



Australian Government

AURLTD101 Select and install performance enhanced suspension system products

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with the Automotive Retail, Service and Repair Training Package Version 7.0. Supersedes and is equivalent to AURLTD001 Select and install performance enhanced suspension system products.

Application

This unit describes the skills and knowledge required to, select and install enhanced suspension products to suit a customer's suspension system modification requirements. It involves preparing for the task, assessing requirements, installing enhanced suspension systems, testing system functionality, and completing workplace procedures and documentation. The suspension systems are those of four-wheel drive (4WD) vehicles, light vehicles, light commercial vehicles or motor sport vehicles.

It applies to those who undertake routine installation tasks in the automotive service and repair industry.

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

Unit Sector

Technical - Steering and Suspension

Elements and Performance Criteria

ELEMENT	Performances CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify job requirements	1.1 Determine job requirements and confirm practicality of proposed suspension system enhancements according to safety requirements 1.2 Determine cost and timeframe of enhanced suspension system installation and create a quote for the proposed work 1.3 Confirm customer authorisation of quote according to

	workplace policies and procedures 1.4 Select installation option according to the identified job requirements 1.5 Test vehicle and confirm proposed modifications are relevant and appropriate to safely incorporate safety incorporate performance enhanced systems
2. Prepare for modification	2.1 Access and interpret manufacturer specifications and workplace inspection procedures 2.2 Identify hazards and environmental issues associated with work tasks, assess potential risks and implement control measures according to workplace policies and procedures 2.3 Select and source performance enhanced suspension system products according to job requirements 2.4 Check products, tools and equipment for serviceability 2.5 Remove and store original suspension products from vehicle according to workplace procedures and safety requirements
3. Install and test performance enhanced suspension products	3.1 Install new performance enhanced suspension products according to manufacturer specifications, workplace procedures and safety requirements, without interfering with existing systems 3.2 Conduct vehicle road test and rectify suspension system functionality faults where required according to workplace procedures 3.3 Conduct final inspection and confirm vehicle is ready for use according to road safety standards and safety requirements
4. Complete work processes	4.1 Clean work area, collect recyclable material and dispose of waste and non-recyclable materials 4.2 Store tools and equipment according to workplace procedures 4.3 Document vehicle safety inspection and performance enhanced product installation process according to workplace procedures

Foundation Skills

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

Skill	Description
Learning	locates appropriate sources of information efficiently
Numeracy	understands and communicate suspension system information in degrees and metric and imperial units of measurement

	• measures performance enhanced suspension system products and use basic mathematical operations • uses basic mathematics to prepare quotes
Oral communication	• clarifies instructions, report findings, gain customer approval of quote and make installation recommendation
Reading	• interprets components specifications, work sheets, electrical diagrams, programming, code and inspection forms
Writing	• legibly and accurately fills out workplace documentation for reports, installation recommendations and records
Planning and organising	• plans own work requirements and prioritise actions to achieve required outcomes and ensure tasks are completed within workplace timeframes
Technology	• uses specialised tools and equipment

Unit Mapping Information

Supersedes and is equivalent to AURLTD001 Select and install performance enhanced suspension system products.

Links

Companion Volume Implementation Guide is found on VETNet -

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

Assessment Requirements for AURLTD101 Select and install performance enhanced suspension system products

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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:

- select and install at least one of the following performance enhanced suspension system:
 - suspension coil springs with modified spring rates and/or heights
 - modified shock absorbers and/or struts
 - modified sway bars
 - modified suspension bushes
 - modified torsion bars.

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:

- key work health and safety (WHS) and regulatory requirements relating to selecting and installing performance enhanced suspension system products, including procedures for managing stored energy in springs and torsion bars
- workplace policies and procedures required to select and install performed enhanced suspension systems, including:
 - establishing serviceability of equipment
 - document procedures and requirements
 - identifying hazards and controlling risks
- key theories and methodologies of suspension systems
- standards, rules and specifications relating to suspension system products, including:
 - road safety standards
 - operation instructions, code software and diagrams
 - The Australian Design Rules (ADRs)

- state government rules and regulations
- requirements of Vehicle Standards and modifications
- key features of safety systems in vehicles, including:
 - advanced driver-assistance systems
 - electronic control systems
 - safety restraint systems
 - telematics systems
- operating principles of suspension systems, including:
 - rigid and independent suspensions
 - sprung and unsprung mass
 - ride and curb height
- key features of performance enhanced suspension system products, including:
 - shock absorbers
 - guard covers
 - impact sensors
 - coil springs, torsion bars and leaf springs
 - adjustable coil-overs
 - rubber and urethane bushings
 - sway bars and sway bar links
 - strut mounts
- key policies and procedures for fitting, adjusting and removing performance enhanced suspension system components, including:
 - interpreting original equipment manufacturer (OEM) guides
 - integrating accessories to controller area network data bus (CAN-bus) system
- key procedures for operating equipment to test suspension systems, including:
 - shock absorber testers
 - suspension system road testing principles and procedures.

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 knowledge of enhanced suspension systems they have applied, e.g. work 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:

- work sheets, workplace instructions and manufacturing documentation related to enhanced suspension system products
- workplace policies and procedures
- tools, equipment and materials required to select and install enhanced suspension system products
- PPE required to select and install enhanced suspension system products

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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