

## LANCS8 SQA Unit Code H59W 04

### Manage the selection, preparation and operation of land-based machinery and attachments

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#### Overview

This standard covers managing the selection, preparation and operation of land-based machinery. This includes tractors and other self propelled land-based machinery and powered vehicles. It also includes the use of attachments.

When using land-based machinery on the public highway you will need to hold the appropriate licenses for both yourself and the machinery.

You must carry out your work in a way which will consider any impact on the natural environment.

This standard is suitable for anyone who has responsibility for managing the use of land based machinery.

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#### Performance criteria

*You must be able to:*

- P1 assess the risks associated with the required activity
- P2 consider weather, ground conditions and terrain when making selections for field operations
- P3 consider distance, weather and road type when making selections for transportation operations
- P4 identify the most appropriate land-based machinery, (including attachments if required), in accordance with specifications
- P5 ensure machinery meets all relevant legislative requirements, particularly when used on the public highway
- P6 ensure operator is competent to use the selected machinery  
*ensure all operations on the public highway are carried out to minimise risk and disruption to the general public and are within relevant legislative requirements*
- P7 ensure machinery is prepared in accordance with specifications
- P8 ensure machinery is properly maintained
- P9 ensure operations are carried out efficiently and key efficiency factors are monitored
- P10 ensure operational requirements are being met and take action when not
- P11 monitor efficiency of operation and take action to improve when necessary
- P12 ensure all machinery is stored safely and securely after use and in a suitable condition for future use
- P13 ensure that environmental and health and safety policies and risk assessment requirements are put into practice across your area of responsibility
- P14 ensure appropriate records are completed as required by relevant legislation and the organisation

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#### Knowledge and understanding

*You need to know and understand:*

- K1 how to identify hazards and assess risks
- K2 the range of land-based machinery and attachments available for a variety of operational requirements
- K3 factors which affect selection of machinery and attachments
- K4 compatibility of machinery with different attachments
- K5 different types of transport operations to meet distance, weather, road type
- K6 wheels, wheel spacing, tracks, tyres and tyre pressure requirements for different operations and conditions
- K7 the need for the operator to be competent and fully briefed before starting operations
- K8 the preparation and maintenance requirements for machinery and attachments
- K9 settings and adjustments to obtain optimum performance
- K10 calibration methods and the reasons for them
- K11 efficiency monitoring equipment
- K12 how to monitor and improve efficiency
- K13 efficiency factors relating to different machinery, attachments and operational activities
- K14 when to suspend operations when conditions inhibit meeting operational requirements
- K15 when to change operational practice to meet requirements
- K16 your responsibilities under relevant environmental and health and safety legislation, codes of practice and company policies
- K17 appropriate records to be kept and their significance

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### Glossary

#### Specifications:

- drawings
- schedules
- method statements
- Standard Operating Procedures (SOPs)
- manufacturers' guidelines
- customer requirements

#### Tractors including:

- two- and four-wheel drive
- articulated
- tracked
- load platform
- high-speed tractors

#### Other self propelled land-based machinery including:

- combine harvesters
- forage harvesters
- sprayers
- lime spreaders
- swathers

#### Powered vehicles including:

- ATVs
- quad bikes
- sit astrides
- mules
- skid steers
- bob cats

#### Attachments including:

- trailed
- mounted
- fore-end loaders

Activity could cover field operations, transportation and routine tasks.

#### Efficiency factors:

- gears
- hydraulics
- tyre pressure
- track condition
- counter balance

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**Originating organisation** Lantra

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**Relevant occupations** Farmer; Gardener; Park Ranger; Groundsman; Greenkeeper; Fruit and Vegetable Production Worker; Supervisor

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**Suite** Agricultural Crop Production; Horticulture; Livestock Production

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**Key words** equipment; two- and four-wheel drive; articulated; tracked; load platform; high-speed; trailed; mounted; fore-end loaders