

Domain	RIGGING	Unit ID: 954
Title:	Replace the boom sheave wheel of a dragline	
Level:3		Credits:3

Purpose

This unit standard specifies the competencies required to replace the boom sheave wheel of a dragline. It includes explaining the factors critical to replacing the boom sheave wheel of a dragline, preparing to replace the boom sheave wheel of a dragline, replacing the boom sheave wheel. This unit standard is intended for those who work as general lifting machine operators.

Special Notes

1. Entry information:
Prerequisite:
 - 937 - *Apply safety rules and regulations in lifting machine operations* or demonstrated equivalent knowledge and skills.
2. This unit standard has been designed as part of a progression. It is one of a series of unit standards for learners in the mechanical handling or related engineering environment. The credits allocated to this unit standard also assume that a learner has already learned to lift and move loads, use relevant tools and use oxy-acetylene equipment.
3. Assessment evidence may be collected from a real workplace, or an appropriate simulated realistic environment in which lifting machine operations are carried out.
4. All inspection, operation and maintenance procedures associated with the use of tools and equipment shall comply with manufacturers' specifications, guidelines and instructions.
5. Regulations and legislation relevant to this unit standard include the following:
 - Labour Act, No. 11, 2007
 - Regulations relating to the Health and Safety of employees at work, 1997 and all subsequent amendment.

Quality Assurance Requirements

This unit standard and others within this subfield may be awarded by institutions which meet the accreditation requirements set by the Namibia Qualifications Authority and the Namibia Training Authority and which comply with the national assessment and moderation requirements. Details of specific accreditation requirements and the national assessment arrangements are available from the Namibia Qualifications Authority and the Namibia Training Authority on www.nta.com.na.

Elements and Performance Criteria

Element 1: Explain the factors critical to replacing the boom sheave wheel of a dragline

Range

Explanation of importance may include but are not limited to injury to persons, damage to equipment, loss of production time through incorrect replacement and increased costs.

Performance Criteria

- 1.1 The function of the boom sheave wheel of a dragline is explained in line with specified requirements.
- 1.2 The importance of replacing the boom sheave wheel of a dragline to achieve healthy, safe production requirements is explained in line with specified requirements.
- 1.3 The possible critical workplace hazards that may be encountered while replacing the boom sheave wheel of a dragline in a particular context are explained. The explanation also describes the risks associated with and the factors contributing to each workplace hazard.

Element 2: Prepare to replace the boom sheave wheel of a dragline

Range

Preparing and making safe of dragline may include but are not limited to lowering the dragline boom and locking out the dragline.

Explanation of consequences may include but are not limited to those for permission, personal protective equipment, tools, material and equipment, workplace examination, workplace hazards and associated risks, identifying the boom sheave wheel and preparing and making safe.

Performance Criteria

- 2.1 Permission to replace the boom sheave wheel is obtained in line with specified requirements.

- 2.2 The required personal protective equipment is selected, examined and used in a way that is consistent with its purpose, design and specified requirements. Personal protective equipment is used to ensure the safety of persons and equipment.
- 2.3 Tools, material and equipment required are selected, examined and transported in line with specified requirements.
- 2.4 The workplace is examined in line with specified requirements. Workplace hazards are dealt with in line with specified requirements.
- 2.5 The boom sheave wheel to be replaced is identified in line with specified requirements.
- 2.6 The dragline is prepared and made safe in line with specified requirements and current accepted best practice.
- 2.7 The consequences for health, safety and production of not preparing to replace the boom sheave wheel in line with specified requirements, and current legislation are explained.

Element 3: Replace the boom sheave wheel

Range

Explanation of consequences may include but are not limited to those for use of personal protective equipment, work related hazards and associated risks, removing defective boom sheave wheel, installing the replacement boom sheave wheel interpersonal interaction and use of tools and equipment.

Performance Criteria

- 3.1 The defective boom sheave wheel is removed in line with specified requirements for sequence and current accepted best practice.
- 3.2 The replacement boom sheave wheel is installed in line with specified requirements for sequence, tolerances, lubrication and current accepted best practice.
- 3.3 Interpersonal interaction is positive, consistent with specified requirements, promotes effective teamwork, and avoids dysfunctional conflict.
- 3.4 The tools and equipment are used in line with manufacturers' design and without injury to self and others.
- 3.5 The consequences for health, safety and production of not replacing the boom sheave wheel in line with specified requirements, and current legislation are explained.

Element 4: Test the boom sheave wheel, and prepare for operation and production

Range

Preparing dragline for testing must include removing lock out, starting up dragline and raising and securing dragline boom.

Explanation of consequences must include those for testing preparation, testing, tools, material and equipment, housekeeping and reporting.

Performance Criteria

- 4.1 The dragline is prepared for testing purposes in line with specified requirements.
- 4.2 The dragline is operated to determine if the boom sheave wheel is functioning in line with specified requirements.
- 4.4 The workplace is cleaned and free from hazards in line with specified requirements and housekeeping practices.
- 4.5 The report on work performed complies with specified requirements for format, content, accuracy and distribution. The report is delivered within the agreed time.
- 4.6 The consequences for health, safety and production of not testing the boom sheave wheel in line with specified requirements, and current legislation are explained.

Registration Data

Subfield:	Lifting, Shifting and Secure Loads
Date first registered:	27 September 2012
Date this version registered:	27 September 2012
Anticipated review:	2015
Body responsible for review:	Namibia Training Authority