



Australian Government

ICTRFN302 Install mobile telecommunications in motor vehicles

Release: 1

ICTRFN302 Install mobile telecommunications in motor vehicles

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 2.0.

Application

This unit describes the skills and knowledge required to fit radio transceivers and cellular mobile phone handsets with powered docking cradles and to install peripheral components such as external antenna, microphone, loudspeaker, mobile data terminals and global positioning systems (GPS) in domestic, commercial or industrial motor vehicles.

It applies to individuals working as installers and technicians who liaise with clients to determine all technical requirements and interpret all regulatory and legislative requirements appropriately.

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

Unit Sector

Telecommunications – radio frequency networks

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. Plan for installation of mobile telecommunications in motor vehicles	1.1 Obtain relevant legislation, codes, regulations and standards and follow work health and safety (WHS) and environmental requirements for given work 1.2 Obtain mobile telecommunications equipment and manufacturer's installation documentation 1.3 Determine critical automotive electrical systems that need to be considered during installation process to prevent any damage to vehicle system

	1.4 Verify installation requirements from client and advise client of issues affecting performance 1.5 Obtain tools and test equipment required for safe work practices
2. Install mobile equipment	2.1 Attach primary mobile telecommunications equipment to vehicle using fixing and fastening hardware, clear of air bag deployment and according to client, vehicle and equipment manufacturer and WHS requirements 2.2 Wire primary mobile telecommunications equipment to vehicle electrical system using industry wiring practices without impacting on other electrical systems 2.3 Attach and wire peripheral mobile telecommunications equipment and components of installation to client's and manufacturer's requirements 2.4 Replace any existing fittings or vehicle components removed during installation and restore to original condition 2.5 Test completed installation to verify that operation of critical automotive electrical systems have not been affected, and rectify if required
3. Complete installation	3.1 Restore vehicle and worksite to client's satisfaction by disposing of waste materials according to environmental requirements 3.2 Note and document any damage that may have occurred during installation and report according to enterprise procedures 3.3 Instruct client on operation of installed equipment 3.4 Complete all administrative tasks and file according to enterprise requirements

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	2.1, 2.3, 3.2, 3.4	Recognises and interprets textual information from relevant sources to determine job specifications and regulatory and legislative requirements
Writing	1.4, 3.2	Uses clear, specific and industry related terminology to complete and update workplace documentation and in written communications with clients

Oral Communication	1.4, 3.3	• Uses specific and relevant language to clearly articulate technical information and appropriate tone for successful negotiations • Uses questioning and listening techniques to determine the understanding of others
Numeracy	2.2, 2.3, 2.5	• Performs calculations appropriate for measuring and estimating materials and for testing installations
Navigate the world of work	1.1, 2.1, 3.2	• Takes personal responsibility for adherence to legal and regulatory requirements, with specific reference to safe industry practices • Understands the nature and purpose of own role and associated responsibilities, and how it contributes to the work of others in the immediate work context
Get the work done	1.1-1.3, 1.5, 2.1-2.5, 3.4	• Determines job priorities, sequences the steps involved in clearly defined and familiar tasks, and identifies and assembles the resources and access required • Takes responsibility for routine decision making by selecting from a range of predetermined options in routine situations, identifying and taking situational factors into account • Identifies and implements standard solutions for typical installation challenges • Reflects on outcomes and identifies what worked and where things could be done differently in the future

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTRFN302 Install mobile telecommunications in motor vehicles	ICTRFN3070A Install mobile telecommunications in motor vehicles	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

Assessment Requirements for ICTRFN302 Install mobile telecommunications in motor vehicles

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Performance Evidence

Evidence of the ability to:

- obtain installation parameters and compliance requirements in preparation for installation
- install cable loom, wiring mobile and peripheral equipment
- test the equipment to verify correct installation and operation.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- outline customer service principles, particularly dealing with clients face to face
- discuss electrical fundamentals
- summarise electromagnetic radiation (EMR)
- discuss enterprise or service-specific knowledge of products and services supplied
- outline objectives and methods of training for product use for client education
- summarise work health and safety (WHS) principles and enterprise-specific job safety analysis (JSA) requirements
- provide an overview of mobile radio and cellular radio product range and connection methods
- summarise pre-installation enterprise-specific requirements
- explain the following aspects of radio frequency (RF):
 - principles
 - safety
 - theory
- explain return path technology
- discuss telephony principles to support return path awareness

- summarise test set ups for final testing
- outline vehicle electrical, electronics and computer-managed systems.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances should be typical of those experienced in the telecommunications – radio frequency networks field of work and include access to:

- vehicles and sites at which installation may be conducted
- testing equipment currently used in industry
- relevant regulatory and equipment documentation.

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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