



Australian Government

Department of Education, Employment and Workplace Relations

AURP245371B Service and repair chainsaw cutting systems

Release: 1

AURP245371B Service and repair chainsaw cutting systems

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit of competency describes the skills and knowledge required to service and repair chainsaw cutting systems, including removal, repair/replacement, fitting and adjustment of components. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication. This unit replaces AURP245371A Service and repair faults in chainsaw cutting systems.
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Application of the Unit

Application of the unit	This unit applies to individuals who undertake servicing and repair of chainsaw cutting systems in the outdoor power equipment industry. Chainsaw cutting systems may be fitted to chainsaws and other equipment which may be electric, air, hydraulic and petrol powered.
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Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	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. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for service and repair operation	1.1. Identify and confirm work to be carried out 1.2. Access and interpret service and repair procedures, workshop manuals and manufacturer information 1.3. Identify and prepare tools, equipment and materials required for servicing and repair job 1.4. Set up work area
2. Determine service and repair requirements	2.1. Check customer requirements and equipment specifications following workplace procedures 2.2. Follow safety procedures, including personal protection needs, for handling chainsaws 2.3. Remove chain and guide bar and inspect for wear and damage 2.4. Plan and cost service and repair procedure 2.5. Discuss recommended repair process with customer and obtain authorisation to proceed
3. Service and repair chainsaw cutting system	3.1. Select tooling and equipment to meet job requirements and check to ensure they are in good working order 3.2. Check equipment manufacturer/component supplier service specifications and recommendations 3.3. Remove components for repair procedure and inspect for condition and serviceability 3.4. Discard unusable components and retain reusable and repairable components following workplace procedures 3.5. Determine availability of replacement parts, qualified repair staff or subcontractors 3.6. Fit reusable, repaired and replacement parts in accordance with manufacturer/component supplier specifications and workplace procedures 3.7. Sharpen chain cutting system components to provide effective cutting edges 3.8. Adjust and tension components in accordance with manufacturer/component supplier specifications 3.9. Perform lubrication and alignment checks
4. Check chainsaw cutting system for normal operation	4.1. Identify and observe applicable occupational health and safety (OHS) requirements, including state/territory regulatory requirements and personal protection needs, for operating a chainsaw

ELEMENT	PERFORMANCE CRITERIA
	4.2. Start up chainsaw and check operation of safety features against equipment specifications 4.3. Make any adjustments as required and re-test 4.4. Check adjustments, fluid levels and alignments 4.5. Complete workplace documentation and update customer and warranty information as required
5. Complete work and return unit to customer	5.1. Inspect repaired unit to ensure protective guards, cowlings and safety features are in place 5.2. Clean unit to workplace expectations 5.3. Clean work area, dispose of waste, and store tools and equipment in accordance with workplace procedures 5.4. Provide customer report on repairs and replacements and explain follow-up adjustments, use and care of equipment and warranty requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

Required skills include:

- technical skills to the level required to use workplace technology and tools related to repairing chainsaw cutting systems and to safely start a chainsaw
- communication skills to the level required to confirm work requirements and specifications, to communicate effectively regarding work requirements with supervisor, other workers and customers, to report work outcomes and problems, and to relate to people from a range of social, cultural and ethnic backgrounds and of varying physical and mental abilities
- literacy skills to the level required to understand information related to work orders and to locate, interpret and apply manufacturer/component supplier information, workplace policies and procedures
- numeracy skills to the level required to correctly calculate time, assess tolerances, apply accurate measurements, calculate material requirements and establish quality checks
- problem-solving skills to the level required to plan and organise activities and establish safe and effective work processes which anticipate and/or resolve problems and downtime, and to systematically develop solutions to avoid or

REQUIRED SKILLS AND KNOWLEDGE

- minimise reworking and avoid wastage
- team skills to the level required to work effectively and cooperatively with others to optimise workflow and productivity

Required knowledge

Required knowledge includes:

- dangers of working with chainsaw cutting equipment
- safe starting procedures for chainsaws
- the relationship of a chainsaw cutting system to the power unit, drive, safety and adjustment systems and overload protection device
- mechanical principles relevant to chainsaw cutting systems
- classifications of chainsaw cutting systems and components
- material used in chainsaw cutting system components
- types and causes of faults in chainsaw cutting systems
- types and layout of service/repair manuals (hard copy and electronic)
- servicing and repair procedures
- types of lubricants, application and methods of lubrication
- selection, checking and use of tooling and equipment
- manufacturer and/or component supplier specifications
- applicable commonwealth, state or territory legislation, regulations, standards and codes of practice, including OHS and environment, relevant to servicing and repairing chainsaw cutting systems
- organisational policies and procedures, including quality requirements, reporting and recording procedures, and work organisation and planning processes, related to servicing and repairing chainsaw cutting systems

Evidence Guide

EVIDENCE GUIDE

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.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessors must be satisfied that the candidate can competently and consistently:

- observe safety procedures and requirements
- communicate effectively with others involved in or affected by the work
- select servicing methods and techniques appropriate to the circumstances
- complete preparatory activity in a systematic manner
- accurately interpret test results
- conduct service in accordance with workplace and manufacturer/component supplier requirements
- repair/replace, fit, sharpen and adjust a range of chainsaw components in accordance with specifications and workplace procedures
- safely start and check operation, adjustments and alignments of chainsaw cutting systems
- complete service and repair of chainsaw cutting systems and associated components within workplace timeframes
- present repaired chainsaw cutting equipment to customer in compliance with workplace requirements
- complete workplace records.

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or a simulated environment that reflects as far as possible the actual working environment.
- Assessment is to occur using standard and authorised work practices, safety requirements and environmental constraints.
- Assessment is to comply with relevant regulatory requirements, including specified Australian standards.
- Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.
- The following resources should be made available:
 - a range of chainsaw cutting systems and components

EVIDENCE GUIDE	
	• area and equipment, including personal protection needs for safe testing of chainsaw cutting systems • materials relevant to servicing and repair of chainsaw cutting systems • equipment, hand and power tooling appropriate to servicing and repair of chainsaw cutting systems • specifications and work instructions.
Method of assessment	• Assessment must satisfy the endorsed Assessment Guidelines of this Training Package. • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of Required Skills and Knowledge. • Assessment methods must be by direct observation of tasks and include questioning on Required Skills and Knowledge to ensure its correct interpretation and application. • Assessment may be applied under project-related conditions (real or simulated) and require evidence of process. • Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances. • Competence in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role.
Guidance information for assessment	Assessment processes and techniques must be culturally sensitive and appropriate to the language and literacy capacity of the candidate and the work being performed.

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. 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.

RANGE STATEMENT	
Chainsaw cutting systems	Chainsaw cutting systems may include: • electric, air, hydraulic and petrol powered • equipment fitted with a chain cutting system • chain cutting system components fitted to chainsaws
Chainsaw system variables	Chainsaw system variables may include: • nickel alloy and chrome-plated cutters • replaceable sprocket nose or stellite-tipped bar • impact and overload protection • safety brake • manual and automatic lubrication
Servicing and repair methods	Servicing and repair methods may include: • on- and off-site servicing and repair • inspection, repair and replacement of components • fault rectification, sharpening, grinding, tension adjusting and testing chain cutting system components • breaking and joining, adjusting, aligning, lubricating and testing chainsaw cutting systems • communicating with customers • documenting and reporting on service and repair
Tooling and equipment	Tooling and equipment may include: • general workshop equipment • sharpening equipment • equipment stands/vices • air tooling • grinders • chain breaking and riveting equipment • exhaust gas extraction system • lubrication and cleaning equipment
Materials	Materials may include: • spare parts • lubricants • cleaning materials

RANGE STATEMENT	
Information/documents	Information/documents may include: • verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, memos, material safety data sheets (MSDS), diagrams or sketches • safe work procedures related to servicing and repairing chainsaw cutting systems and operating chainsaws • regulatory/legislative requirements pertaining to chainsaw cutting systems and chainsaw operation • engineer's design specifications and instructions • organisation work specifications and requirements • instructions issued by authorised enterprise or external persons • Australian standards
OHS requirements	OHS requirements are to be in accordance with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include: • personal protective equipment and clothing • safety equipment • first aid equipment • hazard and risk control • elimination of hazardous materials and substances • manual handling, including shifting, lifting and carrying • emergency procedures
Legislative requirements	Legislative requirements are to be in accordance with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice, and may include: • award and enterprise agreements • industrial relations • Australian standards • Australian Design Rules • confidentiality and privacy • OHS

RANGE STATEMENT	
	• the environment • equal opportunity • anti-discrimination • relevant industry codes of practice • duty of care
Environmental requirements	Environmental requirements may include: • waste management • pollution • noise • dust • clean-up management
Quality requirements	Quality requirements may include: • regulations, including Australian standards • internal organisational quality policies and procedures • enterprise operations and procedures
Organisational policies and procedures	Organisational policies and procedures may include: • quality policies and procedures, including Australian standards • OHS, sustainability, environment, equal opportunity and anti-discrimination • manufacturer specifications and industry codes of practice • safe work procedures • reporting and recording procedures

Unit Sector(s)

Unit sector	Outdoor power equipment
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Co-requisite units

Co-requisite units	
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Co-requisite units		

Competency field

Competency field	
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