



Australian Government

AURETR149 Apply knowledge of ADAS technology in vehicle pre-repair scans

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

Application

This unit describes the skills and knowledge required to apply knowledge and key features of autonomous driver assistance systems (ADAS) when undertaking a pre-repair scan of a vehicle. It involves identifying ADAS components, undertaking a diagnostic scan of the ADAS present to identify the damage for repair, and evaluating their own knowledge of ADAS, escalating tasks to external repairers. This unit does not involve undertaking direct repairs to the ADAS or the clearing of any diagnostic trouble codes related to these systems, which are to be undertaken by authorised repairers with the required equipment and manufacturer specifications.

The unit applies to those working in the automotive service and repair industry. ADAS technology includes that used in agricultural machinery, heavy commercial vehicles, light vehicles, vessels, motorcycles, and outdoor power equipment.

Licensing, legislative, regulatory or certification requirements may apply to this unit at the time of publication.

Unit Sector

Electrical Technical - Electrical and Electronic

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify ADAS components used in vehicle pre-repair scan	1.1 Identify and clarify job requirements from workplace instructions 1.2 Identify information, tools and equipment required for diagnosis activity 1.3 Apply workplace procedures to locate ADAS technology and identify its components according to manufacturer

ELEMENTS	PERFORMANCE CRITERIA
	specifications 1.4 Identify hazards and environmental issues associated with activity, assess potential risks and implement control measures in line with workplace policies and procedures
2. Identify damage to ADAS components	2.1 Identify information required to identify ADAS faults, including any limitations to workplace procedures for diagnosis and repair activity 2.2 Carry out diagnostic scan of ADAS according to manufacturer specifications and workplace procedures 2.3 Carry out visual inspection of components to identify any damage 2.4 Identify and document diagnostic scan and visual inspections findings with reference to workplace procedures 2.5 Confirm and report diagnosis findings according to workplace procedures, recording any limitations
3. Evaluate knowledge of ADAS	3.1 Check knowledge regularly with colleagues and supervisor to ensure currency and accuracy 3.2 Identify any authorised external repairers for escalation of further diagnosis and repair 3.3 Refer diagnostic findings to required workplace personnel 3.4 Complete pre-repair scan documentation according to workplace procedures

Foundation Skills

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

SKILL	DESCRIPTION
Learning	- Locates required sources of information efficiently - Applies a sequenced plan for a specific task.
Numeracy	Measure materials and components to determine compliance with specifications.
Oral communication	- Clarifies task instructions - Obtains information from customers and supervisors.
Reading	Interprets ADAS-related information in manufacturer specifications or equivalent documentation.
Planning and organising	- Plans own work requirements - Escalates actions to required workplace personnel to achieve

SKILL	DESCRIPTION
	outcomes Ensures tasks are completed within workplace timeframes.
Technology	Uses tools and diagnostic equipment.

Unit Mapping Information

New unit.

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 AURETR149 Apply knowledge of ADAS technology in vehicle pre-repair scans

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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:

- conduct a pre-repair scan on at least three different vehicles or machinery.

In the course of the above, the candidate must:

- identify and locate the presence of ADAS on each of the vehicles or pieces of machinery
- identify tasks where ADAS technology must be recalibrated by an authorised repairer or dealer.

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 apply knowledge of ADAS technology during vehicle pre-repair scans, including:
 - information provided by customer and supervisors
 - manufacturer specifications and procedures or equivalent documentation
- workplace procedures required to apply knowledge of ADAS technology during vehicle pre-repair scans, including:
 - establishing serviceability of tools and equipment
 - escalation of tasks to authorised external repairers or dealers
 - using diagnostic scan tools and interpreting fault codes
 - 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
- work health and safety (WHS) requirements relating to repairing ADAS, including procedures for:
 - using specialised tools and equipment
 - selecting and using personal protective equipment (PPE)
 - identifying hazards and controlling risks associated with wearing jewellery while working around electrical systems
- external repairers authorised to diagnose and repair ADAS technology including:
 - original equipment manufacturers
 - dealerships
- key features, components and operating principles of ADAS, including:
 - sonar sensors
 - radar, light detection and ranging (LIDAR) and cameras
- types of ADAS, including:
 - adaptive cruise control
 - collision avoidance
 - blindspot detection
- techniques for reading and interpreting technical information
- common types of faults, including:
 - connector damage
 - terminal damage
 - bent brackets
- visual inspection procedures for damage to ADAS and related components, including:
 - mirror measurements
- diagnostic testing procedures for ADAS and their limitations, including:
 - accessing and interpreting scan tool system data
 - diagnostic trouble codes (DTCs)
 - live data
 - variations in scan tool system data where manufacturer specifications are not present
- safety implications for customers in diagnosing ADAS faults.

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 ADAS they have applied, 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 ADAS specifications or equivalent documentation
- three different vehicles.

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

Links

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