



Australian Government

Department of Education, Employment and Workplace Relations

MEM21011A Service calendar and other dial indication mechanisms for watches

Release: 1

MEM21011A Service calendar and other dial indication mechanisms for watches

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit of competency covers servicing techniques for watches with different types or combinations of calendar and other dial indications, including date, day, month, year, moonphase, annual calendar, perpetual calendar, retrograde and power reserve indicators.
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Application of the Unit

Application of the unit	This unit of competency applies to dial indication servicing work undertaken by a watch repair tradesperson. This work is often performed in conjunction with major servicing on both mechanical and quartz watches received for repair. This work would normally be undertaken in watch service and repair centres and jewellery stores where service and repairs are offered. This unit has been developed for watch service and repair apprenticeship training and the recognition of trade-level skills in watch servicing and repair. Band: A Unit weight: 4 points
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		
	MEM21010A	Service watch power generating systems
	MEM21009A	Inspect, diagnose, adjust and repair mechanical watches
	MEM21008A	Service mechanical watches
	MEM18001C	Use hand tools

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	1.1. Identify watch type, calendar construction and dial indicator components 1.2. Inspect condition and functions of calendar operation/dial indicator mechanisms 1.3. Prepare watch for handover 1.4. Record and document repair requirements
2. Dismantle and reassemble calendar and dial indication mechanisms	2.1. Select and use workshop tools and equipment appropriately 2.2. Open and close watch cases correctly 2.3. Dismantle and reassemble calendar and dial indication mechanisms according to design and construction constraints
3. Service calendar and dial indication mechanisms	3.1. Identify calendar and dial indications drive mechanism 3.2. Identify faults and repair or replace, worn or damaged component parts 3.3. Clean components using appropriate methods 3.4. Inspect correct fitting and function of all components 3.5. Verify sequencing and alignment of components during reassembly, including dial and hand fitting 3.6. Lubricate components according to manufacturer specifications
4. Verify calendar and dial indication mechanism operations	4.1. Test calendar and dial indications will not impact on watch performance, amplitude or timekeeping

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

Required skills include:

- dismantling and reassembling calendar and dial indication mechanism
- inspecting and diagnosing faults in calendar and dial indication mechanism
- applying correct type and amount of lubrication

REQUIRED SKILLS AND KNOWLEDGE

- testing calendar and dial indication mechanisms, operation and synchronisation

Required knowledge

Required knowledge includes:

- types of calendar watches
- types of calendar drive mechanism operation
- power reserve indicator construction and operation
- calendar/dial indications component part names
- lubrication techniques for calendar and dial indication mechanisms
- fault-finding and inspection techniques of calendar and dial indication mechanisms
- occupational health and safety (OHS) regulations and practices

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 service calendar and dial indication mechanisms 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:

- dismantle, reassemble and lubricate calendar mechanisms
- service and fault-find calendar watches
- perform inspection and adjustment of calendar change mechanism
- synchronise dial indications with calendar change mechanism.

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 application of underpinning knowledge.
- Assessment methods must be by direct observation of tasks and include questioning on underpinning

EVIDENCE GUIDE

	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.
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EVIDENCE GUIDE**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.

Watch type, calendar construction and dial indication components

Watch type, calendar construction and dial indication components may include:

- date indications:
 - day/date
 - day/date/month
- moon phase and year indicators
- annual calendar
- perpetual calendar
- power reserve indicator
- equation of time

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:

- hand tools (e.g. tweezers, screwdrivers and eyeglasses)
- hand fitting pushers, stakes and presses

Calendar and dial indications drive mechanism

Calendar and dial indications drive mechanism may include:

- creeping
- semi-instantaneous

RANGE STATEMENT	
	• instantaneous • retrograde • rapid corrector
Correct fitting and functions	Correct fitting and functions may include: • end shake of components • clearances of moving parts • penetrations of calendar drive wheel mechanism, finger • spaces • safety features • calendar change operation at midnight • calendar action • rapid corrector engagement and operation • calendar day and date mechanisms

Unit Sector(s)

Unit sector	Horology
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Co-requisite units

Co-requisite units	

Competency field

Competency field	
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