



Australian Government

AUMATR002 Install and maintain motor vehicle instrumentation sensors and transmitters

Release: 1

AUMATR002 Install and maintain motor vehicle instrumentation sensors and transmitters

Modification History

Release	Comment
Release 1	Unit updated to reflect the new standards for Training Packages Replaces AUMATR4002 Use sensors to acquire motor vehicle data for development purposes

Application

This unit describes the performance outcomes required to install, adjust and maintain instrumentation sensors and transmitters used to gather data for development purposes.

It applies to those in an automotive and related component manufacturing environment.

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

Competency Field

Common

Unit Sector

Technical - Electrical and Electronic

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions section
1. Identify sensors, transmitters and final control elements	1.1 Workplace requirements relevant to the use of sensors, transmitters and final control elements are identified with appropriate personnel 1.2 <i>Instructions</i> and work plans are identified and interpreted 1.3 Specifications from data sheets, circuit diagrams and engineering drawings are determined 1.4 Sensors, transmitters and final control elements are selected

Elements	Performance Criteria
	and prepared, and installation is planned and documented
2. Install sensors, transmitters and final control elements	2.1 Equipment is prepared for installation 2.2 Equipment is installed 2.3 Test is set up to determine correct calibration, operation and data feed
3. Maintain and diagnose faults with sensors, transmitters and final control elements	3.1 Preventative maintenance schedules are implemented 3.2 Periodic tests to ensure continued integrity of data are undertaken 3.3 Sample data is viewed periodically for obvious irregularities and unexplained aberrations
4. Complete fault documentation and plan corrective action	4.1 Operation of sensors, transmitters and final control elements is monitored and assessed against predetermined specifications and manufacturer's technical data 4.2 Fault conditions are identified, localised and monitored 4.3 Faults are documented and reported to appropriate personnel
5. Restore equipment and finalise housekeeping	5.1 Equipment is recovered, and checked for serviceability and calibration 5.2 Serviceable equipment is returned to store for future use 5.3 Unserviceable equipment is sent for repair or disposal according to workplace procedures 5.4 Workplace documentation and test results are completed

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Skills	Description
Reading skills to:	- interpret workplace procedures - interpret manufacturer installation instructions, installation reports and work plans.
Writing skills to:	- develop installation plans - record installation outcomes.
Oral communication skills to:	- communicate irregularities and identified faults with team members - discuss work plans and schedules with relevant personnel.
Numeracy skills to:	- interpret vehicle data - interpret circuit diagrams and engineering drawings

	• determine workplace timelines • calculate material requirements • use, test and calibrate measuring equipment.
Digital literacy skills to:	• use electronic sensors, transmitters and final control systems.
Planning and organising skills to:	• plan, prepare and organise the installation of instrumentation sensors, transmitters and final control elements • prepare work area, materials and equipment.

Range of Conditions

This section specifies work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included. Bold italicised wording, if used in the performance criteria, is detailed below.

<i>Instructions</i> must include:	• job sheets, work plans, specifications and drawings • use and operation of tools and equipment • work health and safety (WHS) requirements relating to installing and maintaining motor vehicle instrumentation sensors and transmitters • workplace and manufacturer instructions.
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Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bd587669-08b3-4cd5-85f0-f9fa0c6304c1>

Assessment Requirements for AUMATR002 Install and maintain motor vehicle instrumentation sensors and transmitters

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Performance Evidence

Before competency can be determined, individuals must have competently installed, adjusted and maintained instrumentation sensors and transmitters on a minimum of three occasions.

Individuals must demonstrate they can:

- comply with workplace procedures and work health and safety (WHS) requirements relating to installing, adjusting and maintaining instrumentation sensors and transmitters
- comply with industry code of practice in using instrumentation sensors, signal transmitters and final control units
- communicate vehicle data with co-workers
- select tools and equipment appropriate to the installation and maintenance of motor vehicle instrumentation sensors and transmitters
- check the currency of equipment calibrations
- complete test results relating to installing, adjusting and maintaining instrumentation sensors and transmitters.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- WHS requirements relating to installing, adjusting and maintaining instrumentation sensors and transmitters
- workplace procedures to gather data from vehicle sensors for further development
- types of sensors, signal transmitters and final control elements, and procedures for their safe use, operation and maintenance
- procedures for identifying faulty sensors
- recording and reporting documentation and vehicle data.

Assessment Conditions

Assessors must satisfy SNR/AQTF assessor requirements.

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

Where assessment of competency includes third-party evidence, individuals must provide evidence that links them to the vehicles 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 manufacturing workplace or simulated workplace
- sensors to acquire motor vehicle data for development purposes
- tools and equipment required to gather data
- workplace and manufacturer instructions
- work plans and sensor specifications
- workplace procedures to gather data from vehicle sensors for further development.

Links

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