TLILICO011

Licence to Operate a Reach Stacker (Greater than 3 Tonnes Capacity)

Learner Guide Instructions

Who is this document for?

The learner.

What is in this document?

- Course information that matches the PowerPoint presentation.
- Review questions.

What do you need to do before you use it for the first time?

- 1. Rebrand the document.
- 2. Review the document as part of your validation process.

See the 'Read Me First' document for a complete set of instructions on how to use these resources.



TLILIC0011 Licence to Operate a Reach Stacker (Greater than 3 Tonnes Capacity)

Learner Name:		
Learner ID:		
Learner Contact Number:		
Learner Email Address:		
Date Training Commenced:		
This Book Conta	ins:	
☐ Course Inform	nation.	
Review Quest		

Table of Contents

1.1 Introduction	
1.1.1 What is a Reach Stacker?	
1.1.1.1 Parts of a Reach Stacker	
1.1.1.2 Reach Stacker Movements	
1.1.2 High Risk Work Licence Requirements	
Please complete section 1 review questions 1 to 4	
1.2 Working Safely	
1.2.1 Work Health & Safety Rules	
1.2.2 Operations Documentation	10
1.2.3 How to Keep Everyone Safe	
1.3 Planning for the Job	11
1.3.1 Work Instructions	
Please complete section 1 review questions 8 to 10	
·	
1.4 Hazard Identification & Control	13
1.4.1 Identify Hazards 1.4.1.1 Working Near Power Lines	
Queensland	
New South Wales.	
Australian Capital Territory	
Victoria	15
Tasmania	
South Australia	
Western Australia	
Northern Territory	
1.4.1.2 Tiger Tails	16
1.4.3 Apply Hazard Control Measures	
1.4.3.1 Personal Protective Equipment (PPE)	10
1.4.3.2 Controls for Pedestrians, Workers and Vehicles	19
1.4.3.2 Controls for Pedestrians, Workers and Vehicles	20
Please complete section 1 review questions 11 to 17	20
1.5 Check the Path of Movement	20
Please complete section 1 review question 18	20
1.6 Communications	
Please complete section 1 review question 19	
2.1 Assess the Load	22
Please complete section 2 review question 1	
2.2 Choose the Right Reach Stacker for the Job	22
2.2.1 Range Diagrams Example 1 – Working Out the Maximum Boom Length	22
Example 2 Working Out the Maximum Boom Length	22
Example 3 – Working Out the Maximum Stack Height	
Please complete section 2 review questions 2 to 5	
2.3 Check the Reach Stacker and Equipment	
2.3.1 Pre-Start Checks	ZC
2.3.1.1 Boom Checks	
2.3.1.2 Tyres	
2.3.1.3 Check Signage and Labels	30
2.3.1.4 Check the Reach Stacker Logbook	
2.3.2 Safely Access the Reach Stacker	31
2.3.3 Locate and Identify Controls	
2.3.3.1 Joystick Controls	
2.3.4 Reach Stacker Onboard Computer	
FIEGSE COMPIETE SECTION / TEVIEW QUESTIONS D.D. L.)	

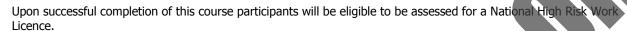
2.4 Start the Reach Stacker	34
2.4.1 Conduct Post-Start Checks	
2.4.1.1 Spreader Checks	
2.4.1.2 Spreader Signal Lamps	35 25
·	
2.5 Report and Record Damage and Defects	
Please complete section 2 review question 17	
3.1 Check Ground Conditions	
Please complete section 3 review question 1	
3.2 Drive the Reach Stacker to the Work Area	
3.2.1 Stabilise the Reach Stacker	
3.2.2 Input Data into the Reach Stacker Computer	
·	
3.3 Position the Reach Stacker for Work	
3.3.1 Conduct a Test Lift	
Please complete section 3 review questions 5 to 10	
3.4 Operate the Reach Stacker	
3.4.1 Lifting a Container	43
3.4.2 Review Route of Travel before Mobiling a Container	
3.4.3 Monitoring the Load Movement	44
3.4.4 Mobile the Load	45
3.4.4.1 Mobiling Loads on Slopes or Inclines	45
3.4.4.2 Mobiling through Narrow Passages	4b 46
3.4.5 Stacking Containers	46
3.4.5 Stacking Containers	47
3.5 Respond to Emergencies and other Situations	47
3.5.1 Emergency Response	47
3.5.1.1 Reporting an Emergency	48
3.5.1.2 Respond to Contact with Power Lines	48
3.5.2.1 Marning Lights, Cut-Outs and Alarms	49 40
3.5.2.2 Abnormal Noises and Movements	50
3.5.2.3 Unstable Reach Stacker or Load 3.5.2.4 Defective Computer or Visual Display	50
3.5.2.4 Defective Computer or Visual Display	50
3.5.3 Unplanned or Unsafe Situations 3.5.3.1 Failure or Loss of Control (Brakes and Steering)	51
3.5.3.2 Failure of Equipment (Hydraulic System or Computer)	
3.5.3.3 Environmental Conditions (Wind, Lightning and Storms)	52
3.5.3.4 Rail/Road Moving Unannounced while Loading/Discharging	
Please complete section 3 review questions 22 to 27	
3.6 Conclude Operations	
3.6.1 Park and Shut Down the Reach Stacker	
3.6.1.1 Apply Motion Locks and Brakes	
3.6.2 Shutting Down and Securing the Reach Stacker	
3.6.3 Conduct Post-Operational Checks	
3.6.4 Recording and Reporting Damage and Defects	55
Please complete section 3 review questions 28 to 34	
Appendix A - Reach Stacker Inspection Checklist	56
Review Questions	58
Section 1	
Section 2	

1.1 Introduction

This course is based on the National High Risk Unit of Competency **TLILIC0011 Licence to Operate a Reach Stacker** (Greater than 3 Tonnes Capacity).

You will learn about:

- Planning for work.
- Inspecting the work area.
- Checking the reach stacker.
- Operating the reach stacker.
- Shutting down and securing the reach stacker.





1.1.1 What is a Reach Stacker?

A reach stacker is a type of mobile plant (with greater than 3 tonnes capacity) that incorporates an attachment for lifting, moving and travelling with a shipping container.



1.1.1.1 Parts of a Reach Stacker

Parts of a reach stacker:

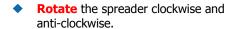


1.1.1.2 Reach Stacker Movements

The reach stacker has the following movements:

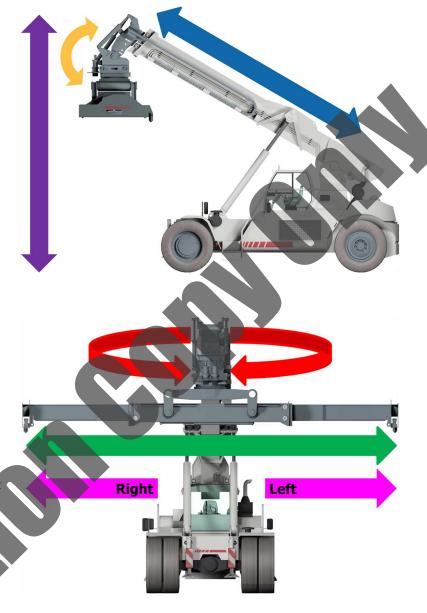


- Booming up and down.
- Articulate the spreader attachment.



 Extend/Retract the spreader in and out.

 Equalise the spreader using side shift to centre the spreader or balance a load.



1.1.2 High Risk Work Licence Requirements



Once you pass your assessment you will have 60 days to apply for your licence.

You must renew your licence within 12 months of its expiry otherwise:

- Your licence can't be renewed.
- You need to repeat the course and re-apply for your licence.
- You need to enrol in the course again and be supervised by somebody who
 has a current licence for the same class.

You can still do high risk work without a licence as long as you are:

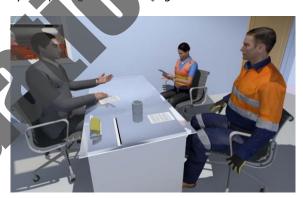
- Enrolled in a high risk course for the class, and
- Being supervised by somebody who has a licence for the same class.

Any licensed worker must take reasonable steps to make sure the way they work does not impact on the safety of themselves or any other worker. This is their legal duty of care. Failing to work safely can result in the health and safety regulator:

- Suspending or cancelling your licence.
- Refusing to renew your licence.
- Ordering that you are reassessed to ensure you are competent.

Your employer might ask you for evidence that you have a high risk licence before you start any high risk work. You can show them:

- Your licence.
- Proof that you are currently completing a course for high risk work.

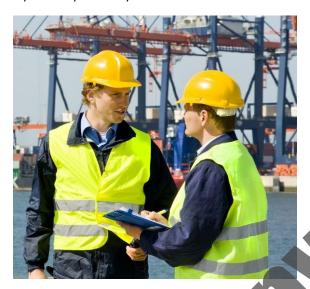


Please complete section 1 review questions 1 to 4



1.2 Working Safely

You must follow all safety rules and instructions when performing any work. If you are not sure about what you should do, ask your boss or supervisor. They will tell you what you need to do and how to do it in a safe way.





Every workplace has to follow laws and rules to keep everyone safe.

Work Health & Safety (WHS) laws and guidelines help keep your workplace safe. There are 4 main types:

Туре	Explanation	
Acts	These are laws that you have to follow.	
Regulations	These explain what the law means.	
Codes of Practice	These are instructions on how to follow the law, based on industry standards.	
Australian Standards	These tell you what the minimum requirement is for a job, product or hazard.	

Some states use OHS laws, and other states use WHS laws. They both talk about the same thing, but use different words or names for people.

If you have any questions about safety rules you should talk to your boss or supervisor.



1.2.2 Operations Documentation

Before starting your work you need to make sure you have access to all operations documentation for the job. This will help you to do your work in the safest way and make sure all work is compliant.

Operations documentation includes:

- Site Details The information and safety requirements of the workplace environment (where you will be working).
- ♦ **Hazard Details** Any hazards in the work area or related to the work.
- Task Details Instructions of what the work is or what you will be doing. Also
 instructions on how to safely do the job.
- Faulty Equipment Procedures Isolation procedures to follow or forms to fill out.
- Signage Site signage tells you what personal protective equipment (PPE) you need to have, or areas that are not safe to be in.
- Emergency Procedures Instructions on what to do in emergency situations, for example a fire, accident or emergency where evacuation or first aid is needed.
- Equipment and Work Instructions Details of how to operate plant and equipment and the sequence of work to be done.





1.2.3 How to Keep Everyone Safe

WHS law says that all companies and workers need to keep themselves and other people safe while they work. This is called a duty of care.

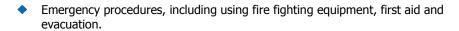


To keep yourself and other workers safe you need to:

- Follow your instructions.
- Follow all workplace rules.
- Make sure all equipment is safe to use.
- Carry out your work safely.
- Report any problems.

If you think something is dangerous tell your boss or supervisor as soon as possible.





- Handling hazardous materials.
- Safe work practices.
- Personal protective clothing and equipment.
- Safe use of tools and equipment.



Please complete section 1 review questions 5 to 7

1.3 Planning for the Job

Planning the job before you start is an important step in any high risk work. You need to plan and be well prepared for reach stacker operation to ensure each task is completed safely and to a high standard. You also need to obtain the relevant site information and relate it to your work activities.







To plan out the work properly you need to get all of the relevant information. Other than workplace hazards, this could include information about:

- Communications (are they adequate and safe).
- Access and egress to/from the area
- Location of the task.
- Specifics of the task.
- Permits or licences required for the task.
- Equipment required for the task and its availability.
- Capability or capacity of the reach stacker.
- Safe work procedures.
- Schedules for rail movement or shunting.
- Configuration and condition of the load the load weight, size, balance, and security (loose load).
- Distance to be travelled, the speed of travel and the travel direction.
- Sequence of movements to transfer the load.



1.3.1 Work Instructions

You need to be clear about what work you will be doing. Make sure you have all information and instructions about the job before you start. This includes what you will be doing, how you will be doing it and what equipment you will be using.

All work needs to follow worksite, environment and company safety procedures.

Procedures help to make sure that all work is done in a safe way, without damaging equipment or putting people in unsafe situations. They also help to make sure that work is done in the correct order and doesn't interrupt or get in the way of other work that is happening on the site. This is especially important in projects that need to be completed in a particular sequence.

Your work instructions will tell you the safest way to do the job, and the equipment that you will need to use. It is a good idea to check your work instructions with your boss or supervisor to make sure you know exactly what you need to do.

If you don't know where to get your instructions or you can't understand the language or terminology being used in them, you can ask your boss or supervisor. They will tell you where to find your work instructions and explain what they mean.



1.3.2 Work Method Statements



Many worksites require a work method statement (WMS) before any work can start. A work method statement is a list of steps that outlines how a job will be done. It also includes any hazards that occur at each step, and what you need to do about them.

These statements can also be known as Safe Work Method Statement (SWMS), Job Safety Analysis (JSA) or Safe Operating Procedure (SOP).

Work method statements are a great tool for organising your work activities and making sure you have completed everything. They will also outline the details of all tools, equipment and coordination with other workers relating to your job. Make sure all of these are available and ready before you start.

Please complete section 1 review questions 8 to 10

1.4 Hazard Identification & Control

Before you start work, you need to check for any hazards or dangers in the area. If you find a hazard or danger you need to do something to control it. This will help to make the workplace safer.



Before you start work you should talk to other personnel about site hazards to identify any site-specific hazards and to make sure that all workplace policies or specific procedures are followed.

Speak to:

- Safety officers.
- Site/Workplace engineers (where applicable).
- Supervisors.
- Other workers.
- Managers or other authorised people responsible for the workplace or job.

1.4.1 Identify Hazards

Part of your job is to look around to see if you can find any hazards before you start any work.

A **hazard** is a thing or situation that causes injury, harm or damage.

When you start checking for hazards, make sure you look everywhere. A good way to do this is to check:

- Up high above your head.
- All around you at eye level.
- Down low on the ground (and also think about what is under the ground).



Some hazards you should check for in the work area:

- Site/Workplace specific issues (e.g. slopes, ground stability).
- Electric lines or overhead hazards.
- Underground services.
- Pedestrians and workers.
- Plant and equipment.
- Buildings.
- Obstructions.
- Wind and bad weather conditions e.g. lightning.
- Lighting or illumination.
- Overhead service lines.
- Potential non-weight bearing surfaces (e.g. recently filled trenches).
- Surrounding structures.
- Facilities.
- Dangerous materials.
- Vehicle traffic.
- Rail movement or shunting schedules.







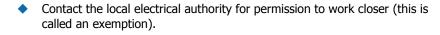
1.4.1.1 Working Near Power Lines



Working near power lines can be very dangerous if you are not careful.

It is very important that you know the safe operating distances for different types of power lines and the steps you must take if your job needs you to work closer than the safe distances.

Generally, if you need to work closer than the safe work distance you must:



- Have the electrical power shut off (disconnected). If this is not possible then have the power lines insulated. This must be done through the relevant authority e.g. the electrical authority.
- Use a spotter in the exclusion zone (depending on local laws and rules).

Distances are different depending on the voltage of the power lines. You should check with the local electrical authority for information and to find out the voltage of power lines in your work area.



Queensland

The Queensland Electrical Safety Regulation breaks down the distances in detail. Exclusion zones are broken down not only by size of power line but also by the competency level of the operator. This means that the requirements should be clarified with the electrical authority before work commences even if the distance appears to be outside the zones.

The following minimum distances are provided as guidance:

Power Line Type	Distance
Up to 132kV	3.0m
132kV up to 330kV	6.0m
330kV and above	8.0m

New South Wales

In New South Wales, for anyone who is not accredited, equipment operation may not be any closer than the following distances to power lines:

Power Line Type	Distance
Up to and including 132kV	3.0m
Above 132kV up to and including 330kV	6.0m
Above 330kV	8.0m

To work closer than these distances requires authority from the relevant electrical authority and adherence to cl.64(2)(e) of the regulations.

Australian Capital Territory

In the ACT mobile plant operators and persons erecting or working from scaffolding must maintain a safe minimum distance to power lines as outlined in the table below:

Pov	wer Line Type	Distance
Less than 33kv		4.0m
33kV or more (transmiss	sion lines)	5.0m

Victoria

In Victoria the Framework for Undertaking Work Near Overhead and Underground Assets states that equipment must not be closer than the following distances to power lines:

Power Line Type	Distance
Distribution lines up to and including 66kV (power poles)	6.4m or 3.0m with a qualified spotter
Transmission lines greater than 66kV (towers)	10m or 8m with a qualified spotter

Tasmania

In Tasmania equipment must not be closer than the following distances to power lines:

Power Line Type	Distance
Up to and including 133kV (poles)	6.4m (or 3m with a safety observer)
Greater than 133kV (towers)	10m (or 8m with a safety observer)