



Assessment Evidence Guides

for

“Assistant Digger Operator”

Level-4

(Formative)

Assessment Evidence Guide

For

“Assistant Operational Supervisor”

Level-4

Maintain Electrical System of Equipment
(Formative Assessment)

6th–10th September 2021



National Vocational & Technical
Training Commission

Title of Qualification: National Vocational Certificate Level 4, in (Digging Operation/Technology) "Assistant Operational Supervisor"	CS Code:	Level: 04	Version: 01
Competency Standard Title: <ul style="list-style-type: none"> Maintain Electrical System of Equipment Establish and Maintain the Occupational Health and Safety System Perform Advance Communication 	Assessment Date (DD/MM/YY): Assessment Time:		

Candidate Details	Name: Registration/Roll Number:
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <ol style="list-style-type: none"> Assessment Task 1: Candidate is required to inspect and maintain Starting and Charging System of Equipment before and after starting the vehicle. Assessment Task 2: Candidate is required to inspect and maintain Electrical Power System and Wiring of Equipment before and after starting the vehicle. <p>And complete:</p> <ol style="list-style-type: none"> Knowledge assessment test (Written or Oral) Portfolios at the time of assessment (if any)
Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: Check Battery and maintain Voltage according to set standards</p> <p>Performance Criteria 2: Maintain Current according to set standards</p> <p>Performance Criteria 3: Check and maintain Self Starting Motor using appropriate instruments and tools</p> <p>Performance Criteria 4: Check and maintain pre-heater of engine</p> <p>Performance Criteria 5: Perform health check of electrical cables</p> <p>Performance Criteria 6: Maintain Battery Voltage according to set standards</p> <p>Performance Criteria 7: Check Battery Relays using appropriate instruments and tools</p> <p>Performance Criteria 8: Maintain Battery Voltage using appropriate tool</p> <p>Performance Criteria 9: Perform test bench of the alternator</p> <p>Performance Criteria 10: Replace/repair alternator</p>
	<p>Assessment Task 2</p> <p>Performance Criteria 1: Maintain operation of indicators, lights, etc.</p> <p>Performance Criteria 2: Maintain working of wiping system</p> <p>Performance Criteria 3: Maintain working of sensors</p> <p>Performance Criteria 4: Replace faulty fuse</p>

	<p>Performance Criteria 5: Maintain solenoid</p> <p>Performance Criteria 6: Interpret schematic wiring diagram from equipment manual</p> <p>Performance Criteria 7: Check battery Resistance using appropriate instruments and tools</p> <p>Performance Criteria 8: Check and maintain continuity of wiring</p>
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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)

Candidate Details	Name: Registration/Roll Number: Candidate Signature:
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:

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							

Each Assessment Task (with performance criteria)				
Assessment Task 1		Description of assessment task 1 Candidate is required to inspect and maintain Starting and Charging System of Equipment before and after starting the vehicle.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Check Battery and maintain Voltage according to set standards			
2.	Maintain Current according to set standards			
3.	Check and maintain Self Starting Motor using appropriate instruments and tools			
4.	Check and maintain pre-heater of engine			
5.	Perform health check of electrical cables			
6.	Maintain Battery Voltage according to set standards			
7.	Check Battery Relays using appropriate instruments and tools			
8.	Maintain Battery Voltage using appropriate tool			
9.	Perform test bench of the alternator			
10.	Replace/repair alternator			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Each Assessment Task (with performance criteria)			
Assessment Task 2		Description of assessment task 2 Candidate is required to inspect and maintain Electrical Power System and Wiring of Equipment before and after starting the vehicle.	
During the practical assessment, candidate demonstrated the following:		Yes	No
1.	Maintain operation of indicators, lights, etc.		
2.	Maintain working of wiping system		
3.	Maintain working of sensors		
4.	Replace faulty fuse		
5.	Maintain solenoid		
6.	Interpret schematic wiring diagram from equipment manual		
7.	Check battery Resistance using appropriate instruments and tools		
8.	Check and maintain continuity of wiring		
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>	

Assessment Evidence Guide

For

“Assistant Operational Supervisor”

Level-4

Maintain Mechanical System of Equipment
(Formative Assessment)

6th–10th September 2021



**National Vocational & Technical
Training Commission**

Title of Qualification: National Vocational Certificate Level 4, in (Digging Operation/Technology) "Assistant Operational Supervisor"	CS Code:	Level: 04	Version: 01
Competency Standard Title: <ul style="list-style-type: none"> Maintain Mechanical System of Equipment Establish and Maintain the Occupational Health and Safety System Perform Advance Communication 	Assessment Date (DD/MM/YY): Assessment Time:		

Candidate Details	Name: Registration/Roll Number:
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <p>Assessment Task 1: Candidate is required to inspect and maintain Intake and Exhaust System of Equipment according to the requirement.</p> <p>Assessment Task 2: Candidate is required to inspect and maintain Cooling System of Equipment according to the requirement.</p> <p>Assessment Task 3: Candidate is required to inspect and maintain Fuel System of Equipment according to the requirement.</p> <p>Assessment Task 4: Candidate is required to inspect and maintain Lubrication System of Equipment according to the requirement.</p> <p>And complete:</p> <p>5. Knowledge assessment test (Written or Oral)</p> <p>6. Portfolios at the time of assessment (if any)</p>
Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: Identify hazards and risks correctly and confirm according to occupational health and safety legislation, codes of practice and prevailing trends.</p> <p>Performance Criteria 2: Provide adequate resources in a timely and consistent manner.</p> <p>Performance Criteria 3: Identify task requirements</p> <p>Performance Criteria 4: Plan steps to complete tasks</p> <p>Performance Criteria 5: Review planning and organizing process</p> <p>Performance Criteria 6: Organize work</p> <p>Performance Criteria 7: Maintain Air Filters</p> <p>Performance Criteria 8: Maintain Intake Manifold for any leakage</p> <p>Performance Criteria 9: Maintain Tappet</p> <p>Performance Criteria 10: Maintain Turbo Charger</p> <p>Performance Criteria 11: Maintain Exhaust Gas Recirculation Valve (EGR)</p>

	Performance Criteria 12: Measure Vacuum Pressure Performance Criteria 13: Measure Compression Pressure Performance Criteria 14: Maintain Inter Cooler and After Cooler
	Assessment Task 2 Performance Criteria 1: Replace faulty Engine Belts Performance Criteria 2: Inspect and maintain Radiator Performance Criteria 3: Inspect and maintain Hoses (Upper and lower) Performance Criteria 4: Inspect and replace Thermostat Valve Performance Criteria 5: Inspect and maintain condition of Ethylene Glycol in the cooling system using Refractometer Performance Criteria 6: Maintain Water Pump
	Assessment Task 3 Performance Criteria 1: Maintain Fuel Pump Performance Criteria 2: Maintain Fuel Filter Performance Criteria 3: Maintain Water Separator Performance Criteria 4: Maintain Fuel Injector
	Assessment Task 4 Performance Criteria 1: Change Lubrication oil and oil filter Performance Criteria 2: Check leakage and take preventive measures Performance Criteria 3: Maintain Lubrication Pump Performance Criteria 4: Maintain Relief Valve Performance Criteria 5: Maintain Sensors

Continued on following page

Assessors Judgment 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:
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:

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							

Each Assessment Task (with performance criteria)				
Assessment Task 1		Description of assessment task 1 Candidate is required to inspect and maintain Intake and Exhaust System of Equipment according to the requirement.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Identify hazards and risks correctly and confirm according to occupational health and safety legislation, codes of practice and prevailing trends.			
2.	Provide adequate resources in a timely and consistent manner.			
3.	Identify task requirements			
4.	Plan steps to complete tasks			
5.	Review planning and organizing process			
6.	Organize work			
7.	Maintain Air Filters			
8.	Maintain Intake Manifold for any leakage			
9.	Maintain Tappet			
10.	Maintain Turbo Charger			
11.	Maintain Exhaust Gas Recirculation Valve (EGR)			
12.	Measure Vacuum Pressure			
13.	Measure Compression Pressure			
14.	Maintain Inter Cooler and After Cooler			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 2		Description of assessment task 2 Candidate is required to inspect and maintain Cooling System of Equipment according to the requirement.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Replace faulty Engine Belts			
2.	Inspect and maintain Radiator			
3.	Inspect and maintain Hoses (Upper and lower)			
4.	Inspect and replace Thermostat Valve			
5.	Inspect and maintain condition of Ethylene Glycol in the cooling system using Refractometer			
6.	Maintain Water Pump			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 3		Description of assessment task 3 Candidate is required to inspect and maintain Fuel System of Equipment according to the requirement.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Maintain Fuel Pump			
2.	Maintain Fuel Filter			
3.	Maintain Water Separator			
4.	Maintain Fuel Injector			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 4		Description of assessment task 4 Candidate is required to inspect and maintain Lubrication System of Equipment according to the requirement.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Change Lubrication oil and oil filter			
2.	Check leakage and take preventive measures			
3.	Maintain Lubrication Pump			
4.	Maintain Relief Valve			
5.	Maintain Sensors			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Evidence Guide

For

“Assistant Operational Supervisor”

Level-4

Maintain Hydraulic System of Equipment
(Formative Assessment)

6th–10th September 2021



**National Vocational & Technical
Training Commission**

Title of Qualification: National Vocational Certificate Level 4, in (Digging Operation/Technology) “Assistant Operational Supervisor”	CS Code:	Level: 04	Version: 01
Competency Standard Title: <ul style="list-style-type: none"> • Maintain Hydraulic System of Equipment • Establish and Maintain the Occupational Health and Safety System • Perform Advance Communication 	Assessment Date (DD/MM/YY): Assessment Time:		

Candidate Details	Name: Registration/Roll Number:
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <ol style="list-style-type: none"> 1. Assessment Task 1: Candidate is required to prepare inspect and maintain Swing System of Equipment according to the requirement. 2. Assessment Task 2: Candidate is required to prepare inspect and maintain Work equipment System of Equipment according to the requirement. 3. Assessment Task 3: Candidate is required to prepare inspect and maintain Travel System of Equipment according to the requirement. 4. Assessment Task 4: Candidate is required to prepare inspect and maintain Open Load Sensing System (OLSS) of Equipment according to the requirement. <p>And complete:</p> <ol style="list-style-type: none"> 5. Knowledge assessment test (Written or Oral) 6. Portfolios at the time of assessment (if any)
Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: Identify task requirements.</p> <p>Performance Criteria 2: Identify hazards and risks correctly and confirm according to occupational health and safety legislation, codes of practice and prevailing trends.</p> <p>Performance Criteria 3: Provide adequate resources in a timely and consistent manner.</p> <p>Performance Criteria 4: Perform the maintenance of Hydraulic Tank</p> <p>Performance Criteria 5: Perform the maintenance of Hydraulic Filter</p> <p>Performance Criteria 6: Perform the maintenance of Hydraulic Pump</p> <p>Performance Criteria 7: Perform the maintenance of Control Valves</p> <p>Performance Criteria 8: Perform the maintenance of Hydraulic Motor</p> <p>Performance Criteria 9: Perform the maintenance of Hydraulic Pipes</p> <p>Performance Criteria 10: Change Swing machinery oil</p>

	Assessment Task 2 Performance Criteria 1: Perform the maintenance of Hydraulic Cylinders (Boom, bucket, arm, etc.) Performance Criteria 2: Perform the maintenance of Hydraulic Pipes
	Assessment Task 3 Performance Criteria 1: Perform the maintenance of Hydraulic Travel Motors Performance Criteria 2: Perform the maintenance of Hydraulic Pipes Performance Criteria 3: Change Final drive oil
	Performance Criteria 1: Perform the maintenance of TVC Valve Performance Criteria 2: Perform the maintenance of CO Valve Performance Criteria 3: Perform the maintenance of NC Valve Performance Criteria 4: Perform the maintenance of Servo Valve Performance Criteria 5: Perform the maintenance of Servo Piston

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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)

Candidate Details	Name: Registration/Roll Number: Candidate Signature:
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:

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							

Each Assessment Task (with performance criteria)				
Assessment Task 1		Description of assessment task 1 Candidate is required to prepare inspect and maintain Swing System of Equipment according to the requirement.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Identify task requirements			
2.	Identify hazards and risks correctly and confirm according to occupational health and safety legislation, codes of practice and prevailing trends			
3.	Provide adequate resources in a timely and consistent manner			
4.	Perform the maintenance of Hydraulic Tank			
5.	Perform the maintenance of Hydraulic Filter			
6.	Perform the maintenance of Hydraulic Pump			
7.	Perform the maintenance of Control Valves			
8.	Perform the maintenance of Hydraulic Motor			
9.	Perform the maintenance of Hydraulic Pipes			
10.	Change Swing machinery oil			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Each Assessment Task (with performance criteria)			
Assessment Task 2		Description of assessment task 2 Candidate is required to prepare inspect and maintain Work equipment System of Equipment according to the requirement.	
During the practical assessment, candidate demonstrated the following:		Yes	No
1.	Perform the maintenance of Hydraulic Cylinders (Boom, bucket, arm, etc.)		
2.	Perform the maintenance of Hydraulic Pipes		
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>	

Each Assessment Task (with performance criteria)			
Assessment Task 3		Description of assessment task 3 Candidate is required to prepare inspect and maintain Travel System of Equipment according to the requirement.	
During the practical assessment, candidate demonstrated the following:		Yes	No
1.	Perform the maintenance of Hydraulic Travel Motors		
2.	Perform the maintenance of Hydraulic Pipes		
3.	Change Final drive oil		
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>	

Each Assessment Task (with performance criteria)			
Assessment Task 4		Description of assessment task 4 Candidate is required to prepare inspect and maintain Open Load Sensing System (OLSS) of Equipment according to the requirement.	
During the practical assessment, candidate demonstrated the following:		Yes	No
1.	Perform the maintenance of TVC Valve		
2.	Perform the maintenance of CO Valve		
3.	Perform the maintenance of NC Valve		
4.	Perform the maintenance of Servo Valve		
5.	Perform the maintenance of Servo Piston		
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>	

Assessment Evidence Guide

For

“Assistant Operational Supervisor”

Level-4

Develop a Preliminary Project Plan
(Formative Assessment)

6th–10th September 2021



**National Vocational & Technical
Training Commission**

Title of Qualification: National Vocational Certificate Level 4, in (Digging Operation/Technology) "Assistant Operational Supervisor"	CS Code:	Level: 04	Version: 01
Competency Standard Title: <ul style="list-style-type: none"> Develop Preliminary Project Plan Analyse with Workplace Policy and Procedures 	Assessment Date (DD/MM/YY): Assessment Time:		

Candidate Details	Name: Registration/Roll Number:
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <p>7. Assessment Task 1: Candidate is required to plan the features of the project, assigned by assessor.</p> <p>8. Assessment Task 2: Candidate is required to perform estimation and prepare a feasibility report on the basis of preliminary plan assigned by assessor.</p> <p>And complete:</p> <p>9. Knowledge assessment test (Written or Oral)</p> <p>10. Portfolios at the time of assessment (if any)</p>
Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: Prepare the project plan as per requirement</p> <p>Performance Criteria 2: Perform reconnaissance survey of area for project</p> <p>Performance Criteria 3: Perform topographic survey of area for project</p> <p>Performance Criteria 4: Prepare working drawings of project</p> <p>Performance Criteria 5: Prepare map of area for project</p>
	<p>Assessment Task 2</p> <p>Performance Criteria 1: Estimate quantity of work, time, and available resources for project</p> <p>Performance Criteria 2: Estimate the unit cost</p> <p>Performance Criteria 3: Calculate the total cost</p> <p>Performance Criteria 4: Mark options on the prepared map</p> <p>Performance Criteria 5: Get Administrative approval of cost and estimation</p> <p>Performance Criteria 6: Identify construction and system feasibility- resources for project</p> <p>Performance Criteria 7: Identify social benefits from the project-operations</p> <p>Performance Criteria 8: Prepare feasibility report of project</p> <p>Performance Criteria 9: Complete work tasks within deadlines in according to order of priority</p> <p>Performance Criteria 10: Supervisors are informed of any delays in work times or projects</p> <p>Performance Criteria 11: Develop agenda in line with meeting purpose</p>

	<p>Performance Criteria 12: Select participants and notify them accordingly</p> <p>Performance Criteria 13: Carryout meeting arrangements according to the time</p> <p>Performance Criteria 14: Record the minutes of the meeting</p> <p>Performance Criteria 15: Practice organizational policy and procedures for responding to emergency incidents</p> <p>Performance Criteria 16: Take initiative to prioritize and facilitate competing demands to achieve organizational goals and objectives</p> <p>Performance Criteria 17: Use technology efficiently and effectively to manage work priorities and commitments</p>
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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)

Candidate Details	Name: Registration/Roll Number: Candidate Signature:
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:

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							

Each Assessment Task (with performance criteria)				
Assessment Task 1		Description of assessment task 1 Candidate is required to plan the features of the project, assigned by assessor.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Prepare the project plan as per requirement			
2.	Perform reconnaissance survey of area for project			
3.	Perform topographic survey of area for project			
4.	Prepare working drawings of project			
5.	Prepare map of area for project			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Each Assessment Task (with performance criteria)				
Assessment Task 2		Description of assessment task 2 Candidate is required to plan the features of the project, assigned by assessor.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Estimate quantity of work, time, and available resources for project			
2.	Estimate the unit cost			
3.	Calculate the total cost			
4.	Mark options on the prepared map			
5.	Get Administrative approval of cost and estimation			
6.	Identify construction and system feasibility-resources for project			
7.	Identify social benefits from the project-operations			
8.	Prepare feasibility report of project			
9.	Complete work tasks within deadlines in according to order of priority			
10.	Supervisors are informed of any delays in work times or projects			
11.	Develop agenda in line with meeting purpose			
12.	Select participants and notify them accordingly			
13.	Carryout meeting arrangements according to the time			
14.	Record the minutes of the meeting			
15.	Practice organizational policy and procedures for responding to emergency incidents			
16.	Take initiative to prioritize and facilitate competing demands to achieve organizational goals and objectives			
17.	Use technology efficiently and effectively to manage work priorities and commitments			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Evidence Guide

For

“Assistant Operational Supervisor”

Level-4

**Perform Advance Digging/Excavation Operations
(Formative Assessment)**

6th–10th September 2021



**National Vocational & Technical
Training Commission**

Title of Qualification: National Vocational Certificate Level 4, in (Digging Operation/Technology) "Assistant Operational Supervisor"	CS Code:	Level: 04	Version: 01
Competency Standard Title: <ul style="list-style-type: none"> Perform Advance Digging/Excavation Operations Analyse with Workplace Policy and Procedures 	Assessment Date (DD/MM/YY): Assessment Time:		

Candidate Details	Name: Registration/Roll Number:
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <ol style="list-style-type: none"> Assessment Task 1: Candidate is required to prepare a trench according to the drawing given by assessor. Assessment Task 2: Candidate is required to Perform following Geometrical Shapes excavations according to the given drawings: <ul style="list-style-type: none"> Circular Square Triangular Trapezoidal, etc. Assessment Task 3: Candidate is required to Perform following excavations according to the given drawings: <ul style="list-style-type: none"> Cut & Fill (Stripping) excavation Barrow excavation Channel excavation Top Soil excavation Bridge excavation Drainage excavation Rock excavation Muck excavation <p>And complete:</p> <ol style="list-style-type: none"> Knowledge assessment test (Written or Oral) Portfolios at the time of assessment (if any)
Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: Complete work tasks within deadlines in according to order of priority</p> <p>Performance Criteria 2: Supervisors are informed of any delays in work times or projects</p> <p>Performance Criteria 3: Perform preparatory activities</p> <p>Performance Criteria 4: Fit appropriate attachment to the equipment according to the job requirement</p>

	<p>Performance Criteria 5: Set the work equipment according to the job requirement</p> <p>Performance Criteria 6: Perform excavation to prepare Trench as per requirement</p> <p>Performance Criteria 7: Perform excavation to prepare Geometrical shapes as per requirement</p> <p>Performance Criteria 8: Monitor equipment performance</p> <p>Performance Criteria 9: Coordinate activities with site team</p> <p>Performance Criteria 10: Perform post digging/ Excavation activities</p> <p>Performance Criteria 11: Submit the job completion report to the concern person</p>
	<p>Assessment Task 2</p> <p>Performance Criteria 1: Fit appropriate attachment to the equipment according to the job requirement</p> <p>Performance Criteria 2: Set the work equipment according to the job requirement</p> <p>Performance Criteria 3: Perform excavation to prepare Geometrical shapes as per requirement</p> <p>Performance Criteria 4: Monitor equipment performance</p> <p>Performance Criteria 5: Coordinate activities with site team</p> <p>Performance Criteria 6: Perform post digging/ Excavation activities</p> <p>Performance Criteria 7: Submit the job completion report to the concern person</p>
	<p>Assessment Task 2</p> <p>Performance Criteria 1: Perform Cut & Fill (Stripping) excavation</p> <p>Performance Criteria 2: Perform Barrow excavation</p> <p>Performance Criteria 3: Perform Channel excavation</p> <p>Performance Criteria 4: Perform Top Soil excavation</p> <p>Performance Criteria 5: Perform Bridge excavation</p> <p>Performance Criteria 6: Perform Drainage excavation</p> <p>Performance Criteria 7: Perform Rock excavation</p> <p>Performance Criteria 8: Perform Muck excavation</p> <p>Performance Criteria 9: Perform post digging/ Excavation activities</p> <p>Performance Criteria 10: Coordinate activities with site team</p> <p>Performance Criteria 11: Perform post digging/ Excavation activities</p> <p>Performance Criteria 12: Submit the job completion report to the concern person</p> <p>Performance Criteria 13: Identify and report emergency incidents</p>

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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)

Candidate Details	Name: Registration/Roll Number: Candidate Signature:
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:

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							

Each Assessment Task (with performance criteria)				
Assessment Task 1		Description of assessment task 1 Candidate is required to prepare a trench according to the drawing given by assessor.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Complete work tasks within deadlines in according to order of priority			
2.	Supervisors are informed of any delays in work times or projects			
3.	Perform preparatory activities			
4.	Fit appropriate attachment to the equipment according to the job requirement			
5.	Set the work equipment according to the job requirement			
6.	Perform excavation to prepare Trench as per requirement			
7.	Perform excavation to prepare Geometrical shapes as per requirement			
8.	Monitor equipment performance			
9.	Coordinate activities with site team			
10.	Perform post digging/ Excavation activities			
11.	Submit the job completion report to the concern person			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Each Assessment Task (with performance criteria)				
Assessment Task 2		Description of assessment task 2 Candidate is required to Perform following Geometrical Shapes excavations according to the given drawings: <ul style="list-style-type: none"> o Circular o Square o Triangular o Trapezoidal, etc. 		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Fit appropriate attachment to the equipment according to the job requirement			
2.	Set the work equipment according to the job requirement			
3.	Perform excavation to prepare Geometrical shapes as per requirement			
4.	Monitor equipment performance			
5.	Coordinate activities with site team			
6.	Perform post digging/ Excavation activities			
7.	Submit the job completion report to the concern person			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Each Assessment Task (with performance criteria)				
Assessment Task 3		Description of assessment task 3 Candidate is required to Perform following excavations according to the given drawings: <ul style="list-style-type: none"> o Cut & Fill (Stripping) excavation o Barrow excavation o Channel excavation o Top Soil excavation o Bridge excavation o Drainage excavation o Rock excavation o Muck excavation 		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Perform Cut & Fill (Stripping) excavation			
2.	Perform Barrow excavation			
3.	Perform Channel excavation			
4.	Perform Top Soil excavation			
5.	Perform Bridge excavation			
6.	Perform Drainage excavation			
7.	Perform Rock excavation			
8.	Perform Muck excavation			
9.	Perform post digging/ Excavation activities			
10.	Coordinate activities with site team			
11.	Perform post digging/ Excavation activities			
12.	Submit the job completion report to the concern person			
13.	Identify and report emergency incidents			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Evidence Guide

for

“Assistant Operational Supervisor”

Level-4

**Perform 2D &3D Engineering Drawings using
CAD Software
(Formative Assessment)**

6th–10th September 2021



**National Vocational & Technical
Training Commission**

Title of Qualification: National Vocational Certificate Level 4, in (Digging Operation Supervisor) "Assistant Operational Supervisor"	CS Code:	Level: 04	Version: 01
Competency Standard Title: <ul style="list-style-type: none"> Perform 2D &3D Engineering Drawings using CAD Software Establish and Maintain the Occupational Health and Safety System Perform Advance Communication 	Assessment Date (DD/MM/YY): Assessment Time:		

Candidate Details	Name: Registration/Roll Number:
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <ol style="list-style-type: none"> Assessment Task 1: Candidate is required to draw a set of 2D technical drawings assign by assessor. Assessment Task 2: Candidate is required to develop 3D model and render the model according to the requirement of job given by assessor. <p>And complete:</p> <ol style="list-style-type: none"> Knowledge assessment test (Written or Oral) Portfolios at the time of assessment (if any)
Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: Setup user interface settings for required drawing.</p> <p>Performance Criteria 2: Create different 2D shapes with given measurements.</p> <p>Performance Criteria 3: Edit different 2D shapes to meet requirement.</p> <p>Performance Criteria 4: Insert dimensions and symbols as per requirement</p> <p>Performance Criteria 5: Save the file in different drawing formats</p> <p>Performance Criteria 6: Develop 2D Drawing with given project specification and measurements.</p> <p>Performance Criteria 7: Plot drawing on scale according to required size & orientation.</p> <p>Performance Criteria 8: Identify the workplace policy & procedures</p> <p>Performance Criteria 9: Apply appropriate strategies that can be used to measure whether your workplace health and safety obligations are being met.</p> <p>Performance Criteria 10: Implement relevant rules and procedures of WHS at work place.</p>

	<p>Assessment Task 2</p> <p>Performance Criteria 1: Setup 3D user interface settings for required drawing.</p> <p>Performance Criteria 2: Create different 3D objects with given measurements.</p> <p>Performance Criteria 3: Modify 3D objects in line with the requirements.</p> <p>Performance Criteria 4: Generate orthographic views from 3D model</p> <p>Performance Criteria 5: Generate sectional/auxiliary views from 3D model as per requirement</p> <p>Performance Criteria 6: Apply material to required 3D Model as per given specification</p> <p>Performance Criteria 7: Render and print the 3D model according to required size & orientation.</p> <p>Performance Criteria 8: Apply texture to 3D model as per requirement.</p> <p>Performance Criteria 9: Communicate procedures to help implement workplace policy</p> <p>Performance Criteria 10: Identify hazards or WHS issues in the workplace to relevant personnel</p>
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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)

Candidate Details	Name: Registration/Roll Number: Candidate Signature:
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:

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							

Each Assessment Task (with performance criteria)				
Assessment Task 1		Description of assessment task 1 Candidate is required to draw a set of 2D technical drawings assign by assessor.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Setup user interface settings for required drawing.			
2.	Create different 2D shapes with given measurements.			
3.	Edit different 2D shapes to meet requirement.			
4.	Insert dimensions and symbols as per requirement			
5.	Save the file in different drawing formats			
6.	Develop 2D Drawing with given project specification and measurements.			
7.	Plot drawing on scale according to required size & orientation			
8.	Identify the workplace policy & procedures			
9.	Apply appropriate strategies that can be used to measure whether your workplace health and safety obligations are being met.			
10.	Implement relevant rules and procedures of WHS at work place.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Each Assessment Task (with performance criteria)				
Assessment Task 2		Description of assessment task 2 Candidate is required to develop 3D model and render the model according to the requirement of job given by assessor.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Setup 3D user interface settings for required drawing.			
2.	Create different 3D objects with given measurements.			
3.	Modify 3D objects in line with the requirements.			
4.	Generate orthographic views from 3D model			
5.	Generate sectional/auxiliary views from 3D model as per requirement			
6.	Apply material to required 3D Model as per given specification			
7.	Render and print the 3D model according to required size & orientation.			
8.	Apply texture to 3D model as per requirement.			
9.	Communicate procedures to help implement workplace policy			
10.	Identify hazards or WHS issues in the workplace to relevant personnel			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		



Written Assessment Evidence Guides

for

“Assistant Digger Operator”

Level-4

(Summative)

Assessment Evidence Guide

for

“Assistant Operational Supervisor”

Level-4

(Summative Assessment)

6th–10th September 2021



**National Vocational & Technical
Training Commission**

Title of Qualification: National Vocational Certificate Level 4, in (Digging Operation/Technology) “Assistant Operational Supervisor”	CS Code:	Level: 04	Version: 01
Competency Standard Title: A- Establish and maintain the occupational Health and safety system B- Perform Advance communication C- Analyse Workplace Policies and Procedures D- Maintain Electrical System of Equipment E- Maintain Mechanical System of Equipment F- Maintain Hydraulic System of Equipment G- Develop Preliminary Project Plan H- Perform Advance Digging/Excavation Operations I- Perform 2D – 3D Engineering Drawings using CAD Software	Assessment Date (DD/MM/YY): Assessment Time: 5 hrs.		

Candidate Details	Name: Registration/Roll Number:
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <ol style="list-style-type: none"> Assessment Task 1: Candidate is required to identify fault(s) in Mechanical system and repair/replace as required. Assessment Task 2: Candidate is required to prepare Preliminary plan and perform digging according to the task assigned by the assessor (e.g. Trench, Geometrical Shape, Barrow, Cut and Fill, etc.) Assessment Task 4: Candidate is required to create 3D drawing of the structure assigned by assessor and manipulate it using software, according to the requirements. <p>Note: Assessor can manage a time duration according to the task requirements</p> <p>And complete:</p> <ol style="list-style-type: none"> Knowledge assessment test (Written or Oral) Portfolios at the time of assessment (if any)

During a practical assessment, under observation by an assessor, you will complete:

Assessment Task 1

Performance Criteria 1: Maintain Air Filters

Performance Criteria 2: Maintain Intake Manifold for any leakage

Performance Criteria 3: Maintain Tappet

Performance Criteria 4: Maintain Turbo Charger

Performance Criteria 5: Maintain Exhaust Gas Recirculation Valve (EGR)

Performance Criteria 6: Measure Vacuum Pressure

Performance Criteria 7: Measure Compression Pressure

Performance Criteria 8: Maintain Inter Cooler and After Cooler

Performance Criteria 9: Replace faulty Engine Belts

Performance Criteria 10: Inspect and maintain Radiator

Performance Criteria 11: Inspect and maintain Hoses (Upper and lower)

Performance Criteria 12: Maintain Fuel Filter

Performance Criteria 13: Maintain Water Separator

Performance Criteria 14: Change Lubrication oil and oil filter

Performance Criteria 15: Check leakage and take preventive measures

Assessment Task 2

Performance Criteria 1: Prepare map of area for project

Performance Criteria 2: Prepare rough cost and detail estimation

Performance Criteria 3: Estimate the quantity

Performance Criteria 4: Estimate the unit cost

Performance Criteria 5: Calculate the total cost

Performance Criteria 6: Mark options on the prepared map

Performance Criteria 7: Get Administrative approval of cost and estimation

Performance Criteria 8: Prepare the project plan as per requirement

Performance Criteria 9: Prepare working drawings of project

Performance Criteria 10: Identify construction and system feasibility- resources for project

Performance Criteria 11: Identify social benefits from the project-operations

Performance Criteria 12: Estimate quantity of work, time, and available resources for project

Performance Criteria 13: Prepare feasibility report of project

Performance Criteria 14: Fit appropriate attachment to the equipment according to the job requirement

Performance Criteria 15: Set the work equipment according to the job requirement

Performance Criteria 16: Perform excavation as per requirement

Performance Criteria 17: Monitor equipment performance

	<p>Performance Criteria 18: Coordinate activities with site team</p> <p>Performance Criteria 19: Perform post digging/ Excavation activities</p> <p>Performance Criteria 20: Submit the job completion report to the concern person</p>
	<p>Assessment Task 3</p> <p>Performance Criteria 1: Setup 3D user interface settings for required drawing</p> <p>Performance Criteria 2: Create different 3D objects with given measurements</p> <p>Performance Criteria 3: Modify 3D objects in line with the requirements</p> <p>Performance Criteria 4: Make customized 3D models according to the requirement of given job</p> <p>Performance Criteria 5: Generate orthographic views from 3D model</p> <p>Performance Criteria 6: Generate sectional/auxiliary views from 3D model as per requirement</p> <p>Performance Criteria 7: Apply material to required 3D Model as per given specification</p> <p>Performance Criteria 8: Render and print the 3D model according to required size & orientation</p> <p>Performance Criteria 9: Apply texture to 3D model as per requirement</p>
	<p>Portfolios required at the time of assessment (if any) for</p> <p>Performance Criteria 1: File/folder of Maintenance of Electrical System of Equipment</p> <p>Performance Criteria 2: File/folder of Maintenance Hydraulic System of Equipment</p> <p>Performance Criteria 3: File/folder of Preliminary Project Plan</p> <p>Performance Criteria 4: File/folder of Advance Digging/Excavation Operations</p> <p>Performance Criteria 5: File/folder of 2D – 3D Engineering Drawings using CAD Software</p>

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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)

Candidate Details	Name: Registration/Roll Number: Candidate Signature:.....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:.....

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							

Each Assessment Task (with performance criteria)				
Assessment Task 1		Description of assessment task 1 Candidate is required to identify fault(s) in Mechanical system and repair/replace as required.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Maintain Air Filters			
2	Maintain Intake Manifold for any leakage			
3	Maintain Tappet			
4	Maintain Turbo Charger			
5	Maintain Exhaust Gas Recirculation Valve (EGR)			
6	Measure Vacuum Pressure			
7	Measure Compression Pressure			
8	Maintain Inter Cooler and After Cooler			
9	Replace faulty Engine Belts			
10	Inspect and maintain Radiator			
11	Inspect and maintain Hoses (Upper and lower)			
12	Maintain Fuel Filter			
13	Maintain Water Separator			
14	Change Lubrication oil and oil filter			
15	Check leakage and take preventive measures			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 2		Description of assessment task 2 Candidate is required to prepare Preliminary plan and perform digging according to the task assigned by the assessor (e.g. Trench, Geometrical Shape, Barrow, Cut and Fill, etc.)		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Maintain Air Filters			
2	Maintain Intake Manifold for any leakage			
3	Maintain Tappet			
4	Maintain Turbo Charger			
5	Maintain Exhaust Gas Recirculation Valve (EGR)			
6	Measure Vacuum Pressure			
7	Measure Compression Pressure			
8	Maintain Inter Cooler and After Cooler			
9	Replace faulty Engine Belts			
10	Inspect and maintain Radiator			
11	Inspect and maintain Hoses (Upper and lower)			
12	Maintain Fuel Filter			
13	Maintain Water Separator			
14	Change Lubrication oil and oil filter			
15	Check leakage and take preventive measures			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Each Assessment Task (with performance criteria)				
Assessment Task 3		Description of assessment task 3 Candidate is required to create 3D drawing of the structure assigned by assessor and manipulate it using software, according to the requirements.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Setup 3D user interface settings for required drawing			
2	Create different 3D objects with given measurements			
3	Modify 3D objects in line with the requirements			
4	Make customized 3D models according to the requirement of given job			
5	Generate orthographic views from 3D model			
6	Generate sectional/auxiliary views from 3D model as per requirement			
7	Apply material to required 3D Model as per given specification			
8	Render and print the 3D model according to required size & orientation			
9	Apply texture to 3D model as per requirement			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Portfolio				
Current <input type="checkbox"/>	Sufficient <input type="checkbox"/>	Authentic <input type="checkbox"/>	Valid <input type="checkbox"/>	Reliable <input type="checkbox"/>
Portfolio meet the following performance standards:			Yes	No
			Remarks	
1.	File/folder of Maintenance of Electrical System of Equipment			
2.	File/folder of Maintenance Hydraulic System of Equipment			
3.	File/folder of Preliminary Project Plan			
4.	File/folder of Advance Digging/Excavation Operations			
5.	File/folder of 2D – 3D Engineering Drawings using CAD Software			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		