



Australian Government

Department of Education, Employment and Workplace Relations

MEM21004A Clean watch and clock components

Release: 1

MEM21004A Clean watch and clock components

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit of competency covers cleaning techniques for watch and clock movements, cases and other components by manual, mechanical and electronic methods, using a range of media.
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Application of the Unit

Application of the unit	<p>This unit applies to all clock and watch service and repair activities. Applications may be found in all service centres and repair services offered in jewellery and watchmaking stores and trade repairers, either home-based or in commercial locations.</p> <p>Band: A</p> <p>Unit weight: 2 points</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Apply principles of occupational health and safety (OHS) to cleaning activities	1.1. Select and use appropriate personal protective equipment correctly based on information in relevant material safety data sheet (MSDS) 1.2. Identify hazards associated with cleaning equipment and media 1.3. Follow safe work practices and apply hazard control measures, as required 1.4. Follow emergency response procedures
2. Select and prepare appropriate methods, equipment and solutions	2.1. Select cleaning methods, processes and equipment according to type and size of mechanisms, components and cases 2.2. Select cleaning solutions appropriate to component, finish, surface coating and material 2.3. Decant, mix and prepare solutions for use 2.4. Dispose of chemicals according to manufacturer guidelines, legislation and regulations
3. Prepare parts and components for cleaning	3.1. Dismantle watch or clock and component parts to optimise cleaning 3.2. Pre-clean components, as required, for inspection 3.3. Arrange components during machine cleaning to prevent damage 3.4. Arrange and sequence parts and components for cleaning to assist subsequent identification, reassembly and to optimise cleaning
4. Perform cleaning operations	4.1. Set up and operate cleaning equipment correctly, using safe work practices 4.2. Monitor and control exposure of components to solutions during cleaning process 4.3. Remove residues, dry and handle cleaned components, as appropriate 4.4. Arrange storage of cleaned components to maintain finish and cleanliness
5. Assess outcomes of cleaning process	5.1. Verify condition of cleaned components and identify remaining residues and contaminants, damage to surface coatings and other component damage 5.2. Account for all components

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

Required skills include:

- handling cleaned components
- handling chemicals safely
- operating cleaning machines
- mixing chemicals and solutions
- handling cleaned components to prevent contamination
- storing cleaned components to maintain finish

Required knowledge

Required knowledge includes:

- cleaning solutions and uses
- cleaning procedures for different components and finishes
- watch case cleaning methods (ultrasonic, vibratory)
- cleaning machine types, uses, function and operation
- potential for damage to components by chemicals or cleaning operations
- chemical storage and disposal
- OHS regulations and procedures

Evidence Guide

EVIDENCE GUIDE	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>A person who demonstrates competency in this unit must be able to clean watch and clock components to industry standards, manufacturer specifications and in accordance with safety regulations and procedures.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>Assessors must be satisfied that the candidate can competently and consistently:</p> <ul style="list-style-type: none"> • prepare solutions and equipment • work safely with chemicals and equipment • sort and track components during process • clean components without damage • verify components as effectively cleaned.
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> • Assessment may occur on the job or in an appropriately simulated environment. Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and information on workplace practices and OHS practices. • Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability. • Access must be provided to appropriate learning and/or assessment support when required. Where applicable, physical resources should include equipment modified for people with disabilities.
<p>Method of assessment</p>	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed Assessment Guidelines of the MEM05 Metal and Engineering Training Package. • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge. • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application. • Assessment may be applied under project-related

EVIDENCE GUIDE	
	<p>conditions (real or simulated) and require evidence of process.</p> <ul style="list-style-type: none"> • Assessment must confirm a reasonable inference that competency is not only able to be satisfied under the particular circumstance, but is able to be transferred to other circumstances. • Assessment may be in conjunction with assessment of other units of competency where required.
Guidance information for assessment	Assessment processes and techniques must be culturally appropriate and appropriate to the language and literacy capacity of the candidate and the work being performed.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Personal protective equipment	<p>Personal protective equipment may include:</p> <ul style="list-style-type: none"> • protective masks • gloves for handling chemicals • fire blankets and extinguishers • ventilation of cleaning area • clothing (e.g. dustcoats and aprons)
Emergency response procedures	<p>Emergency response procedures may include:</p> <ul style="list-style-type: none"> • safe selection and use of fire extinguishers • use of safety blankets and other methods of suppressing solvent-based fires • emergency treatment of eye splashes and chemical burns • carcinogenic effects of chemical inhalation and absorption
Cleaning methods, processes and equipment	<p>Cleaning methods, processes and equipment may include:</p>

RANGE STATEMENT	
	<ul style="list-style-type: none"> • mechanical processes (e.g. rotational and vibrational) • electronic (e.g. ultrasonic) • steam cleaning • cleaning machines • cleaning baskets • hand cleaning (e.g. with pith, brushes and peg wood)
Cleaning solutions	<p>Cleaning solutions may include:</p> <ul style="list-style-type: none"> • number 1 degreasing and cleaning solution (WF1) • customised solutions, ammonia, oleic acid, acetone and water-based solutions • commercial grade ammonia concentrates • rinsing solutions, including hydrocarbon solvents (e.g. Shellite, Mobil B1 and X55)

Unit Sector(s)

Unit sector	Horology
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Co-requisite units

Co-requisite units	

Competency field

Competency field	
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