



Australian Government

Assessment Requirements for AURLTD013

Carry out advanced light vehicle wheel alignment operations

Release: 1

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Modification History

Release	Comment
Release 1	New unit of competency.

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 advanced light vehicle wheel alignment operations to customer specifications that safely follows workplace procedures to meet required outcomes. This includes:

- measuring, recording and adjusting all of the following angles on all four wheels of two different light vehicles:
 - camber
 - caster
 - steering axis inclination (SAI)
 - toe (toe-in and toe-out)
 - toe-out on turns
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Knowledge Evidence

The candidate must demonstrate the following knowledge:

Key policies and procedures for carrying out light vehicle wheel alignment operations, including:

- how to locate and interpret manufacturers specifications, Australian Design Rules and workplace procedures for carrying out light vehicle wheel alignment pre-checks and light vehicle wheel alignment operations
- workplace procedures for communicating with customers
- the following workplace health and safety requirements relating to light vehicle wheel alignment:
 - procedures for using air jacks
- environmental requirements for carrying out advanced light vehicle wheel alignment operations

- steering system reset procedures to calibrate on-board system sensors with the steering geometry
- vehicle wheel alignment pre-check procedures, including:
 - assessing steering system alignment adjustments against safety and Australian Design Rule (ADR) compliance
 - road testing
 - analysing tyre wear
 - determining wheel run-out
 - determining vehicle height
 - checking frame alignment
- measuring and adjusting steering angles procedures, including:
 - caster
 - camber
 - toe-in
 - toe-out on turns
- workplace housekeeping and documentation procedures

Steering geometry and wheel alignment angles, including:

- Ackermann principle of steering
- camber
- caster
- SAI
- thrust angle
- toe-in and toe-out
- toe-out on turns
- included angle
- point of intersection
- scrub radius

Key reasons for making non-standard alignment settings on driving and ride characteristics, including:

- fitting modified road springs
- fitting revised shock absorbers
- fitting modified sway bars
- altering ride height
- fitting non-standard wheel and tyre combinations
- variations to understeer and oversteer
- off-road use

Key types and uses of wheel alignment systems, including:

- laser aligners
- visual aligners
- camera aligners
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Assessment Conditions

The assessment must:

- include access to:
 - 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 wheel alignment activity
 - workplace procedures relating to wheel alignment activity
 - manufacturer steering system alignment specifications required to complete wheel alignment activity
 - Australian Design Rules
 - two different vehicles requiring steering system adjustments to the angles specified in the performance evidence
 - tools, equipment and materials required for carrying out advanced light vehicle wheel alignment operations
- be demonstrated in the workplace or in a simulated environment that reflects workplace conditions
- be conducted in a safe environment
- 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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Links

Companion Volume Implementation Guides are found in VETNet -

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