



Australian Government

Department of Education, Employment and Workplace Relations

MEM21002A Perform watch movement exchange

Release: 1

MEM21002A Perform watch movement exchange

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit of competency covers repairing watches through replacement of quartz and mechanical watch movements. The unit includes cost quotation, removal and replacement of movements, final inspection and completion of repair documentation.
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Application of the Unit

Application of the unit	This unit applies to the exchange of quartz and mechanical watch movements in kiosks offering jewellery/key cutting/watch service and repair, watch service centres, and jewellery/watchmaking stores. Work may be performed by watchmakers, service technicians and kiosk personnel performing mainly movement exchange. Where water-resistance testing is required, <i>MEM21003A Perform watch case servicing, repair and refurbishment</i> should be selected. Band: A Unit weight: 2 points
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		
	MEM21001A	Replace watch batteries, capacitors and bands

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. Establish servicing requirements and liaise with customer	1.1. Verify watch condition and performance concerns with customer 1.2. Prepare written and verbal quotations 1.3. Agree with customer on recommended service procedures to remedy faults 1.4. Record and document repair process
2. Open and close watch cases	2.1. Verify and agree on servicing requirements 2.2. Select and use workshop tools and equipment appropriately 2.3. Open and close watch cases correctly 2.4. Verify condition of case back/gaskets and replace, as required 2.5. Clean case components, as required
3. Remove and replace watch movements	3.1. Establish appropriate working environment 3.2. Identify and follow correct sequence for removal and replacement of watch movements 3.3. Remove and replace crown, stem and case fixings without damaging 3.4. Determine condition of crown, stem, pendant and pushbuttons, and perform custom replacement, as required 3.5. Remove and replace movements without damaging, marking or leaving fingerprints 3.6. Verify correct replacement movement is selected
4. Remove and replace hands and dials	4.1. Identify release mechanism for watch dials 4.2. Remove and replace hands and dials without marking or damaging components 4.3. Check and service hands and dials as required 4.4. Fit hands to correctly synchronise with each other, dial batons and calendar 4.5. Use correct workshop tools and equipment taking precautions for removal and replacement 4.6. Check hands and dial clearances
5. Conduct final inspections	5.1. Inspect watch for cleanliness and rectify imperfections and faults 5.2. Check functionality of crown, stems and pushbuttons 5.3. Confirm watch performance, hand alignment and

ELEMENT	PERFORMANCE CRITERIA
	calendar function and synchronisation 5.4. Record and document repair

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

Required skills include:

- identifying repair cost
- completing documentation
- cleaning watch components (e.g. watch cases, bands, dials and hands)
- selecting replacement movement or components
- using hand tools and equipment
- measuring and visual alignment of components
- maintaining a clean environment
- identifying and using specific hand tools for dial and hand/pendant/pushbutton removal/ fitting

Required knowledge

Required knowledge includes:

- types of watch construction
- types of stems and crowns
- hand tools (e.g. files and pin vices)
- stem position for removal
- various watch case components (e.g. types, styles and materials)
- various types, styles and materials of dials and hands
- various watch crown types, styles and materials
- occupational health and safety (OHS) regulations and procedures

Evidence Guide

EVIDENCE GUIDE

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.

Overview of assessment

A person who demonstrates competency in this unit must be able to perform watch movement exchange to industry standards, manufacturer specifications and in accordance with safety regulations and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessors must be satisfied that the candidate can competently and consistently:

- replace watch movements for both quartz and mechanical watches
- remove and replace watch movements without damaging or marking
- correctly select and fit replacement case parts, crown and stems
- correctly remove and replace hands and dials without damaging or marking
- ensure correct dial and hand alignment, clearances and calendar synchronisation
- ensure cleanliness of the operation is achieved.

Context of and specific resources for assessment

- 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.

Method of assessment

- 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

EVIDENCE GUIDE	
	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 conditions (real or simulated) and require evidence of process. • 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	
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.	
Record and document repair	Record and document repair may include: • date and extent of repair • cost of replacement part • time spent on procedure
Workshop tools and equipment	Workshop tools and equipment may include: • specialised hand removers • case opening tools • cutting tools • files • hand fitting tools

RANGE STATEMENT	
	• general hand tools • cleaning media and lubricants
Appropriate working environment	Appropriate working environment may include: • suitable watchmaker's bench • clean and orderly work area (precautions taken to minimise dust) • adequate lighting • ergonomic chair with adjustable height
Case fixings	Case fixings may include: • case screws • movement rings • stem
Custom replacement	Custom replacement may include: • determining custom stem length • cutting and filing stem end and securing crown • replacing screw or friction fitted worn or damaged pendants • servicing, cleaning and replacing pushbutton • inspecting all crown, pendant, pushbutton gaskets for condition, and replacing and lubricating, as required
Check and service hands and dials	Check and service hands and dials may include: • luminance of hands • dial feet condition • rust and contamination • water marks • damage and wear to hands
Clearances	Clearances may include: • hand clearance from each other, dials and glass

Unit Sector(s)

Unit sector	Horology
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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