

higher education & training

Department: Higher Education and Training REPUBLIC OF SOUTH AFRICA



LOGBOOK (TRAINING RECORD) NOCC-A21 – MECHANICAL FITTER

Name of Apprentice:	
ID Number:	
TVET College:	
Employer:	

Welcome to the Mechanical Fitter trade!

Over the next three years you will learn the mechanical fitter trade by regularly rotating between a company and a TVET college. You will spend 60-70% of your time at the company and 30-40% of your time at the college. The amount of time you spend at the college reduces over the three year training programme and increases in the workplace, where you will spend more and more time on productive activities.

This is your personal logbook and serves as a record of the workplace training you will receive. It is your responsibility to keep it up-to-date and ensure that your workplace supervisor signs it off every month. *Be aware that this logbook is proof of your learning and training, and is thus the entrance ticket for your trade test and becoming a fully qualified artisan.*

If you lose it or do not keep it up to date – no one will be able to assist you as you will have lost the most significant evidence of your training process. So make sure that you keep this logbook tidy, safe and up-to-date. No logbook = no trade test!

On the following pages you will find a number of forms. Please fill each form in fully and correctly. It is essential that the personal information you include is correct as it will be used to identify this logbook as yours. If your contact details change during your apprenticeship, be sure to up-date these in your logbook.

Thanks and enjoy your training!



Fill in WEEKLY!

Get supervisor to sign-off MONTHLY!

No Logbook = No Trade Test!

PERSONAL INFORMATION

APPRENTICE PROFILE, TRADE AND CONTACT INFORMATION

Surname			First name(s)	
Apprentice contact number (cell)				
Residential Address				
Name of parent / guardian (if applicable)			Contact number parent / guardian	
ID number			Age	
Name of medical aid (if you have one)			Medical aid no.	
Driver's license (if applicable)	Yes	No	Means of transport	
Trade Title			Curriculum code	
Apprentice Contract No.				

EMERGENCY CONTACT

In case of an emergency who would you like to be contacted?
Name of emergency contact:
Phone number

HOST COMPANY CONTACT INFORMATION

Name of host company		
Physical address of employer		
P.O. Box address of employer		
Company phone number and email		
Main company	Name	
contact person (Supervisor/HR)	Contact number	
Second company	Name	
contact person (Mentor)	Contact number	

TVET COLLEGE CONTACT INFORMATION

Name of TVET college		
Information on the	Name of campus	
college campus at which the apprentice is based	Physical campus address	
	Campus phone number	
TVET college	Name	
campus manager	Contact number	
TVET college lecturer	Name	
	Contact number	

WHAT YOU NEED TO KNOW ABOUT THIS LOGBOOK

This logbook represents the master record for all work experience completed, and thus needs to be presented when applying for the trade test. It consequently needs to be kept safe at all times.

The logbook contains three sections.

- Section 1: Contains an overview of all learning you will be covering over the entire programme period (NOCC-A21 Overview) as well as your rotation plan between college and company training blocks.
- Section 2: Contains a weekly journal for company training blocks where you
 will keep a daily record of all the things that you are working on/exposed to in the
 workplace.
- Section 3: Contains all the tasks that you will need to complete in the workplace over the entire training time.

It is very important that you ensure that Section 2 and Section 3 of this logbook are completed regularly. If you do not keep this logbook up-to-date you will not be eligible to take the trade test at the end of your training programme.

Section 1: NOCC-A21 Overview & Rotation Plan

NOCC-A21 OVERVIEW

Your training programme is called the National Occupational Curriculum Content for the Artisan of the 21st Century (NOCC-A21). The NOCC-A21 is work-driven and practical, and thus organised around real life work situations in the mechanical fitter trade.

The following overview shows you all the learning areas and work situations that are covered in the programme.

Le	arning areas			Work	Situations			
A	Practice the occupation and behave responsibly and professionally in the workplace	A1 Receive an induction and orientation to the occupation and the training programme	A2 Behave ethically and communicate professionally in the workplace	A3 Manage personal finances	A4 Plan for work activities and manage time effectively	A5 Use personal computer systems	A6 Prepare for job search, CV writing and job interviews	
В	Conduct preparatory and quality assurance activities	B1 Read, interpret and produce freehand as well as accurate basic 2 and 3 dimensional engineering drawings of mechanical components	B2 Identify, handle and store relevant engineering materials	B3 Apply trade calculations in job tasks	B4 Understand and apply basic mechanical theory	B5 Work to company and industry quality standards	B6 ELECTIVE: Read and produce computer aided design (CAD) drawings	
С	Comply with health and safety practices	C1 Adhere to OHS and perform risk assessment and lock- out and tag out procedures	C2 Perform first aid and fire fighting	C3 Work safely and correctly with basic hoisting & lifting equipment (up to 2.5 tons)	C4 Work safely at heights and in confined spaces as well as in & near excavations	C5 Perform house- keeping & resource efficient & environmentally friendly waste removal (incl. storage of hazardous materials)		
D	Select, care for and use hand tools, power tools and machinery	D1 Handle, care for basic hand tools	D2 Handle, care for engineering power tools (portable and fixed)	D3 Identify and care for marking and mechanical measuring equipment				
E	Fabricate a range of simple mechanical components or work pieces	E1 Mark-off, saw and file various simple components and materials	E2 Sharpen drill bits according to application & drill material to specifications using a portable and fixed drilling machine	E3 Saw material to specification using a power saw	E4 Grind material to specifications using a pedestal grinder	E5 Cut threads with stocks, dies, taps and ream parallel and tapered holes		

F	Fabricate complex	F1	F2	F3			
	mechanical	Fabricate and fit a	Fabricate and fit keys	Fabricate a flange			
	components or	gasket	and locking devices	and other suitable			
	work pieces			components			
G	Perform basic	G1	G2	G3			
	welding, cutting,	Gas cut metal to	Arc weld metal to	Gas weld, silver			
	brazing on	specification	specification	solder and braze			
	engineering materials			metal to specification			
Н	Perform work	H1	H2	H3	H4	H5	
	activities on	Perform routine	Perform routine	Install, align and	Install, align and	ELECTIVE:Perform	
	gearboxes and	maintenance, fault	maintenance, fault	commission	commission drives to	laser alignment on	
	drives	finding, repair and	finding, repair and	gearboxes to	specification	drives and gear boxes	
		alignment on	alignment on drives	specification			
		gearboxes					
	Perform work	11	12	13			
	activities on pumps	Perform routine	Perform routine	Install, align and			
	for water systems	maintenance fault	maintenance fault	commission pumps			
	and water related	finding, repair and	finding, repair and	for water systems			
	valves	reassembly activities	reassembly activities	and water related			
		on pumps for water	on water related valves	valves			
	De ferre et	systems	10				
J	Perform work activities on	J1 Perform routine	J2 Perform installation and				
	brakes and	maintenance, fault	commissioning				
	clutches	finding, repair,	activities on brakes and				
	ciutorico	reassembly and	clutches				
		alignment activities on					
		brakes and clutches					
Κ	Perform work	K1	K2	K3	K4		
	activities on	Perform routine	Perform routine	Perform installation	Perform installation		
	bearings and	maintenance, fault	maintenance, fault find,	and commissioning	and commissioning		
	lubrication	find, repair and align	repair and align	activities lubrication	activities on bearings		
	systems	bearings	lubrication systems	systems			

M Perform work activities on pneumatic systems M1 Build and test basic pneumatic circuits M2 Perform routine maintenance, fault finding, repair and reassembly activities on pneumatic systems M3 Perform installation and commissioning activities on pneumatic systems M4 ELECTIVE:Perform basic activities on electro pneumatic systems N Inspect, maintain and fault find on conveyor systems N1 Inspect, maintain conveyor systems N2 N2 Track conveyor belts N3 FLECTIVE:Remove and replace conveyor belts / splicing (excluding vulcanization & fusino) M4 ELECTIVE:Perform basic activities on electro pneumatic systems	L	Perform work activities on hydraulic systems	L1 Build and test basic hydraulic flow circuits	L2 Perform routine maintenance, fault finding, repair and reassembly activities on hydraulic systems	L3 Perform installation and commissioning activities on hydraulic systems	L4 ELECTIVE:Perform basic activities on electro hydraulic systems		
and fault find on conveyor systems Inspect, maintain conveyor systems Track conveyor belts ELECTIVE:Remove and replace conveyor belts / splicing (excluding vulcanization &	Μ	activities on pneumatic	Build and test basic	Perform routine maintenance, fault finding, repair and reassembly activities	Perform installation and commissioning activities on	ELECTIVE:Perform basic activities on electro pneumatic		
	N	and fault find on	Inspect, maintain conveyor systems (incl. rolling elements, structure and belts)		ELECTIVE:Remove and replace conveyor belts / splicing (excluding			

ROTATION PLAN

The constant rotation between learning in a TVET college and gaining real life experience in the world of work is one of the key factors for a successful apprenticeship programme. In each block of training at the college and work experience at the company, you will be learning new things as well as revising and practicing things learned in previous blocks. This will allow you to build on and improve your expertise as you proceed through the programme.

You can fill in the dates for each of your college and company blocks in the table below.

	College Block 1	Company Block 1	College Block 2	Company Block 2	College Block 3	Company Block 3
Start Date						
End Date						

Rotation scheme for Year 1

Rotation scheme for Year 2

	College Block 1	Company Block 1	College Block 2	Company Block 2	College Block 3	Company Block 3
Start Date						
End Date						

Rotation scheme for Year 3

	College Block 1	Company Block 1	College Block 2	Company Block 2	College Block 3	Company Block 3
Start Date						
End Date						

Section 2: Weekly Journal

WEEKLY JOURNAL – COMPANY BLOCKS

On the following pages you will find your weekly journal <u>for the time you are at the company</u>. It provides the critical evidence of the work experience have received. Keep and store these records safely, since if you lose them no one will be able to assist you in retrieving this evidence.

Important: How to fill in your Weekly Journal:

- Fill in your journal on a weekly basis and have it signed-off once per week by your employer. Your college lecturer should NOT sign your logbook. The logbook is a record of the work that you performed in the workplace and as such your college lecturer does not have the authority to sign it.
- You will find one page per working week. Each week is divided into six days. You need to write a short description of the tasks/activities that you have been involved in and specifically mention the tools, equipment and machinery that you used. Below is an example of what is expected in terms of completing your weekly journal.
- Be specific and detailed. The example below shows what is meant by being specific. The journal needs to be a true reflection of what you did. If you have only done housekeeping on the specific day, note this. Do not make up activities.
- Many apprentices complain that they are not receiving relevant exposure to the trade, but this can only be proved, if you have kept an accurate record of what you do in the workplace on a daily basis.

Day	Inse	ert main work experience obtained for each work experience day
Monday	DO NOT WRITE: RATHER OR	Used power tools and equipment Performed a single fillet weld in position 1F on copper using a MIG welding machine Cleaned out a MAG weld using a chipping hammer
Tuesday	DO NOT WRITE: RATHER OR	Sales Department only Sales Department: Comparison of different offers of service providers for welding/electrical materials in terms of quality, price and delivery time Placed orders for electrical supplies
Wednesday		Sick leave/leave
Thursday	DO NOT WRITE: RATHER OR OR	Non-relevant work for welders Swept workshop and washed company cars Supporting plumbing department with installation of drainages Did nothing and sat around the whole day

Mechanical Fitter - Curriculum code: 653303000

WEEKLY JOURNAL		
Week: (from	/ to) Department(s)/Area(s):	
Date	Insert main work experience obtained for each day in the company	Hours

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

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Section 3: Logbook

LOGBOOK

Section three is your formal logbook and proof of experience gained. Once you have performed a task to the required standard your supervisor will sign the task off in your logbook. After all the tasks have been completed, you and your supervisor will both sign-off.

In performing each of the tasks it is essential that you do the following:

- Wear appropriate PPE
- Adhere to occupational health and safety standards
- Work according to company policies and procedures
- Perform a risk assessment
- **Safely use and care** for hand, power, measuring tools and equipment according to manufacturer's specifications and workplace procedures
- Evaluate your work to ensure that it meets quality standards
- Perform housekeeping

When you are learning a task, you will move through a learning process which gradually increases in complexity. The steps usually are:

1) Observing and assisting with a task

2) Performing the task with assistance and under supervision

3) Undertake all task activities without assistance, but under supervision

Your logbook includes space for comments and feedback. Please encourage your supervisor to complete this section. This will help you to know how you are progressing, and where you can improve further.

Completed tasks should be ideally signed off once a month or at the very latest at the end of each company block.

Your employer may not be able to provide you with experience in all the tasks stated in the training record.

Should this be the case then ask your employer to make arrangements for you to obtain the required experience either at a training provider or at a different employer.

Work situation:

A1 Receive an induction and orientation to the occupation and the training programme

	Work Experience Module	Experience
	QCTO Reference: None	gained
Pa	rticipate in a company induction that includes	
0	Company vision and mission, operations, specific structures and procedures	
0	Company specific expectations with regards to work ethics and values of the business and signing of agreed values to be adhered to	
0	Appropriate dress code and behaviour in the workplace	
0	Contractual obligations for apprentice and employer (including leave policy, hours of work, shift and weekend work, remuneration and steps to be taken by the apprentice if he/she is unable to come to work)	
0	Steps the apprentice should follow in order to raise a grievance	
0	The workplace training plan for work experience for apprentices, including rotation scheme and allocated mentors	
0	Roles and responsibilities of coaches and mentors in the workplace	
0	Roles and responsibilities of the apprentice in the workplace	
0	Reporting structures	
0	An introduction to co-workers and supervisor	
0	Becoming a successful mechanical fitter and progression paths in the company	
Att	end medical assessment (pre-placement) and physical assessment	
Ob	tain the relevant PPE	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Work situation:

A2 Behave ethically and communicate professionally in the workplace

Work Experience Module QCTO Reference: WM-01-WE03 and WA-06-WE01	Experience gained
Identify and clarify the work ethics applicable to the company	
Identify and clarify organisational requirements and workplace procedures related to internal and external communication	
Answer telephone calls and take messages (if possible)	
Works as a member of a team	
Shares job instructions and coordinates tasks with colleagues	
Provide support to co-employees when required or requested	
Act as a team leader for at least two specific projects in the workplace	
Report on work progress and achievement within target dates for specific problems	
Demonstrate the ability to respond constructively to problems experienced in the workplace and to provide guidance when required	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Data	Deter
Date: Comment apprentice:	Date: Comment supervisor:

Work situation: A3: Manage personal finances

Work Experience Module QCTO Reference: None	Experience gained
Review salary slip and have a structured discussion on the items listed	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Work situation: A4: Plan work activities and manage time effectively

Work Experience Module QCTO Reference: WM-01-WE03, WM-03-WE01, WM-03-WE02, WM-03-WE03, WM-06-WE02 and WM-08-WE01	Experience gained
Plan work activities based on job cards provided	
Diarise or schedule work activities in accordance with priorities and work targets	
 Communicate on & solve problems related to performance of maintenance requests Take responsibility and initiative to solve work related problems within the scope of standard procedures Recognise and report trends of re-occurring problems 	
Participate and contribute to workplace meetings: Attend at least 4 planning meetings and contribute to planning of and reporting on work activities	
Participate and contribute to workplace meetings: Attend and contribute to at least one meeting where workplace costs are addressed	
Conduct workshop administration and reporting for one month : Job card administration and daily workshop reports	
Complete timesheets	
Complete work within accepted turnaround times	
Obtain feedback on level of time management perceived by company, including areas for further improvement	

(as part of workshop administration and reporting, which should be conducted for one month)

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

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Work situation: A5: Use personal computer systems

Work Experience Module QCTO Reference: None	Experience gained
Complete an induction to the company's computer system, its main applications and usage- related policies	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date: Comment apprentice:	Date: Comment supervisor:

Work situation:

A6: Prepare for job search, CV writing and job interviews

Work Experience Module QCTO Reference: None	Experience gained
Structured discussion with supervisor and / or human resources department about employment opportunities within the company and how to apply for these	
Prepare a CV according to company requirements	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date: Comment apprentice:	Date: Comment supervisor:

Work situation: B1: Read, interpret and produce freehand as well as accurate basic 2 and 3 dimensional engineering drawings of mechanical components

Work Experience Module QCTO Reference: None	Experience gained
Access, select and view engineering drawings related to a specific work scenario	
Interpret basic engineering drawings to determine scope of work	
Discuss appropriateness/correctness of engineering drawing with supervisor	
Identify and interpret component requirements	
Interpret dimensions, instructions, symbols and conventions	
Extract dimensions from engineering drawings for work to be undertaken	
Modify drawings by hand where necessary	
Use drawings to explain and communicate the information content	
Draw a freehand sketch of a component	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date: Comment apprentice:	Date: Comment supervisor:

Work situation: B2: Identify, handle and store relevant engineering materials

Work Experience Module QCTO Reference: WM-03-WE03, WM-08-WE01 and WM-08-WE02	Experience gained
Identify and handle relevant engineering materials	
Keep material and stores records in prescribed formats	
Safely store engineering materials	
Report on any materials defects	
 Control workshop store for a period of two weeks: Control the movement of tools Monitor condition of tools Consumable stock movement and levels 	
Order consumable material and receive goods (as part of workshop administration and reporting, which should be conducted for one month)	
Participate in stocktaking of the consumable materials store on one occasion (as part of workshop administration and reporting, which should be conducted for one month)	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Work situation: B3: Apply trade calculations in job tasks

Work Experience Module QCTO Reference: None	Experience gained
Calculate relevant production parameters utilising trade calculations for various jobs (including length, area, volume and diameter)	
 Apprentices is given various work scenarios in which he/she needs to measure and calculate: Length Area Volume Diameter Other important trade calculations related to work scenarios 	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Work situation:

B4: Understand and apply basic mechanical theory

Work Experience Module QCTO Reference: None	Experience gained
None	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Work situation:

B5: Work to company and industry quality standards

Work Experience Module QCTO Reference: WM-03-WE01	
Identify codes and standards applicable to materials, systems and components and work tasks	
Adhere to SOP and quality standards whilst executing work assignments	
Explain reasons for necessity of adhering to quality standards and potential negative consequences in case of non-compliance	
Complete work within accepted quality standards	
Check completed work for adherence to applicable standards, tolerances and specifications and report back	
Propose remedial action in the case of non-compliance	
Plan the execution of maintenance requests with production staff to minimise down time or production losses	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date: Comment apprentice:	Date: Comment supervisor:

Work situation:

B6: Read and produce computer aided design (CAD) drawings (ELECTIVE)

Work Experience Module QCTO Reference: None	Experience gained
 Use CAD to produce basic 2D drawings under supervision in the drawing office: Read and interpret technical specifications and drawings Determine the scope of work sequences Apply fundamental problem solving skills in order to comply with technical design and operational worksite standards Produce basic 2D drawings 	
 Use CAD to produce basic 3D drawings under supervision in the drawing office: Read and interpret technical specifications and drawings Determine the scope of work sequences Apply fundamental problem solving skills in order to comply with technical design and operational worksite standards Produce basic 3D drawings 	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date: Comment apprentice:	Date: Comment supervisor:

Work situation: C1: Adhere to OHS and perform risk assessments

Work Experience Module QCTO Reference: WM-06-WE03	Experience gained
Select and use correct PPE	
Participate in toolbox talks	
Perform a hazard inspection and risk assessment of an engineering workshop, report findings and make recommendations	
Secure a work area with the applicable safety signage	
Perform basic isolation, lock out and tag out procedures as per applicable industry standard	
Inspect the statutory registers for an engineering workshop, report findings and recommendations	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Work situation: C2: Perform first aid and fire fighting

Work Experience Module QCTO Reference: WM-01-WE02	Experience gained
Be inducted to the company's first aid policies and procedures	
Be appointed as a temporary first aider at the workplace	
Be inducted to the company's fire fighting policies and procedures	
Exercise fire fighting measures in a mock exercise (if applicable)	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Work situation:

C3: Work safely and correctly with basic hoisting and lifting equipment (up to 2.5 tons)

Work Experience Module QCTO Reference: WM-01-WE02	Experience gained
Select the correct lifting and hoisting equipment for the work task at hand	
Perform risk assessment on lifting and hoisting task in the respective environment	
Move equipment/materials (up to 2500kg) as per company specific requirements	
Move equipment/materials on the work site with hoisting and lifting equipment (under various stages of supervision)	
Inspect equipment and check registers	
Store hoisting and lifting equipment, record and report any defects	
Maintain hoisting and lifting equipment	
Apply safety and housekeeping standards related to lifting and hoisting	
Provide work documentation, verbal and written reports as required by the company	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Work situation: C4: Work safely at heights and in confined spaces as well as in and near excavations

Work Experience Module QCTO Reference: WM-01-WE02	Experience gained
Participate in the application and adherence to working at heights procedures whilst performing work at elevated positions	
 Use ladders safely Carry out risk assessments prior to climbing ladders and select the appropriate PPE for use prior to climbing ladders Select the correct type of ladder for work requirements Check ladders for compliance, reject non-compliant ones and initiate repair/replacement process Use ladders on inside/outside structures for applicable work Complete ladder register prior to storing of the ladders Store ladders in accordance with manufactures / workplace specifications 	
 Use scaffolding safely Erect scaffolding and install components correctly for the stabilisation of the scaffolding to install inside and outside of structures up to 2m Erect scaffoldings in various work environments and for various work scenarios Complete scaffolding register prior to storing of scaffold Store scaffolding in accordance with manufactures / workplace specifications 	
Participate in the application and adherence to working in confined space procedures whilst working in constricted areas	
Participate in the application and adherence to working in or near excavations in accordance to worksite standards	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Work situation:C5: Perform housekeeping and resource
efficient and environmentally friendly waste
removal (incl. storage of hazardous materials)

Work Experience Module QCTO Reference: WM-06-WE04	Experience gained
Perform regular housekeeping activities and receive feedback on standards performed	
Conduct toolbox checks, clean tools and safely store as per industry standard	
Lift, carry and handle hazardous substances	
Store hazardous substances following safety procedures	
Inspect the waste handling practices of an engineering workshop, report findings and make recommendations	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date: Comment apprentice:	Date: Comment supervisor:

Learning Area D: Select, care for and use hand tools, power tools and machinery

Work situation: D1: Handle, care for basic hand tools

Work Experience Module QCTO Reference: WM-08-WE02	Experience gained
Care for and maintain own toolbox and tools	
Assist with the use of hand tools on basic work tasks	
Control workshop store for a period of two weeks: Control the movement of hand tools	
Control workshop store for a period of two weeks: Monitor condition of hand tools	
Report on any defects and store hand tools safely and correctly	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Learning Area D: Select, care for and use hand tools, power tools and machinery

Work situation:

D2: Handle, care for engineering power tools (portable and fixed)

Work Experience Module QCTO Reference: WM-08-WE02	Experience gained
Assist with the use of power tools on basic work tasks	
Control workshop store for a period of two weeks: Control the movement of power tools	
Control workshop store for a period of two weeks: Monitor condition of power tools	
Assist with care and maintenance of power tools	
Report on any defects and store power tools safely and correctly	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Learning Area D: Select, care for and use hand tools, power tools and machinery

Work situation: D3: Identify and care for marking and mechanical measuring equipment

Work Experience Module QCTO Reference: WM-08-WE02	Experience gained
Perform a variety of tasks using measuring and marking off instruments	
Maintain and care for measuring and marking off instruments	
Control workshop store for a period of two weeks: Control the movement of measuring and marking off instruments	
Control workshop store for a period of two weeks: Monitor condition of measuring and marking off instruments	
Report on any defects and store measuring and marking off instruments safely and correctly	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Work situation:

E1: Mark-off, saw and file various simple components and materials

Work Experience Module QCTO Reference: WM-01-WE01	Experience gained
Mark-off and fabricate a minimum of two flanges to given specifications	
Mark-off, cut and fit a minimum of two gaskets to specifications using different materials	
Mark-off, cut and fit a minimum of two spacers/shims to specifications	
Saw and file a minimum of two work pieces to specifications	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Work situation: E2: Sharpen drill bits according to application and drill material to specifications using a portable and fixed drilling machine

Work Experience Module QCTO Reference: WM-01-WE02	Experience gained
Drill holes in a minimum of two work pieces as per specifications using portable and fixed drilling machines	
Sharpen a minimum of two drill bits using fixed grinding machines	
Sharpen a minimum of two chisels using fixed grinding machines	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Work situation:

E3: Saw material to specification using a power saw

Work Experience Module QCTO Reference: WM-01-WE02	Experience gained
Saw a minimum of two work pieces to specification	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Work situation:

E4: Grind material to specifications using a pedestal grinder

Work Experience Module QCTO Reference: WM-01-WE02	Experience gained
Sharpen a minimum of two chisels using fixed grinding machines	
Sharpen a range of cutting tools using fixed grinding machines	
Replace and dress a grinding wheel	
Cut and grind a minimum of two work pieces to specification	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Work situation:

E5: Cut threads with stocks, dies, taps and ream parallel and tapered holes

Work Experience Module QCTO Reference: WM-01-WE01	Experience gained
Tap and ream a minimum of two different sized holes to specifications	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Learning Area F: Fabricate complex mechanical components or work pieces

Work situation: F1: Fabricate and fit a gasket

Work Experience Module QCTO Reference: WM-01-WE01	Experience gained
Mark-off, cut and fit a minimum of two gaskets to specifications using different materials	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Learning Area F: Fabricate complex mechanical components or work pieces

Work situation: F2: Fabricate and fit keys and locking devices

Work Experience Module QCTO Reference: WM-01-WE01	Experience gained
Mark-off and fabricate a minimum of two keys to specification	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Learning Area F: Fabricate complex mechanical components or work pieces

Work situation:

F3: Fabricate a flange and other suitable components

Work Experience Module QCTO Reference: WM-01-WE01	Experience gained
Mark-off and fabricate a minimum of two flanges to given specifications	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Learning Area G: Perform basic welding, cutting, brazing on engineering materials

Work situation: G1: Gas cut metal to specification

Work Experience Module QCTO Reference: WM-01-WE02	Experience gained
Gas cut a minimum of two work pieces to specification using gas cutting equipment	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Learning Area G: Perform basic welding, cutting, brazing on engineering materials

Work situation: G2: Arc weld metal to specification

Work Experience Module QCTO Reference: WM-01-WE02	Experience gained
Arc weld a minimum of two work pieces to specification using an arc welding machine	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Learning Area G: Perform basic welding, cutting, brazing on engineering materials

Work situation:

G3: Gas weld, silver solder and braze metal to specification

Work Experience Module QCTO Reference: WM-01-WE02	Experience gained
Gas weld a minimum of two work pieces to specification using gas welding equipment	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Work situation: H1: Perform routine maintenance, fault finding, repair and alignment on gearboxes

Work Experience Module QCTO Reference: WM-02-WE01 – WE04; WM-04-WE01 – WE04 and WM-05-WE01 – WE03	Experience gained
ROUTINE MAINTENANCE	
Conduct inspection processes, safety procedures, lock out, tagging and site preparation procedures required for routine maintenance of gearboxes	
Interact with production personnel and report on routine maintenance of gearboxes	
Conduct a range of routine maintenance tasks of varying complexity on gearboxes (including checks for abnormal noise, vibration, excessive heat and missing components, and replacing safety guards)	
Perform gearbox maintenance tasks within accepted standards of performance under work pressure	
Perform housekeeping as per industry standards	
FAULT FINDING AND REPAIR	
Conduct inspection processes, safety procedures, lock out, tagging and site preparation procedures required for fault finding on and repair of gearboxes	
Interact with production personnel and report on gearboxes fault finding and repair activities	
Perform a range of mechanical fault-finding and repair tasks on gearboxes (experience must include a variety of breakdowns)	
Perform gearbox fault finding and repair tasks within accepted standards of performance under work pressure	
Perform housekeeping as per industry standards	
OVERHAULING	
Perform overhaul planning processes and pre-overhauling inspection procedures on gearboxes	
Perform a range of overhauling tasks on gearboxes	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Work situation: H2: Perform routine maintenance, fault finding, repair and alignment on drives

Work Experience Module QCTO Reference: WM-02-WE01 – WE04 and WM-04-WE01 – WE04	Experience gained	
ROUTINE MAINTENANCE		
Conduct inspection processes, safety procedures, lock out, tagging and site preparation procedures required for routine maintenance of drives		
Interact with production personnel and report on routine maintenance of drives		
Conduct a range of routine maintenance tasks of varying complexity on drives (including checks for abnormal noise, vibration, excessive heat and missing components, and replacing safety guards)		
Perform drive maintenance tasks within accepted standards of performance under work pressure		
Perform housekeeping as per industry standards		
FAULT FINDING AND REPAIR		
Conduct inspection processes, safety procedures, lock out, tagging and site preparation procedures required for fault finding on and repair of drives		
Interact with production personnel and report on drives fault finding and repair activities		
Perform a range of mechanical fault-finding and repair tasks on drives (experience must include a variety of breakdowns)		
Perform gearbox fault finding and repair tasks within accepted standards of performance under work pressure		
Perform housekeeping as per industry standards		

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Work situation:

H3: Install, align and commission gearboxes to specification

Work Experience Module QCTO Reference: WM-04-WE03	
Perform inspection processes, safety procedures, lock out, tagging and site preparation procedures for installation, alignment and commissioning of gearboxes	
Interact with and report to production personnel on the installation, alignment and commissioning of gearboxes	
Gather necessary technical information and develop plan for installing and commissioning gearboxes, and list and obtain the required parts and materials	
Install gearboxes as per manufacturers' and workplace specifications	
Align gearboxes as per manufacturers' and workplace specifications	
Conduct post-installation inspection and functionality tests on gearboxes and commission	
Complete all relevant installation and commissioning documentation for gearboxes	
Perform housekeeping as per industry standards	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Work situation:

H4: Install, align and commission drives to specification

Work Experience Module QCTO Reference: WM-04-WE03	
Perform inspection processes, safety procedures, lock out, tagging and site preparation procedures for installation, alignment and commissioning of drives	
Interact with and report to production personnel on the installation, alignment and commissioning of drives	
Gather necessary technical information and develop plan for installing and commissioning drives, and list and obtain the required parts and materials	
Install drives as per manufacturers' and workplace specifications	
Align drives as per manufacturers' and workplace specifications	
Conduct post-installation inspection and functionality tests on drives and commission	
Complete all relevant installation and commissioning documentation for drives	
Perform housekeeping as per industry standards	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Work situation: H5: Perform laser alignment on drives and gear box (ELECTIVE)

Work Experience Module QCTO Reference: None	Experience gained
Install and align a single belt-drive	
Install and align match-set belt drives	
Install and align chain drives	
Install jockey on V-belt and chain drive units	
Horizontal and vertical alignment of driver and driven pulley within 0.1mm	
Tension and deflection according to chart or calculations 16mm per meter span (use back of instruction sheet for calculations)	
Shims neat and square to the base	
Adjusting bolts must be loose	
Base bolts torque to specifications	
Align driver to driven within ± 0.1mm horizontally	
Align driver to driven within ± 0.1mm vertically	
Align tension sprocket to main sprockets to within ± 0.1mm	
Master link must be in the correct direction	
Chain tension adjusted correctly	
Shims neat and square to the base	
Adjusting bolts must be loose	
Set up and use a laser alignment equipment correctly	
Handle and store laser alignment equipment correctly	
Ensure calibration is valid	
Record and use the results of the laser reading correctly	
Align a gearbox using couplings or drives (alignment to be within 0.05mm on couplings)	
Safety procedure followed for laser alignment	
Perform housekeeping as per industry standards	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Learning Area I: Perform work activities on pumps for water systems and water related valves

Work situation: I1: Perform routine maintenance fault finding, repair and reassembly activities on pumps for water systems

Work Experience Module QCTO Reference: WM-02-WE01 – WE04; WM-04-WE01 – WE04 and WM-05-WE01 – WE03	Experience gained	
ROUTINE MAINTENANCE		
Conduct inspection processes, safety procedures, lock out, tagging and site preparation procedures required for routine maintenance of water system pumps		
Interact with production personnel and report on routine maintenance of water system pumps		
Conduct a range of routine maintenance tasks of varying complexity on water system pumps		
Perform pump maintenance tasks within accepted standards of performance under work pressure		
Perform housekeeping as per industry standards		
FAULT FINDING AND REPAIR		
Conduct inspection processes, safety procedures, lock out, tagging and site preparation procedures required for fault finding on and repair of water system pumps		
Interact with production personnel and report on pump fault finding and repair activities		
Perform a range of mechanical fault-finding and repair tasks on water system pumps (experience must include a variety of breakdowns)		
Perform pump fault finding and repair tasks within accepted standards of performance under work pressure		
Perform housekeeping as per industry standards		
OVERHAULING		
Perform overhaul planning processes and pre-overhauling inspection procedures on water system pumps		
Perform a range of overhauling tasks on water system pumps		

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Learning Area I: Perform work activities on pumps for water systems and water related valves

Work situation: I2: Perform routine maintenance fault finding, repair and reassembly activities on water related valves

Work Experience Module QCTO Reference: WM-02-WE01 – WE04 and WM-04-WE01 – WE04	Experience gained	
ROUTINE MAINTENANCE	-	
Conduct inspection processes, safety procedures, lock out, tagging and site preparation procedures required for routine maintenance of water system related valves		
Interact with production personnel and report on routine maintenance of water system related valves		
Conduct a range of routine maintenance tasks of varying complexity on water system related valves		
Perform valve maintenance tasks within accepted standards of performance under work pressure		
Perform housekeeping as per industry standards		
FAULT FINDING AND REPAIR		
Conduct inspection processes, safety procedures, lock out, tagging and site preparation procedures required for fault finding on and repair of water system related valves		
Interact with production personnel and report on valve fault finding and repair activities		
Perform a range of mechanical fault-finding and repair tasks on water system related valves (experience must include a variety of breakdowns)		
Perform valve fault finding and repair tasks within accepted standards of performance under work pressure		
Perform housekeeping as per industry standards		

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date: Comment apprentice:	Date: Comment supervisor:

Learning Area I: Perform work activities on pumps for water systems and water related valves

Work situation: 13: Install, align and commission pumps for water systems and water related valves

Work Experience Module QCTO Reference: WM-04-WE03	
Perform inspection processes, safety procedures, lock out, tagging and site preparation procedures for installation and commissioning of pumps and valves for water systems	
Interact with and report to production personnel on the installation and commissioning of pumps and valves for water systems	
Gather necessary technical information and develop plan for installing and commissioning pumps and valves for water systems, and list and obtain the required parts and materials	
Install pumps as per manufacturers' and workplace specifications	
Install valves as per manufacturers' and workplace specifications	
Align water system pumps as per manufacturers' and workplace specifications	
Align water system valves as per manufacturers' and workplace specifications	
Conduct post-installation inspection and functionality tests on pumps and commission	
Conduct post-installation inspection and functionality tests on valves and commission	
Complete all relevant installation and commissioning documentation for pumps and valves	
Perform housekeeping as per industry standards	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Learning Area J: Perform work activities on brakes and clutches

Work situation: J1: Perform routine maintenance, fault finding, repair, reassembly and alignment activities on brakes and clutches

Work Experience Module QCTO Reference: WM-02-WE01 – WE04; WM-04-WE01 – WE04 and WM-05-WE01 – WE03	Experience gained
ROUTINE MAINTENANCE	
Conduct inspection processes, safety procedures, lock out, tagging and site preparation procedures required for routine maintenance of breaks and clutches	
Interact with production personnel and report on routine maintenance of breaks and clutches	
Conduct a range of routine maintenance tasks of varying complexity on breaks (including checks for abnormal noise, vibration, excessive heat and missing components, and replacing safety guards)	
Conduct a range of routine maintenance tasks of varying complexity on clutches (including checks	
for abnormal noise, vibration, excessive heat and missing components, and replacing safety guards)	
Perform break and clutch maintenance tasks within accepted standards of performance under work pressure	
Perform housekeeping as per industry standards	
FAULT FINDING AND REPAIR	
Conduct inspection processes, safety procedures, lock out, tagging and site preparation procedures required for fault finding on and repair of breaks and clutches	
Interact with production personnel and report on break and clutch fault finding and repair activities	
Perform a range of mechanical fault-finding and repair tasks on breaks (experience must include a variety of breakdowns)	
Perform a range of mechanical fault-finding and repair tasks on clutches (experience must include a variety of breakdowns)	
Perform break and clutch fault finding and repair tasks within accepted standards of performance under work pressure	
Perform housekeeping as per industry standards	
OVERHAULING	
Perform overhaul planning processes and pre-overhauling inspection procedures on breaks	
Perform overhaul planning processes and pre-overhauling inspection procedures on clutches	
Perform a range of overhauling tasks on breaks	
Perform a range of overhauling tasks on clutches	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Learning Area J: Perform work activities on brakes and clutches

Work situation: J2: Perform installation and commissioning activities on brakes and clutches

Work Experience Module QCTO Reference: WM-04-WE03	
Perform inspection processes, safety procedures, lock out, tagging and site preparation procedures for installation and commissioning of breaks and clutches	
Interact with and report to production personnel on the installation and commissioning of breaks and clutches	
Gather necessary technical information and develop plan for installing and commissioning breaks and clutches, and list and obtain the required parts and materials	
Install breaks as per manufacturers' and workplace specifications	
Install clutches as per manufacturers' and workplace specifications	
Conduct post-installation inspection and functionality tests on breaks and commission	
Conduct post-installation inspection and functionality tests on clutches and commission	
Complete all relevant installation and commissioning documentation for breaks and clutches	
Perform housekeeping as per industry standards	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date: Comment apprentice:	Date: Comment supervisor:

Work situation:

K1: Perform routine maintenance, fault find, repair and align bearings

Work Experience Module QCTO Reference: WM-02-WE01 – WE04 and WM-04-WE01 – WE04	Experience gained	
ROUTINE MAINTENANCE	-	
Conduct inspection processes, safety procedures, lock out, tagging and site preparation procedures required for routine maintenance of bearings		
Interact with production personnel and report on routine maintenance of bearings		
Conduct a range of routine maintenance tasks of varying complexity on bearings (including checks for abnormal noise, vibration, excessive heat and missing components, and replacing safety guards)		
Perform bearing maintenance tasks within accepted standards of performance under work pressure		
Perform housekeeping as per industry standards		
FAULT FINDING AND REPAIR		
Conduct inspection processes, safety procedures, lock out, tagging and site preparation procedures required for fault finding on and repair of bearings		
Interact with production personnel and report on bearings fault finding and repair activities		
Perform a range of mechanical fault-finding and repair tasks on bearings (experience must include a variety of breakdowns)		
Perform bearing fault finding and repair tasks within accepted standards of performance under work pressure		
Perform housekeeping as per industry standards		

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date: Comment apprentice:	Date: Comment supervisor:

Work situation: K2: Perform routine maintenance, fault find, repair and align lubrication systems

Work Experience Module QCTO Reference: WM-02-WE01 – WE04 and WM-04-WE01 – WE04	Experience gained	
ROUTINE MAINTENANCE		
Conduct inspection processes, safety procedures, lock out, tagging and site preparation procedures required for routine maintenance of lubrication systems		
Interact with production personnel and report on routine maintenance of lubrication systems		
Conduct a range of routine maintenance tasks of varying complexity on lubrication systems (including checks for abnormal noise, vibration, excessive heat and missing components, and replacing safety guards)		
Perform lubrication system maintenance tasks within accepted standards of performance under work pressure		
Perform housekeeping as per industry standards		
FAULT FINDING AND REPAIR		
Conduct inspection processes, safety procedures, lock out, tagging and site preparation procedures required for fault finding on and repair of lubrication systems		
Interact with production personnel and report on lubrication system fault finding and repair activities		
Perform a range of mechanical fault-finding and repair tasks on lubrication systems (experience must include a variety of breakdowns)		
Perform lubrication systems fault finding and repair tasks within accepted standards of performance under work pressure		
Perform housekeeping as per industry standards		

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Work situation: K3: Perform installation and commissioning activities lubrication systems

Work Experience Module QCTO Reference: WM-04-WE03	
Perform inspection processes, safety procedures, lock out, tagging and site preparation procedures for installation and commissioning of lubrication systems	
Interact with and report to production personnel on the installation and commissioning of lubrication systems	
Gather necessary technical information and develop plan for installing and commissioning lubrication systems, and list and obtain the required parts and materials	
Install lubrication systems as per manufacturers' and workplace specifications	
Conduct post-installation inspection and functionality tests on lubrication systems and commission	
Complete all relevant installation and commissioning documentation for lubrication systems	
Perform housekeeping as per industry standards	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Work situation:

K4: Perform installation and commissioning activities on bearings

Work Experience Module QCTO Reference: WM-04-WE03	Experience gained
Perform inspection processes, safety procedures, lock out, tagging and site preparation procedures for installation and commissioning of bearings	
Interact with and report to production personnel on the installation and commissioning of bearings	
Gather necessary technical information and develop plan for installing and commissioning bearings, and list and obtain the required parts and materials	
Install bearings as per manufacturers' and workplace specifications	
Conduct post-installation inspection and functionality tests on bearings and commission	
Complete all relevant installation and commissioning documentation for bearings	
Perform housekeeping as per industry standards	

Nome of entroption	Nome of supervisory
Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Work situation: L1: Build and test basic hydraulic flow circuits

Work Experience Module QCTO Reference: None	Experience gained
Read and interpret symbols, diagrams and schematics and identify the related components	
Build and test basic hydraulic circuits	
Remove, test and replace hydraulic components	
Identify typical hydraulic faults	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Work situation: L2: Perform routine maintenance, fault finding, repair and reassembly activities on hydraulic system

Work Experience Module QCTO Reference: WM-02-WE01 – WE04; WM-04-WE01 – WE04 and WM-05-WE01 – WE03	Experience gained
ROUTINE MAINTENANCE	
Conduct inspection processes, safety procedures, lock out, tagging and site preparation procedures required for routine maintenance of hydraulic systems	
Interact with production personnel and report on routine maintenance of hydraulic systems	
Conduct a range of routine maintenance tasks of varying complexity on hydraulic systems	
Perform hydraulic system maintenance tasks within accepted standards of performance under work pressure	
Perform housekeeping as per industry standards	
FAULT FINDING AND REPAIR	
Conduct inspection processes, safety procedures, lock out, tagging and site preparation procedures required for fault finding on and repair of hydraulic systems	
Interact with production personnel and report on hydraulic system fault finding and repair activities	
Perform a range of mechanical fault-finding and repair tasks on hydraulic systems (experience must include a variety of breakdowns)	
Perform fault finding and repair tasks on hydraulic systems within accepted standards of performance under work pressure	
Perform housekeeping as per industry standards	
OVERHAULING	
Perform overhaul planning processes and pre-overhauling inspection procedures on hydraulic systems	
Perform a range of overhauling tasks on hydraulic systems	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Work situation: L3: Perform installation and commissioning activities on hydraulic systems

Work Experience Module QCTO Reference: WM-04-WE03	
Perform inspection processes, safety procedures, lock out, tagging and site preparation procedures for installation and commissioning of hydraulic systems	
Interact with and report to production personnel on the installation and commissioning of hydraulic systems	
Gather necessary technical information and develop plan for installing and commissioning hydraulic systems, and list and obtain the required parts and materials	
Install hydraulic systems as per manufacturers' and workplace specifications	
Conduct post-installation inspection and functionality tests on hydraulic systems and commission	
Complete all relevant installation and commissioning documentation for hydraulic systems	
Perform housekeeping as per industry standards	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Work situation:

L4: Perform basic activities on electro hydraulic systems (ELECTIVE)

Work Experience Module QCTO Reference: None	Experience gained
Assist a competent person in working on an electro-hydraulic system	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date: Comment apprentice:	Date: Comment supervisor:

Work situation: M1: Build and test basic pneumatic circuits

Work Experience Module QCTO Reference: None	Experience gained
Read and interpret symbols, diagrams and schematics and identify the related components	
Build and test basic pneumatic circuits	
Remove, test and replace pneumatic components	
Identify typical pneumatic faults	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Work situation: M2: Perform routine maintenance, fault finding, repair and reassembly activities on pneumatic systems

Work Experience Module QCTO Reference: WM-02-WE01 – WE04; WM-04-WE01 – WE04 and WM-05-WE01 – WE03	
ROUTINE MAINTENANCE	
Conduct inspection processes, safety procedures, lock out, tagging and site preparation procedures required for routine maintenance of pneumatic systems	
Interact with production personnel and report on routine maintenance of pneumatic systems	
Conduct a range of routine maintenance tasks of varying complexity on pneumatic systems	
Perform pneumatic system maintenance tasks within accepted standards of performance under work pressure	
Perform housekeeping as per industry standards	
FAULT FINDING AND REPAIR	
Conduct inspection processes, safety procedures, lock out, tagging and site preparation procedures required for fault finding on and repair of pneumatic systems	
Interact with production personnel and report on pneumatic system fault finding and repair activities	
Perform a range of mechanical fault-finding and repair tasks on pneumatic systems (experience must include a variety of breakdowns)	
Perform fault finding and repair tasks on pneumatic systems within accepted standards of performance under work pressure	
Perform housekeeping as per industry standards	
OVERHAULING	
Perform overhaul planning processes and pre-overhauling inspection procedures on pneumatic systems	
Perform a range of overhauling tasks on pneumatic systems	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:

Work situation: M3: Perform installation and commissioning activities on pneumatic systems

Work Experience Module QCTO Reference: WM-04-WE03	
Perform inspection processes, safety procedures, lock out, tagging and site preparation procedures for installation and commissioning of pneumatic systems	
Interact with and report to production personnel on the installation and commissioning of pneumatic systems	
Gather necessary technical information and develop plan for installing and commissioning pneumatic systems, and list and obtain the required parts and materials	
Install pneumatic systems as per manufacturers' and workplace specifications	
Conduct post-installation inspection and functionality tests on pneumatic systems and commission	
Complete all relevant installation and commissioning documentation for pneumatic systems	
Perform housekeeping as per industry standards	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date: Comment apprentice:	Date: Comment supervisor:

Work situation: M4: Perform basic activities on electro pneumatic systems (ELECTIVE)

Work Experience Module QCTO Reference: None	Experience gained
Assist a competent person in working on an electro pneumatic system	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date: Comment apprentice:	Date: Comment supervisor:
Comment apprentice.	Comment supervisor.

Learning Area N: Inspect, maintain and fault find on conveyor systems

Work situation:N1: Inspect, maintain conveyor systems (incl.
rolling elements, structure and belts) and
inspect safety guards and shout

Work Experience Module QCTO Reference: WM-02-WE01 – WE04	Experience gained
ROUTINE MAINTENANCE	
Conduct inspection processes, safety procedures, lock out, tagging and site preparation procedures required for routine maintenance of conveyor systems	
Interact with production personnel and report on routine maintenance of conveyor systems	
Conduct a range of routine maintenance tasks of varying complexity on at least three different conveyor systems	
Perform conveyor systems maintenance tasks within accepted standards of performance	
Perform housekeeping as per industry standards	

Name of supervisor:
Signature of supervisor:
Date:
Comment supervisor:

Learning Area N: Inspect, maintain and fault find on conveyor systems

Work situation: N2: Track conveyor belts

Work Experience Module QCTO Reference: None	Experience gained
Conduct inspection processes, safety procedures, lock out, tagging and site preparation procedures required	
Conduct pre-maintenance inspections and identify and report any problems	
Track conveyor belts (at least three different conveyor belt systems)	
Conduct post-maintenance inspection	
Interact with production personnel as necessary	
Perform housekeeping as per industry standards	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor:
Comment apprentice.	

Learning Area N: Inspect, maintain and fault find on conveyor systems

Work situation:N3: Remove and replace conveyor belts /
splicing (excluding vulcanization & fusing)
(ELECTIVE)

Work Experience Module QCTO Reference: None	Experience gained
Plan and prepare for the maintenance, repair and/ or removal of the conveyor system/s in accordance with work instructions	
Perform removal and replacement of conveyor system/s	
Perform routine servicing of conveyor system/s	
Perform stripping and assembly, overhauling and fault finding of conveyor system/s	
Perform housekeeping as per prescribed industry standard	

Name of apprentice:	Name of supervisor:
Signature of apprentice:	Signature of supervisor:
Date:	Date:
Comment apprentice:	Comment supervisor: