

Overview

This NOS is about the bench-based overhaul of motorcycle mechanical units, involving dismantling, assessment, repair, replacement or adjustment of internal components together with re-assembly and testing. Mechanical units include engines, transmission and driveline systems, steering and suspension.

In this standard the term 'motorcycle' includes motorcycles, scooters, mopeds and motorcycle-derived three- or four-wheel vehicles (such as quad bikes) on which the rider sits.

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**Performance
criteria**

- You must be able to:
- P1 wear suitable personal protective equipment throughout all **overhauling activities**
 - P2 use suitable sources of technical information to support your **overhauling activities**
 - P3 assess and prepare all the equipment required, following manufacturer's instructions, prior to use
 - P4 use the tools and equipment required correctly and safely throughout all **overhauling activities**
 - P5 carry out all **overhauling activities** following:
 - P5.1 the manufacturer's instructions
 - P5.2 your workplace procedures
 - P5.3 health and safety requirements
 - P6 work in a way which minimises the risk of:
 - P6.1 damage to other components
 - P6.2 leakages
 - P6.3 contact with hazardous substances
 - P7 ensure your assessment of the dismantled unit identifies accurately its condition and suitability for overhaul
 - P8 inform the relevant person(s) promptly where an overhaul is uneconomic or unsatisfactory to perform
 - P9 use testing methods which comply with the manufacturer's requirements
 - P10 adjust the unit's components correctly to ensure that they operate to meet the motorcycle operating requirements, when necessary
 - P11 ensure the overhauled units and assemblies conform to the motorcycle operating specification and any legal requirements
 - P12 ensure your overhaul records are accurate, complete and passed to the relevant person(s) promptly in the format required
 - P13 complete all **overhauling activities** within the agreed timescale
 - P14 report any anticipated delays in completion to the relevant person(s) promptly

Knowledge and understanding

You need to know and understand:

Legislative and organisational requirements and procedures

- K1 the legal requirements applicable to the motorcycle units and assemblies overhauled (including road safety requirements)
- K2 the health and safety legislation, environmental requirements and workplace procedures relevant to workshop practices and personal and motorcycle protection
- K3 your workplace procedures for:
 - K3.1 recording **overhaul activities**
 - K3.2 the referral of problems
 - K3.3 reporting delays to the completion of work
- K4 the importance of documenting repair information
- K5 the importance of working to agreed timescales and keeping others informed of progress
- K6 the importance of reporting any anticipated delays to the relevant person(s) promptly

Equipment

- K7 how to prepare and assess the accuracy and operation of all the overhauling and testing equipment required
- K8 how to use all the overhauling and testing equipment required

Motorcycle mechanical unit overhauling activities

- K9 how to find, interpret and use sources of information on motorcycle overhauling procedures and statutory requirements
- K10 how motorcycle mechanical units and assemblies are constructed and their operation
- K11 how motorcycle mechanical units and assemblies are dismantled and reassembled
- K12 the types and possible causes of faults in motorcycle mechanical units and assemblies and how to identify them

- K13 motorcycle operating specification for limits, fits and tolerances and where this information can be sourced
- K14 how to assess the condition evident within unit motorcycle sub-assemblies and components
- K15 the cost-benefit relationship between the reconditioning, repair and replacement of components within units and assemblies
- K16 how to carry out **overhauling activities** for the type(s) of motorcycle unit worked upon
- K17 the relationship between test methodology and the faults repaired – the use of appropriate testing methods
- K18 how to test and evaluate the performance of overhauled units against the operating specification
- K19 how to interpret test results and make recommendations
- K20 how to make suitable adjustments to motorcycle components and units
- K21 how to work safely avoiding personal injury, damage to components, leakage and hazardous substances

Scope/range

All of the items listed below form part of this National Occupational Standard

1 Overhaul activities are:

- 1.1. dismantling
- 1.2. assessment
- 1.3. repair
- 1.4. replacement
- 1.5. adjustment of internal components
- 1.6. reassembly
- 1.7. functional testing

2 Mechanical units are:

- 2.1. engines
- 2.2. transmission and driveline systems
- 2.3. steering
- 2.4. suspension

**Additional
information**

Glossary

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

Adjustments

Examples include, adjustments made to clearances, settings, pressures, tensions, pre-load

Agreed timescales

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

Assessments

Examples include those for wear, damage, alignment, corrosion, leakage, distortion and balance

Equipment

Examples include hand tools, pullers and presses, measuring instruments, general workshop equipment and special service tools

Motorcycles

In this standard the term 'motorcycle' includes motorcycles, scooters, mopeds and motorcycle-derived three- or four-wheel vehicles (such as quad bikes) on which the rider sits.

Testing methods

As prescribed by the appropriate technical literature

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Overhaul motorcycle mechanical units



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