

NOCC-A21 Electrician: Competence Package

Relevant Occupation/trade title: Electrician			SAQA ID: 91761		
Learning Area 11: Install, maintain and troubleshoot low voltage <u>alternative power supply systems and associated equipment</u>			Total Hours:	64	
Learning Project 4: <u>Maintain and troubleshoot battery standby/UPS system</u>			Total Hours:	8	
Requisite learning areas/projects to be in place (Pre-requisite and co-requisite):		<ul style="list-style-type: none"> Phase 1 completed LA11 LP3 			
Learning project description: <u>Apprentices learn to maintain and troubleshoot battery standby/UPS system</u>					
Activity phase	Practical Skills Modules Content	Underpinning Knowledge Module Content	Work Experience Module Content (Exposure to be given)	Didactical-methodological advice	Learning materials/Tools and Equipment
Reference to QCTO Curriculum	PM-01 (PS-01, 03) PM-06 (PS1, 2) PM-08 (PS1, 2,3,4,5)	KM-06-KT03 KM-07 (KT01,02, 05) KM-08 (KT01) KM-09 (KM01)	WM-03 (WE1,2,3) WM-05 (WE1,2,3)		
Planning/ Preparation	<p>Provide access to (Given): Faulty UPS systems, manufacturer specifications, relevant tools and measuring instruments as per last column.</p> <p>Apprentices must be able to do/perform the following (hard and soft) skills:</p> <ul style="list-style-type: none"> Wear correct PPE Complete documentation Conduct risk assessment Select the correct tools and equipment Transport all materials and equipment safely to workstation 	<p>Knowledge of:</p> <ul style="list-style-type: none"> Electrical maintenance and inspection Common UPS faults and their identification Appropriate methods for maintenance and repair of UPS systems 	<p>Under supervision: <i>If workplace allows for this exposure:</i></p> <ul style="list-style-type: none"> Perform power on and off power test on UPS systems Test continuity of conductors Test protective devices 	Lecture, presentations DVDs, audio-visual Group work, Internet	<p>Print materials, electronic files, software applications incl.:</p> <ul style="list-style-type: none"> Training manuals for trainers and apprentices incl. multimedia software Set of presentation aids (videos, slides) for overhead or LED/LCD projectors <p>Tools, equipment and materials incl.: Electrical toolbox</p> <p>Materials</p> <ul style="list-style-type: none"> UPS System Multi-meter Faulty elements
Implementation/ Execution	<ul style="list-style-type: none"> Perform power on and off power test Test continuity of conductors Test protective devices 				
Evaluation/	<ul style="list-style-type: none"> Test the UPS system to ensure 				

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Documentation	that it is working correctly (functionality test) <ul style="list-style-type: none"> • Report work progress to appropriate personnel • Inspect and clean tools • Store and secure tools and materials • Complete applicable work documentation • Perform housekeeping 				PPE: <ul style="list-style-type: none"> • Safety overall • Safety boots
Total	Hours: 8				
Specialisation additions					
Assessment guidance					
<ul style="list-style-type: none"> • Self assessment • Group assessment • Theory test • Correct PPE is worn • Risk assessment undertaken • Necessary documentation completed • UPS system tested to ensure functionality • Task is completed as per job card • Housekeeping performed 					

Work