

SERVICE VEHICLE STEERING SYSTEM

UNIT CODE: ENG/OS/AUT/CR/5/5/A

Unit description:

This unit specifies competencies required to service vehicle steering system. It involves assess vehicle steering system, remove steering components, assess serviceability of vehicle, replace/service vehicle steering, fit and test vehicle steering components and document vehicle steering system service

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA (<i>Bold and italicized terms are elaborated in the Range</i>)
1. Assess vehicle steering system	1.1 Work area and steering units are prepared as per the workshop procedures 1.2 <i>Tools and equipment</i> are assembled as per job assignment 1.3 Vehicle steering system checklist is prepared based on workplace requirements 1.4 Personal protective clothing and equipment (<i>PPE</i>) is used as per <i>OSHA 2007</i> 1.5 Steering systems are visually inspected in accordance with service manual 1.6 Faulty steering components are identified as per the service manual
2. Remove steering components	2.1 <i>Technical information</i> is used according to the service manual 2.2 Vehicle is raised in accordance with workshop procedures 2.2 <i>Lubricants and fluids</i> are drained and disposed according to HSE&Q 2. Steering components are removed as per service manual
3. Assess serviceability of vehicle steering components	3.1 <i>Steering components</i> are disassembled as per the service manual 3.2 Steering components are cleaned in accordance with service manual 3.3 Serviceability of steering components is <i>assessed</i> as per the service manual
4. Replace/service vehicle steering components	4.1 Worn/damaged components are replaced as per manufacturer's manual 4.2 Replacement parts are verified against manufacturers' part numbers

ELEMENT	PERFORMANCE CRITERIA (<i>Bold and italicized terms are elaborated in the Range</i>)
	4.3 Steering components are re-assembled in accordance with manufacturers' specification 4.4 Vehicle steering components are serviced according to the service manual
5. Fit and test vehicle steering components	4.1 Steering components are fitted back as per service manual 4.2 Lubricants and fluids are replenished according to the service manual 4.3 <i>Steering geometry</i> is set in accordance with manufacturers' specifications 4.4 Steering system is tested as per the manufacturers specification
6. Finalize vehicle steering system service	5.1. Steering service and repair is completed according to workplace policy/customer's specification 5.2 workshop/station is cleaned in accordance with work shop procedures 5.3 Waste is disposed as per OSH Act- 2007

RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

Variable	Range
1. Steering components may include but is not limited to:	<ul style="list-style-type: none"> • Steering rack • Tie rods; • Steering box • Steering column • Universal joint/coupling • Drop arm • Dust rubber boot • Steering wheel

Variable	Range
2. Assessment methods may include but is not limited to:	<ul style="list-style-type: none"> • Visual • Measurement • Acoustic • Vibration • Functional • Serviceable • Unserviceable • Tolerances
3. Steering geometry / wheel alignment may include but is not limited to:	<ul style="list-style-type: none"> • Toe in / Toe out • Castor • Camber • Kingpin inclination
<ul style="list-style-type: none"> • Service and repair records may include but is not limited to: 	<ul style="list-style-type: none"> • Job cards • Company IT system • Customer database
4. Job card may include but is not limited to:	<ul style="list-style-type: none"> • Date • Job card number • Customer order number • Customers name • Vehicle registration • Tasks/repairs/services to be performed • Person assigned the work • Supervisor authorization
5. Wastes may include but is not limited to:	<ul style="list-style-type: none"> • Liquid • Solid/Rubber
6. Agreed timeframe may include but is not limited to:	<ul style="list-style-type: none"> • Manufacturers' recommended work times • Job times set by the company • Job time agreed with a specific customer

Commented [RG1]:

REQUIRED KNOWLEDGE AND UNDERSTANDING

Required Skills

The individual needs to demonstrate the following foundation skills:

- Decision making;
- Multitasking;
- Communications (verbal and written);
- Proficient in ICT;
- Time management;

- Problem solving;
- Planning
- First aid;
- Report writing;
- Record keeping
- Driving

Required knowledge

The individual needs to demonstrate knowledge of:

- Kenyan legislation and workplace procedures
- reporting
- sources of technical information
- wheel alignment and steering geometry measuring and adjusting equipment
- Construction and operation of suspension and steering systems
- The construction, layout and operation of different types of suspension systems,
- The principles of suspension and steering geometry

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

<p>1. Critical Aspects of Competency.</p>	<p>Assessment requires evidence that the candidate:</p> <p>1.1 Worked in a safe and clean environment using personal protection and appropriate tools and equipment;</p> <p>1.2 Observed regulations concerned with health and safety and the disposal of waste</p> <p>1.3 Used technical information to remove and dismantle steering units</p> <p>1.4 Assessed vehicle steering components against manufacturers' specifications</p> <p>1.5 Repaired/serviced, replaced and restored components as per manufacturer's specification</p> <p>1.6 Reassembled steering components in accordance with manufacturers' specifications</p> <p>1.7 Completed steering system servicing within set time frame</p> <p>1.8 Documented steering servicing records as per customer specifications and company policy.</p>
<p>2. Resource Implications.</p>	<p>The following resources must be provided:</p> <p>2.1 A workshop that is fully equipped for servicing vehicle steering systems.</p>

	<p>2.2 Vehicle lift</p> <p>2.3 Tool kits and vehicle steering equipment</p> <p>2.4 Access to manufacturers' technical information</p> <p>2.5 Facilities for the disposal of waste oil and scrap parts</p> <p>2.6 Customer database</p> <p>2.7 Personal protection equipment</p> <p>2.8 Computer</p>
3. Methods of Assessment	<p>Competency may be assessed through:</p> <p>5.1 Observation</p> <p>5.2 Oral questioning</p> <p>5.3 Written test</p>
4. Context of Assessment	<p>Competency may be assessed individually in an actual workplace or in work-simulated conditions within accredited institutions or during industrial attachment.</p>
5. Guidance information for assessment.	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.</p>