

No. 688

15 July 2005

Established in terms of Act 58 of 1995**SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)**

In accordance with regulation 24(c) of the Standard Generating Bodies Regulations of 28 March 1998, the Standards Generating Body (SGB) for

Law, Military Science and Security

publishes the following qualifications and unit standards for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the qualifications and unit standards. The qualifications and unit standards can be accessed via the SAQA web-site at www.saga.org.za. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, Hatfield Forum West, 1067 Arcadia Street, Hatfield, Pretoria.

Comment on the qualification and unit standards should reach SAQA at the address ***below and no later than 15 August 2005***. All correspondence should be marked **Standards Setting – SGB for Combat Weapons Maintenance** and addressed to

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ACTING DIRECTOR: STANDARDS SETTING AND DEVELOPMENT



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:

Further Education and Training Certificate: Firearms Maintenance

SAQA QUAL ID	QUALIFICATION TITLE		
49739	Further Education and Training Certificate: Firearms Maintenance		
SGB NAME	NSB 08	PROVIDER NAME	
SGB Combat Weapons Maintenance	Law, Military Science and Security		
QUAL TYPE	FIELD	SUBFIELD	
National Certificate	Law, Military Science and Security	Safety in Society	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUALIFICATION CLASS
Undefined	130	Level 4	Regular-Unit Stds Based

PURPOSE AND RATIONALE OF THE QUALIFICATION

Purpose:

This qualification will allow a learner in the Firearms Maintenance Industry and Statutory Forces to obtain a nationally recognised qualification for maintaining firearms. It will also contribute to the upliftment of the Firearms Maintenance and Statutory Forces personnel (i.e. armourers, gunsmiths, weapon fitters and armament fitters, etc.) by setting a professional standard within this industry. Qualifying learners will be able to:

- > Communicate with internal and external clients by compiling technical reports and perform related administration.
- > Use mathematical knowledge to read and interpret engineering drawings.
- > Maintain, repair and inspect firearms according to manufacturer's specifications.
- > Adhere to safety regulations and laws pertaining to firearms and ammunition.

Rationale of the qualification:

This qualification reflects the workplace-based needs of the Firearms Maintenance Industry that relates to maintaining firearms as expressed by employers, employees and education, training and development providers. This qualification will standardise firearms maintenance across the different sectors of the Firearms Maintenance Industry and contribute to the safety and security of society. This qualification provides the learner with access to employment within the Firearms Maintenance Industry and provides qualifying learners with the flexibility to pursue different careers in the broader Firearms Maintenance Industry and Statutory Forces.

RECOGNIZE PREVIOUS LEARNING?

Y

LEARNING ASSUMED TO BE IN PLACE

- > Communication NQF Level 3.
- > Mathematical Literacy NQF Level 3.

Recognition of Prior Learning:

This qualification may be achieved in part or whole through the recognition of prior learning gained in the Firearms Maintenance Industry. For the purposes of recognizing prior learning, providers are required to develop structured means of assessment of individual candidates against the exit level outcomes and unit standards of the qualification on a case by case basis. Such procedures and assessment of individual

candidates must be moderated by the relevant ETQA.

ACCESS TO THE QUALIFICATION

Learners embarking on study towards this qualification must meet all the criteria that are set in the firearm legislation pertaining to persons who may maintain firearms and must also have completed the unit standard Select use and care for engineering hand tools at NQF level 2 or its equivalent.

QUALIFICATION RULES

To qualify with the Further Education and Training Certificate in Firearms Maintenance at NQF level 4, learners are required to complete 56 credits in the fundamental and 65 credits in the core components of the qualification which are compulsory. Learners are required to choose a minimum of 9 credits from the elective component to complete the 130 credit requirement of the qualification.

EXIT LEVEL OUTCOMES

1. Communicate with internal and external clients by compiling technical reports and perform related administration.
2. Use mathematical knowledge to read and interpret engineering drawings.
3. Maintain, repair and inspect firearms according to manufacturer's specifications.
4. Adhere to safety regulations and laws pertaining to firearms and ammunition.

Critical Cross-field Outcomes:

The way in which the critical cross-field outcomes are addressed in this qualification is presented in detail in the unit standards. (See unit standards) The qualification addresses the following Critical Cross-Field Outcomes:

- > Identifying and solving problems in which responses display that responsible decisions using critical and creative thinking have been made.
- > Working effectively with others as a member of a team, group, organization or community.
- > Organizing and managing oneself and one's activities responsibly and effectively.
- > Communicating effectively using visual, mathematical and/or language skills in the modes of oral and/or written persuasion.
- > Demonstrating an understanding of the world as a set of related systems by recognizing that problem solving contexts do not exist in isolation.
- > Using science and technology effectively and critically showing responsibility towards the environment and health of others.
- > Collecting, analysing, organising and critically evaluating information.

ASSOCIATED ASSESSMENT CRITERIA

1.
 - > Communication skills are demonstrated within the context of client service.
 - > Technical reports are compiled in order to facilitate communication with internal and external clients.
 - > Administrative procedures are adhered to, to expedite service delivery to clients.
2.
 - > Engineering drawings are read in order to establish maintenance requirements on firearms.
 - > Engineering drawings are analysed using mathematical principles in the planning of maintenance repairs to firearms.
 - > Engineering drawings are interpreted in order to affect maintenance on firearms according to manufacturer's specifications.
3.
 - > Firearms are inspected in order to determine whether repairs, and subsequently which repairs, are necessary in order to maintain the firearm.
 - > Firearms are maintained to ensure its continued safe operation.
 - > Firearms are repaired in accordance with manufacturer's specifications.
4.
 - > Firearms and ammunition are handled in accordance with accepted safety regulations.
 - > Firearms and ammunition are handled in accordance with legal prescripts.

Integrated Assessment

Assessment should focus on the candidates' ability to apply theoretical knowledge and understanding to

practical application. Assessors should use a range of strategies to allow candidates to demonstrate applied competence. Assessment strategies and procedures should be in alignment with the purpose and exit level outcomes of the qualification. These should primarily consist of practical assessments supported by written assignments, tests and/or examinations, case studies, problem solving assignments, portfolios of learning and projects.

INTERNATIONAL COMPARABILITY

A comparison of this qualification and the unit standards of the New Zealand certificate, the Arms Maintenance Diagnostics Advisor Certificate revealed that the content of this level 4 qualification compares well with the knowledge, understanding, skills and value orientations covered in the New Zealand certificate. A search of United States of America qualifications revealed that courses in Weapons Maintenance were too specialised to compare with what the SGB wanted to cover.

In the USA the Weapons Maintenance industry does not cover firearms in general as this qualification intends to. One specialises in pistols, shotguns, semi-automatic carbines, automatic carbines, etc. and this was found to be lacking in content and coverage for the South African context. A search of a number of African countries did not produce any comparable courses in Weapons Maintenance.

ARTICULATION OPTIONS

This qualification is equivalent to other FETCs at NQF level 4 in the Engineering, Mechanical and Maintenance field. Learners qualifying with this qualification may proceed to other level 5 qualifications in Weapons Maintenance that are yet to be developed by the SGB.

MODERATION OPTIONS

Providers offering this qualification must be accredited by the relevant ETQA. Accredited providers must establish moderation procedures and systems in line with the requirements of the ETQA.

One or more external moderators should moderate results of assessments. External moderators should provide reports not only on the fairness and consistency of assessment, but also on the validity of the assessment design in terms of the specified outcomes.

CRITERIA FOR THE REGISTRATION OF ASSESSORS

Anyone assessing learners against this qualification must be registered as an assessor with the relevant ETQA. Assessors should have a level 5 qualification in Firearms Maintenance or its equivalent and an additional three years experience in the Firearms Maintenance Industry (as an Armourer, Gunsmith, Weapon Fitter or Armament Fitter etc).

NOTES

N/A

UNIT STANDARDS

(Note: A blank space after this line means that the qualification is not based on Unit Standards.)

	UNIT STANDARD ID AND TITLE	LEVEL	CREDITS	STATUS
Core	119775 Explain and understand the legislation related to handling and storage of ammunition and firearms during maintenance	Level 4	3	Draft - Prep for P Comment
Core	119776 Maintain optical and non-optical firearm sighting systems	Level 4	18	Draft - Prep for P Comment
Core	119777 Apply safety precautions in the maintenance of firearms	Level 4	6	Draft - Prep for P Comment
Core	119778 Demonstrate an understanding of basic internal and external ballistics	Level 4	7	Draft - Prep for P Comment
Core	119780 Demonstrate an understanding of small arms ammunition	Level 4	4	Draft - Prep for P Comment
Core	119781 Demonstrate the use and care of firearm measuring equipment	Level 4	5	Draft - Prep for P Comment
Core	119782 Explain firearm surface treatments	Level 4	4	Draft - Prep for P Comment
Core	119783 Demonstrate and understanding of the operating principles in the maintenance of firearms	Level 4	18	Draft - Prep for P Comment
Elective	12255 Weld workpieces with the gas metal arc welding process in all positions	Level 3	15	Registered

Elective	119779 Explain the construction of firearm stocks	Level 4	9	Draft - Prep for P Comment
Fundamental	8968 Accommodate audience and context needs in oral communication	Level 3	5	Reregistered
Fundamental	8969 Interpret and use information from texts	Level 3	5	Reregistered
Fundamental	8970 Write texts for a range of communicative contexts	Level 3	5	Reregistered
Fundamental	8973 Use language and communication in occupational learning programmes	Level 3	5	Reregistered
Fundamental	7468 Use mathematics to investigate and monitor the financial aspects of personal, business, national and international issues	Level 4	6	Reregistered
Fundamental	8974 Engage in sustained oral communication and evaluate spoken texts	Level 4	5	Reregistered
Fundamental	8975 Read analyse and respond to a variety of texts	Level 4	5	Reregistered
Fundamental	8976 Write for a wide range of contexts	Level 4	5	Reregistered
Fundamental	8979 Use language and communication in occupational learning programmes	Level 4	5	Reregistered
Fundamental	9015 Apply knowledge of statistics and probability to critically interrogate and effectively communicate findings on life related problems	Level 4	6	Reregistered
Fundamental	9016 Represent analyse and calculate shape and motion in 2-and 3-dimensional space in different contexts	Level 4	4	Reregistered



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

1

Explain and understand the legislation related to handling and storage of ammunition and firearms during maintenance

SAQA US ID	UNIT STANDARD TITLE		
119775	Explain and understand the legislation related to handling and storage of ammunition and firearms during maintenance		
SGB NAME		NSB 08	PROVIDER NAME
SGB Combat Weapons Maintenance		Law, Military Science and Security	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Law, Military Science and Security	Safety in Society
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	3	Level 4	Regular

SPECIFIC OUTCOME 1

Explain the prohibitions of unlicensed firearms and ammunition in the working environment.

SPECIFIC OUTCOME 2

Explain the legislation pertaining to gunsmiths.

SPECIFIC OUTCOME 3

Explain the legislation pertaining to the storage and transport of firearms and ammunition.

SPECIFIC OUTCOME 4

Explain the legislation pertaining to the control of ammunition and firearm parts.

SPECIFIC OUTCOME 5

Explain the legislation pertaining to the requirements of mandatory inspections by authorised official.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

2

Maintain optical and non-optical firearm sighting systems

SAQA US ID	UNIT STANDARD TITLE		
119776	Maintain optical and non-optical firearm sighting systems		
SGB NAME	NSB 08	PROVIDER NAME	
SGB Combat Weapons Maintenance	Law, Military Science and Security		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Law, Military Science and Security	Safety in Society	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	18	Level 4	Regular

SPECIFIC OUTCOME 1

Demonstrate an understanding of the basic principles of sighting systems.

SPECIFIC OUTCOME 2

Maintain sighting systems.

SPECIFIC OUTCOME 3

Trouble shoot faulty sighting systems by analysing the target.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

3

Apply safety precautions in the maintenance of firearms

SAQA US ID	UNIT STANDARD TITLE		
119777	Apply safety precautions in the maintenance of firearms		
SGB NAME	NSB 08	PROVIDER NAME	
SGB Combat Weapons Maintenance	Law, Military Science and Security		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Law, Military Science and Security	Safety in Society	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	6	Level 4	Regular

SPECIFIC OUTCOME 1

Explain the reasons for performing safety precautions when maintaining firearms.

SPECIFIC OUTCOME 2

Perform safety procedures according to manufacturers requirements when maintaining different types of firearms.

SPECIFIC OUTCOME 3

Take corrective actions when unsafe conditions are identified during firearm maintenance.

SPECIFIC OUTCOME 4

Demonstrate an understanding of the cycle of operation of firearms.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

4

Demonstrate an understanding of basic internal and external ballistics

SAQA US ID	UNIT STANDARD TITLE		
119778	Demonstrate an understanding of basic internal and external ballistics		
SGB NAME		NSB 08	PROVIDER NAME
SGB Combat Weapons Maintenance		Law, Military Science and Security	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Law, Military Science and Security	Safety in Society
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	7	Level 4	Regular

SPECIFIC OUTCOME 1

Explain ballistic definitions, terms and tables.

SPECIFIC OUTCOME 2

Demonstrate an understanding of internal ballistics.

SPECIFIC OUTCOME 3

Demonstrate an understanding of external ballistics.

SPECIFIC OUTCOME 4

Describe the effects of ammunition construction on internal and external ballistics.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

5

Explain the construction of firearm stocks

SAQA US ID	UNIT STANDARD TITLE		
119779	Explain the construction of firearm stocks		
SGB NAME	NSB 08	PROVIDER NAME	
SGB Combat Weapons Maintenance	Law, Military Science and Security		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Law, Military Science and Security	Safety in Society	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	9	Level 4	Regular

SPECIFIC OUTCOME 1

Explain the layouts, components of and types of firearm stocks.

SPECIFIC OUTCOME 2

Explain the types of materials used to manufacture firearm stocks.

SPECIFIC OUTCOME 3

Explain the types of treatments and finishing methods used on firearm stocks.

SPECIFIC OUTCOME 4

Explain the types of recoil compensating methods.

SPECIFIC OUTCOME 5

Explain the types, methods and purposes of stock bedding.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

6

Demonstrate an understanding of small arms ammunition

SAQA US ID	UNIT STANDARD TITLE		
119780	Demonstrate an understanding of small arms ammunition		
SGB NAME	NSB 08	PROVIDER NAME	
SGB Combat Weapons Maintenance	Law, Military Science and Security		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Law, Military Science and Security	Safety in Society	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	4	Level 4	Regular

SPECIFIC OUTCOME 1

Explain the various identified components of ammunition.

SPECIFIC OUTCOME 2

Explain the identified marking systems as well as the calibres of ammunition.

SPECIFIC OUTCOME 3

Demonstrate an understanding of the handling and storage of ammunition according to safety procedures.

SPECIFIC OUTCOME 4

Identify defective ammunition in order to report such defects to avoid unsafe conditions.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

7

Demonstrate the use and care of firearm measuring equipment

SAQA US ID	UNIT STANDARD TITLE		
119781	Demonstrate the use and care of firearm measuring equipment		
SGB NAME	NSB 08	PROVIDER NAME	
SGB Combat Weapons Maintenance	Law, Military Science and Security		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Law, Military Science and Security	Safety in Society	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	5	Level 4	Regular

SPECIFIC OUTCOME 1

Identify and explain the purpose of firearm measuring equipment.

SPECIFIC OUTCOME 2

Demonstrate the use of firearm measuring equipment.

SPECIFIC OUTCOME 3

Explain and demonstrate care examination and storage of firearm measuring equipment.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

8

Explain firearm surface treatments

SAQA US ID	UNIT STANDARD TITLE		
119782	Explain firearm surface treatments		
SGB NAME	NSB 08	PROVIDER NAME	
SGB Combat Weapons Maintenance	Law, Military Science and Security		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Law, Military Science and Security	Safety in Society	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	4	Level 4	Regular

SPECIFIC OUTCOME 1

Describe the effects of surface treatment chemicals on the environment and health of persons.

SPECIFIC OUTCOME 2

Explain the reasons for applying surface treatment to firearms.

SPECIFIC OUTCOME 3

Explain the different surface treatments and their respective preparation methods.

SPECIFIC OUTCOME 4

Explain the defects found in and on different types of surface treatment.



Established in terms of Act 58 of 1995

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

9

Demonstrate and understanding of the operating principles in the maintenance of firearms

SAQA US ID	UNIT STANDARD TITLE		
119783	Demonstrate and understanding of the operating principles in the maintenance of firearms		
SGB NAME	NSB 08	PROVIDER NAME	
SGB Combat Weapons Maintenance	Law, Military Science and Security		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Law, Military Science and Security	Safety in Society	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	18	Level 4	Regular

SPECIFIC OUTCOME 1

Explain the operating systems of firearms.

SPECIFIC OUTCOME 2

Demonstrate an understanding of the types of firearm locking mechanisms.

SPECIFIC OUTCOME 3

Demonstrate an understanding of the types of firearm feeding mechanisms.

SPECIFIC OUTCOME 4

Demonstrate an understanding of the types of firearm trigger mechanisms.

SPECIFIC OUTCOME 5

Demonstrate an understanding of the types of firearm safety mechanisms.

SPECIFIC OUTCOME 6

Demonstrate an understanding of the components of firearms barrels.