



Australian Government

Department of Education, Employment and Workplace Relations

LMTCG3002A Perform advanced operational maintenance of cotton ginning machines and equipment

Release: 1

LMTCG3002A Perform advanced operational maintenance of cotton ginning machines and equipment

Modification History

Not applicable.

Unit Descriptor

Unit descriptor This unit covers carrying out advanced safety and maintenance checks on cotton ginning machines and equipment, cleaning, lubrication and adjusting of cotton ginning machinery during the ginning season, identifying faulty components or components requiring repair or replacement, removing the components and selecting replacements or assisting in repairing the component, and then assisting in installing the components in accordance with standard operating procedure.

Application of the Unit

Application the Unit

This unit applies to cotton ginning employees who are required to assist in programmed maintenance during the ginning off season and emergency and regular operational maintenance during ginning.

Work may be conducted in small to large scale ginning enterprises and while the application of the unit will normally be as part of a team there may also be individual activities required. Work is performed within defined procedures under direct supervision of management, tradespersons or technicians.

The application of this unit is according to OHS practices of the enterprise and workplace practices, which may include:

- requirements prescribed by legislation, awards, agreements and conditions of employment
- standard operating procedures
- work instructions
- oral, written and visual communication
- quality practices, including responsibility for maintenance of own work quality and contribution to quality improvement of team or section output
- housekeeping
- tasks related to environmental protection, waste disposal, pollution control and recycling

Operational maintenance tasks covered by this unit are those requiring removal and replacement of parts and restoration of equipment to a working condition. In a cotton gin this will typically involve cleaning equipment of accumulated cotton dust and oil, trapped seeds, trash and other contamination, as well as assisting in removal and replacement of parts for adjustment for different types and grades of cotton, planned maintenance and fault repair.

The unit requires manual dexterity and mechanical skill and the ability to follow written or verbal instructions, including identifying components from sketches or drawings. If a higher level skill in using drawings is required then *MEM92B Interpret technical drawing* should be selected.

This unit requires skills in communication to interpret technical information, and self management in order to follow operating procedures required for maintenance work and work within own skill limits. Problem solving, planning and organising, and initiative and enterprise skills are required to diagnose and address maintenance issues.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisites	MEM18001C MEM18002B MEM12023A
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Employability Skills Information

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

Not applicable.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Undertake safety checks	1.1 Machine or equipment components are inspected and any safety problems or deficiencies in performance recorded, according to standard operating procedures. 1.2 Safety problems are rectified or machine taken out of service pending later repair.
2 Dismantle components	2.1 Instructions for dismantling of components with appropriate personnel are confirmed. 2.2 Appropriate tools and equipment are selected and component/s are prepared for dismantling. 2.3 Component is dismantled using standard operating procedures, tools and equipment according to OHS practices. 2.4 Components are clearly marked to aid reassembly.
3 Identify components requiring repair or maintenance	3.1 Specifications and any instructions for identifying components for repair or maintenance are obtained from appropriate source and are interpreted and understood. 3.2 Components requiring maintenance or damaged or faulty components are identified and assessed against workplace requirements, according to standard operating procedures. 3.3 Components are identified and confirmed for repair, replacement, maintenance or adjustment, according to standard operating procedures.
4 Select replacement components or undertake repairs	4.1 Where applicable, replacement or repaired parts are selected for installation according to standard operating procedures. 4.2 Repairs are undertaken to direction and within limits of individual skill and standard operating procedures.
5 Install components into machines or equipment	5.1 Appropriate techniques are applied in the preparation, assembly and adjustment of components to meet gin requirements and equipment specifications, according to standard operating procedures. 5.2 Correct lubrication, packing and sealing materials are selected and applied correctly in conformance to job specifications.
6 Make cotton ginning machines and equipment operational	6.1 The work is inspected, tested and adjusted as necessary for compliance with operational specifications. 6.2 Operational performance and quality and safety of the completed machine or equipment is checked with appropriate personnel and returned to use, according to standard operating procedures.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Demonstrates knowledge of:

- tasks to be performed in accordance with standard operating procedures
- procedures for dismantling the assembly
- tools and equipment to be used to dismantle the components
- procedures and required equipment for checking components for conformance to specification
- specifications of the components to be replaced
- features or dimensions upon which replacement parts are to be selected
- process of identifying replacement parts from "third party" supplier catalogues
- procedures for assembling components
- requirements of the assembly in terms of specifications, operational performance, quality and safety
- procedures for lubricating the assembly
- materials
- checks to be undertaken during inspection of the final assembly
- procedures for returning components or assemblies into use
- hazards and control measures associated with dismantling, replacing and assembling engineering components, including housekeeping
- safe work practices and procedures

Demonstrates skills to:

- obtain and interpreting all relevant instructions, standard operating procedures, sketches, drawings and specifications
- prepare component for dismantling
- dismantle components using appropriate techniques, tools and equipment
- mark component parts appropriately for identification purposes
- check components visually and dimensionally for conformance to given specification
- where appropriate, identify faulty parts for repair, replacement or adjustment
- select and confirm replacement parts to given specifications
- obtain and use relevant supplier catalogues
- prepare and install components using appropriate techniques in accordance with standard operating procedures
- where appropriate apply lubricants correctly to the assembly in accordance with specifications and standard operating procedures
- where appropriate, applying packing and/or sealing materials in accordance with specifications and standard operating procedures
- inspect and check the final work for conformance to specification
- return machines and equipment to use

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence to be considered	Demonstrates skills and knowledge to: • interpret and apply technical information • dismantle, replace or repair components under supervision • re-install components under supervision • apply OHS policies in work procedures
Consistency in performance	Consistently applies skills and knowledge when: • organising work • completing tasks • identifying improvements • using workplace practices • using OHS practices • recording and reporting accidents and incidents • assessing operational readiness of equipment used and work processes • recognising and adapting to cultural differences in the workplace, including modes of behaviour and interactions • completing work systematically with attention to detail and without damage to goods and equipment
Resource implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Context for assessment	Assessment may occur on the job or in an appropriately simulated environment.
Interdependent assessment	This unit may be assessed independently or in combination with other relevant units.

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. Add any 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.

Legislative/regulatory requirements	All work must comply with relevant Federal and State or Territory legislative or regulatory requirements.
Machine or equipment components may include:	• a range of component parts found in machines or equipment in a cotton gin: • couplings • universal joints • pumps • blowers • cotton gin shafts • rollers • pre-manufactured bearings and seals • lubricants • fasteners • gaskets.
Appropriate tools and equipment may include:	• a range of hand and power tools, bearing pullers, special purpose dismantling and assembly tools etc.
OHS practices	OHS practices must include hazard identification and control, risk assessment and implementation of risk reduction measures specific to the tasks described by this unit, and may include: • manual handling techniques • standard operating procedures • personal protective equipment • safe materials handling • taking of rest breaks • ergonomic arrangement of workplaces • following marked walkways • safe storage of equipment • housekeeping • reporting accidents and incidents • other OHS practices relevant to the job and enterprise
Identified may	• identification of parts for repair or replacement

- include: This can be done through visual inspection, measurement of part for comparison to specification or identifying component from a drawing or sketch.
- Selected may include:
- the process of selecting replacement parts from manufacturer catalogues, store inventories
- Appropriate techniques may include:
- removal and replacement of pre-manufactured bearings and seals
 - simple testing and adjustments for level, alignment or balance
- Techniques must be in accordance with standard operating procedures. Assistance may be required with more complex tests conducted by tradespersons or technicians.

Unit Sector(s)

Sector Cotton Ginning