

UETDRMP007

Perform Rescue from a Live LV Panel

Learner Guide Instructions

Who is this document for?

The learner.

What is in this document?

- Course training content (this 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

UETDRMP007 Perform Rescue from a Live LV Panel

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

This Book Contains:

- Course Information.
- Review Questions.

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1.1 Introduction

Welcome to this course, which is based on the unit of competency, **UETDRMP007 Perform Rescue from a Live LV Panel**.

This unit includes the skills and knowledge required to rescue a person in contact with low voltage live electrical conductors and equipment.

The materials in this course cover the requirements and processes for a person to carry out a risk assessment of an electrically hazardous situation and to perform low voltage rescue procedures without hazard to themselves or others.

It is prerequisite requirement of this unit that the learner has successfully completed the unit HLTAID001 Provide Cardiopulmonary Resuscitation.



1.2 Identify and Control Risks and Hazards



Once you arrive at a work area, everyone in the work group must be familiarised with the location, possible avenues of approach for a rescue, and any risks that may be encountered.

For this reason, a risk assessment of the worksite must be conducted in relation to the work being carried out, and in relation to performing a rescue in the case of an accident or incident.

This means you will need to undertake the risk management process.

1.2.1 Risk Management

The risk management process includes:

Identification of the hazards.

Assessment of the risk.

Select and apply risk treatment/control options.

Reviewing the new risk level.

1.2.1.1 Risk/Hazard Identification



It is important that you identify any risks or hazards that may affect you or any injured persons.

A **HAZARD** is a source or situation with the potential for harm in terms of human injury or ill-health, damage to property, the environment, or a combination of these.

A **RISK** is defined as the chance of a hazard hurting you or somebody else or causing some damage.

Risk management requires you to make prompt and appropriate decisions relating to the management of the incident.

Failure to act accordingly and quickly may result in the casualty's injuries worsening to the point where they may die.

You may also be placing yourself in unnecessary danger by not eliminating hazards and risks before you begin the rescue operation.

Each rescue situation will be unique. You will always have the risks associated with the electricity, but don't overlook the other hazards as well.



You may need to consider factors such as:

- ◆ Risk of fire developing.
- ◆ Risk of electric shock.
- ◆ Risk of other injuries occurring.

By identifying and assessing the risks you can then develop control or minimisation measures that will reduce the chance of you or other personnel suffering injury during the rescue process.

1.2.1.2 Risk Assessment

You will need to identify and assess the risks associated with low voltage rescue situations. This will include an assessment of:

Low voltage electricity.

Environmental conditions.

Injuries of the victim.

Situational factors.

All other risks and hazards.



To conduct a risk assessment of an identified hazard you need to:

- ◆ Determine the likelihood of the event happening.
- ◆ Determine the consequence if the event should occur.
- ◆ Determine the risk level (likelihood and consequence combined) associated with the hazard.

Dynamic Risk Assessment

A Dynamic Risk Assessment (DRA) is undertaken in a situation that has the potential to change dramatically and suddenly. The concepts behind a dynamic risk assessment include:

- ◆ The assessment of risk in dynamic situations is undertaken prior to, during and after the execution of an operation.
- ◆ The benefits of proceeding with a task must be weighed carefully against the risk.
- ◆ Think before you act rather than act before you think.



What sets DRA apart from systematic risk assessment is that it is applied in situations where:

- ◆ Unpredictable/unforeseen risks exist.
- ◆ The risk environment rapidly changes.
- ◆ Individuals are able to make a risk judgment.
- ◆ Personnel are able to adopt a consistent approach to assessing risk.



1.2.1.3 Risk Treatment

Once hazards are identified and risks assessed, the risks need to be minimised through a range of control measures. The reason for minimising risks before undertaking a rescue is so that the rescuer can provide assistance in a safe environment and that the safety of the casualty and bystanders is ensured.

Control measures could include:

- Using protective equipment.
- Eliminating or removing the hazard.
- Isolating the casualty from the hazard.

1.2.1.4 Review and Monitoring



Monitoring and review are an important part of the risk management process and should be planned for at every stage. It involves regular surveillance and checking. Responsibilities should be clearly defined.

It is important that the results of monitoring and review are reported according to organisational policies and procedures.

Keeping records is important as they can help ensure that any risk management activities are traceable. Records also provide a basis for improving methods and tools in the risk management process, as well as enhancing the overall process.

Review Questions

1.	List three (3) types of risks that you will need to assess and consider in relation to low voltage rescue situations.	<input type="checkbox"/>
<p>1.</p> <p>2.</p> <p>3.</p>		
2.	What are the three (3) concepts behind a Dynamic Risk Assessment?	<input type="checkbox"/>
<p>1.</p> <p>2.</p> <p>3.</p>		

1.3 Electrical Safety Legislation

Legislation and regulations define the measures that should be undertaken to ensure the safety of a person performing live electrical work.

For example, the guiding legislation for live electrical work in Queensland includes the Electrical Safety Regulation 2013, which is contained within the *Electrical Safety Act 2002*.



1.3.1 Safe Performance of Live Electrical Work

This regulation defines responsibilities for electrical work under sections 12 and 21:

Regulations Section	Overview
<p>Section 12 – Requirements for performance of live work.</p>	<p>The following circumstances are required for the performance of live work:</p> <ul style="list-style-type: none"> ◆ Live work must be performed where it is not practicable to de-energise the system. ◆ A risk assessment of the performance of the live work must be prepared and documented. ◆ A safe system of work can be maintained. ◆ The work is authorised after consultation has been carried out with the person or people in control of the electrical equipment. ◆ People conducting the work have the appropriate training. ◆ Testing equipment is made available, maintained and used properly as part of the work process. ◆ Appropriate personal protective equipment (PPE) and clothing is used by people performing the work. ◆ The isolation point has been identified and is able to be reached quickly in case of emergency. ◆ The work area has been cleared of obstructions for easy access to and from the area. ◆ A safety observer is appointed to the work (where appropriate).
<p>Section 21 – Rescue and resuscitation training.</p>	<p>This section outlines the requirements for rescue and resuscitation for Low Voltage Electrical Work. It outlines that:</p> <ul style="list-style-type: none"> ◆ Workers who must perform, or assist in performing electrical work must be competent in rescue and resuscitation in accordance with recognised practices. ◆ The above does not apply if it is specified on the worker’s electrical work licence.

It is essential that you are familiar with the relevant legislation and regulations that apply to conducting low voltage electrical work in your state or territory. You must also be able to apply the appropriate measures to ensure your safety.

Review Questions

3.	List three (3) examples of legislative and regulatory requirements for measures that ensure the safety of a person performing live electrical work.	<input type="checkbox"/>
<p>1.</p> <p>2.</p> <p>3.</p>		

4.	What are two (2) examples of requirements for rescue and resuscitation for low voltage electrical work?	<input type="checkbox"/>
<p>1.</p> <p>2.</p>		

1.4 Obligations of the Employer

In accordance with electrical safety legislation, it is the responsibility of the employer to ensure that workers under their control have appropriate training and the necessary safety equipment to perform low voltage rescue.



1.4.1 Employer Responsibilities

Depending on the state or territory you are working employer responsibilities may include the provision of:

- ◆ Suitable rescue equipment appropriate for the type of work situation.
- ◆ Training by qualified instructors.
- ◆ Assessment every 12 months to confirm competency.



1.4.2 Low Voltage Rescue Training



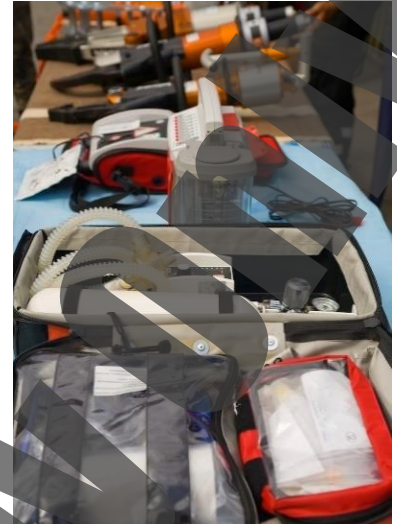
Relevant training may include but is not limited to:

- ◆ Ensuring that all staff are competent in rescue and resuscitation prior to undertaking work.
- ◆ Electrical activity certification including the issue of relevant worksite permits to enable people to undertake their duties safely.
- ◆ Ensuring workers hold licences relevant to the task (where appropriate).
- ◆ Ensuring that all workers have completed relevant hazard identification and risk assessment training.
- ◆ Training in the use of all rescue equipment.
- ◆ Instruction in appropriate isolation and tag out procedures.

1.4.3 Providing Safety Equipment

It is also the employer's duty to ensure that all relevant safety equipment is provided. This may include but is not limited to:

- ◆ Rescue kit and related equipment.
- ◆ Testing equipment.
- ◆ Personal protective equipment (PPE) e.g. insulating gloves, safety glasses, hard hats, long sleeves and trousers.
- ◆ Adequately stocked first aid kits.
- ◆ Correctly insulated tools to prevent electrical shock or contact with live electricity.
- ◆ Other relevant safety equipment for the work task.



It is also the employer's duty of care to ensure that the safety equipment is:

Suitable for the electrical work being performed.

Maintained so that it is suitable.

Tested at least every 6 months to ensure it provides adequate protection.

Labelled with the date on or before which it is due for testing.

In good repair and condition.

Used effectively in the performance of the work.

Review Questions

5.	Under the relevant state or territory electrical safety legislation, what are three (3) things employers may be obliged to provide to workers involved in low voltage rescue activities?	<input type="checkbox"/>
1.		
2.		
3.		

1.5 Obligations of the Employee

Electrical safety legislation and regulations in all states and territories also outline the obligations and responsibilities of employees regarding low voltage rescue.



1.5.1 Employee Responsibilities

Referring to the *Electrical Safety Act 2002 (Qld)* and *Electrical Safety Regulations 2013 (Qld)* again as an example, employees have the following obligations:

- ◆ To wear the appropriate safety clothing, and use all safety equipment correctly.
- ◆ Not to damage or misuse any equipment provided for safety within the workplace.
- ◆ To follow relevant safe working procedures.
- ◆ To comply with the instructions for the electrical safety of persons and property given by the employer or person in control of the electrical equipment.
- ◆ Not to place themselves or any other person at risk in the work area.



Where low voltage rescue is required, the employee has the responsibility to conduct rescue operations within the boundaries of their training and to follow documented procedures.

This means that they must have knowledge of rescues related to the type of work being conducted, and must have been trained/reassessed during the previous 12 months.

Review Questions

6.	List three (3) examples of obligations of employees under the relevant state or territory electrical safety legislation.	<input type="checkbox"/>
<p>1.</p> <p>2.</p> <p>3.</p>		

1.6 Objectives of Low Voltage Rescue



The main objective of low voltage rescue is to remove the victim from the situation as promptly as possible, ensuring their safety as well as your own.

A successful low voltage rescue can often depend on the isolation point being identified and labelled **BEFORE** the work begins, the isolation point is a switch that cuts the flow of electricity to the equipment which makes the scene safer for everyone involved in the rescue. Doing this ensures that the isolation switch can be quickly and easily accessed in the case of a rescue being required. A label can usually be found inside the rescue kit.

1.6.1 Principles of Low Voltage Rescue

The general principles of low voltage rescue involve the following:

- ◆ All measures to ensure the safety of the person performing live electrical work should be undertaken, including risk assessment procedures.
- ◆ All obligations of the employer and employee should have been fulfilled.



In the event of an accident or incident rescue, general principles should be applied, including:

- ◆ Keeping outside the minimum safe approach distance (SAD) of 500mm.
- ◆ Safe use of a fire blanket as necessary.
- ◆ Prompt isolation of the electricity at the appropriate point of isolation.
- ◆ Safety procedures for the rescuer.
- ◆ Rescue of the victim safely using the rescue kit.
- ◆ Removal of the victim from the danger area.
- ◆ Treatment of the victim as necessary.
- ◆ Notification to appropriate authorities.



Make sure that you are familiar with the general principles of low voltage work and rescue, including the appropriate procedures and precautions that must be applied.

Review Questions

7.	a) What is the main objective of low voltage rescue? b) What can a successful low voltage rescue often depend upon?	<input type="checkbox"/>
a)		
b)		

8.

- a) List three (3) general principles of low voltage rescue in the event of an accident or incident.
- b) What does SAD stand for in relation to LV rescue principles.



- a)
- 1.
 - 2.
 - 3.
- b)

1.7 Use and Maintenance of the Rescue Kit

It is essential that you are familiar with the equipment contained in the rescue kit, as well as being competent in the use of every item.



1.7.1 The Rescue Kit

The rescue kit container is generally either a toolbox-type plastic/fibreglass box or a soft pack bag with a shoulder strap for carrying.

The dimensions of the pack are generally 500mm x 100mm x 200mm. The container should be non-conductive, orange in colour and clearly identified as a Low Voltage (LV) Rescue Kit.





Inside the kit should be the standard low voltage rescue equipment applicable to the workplace. Generally the rescue kit will contain:

- ◆ A non-conductive torch.
- ◆ An isolation label to identify the main isolation point (or points) in an emergency.
- ◆ Electrically tested insulated rubber gloves.
- ◆ A non-conductive crook.
- ◆ Burn dressings.
- ◆ A fibreglass fire blanket.

When preparing to start work the rescue kit must be placed appropriately in the work area so that it can be easily accessed in the event of a rescue situation arising.

In order to use the rescue kit correctly when performing low voltage rescue operations, you need to keep your skills up-to-date with accepted and current industry practices and workplace procedures.

These will be demonstrated and practised within the workplace environment to ensure safe use.



1.7.1.1 Using the Fire Blanket



Fire blankets are important pieces of equipment in a low voltage rescue kit. They are used to smother and eliminate flames and minimise burns to the victim.

Fire blankets are made of non-flammable material such as fibreglass and must not be able to conduct electricity.

After the electricity has been isolated and it is safe to approach the victim, extinguish the flames using the fire blanket. Smother the flames from the victim's head towards their feet. This minimises the risk of burns to the face and airways.

Using the blanket, pat the areas of flame and try to extinguish any clothing that may have caught alight. It is important to work quickly but methodically so that burns on the victim can be minimised.

1.7.2 Maintenance of Rescue Equipment

You should be familiar with all items in the rescue kit, as well as their maintenance requirements. All rescue kit equipment must be checked prior to commencement of work to make sure that all items are present and in good condition. Poorly maintained kits can potentially put someone's life at risk.

