

NOCC-A21 Electrician: Competence Package

Relevant Occupation/trade title: Electrician				SAQA ID: 91761	
Learning Area 15: Commission, re- and decommission of electrical systems and equipment (compliance documentation)				Total Hours:	16
Learning Project 2: Commission, re-commission and decommission low voltage <u>three phase</u> power distribution systems and associated components				Total Hours:	8
Requisite learning areas/projects to be in place (Pre-requisite and co-requisite):		<ul style="list-style-type: none">Phase 1 completedLA15 LP1			
Learning project description: Apprentices commission, re-commission and decommission low voltage <u>three phase</u> power distribution systems and associated components					
Activity phase	Practical Skills Modules Content	Underpinning Knowledge Module Content	Work Experience Module Content	Didactical-methodological advice	Learning materials/Tools and Equipment
Reference to QCTO Curriculum	PM-06-PS01-02, PM07-PS01-03, PM08-PS01-05	KM05-KT03, KM07-KT01, KT05, KT06, KM09-KT01	WM-03-WE01-03, WM-04-WE01-03		
Planning/Preparation	<p><u>Provide access to (Given):</u> Pre-installed installation (three phase), electrical drawing, materials and equipment as identified in last column;</p> <p>Apprentices must do/perform the following (hard and soft skills):</p> <ul style="list-style-type: none">Read and interpret the electrical drawingPerform a risk assessment on the taskApply lock out proceduresSelect measuring instruments for commissioning testsAcquire relevant documentationPlan sequence of testing	<p><u>Knowledge of:</u></p> <ul style="list-style-type: none">De-commissioning of three phase commercial/industrial installations (procedures and requirements)Relevant power off and power on testsCommissioning and re-commissioning of three phase commercial/industrial installations (procedures and requirements)Safety precautions when commissioning, re-commissioning and decommissioningSANS 10142-1For alternative power	<p><u>Under supervision:</u></p> <ul style="list-style-type: none">De-commission commercial/industrial installationsConduct relevant tests for commissioning and re-commissioningCommission and re-commission commercial/industrial installations	Lecture, presentations DVDs, audio-visual Demonstrations Practical applications	<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 projectorsStatutory requirements:SANS 10142-Part1Municipal by-lawsCompany policiesElectrical drawings <p>Tools, equipment and materials incl.:</p> <ul style="list-style-type: none">Ladder/Step ladderElectrical hand tools standard toolboxMeasuring instruments
Implementation/	<ul style="list-style-type: none">Perform all relevant power				

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Execution Repair	<ul style="list-style-type: none"> off tests Record the result of each test Identify and rectify faults if applicable Perform additional power off test Perform power on test and commission system 	supplies (generators, PV panels): SANS 10142-1 Annexure S			Materials: <ul style="list-style-type: none"> Pre-installed installation (three phase) – Mock commercial/industrial installation <ul style="list-style-type: none"> Three phase DBs Three phase motor controls Three phase socket outlets Access to appropriate spares in case of faults PPE: <ul style="list-style-type: none"> Safety overall Safety boots Safety glasses
Evaluation/ Documentation	<ul style="list-style-type: none"> Record required readings and findings of power off and power on test Hand over documentation to relevant person Clean work area after completion of task in accordance with work site procedures and housekeeping standards 				
Total	Hours: 8				
Specialisation additions					
Assessment guidance					
<ul style="list-style-type: none"> Self assessment Group assessment Theory test Criteria for assessment: <ul style="list-style-type: none"> Correct isolation procedures (de-commissioning) Correct testing procedures and use of instruments (power off and power on) Identification and rectification of faults Documentation of readings and correct conclusions drawn Correct procedures for hand over/commissioning Clean worksite after completion of task and equipment returned safely to store 					