# IMIBCxx
# Dismantle, inspect and reassemble a cycle

## Overview

This standard is about dismantling, inspecting and reassembling a cycle. It also includes servicing components highlighted by the inspection, so the cycle is left in a safe and roadworthy condition.

**N.B.:** This unit does not include assembling brakes, gears or wheels, all of which are covered in separate NOS units.

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

## Performance criteria

You must be able to:

P1 use the appropriate personal protective equipment when dismantling, inspecting and re-assembling cycle systems and components

P2 ensure the cycle and the work area is safe prior to work commencing

P3 support your dismantling, inspection and reassembly activities by reviewing

- P3.1 cycle technical data, drawing and diagrams
- P3.2 cycle dismantling and reassembly procedures
- P3.3 servicing procedures and techniques
- P3.4 legal requirements

P4 identify components relevant to cycle dismantling, inspection and reassembly

P5 select, prepare, check and use all the equipment required following manufacturer's instructions

P6 carry out all cycle dismantling, inspection and reassembly activities following:

- P6.1 manufacturer's instructions
- P6.2 industry recognised methods
- P6.3 your workplace procedures
- P6.4 health, safety and environmental requirements

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 environment
- P7.3 injury to self and others

P8 service cycle headset assemblies

P9 identify types of bottom bracket systems

P10 chase bottom bracket threads

P11 use the appropriate methods and techniques to dismantle, inspect and reassemble the components in their correct positions

P12 secure the components using the specified connectors and securing devices

P13 use suitable testing methods to accurately evaluate the performance of the reassembled system

P14 ensure the reassembled system performs to the cycle operating specification and meets any legal requirements prior to return to the customer

P15 promptly report any problems or issues relating to the cycle's condition or conformity to the relevant person(s)

P16 ensure your records are accurate, complete and promptly passed to the relevant person(s) in the format required

P17 complete all cycle dismantling, inspection and reassembly activities within the agreed timescale

P18 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 dismantling and reassembly activities

K2 the health and safety legislation, environmental requirements and workplace procedures relevant to cycle dismantling, inspection and reassembly activities and personal and bicycle protection

K3 your workplace procedures for:

- K3.1 recording dismantling and reassembly workand any variations from the original bicycle specification
- K3.2 the referral of problems
- K3.3 reporting delays to the completion of work

K4 how to work safely avoiding damage to other cycle systems, components and units and injury to self and others

K5 the importance of documenting cycle dismantling, inspection and reassembly information

K6 the importance of ensuring the cycle is returned to the customer in a roadworthy and clean condition

K7 the importance of working to agreed timescales and keeping others informed of progress

K8 the relationship between time and cost

K9 the importance of promptly reporting anticipated delays to the relevant person(s)

**Use of technical information**

K10 how to find, interpret and use sources of current technical information for cycle dismantling, inspection and reassembly activities

K11 the importance of using the appropriate sources of technical information

**Tools and equipment**

K12 how to select, prepare, check and use all the removal and replacement equipment required

**Cycle headset and bearing service and replacement**

K13 different headset types

K14 how to distinguish between headsets using Standard Headset Identification System (SHIS)

K15 how to dismantle, service and reassemble different cycle headset assemblies

K16 how to check and determine wear and damage of components

K17 how to identify the components in a threadless headset

K18 the difference between a radially loaded and axially loaded bearing

K19 the steerer diameters available and their applications

K20 how to measure a steerer diameter

K21 how to identify faults and assess the condition of the cycle headset and bearings following removal and replacement activities

**Cycle bottom brackets and cranks component removal and replacement**

K22 how to identify the bottom bracket system for the cycle being worked upon

K23 how to identify the components in different cycle bottom brackets and cranks

K24 the advantages and disadvantages of the different types of bottom brackets, including compatibility

K25 how to check the condition of a cycle bottom bracket and crank

K26 how to remove and replace types of cycle bottom brackets and cranks components for the cycles on which you work

K27 how to test and evaluate the performance of replacement cycle bottom brackets and cranks components and the reassembled system against the cycle operating specifications and any legal requirements

K28 the manufacturer's specification for the type and quality of components to be used

**Cycle dismantling and reassembly**

K29 the systems and components of the types of cycle on which you work

K30 how to recognise cosmetic damage to bicycle systems and components

K31 how to plan a routine for dismantling and storing components

K32 how to plan a method for cycle reassembly

K33 how to chase bottom bracket threads

K34 how to make adjustments to bicycle systems and components

K35 the quality check process following the replacement or reassembly activity

## Scope/range

**1.** **Components** are:

1.1. frame
1.2. forks
1.3. bottom brackets
1.4. cranks
1.5. headset assembly
1.6. bearings
1.7. handlebars
1.8. stem

**2.** **Tools and equipment** include:

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

**3.** **Bottom brackets** are:

3.1. threaded
3.2. non-threaded

**4.** **Adjustments** include:

4.1. bearings
4.2. stem alignment
4.3. measurement
4.4. personalisation

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

**Quality check**

To include cleanliness, security of component parts, adjustment of bearings, tension of spokes, trueness of wheel, function test**.**

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| **Developed by** | IMI |
| **Version number** | 1 |
| **Date approved** | March 2021 |
| **Indicative review date** | March 2024 |
| **Validity** | Current |
| **Status** | Original |
| **Originating organisation** | IMI Ltd |
| **Original URN** | BCxx |
| **Relevant occupations** | Cycle Maintenance and Repair Technician |
| **Suite** | Maintenance and Repair – Cycle |
| **Key words** | Cycle; dismantling; service; reassemble; frame; headset; bottom brackets; cranks; |