



Australian Government

Department of Education, Employment and Workplace Relations

LMTGN4003A Install and commission process and machine control programs

Revision Number: 1

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Modification History

Not applicable.

Unit Descriptor

Unit descriptor This unit covers the skills and knowledge required to install and commission process and machine control system programs in machines and equipment.

Application of the Unit

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This unit applies to the installation and commissioning of process and machine control system programs in machines and equipment used within a production workplace where discretion and judgement may be required, for both self and others, in planning and selecting processes, procedures or outcomes, including liaison with specialist technicians.

Work relates to complex TCF production equipment with control systems involving advanced:

- electronic technology
- pneumatic technology
- hydraulic technology
- robotics technology

Work may be conducted in small to large scale enterprises and may involve individual and team activities.

The unit is applied according to OHS and workplace practices of the enterprise, 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/section output
- housekeeping
- tasks related to environmental protection, waste disposal, pollution control and recycling

This unit requires the application of skills associated with planning and organising machine control programs for production. This unit also requires problem solving ability to check performance and compliance of programs to specifications. Communication skills will be used to interpret production specifications and maintain records. Self management skills are used to ensure work meets quality and work standards.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisites

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
1 Install automatic process and machine control program	1.1 Appropriate program loading technique is selected and external loading devices are connected to automatic process and machine control system correctly 1.2 Process and machine control system is placed in correct operational mode to accept program loading 1.3 Program is downloaded in accordance with manufacturers' recommended procedure or appropriate standard operating procedures and OHS practices 1.4 Checks are undertaken appropriately during and after downloading to ensure data transfer is accurate and complete 1.5 All external program loading devices and connections are disconnected from process and machine control system
2 Commission automatic process and machine control program	2.1 Program format and operational intent is accurately determined and correctly understood 2.2 Program instructions are checked for compliance with specifications 2.3 Software timers are counter set to specification, where required 2.4 Program is stepped through manually and outputs are checked and measured for compliance with specifications 2.5 External inputs are checked for compliance with specifications, according to specified procedures 2.6 Program is run and total operation is checked for compliance with specifications, where applicable 2.7 Confirmation of program master copy storage is assessed
3 Maintain records	3.1 Records are maintained and reports prepared, where necessary, in accordance with workplace practices

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Demonstrates knowledge of:

- appropriate installation and commissioning procedures
- quality requirements and relevant standards
- machine and equipment manufacturer's specifications and instructions
- safety and environmental aspects of relevant workplace activities
- OHS practices, including hazard identification and control measures
- quality practices
- workplace practices
- recording and reporting practices

Demonstrates skills to:

- apply appropriate technical skills
- carry out checking processes
- monitor performance
- apply all the relevant safety practices when working in the industry
- document and transfer information
- read, interpret and follow information on work specifications, standard operating procedures and work instructions and other reference material
- maintain accurate records
- communicate within the workplace
- sequence operations
- meet specifications
- clarify and check task-related information
- carry out work according to OHS practices

Evidence Guide

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

Critical aspects of evidence to be considered	Demonstrates skills and knowledge to: • select and use appropriate loading technique • perform checks to ensure accurate data transfer • check program instructions • run program to ensure compliance with specifications • apply OHS practices in work operations • maintain accurate records
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 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 may include:	• microprocessor or computer control and include production and facility equipment used within the enterprise
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

Unit Sector(s)

Sector	All
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