- (7) Check the chain guides are not deformed and are correctly positioned to ensure smooth feed of chain onto chain wheel.
- (8) Examine load bar/bars and check for deformation.
- (9) Examine suspension plates/yokes/shackle for wear, distortion and cracking.
- (10) Where an adjusting screwed bar is fitted, check for straightness and examine threads for stretch/damage and check function of locking device.
- (11) Ensure both the female threaded spigots (mounted on the side plates) are not damaged or deformed.

NOTES: (1) If all satisfactory, sign for equipment.
 (2) If any defects found, report them to the Rigging Loft Controller.



PROCEDURE 7

(To be used by personnel withdrawing equipment)

UNIVERSAL PLATE CLAMPS

- (1) Check that the SWL is adequate for the load.
- (2) Check that the colour coding is current and the clamp has a plant number / ID mark.
- (3) Examine hook ring and check for wear / distortion in the crown of the ring.
- (4) Ensure the hook ring is not too slack in the clamp as this could indicate internal wear.
- (5) Examine jaw pin and nut and ensure it is secure and not deformed.
- (6) Check operation of cam assembly locking lever / jaw spring.
- (7) Examine serrated jaw and serrated pad and check for wear / deformation.
- (8) Examine main body shell and check for wear, cracks or deformation which may affect the operation of internal components.

NOTES: (1) If all satisfactory, sign for equipment.
 (2) If any defects found, report them to the Rigging Loft Controller.



PROCEDURE 8

(To be used by personnel withdrawing equipment)

HORIZONTAL PLATE CLAMPS

- (1) Check that the SWL is adequate for the load.
- (2) Check that the colour coding is current and that the clamp has a plant number / ID mark.
- (3) Examine suspension shackle and check for wear, stretch or distortion.
- (4) Examine suspension load bar and check for wear, bending or distortion.
- (5) Examine inner clamp half and check for wear, distortion and cracking -check jaws for deformation.
- (6) Examine outer clamp half and check for wear, distortion and cracking - check jaws for deformation.

NOTE: Where swivel jaws are fitted, ensure they are free to rotate.

- (7) Operate adjusting bar and check straightness and function. Check threads for wear and stretch.
- (8) Examine female screwed knuckles (in each clamp half) and ensure they are not deformed due to over / under tightening of clamp on beam.
- (9) Check tommy bar handle and ensure it is not bent or has any damage which may be injurious to the operator's hands.

NOTES: (1) If all satisfactory, sign for equipment.
(2) If any defects found, report them to the Rigging Loft Controller.



PROCEDURE 9

(To be used by personnel withdrawing equipment)

SHEAVE BLOCKS / SNATCH BLOCKS

- (1) Check that the SWL is adequate for the load.
- (2) Check that the colour coding is current and the block has a plant number / ID mark.
- (3) Examine sheaves for wear in the rope groove, cracks or distortion.
- (4) Try to lift sheaves to check bushes for wear.
- (5) Spin the sheaves to check bearings / bushes and ensure smoothness of operation.
- (6) Ensure all grease ports are clean and unblocked and that the block is well lubricated.
- (7) Examine swivel head fitting / bottom load hook and check for wear / stretch.
- (8) Examine (if possible) thrust bearing / washer and ensure smoothness of operation.
- (9) Examine upper load pin / spigots and check for wear / distortion.
- (10) If head fitting / hook is of the shank type, check security of shank and nut and examine for stretch / distortion. Examine cross head for wear.
- (11) Examine head fitting shackle / eye checking for wear, stretch or cracking.
- (12) Examine side plates / straps and check for distortion, wear or cracking (especially around main load pin hole and top suspension hole).
- (13) Ensure there are no sharp edges or burrs on the side plates which may be detrimental to the wire rope.
- (14) If fitted, examine becket and check for wear, stretch or cracking.
- (15) Check all spacers and tie bolts and ensure they are not deformed.
- (16) Using sheave gauge, check rope groove for compatibility with winch rope.

- NOTES:
- (1) If all satisfactory, sign for equipment.
 - (2) If any defects found, report them to the Rigging Loft Controller.



PROCEDURE 10

(To be used by personnel withdrawing equipment)

HYDRAULIC CYLINDERS / JACKS / PUMPS

- (1) Check that the capacity is adequate for the load.
- (2) Check that the colour coding is current and the cylinder / jack has a plant number / ID mark.
- (3) Examine body of cylinder / jack and check for impact damage, cracks and oil leaks. (With cylinders, examine inlet / outlet couplings and check for leakage).
- (4) Operate cylinder / jack, pumping the ram to full stroke.
- (5) Examine the ram and check for bellling, scoring and corrosion.
- (6) If the ram is threaded externally and fitted with a locking collar, examine threads and check for stretch.
- (7) Examine round seal and check for oil leakage.
- (8) Turn valve to lower / release and ensure the ram goes down smoothly. (Jerkiness could indicate distortion to the ram not visible to the eye and sponginess indicates air in the system which will have to be bled).
- (9) Examine all hoses and fittings and ensure they are not perished, cut or in any way damaged.
- (10) With the ram in the lowered position check the oil level of the jack / pump unit.
- (11) Function test the pump and ensure the valve does not leak when closed and under pressure.
- (12) Where claw attachments are fitted examine for distortion / cracks.
- (13) Where gauges are fitted, check for leaks, function test and ensure needle returns to zero.

NOTES: (1) If all satisfactory, sign for equipment.
(2) If any defects found, report them to the Rigging Loft Controller.



PROCEDURE 11

(To be used by personnel withdrawing equipment)

WIRE ROPE SLINGS

- (1) Check that the SWL is adequate for the load.
 - (2) Check that the colour coding is current and the sling has a plant number / ID mark.
 - (3) **Examine each individual leg along its entire length and check for:**
 - (a) Wear
 - (b) Corrosion
 - (c) Abrasion
 - (d) Mechanical Damage
 - (e) Broken Wires
 - (f) Internal Deterioration *
- * Internal deterioration should be checked for by using two specially designed clamps to open up the rope to expose the wire / fibre core.
- (4) Examine each ferrule and ensure the correct size of ferrule has been fitted.
 - (5) Check that the end of the loop does not terminate inside the ferrule (i.e. the rope end should protrude slightly but no more than 1/3rd of the dia) unless the ferrule is of the longer tapered design which has an internal step.
 - (6) The ferrule should be free from cracks or other deformities.
 - (7) Examine each thimble and check for correct fitting, snagging damage and elongation. (Stretched thimbles / eyes could indicate possible overload).
 - (8) Examine wire rope around thimbles as it is often abraded due to sling being dragged over rough surfaces.
 - (9) If fitted, examine master link / quadruple assembly and check for wear, corrosion and cracking.
 - (10) If fitted with hooks, check for wear, corrosion and cracking and ensure safety latch functions.

- NOTES:
- (1) If all satisfactory, sign for equipment.
 - (2) If any defects found, report them to the Rigging Loft Controller.



PROCEDURE 12

(To be used by personnel withdrawing equipment)

CHAIN SLINGS

- (1) Check that the SWL is adequate for the load.
- (2) Check that the colour coding is current and the sling has a plant number / ID mark.
- (3) Lay out chain sling on floor, remove all twists from legs.
- (4) Match up legs to check for signs of stretch / deformation in individual legs.
- (5) **Visually examine the chain sling along its entire length and check for:**
 - (a) Distortion in chain links (nicks, bends, twists, elongated links).
 - (b) Wear between chain links.
 - (c) Wear between chain links and load pins.
 - (d) Heat damage.
 - (e) Chemical damage.
 - (f) Wear, stretch, twisting on end terminations.
 - (g) Function of safety catches (where fitted).
 - (h) Security of load pins.

NOTES: (1) If all satisfactory, sign for equipment.
(2) If any defects found, report them to the Rigging Loft Controller.



PROCEDURE 13

(To be used by personnel withdrawing equipment)

MAN-MADE FIBRE SLINGS

- (1) Check that the SWL is adequate for the load.
- (2) Check that the colour coding is current and the sling has a plant number / ID mark.
- (3) **Visually examine web sling along its entire length and check for:**
 - (a) Cuts or tears.
 - (b) Burst stitching (especially around the eyes).
 - (c) Chemical damage.
 - (d) Heat damage.
 - (e) Ingress of foreign bodies into fibres.
 - (f) Distortion / wear in metal eyes (where fitted).

(When checking round slings, should any cuts be found in the outer protective cover, the sling should be condemned i.e. **do not use** as the inner strength core could be damaged).

- NOTES:
- (1) If all satisfactory, sign for equipment.
 - (2) If any defects found, report them to the Rigging Loft Controller.



PROCEDURE 14

(To be used by personnel withdrawing equipment)

SHACKLES, EYEBOLTS / EYENUTS

1. SHACKLES

- (1) Check that the SWL is adequate for the load.
- (2) Check that the colour coding is current and the shackle has a plant number / ID mark.
- (3) Remove shackle pin and examine wear, deformation and cracking.
- (4) Ensure it is the correct pin for the shackle, (i.e **NOT** a H/T pin in an alloy shackle).
- (5) Check pin threads for wear / deformation.
- (6) Examine shackle body and check for wear in the crown and pin holes, deformation and cracking.
- (7) Check alignment of pin holes and ensure the pin fits correctly.
- (8) In the case of safety pin shackles, ensure split pins are fitted.

2. EYEBOLTS / EYENUTS

- (1) Check that the SWL is adequate for the load.
- (2) The colour coding is current and the eyebolt / eyenut has a plant number / ID mark.
- (3) Clean up threads and wire brush if necessary.
(If they are unused, remove protective tape / plug to allow inspection of threads).
- (4) Examine threads and check for wear, stretch or impact damage. The threads must be complete (no broken threads) and full (no flats on top). The thread should be concentric and fit neatly in a standard nut / on a standard bolt. If stretch is suspected, a thread gauge should be used to confirm condition.
- (5) Examine eye of bolt / nut and check for wear / stretch / distortion and look for hairline cracks at the crown of the ring.
- (6) Check squareness of shank / screwed hole against shoulder.

- NOTES:
- (1) If all satisfactory, sign for equipment.
 - (2) If any defects found, report them to the Rigging Loft Controller.



PROCEDURE 15

(To be used by personnel withdrawing equipment)

RIGGING SCREWS, OPEN WEDGE SOCKETS

1. RIGGING SCREWS

- (1) Check that the SWL is adequate for the load.
- (2) Check that the colour coding is current and the rigging screw has a plant number / ID mark.
- (3) Clean and examine the threads and check for wear, stretch or impact damage.
- (4) Examine the eyes / hooks and check for wear / stretch. (Jaw type - Remove clevis pin and examine pin and pin holes for wear / stretch and distortion).
- (5) Check that the clevis pin and pin holes are free from distortion / wear.
- (6) Ensure the threads are suitably lubricated.

2. OPEN WEDGE SOCKETS

- (1) Check that the SWL is adequate for the load.
- (2) Check that the colour coding is current and the socket has a plant number / ID mark.
- (3) Remove main load pin and wedge.
- (4) Examine load pin and check for wear / distortion.
- (5) Examine wedge and check for wear / distortion / cracking.
(Ensure it is the correct wedge for the rope diameter marked on socket).
- (6) Examine socket and check for wear / elongation of pin holes and cracking.
- (7) If cracking is suspected, remove any coating or paint to expose bare metal and have MPI carried out.
- (8) If all satisfactory, re-paint and re-assemble.

NOTES:

- (1) If all satisfactory, sign for equipment.
- (2) If any defects found, report them to the Rigging Loft Controller.



PROCEDURE 16

(To be used by personnel withdrawing equipment)

SAFETY CABLE REELERS (FALL ARREST DEVICES)

1. SAFETY CABLE REELERS

- (1) Check that the SWL is adequate for the load.
- (2) Check that the colour coding is current and the reeler has a plant number / ID mark.
- (3) Check visual indicator to ensure the block has not been subjected to a shock load (i.e. red button flush or above). With some models of block, check the amount of read showing on the dial to establish if the block has been shock loaded.
- (4) Examine the safelok top hook, check for wear / distortion and ensure safety latch functions.
- (5) Examine top shackle and check for wear / distortion. Also check for wear between shackle pin and body casting lugs.
- (6) Examine complete body casting and check for cracks / impact damage which may affect the workings of the block.
- (7) Pull out cable and check for broken wires, wear and corrosion particularly under the neoprene buffers (water / moisture trap).
- (8) Examine thimble eye in wire and swivel eye in hook checking for wear / distortion and ensure the wire retracts efficiently.
- (9) Examine bottom hook checking for wear / distortion and ensure safety latch functions.

2. SAFETY HARNESS

- (1) Check that the SWL is adequate for the load.
- (2) The colour coding is current and the harness has a plant number / ID mark.
- (3) Examine webbing for wear, cuts, abrasion and heat / chemical damage.
- (4) Ensure all stitching is intact and metal fittings have not abraded the webbing.
- (5) Ensure buckles / clasps etc fasten correctly.
- (6) Ensure you know how to put it on correctly.

- NOTES:
- (1) If all satisfactory, sign for equipment.
 - (2) If any defects found, report them to the Rigging Loft Controller.



PROCEDURE 17

LOAD CELLS

The following procedures are to be performed as a minimum requirement in conjunction with any other specific checks designated by the equipment manufacturer.

CHECKLIST

1. LOAD CELL SHACKLES

- (1) Examine body of shackle and check for wear / stretch.
- (2) Examine pin and bobbin and check for bending.
- (3) Ensure electrical plugs and sockets are clean, free from contamination and dry.
- (4) Examine supply cable to remote readout indicator.
- (5) Examine indicator and function check making sure the unit tares at zero.

2. TEST CLOCKS

- (1) Where shackles are fitted, remove and examine pin and body checking for wear / stretch.
- (2) Examine upper and lower lifting / suspension eyes checking for wear / distortion.
- (3) Ensure swivel functions correctly and check for play on thrust bearing.
- (4) Examine the body of the clock checking for impact damage.
- (5) Examine seals and ensure they are not perished or otherwise damaged.
- (6) Examine clock face and ensure the needle returns to zero when not under load.

GENERAL

Ensure the calibration certificate is current, i.e. no more than 12 months old.

Where possible, function test the load cell / test clock by suspending from it, a known weight.

If all satisfactory, record relevant details and issue report.



APPENDIX 8 - RIGGING LOFT CONTROLLER INSPECTION PROCEDURES



Corporate Procedure for Control And Use of Loose Lifting Equipment

The following procedures and checklists are the minimum requirements for inspection of returned loose lifting equipment. If appropriate the relevant manufacturers instructions should also be consulted.

CONTENTS

- Procedure 1 Manual Hoists (Chainblocks)
- Procedure 2 Lever Hoists (Pull Lifts)
- Procedure 3 Wire Rope Hoists
- Procedure 4 Pneumatic Chain Hoists
- Procedure 5 Beam Clamps
- Procedure 6 Beam Trolleys
- Procedure 7 Universal Plate Clamps
- Procedure 8 Horizontal Plate Clamps
- Procedure 9 Sheave Blocks/Snatch Blocks
- Procedure 10 Hydraulic Cylinders/Jacks/Pumps
- Procedure 11 Wire Rope Slings
- Procedure 12 Chain Slings
- Procedure 13 Man-made Fibre Slings
- Procedure 14 Shackles, Eyebolts/Eyenuts
- Procedure 15 Rigging Screws/Turnbuckles, Open Wedge Sockets
- Procedure 16 Safety Cable Reelers (Fall Arrest Devices)
- Procedure 17 Load Cells

Manual Hoists (Chain Blocks)
Loose Lifting Gear Return Inspection Procedure No.1
 (To be completed by the Rigging Loft Controller)

IDENTIFICATION NUMBERS													
Item	INSPECTION CHECK LIST	OK	US	OK	US	OK	US	OK	US	OK	US	OK	US
1	Examine top and bottom hooks and check for stretch and/or distortion.												
2	Check function of safety catches.												
3	Ensure hooks swivel freely in yokes and are secure in their mountings.												
4	Where accessible, -examine load pin for wear and/or distortion.												
5	Examine load chain sheaves, check for wear and/or distortion and ensure satisfactory seating of load chain.												
6	Examine body casing and check for cracks, distortion, missing bolts/screws or any defect which may affect safe operation.												
7	Examine (as far as possible) internal frame side plates.												
8	Ensure chain guide rollers and chain stripper are in position and functioning.												
9	Examine live end and dead end load chain anchor pins and check for distortion/wear.												
10	Suspend hoist and spin hand chain wheel (in hoist mode) to check ratchet pawl function – listen for healthy clicking sound.												
11	Examine hand chain wheel and chain and ensure it seats correctly in the pockets.												
12	Examine complete length of load chain and check for stretch, deformed/bent links, nicks, wear and excessive corrosion.												

Equipment found to be defective and quarantined

OK = Suitable for Service
 US = Requires Repair

Signed
 Date.....

Lever Hoists (Pull Lifts)
Loose Lifting Gear Return Inspection Procedure No.2
 (To be completed by the Rigging Loft Controller)

IDENTIFICATION NUMBERS													
Item	INSPECTION CHECK LIST	OK	US	OK	US	OK	US	OK	US	OK	US	OK	US
1	Examine top and bottom hooks and check for stretch and/or distortion.												
2	Check function of safety catches.												
3	Ensure hooks swivel freely in yokes and are secure in their mountings.												
4	Where accessible, examine load pin for wear and/or distortion.												
5	Examine load chain sheaves, check for wear and/or distortion and ensure satisfactory seating of load chain.												
6	Examine body casing and check for cracks, distortion, missing bolts/screws or any defect which may affect safe operation.												
7	Examine (as far as possible) internal frame side plates.												
8	Ensure chain guide rollers and chain stripper are in position and functioning.												
9	Examine load chain 'live' end anchor and 'dead' end load chain stop.												
10	Examine the operating lever and ensure it is not deformed. (A bent lever could be an indicator of overload).												
11	Operate the lever in both hoisting and lowering modes to check operation of pawls. (Listen for healthy clicking sound).												
12	Examine complete length of load chain and check for stretch, deformed/bent links, nicks, wear and excessive corrosion.												

OK = Suitable for Service
 US = Requires Repair
 Signed
 Date.....

Wire Rope Hoists

Loose Lifting Gear Return Inspection Procedure No.3

(To be completed by the Rigging Loft Controller)

IDENTIFICATION NUMBERS													
Item	INSPECTION CHECK LIST	OK	US	OK	US	OK	US	OK	US	OK	US	OK	US
1	Examine load pin/hook and hook seating in the side casing for wear, distortion or cracking.												
2	Where hooks are fitted, check operation of safety catch and ensure the shear pins are intact.												
3	Check operation of both forward and reverse operating lever and ensure the shear pins are intact.												
4	Check operation of the release lever/handle.												
5	Insert rope and check the stroke of the forward/reversing lever – T508 & 516 = 55mm,												
	NOTE:												
	Longer stroke = possible wear												
	Shorter stroke = possible contamination/damage												
6	Examine casing and check for cracks, dents or distortion which may affect the workings of the internal mechanism.												
7	Using a torch, examine the internals through the opening at the top of the hoist and ensure it is adequately lubricated.												
8	Examine hoist rope ensuring it is the correct one for the hoist and that it is not damaged or worn.												

Equipment found to be defective and quarantined

OK = Suitable for Service
US = Requires Repair

Signed

Date.....

Pneumatic Hoists (Air Hoists)
Loose Lifting Gear Return Inspection Procedure No.4
 (To be completed by the Rigging Loft Controller)

IDENTIFICATION NUMBERS													
Item	INSPECTION CHECK LIST	OK	US	OK	US	OK	US	OK	US	OK	US	OK	US
1	Examine top and bottom hooks and check for stretch and/or distortion.												
2	Check function of safety catches.												
3	Ensure hooks swivel freely in yokes and are secure in their mountings.												
4	Where accessible, examine load pin for wear and/or distortion.												
5	Examine load sheaves, check for wear/distortion and ensure satisfactory seating of load chains in pockets.												
6	Examine body casing and check for cracks, distortion, missing bolts/screws or any defect which may affect safe operation.												
7	Examine live end and dead end load chain anchor pins and check for distortion and wear.												
8	Check direction controls are free from damage and that they function correctly.												
9	If possible, suspend hoist and run air through hoist to check efficiency of motor. (It should sound smooth and not sluggish).												
10	Examine complete length of load chain and check for stretch, deformed/bent links, nicks, wear and excessive corrosion.												
11	Where a beam trolley is fitted or is an integral part of the hoist, check it as per beam trolley check list.												

Equipment found to be defective and quarantined

OK = Suitable for Service
 US = Requires Repair
 Signed
 Date.....

Beam Clamps

Loose Lifting Gear Return Inspection Procedure No.5

(To be completed by the Rigging Loft Controller)

IDENTIFICATION NUMBERS																	
Item	INSPECTION CHECK LIST	OK	US	OK	US	OK	US	OK	US	OK	US	OK	US	OK	US	OK	US
1	Examine suspension shackle and check for wear, stretch or distortion.																
2	Examine suspension load bar and check for wear, bending or distortion.																
3	Examine inner clamp half and check for wear, distortion and cracking. Check jaws for deformation.																
4	Examine outer clamp half and check for wear, distortion and cracking. Check jaws for deformation.																
5	Where swivel jaws are fitted, ensure they are free to rotate.																
6	Operate adjusting bar and check straightness and function. Check threads for wear and stretch.																
7	Examine female screwed spigots (in each clamp half and ensure they are not deformed due to over/under tightening.																
8	Check tommy bar handle and ensure it is not bent or has any damage which may be injurious to the operator's hands																

Equipment found to be defective and quarantined

OK = Suitable for Service
US = Requires Repair

Signed

Date.....

Beam Trolleys
Loose Lifting Gear Return Inspection Procedure No.6
(To be completed by the Rigging Loft Controller)

IDENTIFICATION NUMBERS		OK		US		OK		US		OK		US		OK		US		OK		US		OK		US	
Item	INSPECTION CHECK LIST	OK		US		OK		US		OK		US		OK		US		OK		US		OK		US	
1	Examine side plates and check for wear, distortion and cracks.																								
2	Examine wheels, axles, bearing, wheel tread and flanges.																								
3	If geared travel, check gear teeth on wheel flanges and hand chain wheel shaft for alignment, broken teeth etc.																								
4	Examine hand chain and hand chain wheel and ensure chain seats properly in the chain pockets.																								
5	Check the chain guides are not deformed and are correctly positioned to ensure smooth feed of chain onto chain wheel.																								
6	Examine load bar/bars and check for deformation																								
7	Examine suspension plates/yokes/shackles for wear, distortion and cracking.																								
8	Where an adjusting screwed bar is fitted, check for straightness and examine threads for damage and check locking device.																								
9	Ensure both the female threaded spigots (mounted on the side plates) are not damaged or deformed																								

Equipment found to be defective and quarantined

OK = Suitable for Service
US = Requires Repair
Signed
Date.....

Universal Plate Clamps
Loose Lifting Gear Return Inspection Procedure No.7
(To be completed by the Rigging Loft Controller)

IDENTIFICATION NUMBERS		OK		US		OK		US		OK		US		OK		US		OK		US		OK		US	
Item	INSPECTION CHECK LIST																								
1	Examine hook ring and check for wear/distortion in the crown of the ring																								
2	Ensure the hook ring is not too slack in the clamp as this could indicate internal wear																								
3	Examine the jaw pin and nut and ensure it is secure and not deformed																								
4	Check operation of cam assembly locking lever/jaw spring																								
5	Examine serrated jaw and serrated pad and check for wear/deformation																								
6	Examine main body shell and check for seam, cracks, deformation which may affect the clamp's operation																								

Equipment found to be defective and quarantined

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Signed
Date.....

Horizontal Plate Clamps
Loose Lifting Gear Return Inspection Procedure No.8
(To be completed by the Rigging Loft Controller)

IDENTIFICATION NUMBERS													
Item	INSPECTION CHECK LIST	OK	US	OK	US	OK	US	OK	US	OK	US	OK	US
1	Examine hook ring and check for wear/distortion in the crown of the ring												
2	Ensure the hook ring is not too slack in the clamp as this could indicate internal wear												
3	Examine the jaw pin and nut and ensure it is secure and not deformed												
4	Check operation of cam assembly locking lever/jaw spring												
5	Examine serrated jaw and serrated pad and check for wear/deformation												
6	Examine main body shell and check for wear, cracks, deformation which may affect the clamp's operation												

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Sheave Blocks

Loose Lifting Gear Return Inspection Procedure No.9

(To be completed by the Rigging Loft Controller)

IDENTIFICATION NUMBERS													
Item	INSPECTION CHECK LIST	OK	US	OK	US	OK	US	OK	US	OK	US	OK	US
1	Examine sheaves for wear in the rope, groove, cracks or distortion												
2	Try to lift sheaves to check bushes for wear												
3	Spin the sheaves to check bearings/bushes and ensure smoothness of operation												
4	Ensure all grease ports are clean and unblocked and that the block is well lubricated												
5	Examine swivel head fitting (including shackle/hook) and check for wear/stretch												
6	Examine (if possible) thrust bearing/washer and ensure smoothness of operation												
7	Examine upper load pin/spigots and check for wear/distortion												
8	If head fitting/hook is of the shank type, check security of shank and nut and examine for stretch/distortion. Examine crosshead for wear.												
9	Examine side plates/straps and check for distortion, wear or cracking (especially around load bearing pins).												
10	Ensure there are no sharp edges or burrs on the side plates which may be harmful to the wire rope.												
11	If fitted, examine becket and check for wear, stretch or cracking.												
12	Check all spacers and tie bolts and ensure they are not deformed.												

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Hydraulic Cylinder/Jacks/Pumps
Loose Lifting Gear Return Inspection Procedure No.10
 (To be completed by the Rigging Loft Controller)

IDENTIFICATION NUMBERS											
Item	INSPECTION CHECK LIST	OK	US	OK	US	OK	US	OK	US	OK	US
1	Examine body of cylinder/jack and check for impact damage, cracks and oil leaks (include inlet/outlet couplings)										
2	Operate cylinder/jack, pumping the ram to full stroke.										
3	Examine the ram and check them for pitting, scoring and corrosion and impact damage.										
4	If the ram is threaded externally and fitted with a locking collar, examine threads and check for stretch.										
5	Examine round seal and check for oil leakage.										
6	Open valve to lower/release and ensure they are not perished, cut or in any way damaged.										
7	Examine all hoses and fittings and ensure they are not perished, cut or in any way damaged.										
8	With the ram in the lowered position check the oil level of the jack/pump unit.										
9	Function test the pump and ensure the valve does not leak when closed under pressure.										
10	Where claw attachments are fitted, examine for distortion/cracks.										
11	Where gauges are fitted, check for leaks, function test and ensure needle returns to zero.										

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 Date.....

Equipment found to be defective and quarantined

Wire Rope Slings

Loose Lifting Gear Return Inspection Procedure No.11

(To be completed by the Rigging Loft Controller)

IDENTIFICATION NUMBERS		OK		US		OK		US		OK		US		OK		US		OK		US		OK		US	
Item	INSPECTION CHECK LIST	OK		US		OK		US		OK		US		OK		US		OK		US		OK		US	
1	Examine each leg along its entire length and check for wear, corrosion, abrasion, mechanical damage and broken wires.																								
2	Measure diameter to determine if there is any reduction from original due to wear or stretch (caused by overload).																								
3	Examine each ferrule and check for impact damage/tearing. It should be free of cracks and other deformities.																								
4	Check that the end of the eye loop does not terminate inside the ferrule unless it is of the longer tapered design.																								
5	Examine each thimble and check for correct fitting, also check for snagging damage caused by sling being dragged.																								
6	Check for elongation in the eyes which could indicate overloading.																								
7	Examine wire rope around thimbles as it is often abraded due to sling being dragged over rough surfaces.																								
8	If fitted, examine masterlink/quadruple assemble and check for wear, corrosion and cracking.																								

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Signed.....

Date.....

Equipment found to be defective and quarantined

Alloy Grade 80 Chain Slings
Loose Lifting Gear Return Inspection Procedure No.12
 (To be completed by the Rigging Loft Controller)

IDENTIFICATION NUMBERS											
Item	INSPECTION CHECK LIST	OK	US	OK	US	OK	US	OK	US	OK	US
1	Lay out chain sling on the floor/deck, remove all twists from the legs and check for bent/deformed links.										
2	With multi-leg slings, match up legs to check for signs of stretch in individual legs.										
3	Examine the chain legs along their complete length and check for wear between links, nicks, twists and elongated links.										
4	Check for wear between chain links and load pins.										
5	Check for security of load pins.										
6	Check complete sling legs for heat and/or chemical damage.										
7	Closely examine chain links closest to end fittings as they are often abraded due to sling being dragged over rough surfaces.										
8	Examine end fittings and check for wear, stretch and twisting.										
9	If fitted, examine masterlink/quadruple assembly and check for wear, corrosion and cracking.										
10	Where fitted, check function of safety catches.										

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Signed.....
 Date.....

Equipment found to be defective and quarantined

Man Made Fibre Slings
Loose Lifting Gear Return Inspection Procedure No.13
 (To be completed by the Rigging Loft Controller)

IDENTIFICATION NUMBERS															
Item	INSPECTION CHECK LIST	OK	US	OK	US	OK	US	OK	US	OK	US	OK	US	OK	US
1	Examine the sling along its entire length and check for cuts or tears and burst stitching (especially around eyes).														
2	Check complete sling for chemical or heat damage.														
3	If it is a 'round' sling, examine outer sheath and ensure there has been no ingress of foreign bodies into load bearing fibres.														
4	If metal eyes are fitted, check that they are not worn, distorted or cracked.														
5	Check for wear in the webbing where it is fitted to the metal eye.														
6	Check there is no abrasion damage caused by being dragged from under a load.														
7	Ensure the SWL has not been obscured and the identification tag is still attached.														

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Signed.....
 Date.....

Equipment found to be defective and quarantined

Shackles, Eyebolts/Eyenuts

Loose Lifting Gear Return Inspection Procedure No.14

(To be completed by the Rigging Loft Controller)

IDENTIFICATION NUMBERS															
Item	INSPECTION CHECK LIST	OK	US	OK	US	OK	US	OK	US	OK	US	OK	US	OK	US
	SHACKLES														
1	Remove shackle pin and examine for wear, deformation and cracking.														
2	Ensure it is the right pin for the shackle (i.e. not a higher tensile pin in an alloy shackle).														
3	Check pin threads and shackle body or nut threads for wear/deformation.														
4	Examine shackle body and check for wear in the crown and in pin holes, deformation and cracking.														
5	In the case of safety pin shackles, ensure split pins are fitted.														
	EYEBOLTS/EYENUTS														
1	If eyebolts/eyenuts are previously unused, remove protective tape/plug to allow inspection of threads.														
2	Clean up threads with wire brush if necessary and check for wear, impact damage or stretch (use thread gauge if required).														
3	Check threads are complete (no broken threads) and full (no flats on top).														
4	Visually check concentricity of thread and squareness of shank/screwed hole against shoulder of eyebolt/eyenut.														
5	Examine eye of bolt/nut and check for wear, stretch, distortion and look for hairline cracks at the crown.														

Equipment found to be defective and quarantined

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 Signed.....
 Date.....

Rigging Screws, Wedge Sockets
Loose Lifting Gear Return Inspection Procedure No.15
 (To be completed by the Rigging Loft Controller)

IDENTIFICATION NUMBERS													
Item	INSPECTION CHECK LIST	OK	US	OK	US	OK	US	OK	US	OK	US	OK	US
	RIGGING SCREWS												
1	Unscrew both ends of rigging screw to separate the three main components.												
2	Clean and examine the threads and check for wear, stretch or impact damage.												
3	Examine the eye/hooks/jaws and check for wear/stretch. Remove clevis pin and examine pin holes for wear/stretch.												
4	If necessary, re-grease the threads and reassemble the rigging screw (ensure male threads are fully open through female threads).												
	OPEN WEDGE SOCKETS												
1	Remove main load pin and wedge and examine both components for wear, distortion and cracking.												
2	Satisfy yourself that it is the correct wedge for the rope diameter marked on the socket.												
3	Examine socket body and check for elongation of pin holes and wear.												
4	Visually examine the socket body for cracks. If cracks are suspected, remove any coating to expose bare metal.												
5	If cracks are suspected, carry out MPI.												
6	If MPI has been performed and all is satisfactory, repaint before issuing.												

Equipment found to be defective and quarantined

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 Date.....

Safety Cable Reelers
Loose Lifting Gear Return Inspection Procedure No.16
(To be completed by the Rigging Loft Controller)

IDENTIFICATION NUMBERS													
Item	INSPECTION CHECK LIST	OK	US	OK	US	OK	US	OK	US	OK	US	OK	US
	SAFETY CABLE REELERS												
1	Check visual indicator to ensure the block has not been subjected to a shock load (i.e. red button flush or above)												
2	With some models of block, check the amount of red showing on the dial to establish if the block has been shock loaded.												
3	Examine the saflok top hook and check for wear/distortion and ensure the safety latch engages properly.												
4	Examine top shackle and check for wear/distortion. Also check for wear between shackle pin and body casting lugs.												
5	Examine complete body casting and check for cracks/impact damage which may affect the working of the block.												
6	Pull out cable and check for broken wires, wear and corrosion particularly under the neoprene buffers (water/moisture trap).												
7	Examine thimble eye in wire and swivel eye in hook checking for wear/distortion and ensure the wire retracts efficiently.												
8	Examine bottom hook checking for wear/distortion and ensure safety latch engages correctly.												
	SAFETY HARNESS												
1	Examine the webbing of the harness checking for wear, cuts, abrasion and heat/chemical damage.												
2	Ensure all stitching is intact and metal fittings have not abraded the webbing.												
3	Ensure buckles/clasps etc. fasten correctly.												

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Signed.....

Date.....

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PROCEDURE 17

LOAD CELLS

The following procedures are to be performed as a minimum requirement in conjunction with any other specific checks designated by the equipment manufacturer.

CHECKLIST

1. LOAD CELL SHACKLES

- (1) Examine body of shackle and check for wear / stretch.
- (2) Examine pin and bobbin and check for bending.
- (3) Ensure electrical plugs and sockets are clean, free from contamination and dry.
- (4) Examine supply cable to remote readout indicator.
- (5) Examine indicator and function check making sure the unit tares at zero.

2. TEST CLOCKS

- (1) Where shackles are fitted, remove and examine pin and body checking for wear / stretch.
- (2) Examine upper and lower lifting / suspension eyes checking for wear / distortion.
- (3) Ensure swivel functions correctly and check for play on thrust bearing.
- (4) Examine the body of the clock checking for impact damage.
- (5) Examine seals and ensure they are not perished or otherwise damaged.
- (6) Examine clock face and ensure the needle returns to zero when not under load.

GENERAL

Ensure the calibration certificate is current, i.e. no more than 12 months old.

Where possible, function test the load cell / test clock by suspending from it, a known weight.

If all satisfactory, record relevant details and issue report.