

## PERFORM DENTAL EQUIPMENT MAINTENANCE

**UNIT CODE:** 0914451 19A

**TVET CDACC UNIT CODE: ENG/OS/MDE/CR/02/5/MA**

### **UNIT DESCRIPTION:**

This unit specifies the competencies required to Perform Dental Equipment Maintenance. Competencies include: maintaining dental unit, maintaining amalgamator, maintaining light cure machine, maintaining dental laser, maintaining dental x-ray and maintaining dental laboratory equipment and maintaining dental scaler.

### **ELEMENTS AND PERFORMANCE CRITERIA**

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
These describe the key outcomes which make up workplace function.	These are assessable statements which specify the required level of performance for each of the elements. <i><b>Bold and italicized terms are elaborated in the Range</b></i>
1 Perform Dental unit Maintenance	1.1 Health hazards and safety procedures are carried out as per work procedure. 1.2 Dental unit is disinfected as per work procedure 1.3 <b>Dental unit parts</b> are inspected as per service manual 1.4 Dental unit Fault diagnosis is performed as per service manual. 1.5 Dental unit parts are maintained as per manufacturer's specifications. 1.6 Dental unit faulty parts are maintained as per manufacturer's specifications. 1.7 Dental unit functionality check is performed as per service manual. 1.8 Equipment user training is carried out in line with the user manual. 1.9 Dental unit Service report is prepared as per work procedure.
2 Perform Amalgamator Maintenance	2.1 Health hazards and safety procedures are carried out as per work procedure. 2.2 <b>Amalgamator parts</b> are inspected as per service manual.

	<p>2.3 Amalgamator fault diagnosis is performed as per service manual.</p> <p>2.4 Amalgamator parts are cleaned as per service manual.</p> <p>2.5 Amalgamator Faulty parts are maintained as per manufacturer's specifications.</p> <p>2.6 Amalgamator functionality check is performed as per service manual.</p> <p>2.7 Equipment user training is carried out in line with the user manual.</p> <p>2.8 Amalgamator Service report is prepared as per work procedure.</p>
3 Perform Light Cure Machine Maintenance	<p>3.1 Health hazards and safety procedures are carried out as per work procedure.</p> <p>3.2 Light Cure Machine is disinfected as per work procedure</p> <p>3.3 Light Cure Machine parts are inspected as per service manual.</p> <p>3.4 Light Cure Machine Fault diagnosis is performed as per service manual.</p> <p>3.5 Light Cure Machine Faulty parts are maintained as per manufacturer's specifications.</p> <p>3.6 Light Cure Machine functionality check is performed as per service manual.</p> <p>3.7 Equipment user training is carried out in line with the user manual.</p> <p>3.8 Light Cure Machine Service report is prepared as per work procedure.</p>
4 Perform Dental Scaler Maintenance	<p>4. 1Health hazards and safety procedures are carried out as per work procedure.</p> <p>4. 2Dental Scaler is disinfected as per work procedure</p> <p>4. 3Dental Scaler Parts are inspected as per service manual</p> <p>4. 4Dental Scaler Fault diagnosis is performed as per service manual.</p> <p>4. 5Dental Scaler Faulty parts are maintained as per manufacturer's specifications.</p> <p>4. 6Dental Scaler functionality check is performed as per service manual.</p> <p>4. 7Equipment user training is carried out in line with the user manual.</p>

	4. 8Dental Scaler Service report is prepared as per work procedure.
5 Perform Dental X-Ray Machine Maintenance	<p>5.1 Health hazards and safety procedures are carried out as per work procedure.</p> <p>5.2 <b>Dental X-Ray Machine parts</b> of the dental X-Ray equipment are inspected as per service manual</p> <p>5.3 Dental X-Ray Fault diagnosis is performed as per service manual.</p> <p>5.4 Dental X-Ray Movable parts are lubricated as per manufacturer's specifications.</p> <p>5.5 Dental X-Ray faulty parts are maintained as per manufacturer's specifications.</p> <p>5.6 Dental X-Ray functionality check is performed as per service manual.</p> <p>5.7 Equipment user training is carried out in line with the user manual.</p> <p>5.1 Dental X-Ray Machine Service report is prepared as per work procedure.</p>
6 Perform Dental Laboratory Equipment Maintenance	<p>6.1 Health hazards and safety procedures are carried out as per work procedure.</p> <p>6.2 <b>Dental Laboratory Equipment parts</b> are inspected as per service manual</p> <p>6.3 Dental Laboratory Equipment Fault diagnosis is performed as per service manual.</p> <p>6.4 Dental Laboratory Equipment Movable parts are lubricated as per manufacturer's specifications.</p> <p>6.5 Dental Laboratory Equipment Faulty parts are maintained as per manufacturer's specifications.</p> <p>6.6 Dental Laboratory Equipment functionality check is performed as per service manuals</p> <p>6.7 Equipment user training is carried out in line with the user manual.</p> <p>6.8 Dental Laboratory Equipment Service report is prepared as per work procedure.</p>

7 Perform Dental laser Equipment Maintenance	<p>7.1 Health hazards and safety procedures are carried out as per work procedure.</p> <p>7.2 <b>Dental laser Equipment parts</b> are inspected as per service manual</p> <p>7.3 Dental laser Equipment Fault diagnosis is performed as per service manual.</p> <p>7.4 Dental laser Equipment Faulty parts are maintained as per manufacturer's specifications.</p> <p>7.5 Dental laser Equipment functionality check is performed as per service manuals</p> <p>7.6 Equipment user training is carried out in line with the user manual.</p> <p>7.7 Dental laser Equipment Service report is prepared as per work procedure.</p>
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## RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

Variable	Range
1. Dental unit parts include but not limited to:	<ul style="list-style-type: none"> <li>● Compressor</li> <li>● Handpieces</li> <li>● Inter-oral camera</li> <li>● Dental Chair</li> <li>● Examination Lamp</li> <li>● Spittoon bowl / cuspidor</li> <li>● Utility box</li> </ul>

2. Amalgamator parts include but not limited to:	<ul style="list-style-type: none"> <li>● Time setting</li> <li>● LCD display</li> <li>● Rubber tray</li> <li>● Clip</li> <li>● Start/stop buttons</li> </ul>
3. Dental X-Ray Machine parts include but not limited to:	<ul style="list-style-type: none"> <li>● X-ray tube</li> <li>● Collimator</li> <li>● Arms</li> <li>● Control panel</li> <li>● Position indicating device</li> </ul>
4. Dental Laboratory Equipment parts include but not limited to:	<ul style="list-style-type: none"> <li>● Dental Microscope</li> <li>● Dental Scanner</li> <li>● Porcelain Machine</li> <li>● Model trimmer</li> <li>● Suspension motor</li> </ul>
5. Dental laser Equipment parts include but not limited to:	<ul style="list-style-type: none"> <li>● Laser Unit</li> <li>● Handpiece</li> <li>● Fiber Optic Cable</li> <li>● Safety Interlocks</li> <li>● Beam Delivery System</li> <li>● Calibration Tools</li> </ul>

## REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit of competency.

### Required Skills

The individual needs to demonstrate the following skills:

- Use of tools and equipment
- Communication skills

- Troubleshooting skills
- Mechanical skills
- ICT skills
- Calibration
- Problem solving
- Critical thinking
- Report writing
- Record keeping
- Interpersonal skills
- Numeracy skills
- Leadership skills

## Required Knowledge

The individual needs to demonstrate knowledge of:

- Safety precautions
- Fault diagnosis
- Electrical principles
- Electronics
- Hospital hygiene
- Standards of calibration

## EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1 Critical Aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 Carried out health hazards and safety procedures as per work procedure.</li> <li>1.2 Disinfected Dental Equipment as per work procedure.</li> <li>1.3 Inspected all parts of Dental Equipment as per service manual.</li> <li>1.4 Carried out fault diagnosis of Dental Equipment as per service manuals.</li> <li>1.5 Cleaned parts of Dental Equipment as per service manual.</li> <li>1.6 Maintained faulty parts of Dental Equipment as per manufacturer's specifications.</li> <li>1.7 Carried out calibration of Dental Equipment as per manufacturer's specifications.</li> <li>1.8 Carried out equipment user training as per user manual.</li> <li>1.9 Carried out functionality check of Dental Equipment as per service manual.</li> <li>1.10 Prepared Dental Equipment service report as per work procedure.</li> </ul>
2 Resource Implications	<p>The following resources should be provided:</p> <ul style="list-style-type: none"> <li>2.1 Access to relevant workplace where assessment can take place</li> <li>2.2 Access to Dental &amp; Renal Equipment which can be used for assessment</li> <li>2.3 Access to relevant tools which can be used for installation and maintenance</li> </ul>
3 Methods of Assessment	<p>Competency in this unit may be assessed through:</p> <ul style="list-style-type: none"> <li>3.1 Observation</li> <li>3.2 Oral questioning</li> <li>3.3 Written test</li> <li>3.4 Practical Demonstration</li> <li>3.5 Interview</li> <li>3.6 Third party report</li> </ul>

4 Context of Assessment	Competency may be assessed in a work place or a simulated work place.
5 Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.