

Training Package	Conservation and Land Management (RTD02)	HSC Requirements and Advice
Title	Clean machinery of plant, animal and soil material	
Unit code RTD2313A	This competency standard covers the process of cleaning machinery of material that may contribute to the spread of weeds, pests or diseases. It requires the ability to prepare for cleaning, carry out thorough cleaning of equipment and the appropriate disposal of waste. Cleaning is likely to be carried out under routine supervision and may involve operating in a team environment. Cleaning machinery of plant, animal and soil material requires knowledge of machinery and equipment operating features and major components, inspection points and procedures required by legislation, and how weeds, pests or diseases can spread through soil, animal or plant materials.	HSC Indicative Hours 10

Evidence Guide

What evidence is required to demonstrate competence for this standard as a whole?

Competence in cleaning machinery for plant, animal and soil material requires evidence that machinery has been thoroughly checked, sources of potential contamination have been identified, and that thorough cleaning has been carried out. The skills and knowledge required for the cleaning of equipment of plant, animal and soil material must be **transferable** to a range of work environments and contexts. For example, this could include different items of machinery and equipment, or different sources of contamination.

What specific knowledge is needed to achieve the performance criteria?	What specific skills are needed to achieve the performance criteria?	Are there other competency standards that could be assessed with this one?	Assessment guide	HSC Requirements and Advice
<p>Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts and to deal with unplanned events. The knowledge requirements for this unit are listed below:</p> <ul style="list-style-type: none"> • machinery and equipment operating features • major components of machinery and equipment • inspection points and procedures required by legislation • vectors for spread of weeds, pests or diseases. 	<p>To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complimentary skills are required. These include the ability to:</p> <ul style="list-style-type: none"> • check machinery and support vehicles • clean machinery and equipment • complete cleaning work. 	<p>This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.</p>	<p>For 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.</p>	<p>Key Terms and Concepts</p> <ul style="list-style-type: none"> • ancillary equipment • cleaning of equipment and machinery • cleaning tools and equipment • cross-contamination • disposal of waste • enterprise guidelines • enterprise records • inspection points • legislative requirements • machinery and equipment operating features • notifiable contaminant • noxious weed • <i>Noxious Weeds Act 1993 (NSW)</i> • preparation for cleaning • regulatory authorities

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				<ul style="list-style-type: none"> • safe work practices • Standard Operating Procedures (SOP) • support vehicles • tools for visual inspection • vectors for spread of weeds, pests and diseases • waste disposal.

Element	Performance Criteria	Range of Variables	HSC Requirements and Advice
1 Check machinery and support vehicles	1.1 Machinery and equipment are checked for contamination according to enterprise guidelines or legislative requirements.	<p>The Range of Variables defines the different contexts, work environments and parameters governing the performance of this competency standard. The variables chosen in training and assessment will need to reflect local industry and regional contexts.</p> <p>What may be included as machinery and equipment?</p> <p>Rotary harvesters and conventional harvesters, bins, augers, earthmoving machinery, vehicles and comb trailer.</p> <p>What sort of ancillary equipment may be included?</p> <p>Agricultural machinery such as bins, augers, vehicles and comb trailer.</p> <p>How can checking of machinery and support vehicles be made?</p> <p>Visually, or utilising an endoscope, torch, mirror or probe.</p> <p>Which legislation and operating procedures may be included?</p> <p>State and Commonwealth noxious weeds legislation, regulations, operating procedures and checklists, with or without diagrams.</p> <p>What enterprise requirements and regulatory guidelines may be relevant?</p> <p>Policies, procedures and management plans, relevant occupational health and safety requirements, Codes of Practice, State and Federal quarantine legislation, and enterprise guidelines.</p>	<p>Learning experiences for the HSC must address</p> <p>A basic understanding of how weeds, pests or disease can spread through soil, animal and plant materials.</p> <p>A basic understanding of:</p> <ul style="list-style-type: none"> • <i>Noxious Weeds Act 1993</i> (NSW) • <i>Noxious Weeds Regulation 2003</i> (NSW). <p>Reasons for checking contamination and cleaning equipment including:</p> <ul style="list-style-type: none"> • prevention of spread of noxious weeds • prevention of spread of plant diseases and disease vectors • prevention of possible cross-contamination in certified plant material • containment of genetically modified crop varieties within property boundaries. <p>A basic understanding of major components and operating features of machinery and equipment.</p> <p>Tools used to assist in visual inspection of equipment including:</p> <ul style="list-style-type: none"> • endoscopes • probes • mirrors • torches. <p>Indicators of equipment requiring cleaning including:</p> <ul style="list-style-type: none"> • build-up of soil • plant residues • grain residues. <p>Identification of parts of equipment and machinery likely to carry contaminants including:</p> <ul style="list-style-type: none"> • protective plates located underneath machines • covers and guards • cab floors • base of hoppers

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			<ul style="list-style-type: none"> • tyre rims • engine compartments • radiator core • augers and elevators • fan housings • chassis rail ledges • axle beams • undercarriage areas • trays and storage boxes • harvester straw walkers • harvester sieves. <p>Inspection points checklist.</p>
	<p>1.2 Machinery and support vehicles are made safe for checking, supported safely, with free moving parts pinned or supported as required.</p>	<p>What may be included as machinery and equipment?</p> <p>Rotary harvesters and conventional harvesters, bins, augers, earthmoving machinery, vehicles and comb trailer.</p> <p>Which support vehicles are included?</p> <p>Those used to transport machinery or any vehicle that has been driven on potentially contaminated ground.</p>	<p>Learning experiences for the HSC must address:</p> <p>Preparation required to enable safe inspections of machinery and support vehicles including:</p> <ul style="list-style-type: none"> • selecting an appropriate location for checking and cleaning • parking on a level surface • applying handbrakes • chocking wheels • placing blocks and guards to prevent collapse of raised hydraulic components • removing keys from ignition • pinning moving parts.
	<p>1.3 Covers and guards removed safely.</p>	<p>What do covers and guards incorporate?</p> <p>Skid plates, mudguards, end covers, inspection plates and hatches and top and bottom feeder housing.</p>	
	<p>1.4 All points identified in legislation or operating procedures are identified and inspected for contamination.</p>	<p>Which legislation and operating procedures may be included?</p> <p>State and Commonwealth noxious weeds legislation, regulations, operating procedures and checklists, with or without diagrams.</p>	
<p>2 Clean machinery and equipment</p>	<p>2.1 Machinery is made safe for cleaning, supported safely, with free moving parts pinned or supported as required.</p>	<p>Where might cleaning be carried out?</p> <p>Field, workshop or in wash-down areas.</p>	

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	2.2 Correct equipment for cleaning selected.	<p>What may be involved in cleaning?</p> <p>High-pressure water, compressed air, brushes or vacuum.</p> <p>What sort of equipment for cleaning may be included?</p> <p>Rod or probe (2m long), torch, screwdrivers, spanners, hammers, wire, compressor and brushes.</p> <p>What enterprise requirements and regulatory guidelines may be relevant?</p> <p>Policies, procedures and management plans, relevant occupational health and safety requirements, Codes of Practice, State and Federal quarantine legislation, and enterprise guidelines.</p>	<p>Learning experiences for the HSC must address:</p> <p>Tools used to assist in cleaning process including:</p> <ul style="list-style-type: none"> • spanners • screwdrivers • sockets and wrenches • hammers • torch • probes • endoscopes • rods. <p>Cleaning equipment including:</p> <ul style="list-style-type: none"> • high pressure water cleaner • air compressor • vacuum • brooms and brushes. <p>Criteria for selecting cleaning equipment including:</p> <ul style="list-style-type: none"> • cost • ability to use in field • time taken to perform cleaning task • operator skill • thoroughness of cleaning outcome • operator safety.
	2.3 Points listed in appropriate regulations, checklists or enterprise procedures are cleaned and checked.		
	2.4 Guards replaced safely and checked.	<p>What do covers and guards incorporate?</p> <p>Skid plates, mudguards, end covers, inspection plates and hatches and top and bottom feeder housing.</p>	
	2.5 Areas on other equipment likely to accumulate contaminants identified, inspected and cleaned according to enterprise operating procedures.	<p>What other machinery may be relevant to this standard?</p> <p>Hay balers, fodder rollers, bale wrappers, cotton pickers, module builders, potato harvesters, haymaking equipment, seeders, drills, planters, air-seeders, cultivators, tillage equipment, bins,</p>	

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		<p>augers, vehicles and comb trailer, any vehicle that has been operated in the work area and any other machinery used for agricultural, horticultural or earthmoving purposes.</p> <p>How can checking of machinery and support vehicles be made?</p> <p>Visually, or utilising an endoscope, torch, mirror or probe.</p> <p>Where might cleaning be carried out?</p> <p>Field, workshop or in wash-down areas.</p> <p>What may be involved in cleaning?</p> <p>High-pressure water, compressed air, brushes or vacuum.</p> <p>What sort of equipment for cleaning may be included?</p> <p>Rod or probe (2m long), torch, screwdrivers, spanners, hammers, wire, compressor and brushes.</p>	
3 Complete cleaning work	3.1 Waste materials are disposed of according to enterprise operating procedures and relevant legislative requirements.	<p>What disposal methods might be included?</p> <p>Burning, burial or return to harvested field.</p> <p>Which legislation and operating procedures may be included?</p> <p>State and Commonwealth noxious weeds legislation, regulations, operating procedures and checklists, with or without diagrams.</p>	<p>Learning experiences for the HSC must address:</p> <p>Waste materials from cleaning including:</p> <ul style="list-style-type: none"> • plant material • soil material • dust • silt and sludge • water • detergents • disinfectants. <p>Procedures for disposal of waste material including:</p> <ul style="list-style-type: none"> • incineration • burial • disinfection • return to harvested field • following guidelines from regulatory bodies.

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	3.2 Records of cleaning are recorded on appropriate forms according to enterprise policy and procedures.		Learning experiences for the HSC must address: Cleaning records including: <ul style="list-style-type: none"> • checklists • quality assurance requirements • regulatory forms • audit reports.
	3.3 The authorities are advised when contaminants are identified as being notifiable or of a potential threat.		Learning experiences for the HSC must address: Regulatory authorities to be advised including: <ul style="list-style-type: none"> • NSW Agriculture. Appropriate reporting methods depending on circumstance: <ul style="list-style-type: none"> • forms • written reports • verbal notification. Information to be reported including: <ul style="list-style-type: none"> • non-compliance by industry personnel • breaches. • notifiable contaminants.

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 3 = perform, administer and design the process

1. How can communication of ideas and information (1) be applied?	Communicating with clients and supervisors.
2. How can information be collected, analysed and organised (1) ?	Visual inspection and through using checklist of inspection points.
3. How are activities planned and organised (1) ?	Organising work schedules in order to carry out activities within time constraints.
4. How can team work (1) be applied?	Working with work team and supporting team activities in inspection and cleaning work.
5. How can the use of mathematical ideas and techniques (1) be applied?	Estimating quantities, reading and recording identification numbers.
6. How can problem-solving skills (1) be applied?	Identifying parts of different machines likely to carry contaminants.
7. How can the use of technology (1) be applied?	Recording and communicating results of inspections, and carrying out cleaning.