

Task Title: Understanding Rigging Terminology

OALCF Cover Sheet – Practitioner Copy

Learner Name: _____

Date Started: _____

Date Completed: _____

Successful Completion: Yes No

Goal Path: Employment Apprenticeship

Secondary School Post Secondary Independence

Task Description: The learner will read and interpret terminology used in rigging.

Main Competency/Task Group/Level Indicator:

- Find and Use Information/Read continuous text/A1.2

Materials Required:

- Pen/pencil and paper and/or digital device

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Learner Information

Millwrights and other skilled tradespeople use different types of ropes and slings when hoisting and rigging loads.

Read "Rigging Terminology".

Rigging Terminology

Chain Grading Scale: The chain grading system helps riggers understand a chain's capabilities. Chains are made of different materials and produced in various sizes, both of which affect their strength.

- Grade 30 chain is made of low-strength carbon steel. It is used for light-duty applications such as towing, lashing, and guard rails.
- Grade 43 chain is stronger than proof coil chain, and it is often used for more demanding tasks in trucking, logging, and farming.
- Grade 70 chain, also known as transport chain, is made of heat-treated carbon steel. It is often used for towing and securing loads.
- Grade 80, 100, and 120 chains are made of heat-treated alloy steel. Like other chain grades, these are used for tie-downs, towing, and load securing.

Eye Bolt: An eye bolt is a bolt with a loop on one end. Riggers use eye bolts to connect a load to a rigging assembly.

There are two main types of eye bolts: machine eye bolts and nut eye bolts. Machine eye bolts are screwed directly into a threaded hole on a machine or other load. Nut eye bolts are inserted through an unthreaded hole and secured with a nut.

Rigging: Rigging is the equipment used to lift, suspend, support, tow, or tie down a load. It includes chains, wire ropes, slings, and the equipment used to connect these to a load, vehicle, supporting structure, or lifting machine such as a crane or hoist.

Rigging Hooks: Rigging hooks are heavy-duty metal hooks. Several types of hooks are used in rigging, including slip hooks and grab hooks.

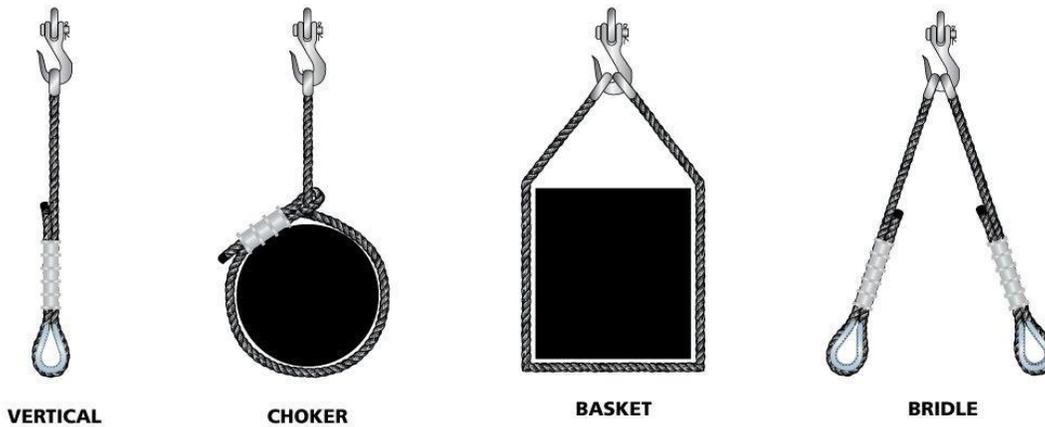
Rigging Sling: A rigging sling is a length of chain or rope with attachment points at both ends. The sling is attached to the load and then attached to a lifting hook or other rigging equipment.

Types of rigging slings include:

- Vertical hitch: connects one end of a sling to a crane hook and the other end to the load.
- Choker hitch: wraps a single sling around the load. One end of the sling passes through an attachment or loop on the other end and is then attached to a lifting hook or other rigging hardware.

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- Basket hitch: the sling is wrapped around the load and both ends are connected to the hook.
- Bridle hitch: two or more vertical hitches to evenly distribute the load's weight.



Shackle: A lifting shackle is comprised of a metal U-shaped crown or bow with a pin penetrating the two free ends, which are called lugs. Shackles are used to connect two parts of a rigging assembly.

Turnbuckle: Turnbuckles reduce slack or adjust tension in rigging assemblies. They have a body with tapped holes into which turnbuckle ends with threaded shafts are screwed.

Material adapted from: <https://www.huyett.com/blog/rigging-terms?srsId=AfmBOoq6RoDyK0Z5DdyRILYmQcK1Alp6acDqZ50cyMyd5rtkLiWh4B6u>

Work Sheet

Task 1: List the types of chains that are made of heat-treated alloy steel.

Answer:

Task 2: Describe the difference between machine eye bolts and nut eye bolts.

Answer:

Task 3: Describe the difference between a shackle and a lug.

Answer:

Task 4: What is the purpose of a turnbuckle?

Answer:

Answers

Task 1: List the types of chains that are made of heat-treated alloy steel.

Answer: Grade 80, 100, and 120 chains

Task 2: Describe the difference between machine eye bolts and nut eye bolts.

Answer: Machine eye bolts and nut eye bolts. Machine eye bolts are screwed directly into a threaded hole on a machine or other load. Nut eye bolts are inserted through an unthreaded hole and secured with a nut.

Task 3: Describe the difference between a shackle and a lug.

Answer: Lugs are the two free ends created by a lifting shackle which is comprised of a metal U-shaped crown or bow with a pin penetrating the two free ends. Shackles are used to connect two parts of a rigging assembly.

Task 4: What is the purpose of a turnbuckle?

Answer: Turnbuckles reduce slack or adjust tension in rigging assemblies.

Performance Descriptors

Levels	Performance Descriptors	Needs Work	Completes task with support from practitioner	Completes task independently
A1.2	scans text to locate information			
	locate multiple pieces of information in simple texts			
	makes low-level inferences			
	makes connections between sentences and between paragraphs in a single text			
	reads more complex texts to locate a single piece of information			
	follows the main events of descriptive, narrative and informational texts			
	obtains information from detailed reading			
	begins to identify sources and evaluate information			

This task: Was successfully completed Needs to be tried again

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Learner Comments:

Instructor (print):

Learner (print):
