

Overview

This standard is about removing and replacing units and components where dismantling and re-assembly of mechanical handling and chassis systems is required. It is also about evaluating the performance of replaced units and components.

The units and components concerned are those ~~outside these~~not replaced as part of normal routine, lift truck maintenance (servicing) activities.

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Performance**criteria**

- You must be able to:
- P1 wear suitable personal protective equipment throughout all removal and replacement activities
 - P2 support your removal and replacement activities by reviewing:
 - P2.1 lift truck technical data
 - P2.2 removal and replacement procedures
 - P2.3 legal requirements
 - P3 prepare, inspect 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 lift truck systems
 - P5.2 damage to other lift truck components and units
 - P5.3 injury to yourself and others
 - P5.4 contact with hazardous substances
 - P5.5 instability when working on the lift truck
 - P6 ensure replaced mechanical handling and chassis units and components conform to the lift truck operating specification and any legal requirements
 - P7 promptly record and report any additional faults you notice during the course of your work ~~promptly~~
 - P8 use suitable testing methods to evaluate the performance of the reassembled system
 - P9 ensure the reassembled mechanical handling and chassis system performs to the lift truck 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) ~~promptly~~ 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) in authority ~~promptly~~

Knowledge and understanding

You need to know and understand:

Legislative and organisational requirements and procedures

- K1 the legal requirements relating to the lift truck
- K2 the health and safety legislation and workplace procedures relevant to lift truck removal and replacement activities including PPE
- K3 3. 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 and purpose of recording removal and replacement activities
- 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) in authority promptly

Use of technical information

- K8 how to find, interpret and use sources of information applicable to unit and component removal and replacement within mechanical handling and chassis systems
- K9 the importance of using the correct sources of technical information
- K10 how to use parts lists and identification codes

Electrical and electronic principles

- K11 lift truck earthing methods
- K12 electrical and electronic principles associated with chassis and mechanical handling systems, including types of sensors and actuators, their application and operation
- K13 types of circuit protection and why these are necessary
- K14 electrical safety procedures
- K15 electrical units, terms and schematics
- K16 electronic control system principles

Hydraulics and Hydraulic Principles

- K17 how hydraulic lift truck systems operate including rams, pumps, motors and valve blocks
- K18 how to inspect hydraulic systems and components to ensure they fall within manufacturer's specifications
- K19 how to remove and replace hydraulic system components
- K20 hydraulic schematics and symbols
- K21 health and safety risks associated with hydraulic systems

Mechanical handling and chassis system operation and construction

- K22 how mechanical handling and chassis systems are constructed, dismantled and reassembled for the classification of lift truck worked upon
- K23 how mechanical handling and chassis systems operate for the classification of lift truck worked upon

Equipment

- K24 how to prepare, inspect and use all the removal and replacement equipment required
- K25 the regulations relating to lifting and slinging equipment

Mechanical handling and chassis system unit and component removal and replacement

- K26 how to remove and replace mechanical handling and chassis system mechanical, electrical and hydraulic units and components for the classification of lift truck worked upon
- K27 how to file, fit, tap, thread, cut and drill plastics and metals
- K28 how to select and use gaskets, sealants, seals, fittings and fasteners
- K29 how to test and evaluate the performance of replacement mechanical handling and chassis system units and components and the reassembled system against the lift truck operating specifications and any legal requirements
- K30 the relationship between testing methods and the mechanical handling and chassis systems units and components replaced – the use of appropriate test methods

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- K31 when replacement units and components must meet the original equipment specification (OES) for warranty or other requirements
 - K32 how to work safely avoiding damage to other lift truck systems, components and units and contact with leakage and hazardous substances relating to yourself and the environment

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Scope/range

1. **1. Equipment** includes:
 - 1.1. hand tools
 - 1.2. special workshop tools
 - 1.3. general workshop equipment
 - 1.4. electrical testing equipment
 - 1.5. lifting and slinging equipment

2. **2. Testing methods** include:
 - ~~2.1. visual~~
 - 2.2.2.1. aural sensory
 - 2.3.2.2. functional
 - 2.4.2.3. measurements

3. **3. Units and components** include:
 - 3.1. mechanical
 - 3.2. electrical
 - 3.3. hydraulic

4. **Mechanical handling and chassis systems** include:
 - 4.1. mast, carriage and attachment assemblies
 - 4.2. hydraulic units and components
 - 4.3. steering systems
 - 4.4. braking systems

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Suite	Lift Truck
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