

# Technical test - Practical

## Wheeled loading shovel - A21



### Resources required

|                               |  |
|-------------------------------|--|
| <p><b>Machine</b></p>         | <ul style="list-style-type: none"> <li>• Wheeled Loading Shovel with:             <ul style="list-style-type: none"> <li>- A minimum unladen operating weight of 7000kg fitted with a general-purpose bucket</li> <li>- Wheeled articulated chassis containing a centrally mounted operating position</li> <li>- Non telescopic arms, mounted on the front section of the machine</li> </ul> </li> </ul>   |
| <p><b>Area</b></p>            | <ul style="list-style-type: none"> <li>• Ground, clear of hazards which must include:             <ul style="list-style-type: none"> <li>- rough terrain</li> <li>- slope or slopes</li> <li>- mound or bank of material suitable for extraction</li> <li>- a straight run for reversing</li> </ul> </li> </ul>  |
| <p><b>Other equipment</b></p> | <ul style="list-style-type: none"> <li>• Load-carrying vehicle for spoil/material</li> <li>• Items to create restrictions for manoeuvring</li> </ul>   |
| <p><b>Notes</b></p>           | <ul style="list-style-type: none"> <li>• The machine selected for the test must be in serviceable condition and conform with current legislation</li> <li>• The bucket to be used in the test is to be of a size that meets the manufacturers specification</li> <li>• The operator's manual must be with the machine</li> <li>• The slope must have at least an 18% (1:5.5) incline with sufficient manoeuvring room at the top, or a straight ramp with an up and down route with a flat area at the summit</li> <li>• The load carrying vehicle must be rear tipping, have a minimum capacity equivalent to 4 full bucket loads of the loading shovel being used for the test</li> <li>• There must be sufficient quantity of material from the bank or mound for all the activities</li> </ul> |

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### Activity instructions



|   |   |
|---|---|
| <p><b>Sequence</b></p>  | <ul style="list-style-type: none"> <li>• Activity 1 must be undertaken at the start of the test</li> <li>• Activity 2 can be undertaken at any time during the test</li> <li>• Activities 4 and 5 can be undertaken in any order</li> <li>• Activity 7 must be undertaken at the end of the test</li> </ul> <p>The test must be completed within a given time. The specifications' section gives further information</p>    |
| <p><b>Preparing for work</b></p>  | <p>1. Complete all manufacturers' pre-start and running checks and prepare the loading shovel for travel as detailed in the operator's manual which must be referred to by the candidate during the activity</p> <ul style="list-style-type: none"> <li>• Additional information to be identified by the candidate referring to the operator's manual. Tester to decide what information will be identified</li> </ul>      |
| <p><b>Travelling &amp; manoeuvring</b><br/><i>(refer to specifications)</i></p> | <p>2. In a loaded and unloaded state:</p> <ul style="list-style-type: none"> <li>- travel up and down the slope</li> <li>- stop and start on the slope in the up direction</li> <li>- stop and start on the slope in the down direction</li> <li>- travel over rough terrain</li> <li>- reverse (loaded only) in a straight line for a minimum of 30 metres and pass through a restriction at the end of the run</li> </ul> |
| <p><b>Setting up for work</b></p>   | <p>3. Prepare and set the loading shovel for the relevant work</p>  |
| <p><b>Working tasks</b><br/><i>(refer to specifications)</i></p>                | <p>4. Using material from the bank, create an upward ramp</p> <p>5. Load material into a vehicle</p>  |
| <p><b>Completing work</b></p>   | <p>6. Clean and tidy the work area</p>  |
| <p><b>Shutting down</b></p>   | <p>7. Park the loading shovel and carry out shut-down and securing procedures</p>   |
| <p><b>Notes</b></p>   | <ul style="list-style-type: none"> <li>• If the machine is hot, checks unable to be carried out (i.e. coolant) may be assessed by the Tester using verbal questions</li> </ul>  |

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### Activity measurements

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|                            |  |
|----------------------------|--|
| <b>Travel restrictions</b> | <ul style="list-style-type: none"><li>• 800 mm</li></ul>   |
| <b>Ramp length</b>         | <ul style="list-style-type: none"><li>• 1.5 times the length of the loading shovel</li></ul>   |
| <b>Ramp width</b>          | <ul style="list-style-type: none"><li>• At least 1.5 times the width of the bucket</li></ul>   |
| <b>Ramp incline</b>        | <ul style="list-style-type: none"><li>• Minimum of 18% (1. 5.5)</li></ul>  |
| <b>Loading vehicle</b>     | <ul style="list-style-type: none"><li>• Minimum of eight full bucket loads (vehicle can be re-loaded to achieve this figure)</li></ul> |
| <b>Test timings</b>        | <ul style="list-style-type: none"><li>• The test must be completed within 1 hour and 30 minutes</li></ul>                              |

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### Basic details

|                 |                     |
|-----------------|---------------------|
| Test ref:       | Candidate name:     |
| Tester name:    | Candidate ref:      |
| Tester ref:     | Date of test:       |
| Make and model: | Start time of test: |
|                 | Duration:           |

| Mandatory  |   | Correctly carried out during the test? | Y/N |
|------------|---|--|-----|
| Preparing  | 1 All pre-start and running checks (or responses to relevant questions)         |  |     |
| Travelling | 2 Loading shovel set for travel   |  |     |
|            | 3 Restrictions and hazards cleared  |  |     |
|            | 4 Full control maintained when ascending and descending slopes                  |  |     |
|            | 5 No opposite movement of intended direction when restarting on slopes          |  |     |
|            | 6 Travel direction on slopes  |  |     |
|            | 7 Straight line kept during reversing activity                                  |  |     |
| Setting up | 8 Allocated area checked and clear of hazards prior to extracting and loading   |  |     |
| Working    | 9 Ramp created to specification   |  |     |
|            | 10 Loading vehicle positioning prior to loading                                 |  |     |
|            | 11 Vehicle loaded to specification  |  |     |
|            | 12 Vehicle evenly loaded but not overloaded                                     |  |     |
|            | 13 Spillage of material kept to minimum   |  |     |
|            | 14 Loading shovel stable during activities                                      |  |     |
| Completing | 15 Working area cleaned after loading   |  |     |
| Shutdown   | 16 All shutdown and securing procedures   |  |     |
| Other      | 17 Legislation, manufacturers' and health and safety requirements complied with |  |     |
|            | 18 Test completed within the given time   |  |     |

All of these items must be awarded  Achieved / Not achieved

| Faults  |   | Candidate incorrectly carried out the following: | Fault           | Mark | Penalty |
|---|---|--|-----------------|------|---------|
| Travelling  | 1 Loading shovel mounting and dismounting                   |  |                 | 1    |         |
|   | 2 Identify information from the Operator's Manual           |  |                 | 2    |         |
|   | 3 Full observation before moving and reversing              |  |                 | 2    |         |
|   | 4 Full observation whilst travelling                        |  |                 | 3    |         |
|   | 5 Transmission drive engaged smoothly                       |  |                 | 1    |         |
|   | 6 Travel speed matched to the ground type and conditions    |  |                 | 2    |         |
| Working   | 7 Bucket kept low at all times (except during loading work) |  |                 | 2    |         |
|   | 8 Wheel spin minimised                                      |  |                 | 1    |         |
|   | 9 Full bucket loads maintained (except for cleaning work)   |  |                 | 2    |         |
|   | 10 Material cleanly placed into the loading vehicle         |  |                 | 2    |         |
|   | 11 Contact with vehicle avoided when loading                |  |                 | 2    |         |
|   | 12 Use of steering/braking/hydraulic controls               |  |                 | 1    |         |
| Not exceeded eight penalties  |   |  | Total penalties |      |         |
| <input type="checkbox"/> Achieved / Not achieved <input type="checkbox"/> |   |  |                 |      |         |