

# **SCOPE OF WORK AND TECHNICAL SPECIFICATION**

## **FOR SERVICING/REPAIR OF LIFTING EQUIPMENT**

**AT**

**UNIVERSITY OF THE WITWATERSRAND**

**JOHANNESBURG**

## **LIFTING EQUIPMENT**

### **CONTENTS**

1. BACKGROUND AND PURPOSE
2. SCOPE OF WORK
3. DEFINITIONS
4. ABBREVIATIONS
5. STANDARD SPECIFICATIONS
  - 5.1 SANS SPECIFICATION
  - 5.2 OHS, MUNICIPAL AND MANUFACTURERS' STANDARDS
6. CONTRACTUAL MATTERS
  - 6.1 CONTRACT DURATION
  - 6.2 MAINTENANCE REPORTING
  - 6.3 HOUSE KEEPING
  - 6.4 WORKING HOURS
  - 6.5 RESPONSE TIMES
  - 6.6 WORKMANSHIP
  - 6.7 PAYMENT TERMS
  - 6.8 SUB CONTRACTING
  - 6.9 QUALIFIED PERSONNEL
  - 6.10 FAILURE TO COMPLY
7. OPERATING AND MAINTENANCE MANUALS
8. LOGGING AND RECORDING PROCEDURES
9. REPAIR WORK TO INSTALLATIONS, SYSTEMS AND EQUIPMENT
10. MAINTENANCE TO INSTALLATIONS, SYSTEMS AND EQUIPMENT
11. SCHEDULE OF LIFTING EQUIPMENT

12. MAINTENANCE AND SERVICING SCHEDULE OF LIFTING EQUIPMENT
13. WARRANTY

## 1. BACKGROUND AND PURPOSE

The University of Witwatersrand, Johannesburg has several lifting equipment spread around its campuses. These were procured at different times. These are used to lift different types of materials depending on where they are located

It is essential that this lifting equipment is maintained regularly in line with the statutory regulations and to extend their lifespan.

For this reason, it is important for the University to procure the services of accredited and experienced Service Provider to perform preventative and corrective maintenance on the lifting equipment.

## 2. SCOPE OF WORK

This specification covers the general repair and maintenance of Lifting Equipment, which include the following:

- (a) Lifts
- (b) Cranes
- (c) Hoists

This specification shall form an integral part of the repair and maintenance contract document. The Contractor must be accredited with the Department of Employment and Labour as Lifting Machinery Entity.

## 3. DEFINITIONS

Call Out	A demand on the Service Provider to act because of equipment or related failure, requiring the Service Provider to visit the site outside of scheduled preventative maintenance.
Down time	The period the equipment is not in operation due to equipment failure, breakdowns, unplanned repairs and periodic re-commissioning/re-adjusting of the equipment systems. This includes the response and repair time.
Emergency	Urgent situation as a result of any equipment part, system failure, or malfunction that results in downtime and impacts on the University's activities or is life threatening.

## 4. ABBREVIATIONS

Term / Acronym	Definition
AC	Alternating Current
BoQ	Bill of Quantities
BS	British Specification
CPS	Campus Protection Services
NDT	Non-Destructive Testing
OEM	Original Equipment Manufacturer
OHS	Occupational Health and Safety

SANS	South African National Standards
SWL	Safe Working Load

## 5. STANDARD SPECIFICATIONS

### 5.1 SANS SPECIFICATION

The latest edition, including all amendments up to date of tender, of the following specifications, publications and codes of practice shall be read in conjunction with this specification and shall be deemed to form part thereof.

#### **SANS and other specifications and codes**

SANS 19:	The inspection, testing and examination of mobile cranes
SANS 21:	Escalators, safety rules for the construction and installation of escalator and passenger conveyors
SANS 10375:	The inspection and testing of overhead cranes
SANS 10148:	The installation and operation of cable cranes and aerial ropeways
SANS 2972:	Lifting tackle – Inspections
SANS 50081-1:	Electric lifts, safety rules for the construction and installation of lifts
SANS 50081-2:	Electric lifts, safety rules for the construction and installation of lifts
SANS 16368:	Mobile Elevating Work Platforms
SANS 1545-1:	Safety rules for the construction and installation of lifts: Part 1: Electric lifts
SANS 1545-2:	Hydraulic lifts, safety rules for the construction and installation of hydraulic lifts
SANS 1545-3:	Safety rules for the construction and installation of lifts: Part 3: Lifts for persons with physical disabilities (stair-lifting platforms)
SANS 1545-4:	Safety rules for the construction and installation of lifts: Part 4: Lifts for persons with physical disabilities (vertical platforms)
SANS 1545-5:	Safety rules for the construction and installation of lifts, Part 5: Electric and hydraulic access, goods only lifts
SANS 1545-6:	Safety rules for the construction and installation of lifts: Part 6: Rack and pinion lifts,

SANS 1545-9:	Safety rules for the construction and installation of lifts: Part 9: Lift landing doors fire resistance testing
SANS 50280:	Design, safe use and maintenance of scissors lifts
SANS 10360:	Maintenance and repair of electric and hydraulic powered lifts, escalators and passenger conveyors

## **5.2 OHS, MUNICIPAL AND MANUFACTURERS' STANDARDS**

### **5.2.1 Occupational Health and Safety Act of 1993**

All regulations and statutory requirements as laid down in the latest edition of the Occupational Health and Safety Act, 1993 (Act no 85 of 1993) shall be adhered to.

### **5.2.2 Manufacturers' specifications, codes of practice and installation instructions**

All equipment and materials shall be installed, serviced and repaired strictly in accordance with the manufacturers' specifications, instructions and codes of practice.

### **5.2.3 Municipal regulations, laws and by-laws**

All municipal regulations laws, by-laws and special requirements of the Local Authority shall be adhered to unless otherwise specified.

## **6. CONTRACTUAL MATTERS**

### **6.1 Contract Duration**

The contract duration will be for 5 years.

### **6.2 Maintenance Reporting**

The Service Provider shall submit two types of documents in writing to the University on an ongoing basis, namely:

- A service log, after every service or inspection.
- Quarterly reports

The service logs must highlight:

- Date and time of service.
- The equipment model and serial number being serviced.
- The maintenance tasks performed such as inspections, repairs, or replacements, and the like. This will include readings, test results and checklists.
- Issues that were encountered during the service and the actions taken to resolve them.
- Recommendations for future maintenance.
- Materials used, including quantity and cost.
- Record of the personnel involved in the maintenance activities.
- Faults found and their priority.

The service log must be submitted to the University, and the subsequent maintenance activities must factor in previous outcomes where required.

Monthly written reports will be required by the University which document all maintenance activities and incidents for that period. The reports are to be succinct and compiled with care. The reports referred to here are separate to the service logs but can be deemed to communicate a summary of events for the month.

### **6.3 House Keeping**

All rubbish and waste arising from the services provided must be removed by the Service Provider at no cost to the University and the site and buildings are left in a clean and tidy condition.

The Service Provider must provide an environmental management plan, that addresses aspects such as but not limited to: electronic waste disposal, gas leaks, and the like

#### **6.4 Response Times**

The required response time for Call Outs and other events is as follows:

- Priority 1 (Emergencies) – within 1 hour. A failure that, for any reason, results in one or more of the pieces of Equipment not operating.
- Priority 2 (Urgent) – within 3 hours. A failure that does not stop a piece of Equipment from operating but may jeopardize people, the Customer's facilities or the Equipment.
- Priority 3 (General) – within 6 hours. A failure that does not stop a piece of Equipment from operating, however if the failure is not attended to in the medium or long term, it could cause a greater and/or more serious level of failure.

Any work / event requiring extended repair time shall be discussed and agreed between the University and the Service Provider.

#### **6.5 Working Hours**

All planned work should be carried out during normal working hours (7am to 5pm) on days and time agreed with the client.

The University shall issue the Service Provider with the Academic Calendar for each year. This document shall contain key dates that may limit the nature of the work that may take place.

#### **6.6 Payment**

The University does not allow upfront payments. All payments will be made within 30 (thirty) days of submitting an invoice. However, where an EME as per the B-BBEE Codes has been appointed as a successful service provider, shorter payments may be considered as part of supplier development, subject to prior written approval by the University.

The rates indicated in the bill of quantities must be adhered to when preparing the invoice. Works involving ad hoc replacement of parts shall be in line with the tendered rates, have sufficient detail provided, and pre-approved by the University.

#### **6.7 Sub-Contracting**

The University prefers to contract directly with all service providers and the Service Provider must not sub-contract any of its responsibilities or obligations.



## **6.8 Workmanship**

Works with poor workmanship and unauthorized spares will not be accepted. Acceptance of the maintenance work shall be by means of review and approval of the submitted and fully completed service log by the University. The University may, from time to time, elect to oversee any of the tests or inspections relating to the maintenance activities or request a retest to satisfy the University personnel of satisfactory functioning of the equipment.

The University reserves the right to withhold payments until the quality of the Services is fit for purpose. The Service Provider must have a quality management system such as ISO 9001:2015 or similar in place, and proof of such is to be provided with the bid. The quality management system must encompass, but not be limited to:

- Structured record keeping and retrieval.
- Record keeping for an established duration.
- The Issuance of reviewed service logs by authorised personnel.

In addition to the services being fit for purpose, they should also meet the manufacturer's performance standards.

## **6.9 Failure to Comply**

The Services will be monitored, and penalties will be imposed. Penalties will be imposed as follows:

If the service provider fails to adhere to the provisions of the priority levels described herein, the University reserves the right to levy a penalty fee against the services provider (in line with university policy). Continuous violation of these provisions will result in the contract being terminated.

## **6.10 Health and Safety**

The Service Provider must maintain and submit a health and safety file every year for the duration of the contract to the University's authorised representative.

The Service Provider must ensure that:

- A second person is present during maintenance activities in the event of an accident, to ensure the emergency will be detected and help will be provided.
- Its personnel wear personal protective clothing and safety equipment.
- Suitably trained personnel perform the Services.

## **6.11 Qualified Personnel**

The Service Provider must ensure that its personnel performing and overseeing the services be suitably qualified and accredited in the specific trade. The required key personnel for the Services are as follows:

The Service Provider must be registered as a Lifting Machinery Inspector with the Engineering Council of South Africa.

## **7 OPERATING AND MAINTENANCE MANUALS**

The Service Provider shall be responsible for the compilation of an inventory list.

All information shall be recorded and reproduced in electronic format, as well as three sets of hard copies to be supplied to the University.

The Service Provider shall also be responsible for the compilation of the following:

(a) Cataloguing of the lifting equipment

All the lifting equipment must be catalogued under the following headings:

- (i) Location and details of equipment
- (ii) Service date
- (iii) Service frequency
- (iv) Condition of equipment
- (v) History: Usage incidents, breaking, etc.

## **8.0 LOGGING AND RECORDING PROCEDURES**

The Service Provider shall under this maintenance contract institute a logging and recording system as part of his maintenance control plan. This shall consist of a log and record book, which shall be utilised to log and record all service records, system checks, breakdowns, maintenance visits, inspections, etc.

The logbook shall be stored in a safe place as agreed with the University. Copies of the monthly entries and recordings into the logbook shall be submitted by the Service Provider together with his monthly report to the University or the University's representative.

The logbook shall be structured to include at least the following:

- (a) Service records
- (b) Inspection and maintenance actions
- (c) Breakdown reports
- (d) Inspection and test comments and reports.

## **9.0 REPAIR WORK TO INSTALLATIONS, SYSTEMS AND EQUIPMENT**

### **9.1 LIFTING EQUIPMENT**

#### **9.1.1 GENERAL**

All repair work shall be executed using approved materials and equipment suitable to the systems and/or installations they serve. The said repair work shall be executed in accordance with the relevant codes of practice, standards, regulations, municipal laws and by-laws, manufacturer's specifications and codes of practice and all applicable additional specifications included in this document.

All new equipment, materials and systems shall be furnished with a written guarantee of a defects liability period of 12 months commencing on the date of issue of a certificate for

completion of the repair work. These guarantees shall be furnished in favour of the University.

#### **9.1.2 REPAIR WORK OF EXISTING LIFTING EQUIPMENT**

The Service Provider shall at the start of the repair and maintenance contract inspect, record and report on all the existing lifting equipment listed in this specification.

This inspection and report shall comprise the following:

- (a) Establishing the condition of all equipment,
- (b) Reporting all defects to equipment,
- (c) Compliance of systems in respect of the governing regulations at the time of the start of the Contract,
- (d) Recording all equipment with an identifying system,
- (e) Details of all equipment,
- (f) Listing of latest service.

The Service Provider shall report on the above in writing to the University and/or University's Representative.

#### **9.1.3 SITE ASSESSMENT AND INSPECTION**

Site assessments shall include but not be limited to the following:

- (a) Conduct a detailed inspection of the lifting equipment, including lifting mechanism, load handling attachments, support structures, drive and control systems, safety devices and power supply.
- (b) Identify any damaged, faulty, or non-compliant components.

#### **9.1.4 FAULT-FINDING & DIAGNOSTICS**

- a) Fault-finding and diagnostics of the lifting equipment shall include but not be limited to the following:  
Use appropriate test equipment and procedures to trace system faults. The Service Provider shall, when servicing or any other approved work, have available (on site) sufficient plant, tools and test equipment in sound working condition and of the required capacity for carrying out the work in an efficient and workmanlike manner. All tools / equipment should be appropriately marked.
- b) Should the Client be of the opinion that the plant tools or test equipment used by the Service Provider are inefficient, inadequate or otherwise unsuitable for use on the works, he will have the right to instruct the Service Provider to provide such additional or approved plant, tools and test equipment which he considers necessary for carrying out the work in a satisfactory manner. Under no circumstances may tools / equipment be borrowed from the Client.

### 9.1.5 REPAIR WORKS

Repair work to the lifting equipment shall include, but not be limited to the following:

- (a) **Mechanical Repairs**
  - Wire rope replacement
  - Chain replacement
  - Hook block repairs
  - Brake repairs
  - Gearbox repairs
- (b) **Structural Repairs**
  - Tighten or replace loose/damaged bolts
  - Repair/replace worn wheels (for gantry cranes or trolleys)
  - Check welds and structural members for cracks (NDT if necessary)

### 9.1.6 TESTING & COMMISSIONING

Testing and commissioning of the lifting equipment shall include, but not be limited to the following:

- (a) **Pre-Commissioning Checks**
  - Ensure repair/installation is fully complete (all bolts tightened, wiring secured, lubrication done, etc.)
  - Verify documentation — manufacturer's manuals, load charts, wiring diagrams, previous inspection reports
  - Ensure all PPE and test weights are available
  - Appoint competent persons (Lifting Machinery Inspector [LMI] or Lifting Tackle Inspector as required)
- (b) **Visual Inspection**
  - Structural check
    - No cracks, deformation, or corrosion on beams, hooks, chains, ropes, frames
  - Mechanical Check
    - Proper reeving of ropes, no kinks/frays, chain wear within limits, brakes in good condition
  - Electrical Check
    - No exposed wires, correct connections, functioning controls, emergency stop working
  - Safety device check
    - Limit switches aligned and functional
    - Load limiter, anti-collision devices, audible alarms functional
  - Markings & Signage
    - Safe Working Load (SWL), manufacturer plates, control labels, and danger signage present and legible
- (c) **Functional Testing (No Load)**
  - Lift, lower, and traverse the hook/trolley/crane through full range
  - Test limit switches (upper/lower, travel ends)
  - Test controls (pendant, radio, or cabin control — all motions correct)
  - Check brake holding in all positions

- Confirm emergency stop works and resets properly

(d) **Load Testing (Proof Load Test)**

- Use calibrated test weights (or water bags, calibrated load cells)
- Typical test load = 100%–125% of SWL (as per SANS 10375 or manufacturer specification)

Test Type	Typical Load
Static Load Test	125% of SWL (held suspended for duration as per industry norms and standards)
Dynamic Load Test	100% of SWL (lifting/lowering, traversing, braking)

- Monitor for the following:
  - Deformation, slippage, unusual noises
  - Proper brake holding under load
  - Proper functioning of overload limiter

(e) **Safety System Verification**

- Reconfirm **overload protection** triggers at appropriate load
- Recheck **limit switches** under load conditions
- Verify **brake performance** under load
- Confirm **emergency stop** and power-off braking

(f) **Final Documentation & Certification**

- Complete Test Certificate
- Issue Load Test Certificate
- Update Equipment Register and Lifting Machine Logbook
- Provide Operator Training (if required)

### 9.1.7 REPORTING & HANDOVER

Reporting and handover of the lifting equipment shall include, but not be limited to the following:

- Provide a detailed service and fault report.
- Submit a Certificate of Compliance or system restoration confirmation.
- Provide maintenance recommendations, if required.

### 9.1.8 DELIVERABLES

Deliverables shall include, but not be limited to the following:

- Fault report and recommendations.
- List of replaced components
- Certificate of unit functionality/compliance
- Updated documentation

## 10. MAINTENANCE TO INSTALLATIONS, SYSTEMS AND EQUIPMENT

### 10.1 LIFTING EQUIPMENT

#### 10.1.1 GENERAL

Annual maintenance responsibilities for each installation including all units and components as specified, shall commence with access to the site.

This service shall include:

- (a) Routine preventative maintenance,
- (b) Corrective maintenance, and
- (a) Breakdown maintenance,

All maintenance work shall be executed in accordance with the relevant codes of practice, statutory regulations, standards, regulations, municipal laws and by-laws and the manufacturers' specifications and codes of practice.

All new equipment, components and materials supplied and installed under the maintenance contract shall be furnished with a prescribed manufacturer's guarantee.

#### 10.1.2 ROUTINE PREVENTATIVE MAINTENANCE

The routine maintenance work to be performed and executed shall include but not be limited to the items listed below under the respective headings. The purpose is to ensure ongoing reliability, compliance with safety regulations, and early detection of faults or potential failures.

These actions and findings shall be logged and reported on the relevant approved schedules and reports.

#### **Equipment Inspection**

Equipment inspection shall include at least the following actions and shall be scheduled in accordance with the relevant regulations,

- (a) Visual inspection of all equipment and components.
- (b) Check for physical damage, corrosion, loose connections, or signs of tampering.

#### **Checklist for quarterly, biannual and annual servicing shall include but not be limited to**

Component	Task
Lubrication	Lubricate wire ropes, chains, gears (as per manual)
Fasteners	Check tightness of accessible bolts/nuts
Electrical connections	Inspect pendant stations & cables
Structure	Visual inspection for cracks/corrosion

Component	Task
Wire ropes/chains/rope drum	Measure wear (gauge) — replace if beyond limits
Brake system	Inspect wear, adjust brake gap
Limit switches	Test and adjust actuation points
Load limiter / Overload device	Functional test
Gearboxes	Check oil level & leaks
Trolley / Crane wheels	Check wear, alignment
Hooks	Measure throat opening & twist — replace if out of spec
Lubrication points	Top up/replace grease/oil as needed

### **Documentation & Reporting**

Documentation and reporting of the equipment shall include at least the following actions

- (a) Record all faults found, and corrective actions taken.
- (b) Submit a detailed maintenance report after each visit.
- (c) Maintain an up-to-date service log on site.

### **Frequency of Maintenance**

Maintenance shall be performed quarterly, biannually and annually (including load test).

### **Deliverables**

Deliverables shall include at least the following

- (a) Signed maintenance reports.
- (b) Log of equipment repaired or replaced.
- (c) Certificates of compliance (for annual maintenance or regulatory inspections).

### **Client Responsibilities**

Client responsibilities shall include at least the following

- (a) Provide safe and uninterrupted access to all lifting equipment.
- (b) Notify staff in advance of maintenance work.
- (c) Maintain lifting equipment logbook accessible to Service Provider.

### **10.1.3 CORRECTIVE MAINTENANCE**

The Service Provider shall inspect and check all equipment, materials, systems and installations for any pending breakdowns, maladjustments or anomalies of equipment.

The Service Provider shall report and take actions to correct such shortfall

#### **10.1.4 BREAKDOWN MAINTENANCE**

All breakdown maintenance shall be done in accordance with the relevant specifications, standards, regulations and codes.

The Service Provider shall have access to the necessary spares, equipment and tools for any possible breakdowns.

- a) The Service Provider shall provide a standby phone that is always attended to – twenty-four (24) hours a day, seven (7) days per week, for the duration of the contract.
- b) All costs related to the standby service are for the Service Provider account i.e. procurement of the devices (this includes mobile phone, chargers and battery banks), airtime and data purchases, shall be at the cost of the Service Provider.
- c) The standby service shall be carried out at the cost as specified in the BoQ under Corrective Maintenance. Standby staff shall be equipped with adequate communication equipment to ensure a minimum delay in the response to emergency call-backs.
- d) In the event of faults or other events requiring urgent attention, the Service Provider shall guarantee attending to the request within 1 hour. Any work/event requiring extended repair time shall be discussed and agreed between the Client.



**11                    SCHEDULE OF LIFTING EQUIPMENT**

The lifting maintenance and servicing are as follows:

## University of the Witwatersrand Lifting Equipment Inspection / Load Test

Type of service	Interval	Building	Equipment Type	Equipment Number
Quarterly inspection of lifting tackle	Every 3 Months	Physics Building	Lifting Tackle	All records of inspections are kept by the department head of the building. We do not keep record of the tackle
		Genmin H.V Lab		
		Goldfields Lab		
		Hillman Building		
		Wits Theatre		
		North West Engineering		
Bi Annual service of cranes	Every 6 Months	Physics Building		
		Humphrey Raikes Building	Morris Chain Block	116-1
		Wits Theatre Building	Black Bear	118-1
		Wits Origins Centre	Sthall	112-1
			Morris	112-2
		Physics Building	Maxi lift chain block	115-1
			Tsala Chain block	115-2
		Gold Fields Lab	Lasch mono rail	207-1
			TXK chain block A-frame	207-3
		Genmin H.V Lab	Lasch 5000kg	207-2/2078
			Lasch 3000kg	205-1
		Richard Ward Building	Lasch mono rail	205-2
			Powalift Chain hoist	111-3
			TXK chain block mono rail	111-2
			TXK chain block mono rail	111-4
			TXK chain block mono rail	111-1
		Hillman Building	Lasch Bruin	108-1/2037
			Wharton 1500kg	108-2
			Black Bear chain hoist & monorail	108-3
			Vital Chain block A-frame	108-4
			Powalift Chain hoist roof jib	108-5
		NW Engineering	Lasch mono rail	134-1
			Lasch mono rail	134-2
			C-Tech Chain hoist	134-3
			Donsa chain block A-frame	134-4
			TXK chain block A-frame	134-5
			Donsa chain block Jib	134-11
			Donsa chain block A-frame	134-6
			Donsa Fixed jib	134-7
			Monorail	134-8
			Monorail	134-9
			Vital chain block mono rail	134-10
		Goldfields Lab	Lasch mono rail	207-4
			Chain block mono rail	207-5
Annually	Once a year	Biology Building	Goods Hoist 100kg	100kg
		Origins Centre the Wedge South	Stahl S.G crane 2000kg	102-1
		Wits Theatre Building	Elephant mono rail 500kg	118-1
		Humphrey Raikes Building	Tusker mono rail 500kg	116-1
		Phytotron Building	Vital mono rail 100kg	131-1
		Physics Building	Tsala building 1000kg	115-2
			Maxi lift chain block 3000kg	115-1
		Genmin H.V Lab	Lasch Crane 3000kg	205-1 2079
			Lasch Brun 2000 kg	205-2
		Hillman Building	Powalift Jib 1000kg	108-5
			Lasch Brun Crane 1500kg	108-1
			Vital A-frame 1000kg	108-4
			Wharton 1500kg	108-2
			Black bear 1000kg	108-3
			Raytoko/TXK monorail	108-6
			Raytoko/TXK monorail	108-6
		Goldfields Laboratories	Powalift A-frame	207-3
			Morris chain block / monorail	
			1000kg	207-5
			Lasch mono rail 5000kg	207-4
			Lasch mono rail	207-1
		Richard Ward Building	Lasch Crane	207-2 2078
			Powalift mono rail 1000kg	111-3
			TXK mono rail 3000kg	111-1
			Raytoko Monorail	111-4
		Medical School	TXK mono rail 500kg	111-2
			Wits Mono rail 1000kg	5664-1
		NW Engineering	Lasch mono rail 3000kg	134-2
			C-Tech A-frame 1000kg	134-3
			Lasch Mono rail 3000kg	134-1
			Donsa chain block A-frame 1500	134-4
			Powalift chain block A-frame 500	134-5
			Donsa Jib 1000	134-11
			Mono rail 500kg	134-8
			Donsa chain block A-frame 1000kg	134-6
			Jib 1000kg	134-7
			Donsa mono rail 1000kg	134-9
			Donsa mono rail 1000kg	134-10

## 12 MAINTENANCE AND SERVICING SCHEDULE OF LIFTING EQUIPMENT

### MAJOR MAINTENANCE (LOAD TESTING) SCHEDULE

Lifting equipment to have a load test every year for a period of 5 years.

Equipment	1 <sup>st</sup> year Inspection	2 <sup>nd</sup> year Inspection	3 <sup>rd</sup> year Inspection	4 <sup>th</sup> year Inspection	5 <sup>th</sup> year Inspection
Lifting Equipment	Y	Y	Y	Y	Y

## 13 WARRANTY

The Service Provider must provide at a minimum a twelve (12) month OEM warranty on the equipment after installation. Equipment that fails and is found to be defective in workmanship or materials shall be replaced by the supplier at its own cost with equipment carrying the same guarantee as the original offer. All workmanship shall be required to carry a twelve-month warranty