



Australian Government

AURLTQ012 Diagnose and repair light vehicle drive shafts

Release: 1

AURLTQ012 Diagnose and repair light vehicle drive shafts

Modification History

Release	Comment
Release 1	New unit of competency.

Application

This unit describes the skills and knowledge required to diagnose and repair faults in the drive shafts of light vehicles. It involves preparing for the task, selecting the correct diagnostic procedure, carrying out the diagnosis and the repair, performing post-repair testing, and completing workplace processes and documentation.

This unit applies to those working within the automotive light vehicle service and repair industry. The drive shafts include those in light vehicles or light commercial vehicles. This unit does not apply to agricultural machinery, heavy commercial vehicles, marine vessels, mobile plant machinery or motorcycles.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Unit Sector

Technical - Driveline and Final Drives

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Diagnose light vehicle drive shaft	1.1 Identify job requirements from workplace instructions 1.2 Obtain and interpret diagnostic information in order to identify diagnostic options required for the job 1.3 Identify hazards and environmental issues, assess potential risks and implement control measures in line with workplace policies 1.4 Identify diagnostic tools and equipment required for the job and examine for serviceability 1.5 Perform diagnostic tests according to workplace procedures and workplace health and safety requirements 1.6 Examine diagnostic test results to identify causes of faults, report findings and make recommendations for necessary repairs or

	adjustments according to workplace procedures
2. Repair and test light vehicle drive shaft	2.1 Obtain and interpret repair information in order to identify repair options required for the job 2.2 Identify repair tools, equipment and materials for the job and examine for serviceability 2.3 Carry out repairs or component replacements and adjustments according to workplace procedures, manufacturer specifications, workplace health and safety and environmental requirements 2.4 Carry out post-repair testing according to workplace procedures, workplace health and safety and environmental requirements to confirm fault rectification and repair any issues identified
3. Complete work processes	3.1 Carry out final inspection to ensure work meets workplace expectations and drive shaft or vehicle is ready for use 3.2 Clear work area and dispose of or recycle materials according to workplace procedures 3.3 Examine and store tools and equipment according to workplace procedures 3.4 Complete documentation according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance and are not explicit in the performance criteria.

Skills	Description
Learning skills to:	locate relevant sources of light vehicle drive shaft information efficiently
Reading skills to:	read and interpret information from workplace procedures and documentation when seeking drive shaft specifications and procedures
Writing skills to:	legibly and accurately fill out workplace documentation when reporting diagnostic findings, making repair recommendations, and recording parts and material used
Oral communication skills to:	- clarify instructions - report diagnostic findings - make repair recommendations
Numeracy skills to:	- measure drive shaft components - use basic mathematical operations, including addition, subtraction

	and understanding of angles in degrees calculate distances, angles, tolerances and deviations from manufacturer specifications
Planning and organising skills to:	- plan own work requirements - prioritise actions to achieve required outcomes - ensure tasks are completed within workplace timeframes
Technology skills to:	use precision measuring equipment, including vernier calipers, micrometers and inclinometers

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AURLTQ012 Diagnose and repair light vehicle drive shafts (Release 1)	AURLTQ002 Diagnose and repair light vehicle drive shafts (Release 1)	Wording changes to ensure compliance with Standards for Training Packages. Combination of performance elements to create three performance criteria. Removal of references to OHS requirements. Removal of range of conditions. Addition of minor elements to knowledge evidence and assessment conditions. Addition of assessor requirements.	Equivalent

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b4278d82-d487-4070-a8c4-78045ec695b1>

Assessment Requirements for AURLTQ012 Diagnose and repair light vehicle drive shafts

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Performance Evidence

The candidate must demonstrate they can perform the following according to the standards defined in the elements, performance criteria and foundation skills of this unit.

The candidate must demonstrate a diagnosis and repair of light vehicle drive shafts that safely follows workplace procedures to meet required outcomes. This includes:

- diagnosis and repair of one rear wheel drive vehicle with drive shaft with universal joints, demonstrating the ability to:
 - remove the drive shaft from the vehicle
 - replace one universal joint
 - refit the drive shaft
- diagnosis and repair of one front wheel drive vehicle with constant velocity joint drive shaft, demonstrating the ability to:
 - remove the drive shaft from the vehicle
 - refit the drive shaft
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Knowledge Evidence

The candidate must demonstrate the following knowledge:

Key policies and procedures relating to the diagnosis, testing and repair of light vehicle drive shafts, including:

- how to locate and identify manufacturers specifications or equivalent documentation and workplace procedures for the diagnosis and repair of light vehicle drive shafts
- the following workplace health and safety requirements for diagnosis and repair of light vehicle drive shafts:
 - safety procedures for working with hazardous oils
- the following environmental requirements for diagnosis and repair of light vehicle drive shafts:
 - procedures for trapping, storing and disposing of oils released from drive shafts
- the following diagnostic testing procedures for light vehicle drive shafts:

- road testing that include drive shaft noise and vibration
- the following repair procedures for light vehicle drive shafts:
 - dismantling drive shafts
 - inspecting drive shafts
 - reassembling and aligning components
- post-repair testing procedures for light vehicle drive shafts
- workplace housekeeping procedures

Light vehicle drive shafts and associated components information, including:

- the operating principles of:
 - torque reaction of rear axle housings
 - torque steer
- the purpose and operation of the following propeller shafts:
 - single and multi-piece shafts
 - universal joints
 - cross and yoke joints
 - double cardan joints
 - lobro joints
 - velocity fluctuation of universal joints
 - shaft alignment
- the purpose and operation of the following constant velocity joints:
 - tripod joints
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Assessment Conditions

The assessment must:

- include access to:
 - an automotive repair workplace or simulated workplace that reflects workplace conditions - where simulation is used, it must reflect real working conditions by modelling industry operating conditions and contingencies, as well as, using suitable facilities, equipment and resources
 - repair orders and workplace instructions relating to diagnose and repair activity
 - workplace procedures relating to diagnose and repair activity
 - manufacturer light vehicle drive shaft specifications and procedures or equivalent documentation to complete diagnose and repair activity
 - light vehicle with front engine and rear wheel drive
 - light vehicle with front wheel drive constant velocity joint drive shaft
 - diagnostic equipment for light vehicle drive shafts
 - tools, equipment and materials required for repair of light vehicle drive shafts

- be demonstrated in the workplace or in a simulated environment that reflects workplace conditions
- be conducted in a safe environment
- automotive repair workplace or simulated workplace
- be assessed in compliance with relevant policies, procedures, processes and operational manuals directly related to the industry sector for which it is being assessed
- confirm consistent performance can be applied in a range of relevant workplace circumstances

Assessor requirements

Assessors of this unit must:

- satisfy the assessor requirements in applicable vocational education and training legislation, frameworks and/or standards
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