



Australian Government

AURTTQ2002 Remove and refit driveline components

Release 1

AURTTQ2002 Remove and refit driveline components

Modification History

Release	Comment
Release 1	Replaces AURT213165A Remove and refit driveline components Unit code updated to meet policy requirements Reference to OHS legislation replaced with new WHS legislation Licensing statement added to unit descriptor

Unit Descriptor

Unit descriptor	This unit covers the competence required to remove and refit driveline components during rectification of faults in steering and suspension systems. Licensing, legislative, regulatory or certification requirements may apply to this unit in some jurisdictions. Users are advised to check with the relevant regulatory authority.
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Application of the Unit

Application of the unit	The unit applies to all types of driveline components fitted to light vehicles, which includes 4WD vehicles and light commercial vehicles. The unit includes identification and confirmation of work requirement, preparation for work, removal and refitting of driveline components and completion of work finalisation processes, including clean-up and documentation. Work involves removing and refitting various driveline system components to carry out required rectification procedures for steering and suspension systems. Work requires individuals to demonstrate discretion, judgement and problem-solving skills in undertaking environmentally sound work practices.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

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. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to test and repair driveline components	1.1.Nature and scope of work requirements are identified and confirmed 1.2.WHS requirements, including individual State/Territory regulatory requirements and personal protection needs are observed throughout the work 1.3.Procedures and information such as workshop manuals and specifications, and tooling required, are sourced 1.4.Method options are analysed and those most appropriate to the circumstances are selected and prepared 1.5.Technical and/or calibration requirements for testing and repairing drivelines are sourced and support equipment is identified and prepared 1.6.Warnings in relation to working with drivelines are observed
2. Remove driveline components	2.1.Removal procedure information is accessed and interpreted from technical publications prior to removal of components 2.2.System components are removed using hand tooling and specialist equipment without causing damage and stored in an appropriate location 2.3.Identified component faults are reported to the customer and discussed for further instructions
3. Refit and adjust driveline components	3.1.Removed components are examined for serviceability prior to commencing the refitting procedures 3.2.Serviceable components are refitted according to manufacturer/component supplier specifications and instructions 3.3.Fluids and lubricants required during the refitting procedures are used in accordance with WHS and manufacturer/component supplier specifications 3.4.Refitted components are adjusted according to manufacturer/component supplier specifications
4. Prepare vehicle/ equipment for use or storage	4.1.Repair schedule documentation is completed 4.2.Final inspection is made to ensure safety requirements are in place 4.3.Final inspection is made to ensure work is to workplace expectations

ELEMENT	PERFORMANCE CRITERIA
	4.4.Vehicle/equipment is cleaned for use or storage to workplace expectations 4.5.Job card is processed in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- apply research and interpretive skills sufficient to locate, interpret and apply manufacturer/component supplier procedures, workplace policies and procedures
- apply analytical skills required for identification and analysis of technical information
- apply plain English literacy and communication skills in relation to dealing with customers and team members
- apply questioning and active listening skills for example when obtaining information from customers
- apply oral communication skills sufficient to convey information and concepts to customers
- apply planning and organising skills to own work activities, including making good use of time and resources, sorting out priorities and monitoring one's own performance
- interact effectively with other persons both on a one-to-one basis and in groups, including understanding and responding to the needs of a customer and working effectively as a member of a team to achieve a shared goal
- establish safe and effective work processes which anticipate and/or resolve problems and downtime, to systematically develop solutions to avoid or minimise reworking and avoid wastage
- use mathematical ideas and techniques to correctly calculate time, assess tolerances, apply accurate measurements, calculate material requirements and establish quality checks
- use workplace technology related to the removal and refitting of driveline components, including the use of electronics, measuring equipment, computerised technology and communication devices and the reporting/documenting of results

Required knowledge

A working knowledge of:

- WHS regulations/requirements, equipment, material and personal safety requirements
- principles of driveline operation
- principles and construction of constant velocity joints
- construction and operation of FWD driveshafts
- types and layout of service/repair manuals (hard copy and electronic)
- dismantling, assembling and adjusting procedures
- methods of using lubricants and sealants
- methods of fitting circlips

REQUIRED SKILLS AND KNOWLEDGE

- enterprise quality procedures
- work organization and planning processes

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

Competence to changing circumstances and to respond to unusual circumstances in the critical aspects of:

- observing safety procedures and requirements
- communicating effectively with others involved in or affected by the work
- selecting methods and techniques appropriate to the circumstances
- completing preparatory activity in a systematic manner
- conducting removal and refitting in accordance with workplace and manufacturer/component supplier requirements
- accurately interpreting test results
- completing removal and refitting of driveline components and associated components within workplace timeframes
- equipment is presented to customer in compliance with workplace requirements

Context of, and specific resources for assessment

Application of competence is to be assessed in the workplace or simulated worksite

Assessment is to occur using standard and authorised work practices, safety requirements and environmental constraints

Assessment is to comply with regulatory requirements, including Australian Standards

The following resources should be made available:

- workplace location or simulated workplace
- material relevant to the removal and refitting of driveline components
- equipment, hand and power tooling appropriate to the removal and refitting of driveline components
- activities covering mandatory task requirements
- specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the automotive industry's RS&R Training Package

Assessment methods must confirm consistency and accuracy

EVIDENCE GUIDE

	of performance together with application of underpinning knowledge Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of key competencies Assessment may be applied under project related conditions and require evidence of process Assessment must confirm a reasonable inference that competence is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances It is preferable that assessment reflects a process rather than an event and occurs over a period of time to cover varying quality circumstances. Evidence of performance may be provided by customers, team leaders/members or other persons subject to agreed authentication arrangements 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	

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. Bold italicised wording, if used in the performance criteria, is detailed below. 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.

System components

Types of system components may include FWD driveshafts, independent rear suspension driveshafts and constant velocity joints

WHS

WHS requirements are to be in accordance with legislation/regulations/codes of practice and enterprise safety policies and procedures. This

RANGE STATEMENT	
	may include protective clothing and equipment, use of tooling and equipment, workplace environment and safety, handling of material, use of fire fighting equipment, enterprise first aid, hazard control and hazardous materials and substances
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation/regulations/codes of practice and workplace policies and practices
Safe operating procedures	Safe operating procedures are to include, but are not limited to the conduct of operational risk assessment and treatments associated with vehicular movement, toxic substances, electrical safety, machinery movement and operation, manual and mechanical lifting and shifting, working in proximity to others and site visitors
Emergency procedures	Emergency procedures related to this unit are to include, but are not limited to emergency shutdown and stopping of equipment, extinguishing fires, enterprise first aid requirements and site evacuation
Environmental requirements	Environmental requirements are to include but are not limited to waste management, noise, dust and clean-up management
Quality requirements	Quality requirements are to include, but are not limited to regulations, including Australian Standards, internal company quality policy and standards and enterprise operations and procedures
Statutory/regulatory authorities	Statutory/regulatory authorities may include Federal, State/Territory and local authorities administering acts, regulations and codes of practice
Tooling and equipment	Tooling and equipment may include hand tooling and jacking equipment
Materials	Materials may include cleaning materials, lubricants and sealants
Communications	Communications are to include but are not limited to verbal and visual instructions and fault

RANGE STATEMENT

	reporting and may include site specific instructions, written instructions, plans or instructions related to job/task, telephones and pagers
Information	Sources of information/documents may include: • verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, memos, material safety data sheets, diagrams or sketches • safe work procedures related to the removal and refitting of driveline components • regulatory/legislative requirements pertaining to the automotive industry, including Australian Design Rules • engineer's design specifications and instructions • organisation work specifications and requirements • instructions issued by authorised enterprise or external persons • Australian Standards

Unit Sector(s)

Unit sector	Mechanical Miscellaneous
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Co-requisite units

Not applicable.

Competency field

Competency field	Technical - Driveline and Final Drives
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