



FEDERAL MINISTRY OF EDUCATION

National Skills Qualifications

FOR

TYRE AND WHEEL SERVICES

LEVEL 1, 2 & 3

February, 2025



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and Effectiveness in the
Acquisition of Skills
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National Board for Technical Education

Plot B, Bida Road, P.M.B. 2239, Kaduna, Nigeria



NATIONAL SKILLS QUALIFICATION

TYRE AND WHEEL SERVICES

LEVELS 1-3

FEBRUARY, 2025

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OVERVIEW

This qualification is for those interested in developing a career in tyre and wheel services for the award of National Skills Qualifications (NSQ). It is aimed at producing specialists in tyre and wheel services and repairs at NSQ Levels 1, 2 and 3 with the competencies to maintain and repair tyre and wheels professionally while complying with relevant regulatory requirements, health and safety etc.

This qualification is subject to review as and when the need arises.

NATIONAL SKILLS QUALIFICATION

**TYRE AND WHEEL
SERVICES**

LEVEL 1

FEBRUARY, 2025

**NATIONAL SKILLS QUALIFICATION
NSQ LEVEL 1 – TYRE AND WHEEL SERVICES
GENERAL INFORMATION**

QUALIFICATION PURPOSE

This qualification is designed for individuals who are interested in developing a career in the Tyre and wheel services in the automotive industry.

QUALIFICATION REQUIREMENTS

Candidates must:

- a. Be at least 15 years of age
- b. Be medically fit
- c. Be mentally fit
- d. Have to achieved all the mandatory units in the qualification

Note:

This is a 180 credit unit qualification. To achieve this qualification; learners are required to achieve all credits units. Each Credit is equivalent to 10 Guided Learning Hours (GLH).

QUALIFICATION OBJECTIVES

At the end of the qualification, the tyre and wheels specialist should be able to:

- a. Demonstrate Health, Safety and The Environment
- b. Demonstrate Communication and Interpersonal Skills
- c. Demonstrate Team Work
- d. Use Tyre and Wheels service tools and equipment
- e. Identify Motor Vehicle Tyre and wheels
- f. Assist in carrying out Vulcanizing Operations
- g. Demonstrate computer skills in Automotive Industry

Unit assessment requirements/evidence requirements:

Assessment must be carried out in both real workplace and training environment in which learning and human development is carried out. Simulation is allowed in this unit and level.

Suggested assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)

NATIONAL SKILLS QUALIFICATION
AUTOMOBILE SECTOR
LEVEL 1: TYRE AND WHEEL SERVICES
Mandatory Units

S/No /Unit No	Reference Number	NSQ Title	Credit Value	Guided Learning Hours	Remark
1	AUT/TWS/001/L1	HEALTH, SAFETY AND THE ENVIRONMENT	2	20	Level 1
2	AUT/TWS/002/L1	COMMUNICATION AND INTERPERSONAL SKILLS	2	20	Level 1
3	AUT/ TWS /003/L1	TEAM WORK	2	20	Level 1
4	AUT/ TWS /004/L1	MOTOR VEHICLE TYRE AND WHEEL SERVICES	2	20	Level 1
5	AUT/ TWS /005/L1	APPLICATION OF TYRE AND WHEEL SERVICE TOOLS AND EQUIPMENT	2	20	Level 1
6	AUT/TWS/006/L1	VULCANIZING OPERATIONS	4	40	Level 1
7	AUT/ TWS /007/L1	BASIC COMPUTER SKILLS IN AUTOMOTIVE TYRE AND WHEEL SERVICES	4	40	Level 1
8	AUT/TWS/008/L1	TYRE MAINTENANCE FOR LIGHT VEHICLE	4	40	Level 1
	SUB-TOTAL		22	220	

NOTE: This is a 22 credit qualification. To achieve this qualification; Learners are required to achieve 220 GLH covering all the mandatory units. Each Credit is equivalent to approximately 10 Guided Learning Hours (GLH). The Total Learning Hours will therefore consist of the GLH *plus* the independent learning hours and practice of the candidate, which is generally 150% – 250% of the GLH. ***Depending on the learner's capacity to achieve competence.***

Qualification Purpose: This qualification is aimed at the ability of the learner acquiring sufficient knowledge and skills in the work environment to carry out Tyre and wheel services and support experienced workers in the industry

**National Skills Qualification
AUTOMOBILE SECTOR
LEVEL 1: TYRE AND WHEEL SERVICES**

Unit 1: HEALTH, SAFETY AND THE ENVIRONMENT**Unit Reference Number: AUT/TWS/001/L1****NSQ Level: 1****Credit Value: 2****Guided Learning Hours: 20**

Unit Purpose: This unit specifies the competencies required to demonstrate and understand safe work practices in the Automotive Industry.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is allowed*** (where/when necessary) in this unit and level.

Suggested assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)
6. Assignment

Unit 01: HEALTH, SAFETY AND THE ENVIRONMENT

LEARNING OBJECTIVE (LO)		PERFORMANCE CRITERIA	Evidence Type	Evidence Ref. No.	Page
The learner will be able:		The learner can:			
LO 1: Demonstrate Safe working Practices and Instructions	1.1	Explain safe work practices and instructions			
	1.2	Identify safety signs and symbols			
	1.3	Use signs and symbols correctly			
	1.4	Carry out safe work practices and instructions			
	1.5	Work in accordance with health and safety best practices			
LO 2: Understand Hazards and risks involved in the work environment	2.1	Identify work environment hazards			
	2.2	State methods to reduce the risk of these hazards			
	2.3	Identify Personal Protective Equipment (PPE).			
	2.3	State methods to resolve an occurring environmental hazard			
LO 3: Take appropriate actions during accident/injury	3.1	Identify basic first aid items			
	3.2	Apply first aid to accident/injury			
	3.3	Report accident /injury to immediate superior officer			
LO 4: Demonstrate safe working habit and clean work environment	4.1	Use safe access and exit routes in the work environment			
	4.2	Dispose all wastes appropriately to designated waste facilities			
	4.3	Explain methods of resource conservation (e.g Water, Energy etc)			
	4.4	State how to maintain hygienic, safe and secure workplace			

RESOURCES: Safety Charts, first aid box, first aid materials, PPE, etc.

Learners Signature:	Date:
Assessors Signature:	Date:
IQAM Signature (if sampled)	Date:
EQAM Signature (if sampled)	Date:

**National Skills Qualification
AUTOMOBILE SECTOR
LEVEL 1: TYRE AND WHEEL SERVICES**

Unit 2: COMMUNICATION AND INTERPERSONAL SKILLS

Unit reference number: AUT/TWS/002/L1

QCF level: 1

Credit value: 2

Guided learning hours: 20

Unit Purpose: This unit specifies the competencies required to demonstrate good communication and interpersonal skills. It involves the ability to read and understand documented instructions and the ability to know how to communicate respectfully when in a bad mood or under pressure;

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

Suggested assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)
6. Assignment

UNIT 02: Communications and Interpersonal Skill

LEARNING OBJECTIVE (LO)		PERFORMANCE CRITERIA	Evidence Type				Evidence Ref. Page No.			
The learner will be able:		The learner can:								
LO 1: Demonstrate good communication in the work environment	1.1	State reasons why good communication is important								
	1.2	List ways to communicate effectively								
	1.3	Exhibit good conduct while communicating with colleagues, managers and clients								
	1.4	Speak in a respectful manner								
	1.5	Use respectful body language								
	1.6	Interpret verbal communication accurately								
	1.7	Listen attentively								
LO 2: Document information for record purpose	2.1	Read an instruction manual								
	2.2	Document information in the workplace (E.g.: Receipt, Invoices, Reports, Records etc.)								
	2.3	Document Errors, solution processes and reports								
LO 3: Apply effective communication in a work environment	3.1	Identify the various methods of communication in the work environment.								
	3.2	explain the various methods of communication in a work environment								
	3.3	Communicate effectively to the right personnel.								
	3.4	Observe information effectively using symbols, signs and codes.								
	3.5	Observe instructions in line with work ethics								

Learners Signature:	Date:
Assessors Signature:	Date:
IQAM Signature (if sampled)	Date:
EQAM Signature (if sampled)	Date:

**National Skills Qualification
AUTOMOBILE SECTOR
LEVEL 1: TYRE AND WHEEL SERVICES**

Unit 3: TEAM WORK**Unit reference number: AUT/TWS/003/L1****QCF level: 1****Credit value: 2****Guided learning hours: 20**

Unit Purpose: This unit specifies the competencies required to know how to work in a team.

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

Suggested assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)
6. Assignment

Unit 3: TEAM WORK

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type						Evidence Ref. No.	Page
The learner will be able to:		The learner can:								
LO 1: Demonstrate positive working Relationship	1.1	Identify positive work ethics.								
	1.2	State the value of respect in work relation.								
	1.3	Assist team members when required.								
	1.4	Explain methods of Reporting for assistance falling outside area of responsibility.								
	1.5	Communicate information to colleagues about own work that might affect others.								
Lo 2: Take Responsibilities within the Team	2.1	State own role and responsibilities within the team.								
	2.2	Perform individual tasks in line with the team rules and regulations.								
	2.3	Participate effectively in team work.								
Lo 3: Comply with Policy of Organization.	3.1	Explain organizational Code of Conduct.								
	3.2	Read organizational code of practice.								
	3.3	Work in line with organizational standard.								

Learners Signature:**Date:**

Assessors Signature:

Date:

IQAM Signature (if sampled)

Date:

EQAM Signature (if sampled)**Date:**

**National Skills Qualification
AUTOMOBILE SECTOR
LEVEL 1: TYRE AND WHEEL SERVICES**

Unit 4: MOTOR VEHICLE TYRE AND WHEEL SERVICES

Unit Reference Number: AUT/TWS/004/L1

NSQ Level: 1

Credit Value: 2

Guided Learning Hours: 20

Unit Purpose: The aim of this unit is to provide learner with the necessary knowledge and skills carryout vehicle tyres and wheels services

Unit assessment requirements/evidence requirements:

Assessment must be carried out in both real workplace and training environment in which automotive tyre repairs are carried out.

Suggested assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)
6. Assignment

UNIT 05: Motor Vehicle Tyre and Wheels Services

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type				Evidence Ref. Page No.			
Lo 1: Understand Classification of tyres and wheels	1.1	Identify various types of tyre <ul style="list-style-type: none"> • Tube • Tubeless 								
	1,2	Explain the features of tyres. <ul style="list-style-type: none"> • Tread • Bead • Sidewall 								
	1.3	Identify wheels based on their design and construction								
	1.4	Read tyre/wheel data according to manufacturer's specifications.								
Lo 2: Apply tools and equipment for tyre & wheels services	2.1	Identify tools and equipment used in tyre and wheel repairs.								
	2.2	Apply manual tools and equipment in tyre and wheel repairs on light vehicle								
	2.3	clean tyre/wheel tools and equipment								
LO 3: Inspect vehicle tyres	3.1	Carryout inspection of tyres								
	3.2	Repair faulty tyres								
	3.3	Replace faulty tyres								
LO 4: Inspect vehicle wheels	3.1	Carryout inspection on Light Vehicle wheels								
	3.2	Repair faulty wheels								
	3.3	Replace faulty wheels								

Learners Signature:	Date:
Assessors Signature:	Date:
IQAM Signature (if sampled)	Date:
EQAM Signature (if sampled)	Date:

**National Skills Qualification
AUTOMOBILE SECTOR
LEVEL 1: TYRE AND WHEEL SERVICES**

Unit 5: APPLICATION OF TYRE AND WHEEL SERVICE TOOLS AND EQUIPMENT

Unit Reference Number: AUT/TWS/005/L1

NSQ Level: 1

Credit Value: 2

Guided Learning Hours: 20

Unit Purpose: The aim of this unit is to equip the learner with knowledge and skills in using of tools and equipment in the Automotive Sector

Unit assessment requirements/evidence requirements:

Assessment must be carried out in both real workplace and training environment in which automotive repairs are carried out.

Suggested assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)
6. Assignment

UNIT 05: Application of tyre and wheel Service Tools and Equipment

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type				Evidence Ref. Page No.			
LO 1: Know tyre and wheel manual and power tools	1.1	Identify manual and power tools in tyre and wheel repair workshop								
	1.2	Perform simple operation using the manual tools: <ul style="list-style-type: none"> • Wheel spanner • Wheel jack • Hammer • Metal bar 								
	1.3	Perform simple operation using the following power tools: <ul style="list-style-type: none"> • Air compressor • Pressure gauge 								
	1.4	Clean the tools used in 1.2 and 1.3 above								
LO 2: Maintain tyre and wheel service tools and equipment	2.1	Identify worn out hand tools								
	2.2	Identify problems associated with equipment								
	2.3	Report faulty tools and equipment to authorized personnel.								
	2.4	Carryout simple routine maintenance of tyre and wheel tools.								
	2.5	Carryout simple routine service of equipment as specified by manufacturer								
LO 3: Store tools and Equipment	3.1	Explain the techniques used in the storage of tyre and wheel service tools and equipment.								
	3.2	Explain various store documentation procedures in tyre and wheel workshop.								
	3.3	Store tyre and wheel tools and equipment in line with workplace procedures.								

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. Page No.
	3.4	Dispose waste generated from tyre repairs in accordance with workplace procedures.		

Learners Signature: Assessors Signature: IQAM Signature (if sampled)	Date: Date: Date:
EQAM Signature (if sampled)	Date:

**National Skills Qualification
AUTOMOBILE SECTOR
LEVEL 1: TYRE AND WHEEL SERVICES**

Unit 6: VULCANIZING OPERATIONS

Unit Reference Number: AUT/TWS/007/L1

NSQ Level: 1

Credit Value: 4

Guided Learning Hours: 40

Unit Purpose: The aim of this unit is to equip the learner with the knowledge and skills to carry out vulcanizing operations

Unit assessment requirements/evidence requirements:

Assessment must be carried out in both real workplace and training environment in which tyre are repaired.

Suggested assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)
6. Assignment

UNIT 06: Vulcanizing Operations

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. Page No.
LO: 1 Measure tyre and rim	1.1	Measure a given tyre		
	1.2	Measure vehicle rim		
	1.3	Interpret the functional ratings of various tyres		
Lo 2: Observe Safety measures in Vulcanizing	2.1	Interpret Safety Signs in the workshop		
	2.2	Use Personal Protective Equipment as related to Vulcanizing operations		
	2.3	Apply adequate measures against hazards related to vulcanizing operations		
Lo 3: Inflate and Deflate Tyres	3.1	Explain the following tyre gauges <ul style="list-style-type: none"> • Stick Tyre Gauge • Dial Tyre Gauge • Digital Tyre Gauge 		
	3.2	Differentiate the gauges listed in 3.1 above		
	3.3	Use the gauges listed in 3.1 above		
	3.4	Explain the effect of improper inflation pressure <ul style="list-style-type: none"> • Under Inflation • Over Inflation 		
	3.5	Deflate vehicle tyre		
	3.6	Inflate vehicle tyre to the specified pressure		

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. Page No.
Lo 4: Maintain vehicle tyres and wheels	4.1	Perform tyre and wheel inspection using the following: • manufacturer's instructions • workplace procedure		
	4.2	Identify defects in vehicle tyres		
	4.3	Repair the identified defects in 4.2 above		
	4.4	Identify defects in vehicle wheels		
	4.5	Repair the identified defects in 4.4 above		

Learners Signature:	Date:
Assessors Signature:	Date:
IQAM Signature (if sampled)	Date:
EQAM Signature (if sampled)	Date:

**National Skills Qualification
AUTOMOBILE SECTOR
LEVEL 1: TYRE AND WHEEL SERVICES**

Unit 7: BASIC COMPUTER SKILLS IN AUTOMOTIVE TYRE AND WHEEL SERVICES

Unit Reference Number: AUT/TWS/007/L1

NSQ Level: 1

Credit Value: 4

Guided Learning Hours: 40

Unit Purpose: This aim of this unit is to provide the necessary skills and competency required for computer usage in the tyre and wheel workshop

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is allowed*** (where/when necessary) in this unit and level.

Suggested assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)
6. Assignment

Unit 7: BASIC COMPUTER SKILLS IN AUTOMOTIVE TYRE AND WHEELS SERVICES

LEARNING OBJECTIVE (LO)		PERFORMANCE CRITERIA	Evidence Type	Evidence Ref. No.	Page
The learner will be able to:		The learner can:			
L01: Classify Computers	1.1	Describe computers according to usage, type and size.			
	1.2	Differentiate between analogue, digital and hybrid computers.			
	1.3	Carryout a simple task using a computer. <ul style="list-style-type: none"> Create a document Save a File 			
L02: Describe Computer Hardware and Software Elements	2.1	Explain the functions of various hardware and software components of the computer			
	2.2	Differentiate between operating system and application software.			
	2.3	Select application software for a particular operation.			
L03: Operate computers in modern tyre and wheels workshop.	3.1	Explain the roles of computer in modern tyre and wheel workshop.			
	3.2	List two tyres and wheels service application software			
	3.3	Operate the application software listed in 3.2 above			
	3.4	State the benefits of computer in a tyre and wheel service workshop.			

Learners Signature:**Date:**

Assessors Signature:

Date:

IQAM Signature (if sampled)

Date:

EQAM Signature (if sampled)**Date:**

NATIONAL SKILLS QUALIFICATION

**TYRE AND WHEEL
SERVICES**

LEVEL 2

FEBRUARY, 2025

NATIONAL SKILLS QUALIFICATION
NSQ LEVEL 2 – TYRE AND WHEEL SERVICES
GENERAL INFORMATION

QUALIFICATION PURPOSE

This qualification is designed for individuals who are interested in developing a career in the Tyre and wheel services and repairs industry.

QUALIFICATION REQUIREMENTS

Candidates must:

- a. Be at least 15 years of age
- b. Be medically fit
- c. Be mentally fit
- d. Have achieved all the mandatory units in the qualification

QUALIFICATION OBJECTIVE

At the end of the qualification, the tyre and wheel specialist should be able to demonstrate knowledge and skills in:

- a. Demonstrate Health, Safety and The Environment
- b. Demonstrate Communication and Interpersonal Skills
- c. Demonstrate Team Work
- d. Identify Motor Vehicle Tyre and Wheels
- e. Carry out Vulcanizing Operations
- f. Carry out Motor Vehicle Wheel Alignment
- g. Carry out Motor Vehicle Wheel Balancing

Unit assessment requirements/evidence requirements:

Assessment must be carried out in both real workplace and training environment in which learning and human development is carried out.

Suggested assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)
6. Assignment

**NATIONAL SKILLS QUALIFICATION
AUTOMOBILE SECTOR
LEVEL 2: TYRE AND WHEEL SERVICES**

Mandatory Units

S/No /Unit No	Reference Number	NOS Title	Credit Value	Guided Learning Hours	Remark
1	AUT/TWS/001/L2	HEALTH, SAFETY AND THE ENVIRONMENT II	2	20	Level 2
2	AUT/TWS/002/L2	COMMUNICATION AND INTERPERSONAL SKILLS II	2	20	Level 2
3	AUT/TWS/003/L2	TEAM WORK II	2	20	Level 2
4	AUT/TWS/004/L2	MOTOR VEHICLE TYRE AND WHEELS	4	40	Level 2
5	AUT/ TWS /005/L1	COMPUTER SKILLS IN AUTOMOTIVE TYRE AND WHEEL SERVICES	4	40	Culled from level 1
	Sub-Total		14	140	

Optional Units

S/No /Unit No	Reference Number	NOS Title	Credit Value	Guided Learning Hours	Remark
6	AUT/TWS /006/L2	MOTOR VEHICLE WHEEL ALIGNMENT	8	80	Level 2
7	AUT/TWS /007/L2	MOTOR VEHICLE WHEEL BALANCING	8	80	Level 2
	Sub-Total		16	160	
	TOTAL		30	300	

NOTE: This is a 24-30 credit qualification. To achieve this qualification; Learners are required to achieve 14 Credit from the mandatory units and between 8 and 16 credit from optional units. Each Credit is equivalent to approximately 10 Guided Learning Hours (GLH). The Total Learning Hours will therefore consist of the GLH *plus* the independent learning hours of the candidate, which is generally 250% – 350% of the GLH.

Qualification Purpose: This qualification is aimed at the ability of the learner acquiring sufficient knowledge and skills in the work environment to carry out Tyre and wheel repairs and support experienced workers in the industry

**National Skills Qualification
AUTOMOBILE SECTOR
LEVEL 2: TYRE AND WHEEL SERVICES**

Unit 1: HEALTH, SAFETY AND THE ENVIRONMENT

Unit Reference Number: AUT/TWS/001/L2

NSQ Level: 2

Credit Value: 2

Guided Learning Hours: 20

Unit Purpose: This unit specifies the competencies required to understand safe work practices in the Automotive Industry.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in both real workplace and training environment in which tyres and wheels are serviced and repaired.

Suggested assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)
6. Assignment

UNIT 01: HEALTH, SAFETY AND THE ENVIRONMENT

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type					Evidence Ref. No.	Page
The learner will be able to:		The learner can:							
LO 1: Observe Personal health and hygiene	1.1	Wear appropriate Personal Protective Equipment.(PPE)							
	1.2	Explain the function of the PPE. Such as Head, Foot, Face, eye, Hand and Body protection.							
	1.3	Treat cuts, grazes and wounds							
	1.4	Explain procedure for reporting illness and infection to the appropriate persons.							
	1.5	State own responsibility under the health and safety Act as it relates to own occupation.							
	1.6	State general rules on hygiene that must be followed.							
	1.7	State the importance of maintaining good personal Hygiene.							
LO 2: Observe Hygiene, safe and hazard free workplace.	2.1	State the importance of working in a healthy, safe and hygienic workplace							
	2.2	Report any accidents or near accidents to the appropriate personnel.							
	2.3	Follow health, hygiene and safely procedures during work							
	2.4	Practice emergency procedures during work							

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. Page No.
	2.5	Follow organizational security Procedures		
	2.6	Dispose waste in accordance with organic and inorganic waste disposal methods.		
	2.7	Follow sound and noise control and protection methods.		
	2.8	Identify any hazards or potential hazards in the workshop		
	2.9	Describe the types of hazards in the workplace that may occur and how to deal with them		
	2.10	Report hazards or potential hazards to the appropriate personnel		
Lo 3 Carry out effective housekeeping practices	3.1	Use cleaning equipment appropriately		
	3.2	Use utilities and appropriate consumables, avoiding waste		
	3.3	Perform housekeeping activities safely and in a way which minimizes inconvenience to customers and staff		
	3.4	Clean the work area to be free from debris and waste materials		
	3.5	Dispose used cleaning agents, waste materials and debris to comply with legal and workplace requirements		

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. Page No.
LO: 4 Deal with dangers in work environment	4.1	Describe organizational emergencies procedures, in particular fire, and how these should be followed		
	4.2	State the possible causes for fire in the workplace		
	4.3	Describe how to minimize the possibility of fire in the workplace		
	4.4	Carry out safe working practices whilst working with equipment, materials and products		
	4.5	Identify the responsible persons for health and safety in their relevant workplace		
	4.6	Report health and safety risks encountered while work		
	4.7	Locate the emergency exit		

Learners Signature:	Date:
Assessors Signature:	Date:
IQAM Signature (if sampled)	Date:
EQAM Signature (if sampled)	Date:

National Skills Qualification
AUTOMOBILE SECTOR
LEVEL 2: TYRE AND WHEEL SERVICES

Unit 2: COMMUNICATION AND INTERPERSONAL SKILLS

Unit Reference Number: AUT/TWS/002/L2

NSQ Level: 2

Credit Value: 2

Guided Learning Hours: 20

Unit Purpose: The aim of this unit is to equip the learner with the knowledge and skills to communicate and relate with colleagues and clients effectively in a tyre and wheel workshop.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in both real workplace and training environment in which tyre and wheel serviced and repaired.

Suggested assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)
6. Assignment

UNIT 02: Communication and Interpersonal Skills

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. No.	Page
LO 1: Demonstrate non-complex communication system in a work environment	1.1	Use a simple verbal means to deliver information			
	1.2	Use non-verbal means to deliver on information e.g. body language			
	1.3	Interpret symbols and signs appropriately			
Lo 2: Apply Source of information in a work Environment.	2.1	Locate the source of information in an organization and work environment.			
	2.2	Use the various information flow systems in a work environment			
	2.3	Report findings in accordance to procedure in a work environment			
	2.4	Use information to avoid challenges in a work situation			
Lo 3: Use Communication means in a Work Environment.	3.1	Locate the various communication equipment in the work environment			
	3.2	Use the various communication equipment in a work environment.			
	3.3	Deliver information effectively to the right personnel			
	3.4	Deliver information effectively using Symbols, signs and codes.			

Learners Signature:	Date:
Assessors Signature:	Date:
IQAM Signature (if sampled)	Date:
EQAM Signature (if sampled)	Date:

**National Skills Qualification
AUTOMOBILE SECTOR
LEVEL 2: TYRE AND WHEEL SERVICES**

Unit 3: TEAM WORK**Unit Reference Number: AUT/TWS/003/L2****NSQ Level: 2****Credit Value: 2****Guided Learning Hours: 20**

Unit Purpose: The aim of this unit is to equip the learner with the knowledge and skills to be a team player in a Tyre and wheel workshop.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in both real workplace and training environment in which tyre and wheel are serviced and repaired.

Suggested assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)
6. Assignment

UNIT 03: Team Work

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. Page No.
LO 1: Maintain Positive working relationship with colleagues	1.1	Identify the factors influencing positive working relationship		
	1.2	Explain the value of respect in strengthening working relationship		
	1.3	Assist team members when required.		
	1.4	Explain the procedures for reporting request falling outside area of responsibility.		
	1.5	Communicate information to colleagues about own work that might affect others.		
Lo 2: Understand team work	2.1	Recognize own role and responsibilities within the team.		
	2.2	Perform individual tasks in line with the team rules and regulations.		
	2.3	Participate effectively in teamwork.		
Lo 3: Comply with organisational policies	3.1	Work In line with organizational standard and structure.		
	3.2	Explain organizational code of conduct.		
	4.1	Recognize the sequence of various team activities		

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.			
Lo 4: Understand team responsibilities	4.2	Differentiate between various time frames of each team activity									
	4.3	Deliver quality output as a team									

Learners Signature: Assessors Signature: IQAM Signature (if sampled)	Date: Date: Date:
EQAM Signature (if sampled)	Date:

**National Skills Qualification
AUTOMOBILE SECTOR
LEVEL 2: TYRE AND WHEEL SERVICES**

Unit 4: VEHICLE TYRES AND WHEELS CARE

Unit Reference Number: AUT/TWS/004/L2

NSQ Level: 2

Credit Value: 4

Guided Learning Hours: 40

Unit Purpose: The aim of this unit is to equip the learner with the knowledge and skills to carry out tyre and wheel services in an automotive workshop.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which motor vehicles are repaired.

Simulation is not allowed in this unit and level.

Suggested assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)
6. Assignment

UNIT 04: Vehicle Tyre and Wheels Care

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. Page No.
LO: 1 Describe tyre composition and features	1.1	Identify the following compositions of tyre: <ul style="list-style-type: none"> • Rubber • Steel • Fabrics 		
	1.2	Describe the following basic features of different tyre designs: <ul style="list-style-type: none"> • Bias Ply Tyre Design • Bias Belted Tyre Design • Radial Ply Tyre Design 		
	1.3	Describe the following internal structures of a tyre: <ul style="list-style-type: none"> • Cap plies • Body plies • Inner Liner • Steel Belt • Edge Cover • Bead Bundle 		
Lo 2: Inflate and Deflate Tyres	2.1	Explain the following tyre gauges: <ul style="list-style-type: none"> • Stick Tyre Gauge • Dial Tyre Gauge • Digital Tyre Guage 		
	2.2	Differentiate between the gauges listed in 2.1 above		
	2.3	Use the gauges listed in 2.1 above		

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. Page No.
	2.4	Explain the effect of improper inflation pressure in the following: <ul style="list-style-type: none"> • Under Inflation • Over Inflation 		
	2.5	Deflate vehicle tyre		
	2.6	Inflate vehicle tyre to specified pressure		
Lo 3: Assemble Wheel Rim	3.1	Differentiate between the following wheels: <ul style="list-style-type: none"> • Artillery Wheel • Steel-disc Wheel • Wire. Wheel 		
	3.2	Identify the following parts in a wheel assembly: <ul style="list-style-type: none"> • The Wheel Hub • The Disc • The Wheel Rim • The Hub Cap/ Wheel Cover (For Steel-Disc Wheels) • The Lug Nuts/ Lug Bolt • The Spokes 		
	3.3	Apply the following wheel fastening devices: <ul style="list-style-type: none"> • Wheel Nuts or Lug Nuts • Wheel Studs • Wheel Bolts or Lug Bolts 		

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. Page No.
	3.4	Carry out wheel assembling		

Learners Signature:	Date:
Assessors Signature:	Date:
IQAM Signature (if sampled)	Date:
EQAM Signature (if sampled)	Date:

**National Skills Qualification
AUTOMOBILE SECTOR
LEVEL 2: TYRE AND WHEEL SERVICES**

Unit 5: COMPUTER SKILLS IN AUTOMOTIVE TYRE AND WHEEL SERVICES

Unit Reference Number: AUT/TWS/007/L1

NSQ Level: 1

Credit Value: 4

Guided Learning Hours: 40

Unit Purpose: The aim of this unit is to provide the necessary knowledge and skills required for computer usage in the automotive tyre and wheels services

Unit assessment requirements/evidence requirements:

Assessment must be carried out in both real workplace and training environment in which learning and human development is carried out. ***Simulation is allowed*** (where/when necessary) in this unit and level.

Suggested assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)
6. Assignment

Unit 5: BASIC COMPUTER SKILLS IN AUTOMOTIVE TYRE AND WHEEL SERVICES

LEARNING OBJECTIVE (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. Page No.
L01: Classify Computers	1.1	Describe computers according to usage, type and size.		
	1.2	Differentiate between analogue, digital and hybrid computers.		
	1.3	Carryout a simple task using a computer. • Create a document • Save a File		
L02: Describe Computer Hardware and Software Elements	2.1	Explain the functions of various hardware and software components of the computer		
	2.2	Differentiate between operating system and application software.		
	2.3	Select application software for a particular operation.		
L03: Operate computers in modern tyre and wheels workshop.	3.1	Explain the roles of computer in modern motor vehicles.		
	3.2	List two tyres and wheels service application software		
	3.3	Operate the application software listed in 3.2 above		
	3.4	State the benefits of computer in a tyre and wheel services workshop.		

Learners Signature:**Date:**

Assessors Signature:

Date:

IQAM Signature (if sampled)

Date:

EQAM Signature (if sampled)**Date:**

**National Skills Qualification
AUTOMOBILE SECTOR
LEVEL 2: TYRE AND WHEEL SERVICES**

Unit 6: MOTOR VEHICLE WHEEL ALIGNMENT

Unit Reference Number: AUT/TWS/006/L2

NSQ Level: 2

Credit Value: 8

Guided Learning Hours: 80

Unit Purpose: The aim of this unit is to equip the learner with the knowledge and skills for testing and adjusting wheel alignments to meet the required tolerances.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in both real workplace and training environment in which motor vehicles are repaired.

Suggested assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)
6. Assignment

UNIT 06: Motor Vehicle Wheel Alignment

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. No.	Page
LO: 1 Understand pre alignment Operations	1.1	State reasons for alignment.			
	1.2	Describe the function of the following in the wheel alignment machine: <ul style="list-style-type: none"> • Castor • Camber • (King Pin Inclination/Steering Angle Inclination) KPI/SAI 			
	1.3	Check the following: <ul style="list-style-type: none"> • Tore in • Tore out 			
Lo 2: Perform Alignment Pre-Checks	2.1	State the purpose of pre-alignment checks.			
	2.2	List the step-by-step procedures for pre-alignment checks.			
	2.3	Carry out pre alignment checks.			
Lo 3: Perform Wheel Alignment Operation	3.1	Select the appropriate tools and equipment for wheel alignment			
	3.2	Carry out wheel alignment operations			
	3.3	Check final adjustment and settings are within tolerance			
	3.4	Complete all wheel alignment operations within the agreed timescale.			
	3.5	Make clear and suitable recommendations for any further action to the relevant authorities			
LO 4: Perform Alignment Post Checks	4.1	State the purpose of post-alignment checks.			
	4.2	List the step-by-step procedures for post-alignment checks.			

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. Page No.
	4.3	Carry out post wheel alignment checks to ensure conformity to specifications.		

Learners Signature:	Date:
Assessors Signature:	Date:
IQAM: Signature (if sampled)	Date:
EQAM: Signature (if sampled)	Date:

**National Skills Qualification
AUTOMOBILE SECTOR
LEVEL 2: TYRE AND WHEEL SERVICES**

Unit 7: MOTOR VEHICLE WHEEL BALANCING

Unit Reference Number: AUT/TWS/007/L2

NSQ Level: 2

Credit Value: 8

Guided Learning Hours: 80

Unit Purpose: The aim of this unit is to equip the learner with the knowledge and skills for testing and adjusting motor vehicle wheels balancing to meet the required rotational specification.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in both real workplace and training environment in which motor vehicles are repaired.

Suggested assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)
6. Assignment
7. Other methods (OM) as may be applicable

UNIT 07: Motor Vehicle Wheel Balancing

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. No.	Page
LO 1: Understand Wheel Balancing	1.1	Differentiate between wheel alignment and balancing.			
	1.2	Explain the following: <ul style="list-style-type: none"> • Dynamic unbalance • Static unbalance • Toe-in • Toe-out, etc. 			
	1.3	Explain the effects of unbalanced wheel while driving a given motor vehicle			
Lo 2: Perform Pre-balancing checks	2.1	Explain the purpose of pre-balancing checks			
	2.2	Enumerate the step-by-step procedures for pre-balancing checks			
	2.3	Carry out wheel balancing pre-checks operations for the following: <ul style="list-style-type: none"> • the correct technical data • the manufacturer's instructions • workplace procedure • Health, Safety and Environment requirements 			
Lo 3: Perform Wheel balancing operation	3.1	Explain the importance of wheel balancing			
		Examine a given motor vehicle (while driving) to ascertain the wheel balancing status.			
	3.2	Carry out wheel balancing operations for the following: <ul style="list-style-type: none"> • the correct technical data • the manufacturer's instructions • workplace procedure • Health, Safety and Environment requirements. 			
	3.3	Check final adjustment and settings are within the tolerance range			
LO 4:	4.1	Explain the purpose of post-balancing checks.			

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. Page No.
Perform Post- balancing checks	4.2	Enumerate the step-by-step procedures for post-balancing checks.		
	4.3	Carry out post wheel balancing checks to ensure conformity to specifications.		

Learners Signature: Assessors Signature: IQAM: Signature (if sampled)	Date: Date: Date:
EQAM: Signature (if sampled)	Date:

NATIONAL SKILLS QUALIFICATION

**TYRE AND WHEEL
SERVICES**

LEVEL 3

FEBRUARY, 2025

NATIONAL SKILLS QUALIFICATION
NSQ LEVEL 3 – TYRE AND WHEEL SERVICES
GENERAL INFORMATION

QUALIFICATION PURPOSE

This qualification is designed for individuals who are interested in developing a career in tyre and wheel services in the Automotive industry.

QUALIFICATION REQUIREMENTS

Candidates must:

- e. Be at least 15 years of age
- f. Be medically fit
- g. Be mentally fit
- h. Have achieved all the mandatory units in the qualification

Note:

This is a 33-42 credit units qualification. To achieve this qualification; learners are required to achieve all credits in the mandatory units. Each Credit is equivalent to 10 Guided Learning Hours (GLH).

There are four (4) optional units, learners are at liberty to pick any optional unit of interest

QUALIFICATION OBJECTIVE

At the end of the qualification, the tyre and wheel specialist should be able to demonstrate knowledge and skills in:

- a. Demonstrate Health, Safety and The Environment
- b. Demonstrate Communication and Interpersonal Skills
- c. Demonstrate Team Work
- d. Conduct Workshop Organisation and Management
- e. Carry out Vulcanizing Operations
- f. Carry out Tyre and Wheel Maintenance
- g. Repair Steering and Suspension Systems
- h. Carry out Motor Vehicle Wheel Alignment
- i. Carry out Motor Vehicle Wheel Balancing

Unit assessment requirements/evidence requirements:

Assessment must be carried out in both real workplace and training environment in which learning and human development is carried out.

Suggested assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)
6. Assignment

**NATIONAL SKILLS QUALIFICATION
AUTOMOBILE SECTOR
LEVEL 3: TYRE AND WHEEL SERVICES**

Mandatory Units

S/No /Unit No	Reference Number	NOS Title	Credit Value	Guided Learning Hours	Remark
1	AUT/TWS/001/L3	HEALTH, SAFETY AND THE ENVIRONMENT	2	20	Level 3
2	AUT/TWS/002/L3	COMMUNICATION AND INTERPERSONAL SKILLS	2	20	Level 3
3	AUT/TWS/003/L3	TEAM WORK	2	20	Level 3
4	AUT/TWS/004/L3	WORKSHOP ORGANISATION AND MANAGEMENT	2	20	Level 3
5	AUT/TWS/005/L3	STEERING AND SUSPENSION SYSTEM	4	40	Level 3
	Sub Total		12	120	

Optional Units

6	AUT/TWS/006/L3	TYRE AND WHEEL MAINTENANCE	6	60	Level 3
7	AUT/TWS/007/L3	VULCANIZING OPERATIONS	6	60	Level 3
8	AUT/TWS/008/L3	MOTOR VEHICLE WHEEL ALIGNMENT II	6	60	Level 3
9	AUT/TWS/009/L3	MOTOR VEHICLE WHEEL BALANCING	6	60	Level 3
	SUB-TOTAL		24	240	
	TOTAL		36	360	

NOTE: This is a 33-42 credit qualification. To achieve this qualification; Learners are required to achieve 12 Credit from the mandatory units Each Credit is equivalent to approximately 10 Guided Learning Hours (GLH). The Total Learning Hours will therefore consist of the GLH *plus* the independent learning hours of the candidate, which is generally 250% – 350% of the GLH.

Qualification Purpose: This qualification is aimed at the ability of the learner to acquire sufficient knowledge and skills in Tyre and wheel services and to carryout operations with experienced workers in the industry

**National Skills Qualification
AUTOMOBILE SECTOR
LEVEL 3: TYRE AND WHEEL SERVICES**

Unit 1: HEALTH, SAFETY AND THE ENVIRONMENT

Unit Reference Number: AUT/TWS/001/L3

NSQ Level: 3

Credit Value: 2

Guided Learning Hours: 20

Unit Purpose: The aim of this unit is to equip the learner with the knowledge, skills and understanding of Health, Safety and the Environment of tyre and wheel workshop.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in both real workplace and training environment in which Tyre and Wheels are repaired.

Suggested assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)
6. Assignment

UNIT 01: Health, Safety and the Environment III

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. Page No.
LO: 1 Understand Personal health and hygiene	1.1	Wear clean, smart and appropriate personal Protective Equipment.		
	1.2	Work safely at all times, complying with health and safety and other relevant regulations and guidelines.		
	1.3	Treat cuts, grazes and wounds		
	1.4	Report illness and infection promptly to the appropriate persons.		
	1.5	Summarize own responsibility under the health and safety Act as it relates to own occupation.		
	1.6	Guide others on general rules of hygiene that must be followed.		
	1.7	Supervise the use of Personal protection Equipment such as head Protection, Foot Protection, face and eye Protection, Hand and Body protection and Regulatory Protection.		
	1.8	Describe the importance of maintaining good personal Hygiene.		
Lo 2: Appreciate Hygiene, safe and hazard free Workplace.	2.1	Describe the importance of working in a healthy, safe and hygienic workplace		
	2.2	Report any accidents or near accidents quickly and accurately to the proper person.		

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. Page No.
	2.3	Promote health, hygiene and safety procedures during work		
	2.4	Practice emergency procedures during work		
	2.5	Analyse organizational security procedures		
	2.6	Ensure the disposal of waste and pollution control with organic and Inorganic waste disposal methods.		
	2.7	Apply sound and noise control protection devices		
	2.8	Supervise identification of any hazards or potential hazards and deal with these correctly.		
	2.9	State where information about health and safety in your workplace can be obtained		
	2.10	Dispose hazardous items in the workplace		
Lo 3: Understand hazards and accidents in a work environment	3.1	Carry out organizational procedures on how to warn other people about hazards and why this is important		
	3.2	State why accidents and near accidents should be reported and who they should be reported to		
	3.3	Describe the types of emergencies that may happen in the workplace and how to deal with them		

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. Page No.
	3.4	Indicate where to find the first-aid equipment and locate the authorized personnel		
	3.5	Lift and handle materials in line with work environment procedures		
	3.6	State other ways of working safely that are relevant to own position responsibility and its importance		
	3.7	Describe organizational emergencies procedures, in particular fire, and how these should be followed		
	3.8	State the possible causes of fire in the workplace		
	3.9	Describe how to minimize the possibility of fire in the workplace		
	3.10	State where to find the alarms and how to set them on		
	3.11	State why a fire should never be approached unless it is safe to		
	3.12	State the importance of adhering to fire safety laws		
	3.13	Describe organizational security procedures and why these are important		
	3.14	State the importance of reporting all usual or non-routine incidents to the appropriate personnel		

Learners Signature:	Date:
Assessors Signature:	Date:
IQAM: Signature (if sampled)	Date:
EQAM: Signature (if sampled)	Date:

National Skills Qualification
AUTOMOBILE SECTOR
LEVEL 3: TYRE AND WHEEL SERVICES

Unit 2: COMMUNICATION AND INTERPERSONAL SKILLS

Unit Reference Number: AUT/TWS/002/L3

NSQ Level: 3

Credit Value: 2

Guided Learning Hours: 20

Unit Purpose: The aim of this unit is to equip the learner with the knowledge and skills to communicate and interact effectively with colleagues and clients in a Tyre and wheel workshop.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in both real workplace and training environment in which tyre and wheel are repaired.

Suggested assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)
6. Assignment

UNIT 02: Communication and Interpersonal Skills

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.			
LO 1: Understand communication system in a Work Environment	1.1	Describe how to use audio, electronic, and electro-magnetic means to deliver necessary information									
	1.2	Describe simple non-verbal means of communication									
	1.3	Read symbols and signs appropriately									
	1.4	Interpret symbols and signs appropriately									
Lo 2: Know sources of Information in a Work Environment	2.1	Participate in creating and making functional sources of information in an organization and work environment.									
	2.2	Access sources of information in an organization or work environment									
	2.3	Relate appropriately with the sources of information									
	2.4	Use the various information flow system in an organization or work environment to overcome challenges									
	2.5	Ensure proper documentation and retrieval of information in accordance to procedures in a work environment									

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. Page No.
Lo 3: understand Communication processes	3.1	Ensure the accessibility of the communication equipment in the work environment		
	3.2	Describe the effective use of the various communication channels in a work environment		
	3.3	Demonstrate the use of various communication means in a work environment		
	3.4	Ensure effective information flow to the right personnel		
	3.5	Ensure the effective deployment of the use of symbols, signs and codes in the workplace		
	3.6	Ensure that instructions are obeyed and disseminated in line with ethics of the work environment		
Lo 4: Know the maintenance of Communication equipment in work environment	4.1	Ensure that communication equipment are in good working condition		
	4.2	Liaise with the maintenance unit to ensure that communication equipment are maintained regularly		
	4.3	Liaise with appropriate authority to replace communication equipment in the event of loss or damage		
	4.4	Ensure that communication equipment are stored appropriately in a work environment		

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. Page No.

Learners Signature:	Date:
Assessors Signature:	Date:
IQAM Signature (if sampled)	Date:
EQAM Signature (if sampled)	Date:

**National Skills Qualification
AUTOMOBILE SECTOR
LEVEL 3: TYRE AND WHEEL SERVICES**

Unit 3: TEAM WORK**Unit Reference Number: AUT/TWS/003/L3****NSQ Level: 3****Credit Value: 2****Guided Learning Hours: 20**

Unit Purpose: The aim of this unit is to equip the learner with the knowledge and skills to be an effective team player in a Tyre and wheel workshop.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in both real workplace and training environment in which tyres and wheels are repaired.

Suggested assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)
6. Assignment

UNIT 03: Team Work

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.	
LO 1: know how to appreciate team work in a work environment	1.1	Identify the various teams in a work environment							
	1.2	Identify the function of each team							
	1.3	Discuss the function of each team							
	1.4	Differentiate between the function of each team							
Lo 2: Know the requirements of the various teams	2.1	Select materials and tools required for each team.							
	2.2	Differentiate types of materials, tools and equipment requirements for each team							
	2.3	Discuss the method of carrying out activities for each team.							
Lo 3: Understand the Benefits of the various teams.	3.1	Recognize the sequence of various team activities							
	3.2	Differentiate between various time frame of each team activity							
	3.3	Produce quality output as a team							
Lo 4: Know how to Communicate with co-workers, subordinates and superiors	4.1	Communicate work related information/requirements clearly to team members							
	4.2	Inform co-workers and superiors about any kind of deviation from work Planned							

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.			
	4.3	Solve problems effectively if need be and report to appropriate person									
	4.4	Collate instructions from superiors and respond effectively									
	4.5	Communicate to team members/subordinates of the right Work techniques and methods.									
	4.6	Obtain clarification and advice from superiors as per work information where necessary									

Learners Signature:	Date:
Assessors Signature:	Date:
IQAM Signature (if sampled)	Date:
EQAM Signature (if sampled)	Date:

**National Skills Qualification
AUTOMOBILE SECTOR
LEVEL 3: TYRE AND WHEEL SERVICES**

Unit 04: WORKSHOP ORGANISATION AND MANAGEMENT

Unit Reference Number: AUT/TWS/004/L3

NSQ Level: 3

Credit Value: 2

Guided Learning Hours: 20

Unit Purpose: The aim of this unit is to equip the learner with knowledge and skills in the organisation and management of tyre and wheel services workshop.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in both real automotive workplace and training environment.

Suggested assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)
6. Assignment

UNIT 04: Workshop Organisation and Management

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. Page No.
LO 1: Manage Workshop Financial Records	1.1	Describe the following various financial records used in a workshop: <ul style="list-style-type: none"> • receipts • invoices • work bills. 		
	1.2	Differentiate between the following various financial records used in a workshop: <ul style="list-style-type: none"> • receipts • invoices • work bills 		
	1.3	Manage procedures for preparing various financial records used in a workshop.		
	1.4	Discuss procedures for safe and proper financial records keeping.		
LO 2: Manage Workshop job Related Records	2.1	Describe the following various job related records used in the workshop: <ul style="list-style-type: none"> • job cards • workshop reception forms • requisition forms • purchase order forms • stock cards, • workshop delivery forms, etc. 		
	2.2	Manage procedures for preparing various job related records used in the workshop		
	2.3	Discuss procedures for safe and proper job related records keeping.		
Lo 3: Manage	3.1	Certify out-of-stock tools, materials and equipment.		

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. Page No.
Procurement Activities	3.2	Evaluate various storage techniques used in the workshop.		
	3.3	Outline procedures for procuring materials, tools and equipment for the following: <ul style="list-style-type: none"> • manuals and reference materials • requests and approvals • order placements • reception of goods and items • payments • storage • use 		

Learners Signature: Assessors Signature: IQAM Signature (if sampled)	Date: Date: Date:
EQAM Signature (if sampled)	
Date:	

National Skills Qualification**AUTOMOBILE SECTOR****LEVEL 3: TYRE AND WHEEL SERVICES****Unit 5: STEERING AND SUSPENSION SYSTEMS****Unit Reference Number: AUT/TWS/007/L3****NSQ Level: 3****Credit Value: 6****Guided Learning Hours: 60**

Unit Purpose: The aim of this unit is to equip the learner with the knowledge and skills of basic maintenance of vehicle suspension and steering systems.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in both real automotive workplace and training environment.

Suggested assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)
6. Assignment

UNIT 05: Steering and Suspension Systems

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. No.	Page
LO 1: Observe safety in removal and replacement activities	1.1	Use the required personal protective equipment			
	1.2	Identify potential health and safety hazards and risks			
	1.3	Dispose used fluids and wastes appropriately			
Lo 2: Remove and replace vehicle suspension and steering systems	2.1	Select the correct tools and equipment and check they are fit for purpose			
	2.2	Use the selected tools and equipment correctly			
	2.3	Identify the major components of the suspension and steering systems			
	2.4	state the basic operation and purpose of the following: <ul style="list-style-type: none"> • Damper • Spring • steering components 			
Lo 3: Examine steering and suspension systems	3.1	Inspect steering and suspension systems			
	3.2	Demonstrate basic removal and fitting techniques			
	3.3	Carry out steering and suspension checks			
	3.4	State how to recognise and report damaged components in a vehicle			

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. Page No.
	3.5	Identify specifications and grades of steering and suspension lubricants.		

Learners Signature: Assessors Signature: IQAM Signature (if sampled)	Date: Date: Date:
EQAM Signature (if sampled)	
Date:	

**National Skills Qualification
AUTOMOBILE SECTOR
LEVEL 2: TYRE AND WHEEL SERVICES**

Unit 6: TYRE AND WHEEL MAINTENANCE**Unit Reference Number: AUT/TWS/006/L3****NSQ Level: 2****Credit Value: 6****Guided Learning Hours: 60**

Unit Purpose: The aim of this unit is to equip the learner with knowledge and skills to maintain tyres and wheels.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in both real automotive workplace and training environment.

Suggested assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)
6. Assignment

UNIT 06: Tyre and Wheel Maintenance

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type					Evidence Ref. Page No.			
The learner will be able to:		The learner can:									
Lo 1: Observe Health and safety in workplace during tyres and wheels maintenance	1.1	Use the correct personal protective equipment (PPE) in carrying out tyre repairs.									
	1.2	Develop safety routine activities in the tyre shop.									
	1.3	Design accident free workshop plan/layout.									
	1.4	Work in accordance with approved safety acts in tyre and wheel services and repairs.									
LO 2: Use Wheel Balancing Tools and equipment	2.1	Use wheel balancing tools and equipment, e.g. <ul style="list-style-type: none"> • caliper • key valve • weight hammer • lever • weight (adhesive and lead), etc 									
	2.2	Monitor the pre-inspection process in wheel balancing									
	2.3	Certify post balancing checks on wheels.									
	2.4	Carryout routine maintenance on wheel balancing tools and equipment									
Lo 3: Use Wheel Alignment Tools and Equipment	3.1	Monitor the pre-inspection procedures in alignment operations									
	3.2	Carry out wear and damage detection on the following: <ul style="list-style-type: none"> • Tyres • ball joints • bearings • track arm • track rod • coil spring, etc 									

LEARNING OUTCOME (LO) The learner will be able to:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. Page No.
	3.3	Carry out pre alignment checks on heavy duty vehicles		
	3.4	Carryout wheel alignment operations on heavy duty vehicles		
	3.5	Carryout post alignment checks on heavy duty vehicles		
LO 4: Maintain Tyres and Wheels	4.1	Inspect wheels and tyres using suitable tools, sources of information and equipment. to include the following: <ul style="list-style-type: none"> • visual inspection • measurement of tread depth • tyre pressures • balance. 		
	4.2	Carry out tyre repair within appropriate timescales using the following: <ul style="list-style-type: none"> • suitable tools and equipment • correct repair and replacement techniques • correct type and size of replacement components • correct materials 		
	4.3	Carry out wheel balancing within the acceptable limits		

Learners Signature	Date:
Assessors Signature:	Date:
IQAM Signature (if sampled)	Date:
EQAM Signature (if sampled)	Date:

**National Skills Qualification
AUTOMOBILE SECTOR
LEVEL 3: TYRE AND WHEEL SERVICES**

Unit 07: VULCANIZING OPERATIONS

Unit Reference Number: AUT/TWS/005/L3

NSQ Level: 3

Credit Value: 6

Guided Learning Hours: 60

Unit Purpose: The aim of this unit is to equip the learner with the knowledge and skills to carry out vulcanizing operations

Unit assessment requirements/evidence requirements:

Assessment must be carried out in both real automotive workplace and training environment.

Suggested assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)
6. Assignment

UNIT 07: Vulcanizing Operations

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type	Evidence Ref. No.	Page No.
The learner will be able to:		The learner can:			
LO: 1 Observe safety measures in Vulcanizing Operations	1.1	Observe safety procedures while carrying out removal of heavy duty tyre			
	1.2	Use suitable PPE when carrying out removal and replacement of tyre and other components			
	1.3	Use powered tools and equipment as specified by the manufacturer			
LO 2: Remove Heavy Duty Tyre	2.1	Prepare heavy duty vehicle for tyre removal			
	2.2	Select appropriate tools and equipment for tyre removal			
	2.3	Follow the sequence of tyre removal preparation			
	2.4	Use powered equipment to remove heavy duty tyre			
LO 3: Carry Out Patch Process	3.1	Use the necessary tools to remove tyre from the rim either mechanically or electrically			
	3.2	Separate the tyre, tube and rim			
	3.3	Locate patch area on tube			
	3.4	Carryout out patch on the punctured tube			
	3.5	Replace tyre correctly			

Learners Signature:

Assessors Signature:

IQAM Signature (if sampled)

Date:

Date:

Date:

EQAM Signature (if sampled)**Date:**

**National Skills Qualification
AUTOMOBILE SECTOR
LEVEL 3: TYRE AND WHEEL SERVICES**

Unit 08: MOTOR VEHICLE WHEEL ALIGNMENT II

Unit Reference Number: AUT/TWS/008/L3

NSQ Level: 3

Credit Value: 6

Guided Learning Hours: 60

Unit Purpose: The aim of this unit is to equip the learner with the knowledge and skills to carry out testing and adjustment of basic four-wheel alignment on motor vehicles

Unit assessment requirements/evidence requirements:

Assessment must be done in both real workplace and training environment in which vehicle alignment is carry out.

Suggested assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)
6. Assignment

UNIT 08: Motor Vehicle Wheel Alignment II

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type					Evidence Ref. Page No.	
The learner will be able to:		The learner can:							
LO 1: Carry out pre alignment checks on four wheel	1.1	Calibrate the following wheel alignment tools: <ul style="list-style-type: none"> Dial Indicator Level Precision Laser 							
	1.2	Carryout pre-checks on four wheel vehicle prior to alignment							
	1.3	Use vehicle data relating to working tolerances on four wheel alignment							
Lo 2: Perform four wheel alignment	2.1	Assemble tools for alignment							
	2.2	Carry out four wheel alignment using suitable tools and equipment							
	2.3	Carry out calibration as appropriate							
	2.4	Use vehicle data relating to working tolerances to consider the following: <ul style="list-style-type: none"> Technical information Manufacturer's instructions where relevant. 							
LO 3: Adjust motor vehicle Wheel Alignment	3.1	Carry out Toe Adjustment							
	3.2	Carry out Camber Adjustment							
	3.3	Carry out Caster Adjustment							

Learners Signature:**Date:**

Assessors Signature:

Date:

IQAM Signature (if sampled)

Date:

EQAM Signature (if sampled)**Date:**

National Skills Qualifications

FOR

TYRE AND WHEEL SERVICES

LEVEL 1, 2 & 3



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