



Australian Government

**Assessment Requirements for
AURMTA008 Apply aerodynamic and
vehicle dynamic principles and effects to
competition vehicles**

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Modification History

Release	Comment
Release 1	New unit of competency.

Performance Evidence

Before competency can be determined, individuals must demonstrate they can perform the following according to the standards defined in this unit's elements, performance criteria, range of conditions and foundation skills:

- determine and supervise the configuration of the following settings on two different competition vehicles:
 - tyre settings
 - steering and suspension settings
 - aerodynamic device settings.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- work health and safety (WHS) and occupational health and safety (OHS) requirements relating to applying aerodynamic and vehicle dynamic principles and effects to competition vehicles, including procedures for identifying hazards and managing risks
- key requirements of controlling body rules, category rules and supplementary regulations relating to establishing settings
- terminology, principles and effects of the physics involved in resistance and motion
- aerodynamic and vehicle dynamic principles and their effects on competition vehicles, including:
 - tyre settings, including:
 - construction and compound
 - size, including stagger
 - pressures
 - loadings
 - temperatures

- steering and suspension settings, including:
 - wheel rate and linkage or leverage ratios
 - spring rate and spring pre-load
 - vehicle weight, sprung and unsprung weight
 - anti-roll bar rate where fitted
 - steering angles, including toe in and out, camber and caster
 - roll centres
 - ride height
 - centre of gravity
- aerodynamic device settings, including:
 - wing angles, height and location
 - body panels and fittings
 - ground effects and ride height
 - frontal areas
 - lift reduction and drag reduction
 - downforce generation
 - downforce and drag compromise
- competition vehicle test methods and procedures, including procedures for record keeping
- mathematical computations for determining optimum settings.

Assessment Conditions

Assessors must satisfy NVR/AQTF assessor requirements.

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessment must include direct observation of tasks.

Where assessment of competency includes third-party evidence, individuals must provide evidence that links them to the competition vehicle settings they have configured, e.g. work order.

Assessors must verify performance evidence through questioning on skills and knowledge to ensure correct interpretation and application.

The following resources must be made available:

- motor sport workplace or simulated workplace
- two different competition vehicles requiring configuration resetting
- controlling body rules, category rules and supplementary regulations for a motor sport event
- tools and equipment appropriate for adjusting and modifying tyres, steering and suspension, and aerodynamic device settings.

Links

Companion Volume implementation guides are found in VETNet -

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

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