

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</u> supply systems and associated equipment			Total Hours:		64
Learning Project 4: Maintain and troubleshoot battery standby/UPS system			Total Hours:		8
Requisite learning areas/projects to be in place (Pre-requisite and co-requisite):		<ul style="list-style-type: none">Phase 1 completedLA11 LP3			
Learning project description: Apprentices learn to maintain and troubleshoot battery standby/UPS system					
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><u>Provide access to (Given):</u> Faulty UPS systems, manufacturer specifications, relevant tools and measuring instruments as per last column.</p> <p><u>Apprentices must be able to do/perform the following (hard and soft) skills:</u></p> <ul style="list-style-type: none">Wear correct PPEComplete documentationConduct risk assessmentSelect the correct tools and equipmentTransport all materials and equipment safely to workstation	<p><u>Knowledge of:</u></p> <ul style="list-style-type: none">Electrical maintenance and inspectionCommon UPS faults and their identificationAppropriate methods for maintenance and repair of UPS systems	<p><u>Under supervision:</u> <i>If workplace allows for this exposure:</i></p> <ul style="list-style-type: none">Perform power on and off power test on UPS systemsTest continuity of conductorsTest 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 softwareSet 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 SystemMulti-meterFaulty elements
Implementation/ Execution	<ul style="list-style-type: none">Perform power on and off power testTest continuity of conductorsTest protective devices				
Evaluation/	<ul style="list-style-type: none">Test the UPS system to ensure				

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Documentation	<div>that it is working correctly (functionality test)</div> <ul style="list-style-type: none">Report work progress to appropriate personnelInspect and clean toolsStore and secure tools and materialsComplete applicable work documentationPerform housekeeping				PPE: <ul style="list-style-type: none">Safety overallSafety boots
Total	Hours: 8				
Specialisation additions					
Assessment guidance					
<div><ul style="list-style-type: none">Self assessmentGroup assessmentTheory test <ul style="list-style-type: none">Correct PPE is wornRisk assessment undertakenNecessary documentation completedUPS system tested to ensure functionalityTask is completed as per job cardHousekeeping performed</div>					