

GENERATOR MECHANIC



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ASSESSMENT PACKAGE
National Vocational Certificate Level 4

Version 1 - November, 2019

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ASSESSMENT PACKAGE
National Vocational Certificate Level 4

Version 1 - November, 2019

Instructions for Candidate (to be given by the Assessor before Assessment)

Title of Qualification: National Vocational Certificate level 4, In Generator Mechanic	CS Code: 071300625	Level: 4	Version: 1 (2019)
Competency Standard Title: Perform Winding	Assessment Date (DD/MM/YY):		

Candidate Details	Name..... Registration/Roll Number.....
Guidance for Candidate	To meet this standard, you are required to complete the following tasks within 40 min timeframe: Assessment Task 1: Make winding coils Assessment Task 2: Perform paper insulation Assessment Task 3: Insert coils in relevant slots Assessment Task 4: Connect coils Assessment Task 5: Perform varnishing as per standard Assessment Task 6: Perform winding continuity Test And complete: Knowledge assessment test (Written or Oral) Portfolios at the time of assessment (if any)
Time 4.30 hrs Minimum Evidence Required	During a practical assessment, under observation by an assessor, you will complete: Task 1: Make winding coils Performance Criteria 1: Select wire as per required gauge Performance Criteria 2: Make coils as per specifications Task 2: Perform paper insulation Performance Criteria 1: Select insulation paper Performance Criteria 2: 2ut insulation paper as per slot size Performance Criteria 3: Insert insulation paper in stator /rotor slots Task 3: Insert coils in relevant slots Performance Criteria 1: Insert coil in internal slot as per pitch Performance Criteria 2: Insert coil in external slot as per pitch Performance Criteria 3: Insert wedge/insulation paper Task 4: Connect coils Performance Criteria 1: Inter connect coil as per circuit diagram Performance Criteria 2: Perform lacing of coils

Task 5: Perform varnishing as per standard

Performance Criteria 1: Select varnish grade as per standard

Performance Criteria 2: Apply varnish to coil

Performance Criteria 3: Dry varnish

Task 6: Perform winding continuity Test

Performance Criteria 1: Adjust test parameters of test bench as per requirement

Performance Criteria 2: Perform continuity, high voltage, and power input tests

Performance Criteria 3: Record warning indication and follow as per SOPs

Portfolios required at the time of assessment (if any) for

Performance criteria for the evaluation of portfolio:

Submit log book or activity record (practical journal, project, pictures etc.) completed during the training.

Assessors Judgment Guide (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

071300625 Perform Winding

Candidate Details	Name:Registration/Roll Number: Candidate Signature:.....
Assessment Outcome	COMPETENT ☐ NOT YET COMPETENT ☐ Assessor Name:.....Assessor's code:..... Assessor Signature:

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration							
Knowledge Assessment							
Other Requirement							

Feedback to the candidate on assessment.

Candidate Signature..... Assessor Signature

Assessment Task 1		Make Winding coils		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Performance Criteria 1: Selected wire as per required gauge			
2.	Performance Criteria 2: Made coils as per specifications			
Competent ☐		Not Yet Competent ☐		

Assessment Task 2		Perform paper insulation		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Selected insulation paper			
2	Performance Criteria 2: Cut insulation paper as per slot size			
3	Performance Criteria 3: Inserted insulation paper in stator /rotor slots			
Competent ☐		Not Yet Competent ☐		

Assessment Task 3		Insert coils in relevant slots		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Inserted coil in internal slot as per pitch			
2	Performance Criteria 2: Inserted coil in external slot as per pitch			
3	Performance Criteria 3: Inserted wedge/insulation paper			
Competent ☐		Not Yet Competent ☐		

Assessment Task 4		Connect coils		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Inter connected coil as per circuit diagram			
2	Performance Criteria 2: Performed lacing of coils			
Competent ☐		Not Yet Competent ☐		

Assessment Task 5		Perform varnishing as per standard		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Selected varnish grade as per standard			
2	Performance Criteria 2: Applied varnish to coil			
3	Performance Criteria 3: Dry varnish			
Competent ☐		Not Yet Competent ☐		

Assessment Task 6		Perform winding continuity Test		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Adjusted test parameters of test bench as per requirement			
2	Performance Criteria 2: Performed continuity, high voltage, and power input tests			
3	Performance Criteria 3: Recorded warning indication and follow as per SOPs			
Competent ☐		Not Yet Competent ☐		

Portfolio (if any)		Description of portfolio		
Current ☐ Sufficient ☐ Authentic ☐ Valid ☐ Reliable ☐				
Portfolio meet the following performance standards:		Yes	No	Remarks
1	Performance criteria for the evaluation of portfolio: Submit log book or activity record (practical journal, project, pictures etc.) completed during the training.			
Competent ☐		Not Yet Competent ☐		

Knowledge Assessment

Title of Qualification: National Vocational Certificate level 4, In Generator Mechanic	CS Code: 071300625	Level: 4	Version: 1 (2019)
Competency Standard Title: Perform Winding	Assessment Date (DD/MM/YY): --/--/--		

Guidance for Candidate	To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.
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Assessors Guide (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: Registration/Roll Number: Candidate Signature:
Written Assessment Outcome	COMPETENT ☐ NOT YET COMPETENT ☐ Assessor Name: Assessor's code: Assessor Signature:

Feedback to the candidate on assessment.

	Candidate Signature..... Assessor Signature
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Title of Qualification: National Vocational Certificate level 4, In Generator Mechanic	CS Code: 071300625	Level: 4	Version: 1 (2019)
Competency Standard Title: Perform Winding	Assessment Date (DD/MM/YY): --/--/--		

WRITTEN ASSESSMENT

Question	Candidate's answer
1 Describe winding types including short pitched, full pitched, single layer and double layer winding	
2 Define types of winding wires?	
3 Define standard wire gauge (SWG)?	

Question	Candidate's answer
4 Define coil making techniques including number of turns, number of coils and coil pitch?	
5 Define insulation paper?	
6 Define techniques for insertion of insulation paper?	
7 Define insertion procedure of coils in proper slots?	

Question	Candidate's answer
8 Define coil connections procedure?	
9 Describe lacing procedure of winding?	
10 Describe varnishing procedure?	
11 Describe different winding testing procedures and techniques?	

Instructions for Candidate (to be given by the Assessor before Assessment)

Title of Qualification: National Vocational Certificate level 4, In Generator Mechanic	CS Code: 071300628	Level: 4	Version: 1 (2019)
Competency Standard Title: Perform test as per specification	Assessment Date (DD/MM/YY):		

Candidate Details	Name..... Registration/Roll Number.....
Guidance for Candidate	To meet this standard, you are required to complete the following tasks within 40 min timeframe: Assessment Task 1: Perform test on full load Assessment Task 2: Record Voltage Assessment Task 3: Record Ampere Assessment Task 4: Record frequency Assessment Task 5: Record Temperature Assessment Task 6: Record Engine Speed Assessment Task 7: Compile all the Test result And complete: Knowledge assessment test (Written or Oral) Portfolios at the time of assessment (if any)
Minimum Evidence Required	During a practical assessment, under observation by an assessor, you will complete: Task 1: Perform test on full load Performance Criteria 1: Identify full load as per manufacturer Performance Criteria 2: Connect load bank with generator Performance Criteria 3: Select full load of load bank Task 2: Record Voltage Performance Criteria 1: Record start time Performance Criteria 2: Record fluctuation in voltage Performance Criteria 3: Repeat the process up to 3 times with intervals Performance Criteria 4: Document the average Voltage Task 3: Record Ampere Performance Criteria 1: Record start time Performance Criteria 2: Record fluctuation in Current Performance Criteria 3: Repeat the process up to 3 times with intervals Performance Criteria 4: Document the average Ampere

Task 4: Record Frequency

Performance Criteria 1: Record start time

Performance Criteria 2: Record fluctuation in Frequency

Performance Criteria 3: Repeat the process up to 3 times with intervals

Performance Criteria 4: Document the average Frequency

Task 5: Record Temperature

Performance Criteria 1: Record start time

Performance Criteria 2: Record fluctuation in Temperature

Performance Criteria 3: Repeat the process up to 3 times with intervals

Performance Criteria 4: Document the average Temperature

Task 6: Record Engine Speed

Performance Criteria 1: Record start time

Performance Criteria 2: Record fluctuation in revolution per minute RPM

Performance Criteria 3: Repeat the process up to 3 times with intervals

Performance Criteria 4: Document the average Speed

Task 7: Compile all the Test result

Performance Criteria 1: Prepare Table Sheet

Performance Criteria 2: Enter all the average data in the Table Sheet

Performance Criteria 3: Take Signatures on the document from the customer and expert

Portfolios required at the time of assessment (if any) for

Performance criteria for the evaluation of portfolio:

Submit log book or activity record (practical journal, project, pictures etc.) completed during the training.

Assessors Judgment Guide (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

071300628 Perform test as per specification

Candidate Details	Name:Registration/Roll Number: Candidate Signature:.....
Assessment Outcome	COMPETENT ☐ NOT YET COMPETENT ☐ Assessor Name:.....Assessor's code:..... Assessor Signature:

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration							
Knowledge Assessment							
Other Requirement							

Feedback to the candidate on assessment.

Candidate Signature..... Assessor Signature

Assessment Task 1		Perform test on full load		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Performance Criteria 1: Identified full load as per manufacturer			
2.	Performance Criteria 2: Connected load bank with generator			
3.	Performance Criteria 3: Selected full load of load bank			
Competent ☐		Not Yet Competent ☐		

Assessment Task 2		Record Voltage		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Recorded start time			
2	Performance Criteria 2: Recorded fluctuation in voltage			
3	Performance Criteria 3: Repeated the process up to 3 times with intervals			
4	Performance Criteria 4: Documented the average Voltage			
Competent ☐		Not Yet Competent ☐		

Assessment Task 3		Record Ampere		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Recorded start time			
2	Performance Criteria 2: Recorded fluctuation in Current			
3	Performance Criteria 3: Repeated the process up to 3 times with intervals			
4	Performance Criteria 4: Documented the average Ampere			
Competent ☐		Not Yet Competent ☐		

Assessment Task 4		Record Frequency		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Recorded start time			
2	Performance Criteria 2: Recorded fluctuation in Frequency			
3	Performance Criteria 3: Repeated the process up to 3 times with intervals			
4	Performance Criteria 4: Documented the average Frequency			
Competent ☐		Not Yet Competent ☐		

Assessment Task 5		Record Temperature		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Recorded start time			
2	Performance Criteria 2: Recorded fluctuation in Temperature			
3	Performance Criteria 3: Repeated the process up to 3 times with intervals			
4	Performance Criteria 4: Documented the average Temperature			
Competent ☐		Not Yet Competent ☐		

Assessment Task 6		Record Engine Speed		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Recorded start time			
2	Performance Criteria 2: Recorded fluctuation in Revolution Per Minute (RPM).			
3	Performance Criteria 3: Repeated the process up to 3 times with intervals			
4	Performance Criteria 4: Documented the average Speed			
Competent ☐		Not Yet Competent ☐		

Assessment Task 7		Compile all the Test result		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Prepared Table Sheet			
2	Performance Criteria 2: Entered all the average data in the Table Sheet			
3	Performance Criteria 3: Took Signatures on the document from the customer and expert			
Competent ☐		Not Yet Competent ☐		

Portfolio (if any)		Description of portfolio		
Current ☐ Sufficient ☐ Authentic ☐ Valid ☐ Reliable ☐				
Portfolio meet the following performance standards:		Yes	No	Remarks
1	Performance criteria for the evaluation of portfolio: Submit log book or activity record (practical journal, project, pictures etc.) completed during the training.			
Competent ☐		Not Yet Competent ☐		

Knowledge Assessment

Title of Qualification: National Vocational Certificate level 4, In Generator Mechanic	CS Code: 071300628	Level: 4	Version: 1 (2019)
Competency Standard Title: Perform test as per specification	Assessment Date (DD/MM/YY): --/--/--		

Guidance for Candidate	To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.
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Assessors Guide (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: Registration/Roll Number: Candidate Signature:
Written Assessment Outcome	COMPETENT ☐ NOT YET COMPETENT ☐ Assessor Name: Assessor's code: Assessor Signature:

Feedback to the candidate on assessment.

	Candidate Signature..... Assessor Signature
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Title of Qualification: National Vocational Certificate level 4, In Generator Mechanic	CS Code: 071300628	Level: 4	Version: 1 (2019)
Competency Standard Title: Perform test as per specification	Assessment Date (DD/MM/YY): --/--/--		

WRITTEN ASSESSMENT

Question	Candidate's answer
12 Define generator capacity and load bank?	
13 Define voltage testing procedure?	
14 Define current testing procedure?	

Question	Candidate's answer
15 Define frequency testing procedure?	
16 Define heat testing procedure?	
17 Define speed testing procedure?	
18 How to manage test report writing?	

Instructions for Candidate (to be given by the Assessor before Assessment)

Title of Qualification: National Vocational Certificate level 4, In Generator Mechanic	CS Code: 071300629	Level: 4	Version: 1 (2019)
Competency Standard Title: Plan Work	Assessment Date (DD/MM/YY):		

Candidate Details	Name..... Registration/Roll Number.....
Guidance for Candidate	To meet this standard, you are required to complete the following tasks within 40 min timeframe: Assessment Task 1: Assess site hazards Assessment Task 2: Ensure work procedures Assessment Task 3: Follow symbols Assessment Task 4: Ensure Drawing parameters Assessment Task 5: Ensure environmental concerns And complete: Knowledge assessment test (Written or Oral) Portfolios at the time of assessment (if any)
Minimum Evidence Required	During a practical assessment, under observation by an assessor, you will complete: Task 1: Assess site hazards Performance Criteria 1: Inspect site visually Performance Criteria 2: Identify actual and potential hazards Performance Criteria 3: Communicate with site supervisor/customer/supplier Task 2: Ensure work procedures Performance Criteria 1: Identify Tools & equipment Performance Criteria 2: Prepare job sheet /job card/work order Performance Criteria 3: Follow job sequence Performance Criteria 4: Demonstrate/co-ordinate activities with others Task 3: Follow symbols Performance Criteria 1: Follow Warning symbols Performance Criteria 2: Follow Electrical symbols Performance Criteria 3: Follow Mechanical symbols Task 4: Ensure Drawing parameters Performance Criteria 1: Follow metric and imperial measurements Performance Criteria 2: Adopt inter-conversion of metric and imperial measurement Performance Criteria 3: Distinguish between plan, side view and section

	Task 5: Ensure environmental concerns Performance Criteria 1: Identify actual and potential environmental concerns (proximity to water courses, noise levels, fuel leaks and hazardous materials) Performance Criteria 2: Review environment concerns Performance Criteria 3: Review work plan as per standard Performance Criteria 4: Communicate report to site supervisor Portfolios required at the time of assessment (if any) for Performance criteria for the evaluation of portfolio: Submit log book or activity record (practical journal, project, pictures etc.) completed during the training.
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Assessors Judgment Guide (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

071300629 Plan Work

Candidate Details	Name:Registration/Roll Number: Candidate Signature:.....
Assessment Outcome	COMPETENT ☐ NOT YET COMPETENT ☐ Assessor Name:.....Assessor's code:..... Assessor Signature:

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration							
Knowledge Assessment							
Other Requirement							

Feedback to the candidate on assessment.

Candidate Signature..... Assessor Signature

Assessment Task 1		Assess site hazards		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Performance Criteria 1: Inspect site visually			
2.	Performance Criteria 2: Identify actual and potential hazards			
3.	Performance Criteria 3: Communicate with site supervisor/customer/supplier			
Competent ☐		Not Yet Competent ☐		

Assessment Task 2		Ensure work procedures		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Identify Tools & equipment			
2	Performance Criteria 2: Prepare job sheet /job card/work order			
3	Performance Criteria 3: Follow job sequence			
4	Performance Criteria 4: Demonstrate/co-ordinate activities with others			
Competent ☐		Not Yet Competent ☐		

Assessment Task 3		Follow symbols		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Follow Warning symbols			
2	Performance Criteria 2: Follow Electrical symbols			
3	Performance Criteria 3: Follow Mechanical symbols			
Competent ☐		Not Yet Competent ☐		

Assessment Task 4		Ensure Drawing parameters		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Follow metric and imperial measurements			
2	Performance Criteria 2: Adopt inter-conversion of metric and imperial measurement			
3	Performance Criteria 3: Distinguish between plan, side view and section			
Competent ☐		Not Yet Competent ☐		

Assessment Task 5		Ensure environmental concerns		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Identify actual and potential environmental concerns (proximity to water courses, noise levels, fuel leaks and hazardous materials)			
2	Performance Criteria 2: Review environment concerns			
3	Performance Criteria 3: Review work plan as per standard			
4	Performance Criteria 4: Communicate report to site supervisor			
Competent ☐		Not Yet Competent ☐		

Portfolio (if any)		Description of portfolio		
Current ☐ Sufficient ☐ Authentic ☐ Valid ☐ Reliable ☐				
Portfolio meet the following performance standards:		Yes	No	Remarks
1	Performance criteria for the evaluation of portfolio: Submit log book or activity record (practical journal, project, pictures etc.) completed during the training.			
Competent ☐		Not Yet Competent ☐		

Knowledge Assessment

Title of Qualification: National Vocational Certificate level 4, In Generator Mechanic	CS Code: 071300629	Level: 4	Version: 1 (2019)
Competency Standard Title: Plan Work	Assessment Date (DD/MM/YY): --/--/--		

Guidance for Candidate	To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.
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Assessors Guide (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: Registration/Roll Number: Candidate Signature:
Written Assessment Outcome	COMPETENT ☐ NOT YET COMPETENT ☐ Assessor Name: Assessor's code: Assessor Signature:

Feedback to the candidate on assessment.

	Candidate Signature..... Assessor Signature
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Title of Qualification: National Vocational Certificate level 4, In Generator Mechanic	CS Code: 071300629	Level: 4	Version: 1 (2019)
Competency Standard Title: Plan Work	Assessment Date (DD/MM/YY): --/--/--		

WRITTEN ASSESSMENT

Question	Candidate's answer
19 Define hazards?	
20 Describe different types of hazards?	
21 Describe job sheet/ job card/work order?	

Question	Candidate's answer
22 Describe various types of warning symbols and marks?	
23 Describe metric and imperial measurement system?	
24 Describe different conversion units?	

Title of Qualification: National Vocational Certificate level 3, In Generator Mechanic	CS Code: 0713E&E20	Level: 3	Version: 1 (2019)
Competency Standard Title: Perform Winding, Perform Test as Per specification, Plan Work	Assessment Date (DD/MM/YY):		

Candidate Details	Name: Registration/Roll Number:
Guidance for Candidate	To meet this standard, you are required to complete the following activities within 04 Hrs. time frame (for practical demonstration & assessment): • Conduct Short Circuit Test of the Alternator winding • Perform Test for Voltage, Current, Frequency, Temperature and Engine Speed • Test and Compare Power before and after load • Compile Report of the above tasks And complete: 1. Knowledge assessment test (Written or Oral). 2. Portfolios at the time of assessment (if any).
Minimum Evidence Required	During a practical assessment, under the observation by an assessor, you are required to conduct the following tests by demonstrate the following criteria Task 1: Conduct Short Circuit Test Performance Criteria 1: Disconnect the electrical current from the transformer. Performance Criteria 2: Clean the terminals of transformer Performance Criteria 3: Inject the voltage on the primary winding Performance Criteria 4: Control the voltage from zero until current reach in the secondary winding to equal the full load current of the transformer. Performance Criteria 5: Take the voltmeter reading from the primary winding Performance Criteria 6: Apply the formula to find the load loss Task 2: Record Voltage Performance Criteria 1: Record start time Performance Criteria 2: Record fluctuation in voltage Performance Criteria 3: Repeat the process up to 3 times with intervals Performance Criteria 4: Document the average Voltage Task 3: Record Ampere Performance Criteria 1: Record start time Performance Criteria 2: Record fluctuation in Current Performance Criteria 3: Repeat the process up to 3 times with intervals Performance Criteria 4: Document the average Ampere Task 4: Record Frequency Performance Criteria 1: Record start time

	Performance Criteria 2: Record fluctuation in Frequency Performance Criteria 3: Repeat the process up to 3 times with intervals Performance Criteria 4: Document the average Frequency Task 5: Record Temperature Performance Criteria 1: Record start time Performance Criteria 2: Record fluctuation in Temperature Performance Criteria 3: Repeat the process up to 3 times with intervals Performance Criteria 4: Document the average Temperature Task 6: Record Engine Speed Performance Criteria 1: Record start time Performance Criteria 2: Record fluctuation in revolution per minute RPM Performance Criteria 3: Repeat the process up to 3 times with intervals Task 7: Compile all the Test result Performance Criteria 1: Prepare Table Sheet Performance Criteria 2: Enter all the average data in the Table Sheet Performance Criteria 3: Take Signatures on the document from the customer and expert Task 8: Perform test on full load Performance Criteria 1: Identify full load as per manufacturer Performance Criteria 2: Connect load bank with generator Performance Criteria 3: Select full load of load bank Performance Criteria 4: Compare Power before and after load
	Portfolios required at the time of assessment (if any) for Performance criteria for the evaluation of portfolio: Submit log book or activity record (practical journal, project, pictures etc.) completed during the training.

Self-Assessment Checklist

I can perform

Candidate Name	
Registration No.	
Qualification	0713E&E20 National Vocational Certificate Level- 3 in Generator Mechanic
Purpose of Assessment	Summative Assessment
Assessment Task	• Conduct Short Circuit Test of the Alternator winding • Perform Test for Voltage, Current, Frequency, Temperature and Engine speed. • Test and Compare Power before and after load • Compile Report of the above tasks

Performance Criteria	Yes	No
Task 1: Conduct Short Circuit Test		
Performance Criteria 1: Disconnect the electrical current from the transformer.		
Performance Criteria 2: Clean the terminals of transformer		
Performance Criteria 3: Inject the voltage on the primary winding		
Performance Criteria 4: Control the voltage from zero until current reach in the secondary winding to equal the full load current of the transformer.		
Performance Criteria 5: Take the voltmeter reading from the primary winding		
Performance Criteria 6: Apply the formula to find the load loss		
Task 2: Record Voltage		
Performance Criteria 1: Record start time		
Performance Criteria 2: Record fluctuation in voltage		
Performance Criteria 3: Repeat the process up to 3 times with intervals		
Performance Criteria 4: Document the average Voltage		
Task 3: Record Ampere		
Performance Criteria 1: Record start time		
Performance Criteria 2: Record fluctuation in Current		
Performance Criteria 3: Repeat the process up to 3 times with intervals		
Performance Criteria 4: Document the average Ampere		
Task 4: Record Frequency		
Performance Criteria 1: Record start time		
Performance Criteria 2: Record fluctuation in Frequency		
Performance Criteria 3: Repeat the process up to 3 times with intervals		
Performance Criteria 4: Document the average Frequency		
Task 5: Record Temperature		
Performance Criteria 1: Record start time		

Performance Criteria 2: Record fluctuation in Temperature		
Performance Criteria 3: Repeat the process up to 3 times with intervals		
Performance Criteria 4: Document the average Temperature		
Task 6: Record Engine Speed		
Performance Criteria 1: Record start time		
Performance Criteria 2: Record fluctuation in revolution per minute RPM		
Performance Criteria 3: Repeat the process up to 3 times with intervals		
Task 7: Compile all the Test result		
Performance Criteria 1: Prepare Table Sheet		
Performance Criteria 2: Enter all the average data in the Table Sheet		
Performance Criteria 3: Take Signatures on the document from the customer and expert		
Task 8: Perform test on full load		
Performance Criteria 1: Identify full load as per manufacturer		
Performance Criteria 2: Connect load bank with generator		
Performance Criteria 3: Select full load of load bank		
Performance Criteria 4: Compare Power before and after load		

Candidate's Signature_____ Assessor's Signature_____

Date: _____

Assessors Judgment Guide (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

0713E&E20 National Vocational Certificate Level – 4 in Generator Mechanic

Candidate Details	Name:Registration/Roll Number: Candidate's Signature:.....
Assessment Outcome	COMPETENT ☐ NOT YET COMPETENT ☐ Assessor Name:.....Assessor's code: Assessor's Signature:

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration							
Knowledge Assessment							
Other Requirement							

Feedback to the Candidate
Candidate's Signature _____ Assessor's Signature _____

Each Assessment Task (with performance criteria)				
Assessment Task		Description of assessment task		
		- Conduct Short Circuit Test of the Alternator winding - Perform Test Voltage, Current, Temperature Test before load and after load - Test and Compare Power before and after load - Compile Report of the above tasks.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Task 1: Conduct Short Circuit Test			
2.	Performance Criteria 1: Disconnect the electrical current from the transformer.			
3.	Performance Criteria 2: Clean the terminals of transformer			
4.	Performance Criteria 3: Inject the voltage on the primary winding			
5.	Performance Criteria 4: Control the voltage from zero until current reach in the secondary winding to equal the full load current of the transformer.			
6.	Performance Criteria 5: Take the voltmeter reading from the primary winding			
7.	Performance Criteria 6: Apply the formula to find the load loss			
8.	Task 2: Record Voltage			
9.	Performance Criteria 1: Record start time			
10.	Performance Criteria 2: Record fluctuation in voltage			
11.	Performance Criteria 3: Repeat the process up to 3 times with intervals			
12.	Performance Criteria 4: Document the average Voltage			
13.	Task 3: Record Ampere			
14.	Performance Criteria 1: Record start time			
15.	Performance Criteria 2: Record fluctuation in Current			
16.	Performance Criteria 3: Repeat the process up to 3 times with intervals			
17.	Performance Criteria 4: Document the average Ampere			
18.	Task 4: Record Frequency			
19.	Performance Criteria 1: Record start time			
20.	Performance Criteria 2: Record fluctuation in Frequency			
21.	Performance Criteria 3: Repeat the process up to 3 times with intervals			
22.	Performance Criteria 4: Document the average Frequency			
23.	Task 5: Record Temperature			

24	Performance Criteria 1: Record start time			
25	Performance Criteria 2: Record fluctuation in Temperature			
26	Performance Criteria 3: Repeat the process up to 3 times with intervals			
27	Performance Criteria 4: Document the average Temperature			
28	Task 6: Record Engine Speed			
29	Performance Criteria 1: Record start time			
30	Performance Criteria 2: Record fluctuation in revolution per minute RPM			
31	Performance Criteria 3: Repeat the process up to 3 times with intervals			
32	Task 7: Compile all the Test result			
33	Performance Criteria 1: Prepare Table Sheet			
34	Performance Criteria 2: Enter all the average data in the Table Sheet			
35	Performance Criteria 3: Take Signatures on the document from the customer and expert			
36	Task 8: Perform test on full load			
37	Performance Criteria 1: Identify full load as per manufacturer			
38	Performance Criteria 2: Connect load bank with generator			
39	Performance Criteria 3: Select full load of load bank			
40	Performance Criteria 4: Compare Power before and after load			
Competent ☐		Not Yet Competent ☐		

Knowledge Assessment

Qualification	0713E&E20 National Vocational Certificate Level – 3 in Generator Mechanic
Purpose of Assessment	Summative Assessment
Candidate Details	Name: _____ Registration Number: _____ Signature: _____
Assessment Outcome	COMPETENT ☐ NOT YET COMPETENT ☐ Name of the Assessor _____ Assessor's code: _____ Signature: _____

Portfolio (if any)		Description of portfolio		
Current ☐ Sufficient ☐ Authentic ☐ Valid ☐ Reliable ☐				
Portfolio meet the following performance standards:		Yes	No	Remarks
1	Performance criteria for the evaluation of portfolio: Submitted log book or activity record (practical journal, project, pictures etc.) completed during the training.			
Competent ☐		Not Yet Competent ☐		

Feedback to the Candidate	
Candidate's Signature _____ Assessor's Signature _____	

Questions (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)		Satisfactory	Not Satisfactory
1.	What is the main purpose of self-starter?		

2	What is the main function of Automatic Voltage Regulator (AVR)?	Satisfactory	Not Satisfactory
3	What is coil pitch?	Satisfactory	Not Satisfactory
		y	
4	Why we use varnish after winding?	Satisfactory	Not Satisfactory
		y	

5	What is continuity test?	Satisfactory	Not Satisfactory
6	What is short circuit test?	Satisfactory	Not Satisfactory

