IMIBCxx
Carry out routine maintenance on a cycle

Overview

This standard is about carrying out routine maintenance on a cycle.

In this standard the term ‘cycle’ includes pedal-propelled vehicles with two, three or four wheels. It may also include pedal-assisted e-bikes:

- Road legal up to 15.5 mph with a motor with an output of up to 250w
- E-cycles used for other purposes

This standard does not include maintenance of an electric cycle’s high voltage systems and their components, but does include their security to the cycle.

Performance criteria

You must be able to:

P1 use suitable personal protective equipment and cycle coverings (where applicable) throughout all cycle maintenance activities

P2 use suitable sources of technical information to support all your cycle maintenance activities

P3 ensure the cycle and the work area is safe prior to work commencing

P4 use the correct specifications and tolerances for the cycle when making assessments of system and component performance

P5 examine the cycle's systems and components following:

- P5.1 manufacturer's approved examination methods
- P5.2 your workplace procedures
- P5.3 health, safety and environmental requirements

P6 carry out adjustments following:

- P6.1 working methods and procedures
- P6.2 legislation, including waste disposal
- P6.3 correct use of tools and equipment

P7 work in a way which minimises the risk of:

- P7.1 damage to the cycle, its systems and components
- P7.2 damage to your working premises or the environment
- P7.3 injury to self and others

P8 use suitable check methods to accurately evaluate the performance of all systems and components to ensure cycle operates to required specification

P9 promptly report any problems or issues relating to the cycle's condition or conformity to the relevant person(s)

P10 ensure your cycle maintenance records are accurate, complete and promptly passed to the relevant person(s) in the format required

P11 complete all cycle maintenance activities within the agreed timescale

P12 promptly report any anticipated delays in completion to the relevant persons(s)

Knowledge and understanding

You need to know and understand:

Legislative and organisational requirements and procedures

K1 the manufacturer's and legal requirements relating to routine maintenance activities for cycle systems and components

K2 the health and safety legislation, environmental requirements and workplace procedures relevant to routine cycle maintenance activities and personal and cycle protection

K3 your workplace procedures for:

- K3.1 recording cycle maintenance work and any variations from the original cycle specification or condition
- K3.2 the referral of problems
- K3.3 reporting delays to the completion of work

K4 the importance of working within your level of competence and responsibility

K5 the importance of documenting maintenance information

K6 the importance of working to agreed timescales and keeping others informed of progress

K7 the importance of promptly reporting anticipated delays to the relevant person(s)

Tools and equipment

K8 how to select, prepare and use the tools and equipment necessary for carrying out routine maintenance

K9 how to ensure correct calibration (self/third party) of tools and equipment

Use of technical information

K10 how to find, interpret and use sources of current technical information for systematic check activities

K11 the importance of using the appropriate sources of technical information

Systematic check requirements

K12 how to recognise pre-existing cosmetic damage to cycle systems and components

K13 how to work safely avoiding damage to the cycle, its systems and components

K14 how cycle systems operate for the type of cycles on which you work

K15 the different stages of a routine cycle maintenance

K16 how to store all the removed components safely following workplace procedures

K17 assess the serviceability of all removed components

K18 how to make adjustments to cycle systems and components

K19 the quality check process following the routine maintenance of a cycle, including lubrication

K20 how to rectify any faults highlighted during the quality check

Scope/range

1. Examination methods are:

1.1. sensory
1.2. functional
1.3. measurement

2. Tools and equipment include:

2.1. hand tools
2.2. electrical tools
2.3. measuring equipment
2.4. bench mounted equipment
2.5. power tools
2.6. cleaning and degreasing equipment

3. Components are:

3.1. front and rear derailleur
3.2. derailleur cables
3.3. chain
3.4. pedals
3.5. crank
3.6. jockey wheels
3.7. gear shift mechanisms
3.8. brake discs
3.9. brake pads
3.10. brake operation levers
3.11. brake cables
3.12. brake hoses
3.13. handlebars
3.14. headsets
3.15. front forks including suspension components
3.16. rear suspension components
3.17. wheels
3.18. saddle and stem
3.19. accessories

4. **Stages of a cycle maintenance** include:

4.1. degreasing
4.2. cleaning
4.3. lubricating
4.4. adjustment

5. **Quality check** process includes:

5.1. cleanliness
5.2. security
5.3. adjustment
5.4. lubrication

6. **Lubrication** includes:

6.1. rear derailleur
6.2. front derailleur
6.3. chain
6.4. pedal bearings
6.5. joints and pivots

7. **Adjustments** include:

7.1. rear derailleur h&l
7.2. front derailleur h&l
7.3. gear indexing
7.4. front brake lever travel
7.5. rear brake lever travel
7.6. brake adjustment screws
7.7. fork alignment
7.8. handlebars & headsets
7.9. wheel trueness / spoke tension
7.10. suspension travel and rebound
7.11. tyre pressure
7.12. security of e-components

Additional information

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

Glossary

Accessories

Include lighting, carriers and racks, audible warning devices, side stand, mud guards

Agreed timescales

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

Conformity

Examples include conformity to approvals and specifications, UK and European legal requirements where applicable

Cycles

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E-system components

For example battery, controls, rider information, wiring loom, motor.

Sensory examination methods

These may include looking, listening, smelling and touching for heat.

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