



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **CUESTA03C Operate flying systems**

**Revision Number: 1**

## CUESTA03C Operate flying systems

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the skills and knowledge required to operate theatrical flying systems. Appropriately licensed personnel must undertake installation of these systems.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>Mechanists and staging personnel apply the skills and knowledge outlined in this unit. In this role they are responsible for operating manual and automated flying systems that raise and lower soft hangings and flats, as well as 'flying' scenery items into and off the stage.</p> <p>This unit has linkages to a range of other staging units and combined assessment and/or training with those units may be appropriate.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	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. Set fly cues	1.1. Correctly interpret production documentation to determine flying requirements 1.2. Accurately plot fly cues and determine correct speed and timing of each cue 1.3. Make modifications and changes in accordance with organisational procedures and <i>safety requirements</i> 1.4. Liaise with other production and performance personnel to ensure correct setting of cues
2. Make pre-operational checks	2.1. Complete pre-show checks to ensure individual components of the <i>flying system</i> are ready for operation and comply with all safety requirements 2.2. Correctly execute the pre-set and accurately document any modifications
3. Operate flying systems	3.1. Operate flying system correctly and safely, ensuring that cues are executed on direction in accordance with performance requirements 3.2. Use flying system within its rated capacity and within an acceptable safety margin 3.3. Where counterweight systems are used, keep the flown load and the counterweights in balance and/or under control 3.4. Use the brake system, handbrake or other stopping devices safely and appropriately 3.5. Use control systems in accordance with instructions 3.6. Promptly identify any <i>problems</i> with flying system operation and rectify or refer to appropriate personnel in accordance with organisational procedures and safety regulations 3.7. Correctly use <i>communication systems</i> and signals in accordance with organisational procedures and relevant safety requirements 3.8. Reset all <i>flying elements</i> at completion of performance in accordance with organisational procedures and safety regulations 3.9. Make reports to relevant personnel on any aspects of system operation requiring attention

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

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

#### Required skills

- communication requirements between different production personnel
- communication systems and correct signals for use when flying
- numeracy skills sufficient to undertake all calculations associated with the operation of theatrical flying systems
- literacy skills sufficient to both interpret and make modifications to production documentation

#### Required knowledge

- the role of flying systems within different types of production, and the links between flying and other aspects of a production
- different types of flying elements
- knowledge of a range of flying systems and relevant operating techniques
- specific safety issues that impact on flying systems, including regulations about the scope of work that can be undertaken by unlicensed personnel
- sequencing, equipment, timing and speed requirements for flying systems in the context of different types of production
- emergency procedures relevant to flying system operation
- knowledge of counterweight systems, including single and double purchase, loading and unloading cradles, swinging bars, safe working loads, spreading the load and where to hang lighting bars, masking, etc

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
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.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The following evidence is critical to the judgement of competence in this unit:</p> <ul style="list-style-type: none"> <li>• application of safe working practices when operating flying systems</li> <li>• knowledge of safety issues and regulations associated with theatrical flying.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>The assessment context must ensure:</p> <ul style="list-style-type: none"> <li>• practical demonstration of skills through the operation of flying systems for more than one production</li> <li>• involvement of and interaction with a team to reflect the collaborative nature of the production process.</li> </ul>
<b>Method of assessment</b>	<p>Assessment may incorporate a range of methods to assess performance and the application of essential underpinning knowledge, and might include:</p> <ul style="list-style-type: none"> <li>• direct observation of the candidate operating flying systems correctly and safely</li> <li>• oral or written questioning to assess knowledge of safety issues and different operating and communication techniques</li> <li>• review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate.</li> </ul> <p>Assessment methods should closely reflect workplace demands and the needs of particular groups (e.g. people with disabilities, and people who may have literacy or numeracy difficulties such as speakers of languages other than English, remote communities and those with interrupted schooling).</p>
<b>Guidance information for assessment</b>	<p>Assessment of this unit requires access to:</p> <ul style="list-style-type: none"> <li>• a venue in which a theatrical flying system is installed</li> </ul>

**EVIDENCE GUIDE**

- a production for which to operate flying systems.

## 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.

<b><i>Safety requirements</i></b> refers to:	<ul style="list-style-type: none"> <li>both specific organisational requirements and statutory authority requirements</li> </ul>
Types of <b><i>flying systems</i></b> may include:	<ul style="list-style-type: none"> <li>belaying, abseiling equipment</li> <li>block and tackle systems</li> <li>chain crawlers</li> <li>chain motors and chain blocks</li> <li>electrically operated winches</li> <li>electrically powered flying systems</li> <li>hand lines</li> <li>hydraulic flying systems</li> <li>manually operated counterweight systems (single or double purchase)</li> <li>manually operated winches</li> <li>pulley systems</li> </ul> <p>Note: installation of some of these systems must be completed by or under the supervision of licensed personnel.</p>
<b><i>Problems</i></b> that occur with flying systems may include:	<ul style="list-style-type: none"> <li>failure of performers and workers to observe warnings of flying activities</li> <li>inadequate tie-off applications</li> <li>incorrect balance of load</li> <li>overload on system</li> <li>slippage of wore ropes from pulleys</li> </ul>
<b><i>Communication systems</i></b> and signals may include:	<ul style="list-style-type: none"> <li>hand signals</li> <li>screen monitor</li> <li>verbal calls, with or without headsets</li> <li>warning lights</li> <li>watching for the cue</li> <li>written instructions</li> </ul>
<b><i>Flying elements</i></b> may include:	<ul style="list-style-type: none"> <li>lighting, e.g.: truss, lanterns, practicals, special effects</li> <li>machinery and equipment, e.g.:</li> </ul>

**RANGE STATEMENT**

	<ul style="list-style-type: none"> <li>• smoke machines</li> <li>• fog machines</li> <li>• lasers</li> <li>• vehicles</li> <li>• performers</li> <li>• scenery, e.g.: <ul style="list-style-type: none"> <li>• flats</li> <li>• doors</li> <li>• windows</li> <li>• legs</li> <li>• borders</li> </ul> </li> <li>• soft hangings, e.g.: <ul style="list-style-type: none"> <li>• legs</li> <li>• borders</li> <li>• cycloramas</li> <li>• masking</li> <li>• tabs</li> </ul> </li> <li>• sound, e.g.: speakers</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	
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**Competency field**

<b>Competency field</b>	Media and entertainment production - staging
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**Co-requisite units**

<b>Co-requisite units</b>	It is strongly recommended that this unit be assessed with or after the following unit:	
	CUESTA06B	Apply a general knowledge of theatrical rigging

<b>Co-requisite units</b>	It is strongly recommended that this unit be assessed with or after the following unit:	