



Australian Government

**Assessment Requirements for AURLTD005
Diagnose and repair light vehicle
suspension systems**

Release: 1

Assessment Requirements for AURLTD005 Diagnose and repair light vehicle suspension systems

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:

- diagnose and repair a fault in a light vehicle MacPherson strut suspension system, in which the work must involve removing and refitting or replacing the MacPherson strut
- diagnose and repair a fault in a light vehicle coil spring suspension system, in which the work must involve removing and refitting or replacing the coil spring
- diagnose and repair a fault in one of the following suspension system components, in which the work must involve removing the spring component from the vehicle:
 - leaf spring suspension system
 - torsion bar suspension system
 - pneumatic suspension system.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- work health and safety (WHS) and occupational health and safety (OHS) requirements relating to diagnosing and repairing light vehicle suspension systems, including procedures for:
 - working with stored energy in springs and torsion bars, including when removing tension from suspension components
 - moving heavy suspension components
- operating principles of light vehicle suspension systems and associated components, including:
 - rigid and independent suspensions
 - sprung and unsprung mass

- ride and curb height
- application, purpose and operation of light vehicle suspension systems and components, including:
 - coil spring suspension, including:
 - types of coil springs and deflection rates
 - front coil spring suspension arrangements, including short arm and long arm suspension
 - rear coil spring suspension arrangements
 - strut or MacPherson suspension
 - leaf spring suspension
 - torsion bar suspension
 - multi-link suspension
 - hydraulic suspension
 - pneumatic suspension
 - suspension system components, including:
 - ball joint function and operation
 - stabiliser bar function and operation
 - Watts link and Panhard rod function and operation
 - independent rear suspension arrangements and operation
 - shock absorber function and operation, including:
 - gas-filled shock absorbers
 - strut or MacPherson shock absorbers
 - hub assemblies and bearing arrangements, including:
 - hubs with tapered roller bearings
 - hubs with unitised bearings
- diagnostic testing procedures for light vehicle suspension systems, including procedures for analysing:
 - component wear
 - abnormal system noise
- repair procedures for light vehicle suspension systems, including procedures for:
 - removing and replacing ball joints, suspension bushes, shock absorbers, MacPherson struts, coil springs, leaf springs and torsion bars
 - compressing coil springs
 - replacing and adjusting bearings for hubs with:
 - tapered roller bearings
 - unitised bearings
- post-repair testing procedures for light vehicle suspension systems.

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 light vehicle suspension systems that they have worked on, e.g. repair orders.

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

The following resources must be made available:

- automotive repair workplace or simulated workplace
- workplace instructions
- manufacturer suspension system specifications
- light vehicles with faults in the suspension systems specified in the performance evidence
- diagnostic equipment for light vehicle suspension systems
- tools, equipment and materials appropriate for repairing light vehicle suspension systems.

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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