No. 834 **6 August 2004**

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

Established in terms of Act 58 of 1995

SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

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

Clothing, Textiles, Footwear and Leather

Registered by NSB 06, Manufacturing, Engineering and Technology, publishes the following qualification and unit standards for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the qualification and unit standards. The qualification and unit standards can be accessed via the SAQA web-site at **www.saqa.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 unit standards should reach SAQA at the address ***below and no later than 6 September 2004.*** All correspondence should be marked **Standards Setting – SGB for Clothing, Textiles, Footwear and Leather** and addressed to

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SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:

Further Education and Training Certificate: Clothing, Textiles, Footwear and Leather (CTFL) Mechanician Processes

SAQA QUAL ID	QUALIFICATION TITLE		
48964	Further Education and Training Certificate: Clothing, Textiles, Footwear and Leather (CTFL) Mechanician Processes		
SGB NAME	SGB Clothing, Textiles, Footwear and Leather		
NSB ACRONYM	PROVIDER NAME		
NSB 06			
QUAL TYPE	FIELD		SUBFIELD
National Certificate	Manufacturing, Engineering and Technology		Manufacturing and Assembly
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUALIFICATION CLASS
Undefined	178	Level 4	Regular-Unit Stds Based

PURPOSE OF THE QUALIFICATION

The qualification is applicable to people across the CTFL sector as the fundamental and core and elective components deal with knowledge, skills, values and attitudes required by all mechanicians in the sector. Learners will deal with specific clothing, textile (dry) or textile (wet) processes through the chosen elective area.

The purpose of the qualification is to build the mechanician competence at level 4 to address the following:

1. The need for mechanicians to monitor the use of raw materials, lubricants and chemicals.
2. The need to maintain and use a range of hand or power tools.
3. The need to record quality matters and maintain a quality system.
4. The need to monitor waste and record waste related statistics.
5. The need to determine common mechanical, hydraulic, pneumatic, electrical, electronic and to conduct generic tests on these.
6. The need to monitor and improve employer / employee practices in a CTFL plant.
7. The need to lead teams in CTFL processes
8. The need to describe material flow in the manufacture of CTFL products.
9. The need for learners to maintain a range of clothing machinery.
10. The need for learners to maintain textile (dry) process machinery in the textile industry.
11. The need for learners to complete a product change over in a textile dry process.
12. The need for learners to maintain textile (wet) process machinery in the textile industry.

This qualification will allow a learner to obtain a nationally recognised qualification in mechanician processes. It will set a standard for proficiency and assist in reducing high costs related to machine and equipment maintenance and breakdown. It will also assist with attracting and retaining quality learners. This qualification will also provide for the recognition of prior learning by allowing learners to obtain credits for knowledge and skills that they already possess and so obtain the qualification in whole or in part through such recognition.

The qualification supports the objectives of the National Qualifications Framework in the following ways:
> It provides for progression from the level 3 qualification and to the level 5 qualification. It also meets the NQF principle of portability in that 24 credits are carried over to the manufacturing processes qualifications

at the same level in clothing, textiles, footwear and leather. Furthermore, it gives the opportunity for learners to obtain official recognition for knowledge and skills that they possess in mechanicians processes the awarding of an officially recognised qualification.
> The provision that the qualification may be obtained through recognition of prior learning facilitates access to an education, training and career path in mechanicians processes, and thus accelerates the redress of past unfair discrimination in education, training and employment opportunities.
> The inclusion of the specified unit standards in the fundamental and core categories contributes to the full personal development of each learner and the social and economic development of the nation at large.

Rationale for the qualification

The National Certificate in CTFL Mechanician Processes at NQF Level 4 is designed to meet the needs of learners who are involved in mechanician processes or who enter the CTFL sector. This qualification reflects the workplace-based needs across the sector. The current and future need for competent mechanicians has been expressed by employers and employees, and is captured in this qualification. This qualification provides the learner with accessibility to be employed in manufacturing support processes and provides the flexibility in that learners accessing this qualification may move into qualifications in Clothing, Textiles, Footwear and Leather manufacturing processes.

To this end 24 credits in this qualification are portable across to the manufacturing process qualifications. This National Certificate is structured in such a away that it gives learners exposure to a broad set of core competencies while the electives may be chosen from either clothing, textiles (dry) or textiles (wet) processes. (Note: further work in developing elective standards in footwear and leather will complete the qualification for those specific elective areas). This qualification will allow for competence in the learner's current work environment or chosen future work environment. This qualification may also be accessed by learners who have demonstrated competence in the National Certificate in CTFL Mechanicians Processes at NQF level 3.

RECOGNIZE PREVIOUS LEARNING?

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LEARNING ASSUMED TO BE IN PLACE

Learners should be competent in the national certificate level 3 in Clothing, Textiles, Footwear and Leather manufacturing processes or equivalent.

Recognition of prior learning

This qualification may be achieved in part or in whole through the recognition of prior learning, which includes formal, informal and non-formal learning and work experience.

QUALIFICATION RULES

Level, credits and learning components assigned to the qualification

This national certificate in CTFL mechanicians processes at NQF level 4 comprises of unit standards, which are fundamental, core and elective. The qualification will have a minimum of 150 credits of which 56 credits are fundamental, 72 credits are core and 50 credits are in the elective component.

In this qualification the credits are allocated as follows:

Fundamental	56 credits	37%
Core	72 credits	29%
Elective	50 credits	34%

Motivation for number of credits assigned to fundamental, core and elective components

Credits for the fundamental component:

These unit standards are compulsory. These unit standards will add value to learners both socially and

economically in terms of their ability to operate at the level of literacy and numeracy required of mechanicians in the sector. 40 credits will apply to standards in communication studies and language (first language - 20 credits and second language - 20 credits) and 16 credits apply to the physical, mathematical computer and life sciences field.

Credits for the core component:

The unit standards classified as core describe the generic mechanician competence applicable to the CTFL sector. The unit standards require learners to monitor, maintain determine faults on appropriate machinery and lead people within a range of knowledge and skill at this level. All these unit standards are compulsory.

Credits for the elective component:

Learners are required to select electives that add up to 50 credits from unit standards in either the clothing, textile (dry) or textile (wet) processes. In the case of textiles (dry) processes further portability principles are enhanced because 15 of the 50 credits exist in the textile (dry) manufacturing process qualification at this level.

EXIT LEVEL OUTCOMES

The outcomes are specified in terms of a combination of specific and critical cross-field outcomes as defined in the different unit standards.

On achieving this qualification, a learner is able to:
> Monitor the use of raw materials, lubricants and chemicals when maintaining machines and equipment, interpreting data, evaluating information, keeping records and solving under and over use problems related to materials.
> Maintain and use a range of hand or power tools understanding the technology related to such tools and adapting to situations that occur during maintenance and repair procedures.
> Record quality matters and maintain a quality system as it applies to maintenance recognising areas of poor quality and then communicating action to rectify areas of poor quality.
> Monitor waste and record waste related statistics.
> Determine common mechanical, hydraulic, pneumatic, electrical, electronic and steam generating faults and to conduct generic tests on these ensuring that future faults are prevented through problem solving.
> Monitor and improve employer / employee practices in a CTFL plant, understanding that interpersonal problems in one section or forum affects relations throughout the organisation.
> Lead teams in CTFL processes and identify and solve problems so that appropriate coaching counselling motivating disciplining and rewarding are implemented.
> Describe material flow in the manufacture of CTFL products working with others ensuring smooth material flow from previous processes to future processes is optimised.
> Maintain a range of clothing machinery where communication and problem solving allows for accuracy and proficiency.
> Maintain textile (dry) process machinery in the textile industry where communication and problem solving allows for accuracy and proficiency.
> Complete a product change over in a textile dry process using information for accurate interpretation of specifications and understanding technology for the use of appropriate testing where it applies to the introduction of new products to a process.
> Maintain textile (wet) process machinery in the textile industry where communication and problem solving allows for accuracy and proficiency.

ASSOCIATED ASSESSMENT CRITERIA

Assessors should check that the learner can demonstrate an ability to consider a range of options, make decisions and apply the skills that relate to:

> Raw materials, chemicals and lubricants used when maintaining machines and equipment in order to keep the machines running at optimal efficiency.
> A range of hand and hand held power tools that are used and maintained ensuring legislation,

manufacturers specifications and safety procedures are met.
> Quality matters that are recorded and quality systems that are maintained ensuring accurate explanation and demonstration meet laid down quality procedures.
> The monitoring of waste and the recording of statistics ensuring accuracy in terms of time frames, procedures, legislation, company policies and procedures and compliance with industry waste reduction practices.
> Mechanical pneumatic hydraulic electrical electronic and steam generating systems faults which are determined by identifying symptoms selecting instruments and applying systematic approaches to identify and locate causes.
> Employer / employee practices which are monitored and improved through implementing procedures, establishing committees and consultation.
> The leading of CTFL teams that are organised according to work schedules planned with people and targets being met.
> Material flow within CTFL processes that is described accurately and emergency conditions responded to ensuring material flow is optimised.
> Either the maintenance, diagnostics, repair and/ or overhaul of a range of CTFL machines and equipment ensuring that manufacturers and company specifications are met.
> Relate to a product change over that is completed (specific to a textile dry process) where specifications are interpreted accurately, and stripping, assembling and setting is demonstrated sequentially and new product checks are conducted according to manufacturers specifications and company procedures.

Integrated assessment

The competence (practical, foundational and reflective competencies) of this qualification will be achieved if a learner is able to achieve all the exit level outcomes of the qualification. The identification and solving of problems, working in a team, organising self, using data, understanding the implications of actions and reactions in the world as a set of related systems must be assessed during any combination of practical, foundational and reflexive competencies assessment methods and tools to determine the whole person development and integration of applied knowledge and skills in the field of management.

Certain exit level outcomes are measurable and verifiable through assessment criteria assessed in one application. Competence will be assessed when conducting formative and summative assessment.

Formative assessment:

The assessment criteria for formative assessment are described in the various unit standards. Formative assessment takes place during the process of learning and assessors should use a range of assessment methods and tools that support each other to assess total competence.

These tools include the following:

> On-the-job observations where practical demonstration is required.
> Role-play simulations where observation of people interaction competence is required.
> Structured group discussions that require communication and teamwork.
> Knowledge tests, exams, case studies, projects, registers, logbooks, workbooks that applicable to specific contexts.
> Verbal report backs (presentations) that require accuracy of information.
> Portfolios of evidence that may be applicable to prior learning.
> Projects especially relating to a complete process of either cleaning, lubricating, stripping, repairing and / or assembling.
> Completed production related documentation, progress and variance reports.
> Requisition documentation in terms of spares and / or equipment.
> Costing documentation relating to appropriate spares and / or equipment.

Assessment tools must encourage learners to give an account of the thinking and decision-making that underpins their demonstrated performance. Some assessments will be of a more practical nature others will be more theoretical. The assessment method and/or tools used by the assessor must be fair so as not to hinder or advantage the learner, valid in a sense that it measures what it intents to measure, reliable in

a sense that it is consistent and delivers the same output across a range of learners and practical in a sense that it takes into account the available financial resources, facilities, equipment and time.

The key to successful assessment in the field of mechanician processes, lies in ongoing formative assessment. There will need to be a continuous process of evaluation of results achieved which will include the demonstration of all the outcomes in the context where learners are responsible for performing a range of mechanician operations.

Summative assessment:

Summative assessment is carried out at the end of the learning programme, under the direction of the appropriate ETQAs, to assess the overall achievement of the learner. A detailed portfolio of evidence is required to prove the practical, applied and foundational competencies of the learner.

The overall integration of the fundamental and core unit standards with the elective unit standards in the learner's working context is critical, and will ultimately show the impact of the qualification on improving mechanician competence. At the point of the summative assessment co-operation between the sector and band ETQAs may be required.

Assessors and moderators:

Assessors and moderators should develop and conduct their own integrated assessment by making use of a range of formative and summative assessment methods. Assessors should assess and give credit for the evidence of learning that has already been acquired through formal, informal and non-formal learning and work experience.

Unit standards associated with the qualification must be used to assess specific and critical cross-field outcomes. During integrated assessments the assessor should make use of formative and summative assessment methods and should assess combinations of practical, applied, foundational and reflective competencies.

INTERNATIONAL COMPARABILITY

The qualification was benchmarked against mechanician qualifications in Britain, Australia and New Zealand, and was found to be comparable with other qualifications at this level, in terms of the outcomes and assessment criteria. In addition, the existing internationally benchmarked textile trades, were used as input.

ARTICULATION OPTIONS

This qualification provides the following articulation possibilities at level 4:
> The national certificate in Textile Processes (NQF 4).
> The national certificate in Clothing Manufacturing Technology (NQF 4).
> The national certificate in Footwear Technology (NQF 4).
> The national certificate in Leather Manufacturing (NQF 4).
> The National Diploma in Clothing, Textiles, Footwear and Leather (NQF 5).
> Any other manufacturing related qualifications.

MODERATION OPTIONS

> Assessors must be registered as an assessor with the relevant ETQA.
> Moderators must be registered as assessors with the relevant ETQA, or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.
> The mechanisms and requirements for moderation should be applied in accordance with the requirements of the relevant ETQA.

Anyone wishing to be assessed against this Qualification may apply to be assessed by any assessment agency, assessor or provider institution that is accredited by the relevant ETQA.

CRITERIA FOR THE REGISTRATION OF ASSESSORS

Assessors need experience in the following areas:
> Interpersonal skills.
> Subject matter.
> Assessment.

The assessor needs to be competent in the planning and conducting of assessment of learning outcomes and in the design and development of assessments as described in the unit standards 'Plan and conduct assessment of learning outcomes NQF level 4'. Subject matter experience must be well developed within the different functional areas of the specific industry. The assessor must have completed:
> A similar qualification at the level with a minimum of 6-12 months field experience after he/she has completed the qualification or,
> The subject matter experience of the assessor can be established by recognition of prior learning.
Assessors need to be registered with the relevant Education and Training Quality Assurance Body.

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	7176 Describe material flow in the manufacture of textiles	Level 4	4	Registered-capture in proc
Core	12058 Demonstrate knowledge and operation of mechanical and electrical sytems	Level 4	6	Registered
Core	12662 Prepare and process raw materials	Level 4	10	Registered
Core	13115 Install, test and maintain an electro-hydraulic system	Level 4	20	Registered
Core	13116 Install, test and maintain an electro-pneumatic system	Level 4	20	Registered
Core	116325 Monitor the use of raw materials, chemicals and lubricants when maintaining machines and equipment	Level 4	3	Draft - Prep for P Comment
Core	116326 Determine common steam faults and conduct generic steam tests	Level 4	3	Draft - Prep for P Comment
Core	116329 Determine common electronic faults and conduct generic electronic tests	Level 4	3	Draft - Prep for P Comment
Core	116374 Monitor waste and record waste related statistics	Level 4	3	Draft - Prep for P Comment
Elective	10252 Identify, inspect, use, maintain and care for engineering hand tools	Level 2	6	Reregistered
Elective	7120 Monitor and improve employer/employee practices in a textile plant	Level 4	4	Registered-capture in proc
Elective	7178 Lead teams in textile processes	Level 4	7	Registered-capture in proc
Elective	13235 Maintain the quality assurance system	Level 4	5	Registered
Elective	116323 Complete a product change over in a textile dry process	Level 4	15	Draft - Prep for P Comment
Elective	116331 Maintain textile (wet processes) machinery in the textile industry	Level 4	50	Draft - Prep for P Comment
Elective	116332 Maintain textile (dry processes) machinery in the textile industry	Level 4	35	Draft - Prep for P Comment
Fundamental	8968 Accommodate audience and context needs in oral communication	Level 3	5	Registered
Fundamental	8969 Interpret and use information from texts	Level 3	5	Registered
Fundamental	8970 Write texts for a range of communicative contexts	Level 3	5	Registered
Fundamental	8973 Use language and communication in occupational learning programmes	Level 3	5	Registered
Fundamental	9013 Describe, apply, analyse and calculate shape and motion in 2-and 3-dimensional space in different contexts	Level 3	4	Registered
Fundamental	7468 Use mathematics to investigate and monitor the financial aspects of personal, business, national and international issues	Level 4	2	Registered
Fundamental	7483 Solve problems involving sequences and series in real and simulated situations	Level 4	2	Registered
Fundamental	8974 Engage in sustained oral communication and evaluate spoken texts	Level 4	5	Registered

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Fundamental	8975 Read analyse and respond to a variety of texts	Level 4	5	Registered
Fundamental	8976 Write for a wide range of contexts	Level 4	5	Registered
Fundamental	8979 Use language and communication in occupational learning programmes	Level 4	5	Registered
Fundamental	9015 Apply knowledge of statistics and probability to critically interrogate and effectively communicate findings on life related problems	Level 4	5	Registered
Fundamental	9016 Represent analyse and calculate shape and motion in 2-and 3-dimensional space in different contexts	Level 4	4	Registered

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UNIT STANDARD:

Monitor waste and record waste related statistics

SAQA US ID	*UNIT STANDARD TITLE*
116374	Monitor waste and record waste related statistics

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 4	3

Specific Outcomes:

SPECIFIC OUTCOME 1

Conducting and monitoring waste processes for work in progress.

SPECIFIC OUTCOME 2

Recording, reporting, analysing and evaluating waste.

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UNIT STANDARD:

Determine common electronic faults and conduct generic electronic tests

SAQA US ID	*UNIT STANDARD TITLE*
116329	Determine common electronic faults and conduct generic electronic tests

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 4	3

Specific Outcomes:

SPECIFIC OUTCOME 1

Identifying symptoms which are related to system malfunctions.

SPECIFIC OUTCOME 2

Identifying and selecting appropriate instruments.

SPECIFIC OUTCOME 3

Applying logical and systematic fault finding approaches to identify and locate fault causes.

SPECIFIC OUTCOME 4

Testing electronic equipment and machinery for compliance.

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UNIT STANDARD:

Determine common steam faults and conduct generic steam tests

SAQA US ID	*UNIT STANDARD TITLE*
116326	Determine common steam faults and conduct generic steam tests

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 4	3

Specific Outcomes:

SPECIFIC OUTCOME 1

Identifying symptoms which are related to steam system malfunctions.

SPECIFIC OUTCOME 2

Identifying and selecting appropriate instruments.

SPECIFIC OUTCOME 3

Applying logical and systematic fault finding approaches to identify and locate fault causes.

SPECIFIC OUTCOME 4

Testing steam operated machinery and equipment for compliance.

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UNIT STANDARD:

Monitor the use of raw materials, chemicals and lubricants when maintaining machines and equipment

SAQA US ID	*UNIT STANDARD TITLE*
116325	Monitor the use of raw materials, chemicals and lubricants when maintaining machines and equipment

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 4	3

Specific Outcomes:

SPECIFIC OUTCOME 1

Determining material requirements, quantities, times and supply.

SPECIFIC OUTCOME 2

Identifying and describing control procedures for monitoring materials used.

SPECIFIC OUTCOME 3

Monitoring usage of raw materials, chemicals and lubricants.

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UNIT STANDARD:

Maintain textile (dry processes) machinery in the textile industry

SAQA US ID	*UNIT STANDARD TITLE*
116332	Maintain textile (dry processes) machinery in the textile industry

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 4	35

Specific Outcomes:

SPECIFIC OUTCOME 1

Conducting repairs to textile machinery (dry processes).

SPECIFIC OUTCOME 2

Demonstrating the ability to strip and assemble textile machinery (dry processes).

SPECIFIC OUTCOME 3

Carrying out a product / style change.

SPECIFIC OUTCOME 4

Diagnosing faults and conducting running repairs.

SPECIFIC OUTCOME 5

Conducting major overhauls on textile machinery (dry process).

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UNIT STANDARD:

Complete a product change over in a textile dry process

SAQA US ID	*UNIT STANDARD TITLE*
116323	Complete a product change over in a textile dry process

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB C othing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 4	15

Specific Outcomes:

SPECIFIC OUTCOME 1

Interpreting specifications.

SPECIFIC OUTCOME 2

Demonstrating the ability to strip, assemble and set textile machinery (dry processes).

SPECIFIC OUTCOME 3

Adjusting material inputs.

SPECIFIC OUTCOME 4

Conducting new product checks.

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UNIT STANDARD:

Maintain textile (wet processes) machinery in the textile industry

SAQA US ID	*UNIT STANDARD TITLE*
116331	Maintain textile (wet processes) machinery in the textile industry

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 4	50

Specific Outcomes:

SPECIFIC OUTCOME 1

Diagnosing faults and conducting repairs to textile machinery (wet processes).

SPECIFIC OUTCOME 2

Conducting an overhaul on textile machinery (wet processes).

SPECIFIC OUTCOME 3

Conducting repairs to textile machinery (wet processes).

SPECIFIC OUTCOME 4

Demonstrating the ability to overhaul, (strip, assemble and set) textile machinery (wet processes).

SPECIFIC OUTCOME 5

Conducting maintenance on textile machinery (wet processes).

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QUALIFICATION:

National Certificate: Clothing, Textiles, Footwear and Leather (CTFL) Mechanician Processes

SAQA QUAL ID	*QUALIFICATION TITLE*		
48973	National Certificate: Clothing, Textiles, Footwear and Leather (CTFL) Mechanician Processes		
SGB NAME	SGB Clothing, Textiles, Footwear and Leather		
NSB ACRONYM	*PROVIDER NAME*		
NSB 06			
QUAL TYPE	*FIELD*		*SUBFIELD*
National Certificate	Manufacturing, Engineering and Technology		Manufacturing and Assembly
ABET BAND	*MINIMUM CREDITS*	*NQF LEVEL*	*QUALIFICATION CLASS*
Undefined	130	Level 3	Regular-Unit Stds Based

PURPOSE OF THE QUALIFICATION

The qualification is applicable to people across the CTFL sector as the fundamental and core and elective components deal with knowledge, skills, values and attitudes required by all mechanicians in the sector. Learners will deal with specific clothing, textile (dry) or textile (wet) processes through the chosen elective area.

The purpose of the qualification is to build the mechanician competence at level 3 to address the following:
1. The need for mechanicians to describe and identify raw materials, lubricants and chemicals.
2. The need for mechanicians to describe and relate the mechanician competence to the various production sectors, end uses and role players in the CTFL sector.
3. The need to use a range of hand or power tools, as well as a range of fastening devices and systems
4. The need comply with quality and waste reduction practices as well as the need to apply safety, house keeping, environmental practices and specific legal requirements.
5. The need to understand mechanical, pneumatic, hydraulic, electrical, electronic and steam generating systems and concepts.
6. The need to maintain positive \ employee relationships and to interact with people within other CTFL processes.
7. The need to read and react to machine control variables.
8. The need to identify calculations, terms, concepts and materials.
9. The need for learners in a clothing environment to maintain a range of clothing machinery.
10. The need for learners in a textile dry process to maintain and care for machinery and to start up and shut down a textile dries process.
11. The need for learners in a textile wet process to maintain and care for machinery.

This qualification will allow a learner to obtain a nationally recognised qualification in mechanician processes. It will set a standard for proficiency and assist in reducing high costs related to machine and equipment maintenance and breakdown. It will also assist with attracting and retaining quality learners. This qualification will also provide for the recognition of prior learning by allowing learners to obtain credits for knowledge and skills that they already possess and so obtain the qualification in whole or in part through such recognition.

The qualification supports the objectives of the National Qualifications Framework in the following ways:
> It provides an entry level learning opportunity at level 3 which will lead to qualifications for mechanicians

at levels 4 and 5. It also meets the NQF principle of portability in that 21 credits are carried over to the manufacturing processes qualifications in clothing, textiles, footwear and leather. Furthermore, it gives the opportunity for learners to obtain official recognition for knowledge and skills that they possess in mechanicians processes the awarding of an officially recognised qualification.

> The provision that the qualification may be obtained through recognition of prior learning facilitates access to an education, training and career path in mechanicians processes, and thus accelerates the redress of past unfair discrimination in education, training and employment opportunities.

> The inclusion of the specified unit standards in the fundamental and core categories contributes to the full personal development of each learner and the social and economic development of the nation at large.

Rationale for the qualification

The National Certificate in CTFL Mechanician Processes at NQF Level 3 is designed to meet the needs of learners who are involved in mechanician processes or who enter the CTFL sector. This qualification reflects the workplace-based needs across the sector. The current and future need for competent mechanicians has been expressed by employers and employees, and is captured in this qualification. This qualification provides the learner with accessibility to be employed in manufacturing support processes and provides the flexibility in that learners accessing this qualification may move qualifications in Clothing, Textiles, Footwear and Leather manufacturing processes. To this end 21 credits in this qualification are portable across to the manufacturing process qualification. This National Certificate is structured in such a way that it gives learners exposure to a broad set of core competencies while the electives may be chosen from either clothing, textiles (dry) or textiles (wet) processes. (Note: further work in developing elective standards in footwear and leather will complete the qualification for those specific elective areas). This qualification will allow for competence in the learner's current work environment or chosen future work environment.

RECOGNIZE PREVIOUS LEARNING?

Y

LEARNING ASSUMED TO BE IN PLACE

Learners should be competent at NQF level 2 in Clothing, Textiles, Footwear and Leather manufacturing Processes or equivalent.

Recognition of prior learning

This qualification may be achieved in part or in whole through the recognition of prior learning, which includes formal, informal and non-formal learning and work experience.

QUALIFICATION RULES

Level, credits and learning components assigned to the qualification

This national certificate in CTFL mechanicians processes at NQF level 3 comprises of unit standards, which are fundamental, core and elective. The qualification will have a minimum of 149 credits of which 56 credits are fundamental, 64 credits are core and 29 credits are in the elective component.

In this qualification the credits are allocated as follows:

Fundamental	36 credits	38%
Core	64 Credits	43%
Elective	29 credits	19%

Credits for the fundamental component:

These unit standards are compulsory.

Credits for the core component:

The unit standards classified as core describe the generic mechanician competence applicable to the CTFL sector and are compulsory.

Credits for the elective component:

Learners are required to select electives that add up to 29 credits from unit standards in either the clothing, textile (dry) or textile (wet) processes. In the case of textiles (dry) processes further portability principles are enhanced because 12 of the 29 credits exist in the textile (dry) manufacturing process qualification at this level.

EXIT LEVEL OUTCOMES

The outcomes are specified in terms of a combination of specific and critical cross-field outcomes as defined in the different unit standards. On achieving this qualification, a learner is able to:

> Describe and identify raw materials, lubricants and chemicals relating these to common raw materials across the sector where problems are resolved through recognising suitability for end use.
> Describe and relate the mechanician competence to the various production sectors, end users and role players in the CTFL sector where both written and verbal communication demonstrate sound interaction, use of electronic media and understanding the impact of competitor countries on the domestic market is demonstrated.
> Use a range of hand or power tools, as well as a range of fastening devices and systems, and serviceability, alternatives and applicability \ appropriateness are recognised.
> Comply with quality and waste reduction practices as well as the need to apply safety, house keeping, environmental practices and specific legal requirements where standards in the above are accurately interpreted and communicated to all role players.
> Understand mechanical, pneumatic, hydraulic, electrical, electronic and steam generating systems and concepts where the understanding of the technology of the concepts demonstrates appropriateness and safe use.
> Maintain positive \ employee relationships and interact with people in other CTFL processes, understanding the importance of relationships and ensuring sound communications when interacting with various forums.
> Read and react to machine control variables using technology, relating to gauges and / or computer monitors and ensuring information is accurately analysed and evaluated.
> Identify calculations, terms, concepts and materials and ensure appropriateness of these to different processes in a CTFL environment.
> Maintain a range of clothing machinery solving a range of problems which may be routine, fault identification, cleaning and lubrication and relating the importance of this to meeting production targets.
> Maintain and care for machinery and to start up and shut down a textile (dry) process solving a range of problems which may be routine, fault identification, cleaning and lubrication and relating the importance of this to meeting production targets.
> Maintain and care for machinery in a textile (wet) process solving a range of problems, which may be routine, fault identification, cleaning and lubrication, and relating the importance of this to meeting production targets.

ASSOCIATED ASSESSMENT CRITERIA

Assessors should check that the learner can demonstrate an ability to consider a range of options, make decisions and apply the skills that relate to:

> Raw materials, lubricants and chemicals in a range of manufacturing contexts which are accurately described and identified with particular reference to product specifications.
> Hand and hand held tools that are prepared, operated, cleaned and stored to manufacturers' specifications and appropriate legislative and safety standards that are met.
> A range of fastening devices and systems where the selection and use are to manufacturers' specifications.
> Quality practices that are met as they relate to the CTFL sector specifically around mechanician processes.
> Safety, housekeeping, environment and legal requirements which are explained accurately and that

relevant equipment used as per related legislation.
> Waste reduction practices relevant to mechanician process that are met.
> Mechanical, pneumatic, hydraulic, electrical, electronic and steam generating systems and concepts through working safely and accurately.
> Positive employer / employee practices that meet organisational policies and procedures as well as obligatory rights of both parties.
> Production sectors, end users and competitors to the sector that are accurately described and related as the sector changes to meet its needs
> Machine control variables that are read, interpreted and reacted to.
> The interaction of people through day-to-day communications, reporting and coaching.
> Calculations, terms, concepts and materials that are identified in detail.
> The care and maintenance of a range of CTFL machinery and equipment that are either cleaned, lubricated, stripped, assembled and / or repaired according to manufacturers' specifications.
> The start up and shut down (of a textile dry process) including preparation of equipment and raw materials and the implementation of production plans ensures efficient start up and shut down.

Integrated assessment

The competence (practical, foundational and reflective competencies) of this qualification will be achieved if a learner is able to achieve all the exit level outcomes of the qualification. The identification and solving of problems, working in a team, organising self, using data, understanding the implications of actions and reactions in the world as a set of related systems must be assessed during any combination of practical, foundational and reflexive competencies assessment methods and tools to determine the whole person development and integration of applied knowledge and skills in the field of management.

Certain exit level outcomes are measurable and verifiable through assessment criteria assessed in one application. Competence will be assessed when conducting formative and summative assessment.

Formative assessment:

The assessment criteria for formative assessment are described in the various unit standards. Formative assessment takes place during the process of learning and assessors should use a range of assessment methods and tools that support each other to assess total competence.

These tools include the following:
> On-the-job observations where practical demonstration is required.
> Role-play simulations where observation of people interaction competence is required
> Structured group discussions that require communication and teamwork.
> Knowledge tests, exams, case studies, projects, registers, logbooks, workbooks that applicable to specific contexts.
> Verbal report backs (presentations) that require accuracy of information.
> Portfolios of evidence that may be applicable to prior learning.
> Projects especially relating to a complete process of either cleaning, lubricating, stripping, repairing and / or assembling.
> Completed production related documentation, progress and variance reports.
> Requisition documentation in terms of spares and / or equipment.
> Costing documentation relating to appropriate spares and / or equipment.

Assessment tools must encourage learners to give an account of the thinking and decision-making that underpins their demonstrated performance. Some assessments will be of a more practical nature others will be more theoretical. The assessment method and/or tools used by the assessor must be fair so as not to hinder or advantage the learner, valid in a sense that it measures what it intents to measure, reliable in a sense that it is consistent and delivers the same output across a range of learners and practical in a sense that it takes into account the available financial resources, facilities, equipment and time.

The key to successful assessment in the field of mechanician processes lies in ongoing formative assessment. There will need to be a continuous process of evaluation of results achieved which will include the demonstration of all the outcomes in the context where learners are responsible for performing

a range of mechanician operations.

Summative assessment:

Summative assessment is carried out at the end of the learning programme, under the direction of the appropriate ETQA/s, to assess the overall achievement of the learner. A detailed portfolio of evidence is required to prove the practical, applied and foundational competencies of the learner.

The overall integration of the fundamental and core unit standards with the elective unit standards in the learner's working context is critical, and will ultimately show the impact of the qualification on improving mechanician competence. At the point of the summative assessment co-operation between the sector and band ETQAs may be required.

Assessors and moderators:

Assessors and moderators should develop and conduct their own integrated assessment by making use of a range of formative and summative assessment methods. Assessors should assess and give credit for the evidence of learning that has already been acquired through formal, informal and non-formal learning and work experience.

Unit standards associated with the qualification must be used to assess specific and critical cross-field outcomes. During integrated assessments the assessor should make use of formative and summative assessment methods and should assess combinations of practical, applied, foundational and reflective competencies.

INTERNATIONAL COMPARABILITY

The qualification was benchmarked against mechanician qualifications in Britain, Australia and New Zealand, and was found to be comparable with other qualifications at this level, in terms of the outcomes and assessment criteria. In addition, the existing internationally benchmarked textile trades, were used as input.

ARTICULATION OPTIONS

This qualification provides the following articulation possibilities:
> The national certificate in General Textiles (NQF 2 and 4).
> The national certificate in Clothing Manufacturing Processes (NQF 2 and 4).
> The national certificate in Footwear Manufacturing (NQF 2 and 4).
> The national certificate in Leather Manufacturing (NQF 2 and 4).
> Any other manufacturing related qualifications.

MODERATION OPTIONS

> Assessors must be registered as an assessor with the relevant ETQA.
> Moderators must be registered as assessors with the relevant ETQA, or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.
> The mechanisms and requirements for moderation should be applied in accordance with the requirements of the relevant ETQA.

Anyone wishing to be assessed against this Qualification may apply to be assessed by any assessment agency, assessor or provider institution that is accredited by the relevant ETQA.

CRITERIA FOR THE REGISTRATION OF ASSESSORS

Assessors need experience in the following areas:
> Interpersonal skills.
> Subject matter and
> Assessment.

The assessor needs to be competent in the planning and conducting of assessment of learning outcomes

and in the design and development of assessments as described in the unit standards 'Plan and conduct assessment of learning outcomes NQF level 4'. Subject matter experience must be well developed within the different elected areas of the CTFL sector. The assessor must have completed:
> A similar qualification at the level with a minimum of 6-12 months field experience after he/she has completed the qualification; or
> The subject matter experience of the assessor can be established by recognition of prior learning.
Assessors need to be registered with the relevant Education and Training Quality Assurance Body.

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	12037 Demonstrate knowledge of mechanical and electrical equipment	Level 2	4	Registered
Core	12216 Select, use and care for engineering hand tools	Level 2	8	Registered
Core	10574 Demonstrate knowledge of Steam Generator design and application	Level 3	6	Registered
Core	13234 Apply quality procedures	Level 3	8	Registered
Core	114406 Understand basic electronic theory and components	Level 3	4	Registered
Core	116441 Read and react to machine control variables	Level 3	4	Draft - Prep for P Comment
Core	116442 Describe and relate to production sectors, end uses and competitors to the CTFL industry	Level 3	4	Draft - Prep for P Comment
Core	116446 Maintain positive employer / employee practices	Level 3	3	Draft - Prep for P Comment
Core	116447 Interact with people in clothing, textiles, footwear and leather processes	Level 3	4	Draft - Prep for P Comment
Core	116448 Identify and usea range of fastening devices and systems	Level 3	3	Draft - Prep for P Comment
Core	116449 Describe and identify raw materials used including lubricants and chemicals	Level 3	3	Draft - Prep for P Comment
Core	116450 Demonstrate a broad understanding of pneumatic and hydraulic systems and concepts	Level 3	4	Draft - Prep for P Comment
Core	116452 Comply with waste reduction practices	Level 3	3	Draft - Prep for P Comment
Core	116455 Apply safety, housekeeping, environment practices and legal requirements when working on machines and equipment	Level 3	3	Draft - Prep for P Comment
Core	7182 Process electronic banking-related reports	Level 4	6	Reregistered
Elective	116435 Start up and Shut down a textile dry processes	Level 3	3	Draft - Prep for P Comment
Elective	116443 Maintenance and care of machinery in the textile industry (dry processes)	Level 3	17	Draft - Prep for P Comment
Elective	116444 Maintenance and care of machinery in the textile industry (wet processes)	Level 3	29	Draft - Prep for P Comment
Elective	116445 Maintaina range of clothing machinery	Level 3	29	Draft - Prep for P Comment
Fundamental	7456 Use mathematics to investigate and monitor the financial aspects of personal, business and national issues	Level 3	2	Registered
Fundamental	7460 Use structured models to describe, represent and analyse shape and motion in 2- and 3-dimensional space	Level 3	4	Registered
Fundamental	8968 Accommodate audience and context needs in oral communication	Level 3	5	Registered
Fundamental	8969 Interpret and use information from texts	Level 3	5	Registered
Fundamental	8970 Write texts for a range of communicative contexts	Level 3	5	Registered
Fundamental	9010 Demonstrate an understanding of the use of different number bases and measurement units and an awareness of error in the context of relevant calculations	Level 3	2	Registered
Fundamental	9012 Investigate life and work related problems using data and probabilities	Level 3	5	Registered

Fundamental	8975 Read analyse and respond to a variety of texts	Level 4	5	Registered

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Identify and usea range of fastening devices and systems

SAQA US ID	*UNIT STANDARD TITLE*
116448	Identify and usea range of fastening devices and systems

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 3	3

Specific Outcomes:

SPECIFIC OUTCOME 1

Identifying common fastening devices and systems.

SPECIFIC OUTCOME 2

Selecting the appropriate fastening device or system for an application.

SPECIFIC OUTCOME 3

Using fastening devices and systems most common in the industry.

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Comply with waste reduction practices

SAQA US ID	*UNIT STANDARD TITLE*
116452	Comply with waste reduction practices

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 3	3

Specific Outcomes:

SPECIFIC OUTCOME 1

Describing waste reduction practices according to company and industry standards.

SPECIFIC OUTCOME 2

Identifying, measuring and applying current waste reduction practices and taking corrective action.

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate a broad understanding of pneumatic and hydraulic systems and concepts

SAQA US ID	*UNIT STANDARD TITLE*
116450	Demonstrate a broad understanding of pneumatic and hydraulic systems and concepts

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 3	4

Specific Outcomes:

SPECIFIC OUTCOME 1

Demonstrating a knowledge of pneumatic and hydraulic systems, concepts and circuits.

SPECIFIC OUTCOME 2

Demonstrating knowledge of pneumatic and or hydraulic tools and equipment components and the system

SPECIFIC OUTCOME 3

Demonstrating knowledge of general hydraulic and pneumatic testing equipment and tools.

SPECIFIC OUTCOME 4

Demonstrating knowledge of the general principles and precautions relating to working safely with pn

SPECIFIC OUTCOME 5

Demonstrating knowledge of safety clothing and safety equipment as used when working with pneumatic

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Maintain positive employer / employee practices

SAQA US ID	*UNIT STANDARD TITLE*
116446	Maintain positive employer / employee practices

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 3	3

Specific Outcomes:

SPECIFIC OUTCOME 1

Identifying and meeting policies and procedures.

SPECIFIC OUTCOME 2

Participating and interacting with forums.

SPECIFIC OUTCOME 3

Identifying structures and their roles.

SPECIFIC OUTCOME 4

Identifying rights and obligations of employers and employees.

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Describe and relate to production sectors, end uses and competitors to the CTFL industry

SAQA US ID	*UNIT STANDARD TITLE*
116442	Describe and relate to production sectors, end uses and competitors to the CTFL industry

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 3	4

Specific Outcomes:

SPECIFIC OUTCOME 1

Describing and relating to main production sectors.

SPECIFIC OUTCOME 2

Describing and relating to end uses.

SPECIFIC OUTCOME 3

Describing and relating to competitors.

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Read and react to machine control variables

SAQA US ID	*UNIT STANDARD TITLE*
116441	Read and react to machine control variables

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 3	4

Specific Outcomes:

SPECIFIC OUTCOME 1

Recognising and reacting to speed.

SPECIFIC OUTCOME 2

Recognising and reacting to moisture and humidity.

SPECIFIC OUTCOME 3

Recognising and reacting to pressure and vacuum.

SPECIFIC OUTCOME 4

Recognising and reacting to temperature.

SPECIFIC OUTCOME 5

Recognising and reacting to electricity.

SPECIFIC OUTCOME 6

Recognising and reacting to tension.

SPECIFIC OUTCOME 7

Recognising and reacting to time.

SPECIFIC OUTCOME 8

Recognising and reacting to liquor ratios.

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Interact with people in clothing, textiles, footwear and leather processes

SAQA US ID	*UNIT STANDARD TITLE*
116447	Interact with people in clothing, textiles, footwear and leather processes

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 3	4

Specific Outcomes:

SPECIFIC OUTCOME 1

Handling day to day verbal communications.

SPECIFIC OUTCOME 2

Completing reports and documents.

SPECIFIC OUTCOME 3

Coaching fellow employees.

SPECIFIC OUTCOME 4

Using electronic information/ communication technology.

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Apply safety, housekeeping, environment practices and legal requirements when working on machines and equipment

SAQA US ID	*UNIT STANDARD TITLE*
116455	Apply safety, housekeeping, environment practices and legal requirements when working on machines and equipment

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 3	3

Specific Outcomes:

SPECIFIC OUTCOME 1

Explaining the legal, safety, environmental and specified procedures in health, safety and environme

SPECIFIC OUTCOME 2

Using relevant safety and protective equipment, clothing and machine guards common to the CTFL secto

SPECIFIC OUTCOME 3

Explaining and applying housekeeping practices and measures.

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Describe and identify raw materials used including lubricants and chemicals

SAQA US ID	*UNIT STANDARD TITLE*
116449	Describe and identify raw materials used including lubricants and chemicals

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 3	3

Specific Outcomes:

SPECIFIC OUTCOME 1

Identifying common raw materials used to maintain machinery.

SPECIFIC OUTCOME 2

Describing methods used to identify common raw materials.

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Maintaina range of clothing machinery

SAQA US ID	*UNIT STANDARD TITLE*
116445	Maintaina range of clothing machinery

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 3	29

Specific Outcomes:

SPECIFIC OUTCOME 1

Cleaning and lubricating basic clothing machinery.

SPECIFIC OUTCOME 2

Stripping, assembling and setting a range of clothing machinery.

SPECIFIC OUTCOME 3

Conducting running maintenance to a range of clothing machinery.

SPECIFIC OUTCOME 4

Diagnosing and repairing a range of clothing machinery.

SPECIFIC OUTCOME 5

Constructing a garment using applicable stitch types.

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Maintenance and care of machinery in the textile industry (dry processes)

SAQA US ID	*UNIT STANDARD TITLE*
116443	Maintenance and care of machinery in the textile industry (dry processes)

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 3	17

Specific Outcomes:

SPECIFIC OUTCOME 1

Conducting routine and running maintenance on textile machinery (dry processes).

SPECIFIC OUTCOME 2

Demonstrating the ability to identify and react to symptoms of textile machinery faults (dry process

SPECIFIC OUTCOME 3

Demonstrating the ability to clean and lubricate textile machinery (dry processes).

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Start up and Shut down a textile dry processes

SAQA US ID	*UNIT STANDARD TITLE*
116435	Start up and Shut down a textile dry processes

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 3	3

Specific Outcomes:

SPECIFIC OUTCOME 1

Preparing machinery and equipment for production.

SPECIFIC OUTCOME 2

Obtaining and preparing raw materials to be processed.

SPECIFIC OUTCOME 3

Implementing production plans.

SPECIFIC OUTCOME 4

Conducting shut-down processes.

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Maintenance and care of machinery in the textile industry (wet processes)

SAQA US ID	*UNIT STANDARD TITLE*
116444	Maintenance and care of machinery in the textile industry (wet processes)

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 3	29

Specific Outcomes:

SPECIFIC OUTCOME 1

Conducting routine and running maintenance on textile machinery (wet processes).

SPECIFIC OUTCOME 2

Demonstrating the ability to identify and react to textile machinery faults (wet processes).

SPECIFIC OUTCOME 3

Demonstrating the ability to clean and lubricate textile machinery (wet processes).

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:

National Diploma: Clothing, Textiles, Footwear and Leather (CTFL) Mechanician Processes

SAQA QUAL ID	*QUALIFICATION TITLE*			
48968	National Diploma: Clothing, Textiles, Footwear and Leather (CTFL) Mechanician Processes			
SGB NAME	SGB Clothing, Textiles, Footwear and Leather			
NSB ACRONYM	*PROVIDER NAME*			
NSB 06				
QUAL TYPE	*FIELD*			*SUBFIELD*
National Diploma	Manufacturing, Engineering and Technology			Manufacturing and Assembly
ABET BAND	*MINIMUM CREDITS*	*NQF LEVEL*	*QUALIFICATION CLASS*	
Undefined	250	Level 5	Regular-Unit Stds Based	

PURPOSE OF THE QUALIFICATION

The qualification is applicable to people across the CTFL sector as the fundamental and core and elective components deal with knowledge, skills, values and attitudes required by all mechnicians in the sector. Learners will deal with specific clothing, textile (dry) or textile (wet) processes through the chosen elective area.

The purpose of the qualification is to build the mechanician competence at level 5 to address the following:

1. The need for mechanicians to plan and implement a waste management system.
2. The need for mechanicians to implement quality elements and enhance quality systems.
3. The need for mechanicians to promote employer / employee relationships in a CTFL plant.
4. The need for mechanicians to integrate electrical, steam, electronic, hydraulic, pneumatic and mechanical systems to engineer new products.
5. The need for mechanicians to source new materials, chemicals and lubricants.
6. The need for mechanicians to develop and manage maintenance policies and schedules.
7. The need for mechanicians to maintain advanced clothing machinery or
8. The need for mechanicians to diagnose and conduct major repairs to machines in dry process textile industry and to set and adjust complex parameters to a textile dry process or
9. The need for mechanicians to conduct major repairs to machines in the wet process in the textiles industry

Note, In addition, footwear and leather processes will be included later.

This qualification will allow a learner to obtain a nationally recognised qualification in mechanician processes. It will set a standard for proficiency and assist in reducing high costs related to machine and equipment maintenance and breakdown. It will also assist with attracting and retaining quality learners. This qualification will also provide for the recognition of prior learning by allowing learners to obtain credits for knowledge and skills that they already possess and so obtain the qualification in whole or in part through such recognition.

The qualification supports the objectives of the National Qualifications Framework in the following ways:
> It meets the NQF principle of portability in that 30 credits are carried over to the manufacturing processes qualifications at the same level in clothing, textiles, footwear and leather. Furthermore, it gives the

opportunity for learners to obtain official recognition for knowledge and skills that they possess in mechanicians processes the awarding of an officially recognised qualification It also meets the principle of progression in that learners accessing this qualification would have acquired the NQF level 4 mechanician qualification and it may allow for learners to progress to higher level related engineering degree qualifications.

> The provision that the qualification may be obtained through recognition of prior learning facilitates access to an education, training and career path in mechanicians processes, and thus accelerates the redress of past unfair discrimination in education, training and employment opportunities.

> The inclusion of the specified unit standards in the fundamental and core categories contributes to the full personal development of each learner and the social and economic development of the nation at large.

Rationale for the qualification

The National Diploma in CTFL Mechanician Processes at NQF Level 5 is designed to meet the needs of learners who are involved in mechnician processes or who enter the CTFL sector with related engineering qualifications. This qualification reflects the workplace-based needs across the sector. The current and future need for competent mechanicians has been expressed by employers and employees, and is captured in this qualification. This qualification provides the learner with accessibility to be employed in manufacturing or support processes and provides the flexibility in that learners accessing this qualification may move into the qualifications in Clothing, Textiles, Footwear and Leather manufacturing processes. To this end 30 credits in this qualification are portable across to the manufacturing process qualifications. This National Diploma is structured in such a away that it gives learners exposure to a broad set of core competencies while the electives may be chosen from either clothing, textiles (dry) or textiles (wet) processes. (Note: further work in developing elective standards in footwear and leather will complete the qualification for those specific elective areas). This qualification will allow for competence in the learner's current work environment or chosen future work environment.

RECOGNIZE PREVIOUS LEARNING?

Y

LEARNING ASSUMED TO BE IN PLACE

Learners should be competent at level 4 mechanicians or equivalent.

Recognition of prior learning

This qualification may be achieved in part or in whole through the recognition of prior learning, which includes formal, informal and non-formal learning and work experience.

QUALIFICATION RULES

Level, credits and learning components assigned to the qualification

This National Diploma in CTFL mechanician's processes at NQF level 5 comprises of unit standards, which are fundamental, core and elective. The qualification will have a minimum of 250 credits of which 10 credits are fundamental 180 credits are core and 60 credits are in the elective component.

In this qualification the credits are allocated as follows:

Fundamental	10 credits	4%
Core	180 credits	72%
Elective	60 credits	24%

Credits for the fundamental component:

These unit standards are compulsory. These unit standards will add value to learners both socially and economically in terms of their ability to operate at the level of literacy and numeracy required of mechanicians in the sector. 5 credits will apply to standards in communication studies and language and 5 credits apply to the physical, mathematical computer and life sciences field.

Credits for the core component:

The unit standards classified as core describe the generic mechanician competence applicable to the CTFL sector. The unit standards require learners to describe, identify, and comply with a range of knowledge and skill at this level. Furthermore, it is a broad and generic understanding of systems and concepts that will be important at this level. All these unit standards are compulsory.

Credits for the elective component:

Learners are required to select electives that add up to 60 credits from unit standards in the clothing, textile (dry) or textile (wet) processes. In the case of textiles (dry) processes further portability principles are enhanced because 30 of the 60 credits exist in the textile (dry) manufacturing process qualification at this level.

EXIT LEVEL OUTCOMES

The outcomes are specified in terms of a combination of specific and critical cross-field outcomes as defined in the different unit standards.

On achieving this qualification, a learner is able to:

> Plan and implement a waste management system, working effectively with people to ensure successful company implementation.
> Implement quality elements and enhance quality systems understanding technology where sampling or testing needs to be appropriate to the desired outcome.
> Promote employer / employee relationships in a CTFL plant, communicating to all role players to ensure positive consultation and solving a range of interpersonal problems.
> Integrate electrical, steam, electronic, hydraulic, pneumatic and mechanical systems to engineer new products, understanding the impact and the interrelationship between the various systems and where each best applies in the CTFL sector.
> Source new materials, chemicals and lubricants and making decisions to the benefit of the application of such materials.
> Develop and manage maintenance policies and schedules, effectively managing information related to policies and procedures.
> Maintain advanced clothing machinery; or
> Diagnose and conduct major repairs to machines in dry process textile industry and set and adjust complex parameters to a textile dry process; or
> Conduct major repairs to machines in the wet process in the textiles industry focussing on the application and implementation of practices to minimize downtime, wear and tear and on costs related to this.

ASSOCIATED ASSESSMENT CRITERIA

Assessors should check that the learner can demonstrate an ability to consider a range of options, make decisions and apply the skills that relate to:

> Waste management systems which are planned and implemented and waste is reduced to acceptable sector standards.
> Quality systems that are interpreted and enhanced and evaluated against company standards.
> Employer and employee relationships that are promoted to result in positive climate through responding and consulting.
> Electric, electronic, hydraulic, pneumatic, mechanical and steam systems that are integrated.
> Raw materials, chemicals and lubricants are sourced, structures developed and implementation of new sources are managed.
> Maintenance policies and procedures are developed and meet all legislative, sector and company requirements.
> Advanced clothing machinery that is maintained according to laid down procedures.
> Textile dry machinery that are diagnosed and repaired according to laid down procedures.
> Textile dry processes that are set and adjusted.

> Textile wet process machinery that is maintained according to laid down procedures.

Integrated assessment

The competence (practical, foundational and reflective competencies) of this qualification will be achieved if a learner is able to achieve all the exit level outcomes of the qualification. The identification and solving of problems, working in a team, organising self, using data, understanding the implications of actions and reactions in the world as a set of related systems must be assessed during any combination of practical, foundational and reflexive competencies assessment methods and tools to determine the whole person development and integration of applied knowledge and skills in the field of management.

Certain exit level outcomes are measurable and verifiable through assessment criteria assessed in one application. Competence will be assessed when conducting formative and summative assessment.

Formative assessment:

The assessment criteria for formative assessment are described in the various unit standards. Formative assessment takes place during the process of learning and assessors should use a range of assessment methods and tools that support each other to assess total competence.

These tools include the following:
> On-the-job observations where practical demonstration is required.
> Role-play simulations where observation of people interaction competence is required.
> Structured group discussions that require communication and team work.
> Knowledge tests, exams, case studies, projects, registers, logbooks, workbooks that applicable to specific contexts.
> Verbal report backs (presentations) that require accuracy of information.
> Portfolios of evidence that may be applicable to prior learning.
> Projects especially relating to a complete process of either diagnosing, repairing, testing and maintaining machines.
> Completed production related documentation, progress and variance reports.
> Requisition documentation in terms of spares and / or equipment.
> Costing documentation relating to appropriate spares and / or equipment.

Assessment tools must encourage learners to give an account of the thinking and decision-making that underpins their demonstrated performance. Some assessments will be of a more practical nature others will be more theoretical. The assessment method and/or tools used by the assessor must be fair so as not to hinder or advantage the learner, valid in a sense that it measures what it intents to measure, reliable in a sense that it is consistent and delivers the same output across a range of learners and practical in a sense that it takes into account the available financial resources, facilities, equipment and time.

The key to successful assessment in the field of mechanician processes lies in ongoing formative assessment. There will need to be a continuous process of evaluation of results achieved which will include the demonstration of all the outcomes in the context where learners are responsible for performing a range of mechanician operations.

Summative assessment:

Summative assessment is carried out at the end of the learning programme, under the direction of the appropriate ETQA/s, to assess the overall achievement of the learner. A detailed portfolio of evidence is required to prove the practical, applied and foundational competencies of the learner.

Assessors and moderators:

Assessors and moderators should develop and conduct their own integrated assessment by making use of a range of formative and summative assessment methods. Assessors should assess and give credit for the evidence of learning that has already been acquired through formal, informal and non-formal learning and work experience.

Unit standards associated with the qualification must be used to assess specific and critical cross-field outcomes. During integrated assessments the assessor should make use of formative and summative assessment methods and should assess combinations of practical, applied, foundational and reflective competencies.

INTERNATIONAL COMPARABILITY

The qualification was benchmarked against mechanician qualifications in Britain, Australia and New Zealand, and was found to be comparable with other qualifications at this level, in terms of the outcomes and assessment criteria. In addition, the existing internationally benchmarked textile trades, were used as input.

ARTICULATION OPTIONS

This qualification provides the following articulation possibilities at level 5:
> The National Diploma in Textile Technology (NQF 6).
> The National Diploma in Clothing Manufacturing Technology (NQF 5).
> The National Diploma in Footwear Technology (NQF 5).
> The National Diploma in Leather Technology (NQF 5).
> Any other manufacturing related qualifications.

MODERATION OPTIONS

> Assessors must be registered as an assessor with the relevant ETQA.
> Moderators must be registered as assessors with the relevant ETQA, or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.
> The mechanisms and requirements for moderation should be applied in accordance with the requirements of the relevant ETQA.

Anyone wishing to be assessed against this Qualification may apply to be assessed by any assessment agency, assessor or provider institution that is accredited by the relevant ETQA.

CRITERIA FOR THE REGISTRATION OF ASSESSORS

Assessors need experience in the following areas:
> Interpersonal skills.
> Subject matter.
> Assessment.

The assessor needs to be competent in the planning and conducting of assessment of learning outcomes and in the design and development of assessments as described in the unit standards 'Plan and conduct assessment of learning outcomes NQF level 4'. Subject matter experience must be well developed within the different functional areas of the specific industry.

The assessor must have completed:
> A similar qualification at the level with a minimum of 6-12 months field experience after he/she has completed the qualification or,
> The subject matter experience of the assessor can be established by recognition of prior learning.
Assessors need to be registered with the relevant Education and Training Quality Assurance Body.

NOTES

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	116401 Integrate electrical, steam, electronic hydraulic, pneumatic and mechanical systems to engineer new products	Level 5	50	Draft - Prep for P Comment

Core	116404 Interpret quality elementsand enhance quality systems	Level 5	30	Draft - Prep for P Comment
Core	116417 Plan and implement a waste management system	Level 5	40	Draft - Prep for P Comment
Core	116420 Promote employer/employee relationships in a CTFL plant	Level 5	30	Draft - Prep for P Comment
Core	116423 Source new materials, chemicals and lubricants	Level 5	10	Draft - Prep for P Comment
Core	116456 Develop and manage maintenance policies and schedules	Level 5	20	Draft - Prep for P Comment
Elective	116391 Diagnose and conduct major repairs on machinery in the textile industry (dry processes)	Level 5	30	Draft - Prep for P Comment
Elective	116395 Diagnose and conduct major repairs on machinery in the textile industry (wet processes)	Level 5	60	Draft - Prep for P Comment
Elective	116410 Maintain advanced clothing machinery	Level 5	60	Draft - Prep for P Comment
Elective	116422 Set and adjust complex parametersto a textile dry process	Level 5	30	Draft - Prep for P Comment
Fundamental	10293 Mediate language, literacies and mathematics across the curriculum	Level 5	20	Reregistered
Fundamental	12433 Use communication techniques effectively	Level 5	8	Registered

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Develop and manage maintenance policies and schedules

SAQA US ID	*UNIT STANDARD TITLE*
116456	Develop and manage maintenance policies and schedules

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 5	20

Specific Outcomes:

SPECIFIC OUTCOME 1

Developing systems, policies and procedures for maintenance of plant and equipment in operational co

SPECIFIC OUTCOME 2

Analysing and monitoring repair and maintenance levels in respect of quality of output and quality o

SPECIFIC OUTCOME 3

Analysing, recording and reporting on repair and maintenance policies, procedures and processes.

SPECIFIC OUTCOME 4

Evaluating existing maintenance policies, systems etc.

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Integrate electrical, steam, electronic hydraulic, pneumatic and mechanical systems to engineer new products

SAQA US ID	*UNIT STANDARD TITLE*
116401	Integrate electrical, steam, electronic hydraulic, pneumatic and mechanical systems to engineer new products

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 5	50

Specific Outcomes:

SPECIFIC OUTCOME 1

Producing operational systems, policies and procedures for electrical, steam, electronic, hydraulic,

SPECIFIC OUTCOME 2

Implementing approved operational systems, policies and procedures for electrical, steam, electronic

SPECIFIC OUTCOME 3

Enhancing systems.

SPECIFIC OUTCOME 4

Evaluating electrical, steam, electronic, hydraulic, pneumatic and mechanical systems.

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Interpret quality elementsand enhance quality systems

SAQA US ID	*UNIT STANDARD TITLE*
116404	Interpret quality elementsand enhance quality systems

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 5	30

Specific Outcomes:

SPECIFIC OUTCOME 1

Identifying and describing quality control procedures in the industry.

SPECIFIC OUTCOME 2

Applying, monitoring and measuring quality principles.

SPECIFIC OUTCOME 3

Identifying areas for improvement to enhance the quality system.

SPECIFIC OUTCOME 4

Training and developing others.

SPECIFIC OUTCOME 5

Evaluating quality systems.

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Plan and implement a waste management system

SAQA US ID	*UNIT STANDARD TITLE*
116417	Plan and implement a waste management system

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 5	40

Specific Outcomes:

SPECIFIC OUTCOME 1

Designing a system for managing waste in a relevant manufacturing CTFL plant.

SPECIFIC OUTCOME 2

Implementing a waste management system.

SPECIFIC OUTCOME 3

Monitoring a waste management system and recording and reporting on results.

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Promote employer/employee relationships in a CTFL plant

SAQA US ID	*UNIT STANDARD TITLE*
116420	Promote employer/employee relationships in a CTFL plant

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 5	30

Specific Outcomes:

SPECIFIC OUTCOME 1

Identifying and responding to areas affecting relationships.

SPECIFIC OUTCOME 2

Consulting with parties.

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Source new materials, chemicals and lubricants

SAQA US ID	*UNIT STANDARD TITLE*
116423	Source new materials, chemicals and lubricants

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 5	10

Specific Outcomes:

SPECIFIC OUTCOME 1

Developing structures, sources and methods for new materials, chemicals and lubricants.

SPECIFIC OUTCOME 2

Managing the implementation of the new sources of product.

SPECIFIC OUTCOME 3

Evaluating new materials, chemicals and lubricants.

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Diagnose and conduct major repairs on machinery in the textile industry (wet processes)

SAQA US ID	*UNIT STANDARD TITLE*
116395	Diagnose and conduct major repairs on machinery in the textile industry (wet processes)

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 5	60

Specific Outcomes:

SPECIFIC OUTCOME 1

Re-commissioning textile machinery (wet processes).

SPECIFIC OUTCOME 2

Sourcing, acquiring and controlling consumables for textile machinery (wet processes).

SPECIFIC OUTCOME 3

Developing maintenance schedules.

SPECIFIC OUTCOME 4

Interpreting design and innovation specifications for textile machinery (wet processes).

SPECIFIC OUTCOME 5

Selecting a product design concept and proving design functionality.

SPECIFIC OUTCOME 6

Optimising machine performance.

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Set and adjust complex parametersto a textile dry process

SAQA US ID	*UNIT STANDARD TITLE*
116422	Set and adjust complex parametersto a textile dry process

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 5	30

Specific Outcomes:

SPECIFIC OUTCOME 1

Setting parameters on a range of equipment and machinery within the dry process.

SPECIFIC OUTCOME 2

Interpreting design and innovation specifications for textile machinery (dry processes).

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Diagnose and conduct major repairs on machinery in the textile industry (dry processes)

SAQA US ID	*UNIT STANDARD TITLE*
116391	Diagnose and conduct major repairs on machinery in the textile industry (dry processes)

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 5	30

Specific Outcomes:

SPECIFIC OUTCOME 1

Conducting major repairs to textile machinery (dry processes).

SPECIFIC OUTCOME 2

Interpreting design and innovation specifications for textile machinery (dry processes).

SPECIFIC OUTCOME 3

Selecting a product design concept and proving design functionality.

SPECIFIC OUTCOME 4

Installing and commissioning as per manufacturer's specifications for textile machinery.

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Maintain advanced clothing machinery

SAQA US ID	*UNIT STANDARD TITLE*
116410	Maintain advanced clothing machinery

SGB NAME	*NSB ACRONYM*	*PROVIDER NAME*
SGB Clothing, Textiles, Footwear and Leather	NSB 06	

FIELD	*SUBFIELD*
Manufacturing, Engineering and Technology	Manufacturing and Assembly

ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 5	60

Specific Outcomes:

SPECIFIC OUTCOME 1

Identifying and reacting to faults found in advanced clothing machinery.

SPECIFIC OUTCOME 2

Conducting running maintenance to advanced clothing machinery.

SPECIFIC OUTCOME 3

Stripping and assembling advanced clothing machinery.

SPECIFIC OUTCOME 4

Conducting repairs to advanced clothing machinery.

SPECIFIC OUTCOME 5

Diagnosing and repairing advanced clothing machinery.

SPECIFIC OUTCOME 6

Conducting overhauls of advanced clothing machinery.

SPECIFIC OUTCOME 7

Designing and innovating advanced clothing machinery.

SPECIFIC OUTCOME 8

Evaluating the characteristics of a new range of machines.