UKTTE17
Monitor the performance and condition of the Tram vehicle assets, components, equipment and systems

Overview

This standard is about monitoring the performance and condition of the Tram vehicle assets, components, equipment and systems. You will be required to select the appropriate monitoring equipment to use, based on the type of Tram vehicle asset, component, equipment or system being monitored and the performance or condition you wish to check. You will then use this equipment to carry out diagnostic condition monitoring on a range of Tram vehicle assets, components, equipment and systems such as mechanical, electrical, electronic, hydraulic, pneumatic, systematic, fixtures and fittings. You will then be able to analyse and interpret the performance and condition information and present recommendations on suitable actions to be taken.

Your responsibilities will require you to comply with organisational policy and procedures for the monitoring activities undertaken, and to report any problems with the diagnostic equipment or monitoring activities that you cannot personally resolve, or that are outside your permitted authority, to the relevant people. You will be expected to work with minimal supervision, taking personal responsibility for your own actions, and for the quality and accuracy of the work that you carry out.

This standard is for those who work in the Tram engineering environment at supervisor/technician level.

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Performance criteria

You must be able to:

P1 interpret and analyse **information** required for the monitoring activity
P2 confirm the **health and safety procedures** that must be followed
P3 correctly **set up** the equipment required for the monitoring being carried out
P4 take precautions to prevent damage to surrounding equipment, components and systems during monitoring activities
P5 carry out monitoring activities with the minimum disruption to routine activities
P6 **analyse and interpret** the outcomes of the monitoring activities
P7 present **recommendations** for suitable actions to be taken
P8 complete monitoring 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 monitoring the performance and condition of the Tram vehicle assets, components, equipment and systems

K2 the importance of **securing the area** prior to monitoring activities taking place

K3 the basic principles of performance and condition/remote monitoring, and how it helps prevent asset, component, equipment or system failure

K4 the different types of monitoring **equipment or sensors** and their application

K5 how to check that monitoring equipment or sensors are fit for purpose, undamaged, and have a suitable monitoring range and value

K6 the methods and procedures for monitoring the performance and condition of the Tram vehicle assets, components, equipment and systems

K7 the range of precautions that can be taken to prevent damage to surrounding Tram vehicle equipment, components and systems

K8 the problems that can occur during the monitoring activity, and how they can be overcome

K9 the importance of carrying out monitoring activities in the correct sequence and within agreed timescales

K10 the methods and techniques for analysing and interpreting the outcomes of the monitoring activities

K11 the potential consequences of not monitoring the performance and condition of the Tram vehicle assets, components, equipment and systems

K12 the range of recommendations that can be made and how to present these in line with your organisation's procedures

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Additional Information

Scope related to performance criteria

P1 **Information** may include; electronic or paper records and documents such as, previous monitoring information, drawings, defect history, fault reports, handbooks, manuals, charts, maintenance specifications, maintenance history, permits, warrantee, instructions, schedules, catalogues, logbooks.

P2 **Health and safety procedures** may include; 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 **Set up** may include; calibration, tests, checks, cleaning, adjusting, removing and replacing consumable components, tightening, sharpening.

P6 **Analyse and interpret** may include for example; calculating how long before the next wheel turn.

P7 **Recommendations** may include; root cause, early indication of potential failures, predictive maintenance requirements, non-compliance with policies, equipment protection requirements, performance optimisation.

Scope related to knowledge criteria

K2 **Securing the area** may include; isolation, lock off, permit to work, warning notices.

K4 **Equipment or sensors** may include; those for measuring temperature, force, pressure, vibration, rotational, voltage, current, distance.

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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.

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