Australian Government

Assessment Requirements for AURLTD105 Diagnose and repair light vehicle suspension systems

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with AUR Automotive Retail, Service and Repair Training Package Version 6.0

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- diagnose and repair a fault in:
  - a MacPherson strut suspension system, in which the work must involve removing and refitting or replacing the MacPherson strut
  - a coil spring suspension system, in which the work must involve removing and refitting or replacing the coil spring
  - at least 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
- carry out a diagnostic test in the course of the above work for at least one of the following faults:
  - worn components
  - abnormal system noise.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- methods to locate and interpret information required to diagnose and repair light vehicle suspension systems, including:
  - information provided by customers and supervisors
  - manufacturer specifications and procedures or equivalent documentation
- workplace procedures required to diagnose and repair light vehicle suspension systems, including:
  - establishing serviceability of tools and equipment

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- documentation procedures
- housekeeping procedures, including:
  - examination of tools and equipment
  - storage of equipment
  - identification, tagging and isolation of faulty equipment
  - disposal of excess materials
  - recycling procedures
- workplace health and safety (WHS) requirements relating to diagnosing and repairing light vehicle suspension systems, including identifying hazards and controlling risks associated with:
  - working with stored energy in springs and torsion bars, including procedures for removing tension from suspension components
  - manual handling heavy suspension system components
- principles of light vehicle suspension systems and associated components, including:
  - rigid and independent suspensions
  - sprung and unsprung mass
  - ride and curb height
- 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

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- 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
    - 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

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.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

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Links

Companion Volume Implementation Guide is found on VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b4278d82-d487-4070-a8c4-78045ec695b1

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