

<b>Unit ID: 220</b>	
<b>Domain</b>	<b>AUTOMOTIVE MECHANICS</b>
<b>Title:</b>	<b>Overhaul steering system components of a motor vehicle</b>
<b>Level: 4</b>	<b>Credits: 4</b>

### Purpose

This unit standard specifies the competencies required to overhaul steering system components of a motor vehicle. It includes inspecting and assessing the condition and overhauling of steering system components in line with manufacturers' specifications. This unit standard is intended for those who work as automotive mechanics.

### Special Notes

1. Entry information:
  - Prerequisite
    - Unit 65 - *Apply safety rules and regulations in an automotive mechanics workshop* or demonstrated equivalent knowledge and skills.
2. Assessment evidence may be collected from a real workplace or a simulated real workplace or an appropriate simulated realistic environment in which automotive mechanics operations are carried out.
3. All inspection, operation and maintenance procedures associated with the use of tools and equipment shall comply with manufacturers' and company guidelines, instructions and reasonable flat rate time.
4. Glossary of terms:
  - '*specifications*' refers to any, or all of the following: manufacturers' specifications and recommendations, workplace specific requirements
  - '*steering system components*' refer to mechanical and power-assisted components and may include hydraulic pump, steering box, pressure hoses and lines.
5. Regulations and legislation relevant to this unit standard include the following:
  - Labour Act, No. 6, 1992
  - Occupational Health and Safety Regulations No. 18, 1997
  - Road Traffic and Transport Regulations No. 266, 2000
 and all subsequent amendments.
6. This unit standard applies to passenger and light commercial vehicles with a Gross Vehicle Mass  $\leq 5\,500$  kg (Petrol & Diesel).

## **Quality Assurance Requirements**

This unit standard and others within this subfield may be awarded by institutions which meet the accreditation requirements set by the Namibia Qualifications Authority and the Namibia Training Authority and which comply with the national assessment and moderation requirements. Details of specific accreditation requirements and the national assessment arrangements are available from the Namibia Qualifications Authority and the Namibia Training Authority. All approved unit standards, qualifications and national assessment arrangements are available on the Namibia Training Authority website [www.nta.com.na](http://www.nta.com.na).

## **Elements and Performance Criteria**

### **Element 1: Plan and prepare for work**

#### **Range**

Planning and preparation may include but is not limited to workplace inspection, equipment defect identification, assessment of conditions and hazards and determination of work requirements.

Tools and equipment may include but are not limited to standard tool set, power tools, specialist tools for dismantling, assembling and adjustment, hydraulic pressure tester, testing equipment and precision measurement tools.

Materials may include but are not limited to hydraulic fluids, lubricants, spare parts and cleaning materials.

#### **Performance Criteria**

- 1.1 Work instructions, including repair order forms, specifications and operational details are obtained, confirmed and applied.
- 1.2 Safety requirements are followed in accordance with safety plans and policies.
- 1.3 Tools and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults rectified or reported prior to commencement.
- 1.4 Material requirements are identified and obtained in accordance with repair order form and/or specifications.
- 1.5 Materials are safely handled and located ready for use in line with workplace procedures.
- 1.6 Technical and/or calibration requirements for tools and equipment are sourced and implemented in line with workplace procedures.
- 1.7 Environmental protection requirements are identified and applied in line with environmental plans and regulatory obligations.

## **Element 2: Inspect and assess steering system components**

### **Range**

Inspection methods are to include but are not limited to functional testing, measurements, visual, aural and functional assessment (including damage, corrosion, leakage, wear) in line with manufacturers' specifications.

### **Performance Criteria**

- 2.1 Procedures and information required for inspecting and assessing steering system components of a motor vehicle are identified and sourced in line with workplace requirements.
- 2.2 Inspection methods are implemented according to workplace procedures and manufacturers' specifications.
- 2.3 Inspection results are compared with manufacturers' specifications.
- 2.4 Results are documented with evidence and supporting information and recommendation(s) is made in line with workplace requirements.
- 2.5 Report is forwarded to appropriate personnel according to workplace procedures.

## **Element 3: Overhaul components**

### **Range**

Overhaul methods are to include the complete dismantling of component parts, measuring and evaluation of wear, the replacement, repair, rebuilding or reconditioning of parts comparable to original parts, the assembly of parts, and performance of functional testing in line with manufacturers' specifications.

### **Performance Criteria**

- 3.1 Information required for overhauling steering system components are accessed and interpreted from manufacturers' specifications.
- 3.2 Steering system components are overhauled using approved methods, equipment and materials, according to manufacturers' specifications.
- 3.3 All adjustments made during the overhaul are implemented in line with manufacturers' specifications.
- 3.4 Unexpected or unplanned contingencies that are encountered in overhauling steering system components are addressed through applying workplace procedures, previous experience and manufacturers' technical information.
- 3.5 Final performance test is conducted and results compared with manufacturers' specifications.

#### **Element 4: Complete work and clean up**

##### **Range**

Work completion details may include but are not limited to repair order form, sign-out form for equipment, service record book and service plan form.

##### **Performance Criteria**

- 4.1 Work is completed and appropriate personnel notified in accordance with workplace procedures.
- 4.2 Work area is cleared of waste, cleaned, restored and secured in accordance with workplace procedures.
- 4.3 Reusable material is collected and stored in accordance with workplace procedures.
- 4.4 Equipment used is cleaned, checked, maintained and stored in accordance with workplace procedures.
- 4.5 Work completion details are finalised in accordance with workplace procedures.

##### **Registration Data**

<b>Subfield:</b>	Automotive Engineering
<b>Date first registered:</b>	29 March 2007
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<b>Body responsible for review:</b>	Namibia Training Authority