TLILIC0008

Licence to Operate a Non-Slewing Mobile Crane (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.

LEARNER GUIDE

TLILIC0008 Licence to Operate a Non-Slewing Mobile Crane (greater than 3 tonnes capacity)

Learner Name:	
Learner ID:	
Learner Contact Number:	
Learner Email Address:	
Date Training Commenced:	

This Book Contains:

- ☐ Course Information.
- ☐ Review Questions.

The review questions can be retained by the trainer/assessor as proof of formative assessment if required.

Table of Contents

1.1 Introduction

This training course is based on the National High Risk Work Licence Unit of Competency **TLILIC0008 Licence to Operate a Non-Slewing Mobile Crane (Greater than 3 Tonnes Capacity).**

The National Standard for Licensing Persons Performing High Risk Work aims to facilitate the operation of a nationally uniform, competency-based licensing system for persons performing certain types of high risk work.

You will learn about:

- Planning the work.
- Conducting routine checks.
- Transferring loads.
- Mobiling loads.
- Shutting down and securing the crane.

Upon successful completion of this course participants will be eligible to be assessed for a National High Risk Work Licence.

1.1.1 What is a Non-Slewing Mobile Crane?

A non-slewing mobile crane is a powered mobile crane with a capacity of more than 3 tonnes and which incorporates a boom or jib that is not capable of being slewed.

A non-slewing mobile crane may be an articulated type or a locomotive crane but not a crane engaged in vehicle tow truck operations.

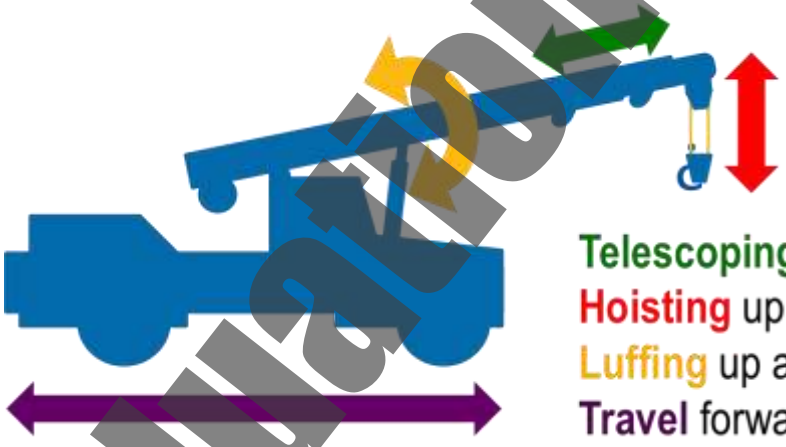
1.1.1.1 Parts of a Non-Slewing Mobile Crane

The following diagram outlines the basic crane parts:

A. Hook Block
B. Boom
C. Hydraulic Rams
D. Cabin
E. Counterweight
F. Spreader Beam
G. Jib
H. Rope Drum
I. Storage
J. Tyres

1.1.1.2 Crane Movements

The following diagram outlines the basic crane movements:



Telescoping in and out.
Hoisting up and down.
Luffing up and down.
Travel forwards and backwards.

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.

1.2.1 Health and Safety Rules

Every workplace has to follow laws and rules to keep everyone safe. There are 4 main types:

Type	Explanation
Acts	Laws to protect the health, safety and welfare of people at work.
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 Duty of Care

Everybody in the workplace has a responsibility to keep themselves and others as safe as possible while they are at work. This is called a 'Duty of Care'.

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. Your duty of care requires the following:

- To take reasonable care of your own safety and the safety of others.
- To cooperate with your employer in any way that ensures the health and safety of the workplace.
- To avoid taking unnecessary risks, acting dangerously or using workplace equipment in unsafe ways, or ways it is not designed to be used.

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.
- Take legal action to prosecute you.

Your employer must take steps to ensure that the workplace is as safe as possible for you and other workers. In order to do this they can:

- Provide a safe workplace with minimal risks.
- Provide and maintain safe plant, equipment and structures.
- Provide and maintain safe systems/procedures for work.
- Provide facilities that are adequate for the personnel on site.
- Provide instruction, training, supervision and information for any work to be undertaken safely, **including any time you are required to use an unfamiliar piece of equipment**.
- Take action to ensure all equipment, plant & substances used on site is handled and stored in a safe way.

Please complete section 1 review questions 1 and 2.

1.3 Planning for the Work

There will be specific requirements and things to consider when you plan for the particular task you will be completing.

You should think about:

- Communications (safe and adequate).
- Location of the task.
- Access and egress, both to the site and for the specific task.
- Permits and/or licences required for the task.
- Requirements for taglines, dogman/rigger.
- Load configuration and conditions, weight, size of the load, slinging arrangements, load balance, load security (loose load).
- Equipment required for the task.
- Availability of equipment.
- Capability/capacity of the crane.
- Safe work procedures.
- Sequence of movements.
- Distance to be travelled, the speed of travel, the travel direction, slope and ground conditions.
- Specifics of the task.

For example, if you needed to set up a crane in a busy street, you would need to check with the local authorities to see if there are any permits required for traffic control, any exclusion zones that need to be put in place, or if there are any conditions/requirements under which you would need to operate the crane. You can also determine the location of underground services that need to be considered by speaking with the local authorities.

1.3.1 Work Instructions and Safety Information

All work needs to follow worksite 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.

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.

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

Make sure you have all of the details about where you will be working and the job. For example:

The Site
Is there clear access for all equipment? Are there buildings, structures, facilities or trees in the way? What are the ground conditions like? Is there a safe place for the load to be moved to?

The Weather
Is there wind, rain or other bad weather? Is it too dark?

Facilities and Services
Are there power lines or other overhead or underground services to think about?

Traffic
Are there people, vehicles or other equipment in the area that you need to think about? Do you need to get them moved out of the area? Do you need to set up barriers or signs?

Hazards
Are there dangerous materials to work around or think about? Will you be working close to power lines or other people?

The Task
What load is being moved? How big is it? How much does it weigh? Does it need any special lifting arrangements?

Instructions for the task can include:

- Manufacturer's guidelines (instructions, specifications, checklists).
- Industry operating procedures.
- Workplace procedures (work instructions, operating procedures, management plans, safety policies, checklists).

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

You can also speak with your WHS workplace representative for more information about workplace safety.

1.4 Identify and Manage Hazards

Before starting any work it is important to manage any hazards or risks in the area, or related to the work.

A **Hazard** is a thing or situation with the potential to cause harm or damage.

A **Risk** is the chance of a hazard causing harm or damage.

By lowering or removing risks we can make hazards less dangerous.

Common workplace hazards related to non-slewing crane operations include:

- Overhead power lines.
- Overhead service lines.
- Underground services.
- Buildings, facilities and other surrounding structures.
- Obstructions and obstacles.
- Pedestrians and workers.
- Dangerous materials.
- Bad weather conditions such as dangerously strong winds, lightning or storms.
- Insufficient lighting.
- Vehicle traffic.
- Plant and equipment.
- Ground stability and condition, e.g. surfaces that are potentially non-weight bearing.
- Unusual or difficult terrains.
- Hazards specific to the site or workplace, such as slopes, trees or recently filled trenches, e.g. those associated with demolition sites such as rubble and other obstacles.

Part of your job is to look around to see if you can find any hazards before you start any work moving the crane and load.

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).

1.4.1 Consulting with Other Workers about Hazards and Risks

Controlling a hazard can be a team effort and it's important that everybody knows what they need to do and how or if they need to change their work process to suit.

You should also speak with several personnel on site when preparing for work including:

- Safety officers.
- Site engineers (where applicable).
- Supervisors.
- Other workers.
- Managers who are authorised to take responsibility for the workplace or operations.
- Health and Safety Representatives.
- Work Health and Safety Committee members.

These people can help you to identify workplace specific hazards including unsuitable ground conditions and appropriate controls. It is important to speak with them to ensure that all workplace policies and procedures are being followed as well.

1.4.2 Working Near Power Lines

Working near power lines can be 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:

- Contact the local electrical authority for permission to work closer (this is called an exemption or access permit).
- Have the power lines shut off. If this is not possible then have the power lines insulated.
- Use a spotter (depending on local laws and rules).

Distances are different depending on the state or territory you are working in and the voltage of the power lines. You should check with the local electrical authority for information and advice 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:

Power Line Type	Distance
Less than 33kv	4.0m
33kV or more (transmission 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)

South Australia

In South Australia 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:

Power Line Type	Distance
Up to 132kv (including 132kv poles)	6.4m (or 3.0m with a spotter)
132kv or more (including 132kv towers)	10.0m (or 8.0m with a spotter)

Western Australia

In Western Australia this falls under Regulation 3.64 from the OSH Regulations and states the following as the minimum distances:

Power Line Type	Distance
Up to 1kV (insulated)	0.5m
Up to 1kV (uninsulated)	1.0m
Above 1kV and up to 33kV	3.0m
Above 33kV	6.0m

Northern Territory

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

Power Line Type	Distance
Up to and including 132kV (distribution lines)	6.4m (or 3m with a spotter)
Greater than 132kV (transmission lines)	10m (or 8m with a spotter)

Review Questions

The following review questions are to be completed by the learner. They can be removed and retained by the trainer/assessor as proof of formative assessment if required.

Review Questions Section 1

1.	What are the 4 main types of health and safety rules?	☐

1.

2.

3.

4.

2.	What is Duty of Care?	☐

3.	List 5 examples of hazards that may exist on a site where a crane is being used.	☐

1.

2.

3.

4.

5.

4.	Who should you consult before commencing work regarding hazards?	☐