

RTC2309A

Unit Descriptor

Unit Sector

Operate tractors

Operate tractors

No sector assigned

ELEMENT	PERFORMANCE CRITERIA
1. Prepare tractor for operation	1.1 Occupational health and safety hazards in the work area are identified, risk assessed and reported to the supervisor 1.2 Routine checks of tractors are conducted prior to use according to manufacturers specifications and enterprise requirements 1.3 Attached equipment is identified and selected appropriate to work requirements, checked for safety and set for operation 1.4 Tractor and attached equipment faults or malfunctions are identified and reported for repair according to enterprise requirements
2. Operate tractor	2.1 Risks to self, others and the environment are recognised and avoided according to Occupational Health and Safety and enterprise requirements 2.2 Suitable personal protective equipment is selected, used, maintained and stored according to Occupational Health and Safety and enterprise requirements 2.3 Tractor is operated in a safe and controlled manner and monitored for performance and efficiency 2.4 Hazards are identified, anticipated and controlled through the application of safe and defensive driving techniques 2.5 Environmental implications associated with tractor operation are recognised and positive enterprise environmental procedures applied where relevant
3. Complete and check tractor operation	3.1 Shut-down procedures are conducted according to manufacturers specifications and enterprise requirements 3.2 Malfunctions, faults, irregular performance or damage to tractor and attached equipment is detailed and reported according to enterprise requirements 3.3 Tractor and attached equipment is cleaned and decontaminated where necessary, secured and stored according to enterprise and Occupational Health and Safety requirements 3.4 Tractor operational reports are maintained to industry standards according to enterprise requirements

KEY COMPETENCIES

What processes should be applied to this competency standard? There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	With regard to hazards and unsafe work practices associated with the operation of tractors may be reported to the supervisor and work team	1
Collecting analysing and organising information	With regard to tractor performance, faults and maintenance requirements may be detailed and recorded for reference and organised by reports	1
Planning and organising activities	Tractor operation may be planned and coordinated around work schedules	1
Working with others and in teams	May be applied in the application of methods and procedures to complete operating procedures and maintain records	1
Using mathematical ideas and techniques	May be applied in the calculation and measurement of load and weight, servicing requirements, and distance and fuel consumption	1
Solving problems	Breakdowns, faults or malfunctions will require arrangement for repair or replacement to achieve work schedules	1
Using technology	To communicate, measure and record information with regard to maintenance, usage and performance of tractor	1

RANGE STATEMENT

Occupational Health and Safety requirements

may include safe systems and procedures for

- the safe operation of tractors and attached equipment including the fitting of guards and shields
- hazard and risk control
- safe mounting and dismounting
- manual handling including lifting and carrying
- the application of emergency/defensive driving techniques
- handling, application and storage of hazardous substances
- outdoor work including protection from solar radiation, dust and noise
- the appropriate use, maintenance and storage of personal protective equipment
- roll over protection secured if required
- wearing a seatbelt
- passengers only being carried when there is a seat approved by manufacturer

Hazards

may include

- exposure to loud noise and fumes, hazardous substances (fuel, oils), solar radiation and organic and other dusts
- ergonomic hazards associated with posture and mechanical vibration
- bystanders
- livestock and wildlife
- difficult terrain and varying gradients
- broken ground
- potholes
- ditches
- gullies
- embankments
- obstacles
- adverse weather conditions
- electricity
- overhead hazards including
 - powerlines
 - loose clothing
 - speed and fatigue
 - load shifts
 - mechanical malfunctions
- exposed moving parts including
 - hydraulics
 - run over by tractor
 - crushed by roll-over
 - other machinery

Routine checks carried out prior to operation

may include

- cabin drills and pre-start and safety checks including
 - an assessment of tyres
 - wheels
 - controls and cables
 - lights
 - safety mirrors
 - electrics
 - safety restraints
 - chain/driveshaft
 - chassis
 - seatbelts
 - suspension
 - power take-off equipment and guards
 - roll over protection
 - spark arresters
 - pneumatic and hydraulic systems
- checking of cooling system
- fuel
- oils and lubricants
- battery levels
- tyre pressure
- fan belts
- leads
- lines
- connections
- air filters
- air conditioning
- brakes clutch
- gearbox
- steering
- lighting and transmission
- inspection of hitch and towing points

Operational characteristics

may vary in tractors where they may be

- two wheel drive, four wheel drive, front wheel assist, articulated tractors including scrapers, track or crawler driven
- steering systems may include conventional front-wheeling steering, all wheel steering and articulated
- variational characteristics also include rated horsepower and complexities of operations and controls

Enterprise requirements	applicable to this standard may include • Standard Operating Procedures (SOPs) • industry standards • production schedules • Material Safety Data Sheets (MSDS) • work notes and plans • product labels • manufacturers specifications • operators manuals • enterprise policies and procedures including • waste disposal • recycling • re-use guidelines • supervisors oral or written instructions
Range of operations with attached equipment	may be • set up and operated for blade • belt pulley • drawbar • front-end loader • power-take-off • remote hydraulics • linkage mounted equipment
Risks associated with the operation of tractors	may include • tractor rollover, which may be caused by traversing a steep slope or cornering too sharply at speed • tractor back flip which may be caused by driving off in low gear but with high engine speed, rapid acceleration (particularly when driving uphill or pulling a heavy load), attempting to drive forward when the wheels are unable to move forward (bogged), rapid engagement of the clutch of the tractor • power-take-off entanglement (loose clothing)
Personal protective equipment	may include • boots with non-slip soles • overalls • seatbelts • gloves • protective eyewear • hearing protection • respirator or facemask • sun protection, eg, sun hat, sunscreen

Safe control and operation of tractors	may include • the appropriate selection and use of tractor controls, features, settings and operational techniques for the terrain and all weather conditions without causing damage to tractor, equipment, person, property or environment
Environmental implications	associated with the operation of tractors may include • negative environmental impacts resulting from excessive noise and exhaust emissions • the unsafe use and disposal of maintenance debris, eg, oil containers, chemical residues • hazardous substances, eg, fuel, oils • high traffic activity • particularly the repeated use of tracks • may negatively impact in soil disturbance • dust problems and increased run-off flows from unsafe cleaning and servicing activities
Shut down procedures	for tractors may include • turning the engine off • safe dismounting and securing the tractor • ensuring hydraulic equipment is lowered to a safe position • it may also include • parking away from hazards • maintaining a clear thoroughfare • refuelling and cleaning the tractor • engaging handbrake and removing keys
Relevant reports	may include • routine checks and maintenance • scheduled maintenance activities • mandatory or statutory inspections • log books • faults • malfunctions and damage details • hazard and incident reports

The sport and recreation industry**covers**

- industry sectors of community recreation, fitness, outdoor recreation and sport
- significant roles played by activity organisations, industry peak bodies, professional organisations
- large volunteer base
- high turnover of volunteers
- high levels of part time and casual employment
- irregular working hours
- relatively few professional positions
- workforce employed mostly in operational positions
- mainly small business or self-employed personnel
- slow to take up technology
- over 2/3 of the sport and recreation industry have no formal/recognised qualifications
- significant reliance upon industry credentials and involvement in the activity itself

EVIDENCE GUIDE**Critical aspects of evidence to be considered**

- Assessment must confirm sufficient knowledge to safely operate tractors with or without attached equipment relative to operating conditions
- Assessment of performance should be over a period of time covering all categories from the Range Statements applicable to the learner's work environment
- In particular, assessment must confirm the ability to
 - match and attach equipment appropriate to work requirements
 - secure loads within working specifications
 - perform routine pre-operational checks
 - recognise and control hazards and risks
 - demonstrate emergency procedures
 - monitor and maintain operational records
 - demonstrate safe workplace and positive environmental practices
- transfer the skills and knowledge required to operate tractors to a different work environment, eg, this could include different tractors, terrain and weather conditions

**Interdependent
assessment of units**

- This unit must be assessed after attainment of competency in the following unit(s)
 - Nil
- This unit must be assessed in conjunction with the following unit(s)
 - Nil
- For the purpose of integrated assessment, this unit may be assessed in conjunction with the following unit(s)
 - Nil

**Required knowledge and
skills**

- Required knowledge
 - Tractor components, controls and features and operational functions
 - Tractor steering systems and features
 - Attached equipment, features and operational functions and procedures
 - Operating principles and operating methods
 - Load limits and the principles of weight distribution with regard to load shifting and tractor movement
 - Effects of adverse weather and difficult terrain conditions on tractor operation
 - Environmental Codes of Practice with regard to machinery operation
 - Occupational health and safety legislative requirements, hazard identification and risk assessment
 - Relevant legislation with regard to machinery operation and licensing requirements
 - Occupational Health and Safety Codes of Practice including the use and control of hazardous substances
- Required skills
 - Steer, manoeuvre and position tractor in a smooth and controlled manner
 - Safely and effectively operate tractors in adverse weather and difficult terrain conditions
 - Demonstrate safe and environmentally responsible workplace practices
 - Interpret manufacturers specifications, work and maintenance plans, and Material Safety Data Sheets
 - Effectively communicate faults and hazards, interpret and apply task instructions, report and maintain operational records
 - Calculate and measure distance, volumes and weights

Resource implications

- Physical resources - assessment of this competency requires assess to
 - personal protective equipment
 - tractors
 - appropriate documentation and resources normally used in the workplace
- Human resources - assessment of this competency will require human resources consistent with those outlined in the Assessment Guidelines. That is, assessors (or persons within the assessment team) should
 - be competent in this unit
 - be current in their knowledge and understanding of the industry through provision of evidence of professional activity in the relevant area
 - have attained the National Competency Standards for Assessment: BSZ401A, BSZ402A and BSZ403A

Consistency in performance

- Competence in this unit must be assessed over a period of time in order to ensure consistency of performance over the Range Statements and contexts applicable to the work environment

Context for assessment

- This unit of competency must be assessed in the context of sport or recreation. For valid and reliable assessment the sport or recreation activity should closely replicate the work environment. The environment should be safe with the hazards, circumstances and equipment likely to be encountered in a real workplace
- Assessment of this unit of competence will usually include observation of processes and procedures, oral and/or written questioning on required knowledge and skills and consideration of required attitudes
- Where performance is not directly observed and/or is required to be demonstrated over a "period of time" and/or in a "number of locations", and evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons

Essential Assessment Information

There is **essential information about assessing this competency standard for consistent performance and where and how it may be assessed** , in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines** . Further advice may also be sought from the relevant **sector booklet** .