

## UKTTWE05

# Carry out routine maintenance of Tramway assets, components and equipment



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### Overview

This standard is about carrying out routine maintenance on Tramway assets, components and equipment. You will be able to work to a plan and carry out a range of maintenance activities on the Tramway Infrastructure. This may include the track and track side environment, signalling, telecommunication and electrification systems, as required by your own organisation. The activities will be routine and will involve understanding the range of tramway assets, components and equipment and their purpose. The maintenance activities will be undertaken regularly and will be under the guidance of a team leader or supervisor. You will be able to interpret information relating to the routine maintenance activities and undertake these activities using approved methods and procedures. At all times you will follow approved health and safety procedures and take precautions to prevent damage to surrounding equipment and systems.

You will know and understand the importance of securing the area prior to routine maintenance activities taking place as well as undertaking activities in the correct sequence.

This standard is for those who work in the Tramway engineering environment.

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#### Performance criteria

- You must be able to:*
- P1 source and interpret **information** required for the **routine maintenance** activity
  - P2 identify the **health and safety procedures** that must be followed
  - P3 confirm the **routine maintenance activities** to be carried out and determine their sequence
  - P4 identify and confirm the **resources** required
  - P5 identify where resources are not available and deal with the deficiency in line with your organisation's requirements
  - P6 confirm the timescales required to complete the planned routine maintenance activities
  - P7 take precautions to prevent damage to surrounding assets, components, equipment and the wider environment during routine maintenance activities
  - P8 carry out routine maintenance activities on Tramway assets, components and equipment using methods and procedures approved by your organisation
  - P9 complete maintenance records in line with your organisation's procedures

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#### Knowledge and understanding

*You need to know and understand:*

- K1 the importance of **securing the area** prior to routine maintenance activities taking place
- K2 how to safely access the Tramway asset, component and equipment
- K3 the **hazards** associated with working on or near **assets, components or equipment**
- K4 the methods and techniques for releasing stored energy or substances
- K5 the basic principles of how Tramway assets, components and equipment function
- K6 the different types of Tramway asset configuration and the reasons behind this
- K7 how to source and interpret information required for the routine maintenance activities
- K8 how to confirm resources, including the booking of parts and equipment, where required
- K9 the limits of own authority and competency when carrying out planned maintenance activities on Tramway assets, components and equipment
- K10 the range of precautions that can be taken to prevent damage to surrounding Tramway assets, components and equipment
- K11 the range of precautions to be taken to prevent damage and interference with the Tramway and wider environment
- K12 the methods and procedures for routine maintenance activities on Tramway assets, components and equipment
- K13 the importance of carrying out routine maintenance activities in the correct sequence and within agreed timescales
- K14 when and how to perform an inventory of tools, equipment and components
- K15 the methods and procedures for the re-use and discarding of components
- K16 the importance of observing sufficient operations of the Tramway assets, components and equipment prior to completion of routine maintenance activities
- K17 the problems that can occur during routine maintenance activities and the organisational procedures for dealing with these
- K18 how defects in component and equipment and affect the safety and performance of the Tramway

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### Additional Information

#### Scope related to performance criteria

P1 **Information** may include; electronic or paper records and documents such as, drawings, defect history, fault reports, handbooks, manuals, charts, maintenance specifications, maintenance history, permits, warrantee, instructions, schedules, catalogues, logbooks, method statements, weather restrictions, extreme weather plans, risk assessments. **Routine maintenance** may include; scheduled, planned preventative, condition based, total preventative.

P2 **Health and safety procedures** may include; site safety briefings, authorised access/egress points, signage, lighting, CCTV, walking to and from a work site, planned protection arrangements, emergency stop protection arrangements, possession arrangements, isolation requirements, communication/warning arrangements and techniques, positions of safety, safety zones, lookout arrangements, first aid points, emergency assembly point, safety briefings, fire evacuation, working at height requirements, working in confined spaces requirements, authorised walking routes, Personal Protective Equipment (PPE) requirements, insulated tools/rubber matting, emergency service support (as required), walking to and from a vehicle, designated parking areas.

P3 **Activities** may include; sensory checks, electrical measurements and adjustments, mechanical measurements and adjustments, routine servicing, wiring/fuse checks, replacements, dismantling, reassembling, cleaning, cutting grinding, planning, lubricating, condition checks, checking gauges/sensors, routine adjustments, aligning, tightening, leak checks, torque loading, replacing consumables (batteries, filters, fluids, seals, bearings, belts), testing, marking/labelling, system review/analysis, cleaning out ditches/drains, cutting back/clearing vegetation, ensuring ballast profile, removing and disposing of debris/waste materials.

P4 **Resources** may include; components, consumables, personnel, tools and equipment, test equipment, waste disposal, personal protective equipment, lifting equipment

#### Scope related to knowledge criteria

K1 **Securing the area** may include; isolation, lock off, permit to work, warning notices, barriers.

K3 **Hazards** may include; stored energy, radio frequency radiation, electrical/electronic interfaces, using damaged tools and equipment, not following procedures, working at height, working in confined spaces.

**Components or assemblies** may include; mechanical, electrical, electronic, hydraulic, pneumatic, systematic, thermal, fixtures and fittings.

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### **Additional Information**

#### **Glossary**

##### **Tram**

Tramcars, tram vehicle, and any other rail vehicles that operate on tramways. It includes one or more trams coupled together and includes non-passenger-carrying vehicles.

##### **Tramway**

Includes the tramway (a set of rails, switches and crossings which form the route of a Tram) , infrastructure (fixed assets used for the running of the Tram transport system, including, the tramway, bridges, tunnels, stops, stations and fixed equipment for signalling, communications and electrification), depots, stabling yards.

##### **Trackside environment**

Includes structures, platforms, embankments.

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