

Topic Skills Practice Cover Sheet

Unit Name:	NAT10809006 – Verify compliance, functionality and aspects critical to the safety of electrical installations.
Topic Title:	Work, Health and Electrical Safety

Skill Practice Number:	1.6
Skill Practice Name:	Demonstrate Safe Isolation Procedures

Student Name:	
Student ID:	
College/Campus:	
Group:	

Results	
Planning:	
Carryout:	
Completion:	
Overall Results:	
Comments:	

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NAT10809006 – Verify compliance, functionality and aspects critical to the safety of electrical installations.

KE-10809006 Verification of Australian electrical installations principles

Topic 1. Work, Health and Electrical Safety

Skills Practice 1.6: Demonstrate Safe Isolation Procedures

Task:

To carry out the safe isolation of a low voltage item of electrical equipment using approved safe isolation and lock-out tag-out procedures.

Objectives:

At the completion of this skills practice, you should be able to:

- Notify relevant personnel prior to loss of supply.
- Locate circuits and circuit protection/isolation devices.
- Isolate, lock-out and tag-out electrical circuits and equipment.
- Test circuits and equipment to verify isolation.
- Test the test equipment to verify correct functionality.

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1. Planning the Skills Practice

1.1 Equipment

- Single or three phase circuit/equipment
- Test equipment - multi-meter/voltmeter
- Known live source

1.2 Suggested Materials

- Note pad
- Pens/pencils
- AS/NZS 4836

1.3 Miscellaneous Items




- Lock-out device
- Padlock & key
- Danger tag
- PPE

1.4 Risk Assessment

Risk assessment procedure:

- Identify any hazards that may exist with this skills practice below
- List the supervision level you will be working under - Direct (D), General (G) or Broad (B)
- List the risk classification – High Risk (H), Medium Risk (M) or Low Risk (L)
- List the control measures required for each identified hazard that you need to implement.

Hazard/s Identified	Supervision Level (D, G or B)	Risk Classification (H, M or L)	Control Measure/s

	 Feedback Have your teacher/trainer check your risk assessment	Teacher/Trainer Initials and Date 	
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2. Carrying Out the Skills Practice

2.1 Safely Isolate Electrical Circuits & Equipment

2.1.1 Locate the circuit protection/isolation device, and note down the details below.

Circuit / Device No.	Device Location	Protective Device Type	Nominal Current Rating

2.1.2 Notify relevant personnel of your intention to isolate the circuit, and note down details below.

Person Notified	Position	Authorisation Obtained		
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

2.1.3 Isolate, lock and tag the circuit protection/isolation device using an approved lock-out device and Danger Tag, and record details below.

Type of lock-off devices used:			
Type of tag used:			
Details recorded on tag:	<input type="checkbox"/> Name	<input type="checkbox"/> Company	<input type="checkbox"/> Contact Number

2.1.4 Verify that your test equipment is functioning correctly by using them to test a known live source.

Test equipment is functioning correctly	
<input type="checkbox"/> Yes	<input type="checkbox"/> No




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2.1.5 Before touching the metallic frame of equipment, test for voltage between the frame and a known earth, and record your results below.






Note: if a voltage is measured between the frame of the equipment and earth, DO NOT PROCEED – seek guidance from your teacher/trainer.

Test	Reading (Volts)
Frame to known earth	

	 Feedback	Have your teacher/trainer check your electrical measurements	Teacher/Trainer Initials and Date 
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2.1.5 Test the equipment to verify the isolation, and record your test results in the table.




Test	Reading (Volts)	Test	Reading (Volts)
Line 1 to earth		Line 3 to neutral	
Line 2 to earth		Line 1 to Line 2	
Line 3 to earth		Line 1 to Line 3	
Line 1 to neutral		Line 2 to Line 3	
Line 2 to neutral		Earth to neutral	

	 Feedback	Have your teacher/trainer check your electrical measurements	Teacher/Trainer Initials and Date 
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2.1.6 Verify that your test equipment is still functioning correctly by using them to test a known live source.

Test equipment is functioning correctly	
<input type="checkbox"/> Yes	<input type="checkbox"/> No

	 <i>Feedback</i>	Have your teacher/trainer check your electrical measurements	Teacher/Trainer Initials and Date	

3. Completing the Skills Practice

3.1 Skills Practice Review Questions

3.1.1 Clean your work area, return all equipment to the correct storage areas as directed by your teacher/trainer, and complete the following review questions.



1. List the three essential pieces of information that should be recorded on a Danger Tag.

2. List two additional pieces of information that may be recorded on a Danger Tag.

3. Explain who is permitted to re-energise a circuit after it has been safely isolated using LOTO procedures.

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4. Describe three real world scenarios where safe isolation and LOTO procedures are required.

	 Feedback	Have your teacher/trainer check your answers	Teacher/Trainer Initials and Date	