



Australian Government

Department of Education, Employment and Workplace Relations

SUGTDMS3A Drive a master-slave locomotive

Revision Number: 1

SUGTDMS3A Drive a master-slave locomotive

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to prepare, start up, operate and shut down a master-slave locomotive.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare and connect the slave locomotive for operation	1.1 Personal protective clothing and equipment is selected and used 1.2 Health and safety hazards / maintenance requirements are identified and reported to appropriate personnel according to workplace reporting procedures 1.3 Workplace records are checked to confirm operational status 1.4 The remote control system is set in accordance with workplace procedures and manufacturer's specifications 1.5 Slave locomotives are prepared and required operating mode is selected 1.6 Pre-start checks are conducted
2. Prepare and connect the master locomotive	2.1 Confirm that system is in link mode 2.2 Check control system and conduct system self-test to confirm that the system is operating effectively 2.3 Confirm braking system is operating effectively 2.4 Total control of the system is established and confirmed 2.5 Pre-departure tests are conducted to confirm control system and locomotive equipment meets operating standard 2.6 Front and rear train consists are coupled safely to form one train
3. Start, operate and monitor locomotive	3.1 Master-slave locomotives are operated in accordance with workplace procedures and manufacturer's specifications to meet transport requirements 3.2 Condition of locomotive equipment is monitored to maintain optimum operating condition and identify faults or defects 3.3 Faults are assessed to determine risk of injury to personnel or damage to equipment 3.4 Corrective action is taken in accordance with workplace procedures in response to OHS hazards, abnormal or unacceptable equipment condition or performance 3.5 Emergency procedures are implemented as required according to workplace procedures and

Element	Performance criteria
	manufacturer's recommendations
	3.6 Housekeeping standards are maintained
4. Prepare for shift handover	4.1 Workplace records are maintained in accordance with statutory requirements and workplace procedures
	4.2 Handover is carried out according to workplace procedure
	4.3 Changeover drivers are aware of locomotive and related equipment status, track conditions and incidents at completion of handover
5. Shut down locomotive	5.1 Shutdown procedures for master and slave locomotives are followed according workplace procedures
	5.2 Shut down sequence is confirmed and complete and locomotives are secured in accordance with workplace procedures
6. Complete work	6.1 Workplace information is recorded according to workplace recording requirements
	6.2 Plant and equipment are cleaned and stored/parked as required
	6.3 Defects and faults are identified and reported according to workplace procedures

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information such as running slips to identify driving requirements
2. Select, fit and use personal protective clothing and/or equipment
3. Prepare the master and slave locomotive systems and operating settings. This includes following procedures to prepare each unit, conducting visual inspections of equipment, pre-start checks and warm up procedures, and pre-departure checks and coupling of train components
4. Operate the master-slave locomotive and associated equipment according to work procedure to achieve work requirements. This includes demonstrating full control of both locomotives
5. Monitor locomotive and equipment condition. This includes monitoring operating status of both locomotives and related equipment and monitoring condition of bins in the rake
6. Take corrective action in response to abnormal or unacceptable performance of control systems or operating equipment
7. Assess equipment faults to determine appropriate corrective action
8. Follow procedure to notify a locomotive breakdown
9. Communicate with the traffic officer and rail personnel as required
10. Use appropriate communication methods and equipment
11. Maintain workplace records
12. Maintain work area to meet housekeeping standards

Knowledge of:

13. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
14. Safe work procedures including awareness of health and safety hazards related to driving a locomotive and associated control measures. Typical hazards include working with moving machinery, manual handling and working in exposed conditions
15. Purpose and limitations of protective clothing and equipment
16. Functions and basic operating principles of master and slave locomotive operating equipment
17. Purpose of the master and slave locomotives in controlling the train and operating principles of all instruments and controls
18. Safe operating capacities of equipment
19. Typical faults that can occur when operating a locomotive in a master-slave configuration. This includes the ability to assess severity and risk in order to determine appropriate corrective action
20. Communication procedures, methods and equipment. This includes an understanding of warning devices and signals
21. Procedures for responding to emergency situations. This includes use of two-way radio system to report emergencies
22. Environmental issues and controls
23. Requirements to liaise/advise related work areas and personnel
24. Housekeeping standards
25. Reporting and recording systems and responsibilities

Relationship with other standards*Pre-requisite units*

The person being assessed in this unit of competence must be competent in the relevant core units. They must also be competent in:

- SUGTDCL2A Drive a cane locomotive

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Master and slave locomotives and related equipment such as brake vans
- Cane railway system
- Relevant services and equipment required to carry out inspections, checks and monitoring
- Workplace information including running slips and daily schedule, to advise of driving requirements
- Operating procedures and related advice on equipment operation
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement**Range statement**

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice and sugar industry codes of practice related to cane railway and transport operations
- Workplace information can include Standard Operating Procedures (SOPs) and manufacturer's specifications
- Documentation and recording requirements may include marshalling strategy, documentation relating to the traffic schedule such as run slips and loco running sheets and log books
- Cane transport network features and their characteristics may include main and branch lines, yards, sidings, loops, dump points and pads
- Information systems may be print or screen based

- A master-slave configuration describes any mechanism and operating system that allows control of one motive power unit by another motive power unit, which forms part of the same train. The slave or remote unit is not operated freely, unattached from the master or lead locomotive
- Master-slave locomotives may be used within a yard for the purpose of marshalling and shunting and on running lines
- Equipment may include diesel and electric locomotives, rail cars and multiple units including electric, diesel and hydraulic
- Confirming equipment status involves conducting relevant pre-start checks and equipment is ready and safe to operate
- Work may require the ability to work within a team environment
- Communication methods include use of two-way radios used in accordance with workplace requirements and state authority protocols and hand and audible signalling
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Unit Sector(s)

Not applicable.