

IMICB07 Install motor vehicle ancillary units and components in large commercial and passenger vehicles



Overview

This standard identifies the competencies needed to install a range of units and components on large commercial and passenger vehicles in accordance with approved procedures to organisational and manufacturers' standards. It requires the knowledge and understanding to enable application of installation techniques possible given the constraints that may apply, while ensuring awareness of the regulatory policies and procedures that may be involved. Electrical and electronic knowledge relating to the methods employed to plan and prepare the installation to the required specification.

The extent of responsibility requires work to an agreed specification. If, in the course of the work activity, this specification requires changing or modifying it is expected that you would use your knowledge, skills and experience to initiate an alternative route without compromising the quality of the assembly.

IMICB07

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Performance criteria

You must be able to:

- P1. use the appropriate personal protective equipment when installing **ancillary units and components**
- P2. support your installation activities by reviewing
 - P2.1. vehicle technical data, drawing and diagrams
 - P2.2. assembly procedures and techniques
 - P2.3. legal requirements
- P3. select, prepare and use correctly all the tools and equipment required following manufacturers' instructions
- P4. Install **ancillary units and components** following:
 - P4.1. manufacturers' data and instructions
 - P4.2. approved methods/procedures
 - P4.3. your workplace manuals and procedures
 - P4.4. health, safety, environmental and legal requirements
- P5. work in a way which minimises the risk of:
 - P5.1. damage to other vehicle systems, units and components
 - P5.2. contact with leakage and hazardous substances
 - P5.3. damage to your working environment
 - P5.4. injury to self and others
- P6. install ancillary units and components within the limits of your responsibility
- P7. ensure that the installed component meets the specified operating conditions
- P8. deal promptly and effectively with problems within your control and report those that cannot be solved to the appropriate person
- P9. ensure your records are accurate, complete and passed to the relevant person(s) within the agreed timescale and in the format required
- P10. complete all installation activities within the agreed timescale
- P11. report any anticipated delays in completion to the relevant person(s) promptly

IMICB07

Install motor vehicle ancillary units and components in large commercial and passenger vehicles



Knowledge and understanding

You need to know and understand:

Relevant health and safety legislation, regulations and safe working procedures

- K1. the legal requirements relating to the vehicle (including road safety requirements)
- K2. the implications on an Operator's Licence of not carrying out repairs and inspections correctly
- K3. the legislation and workplace procedures relevant to:
 - K3.1. health and safety
 - K3.2. the environment (including waste disposal)
 - K3.3. appropriate personal and vehicle protective equipment
- K4. your workplace procedures for:
 - K4.1. recording installation information
 - K4.2. the referral of problems
 - K4.3. reporting delays to the completion of work
- K5. the work that needs to be done and the standard required
- K6. the extent of your own responsibility and to whom you should report if you have problems that you cannot solve
- K7. the control procedures for reporting defective tools and equipment
- K8. the importance of documenting installation information
- K9. the importance of reporting the progress and completion of the installation including how different types of installation reports are presented to ensure clarity and accuracy of detail
- K10. the relationship between time, costs and productivity
- K11. the hazards associated with working on or near high voltage electrical vehicle components

Use of technical information

- K12. how to find, interpret and use sources of information applicable to electrical unit and component removal and replacement
- K13. the importance of using the correct sources of technical information

Ancillary unit operation and construction

- K14. how electrical ancillary units and components are constructed, removed and replaced for the classification of vehicle worked upon
- K15. how electrical ancillary units and components operate for the classification of vehicle worked upon
- K16. the basic principles of hydraulics and pneumatics involved in ancillary units

IMICB07

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Installation methods, techniques and procedures

- K17. the type of constraints which influence the installation plan
- K18. the methods, techniques and procedures for installing ancillary units including how to check and commission a completed installation to ensure it meets company and regulatory standards
- K19. the methods used to check compliance with specification, including checks for correct operation, accuracy, alignment and profile, and security of components/parts

IMICB07

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Scope/range

1. Units/Components to be installed include:

- 1.1. Security systems
- 1.2. Hydraulic/pneumatic systems
- 1.3. Electrical/electronic systems
- 1.4. Comfort facilities

2. Tools and equipment are:

- 2.1. hand tools
- 2.2. manufacturer's specified and specialist tools
- 2.3. workshop equipment

Commented [CH1]: Is this enough detail or do we need more here? If this is to be suitable for both HV and B&C sectors we need to consider what this looks like. It may be that we need separate standards if there is not enough commonality.

Commented [CH2]: Is this enough? Are there any specialist tools?

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Glossary

Agreed timescales:

Examples include: manufacturer's recommended work times, job times set by your company or a job time agreed with a specific customer.

Constraints:

Examples include: costs, availability of materials and equipment, regulations, manufacturer's construction, legislation and warranty.

Large Commercial and Passenger Vehicles:

These are medium and large goods vehicles, buses and coaches of 3500kgs gross vehicle mass (GVM) and above.

Sources of information:

Examples include: data sheets; specifications, inspection sheets, vehicle records, workshop manuals and procedures, manufacturers' instructions, diagnostic reports, repair schedules and installation schedules

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Developed by	IMI Ltd
Version number	1
Date approved	not yet approved
Indicative review date	March 2024
Validity	New
Status	Original
Originating organisation	IMI Ltd
Original URN	IMIHVB07
Relevant occupations	Bus and Coach Coachbuilder
Suite	Coachbuilding
Key words	Install; large commercial vehicle; large passenger vehicle; ancillary units; components;