



1.0 Trade Qualification Offered

Qualification Information	Occupational Certificate: Automotive Engine Fitter, NQF Level 04
SAQA ID	119423
Credits:	540 credits/ 5400 hours (48 months training attendance)
Entry Requirement	Grade 10/ NQF level 1 with Maths and Science Recognise Previous Learning
Exit	External Integrated Summative Assessment (EISA) and Trade Test
Careers	Motor Mechanic, Diesel Motor Mechanic, Motorcycle Mechanic, Small Engine Mechanic

1.1 Purpose and Rationale of the Qualification

The purpose of this qualification is to prepare a learner to operate as an Automotive Engine Fitter. An Automotive Engine Fitter dismantles, inspects, measures, assesses, assembles, tests, diagnoses and rectifies faults on internal combustion engines.

A qualified learner will be able to:

- I. Dismantle, clean and prepare internal combustion engines for inspection
- II. Inspect, assess and assemble internal combustion engines
- III. Diagnose, test and verify performance of internal combustion engines

1.2 Training Content

The Occupational Certificate covers the following:

1.2.1 KNOWLEDGE MODULES

Knowledge Modules: Eight (8) Knowledge Modules covers Theory and Class Attendance at our Training Centre

Credits: 108

Module 1: *Workplace* fundamentals

Module 2: Foundational concepts for mechanics

Module 3: Vehicle and equipment fundamentals

Module 4: Basic engine systems

Module 5: Vehicle, equipment and propulsion systems

Module 6: Electrical systems and basic electronic, hydraulic and pneumatic principles

Module 7: Advanced vehicle and equipment systems

Module 8: Problem solving and engine optimization,

1.2.2 PRACTICAL MODULES

Practical Modules, eleven (11) Modules, offered in our Training Workshop

Credits: 108

Module 01: Work safely and respond to emergencies

Module 02: Use tools and equipment

Module 03: Cut and join metals

Module 04: Remove and install mechanical components (gaskets, seals, bearings and locking devices),

Module 05: Dismantle, clean and prepare engine and components,

Module 06: Measure and assess engine components to given specifications for machining and assembling,

Module 07: Assemble petrol engines

Module 08: Assemble diesel engines

Module 09: Diagnose and rectify petrol engine malfunctions

Module 10: Diagnose and rectify diesel engine malfunctions

Module 11: Dynamometer test engines and verify performance

1.2.3 WORKPLACE COMPONENT

WORKPLACE COMPONENT (may also be in the form of a logbook, covering the competencies required in the workplace) offered at a Registered Workplace (Automotive Services and Repair Workshop)

Credits: 324

- Module 01:** Dismantling and preparing internal combustion engines and components,
- Module 02:** Measuring and assessing engine components prior to machining
- Module 03:** Assemble engine components and engine after assessment and measuring,
- Module 04:** Mounting assembled engine on dynamometer
- Module 05:** Pre-checking procedure of mounted engine
- Module 06:** Dynamometer mounted engines' performance verified and tested to requirements,
- Module 07:** Diagnosis and rectification of engine and engine component malfunctions

2.0 Part Qualifications Offered

Occupational Certificates are Part of the Occupational Certificate: Automotive Motor Mechanic, SAQA QUAL ID: 97990, 540 Credits. Offered at NQF Level 04. The Qualification Development Quality Partner is MERSETA. The certificate is made up of:

- 8 Knowledge Modules
- 13 Practical Modules
- 10 Workplace Modules

The Part Qualifications are thus made up of modules selected from the qualification, hence the term "Part Qualification".

2.1 Learner Horizontal Progression

Learners that successfully concluded the Part Qualification program and earn the Occupational Certificate will receive credits of the acquired modules in the event they wish to pursue the Full Qualification, i.e. Automotive Motor Mechanic

We propose two (2) Part – Qualification here below: