
Overview

This standard is about removing and replacing units and components previously identified as faulty, damaged, deteriorated or where the customer has requested replacements. It is also about evaluating the performance of replaced units and components.

The units and components concerned are those not replaced as part of normal routine heavy vehicle trailer maintenance (servicing) activities.

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Performance

criteria

- You must be able to:
- P1 use suitable personal and vehicle protective equipment throughout all heavy vehicle trailer maintenance activities
 - P2 support your removal and replacement activities by reviewing
 - P2.1 heavy vehicle trailer technical data
 - P2.2 removal and replacement procedures
 - P2.3 legal requirements
 - P3 prepare, check and use all the **equipment** required following manufacturers' instructions
 - P4 carry out all removal and replacement activities following;
 - P4.1 manufacturers' instructions
 - P4.2 your workplace procedures
 - P4.3 health and safety requirements
 - P5 work in a way which minimises the risk of:
 - P5.1 damage to other heavy vehicle trailer systems
 - P5.2 damage to other heavy vehicle trailer components and units
 - P5.3 contact with leakage
 - P5.4 contact with hazardous substances
 - P6 ensure replaced **electrical auxiliary units and components** conform to the heavy vehicle trailer operating specification and any legal requirements
 - P7 promptly record and report any additional faults you notice during the course of your work
 - P8 use suitable **testing methods** to evaluate the performance of the reassembled system accurately
 - P9 ensure the reassembled system performs to the heavy vehicle trailer operating specification and meets any legal requirements prior to return to the customer
 - P10 ensure your records are accurate, complete and promptly passed to the relevant person(s) in the format required
 - P11 complete all removal and replacement activities within the agreed timescale
 - P12 promptly report any expected delays in completion to the relevant person(s)

Knowledge and understanding

You need to know and understand:

Legislative and organisational requirements and procedures

- K1 the legal requirements relating to the heavy vehicle trailer (including road safety and refrigerant handling requirements)
- K2 the health and safety legislation and workplace procedures relevant to heavy vehicle trailer maintenance activities and personal and vehicle trailer protection
- K3 your workplace procedures for
 - K3.1 recording removal and replacement information
 - K3.2 the referral of problems
 - K3.3 reporting delays to the completion of work
- K4 the importance of documenting removal and replacement information
- K5 the importance of working to agreed timescales and keeping others informed of progress
- K6 the relationship between time and costs
- K7 the importance of promptly reporting anticipated delays to the relevant person(s)

Use of technical information

- K8 how to find, interpret and use sources of information applicable to electrical unit and component removal and replacement
- K9 the importance of using the correct sources of technical information
- K10 the purpose of and how to use identification codes

Electrical auxiliary system operation and construction

- K11 how **electrical auxiliary units and components** are constructed, removed and replaced for the classification of heavy vehicle trailer worked upon
- K12 how **electrical auxiliary units and components** operate for the classification of heavy vehicle trailer worked upon

Equipment

- K13 how to prepare, check and use all the removal and replacement **equipment**

Electrical and electronic principles

- K14 heavy vehicle trailer earthing principles and earthing methods
- K15 electrical and electronic principles associated with electrical auxiliary systems, including types of sensors and actuators, their application and operation
- K16 types of circuit protection and why these are necessary
- K17 electrical safety procedures
- K18 how lighting, warning, and auxiliary circuits work
- K19 electric symbols, units and terms
- K20 electrical/electronic control system principles

Electrical unit and component removal and replacement

- K21 how to remove and replace **electrical auxiliary units and components** for the classification of heavy vehicle trailer worked upon
- K22 how to test and evaluate the performance of replacement **electrical auxiliary units and components** and the reassembled system against the heavy vehicle trailer operating specifications and any legal requirements
- K23 the relationship between **testing methods** and the **electrical auxiliary units and components** replaced – the use of appropriate test methods
- K24 the manufacturer's specification for the type and quality of **electrical auxiliary units and components** to be used
- K25 how to work safely avoiding damage to other heavy vehicle trailer systems, components and units and contact with leakage and hazardous substances

Scope/range

- 1. Equipment** is, for example:
 - 1.1. hand tools
 - 1.2. special workshop tools
 - 1.3. general workshop equipment
 - 1.4. electrical meters
- 2. Testing methods** are:
 - 2.1. sensory
 - 2.2. functional
- 3. Electrical auxiliary units and components** are for:
 - 3.1. lighting systems
 - 3.2. body operating systems
 - 3.3. tracking, security and alarm systems
 - 3.4. audible systems
 - 3.5. monitoring and instrumentation systems
 - 3.6. networking systems

**Additional
information**

This section contains examples and explanations of some of the terms used but does not form part of the standard.

Glossary

Agreed timescales:

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

Heavy Vehicle Trailer:

These include:

DVSA category O3: Trailers over 3,500 kg but not exceeding 10,000kg.

DVSA category O4: Trailers with a DTAW exceeding 10,000kg.

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Developed by	IMI
Version number	2
Date approved	March 2022
Indicative review date	March 2025
Validity	Current
Status	Original
Originating organisation	IMI Ltd
Original URN	HVT03
Relevant occupations	Heavy Vehicle Trailer Service Technician
Suite	Heavy Vehicle Trailer
Key words	Remove; Replace; Heavy Vehicle Trailer; Electrical; Auxiliary; Units; Components;