



**National Competency Standards Level-4 in Agricultural Machinery
Technology**



National Competency Standards Level-4 in Agricultural Machinery Technology

“Agricultural Machinery Technician”



**National Vocational and Technical Training Commission (NAVTTC),
Government of Pakistan**



**National Competency Standards Level-4 in Agricultural Machinery
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ACKNOWLEDGEMENTS

National Vocational and Technical Training Commission (NAVTTC) extends its gratitude and appreciation to representatives of business, industry, academia, government agencies, provincial TEVTAs, sector skill councils and trade associations who spared time and extended their expertise for the development of National Vocational Qualification for the trade of **Agricultural Machinery Technology**. This work would not have been possible without the technical support of the above personnel.

NAVTTC initiated development of CBT&A based qualifications for 200 traditional / hi-tech trades under the Prime **Minister's Hunarmand Pakistan Program**, focusing on Development & Standardization of 200 Technical & Vocational Education & Training (TVET) Qualifications. NAVTTC efforts have received full support from the Ministry of Federal Education and Professional Training which highly facilitated progress under this initiative.

It may not be out of place to mention here that all the experts of Industry, Academia and TVET experts of TEVTAs, BTEs and PVTC work diligently for making this qualification worthy and error free for which all credit goes to them. However, NAVTTC accepts the responsibility of all the errors and omissions still prevailing in the Qualification document.

It is also noteworthy that development of Skill Standards is a dynamic and ongoing process, and the developed skill standards needs periodic review and updating owing to the constant technological advancements, development in scientific knowledge, and growing experience of implementation at the grass root level as well as the demand of industry. NAVTTC will ensure to keep the qualifications abreast with the changing demands of both national and international job markets.

Executive Director (NAVTTC)



National Competency Standards Level-4 in Agricultural Machinery Technology



Table of Contents

1. Introduction	5
2. Purpose of the Qualification.....	5
3. Core competencies of the Qualification	6
4. Date of Validation	8
5. Date of Review.....	8
6. Minutes of Meeting.....	9
7. Codes of Qualifications	10
8. Members of Qualification Development Committee	11
9. Qualification Validation Committee	12
10. Entry Requirements	12
0716-MVS&A-1. Conduct Field survey	13
0716-MVS&A-2. Perform Shaper, Slotter Machining Operations	15
0716-MVS&A-3. Perform welding and soldering process on the given work piece	18
0716-MVS&A-4. Maintain Fuel Supply System	21
0716-MVS&A-5. Maintain Brake system	24
0716-MVS&A-6. Maintain Lubrication System	26
0716-MVS&A-7. Maintain Steering System	27
0716-MVS&A-8. Maintain Electrical System.....	29
0716-MVS&A-9. Maintain Grain Grader.....	31
0716-MVS&A-10. Maintain sprayer.....	33
0716-MVS&A-11. Maintain land preparation implements	35
0716-MVS&A-12. Maintain sowing and planting implements.....	41
0716-MVS&A-13. Operate / Maintain Mowers and Forage Harvester.....	45
0716-MVS&A-14. Operate / Maintain Reaper.....	47
0716-MVS&A-15. Operate / Maintain Digger (Root crops)	49
0716-MVS&A-16. Operate Plant protection (PP) implements	51
0716-MVS&A-17. Develop workplace policy and procedures for sustainability	53
0716-MVS&A-18. Manage meetings	56
0716-MVS&A-19. Manage recruitment selection and induction processes.....	58



National Competency Standards Level-4 in Agricultural Machinery Technology



0716-MVS&A-20.	Manage personal work priorities and professional development.....	60
0716-MVS&A-21.	Manage workforce planning	62
0716-MVS&A-22.	Undertake project work	64
0716-MVS&A-23.	Identify and communicate trends in career development	67
0716-MVS&A-24.	Apply specialist interpersonal and counseling interview skills	69
0716-MVS&A-25.	Work safely in an office environment	73
0716-MVS&A-26.	Develop workplace documents	75
0716-MVS&A-27.	Prepare and implement negotiation	78
0716-MVS&A-28.	Maintain professionalism in the workplace	81
0716-MVS&A-29.	Organize schedules.....	83



National Competency Standards Level-4 in Agricultural Machinery Technology



1. Introduction

Agriculture is an important sector of Pakistan's economy. This sector directly supports the country's population and accounts for 26 percent of gross domestic product (GDP). Agricultural machinery mechanics work with modern machinery. They assemble, adjust, operate, repair, maintain and test agricultural machinery. This machinery includes land preparation, tilling, sowing & planting, irrigating, spraying, harvesting, drying and equipment handling. They often supervise skilled mechanics and other workers who keep machines and systems operating at maximum efficiency.

2. Purpose of the Qualification

The purpose of this qualification is to set the high professional standards for the agricultural machine mechanic. The specific objectives of developing these qualifications are as under:

- Improve the professional competence of the trainees
- Provide opportunities for recognition of the skills attained through formal or informal pathways
- Improve the quality and effectiveness of the training and assessment for Mechatronics Technological sector
- Enabling / helping / facilitating the existing workforce to indulge themselves in new technologies and methods



**National Competency Standards Level-4 in Agricultural Machinery
Technology**



3. Core competencies of the Qualification

Sr No	Competency Standards	NVQF Level	Category	Estimated Contact Hours			Cr Hr
				Th	Pr	Total	
Level-4 (Agricultural Machinery Technician)							
1.	Conduct Field survey	4	Technical	20	54	74	7.4
2.	Perform Shaper, Slotter Machining Operations	4	Technical	10	42	52	5.2
3.	Perform welding and soldering process on the given work piece	4	Technical	10	54	64	6.4
4.	Maintain Fuel Supply System	4	Technical	10	57	67	6.7
5.	Maintain Brake system	4	Technical	10	36	46	4.6
6.	Maintain Lubrication System	4	Technical	8	30	38	3.8
7.	Maintain Steering System	4	Technical	10	39	49	4.9
8.	Maintain Electrical System	4	Technical	10	36	46	4.6
9.	Maintain Grain Grader	4	Technical	6	21	27	2.7
10.	Maintain sprayer	4	Technical	8	30	38	3.8
11.	Maintain land preparation implements	4	Technical	8	60	68	6.8
12.	Maintain sowing and planting implements	4	Technical	10	54	64	6.4
13.	Operate / Maintain Mowers and Forage Harvester	4	Technical	8	39	47	4.7
14.	Operate / Maintain Reaper	4	Technical	8	39	47	4.7
15.	Operate / Maintain Digger	4	Technical	5	27	32	3.2
16.	Operate lant protection (PP) implements	4	Technical	9	42	51	5.1
17.	Apply specialist interpersonal and counseling interview skills	4	Generic	6	24	30	3
18.	Develop workplace documents	4	Generic	6	24	30	3
19.	Develop workplace policy and procedures for sustainability	4	Generic	6	24	30	3
20.	Identify and communicate trends in career development	4	Generic	6	24	30	3
21.	Implement negotiation	4	Generic	6	24	30	3
22.	Manage personal work priorities and professional development	4	Generic	6	24	30	3
23.	Manage recruitment selection and induction processes	4	Generic	6	24	30	3
24.	Manage workforce planning	4	Generic	6	24	30	3
25.	Undertake project work	4	Generic	6	24	30	3
26.	Work safely in an office environment	4	Generic	6	24	30	3



**National Competency Standards Level-4 in Agricultural Machinery
Technology**



27	Organize schedules	4	Generic	6	24	30	3
28	Maintain professionalism in the workplace	4	Generic	6	24	30	3
29	Manage meetings	4	Generic	6	24	30	3
	Total			228	972	1200	120
	Percentage			19	81		



***National Competency Standards Level-4 in Agricultural Machinery
Technology***



4. Date of Validation

The level 5 of National DAE qualification for 'Agricultural Machine Mechanic' has been validated by the Qualifications Validation Committee (QVC) members on 16th Jan, 2031 and will remain valid for ten years i.e. 16th Jan, 2031

5. Date of Review

The level 5 of National DAE qualification for 'Agricultural Machine Mechanic' has been validated by the Qualifications Validation Committee (QVC) members on 16th Jan, 2031 and shall be reviewed after 3 years i.e. 17th Jan, 2024



National Competency Standards Level-4 in Agricultural Machinery Technology



6. Minutes of Meeting



Report Regarding Validation of Competency Standards for National Vocational Qualifications Level 5 for Agricultural Machinery Technology



MINUTES OF MEETING

A meeting of Qualification Review and Validation Committee for Review and Validation of Competency Standards for the trade of "Agricultural Machinery Technology" was held at Pakistan Industrial Technical Assistance Center, Lahore from 12th – 16th Jan, 2021. The following activities took place during meeting:

1. Introduction of OP & CS file to the new participants
2. Detailed discussion regarding validation process
3. Consultation was made with the relevant industry experts to confirm the accuracy of the competency standards
4. Levels of competency standards were defined according to NVQF Level Descriptor
5. Prepared the packaging of CS as per expert's guidelines.
6. Assigned the credit hours for CS as per PBTE and NVQF guidelines.
7. Revision of competency standards as per Industry/TEVTAs/BTEs requirements
8. Tools and equipment lists were revised as per industry requirements.
9. Time allocation for contact hours is confirmed with the industry & academia representatives and adjusted accordingly.
10. Competency standards were packaged in National Occupational Standards in 5 certifications of Levels 1, 2, 3, 4 and 5.

The following experts has participated in the CS Review and Validation Committee meeting and showed their consent to validated competency standards as found them according to the requirements of the industry:

S#	Expert Name	Designation	Signature
1.	Rana Imran Sattar	Instructor, GCT, Railway Road Lahore	
2.	Mr. Atif Latif	Assistant Director (R&D), Auto Farm Expert (P-TEVTA)	
3.	Mr. Muhammad Afzal	Assistant Manager, Millat Tractors Ltd.	
4.	Engr. Shahzad Amir Rafiq	DPO Sahiwal and Pakpattan (P-TEVTA)	
5.	Engr. Jamal Akbar	Associate Prof (KP TEVTA)	
6.	Engr. Aqib Sharif	Manager Accreditation (P-TEVTA)	
7.	Syeda Fatima Iqbal	System Analyst (PBTE)	
8.	M. Shahzad Khalid	Instructor VTI Burewala (PVTC)	
9.	Mr. Nazakat Hussain Qureshi	Ex-Head, Farm Implements, Millat Tractors Ltd.	
10.	Engr. Liaquat Ali Jamroh	Director (Academics), Sindh TEVTA	
11.	Mr. Sikandar Masood	Director NAVTTC/ Coordinator	
12.	Engr. Aijaz Ahmed Zia	DACUM Facilitator	



National Competency Standards Level-4 in Agricultural Machinery Technology



7. Codes of Qualifications

The International Standard Classification of Education (ISCED) is a framework for assembling, compiling and analyzing cross-nationally comparable statistics on education and training. ISCED codes for these qualifications are assigned as follows:

ISCED Classification for level-5	
Code	Description
0716-MVS&A(1)	1 st Level National Certificate of level-5, in “ Agricultural Machinery Mechanic”
0716-MVS&A (2)	2 nd Level National Certificate of level-5, in “ Agricultural Machinery Mechanic”
0716-MVS&A (3)	3 rd Level National Certificate of level-5, in “ Agricultural Machinery Mechanic”
0716-MVS&A 4)	4 th Level National Certificate of level-5, in “ Agricultural Machinery Mechanic”
0716-MVS&A (5)	5 th Level National Certificate of level-5, in “ Agricultural Machinery Mechanic”



**National Competency Standards Level-4 in Agricultural Machinery
Technology**



8. Members of Qualification Development Committee

The following members participated in the qualifications development and validation of this qualification:

S#	Name	Designation	Organization
1.	Dr. Dilbagh Muhammad	Ex. Director Farm Machinery	PCCC Mutan
2.	Dr. Ghaffar Dogar	Visiting Professor IAGS	Punjab University
3.	Dr. Muhammad Yasin	Assistant Professor	Punjab University
4.	Mr. Muhammad Afzal	Assistant Manager	Millat Tractor
5.	Engr. Atif Latif	Assistant Director (R&D)	P-Tevta
6.	Mr. Shahzad Rashid	Lecturer	GCT Faisalabad
7.	Mr. Shakeel Ahmed	Lecturer	GCT Faisalabad
8.	Mr. Rana Imran Sattar	Assistant Professor	GCT Railway Road
9.	Mr. Maroof Siddique	PhD Scholar	Punjab University
10.	Mr. Arsalan Abbas	Research Assistant	Punjab University
11.	Engr. Abdul Kabir	Research Assistant	The University of Lahore
12.	Engr. Aijaz Ahmed Zia	DACUM Facilitator	INTECH/UET Lahore
13.	Mr. Sikandar Masood	Director SS&C	NAVTTC HQs



National Competency Standards Level-4 in Agricultural Machinery Technology



9. Qualification Validation Committee

The following members participated in the qualifications development and validation of this qualification:

S#	Name	Designation	Organization
1.	Rana Imran Sattar	Instructor	GCT, Railway Road Lahore
2.	Mr. Atif Latif	Assistant Director	P- TEVTA
3.	Mr. Muhammad Afzal	Assistant Manager,	Millat Tractors Ltd.
4.	Engr. Shahzad Amir Rafiq	DPO Sahiwal and Pakpattan	P-TEVTA
5.	Engr. Jamal Akbar	Associate Prof	KP TEVTA
6.	Engr. Aqib Sharif	Manager Accreditation	P-TEVTA
7.	Syeda Fatima Iqbal	System Analyst	PBTE
8.	M. Shahzad Khalid	Instructor	VTI Burewala PVTC
9.	Mr. Nazakat Hussain Qureshi	Ex-Head, Farm Implements	Millat Tractors Ltd.
10.	Mr. Sikandar Masood	Director / Coordinator	NAVTTC
11.	Engr. Aijaz Ahmed Zia	DACUM Facilitator	INTECH/UET

10. Entry Requirements

The entry requirements for National Certificate level 4, in Agricultural Machinery Technology are:

1. A person having middle education (8th class)
2. National Certificate level 3, in Agricultural Machinery Technology



11. Detail of Qualifications and its Competency Standards

0716-MVS&A-1. Conduct Field survey

Overview: After this competency standard candidate will be able to develop the field preparation for better production of crops.

Competency Unit	Performance Criteria
CU1. Identify survey equipment	<p>P1. Identify field conditions (plain, mountain, plateau)</p> <p>P2. Identify survey equipment (Theodolite, staff rod, measuring tape, chain, rings, range poles, tripod stand)</p> <p>P3. Identify hurdles (trees, bushes, stones, bricks)</p>
CU2. Conduct Land Survey	<p>P1. Conduct a reconnaissance survey</p> <p>P2. Conduct a topographic survey</p> <p>P3. Estimate survey cut-fill ratio</p> <p>P4. Develop cut-fill map</p> <p>P5. Prepare a map of the survey field</p> <p>P6. Implement of a survey plan</p>
CU3. Estimate survey cost	<p>P1. Estimate Cost variables</p> <p>P2. Estimate survey operation time</p> <p>P3. Estimate survey operation cost</p>

Knowledge & Understanding

The candidate must be able to demonstrate the underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes:

- Enlist the survey equipment
- Describe the survey procedure
- Estimate survey operation time & cost.

Tools and Equipment

The tools and equipment required for this competency standard are given below:

S. No.	Items
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**National Competency Standards Level-4 in Agricultural Machinery
Technology**



1.	Theodolite
2.	staff rod
3.	measuring tape
4.	range poles
5.	Tractor
6.	Bulldozer
7.	Blade

Critical Evidence(s) Required

The candidate needs to produce the following **Critical Evidence(s)** to be competent in this competency standard:

- Determine cut-fill ratio if an unlevel field



0716-MVS&A-2. Perform Shaper, Slotter Machining Operations

Overview. This competency standard covers the skills and knowledge required to produce a squared shape work piece, Produce V shaped work piece, Machining a Rack Gear, T-slot Machining, Machining Irregular Surfaces, Machining External Keyways and Machining internal Keyways

Critical Evidence	Performance Criteria
CU1. Produce a squared shape work piece	<p>P1. Identify the safety hazards related the shaping operations in order to to avoid injury / accident.</p> <p>P2. Select a point cutting tool and set the machine as per requirements.</p> <p>P3. Mount a cutting tool and the work piece in the machine.</p> <p>P4. Check the quality of the component at suitable intervals.</p> <p>P5. Shut down the machine at safe position after completion of work.</p>
CU2. Produce V shaped work piece	<p>P1. Identify the safety hazards related to the shaping operations in order to to avoid any injury / accident.</p> <p>P2. Dial the machine vice according to job requirement.</p> <p>P3. Select point cutting tool and set machine according to job requirements.</p> <p>P4. Mount cutting tool and work piece in the machine.</p> <p>P5. Check quality of the component at suitable intervals.</p> <p>P6. Shut down the machine in safe position after finishing the work</p>
CU3. Machine the Rack Gear	<p>P1. Identify safety hazards related with shaping operations and take appropriate steps to avoid any injury or accident.</p> <p>P2. Dial the machine vice according to job requirement.</p> <p>P3. Select point cutting tool and set machine according to job requirements.</p> <p>P4. Mount cutting tool and work piece in the machine.</p> <p>P5. Set the job/Tool Movement According to specified speed</p> <p>P6. Check quality of the component at suitable intervals.</p> <p>P7. Shut down the machine in safe position after finishing the work</p>
CU4. Machine the slot	<p>P1. Identify safety hazards related with shaping operations and take appropriate steps to avoid any injury or accident.</p>



**National Competency Standards Level-4 in Agricultural Machinery
Technology**



	<p>P2. Dial the machine vice according to job requirement.</p> <p>P3. Select point cutting tool and set machine according to job requirements.</p> <p>P4. Mount cutting tool and work piece in the machine.</p> <p>P5. Check quality of the component at suitable intervals.</p> <p>P6. Shut down the machine in safe position after finishing the work</p>
CU5. Machine the irregular Surfaces	<p>P1. Identify safety hazards related with shaping operations and take appropriate steps to avoid any injury or accident.</p> <p>P2. Dial the machine vice according to job requirement.</p> <p>P3. Select point cutting tool and set machine according to job requirements.</p> <p>P4. Mount cutting tool and work piece in the machine.</p> <p>P5. Use Different feed and speed of cutting and different points according to given drawing</p> <p>P6. Check quality of the component at suitable intervals.</p> <p>P7. Shut down the machine in safe position after finishing the work</p>
CU6. Machine External Keyways	<p>P1. Identify safety hazards related with shaping operations and take appropriate steps to avoid any injury or accident.</p> <p>P2. Dial the machine vice according to job requirement.</p> <p>P3. Select point cutting tool and set machine according to job requirements.</p> <p>P4. Mount cutting tool and work piece in the machine.</p> <p>P5. Check quality of the component at suitable intervals.</p> <p>P6. Shut down the machine in safe position after finishing the work</p>
CU7. Machine internal Keyways	<p>P1. Identify safety hazards related with shaping operations and take appropriate steps to avoid any injury or accident.</p> <p>P2. Dial the machine vice according to job requirement.</p> <p>P3. Select point cutting tool and set machine according to job requirements.</p> <p>P4. Mount cutting tool and work piece in the machine.</p> <p>P5. Check quality of the component at suitable intervals.</p> <p>P6. Shut down the machine in safe position after finishing the work</p>



Knowledge & Understanding

- List the safety hazards related to the shaper machine operations.
- Use of Dial indicator
- Method of the mounting of cutting tool
- Checking of a right angle with the tri square.
- Explain the square facing procedure.
- Safety guidelines and procedures.
- Safety checks for operating a shaper machine.
- Interpreting the information given in the engineering drawings and job specifications

Critical Evidence

The candidate needs to produce following **Critical Evidence(s)** in order to be competent in this competency standard.

- Make V or square shape work piece
- Make Internal or External key ways in shaft
- Make a rack

Tool & Equipment

S. No.	Items
1.	Shaper, Slotter
2.	Machine Vice
3.	Tri square
4.	Vernier Calliper
5.	Dial indicator with magnet stand
6.	Point cutting tools
7.	Personal Protective Equipment
8.	Tri square/bevel protector



0716-MVS&A-3. Perform welding and soldering process on the given work piece

Overview: After this competency standard candidate will be able to make joint for the given job with Welding and soldering as required by following the standardized procedure.

Competency Unit	Performance Criteria
CU1 Perform operations related to Shielded Metal Arc Welding (SMAW)	P1. Apply specific safety precautions associated with welding job/process P2. Arrange the electrode as per welding procedure specification (WPS) / instruction sheet P3. Arrange pre-heating equipment as per welding procedure specification (WPS) / instruction sheet P4. Adjust electrical parameters as per welding procedure specification (WPS) / instruction sheet P5. Perform welding as per welding procedure specification (WPS) / instruction sheet Pre heat the job, if required <ul style="list-style-type: none"> • Apply jigs and fixtures • Perform welding operation • Inter-pass cleaning • Inter-pass inspection • Maintain inter-pass temperature
CU2 Perform post welding operations	P1. Apply post weld cleaning of the job following the process <ul style="list-style-type: none"> • Removal of slag • Removal of jigs and fixtures • Removal of spatters P2. Perform visual inspection and rectify any visual imperfections of weld area P3. Perform post-heating of the job as per WPS/ instruction sheet, if required P4. Apply specific safety precautions associated with welding job/process
CU3.Perform Soldering	P1 Select the solder gun according to job P2. Prepare the solder gun P3 Clean the surface of job



**National Competency Standards Level-4 in Agricultural Machinery
Technology**



	P4 prepare the surface by Rubbing P5 Check the solder gun for proper heat P6. Apply the solder paste on surface of job
CU4. Perform post soldering operations	P1. Clean the surface of soldering area P2 Perform finishing with emery paper P3 Store the solder gun proper place
CU5. Perform Brazing Operation	P1. Perform marking as per drawing P2. Cut the metal sheet according to drawing using shearing machine P3. Straighten the material with help of hammer P4. File work piece before soldering P5. Open gas cylinder with the help of cylinder key P6. Adjust pressure of both gas cylinders with the help of regulator P7. Select the correct size of the nozzle P8. Set flame to carburizing flame as per standard P9. Use bronze filler rod as filler material P10. Use flux before brazing P11. Perform brazing as per standard

Knowledge & Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes.

- Explain Basic workshop welding and soldering tools.
- Describe the basic welding and soldering operation

Tools and Equipment

The tools and equipment required for this competency standard are given below.

S. No.	Items
1.	Electric arc welding transformer
2.	Welding rod
3.	Solder gun
4.	Solder wire and paste
5.	Gas cylinders
6.	Regulators
7.	Nozzle guns



**National Competency Standards Level-4 in Agricultural Machinery
Technology**



Critical Evidence(s) Required

The candidate needs to produce following **Critical Evidence(s)** in order to be competent in this competency standard.

- Joint the job at given angel with soldering
- Joint the job at given angel wit welding



0716-MVS&A-4. Maintain Fuel Supply System

Overview. After this competency standard candidate will be able to maintain fuel system of Prime Mover

Competency Unit	Performance Criteria
CU1. Clean the Fuel tank	<ul style="list-style-type: none">P1.Remove the earth lead of BatteryP2.Clean the mounting bolts of fuel tankP3.Remove the connections of fuel gaugeP4.Drain the fuel tankP5.Remove the fuel pipeP6.Remove the fuel tank from Prime MoverP7.Clean the Fuel tank with the petrol from inner sideP8.Dry the fuel tank with air gunP9.Install the Fuel tank in Prime Mover
CU2. Replace the fuel pump	<ul style="list-style-type: none">P1.Close the fuel supply with valveP2.Remove the both pipes of fuel pumpP3.Cover the opening ends of fuel pumpP4.Remove the nuts of fuel pumpP5. Remove the fuel pump from Prime MoverP6.Install the Fuel pump in Prime Mover
CU3. Service the carburetor	<ul style="list-style-type: none">P1.Remove the air intake & fuel supply from carburetorP2.Remove the carburetor from engineP3.Dismantle the carburetorP4.Remove the float and needle valveP5.Remove the main jet and idling adjusterP6.Service the parts of carburetorP7.Assemble the carburetorP8.Install the Carburetor
CU4. Service Fuel injection Pump	<ul style="list-style-type: none">P1.Remove the intake air connector and air intakeP2.Remove the timing coverP3.Place the first piston at top of compressionP4.Enline the timing point with pulley and pointerP5.Place the valves of fourth cylinder on overlap positionP6.Remove the injection pipesP7.Adjust the compression of valves by rotating crank shaft



**National Competency Standards Level-4 in Agricultural Machinery
Technology**



	<p>P8.Loosen the union bolt and nuts of pump P9. Remove the injection pump P10.Adjust the retard/Advance timing of pump P11.Install the injection pump with Prime Mover P12.Tight the nuts of Fuel pump</p>
CU5. Remove the air locking from air filter	<p>P1.Tight the connections of fuel supply line P2.Remove the bleed screw from filter P3.Operate the lift pump for air removing P4. Place and tighten the bleed screw by pressing the pump plunger</p>
CU6. Remove the air locking from injection pump	<p>P1.Open the bleed valve of injection pump P2.Operate the fuel lift pump P3.Remove the fuel injectors from engine P4. Crank the engine for air removing through injectors P5.Tighten the bleed screw and line nuts</p>
CU7. Replace the fuel injectors	<p>P1.Clean the injectors P2. Separate leak of lines and return lines from each injector P3.Remove the fuel pipes from injection pump P4.Remove the injectors by opening their nuts and using puller P5.Place copper seat washer P6.Place the dust seal/gasket on injector body P7.Install the injector on seat P8.Install leak off and high pressure fuel pipes</p>

Knowledge & Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes.

- Identify the components of fuel system
- Understand the working of fuel feed pup and fuel injection pum

Tools and Equipment

The tools and equipment required for this competency standard are given below.

S. No.	Items
---------------	--------------



**National Competency Standards Level-4 in Agricultural Machinery
Technology**



1.	Socket Set
2.	Combination spanner set
3.	Flat screw set
4.	Philip screw set
5.	Parts tray
6.	Scraper

Critical Evidence(s) Required

The candidate needs to produce following **Critical Evidence(s)** in order to be competent in this competency standard.

- Remove the air locking from fuel system
- Replace the fuel feed pump
- Replace the fuel injector



0716-MVS&A-5. Maintain Brake system

Overview. After this competency standard candidate will be able to service Brake system of Prime Mover

Competency Unit	Performance Criteria
CU1. Rebuild/ replace brake master cylinder of vehicle	<ul style="list-style-type: none">P1. Release the Brake fluidP2. Remove the brake paddleP3. Remove the brake PipesP4. Remove the nuts & bolts of Master cylinderP5. Remove the master cylinderP6. Clean the surface with scraperP7. Insert the seal on CylinderP8. Install the Master cylinder
CU2. Replace wheel cylinders of vehicle	<ul style="list-style-type: none">P1. Release and restore the brake fluidP2. Remove the pipe and nuts/bolts from cylinderP3. Remove the Wheel CylinderP4. Replace the seals of wheel cylinderP5. Install the both male & female cylinder as per service manual
CU3. Bleed the brake	<ul style="list-style-type: none">P1. Place the Prime Mover on plain surfaceP2. Operate the brake paddleP3. Open the brake nippleP4. Bleed the brakeP5. Tight the brake nippleP6. Top up the brake fluid
CU4. Service parking brake system of vehicle	<ul style="list-style-type: none">P1. Jack up the wheelsP2. Tight the brake adjuster up-to wheel lockingP3. Unscrew the adjuster
CU5. Service the brake	<ul style="list-style-type: none">P1. Park the Prime Mover on level surfaceP2. Remove the brake shoeP3. Service the Brake shoeP4. Adjust the brake shoeP5. Install the brake shoeP6. Conduct road test of vehicle to verify repair

Knowledge & Understanding



**National Competency Standards Level-4 in Agricultural Machinery
Technology**



The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes.

- Working principle of Hydraulic Brake system
- Inspect and Diagnose the faults of Brake

Tools and Equipment

The tools and equipment required for this competency standard are given below.

S. No.	Items
1.	Spanner set
2.	Hydraulic Jack
3.	Cotton rage
4.	Brake fluid
5.	Screw driver Philip & flate

Critical Evidence(s) Required

The candidate needs to produce following **Critical Evidence(s)** in order to be competent in this competency standard.

- Bleed the brake to remove air locking
- Replace Master Cylinder



0716-MVS&A-6. Maintain Lubrication System

Overview. After this competency standard candidate will be able to service lubrication system of Prime Mover

Competency Unit	Performance Criteria
CU1. Replace the engine oil	P1. Warm the engine to ambient temperature P2. Select the proper tools for opening the Filter P3. Remove the drain plug P4. Remove the Oil filter P5. Install new oil filter P6. Place the drain Plug P7. Top up the Oil level
CU2. Replace the oil pump	P1. Drain the oil by opening the drain plug P2. Remove the engine sump P3. Remove the timing cover of engine P4. Remove the oil pipes of oil pump P5. Remove the idler gear of oil pump P6. Remove the oil pump P7. Install new oil pump P8. Assemble the engine cover and sump P9. Top up the engine oil level
CU3. Replace the oil balancer	P1. Remove the Engine sump P2. Remove the balancer unit P3. Remove the idler gear P4. Remove the oil pump drive shaft P5. Remove the oil pump mounting bolts P6. Install the oil pump P7. Assemble the balancer unit P8. Assemble the Engine sump

Knowledge & Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes.

- Functions of oil pump
- Oil flow line in lubrication system



Tools and Equipment

The tools and equipment required for this competency standard are given below.

S. No.	Items
1.	Spanner set
2.	Screw driver
3.	Engine oil
4.	Hydraulic jack

Critical Evidence(s) Required

The candidate needs to produce following **Critical Evidence(s)** in order to be competent in this competency standard.

- Remove the oil pump of Prime Mover

0716-MVS&A-7. Maintain Steering System

Overview. After this competency standard candidate will be able to maintain steering system of Prime Mover

Competency Unit	Performance Criteria
CU1. Service the steering assembly	P1.Place the Prime Mover on level surface P2. Remove the ball joints P3.Unscrew the nuts and bolts to separate from transmission P4.Remove the arms P5.Remove the side plate P6.Disassemble the steering column P7.Clean and lubricate the components P8.Assemble the steering column P9.Install the Steering side plate and arms
CU2. Service the Hydraulic steering	P1. Place the Prime Mover on level surface P2.Remove the reservoir P3.Remove the hydraulic oil filter P4.Clean the hydraulic oil filter with kerosene oil P5. Install oil filter



	P6. Install the reservoir
CU3. Service the Steering Cylinder	P1. Jack-up the Prime Mover P2. Remove the ball joints P3. Remove the cup P4. Remove the piston P5. Place the seal kit appropriately P6. Assemble the steering cylinder

Knowledge & Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes.

- Principal of hydraulic system
- Functions of the steering assembly

Tools and Equipment

The tools and equipment required for this competency standard are given below.

S. No.	Items
1.	Spanner set
2.	Hydraulic Jack
3.	Circlip plier
4.	Scriber

Critical Evidence(s) Required

The candidate needs to produce following **Critical Evidence(s)** in order to be competent in this competency standard.

- Remove the hydraulic oil filter
- Service the steering assembly



0716-MVS&A-8. Maintain Electrical System

Overview. After this competency standard candidate will be able to maintain the several electrical circuits of Farm Implements

Competency Unit	Performance Criteria
CU1. Maintain fuel gauge	P1. Inspect fuel sending unit P2. Inspect instrument panel unit P3. Check the continuity between instrument panel unit and sending unit P4. Replace fuel sending unit P5. Replace instrument panel unit
CU2. Maintain temperature gauge	P1. Check the continuity between both unit P2. Replace the instrument panel unit P3. Replace the temperature sensor
CU3. Maintain oil pressure indicator	P1. Check the continuity between both unit P2. Replace the instrument panel unit P3. Replace the pressure gauge
CU4. Maintain head light circuit	P1. Check the continuity between head light and switch P2. Replace the head light bulb or tube P3. Replace the head light fuse P4. Replace the head light switch P5. Replace the head light relay P6. Adjust or aiming the head light
CU5. Maintain indicator circuit	P1. Check the continuity between indicator light and switch P2. Replace the indicator light bulb P3. Replace the indicator light fuse P4. Replace the indicator light switch P5. Replace the flasher of indicator light
CU6. Maintain horn circuit	P1. Check the continuity between horn and switch P2. Adjust the horn sound P3. Replace the horn system fuse P4. Replace the horn P5. Replace horn switch



CU7. Maintain Brake light circuit	P1. Check the continuity between brake pedal switch and Brake Light P2. Replace brake light circuit fuse P3. Adjust the brake pedal switch P4. Replace the brake pedal switch P5. Replace the brake pedal light bulb
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Knowledge & Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes.

- Explain electrical circuit repair tools.
- Describe the different electrical circuit operation

Tools and Equipment

The tools and equipment required for this competency standard are given below.

S. No.	Items
1.	Multi-meter
2.	Pliers
3.	Screw driver
4.	Spanner set
5.	Bulbs
6.	Wire
7.	Switches
8.	Fuse
9.	Insulation tape
10.	Wire striper

Critical Evidence(s) Required

The candidate needs to produce following **Critical Evidence(s)** in order to be competent in this competency standard.

- Construct head light circuit Prime Movers





0716-MVS&A-9. Maintain Grain Grader

Overview: After this competency standard candidate will be able to manage and maintain different types of graders.

Competency Unit	Performance Criteria
CU1. Identify Graders Types	P1. Identify Grain Graders P2. Identify Vegetable Grader. P3. Identify Fruit Grader.
CU2. Maintain Grain Grader	P1. Inspect major components of Grain Grader. P2. Adjust air pressure of grain Grader blower P3. Change appropriate sieves for different grains P4. Clean sieves of grain grader P5. Adjust belts of grain grader P6. Adjust tilt angle of grain grader P7. Adjust feeding of grain graders P8. Replace balls/brushes of grain graders.
CU3. Maintain vegetable Graders	P1. Inspect major components of vegetable grader. P2. Adjust feeding of vegetable grader. P3. Adjust chain/belt conveyer of vegetable grader. P4. Service of different parts of vegetable grader.
CU4. Maintain Fruit Grader	P1. Inspect major components of fruit grader. P2. Adjust feeding of fruit grader. P3. Adjust chain/belt conveyer of fruit grader. P4. Service of different parts of fruit grader

Knowledge & Understanding



**National Competency Standards Level-4 in Agricultural Machinery
Technology**



The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes:

- List down various Grader issues.
- Describe the working principle of various Grader.
- Describe the maintenance of graders.
- Explain the types of bearings used in graders.

Tools and Equipment

The tools and equipment required for this competency standard are given below:

S. No.	Items
1.	Adjustable wrench
2.	Open end spanner set
3.	Combination plier
4.	Nose plier
5.	hammer

Critical Evidence(s) Required

The candidate needs to produce following **Critical Evidence(s)** in order to be competent in this competency standard:

- Change appropriate sieves for different grains.



0716-MVS&A-10. Maintain sprayer

Overview: After this competency standard candidate will be able to learn maintenances of sprayers.

Competency Unit	Performance Criteria
CU1. Maintain Knapsack sprayer	<p>P1. Identify the main frame, water tank, hose pipe and nozzles</p> <p>P2. Check the seals of pump</p> <p>P3. Check working pressure of knapsack.</p> <p>P4. Check the charging status of battery.</p> <p>P5. Charge the battery.</p>
CU2. Maintain tractor mounted boom sprayer	<p>P1. Check 3-point linkage system</p> <p>P2. Check the drive shaft</p> <p>P3. Check the main frame with water tank</p> <p>P4. Remove the nuts and mounting bolts</p> <p>P5. Assemble tank with suitable mounting</p> <p>P6. Remove filter service with pressure water.</p> <p>P7. Remove PTO shaft from pump</p> <p>P8. Remove pump mounting bolts from frame.</p> <p>P9. Remove pump.</p> <p>P10. Open the regulating valve.</p> <p>P11. Remove pumping piston and diaphragm.</p> <p>P12. Remove drive shaft french and bearing</p> <p>P13. Remove drive shaft and connecting rod</p> <p>P14. Clean with kerosene oil</p> <p>P15. Assemble pump with recommended torque.</p> <p>P16. Top-up the pump with lubricant.</p> <p>P17. Check and adjust pressure 2 to 3 bar.</p>
CU3. Clean Boom Assembly	<p>P1. Remove high pressure pipe</p> <p>P2. Remove nozzles</p> <p>P3. Clean nozzle with clean water.</p> <p>P4. Assemble boom assembly with frame of sprayer</p>

Knowledge & Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes:



**National Competency Standards Level-4 in Agricultural Machinery
Technology**



- List down various parts of boom sprayer.
- Describe the clean procedure of pump

Tools and Equipment

The tools and equipment required for this competency standard are given below:

Items	
1.	Spanner
2.	Fibre brush
3.	Screw driver
4.	Plier

Critical Evidence(s) Required

The candidate needs to produce following **Critical Evidence(s)** in order to be competent in this competency standard:

- Check working pressure of knapsack
- Clean Nozzle





0716-MVS&A-11. Maintain land preparation implements

Overview: After this competency standard candidate will be able to maintain land preparation implements

Competency Unit	Performance Criteria
CU1. Inspect cultivator	<p>P4. Inspect cultivator components (main frame, springs, tines, shovels etc.)</p> <p>P5. Inspect attachment of cultivator with 3-point linkage system of tractor</p> <p>P6. Check alignment of tines</p> <p>P7. Check the size of tines</p> <p>P8. Observe the tillage penetration</p> <p>P9. Replace shovels at wear and tear</p>
CU2. Replace Blades	<p>P1. Select Spanner and special tools (spring installer)</p> <p>P2. Clean components from dust, mud and residue</p> <p>P3. Uplift cultivator on stand 1-2 feet from ground surface</p> <p>P4. Remove the nuts and bolts</p> <p>P5. Remove blades</p> <p>P6. Assemble blades with required torque</p>
CU3. Replace tines	<p>P1. Select Spanner and special tools (spring installer)</p> <p>P2. Clean components from dust, mud and residue</p> <p>P3. Uplift cultivator on stand 1-2 feet from ground surface</p> <p>P4. Remove the nuts and bolts</p> <p>P5. Remove tine assembly from frame</p> <p>P6. Remove tine spring with SST</p> <p>P7. Remove tines pins</p> <p>P8. Replace tines</p> <p>P9. Assemble tines with springs</p>
CU4. Inspect Rotavator	<p>P1. Clean components from dust, mud, and residue</p> <p>P2. Inspect rotavator components (mainframe with a metal cover sheet, pipes, blades, bearing, gearbox, cross shaft)</p> <p>P3. Inspect rotavator attachment with PTO shaft</p> <p>P4. Check wear and tear of blades, bearings, and both gearbox</p>



CU5. Service rotavator	<p>P1. Uplift rotavator on stand 1-2 feet from the ground surface</p> <p>P2. Change oil single-speed gearbox</p> <p>P3. Change oil multi-speed gearbox</p> <p>P4. Remove clutch nuts and bolts</p> <p>P5. Remove clutch springs</p> <p>P6. Remove friction disk (clutch plate)</p> <p>P7. Assemble clutch Assembly with the required torque</p>
CU6. Replace single-speed gearbox of Rotavator	<p>P1. Remove nuts and bolts mainframe to the gearbox</p> <p>P2. Remove gearbox</p> <p>P3. Remove nuts and bolts drive pinion</p> <p>P4. Remove crown wheel and bearings</p> <p>P5. Clean with Kerosene oil</p> <p>P6. Replace oil seals</p> <p>P7. Assemble with special tools</p> <p>P8. Top-up lubricant level</p>
CU7. Replace multi-speed gearbox of Rotavator	<p>P1. Uplift rotavator on stand 1-2 feet from the ground surface</p> <p>P2. Drain gearbox oil</p> <p>P3. Remove gearbox cover</p> <p>P4. Remove idler gear</p> <p>P5. Remove drive and driven gear</p> <p>P6. Clean with Kerosene oil</p> <p>P7. Replace oil seal</p> <p>P8. Assemble gears cover with nuts and bolts with required torque</p> <p>P9. Top-up lubricant level</p>
CU8. Replace blades	<p>P1. Uplift rotavator on stand 1-2 feet from the ground surface</p> <p>P2. Remove nuts and bolts of blades</p> <p>P3. Remove blades</p> <p>P4. Assemble blades in sequence from left to right</p> <p>P5. Tight nut and bolts with the required torque</p> <p>P6. Assemble depth control bracket</p>
CU9. Inspect Reversible Mouldboard (RMB) Plough	<p>P1. Clean components from dust, mud, and residue</p> <p>P2. Inspect RMB plough components (share, mould board, land side, frog, tail pieces, marker etc.)</p> <p>P3. Inspect attachment of RMB plough with 3-point linkage system of tractor.</p>



CU10. Maintain rotating mechanism of RMB	<p>P1. Select spanner, punch, hamer, torque ranch, brass rod and greace gun</p> <p>P2. Remove high-pressure pipes</p> <p>P3. Remove hydraulic jack</p> <p>P4. Remove center pin from A-frame to the mainframe</p> <p>P5. Clean bush and shaft with Kerosene oil</p> <p>P6. Assemble locking device and center pin</p> <p>P7. Lubricate locking device and center pin</p>
CU11. Replace components	<p>P1. Uplift MB plough on stand 1-2 feet from the ground surface</p> <p>P2. Remove nuts and bolts</p> <p>P3. Remove mould board, landside, frog, and share</p> <p>P4. Assemble mould board, landside, frog, and share</p> <p>P5. Tight nut and bolts with the required torque</p>
CU12. Inspect chisel plough	<p>P1. Clean components from dust, mud, and residue</p> <p>P2. Inspect chisel plough components (A-frame, tines, share, tines, pin)</p> <p>P3. Check wear and tear of tines</p>
CU13. Replace share	<p>P1. Uplift chisel plough on stand 1-2 feet from the ground surface</p> <p>P2. Remove hairpin and pin</p> <p>P3. Remove tines from A-frame</p> <p>P4. Remove share from tine</p> <p>P5. Assemble share with tine</p>
CU14. Inspect Disc plough	<p>P1. Identify disc plough</p> <p>P2. Clean components from dust, mud, and residue</p> <p>P3. Inspect disc plough components (mainframe, hub, discs, and marking wheel).</p> <p>P4. Check wear and tear of discs.</p>
CU15. Replace disc and hub bearings	<p>P1. Select spanners and torque ranch and grease</p> <p>P2. Uplift disc plough on stand 1-2 feet from the ground surface</p> <p>P3. Remove nuts and bolts from disc to hub</p> <p>P4. Remove nuts and bolts from mainframe to hub</p> <p>P5. Remove hub bearing</p> <p>P6. Clean with kerosene oil</p> <p>P7. Assemble bearing in the hub with required torque</p> <p>P8. Assemble hub on main frame</p> <p>P9. Attach hub with frame</p>



**National Competency Standards Level-4 in Agricultural Machinery
Technology**



	<p>P10. Assemble disc with hub with required torque</p> <p>P11. Fill Grease on both hubs</p> <p>P12. Align discs to each other</p>
CU16. Inspect Disc harrows	<p>P1. Clean components from dust, mud, and residue</p> <p>P2. Inspect disc harrow components (mainframe, drawbar, front gang carrier, rare gang carrier, and frame assembly, offset bar, axle, discs).</p> <p>P3. Check wear and tear of discs.</p>
CU17. Replace gang assembly	<p>P1. Uplift disc harrow on stand 1-2 feet from the ground surface</p> <p>P2. Remove A-frame pins</p> <p>P3. Remove offset bar</p> <p>P4. Remove gang assembly</p> <p>P5. Uplift gang assembly</p> <p>P6. Remove nuts and bolts from hub to frame from both sides</p> <p>P7. Remove axle shaft nut and bearings</p> <p>P8. Clean bearings with kerosene oil</p> <p>P9. Replace both seals</p> <p>P10. Assemble hub</p> <p>P11. Remove gang axle nut</p> <p>P12. Assemble both gang assembly</p> <p>P13. Attach gang assembly with mainframe and A-frame/drawbar</p>

Knowledge & Understanding

The candidate must be able to demonstrate the underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes:

- Differentiate between cultivator and chisel plough
- State components of Rotavator and its maintenance
- Explain attachment principle for Rotavator

Tools and Equipment

The tools and equipment required for this competency standard are given below:

S. No.	Items
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**National Competency Standards Level-4 in Agricultural Machinery
Technology**



1.	Cultivator
2.	Springs
3.	Tines
4.	Shovels
5.	Ranch
6.	Bearings
7.	Blades
8.	Rotavator
9.	MB plough
10.	Share
11.	Tailpiece
12.	Marker
13.	Frog
14.	Pins
15.	Discs
16.	Disc plough
17.	Grease
18.	Nuts
19.	Bolts
20.	Axle
21.	Disc harrows
22.	Drawbar
23.	Seed drill
24.	Seed
25.	Fertilizer
26.	Chain
27.	Shaft
28.	Lubricants
29.	Kerosene oil

Critical Evidence(s) Required

The candidate needs to produce the following **Critical Evidence(s)** in order to be competent in this competency standard:

- Maintain the rotavator



***National Competency Standards Level-4 in Agricultural Machinery
Technology***



Operate and maintain MB plough

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0716-MVS&A-12. Maintain sowing and planting implements

Overview: After this competency standard candidate will be able to maintain the sowing equipment during the time of sowing.

CU1. Inspect seed cum fertilizer drill	<p>P1. Clean components from dust, mud, and residue</p> <p>P2. Inspect the components of seed drill (mainframe, furrow opener, covering device, metering unit, clutch, seed delivery unit, seed and fertilizer box, 3-point hitch point, etc.).</p> <p>Identify various fertilizers</p>
CU2. Calibrate seed drill	<p>P1. Calibrate seed drill as follows.</p> <p>P2. Fix calibration area for seed metering.</p> <p>P3. Measure the circumference of the seed metering wheel</p> <p>P4. Multiply the measured circumference of wheel with 10.</p> <p>P5. Collect and weigh the dropped seed from each seed tube.</p> <p>P6. Calculate total dropped seed in measured area.</p> <p>P7. Calculate the seed rate for one acre on the basis of measured area:</p> <p>P8. $= \frac{\text{Dropped seed(Kg)} * \text{One acre (m}^2\text{)}}{\text{measured Area (m}^2\text{)}}$</p>
CU3. Operate seed drill	<p>P3. Adjust the seed drill with the 3-point linkage.</p> <p>P4. Run the seed drill at recommended RPM to drop the measured quantity of seed at desired depth.</p> <p>P5. Ensure uniform seed dropping in all seed tubes.</p> <p>P6. Ensure continuous seed dropping in all furrows.</p> <p>P7. Note the calibration data on sheet for future usage.</p>
CU4. Replace Blades of Seed Drill	<p>P1. Select Spanner and required tools</p> <p>P2. Clean components from dust, mud and residue</p> <p>P3. Uplift cultivator on stand 1-2 feet from ground surface</p> <p>P4. Open seed box</p> <p>P5. Open fertilizer box</p> <p>P6. Remove the nuts and bolts</p> <p>P7. Remove blades</p> <p>P8. Remove both tubes</p> <p>P9. Assemble blades with required torque</p>



CU5. Identify Potato planter	P1. Identify the components of potato planter (ridger assembly, seed hopper, fertilizer box, seed treatment tank) P2. Clean potato planter components from dust, mud, and residue. P3. Check wear and tear of furrow opener
CU6. Maintain potato planter-seed hopper	P1. Select spanners, screwdriver, L-key, hammer, grease gun P2. Place the planter at levelled surface P3. Remove nuts and bolts of the seed hopper P4. Remove nuts and bolts of fertilizer box P5. Remove nuts and bolts of seed treatment box P6. Uplift planter on stand 1-2 feet from the ground surface P7. Remove furrow opener nuts and bolts P8. Assemble furrow opener P9. Tight nut and bolts with the required torque P10. remove conveyer drive shaft bearings P11. Remove cup conveyor belt P12. Assembled cup conveyor belt P13. Assemble both bearings on hopper with require torque
CU7. Maintain potato planter-fertilizer box	P1. Select spanners, screwdriver, L-key, hammer, grease gun P2. Place at a smooth and clean surface P3. Remove nuts and bolts of fertilizer box P4. Uplift planter on stand 1-2 feet from the ground surface P5. Remove fertilizer drop assembly P6. Remove drop gear and tubes P7. Assemble drop gear and tubes P8. Assemble fertilizer drop assembly with require torque
CU8. Identify potato digger	P1. Identify the components of potato digger (digging shovel, conveyer chain, PTO shaft) P2. Clean components from dust, mud, and residue. P3. Check wear and tear of potato digger
CU9. Maintain Potato digger	P1. Remove nuts and bolts of shovels P2. Assemble shovel nut bolts with required torque P3. Remove conveyer chain drive gearbox P4. Remove nuts and bolts of drive gearbox P5. Remove chain laying drive wheel P6. Clean with kerosene oil



National Competency Standards Level-4 in Agricultural Machinery Technology



- P7. Remove conveyer chain
- P8. Remove laying drive wheel
- P9. Remove shaft and bearings
- P10. Clean with kerosene oil
- P11. Assemble shaft and laying drive wheel
- P12. Assemble conveyor chain drive gearbox
- P13. Lubricate/ grease fill

Knowledge & Understanding

The candidate must be able to demonstrate the underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes:

- Differentiate between planters and diggers
- State components of potato planter
- Explain calibration of Seed Drill
- Explain attachment principle for Potato Digger

Tools and Equipment

The tools and equipment required for this competency standard are given below:

S. No.	Items
1.	Cultivator
2.	Springs
3.	Tines
4.	Shovels
5.	Ranch
6.	Bearings
7.	Blades
8.	Rotavator
9.	MB plough
10.	Share
11.	Tailpiece
12.	Marker



**National Competency Standards Level-4 in Agricultural Machinery
Technology**



13.	Frog
14.	Pins
15.	Discs
16.	Disc plough
17.	Grease
18.	Nuts
19.	Bolts
20.	Axle
21.	Disc harrows
22.	Drawbar
23.	Seed drill
24.	Seed
25.	Fertilizer
26.	Chain
27.	Shaft
28.	Lubricants
29.	Kerosene oil

Critical Evidence(s) Required

The candidate needs to produce the following **Critical Evidence(s)** in order to be competent in this competency standard:

- Maintain the diggers
- Operate and maintain seed drill



0716-MVS&A-13. Operate / Maintain Mowers and Forage Harvester

Overview: After this competency standard, candidate will be able to select appropriate, adjust and operate Mowers and Forage Harvester.

Competency Unit	Performance Criteria
CU1. Select appropriate Mower / Forage Harvester	P10. Identify types of Mowers with respect to their function P11. Identify parts of Mower Sickle bar assembly. P12. Identify Parts of Forage Harvester P13. Select the suitable Mower P14. Select the suitable Forage Harvester
CU2. Operate Mower	P1. Operate Sickle bar Mower P2. Adjust mower cutter bar assembly Lead P3. Adjust Guard Alignment of cutter bar P4. Perform Tilt adjustment of mower P5. Operate Sickle bar type side mower P6. Select and Maintain forward speed of Mower
CU3. Operate Forage Harvester	P5. Inspect the forage harvester for ready operation P6. Start the forage harvester P7. Inspect the control panel and adjust if required P8. Adjust the header of forage harvester P9. Operate the forage harvester(Field Visit) P10. Select and Maintain forward speed of Forage Harvester

Knowledge & Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes:



National Competency Standards Level-4 in Agricultural Machinery Technology



- State the purpose of Mower
- Enlist the parts of cutter bar assembly
- Enlist the types of movers
- Setting of cutter bar assembly
- Define the purpose of forage harvester
- State the mechanism of forage harvester
- Control panel and header setting

Tools and Equipment

The tools and equipment required for this competency standard are given below:

S. No.	Items
1.	Tool kit
2.	Goggles
3.	Gloves
4.	Operator Safety Helmet
5.	Mower
6.	Forage Harvester

Critical Evidence(s) Required

The candidate needs to produce following **Critical Evidence(s)** in order to be competent in this competency standard:

- Operate Forage Harvester in field
- Sequence the operations of Forage Harvester



0716-MVS&A-14. Operate / Maintain Reaper

Overview: After this competency standard candidate will be able to select adjust, Maintain and operate Reaper

Competency Unit	Performance Criteria
CU1. Identify Reaper	<p>P1. Identify types of Reaper</p> <p>P2. Identify parts of Reaper</p> <p>P3. Inspect parts of Reaper for proper operation</p> <p>P4. Inspect Alignment of Reaper</p> <p>P5. Identify parts of Reaper Binder</p> <p>P6. Inspect parts of Reaper Binder</p> <p>P7. Inspect Alignment of Reaper Binder</p>
CU2. Adjust / Maintain Reaper	<p>P1. Adjust reaper cutter bar assembly</p> <p>P2. Service and Lubricate (Greasing) Reaper</p> <p>P3. Adjust tension of belts</p> <p>P4. Check reaper binding mechanism (Adjust if required)</p> <p>P5. Check Engine Lubrication Oil</p> <p>P6. Check Radiator Coolant</p> <p>P7. Check Hydraulic Oil</p> <p>P8. Check Electric System</p> <p>P9. Replace worn out part</p> <p>P10. Adjust Guard Alignment of Reaper cutter bar</p> <p>P11. Perform Tilt adjustment of Reaper Cutter bar</p> <p>P12. Check Low and Middle cut fingers</p> <p>P13. Check Clutch adjust if required</p> <p>P14. Check gear oil ,make up if required</p> <p>P15. Hitch Reaper with Tractor</p>
CU3. Operate Reaper	<p>P1. Inspect and Start Tractor</p> <p>P2. Operate Tractor Drawn Reaper</p> <p>P3. Operate front mounted Reaper</p> <p>P4. Start self propelled reaper</p> <p>P5. Operate Self Propelled Reaper</p>

Knowledge & Understanding



National Competency Standards Level-4 in Agricultural Machinery Technology



The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes:

- State the purpose of Reaper
- Enlist the parts of Reaper cutter bar assembly
- Enlist the types of Reaper
- Adjust and maintain reaper
- State the mechanism of Reaper Binder

Tools and Equipment

The tools and equipment required for this competency standard are given below:

S. No.	Items
1	Tool kit
2	Grease
3	Grease Gun
4	Lubrication Oil
5	Goggles
6	Gloves
7	Cotton Waste
8	Operator Safety Helmet
9	Works shop safety Helmet
10	Reaper
11	Reaper Binder



0716-MVS&A-15. Operate / Maintain Digger (Root crops)

Overview: After this competency standard, candidate will be able to select, adjust, Maintain and operate Digger.

Competency Unit	Performance Criteria
CU1. Inspect Digger	P1. Select appropriate tools for adjustment P2. Check the adjustment of Roller , Belts and Chains P3. Generate Inspection of Digging Shovel P4. Enlist types of Digger
CU2. Operate Digger	P1. Inspect the control panel and adjust if required P2. Adjust the hitching attachment of digger P3. Adjust the depth of digging shovel
CU3. Maintain Digger	P1. Select and Maintain forward speed of tractor P2. Lubricate all lubricants point P3. Service the digger

Knowledge & Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes:

- State the purpose of Digger
- Enlist the parts of Digger
- State the mechanism of Digger
- Differentiate between cotton picker and maize harvestor



**National Competency Standards Level-4 in Agricultural Machinery
Technology**



Tools and Equipment

The tools and equipment required for this competency standard are given below:

S. No.	Items
1.	Tool kit
2	Goggles
3	Gloves
4	Operator Safety Helmet
5	Workshop Safety Helmet
6	Digger

Critical Evidence(s) Required

The candidate needs to produce following **Critical Evidence(s)** in order to be competent in this competency standard:

- Service and adjust of Digger
- Sequence the operations of Digger



0716-MVS&A-16. Operate Plant protection (PP) implements

Overview: After this competency standard candidate will be able to operate plant protection implements.

Competency Unit	Performance Criteria
CU1. Identify plant protection (PP) equipment	P1. Identify indicators PP (herbicides, fungicides, insecticides, etc.) P2. Identify PP equipment (hand sprayers, knapsack sprayers, boom sprayers, dusters, etc.) P3. Inspect plant protection equipment P4. Identify the nozzels
CU2. Operate PP equipment	P1. Inspect pest scouting as per requirement P2. Calibrate plant protection equipment P3. Estimate the water chemical ratio P4. Use of plant protection equipment P5. Uses of nozzels according indicators P6. Estimate operation cost
CU3. Maintenance PP equipment	P1. Find problems of PP equipment P2. Maintain knapsack sprayers P3. Maintain Boom sprayers P4. Maintain Dusters

Knowledge & Understanding

The candidate must be able to demonstrate the underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes:

- Enlist indicators of plant protection
- Describe sprayers types and function
- Describe pest scouting

Tools and Equipment

The tools and equipment required for this competency standard are given below:

S. No.	Items
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**National Competency Standards Level-4 in Agricultural Machinery
Technology**



1.	Hand sprayer
2.	Knapsack sprayer
3.	Boom sprayer
4.	Dusters
5.	Nozzles
6.	Motors
7.	Lever

Critical Evidence(s) Required

The candidate needs to produce the following **Critical Evidence(s)** to be competent in this competency standard:

- Determine per acre dose of chemical
- Troubleshoot boom sprayer



A. Generic Competencies

0716-MVS&A-17. Develop workplace policy and procedures for sustainability

Overview: This unit describes the skills and knowledge required to develop and implement a workplace sustainability policy and to modify the policy to suit changed circumstances. It applies to individuals with managerial responsibilities who undertake work developing approaches to create, monitor and improve strategies and policies within workplaces and engage with a range of relevant stakeholders and specialists.

Unit of Competency	Performance Criteria
CU1. Develop workplace sustainability policy	P1 Define scope of sustainability in the policies P2 Gather information from a range of sources to plan and develop policy P3 Identify and consult stakeholders as a key component of the policy development process P4 Include appropriate strategies in policy at all stages of work for minimizing resource use, reducing toxic material and hazardous chemical use and employing life cycle management approaches P5 Make recommendations for policy options based on likely effectiveness, timeframes and cost P6 Develop policy that reflects the organization s commitment to sustainability as an integral part of business planning and as a business opportunity P7 Agree to appropriate methods of implementation, outcomes and performance indicators
CU2. Communicate workplace sustainability policy	P1 Promote workplace sustainability policy, including its expected outcome, to key stakeholders P2 Inform those involved in implementing the policy about expected outcomes, activities to be undertaken and assigned responsibilities
CU3. Implement workplace sustainability policy	P1 Develop and communicate procedures to help implement workplace sustainability policy



National Competency Standards Level-4 in Agricultural Machinery Technology



	<p>P2 Implement strategies for continuous improvement in resource efficiency</p> <p>P3 Establish and assign responsibility for recording systems to track continuous improvements in sustainability approaches</p>
CU4. Review workplace sustainability policy implementation	<p>P1 Review workplace sustainability policy implementation</p> <p>P2 Investigate successes or otherwise of policy</p> <p>P3 Monitor records to identify trends that may require remedial action and use to promote continuous improvement of performance</p> <p>P4 Modify policy and or procedures as required to ensure improvements are made</p>

Knowledge & Understanding

K1: outline the environmental or sustainability legislation, regulations and codes of practice applicable to the organization identify internal and external sources of information and explain how they can be used to plan and develop the organization s sustainability policy

K2: explain policy development processes and practices

K3: outline organizational systems and procedures that relate to sustainability

K4: outline typical barriers to implementing policies and procedures in an organization and possible strategies to address them. Assessment Conditions

Critical Evidence(s) Required

The candidate needs to produce following **Critical Evidence(s)** to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of the ability to Develop workplace policy and procedures for sustainability. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

Performance requirements

This competency is to be assessed using standard and authorized work practices, safety requirements and environmental constraints. Demonstrated evidence is required of the ability to:

- scope and develop organizational policies and procedures that comply with legislative requirements and support the organization s sustainability goals covering at a minimum:
 - minimizing resource use
 - resource efficiency
 - reducing toxic material and hazardous chemical use
 - employing life cycle management approaches



***National Competency Standards Level-4 in Agricultural Machinery
Technology***



- continuous improvement
- plan and implement sustainability policy and procedures including:
 - agreed outcomes
 - performance indicators
 - activities to be undertaken
 - assigned responsibilities
 - record keeping, review and improvement processes
- consult and communicate with relevant stakeholders to generate engagement with sustainability policy development, implementation and continuous improvement
- Review and improve sustainability policies.



0716-MVS&A-18. Manage meetings

Overview: This unit describes the skills and knowledge required to manage a range of meetings including overseeing the meeting preparation processes, chairing meetings, organizing the minutes and reporting meeting outcomes. It applies to individuals employed in a range of work environments who are required to organize and manage meetings within their workplace, including conducting or managing administrative tasks in providing agendas and meeting material. They may work as senior administrative staff or may be individuals with responsibility for conducting and chairing meetings in the workplace.

Unit of Competency	Performance Criteria
CU1. Prepare for meetings	<p>P1 Develop agenda in line with stated meeting purpose</p> <p>P2 Ensure style and structure of meeting are appropriate to its purpose</p> <p>P3 Identify meeting participants and notify them in accordance with organizational procedures</p> <p>P4 Confirm meeting arrangements in accordance with requirements of meeting</p> <p>P5 Dispatch meeting papers to participants within designated timelines</p>
CU2. Conduct meetings	<p>P1 Chair meetings in accordance with organizational requirements, agreed conventions for type of meeting and legal and ethical requirements</p> <p>P2 Conduct meetings to ensure they are focused, time efficient and achieve the required outcomes</p> <p>P3 Ensure meeting facilitation enables participation, discussion, problem-solving and resolution of issues</p> <p>P4 Brief minute-taker on method for recording meeting notes in accordance with organizational requirements and conventions for type of meeting</p>
CU3. Follow up meetings	<p>P1 Check transcribed meeting notes to ensure they reflect a true and accurate record of the meeting and are formatted in accordance with organizational procedures and meeting conventions</p> <p>P2 Distribute and store minutes and other follow-up documentation within designated timelines, and according to organizational requirements</p> <p>P3 Report outcomes of meetings as required, within designated timelines</p>



National Competency Standards Level-4 in Agricultural Machinery Technology



Knowledge & Understanding

K1: outline meeting terminology, structures, arrangements

K2: outline responsibilities of the chairperson and explain group dynamics in relation to managing meetings

K3: describe options for meetings including face-to-face, teleconferencing, web-conferencing and using webcams

K4: identify the relevant organizational procedures and policies regarding meetings, chairing and minutes including identifying organizational formats for minutes and agendas.

Critical Evidence(s) Required

The candidate needs to produce following **Critical Evidence(s)** to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of the ability to manage meetings. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

Performance requirements

This competency is to be assessed using standard and authorized work practices, safety requirements and environmental constraints. Demonstrated evidence is required of the ability to:

- apply conventions and procedures for formal and informal meetings including:
 - developing and distributing agendas and papers
 - identifying and inviting meeting participants
 - organizing and confirming meeting arrangements
 - running the meeting and following up
- organize, take part in and chair a meeting
- record and store meeting documentation
- Follow organizational policies and procedures.



0716-MVS&A-19. Manage recruitment selection and induction processes

Overview: This unit describes the skills and knowledge required to manage all aspects of recruitment selection and induction processes in accordance with organizational policies and procedures. It applies to individuals or human resource personnel who take responsibility for managing aspects of selecting new staff and orientating those staff in their new positions. It is not assumed that the individual will be directly involved in the selection processes themselves, although this may well be the case.

Unit of Competency	Performance Criteria
CU1. Develop recruitment, selection and induction policies and procedures	<p>P1 Analyze strategic and operational plans and policies to identify relevant policies and objectives</p> <p>P2 Develop recruitment, selection and induction policies and procedures and supporting documents</p> <p>P3 Review options for technology to improve efficiency and effectiveness of recruitment and selection process</p> <p>P4 Obtain support for policies and procedures from senior managers</p> <p>P5 Trial forms and documents supporting policies and procedures and make necessary adjustments</p> <p>P6 Communicate policies and procedures to relevant staff and provide training if required</p>
CU2. Recruit and select staff	<p>P1 Determine future human resource needs in collaboration with relevant managers and sections</p> <p>P2 Ensure current position descriptors and person specifications for vacancies are used by managers and others involved in recruitment, selection and induction processes</p> <p>P3 Provide access to training and other forms of support to all persons involved in recruitment and selection process</p> <p>P4 Ensure advertising of vacant positions complies with organizational policy and legal requirements</p> <p>P5 Utilize specialists where necessary</p> <p>P6 Ensure selection procedures are in accordance with organizational policy and legal requirements</p> <p>P7 Ensure processes for advising applicants of selection outcome are followed</p> <p>P8 Ensure job offers and contracts of employment are executed promptly, and new appointments are provided with advice about salary, terms and conditions</p>



**CU3. Manage staff
induction**

- P1 Provide access to training and ongoing support for all persons engaged in staff induction
- P2 Check induction processes are followed across the organization
- P3 Oversee management of probationary employees and provide them with feedback until their employment is confirmed or terminated
- P4 Obtain feedback from participants and relevant managers on extent induction process is meeting its objectives
- P5 Make refinements to induction policies and procedures

Knowledge & Understanding

K1: describe recruitment and selection methods, including assessment centers

K2: explain the concept of outsourcing

K3: describe the purpose of employee contracts and industrial relations

K4: summarize relevant legislation, regulations, standards and codes of practice that may affect recruitment, selection and induction

K5: explain why terms and conditions of employment are an important aspect of recruitment

K6: explain the relevance of psychometric and skills testing programs to recruitment.

Critical Evidence(s) Required

The candidate needs to produce following **Critical Evidence(s)** to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of the ability to manage recruitment selection and induction processes. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

Performance requirements

This competency is to be assessed using standard and authorized work practices, safety requirements and environmental constraints. Demonstrated evidence is required of the ability to:

- develop or critically analyze a policy and procedures framework for recruitment, selection and induction
- identify the need for recruitment
- prepare and oversee appropriate documentation required for recruitment
- select and advise job applicants appropriately
- manage the induction process
- Comply with relevant legislation and organizational requirements.



0716-MVS&A-20. Manage personal work priorities and professional development

Overview: This unit describes the skills and knowledge required to create systems and process to organize information and prioritize tasks. It applies to individuals working in managerial positions who have excellent organizational skills. The work ethic of individuals in this role has a significant impact on the work culture and patterns of behavior of others as managers at this level are role models in their work environment.

Unit of Competency	Performance Criteria
CU1. Establish personal work goals	P1 Serve as a positive role model in the workplace through personal work planning P2 Ensure personal work goals, plans and activities reflect the organization s plans, and own responsibilities and accountabilities P3 Measure and maintain personal performance in varying work conditions, work contexts and when contingencies occur
CU2. Set and meet own work priorities	P1 Take initiative to prioritize and facilitate competing demands to achieve personal, team and organizational goals and objectives P2 Use technology efficiently and effectively to manage work priorities and commitments P3 Maintain appropriate work-life balance, and ensure stress is effectively managed and health is attended to
CU3. Develop and maintain professional competence	P1 Assess personal knowledge and skills against competency standards to determine development needs, priorities and plans P2 Seek feedback from employees, clients and colleagues and use this feedback to identify and develop ways to improve competence P3 Identify, evaluate, select and use development opportunities suitable to personal learning style/s to develop competence P4 Participate in networks to enhance personal knowledge, skills and work relationships P5 Identify and develop new skills to achieve and maintain a competitive edge

Knowledge & Understanding

K1: explain principles and techniques involved in the management and organization of:

- performance measurement
- personal behavior, self-awareness and personality traits identification



National Competency Standards Level-4 in Agricultural Machinery Technology



- a personal development plan
- personal goal setting
- time

K2: discuss management development opportunities and options for self

K3: describe methods for achieving a healthy work-life balance

K4: outline organization s policies, plans and procedures

K5: explain types of learning style/s and how they relate to the individual

K6: describe types of work methods and practices that can improve personal performance.

Critical Evidence(s) Required

The candidate needs to produce following **Critical Evidence(s)** to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of the ability to manage personal work priorities and professional development. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

Performance requirements

This competency is to be assessed using standard and authorized work practices, safety requirements and environmental constraints. Demonstrated evidence is required of the ability to:

- use business technology to create and use systems and processes to organise and prioritise tasks and commitments
- measure and maintain personal work performance including assessing competency against competency standards and seeking feedback
- maintain an appropriate work-life balance to manage personal health and stress
- participate in networks
- develop a personal development plan which includes career objectives and an action plan
- Develop new skills.



0716-MVS&A-21. Manage workforce planning

Overview: This unit describes the skills and knowledge required to manage planning in relation to an organization's workforce including researching requirements, developing objectives and strategies, implementing initiatives and monitoring and evaluating trends. It applies to individuals who are human resource managers or staff members with a role in a policy or planning unit that focuses on workforce planning.

Unit of Competency	Performance Criteria
CU1. Research workforce requirements	<p>P1 Review current data on staff turnover and demographics</p> <p>P2 Assess factors that may affect workforce supply</p> <p>P3 Establish the organization's requirements for a skilled and diverse workforce</p>
CU2. Develop workforce objectives and strategies	<p>P1 Review organizational strategy and establish aligned objectives for modification or retention of the workforce</p> <p>P2 Consider strategies to address unacceptable staff turnover, if required</p> <p>P3 Define objectives to retain required skilled labor</p> <p>P4 Define objectives for workforce diversity and cross-cultural management</p> <p>P5 Define strategies to source skilled labor</p> <p>P6 Communicate objectives and rationale to relevant stakeholders</p> <p>P7 Obtain agreement and endorsement for objectives and establish targets</p> <p>P8 Develop contingency plans to cope with extreme situations</p>
CU3. Implement initiatives to support workforce planning objectives	<p>P1 Implement action to support agreed objectives for recruitment, training, redeployment and redundancy</p> <p>P2 Develop and implement strategies to assist workforce to deal with organizational change</p> <p>P3 Develop and implement strategies to assist in meeting the organization's workforce diversity goals</p> <p>P4 Implement succession planning system to ensure desirable workers are developed and retained</p> <p>P5 Implement programs to ensure workplace is an employer of choice</p>
CU4. Monitor and evaluate workforce trends	<p>P1 Review workforce plan against patterns in exiting employee and workforce changes</p>



**National Competency Standards Level-4 in Agricultural Machinery
Technology**



- P2 Monitor labor supply trends for areas of over- or under-supply in the external environment
- P3 Monitor effects of labor trends on demand for labor
- P4 Survey organizational climate to gauge worker satisfaction
- P5 Refine objectives and strategies in response to internal and external changes and make recommendations in response to global trends and incidents
- P6 Regularly review government policy on labor demand and supply
- P7 Evaluate effectiveness of change processes against agreed objectives

Knowledge & Understanding

K1: explain current information about external labor supply relevant to the specific industry or skill requirements of the organization

K2: outline industrial relations relevant to the specific industry

K3: describe labor force analysis and forecasting techniques

Critical Evidence(s) Required

The candidate needs to produce following **Critical Evidence(s)** to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of the ability to manage workforce planning. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

Performance requirements

This competency is to be assessed using standard and authorized work practices, safety requirements and environmental constraints. Demonstrated evidence is required of the ability to:

- review and interpret information from a range of internal and external sources to identify:
 - current staff turnover and demographics
 - labor supply trends factors that may affect workforce supply
 - organization's workforce requirements objectives and strategies
- manage workforce planning including developing, implementing, monitoring and reviewing strategies to meet workforce needs
- review relevant trends and supply and demand factors that will impact on an organization's workforce
- Develop a workforce plan that includes relevant research and specific strategies to ensure access to a skilled and diverse workforce.



0716-MVS&A-22. Undertake project work

Overview: This unit describes the skills and knowledge required to undertake a straightforward project or a section of a larger project. It covers developing a project plan, administering and monitoring the project, finalizing the project and reviewing the project to identify lessons learned for application to future projects. This unit applies to individuals who play a significant role in ensuring a project meets timelines, quality standards, budgetary limits and other requirements set for the project.

Unit of Competency	Performance Criteria
CU1. Define project	<ul style="list-style-type: none"> P1 Access project scope and other relevant documentation P2 Define project stakeholders P3 Seek clarification from delegating authority of issues related to project and project parameters P4 Identify limits of own responsibility and reporting requirements P5 Clarify relationship of project to other projects and to the organization's objectives P6 Determine and access available resources to undertake project
CU2. Develop project plan	<ul style="list-style-type: none"> P1 Develop project plan in line with the project parameters P2 Identify and access appropriate project management tools P3 Formulate risk management plan for project, including Work Health and Safety (WHS) P4 Develop and approve project budget P5 Consult team members and take their views into account in planning the project P6 Finalize project plan and gain necessary approvals to commence project according to documented plan
CU3. Administer and monitor project	<ul style="list-style-type: none"> P1 Take action to ensure project team members are clear about their responsibilities and the project requirements P2 Provide support for project team members, especially with regard to specific needs, to ensure that the quality of the expected outcomes of the project and documented time lines are met P3 Establish and maintain required recordkeeping systems throughout the project P4 Implement and monitor plans for managing project finances, resources and quality



National Competency Standards Level-4 in Agricultural Machinery Technology



	P5 Complete and forward project reports as required to stakeholders P6 Undertake risk management as required to ensure project outcomes are met P7 Achieve project deliverables
CU4. Finalize project	P1 Complete financial recordkeeping associated with project and check for accuracy P2 Ensure transition of staff involved in project to new roles or reassignment to previous roles P3 Complete project documentation and obtain necessary sign-offs for concluding project

Knowledge & Understanding

K1: give examples of project management tools and how they contribute to a project

K2: outline types of documents and other sources of information commonly used in defining the parameters of a project

K3: explain processes for identifying and managing risk in a project

K4: outline the organization's mission, goals, objectives and operations and how the project relates to them

K5: explain the organization's procedures and processes that are relevant to managing a project including:

- lines of authority and approvals
- quality assurance
- human resources
- budgets and finance
- recordkeeping
- reporting

Outline the legislative and regulatory context of the organization in relation to project work, including work health and safety (WHS) requirements.

Critical Evidence(s) Required

The candidate needs to produce following **Critical Evidence(s)** to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of the ability to undertake project work. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

Performance requirements



***National Competency Standards Level-4 in Agricultural Machinery
Technology***



This competency is to be assessed using standard and authorized work practices, safety requirements and environmental constraints. Demonstrated evidence is required of the ability to:

- define the parameters of the project including:
 - project scope
 - project stakeholders, including own responsibilities
 - relationship of project to organizational objectives and other projects
 - reporting requirements
 - resource requirements
- use project management tools to develop and implement a project plan including:
 - deliverables
 - work breakdown
 - budget and allocation of resources
 - timelines
 - risk management
 - recordkeeping and reporting
- consult and communicate with relevant stakeholders to generate input and engagement in planning, implementing and reviewing the project
- provide support to team members to enable them to achieve deliverables and to transition them as appropriate at completion of the project
- finalize the project including documentation, sign-offs and reporting

Review and document the project outcomes.



0716-MVS&A-23. Identify and communicate trends in career development

Overview: This unit describes the skills and knowledge required to conduct research to identify and communicate career trends. It establishes the need to interact professionally with others in assessing career needs, to effectively assist clients identify competencies they require for a career and employability in a given context. It also examines how to maintain quality of career development services and professional practice. It applies to individuals seeking to identify and communicate trends in career development.

Unit of Competency	Performance Criteria
CU1. Research and confirm career trends	<p>P1 Apply knowledge of changing organizational structures, lifespan of careers and methods of conducting work search, recruitment and selection processes</p> <p>P2 Analyze changing worker and employer issues, rights and responsibilities in context of changing work practices</p> <p>P3 Examine importance of quality careers development services</p> <p>P4 Maintain all research, documentation, sources and references (electronic or physical) to a high degree of currency and relevance</p> <p>P5 Analyze implications of relevant policy, legislation, professional codes of practice and national standards relating to worker and employer issues</p> <p>P6 Research changes and trends in theory of career development counseling and practice</p> <p>P7 Confirm clusters, levels and combinations of transferable employability skills and preferences that may open employment options spanning more than one occupation or career pathway</p>
CU2. Assess and confirm ongoing career development needs of target group	<p>P1 Analyze history and records in assessing needs of target group</p> <p>P2 Assess success of previous career development services and techniques used for individual or target group</p> <p>P3 Deploy other means to investigate appropriate care and counseling approaches as required</p> <p>P4 Maintain privacy and security of all data, research and personal records according to relevant policy, legislation, professional codes of practice and national standards</p> <p>P5 Establish existing work-life balance requirements, issues and needs</p>
CU3. Maintain quality of	<p>P1 Analyze and review relevance of career theories, models,</p>



National Competency Standards Level-4 in Agricultural Machinery Technology



career development services and professional practice

- frameworks and research for target group
- P2 Incorporate into career development services and professional practice, major changes and trends influencing workplace and career-related options and choices
- P3 Comply with all relevant policy, legislation, professional codes of practice and national standards that influence delivery of career development services

Knowledge & Understanding

- K1: explain client care and counseling techniques and processes in the context of career development services
- K2: describe diversity and its potential effects on career choices
- K3: outline human psychological development and needs in relation to careers development
- K4: outline relevant policy, legislation, codes of practice and standards relevant to career development
- K5: explain recruitment and selection processes in the context of career development services
- K6: describe a range of data gathering and research techniques
- K7: explain techniques used to analyze trends.

Critical Evidence(s) Required

The candidate needs to produce following **Critical Evidence(s)** to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of the ability to identify and communicate trends in career development. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

Performance requirements

This competency is to be assessed using standard and authorized work practices, safety requirements and environmental constraints. Demonstrated evidence is required of the ability to:

- research and analyze current economic, labor market, employment, career and vocational, educational and training trends
- identify choices and career development needs for individuals and target groups within a given context
- report and document management of research and career development materials
- Comply with all relevant local, state/territory and national legislation, policies and practices.



0716-MVS&A-24. Apply specialist interpersonal and counseling interview skills

Overview: This unit describes the skills and knowledge required to use advanced and specialized communication skills in the client-counselor relationship. This unit applies to individuals whose job role involves working with clients on personal and psychological issues within established policies, procedures and guidelines.

Unit of Competency	Performance Criteria
CU1. Communicate effectively	<p>P1 Identify communication barriers and use strategies to overcome these barriers in the client-counselor relationship</p> <p>P2 Facilitate the client-counselor relationship through selection and use of micro skills</p> <p>P3 Integrate the principles of effective communication into work practices</p> <p>P4 Observe and respond to non-verbal communication cues</p> <p>P5 Consider and respond to the impacts of different communication techniques on the client-counselor relationship in the context of individual clients</p> <p>P6 Integrate case note taking with minimum distraction</p>
CU2. Use specialized counseling interviewing skills	<p>P1 Select and use communication skills according to the sequence of a counseling interview</p> <p>P2 Identify points at which specialized counseling interviewing skills are appropriate for inclusion</p> <p>P3 Use specialized counseling communication techniques based on their impacts and potential to enhance client development and growth</p> <p>P4 Identify and respond appropriately to strong client emotional reactions</p>
CU3. Evaluate own communication	<p>P1 Reflect on and evaluate own communication with clients</p> <p>P2 Recognize the effect of own values and beliefs on communication with clients</p> <p>P3 Identify and respond to the need for development of own skills and knowledge</p>

Knowledge & Understanding



**National Competency Standards Level-4 in Agricultural Machinery
Technology**



K1: legal and ethical considerations for communication in counseling practice, and how these are applied in individual practice:

- codes of conduct/practice
- discrimination
- duty of care
- human rights
- practitioner/client boundaries
- privacy, confidentiality and disclosure
- rights and responsibilities of workers, employers and clients
- work role boundaries responsibilities and limitations of the counselor role
- work health and safety

K2: principles of person-centered practice

K3: key objectives of counseling interviewing

K4: stages of a counseling interview

K5: potential impacts of using different communication skills and techniques in counseling contexts

K6: communication techniques and micro-skills including:

- attending behaviors active listening, reflection of content feeling, summarizing
- questioning skills open, closed, simple and compound questions
- client observation skills
- noting and reflecting skills
- providing client feedback

K7: specialized counseling communication techniques, and how they are used, including:

- challenging
- reframing
- focusing

K8: components of the communication process including:

- encoder
- decoder

K9: primary factors that impact on the communication process including:

- context
- participants
- rules
- messages
- channels
- noise
- feedback

K10: communication barriers and resolution strategies, including:

- environmental
- physical
- individual perceptions
- cultural issues
- language
- age issues
- disability

K11: observational techniques including:

- facial expressions
- non-verbal behavior
- posture
- silence

K12: ways in which different people absorb information, including:

- visual
- auditory



National Competency Standards Level-4 in Agricultural Machinery Technology



- kinesthetic

K13: obstacles to the counseling process

K14: impacts of trauma and stress on the communication process, including on:

- concentration and attention
- memory
- use of verbal and written language
- use of body language
- challenging within the counseling session

K15: self-evaluation practices, including:

- how to recognize own biases
- Impact of own values on the counseling relationship.

Critical Evidence(s) Required

The candidate needs to produce following **Critical Evidence(s)** to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of the ability to apply specialist interpersonal and counseling interview skills. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

Performance requirements

This competency is to be assessed using standard and authorized work practices, safety requirements and environmental constraints. Demonstrated evidence is required of the ability to:

- interviewed at least 3 different clients using specialized interpersonal communication and counseling interviewing skills, including:
- micro-skills and communication techniques, including:
 - attending behaviors active listening,
 - reflection of content, summarizing
 - questioning skills open, closed, simple and compound questions
 - client observation skills
 - noting and reflecting skills
 - providing client feedback
- specialized counseling interviewing skills, including:
 - challenging
 - reframing
 - focusing
- integrated clear case note taking into the interview process
- Completed a structured process of self-reflection and evaluation of own communication used during the 3 interviews.



***National Competency Standards Level-4 in Agricultural Machinery
Technology***





0716-MVS&A-25. Work safely in an office environment

Overview: This unit describes the performance outcomes, skills and knowledge required to participate in workplace occupational health and safety (OHS) processes to protect workers own health and safety, and that of others.

Unit of Competency	Performance Criteria
CU1. Work safely	P1 Follow established safety procedures when conducting work P2 Carry out pre-start systems and equipment checks in accordance with workplace procedures
CU2. Implement workplace safety requirements	P1 Identify designated persons for reporting queries and concerns about safety in the workplace P2 Identify existing and potential hazards in the workplace, report them to designated persons and record them in accordance with workplace procedures P3 Identify and implement workplace procedures and work instructions for controlling risks P4 Report emergency incidents and injuries to designated persons
CU3. Participate in OHS consultative processes	P1 Contribute to workplace meetings, inspections or other consultative activities P2 Raise OHS issues with designated persons in accordance with organizational procedures P3 Take actions to eliminate workplace hazards or to reduce risks
CU4. Follow safety procedures	P1 Identify and report emergency incidents P2 Follow organizational procedures for responding to emergency incidents

Knowledge & Understanding

K1: Explain responsibilities of employers and employees under relevant health and safety regulation

K2: describe emergency procedures including procedures for fires, accidents and evacuation

K3: outline commonly used hazard signs and safety symbols

Critical Evidence(s) Required

The candidate needs to produce following **Critical Evidence(s)** to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of the ability to participate in workplace OHS processes. The evidence should integrate employability skills with



***National Competency Standards Level-4 in Agricultural Machinery
Technology***



workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

Performance requirements

This competency is to be assessed using standard and authorized work practices, safety requirements and environmental constraints. The unit assessment must ensure the safety processes; hazards and risk are relevant to the area of work. Evidence of the following is essential:

- Accurately following all relevant safety procedures
- Identifying and reporting hazards to designated personnel
- Knowledge of relevant health and safety regulations
- Knowledge of relevant materials, equipment and work processes.



0716-MVS&A-26. Develop workplace documents

Overview: This unit covers interpreting and composing a range of workplace documents from a number of sources. It includes interpreting written information for workplace purposes as well as planning, drafting and reviewing a basic document before writing the final version. The focus is on the content and structure of written materials and not on the use of computer technology

Unit of Competency	Performance Criteria
CU1. Interpret written information	<p>P1 Read workplace materials to identify the subject and key information for using or reporting to others.</p> <p>P2 Read procedural manuals and codes of practice to locate specific information to carry out work functions in accordance with policy and standards.</p> <p>P3 Read a range of written materials to locate and select required information for summaries, short reports and responses to requests.</p> <p>P4 Identify the cultural context and prior knowledge required to interpret workplace information and obtain assistance when required.</p> <p>P5. Determine audience and purpose for the document</p> <p>P6 Seek assistance with interpretation of complex materials in accordance with organizational procedures.</p>
CU2. Develop written materials	<p>P1 Identify and comply with established requirements for a range of written materials in accordance with organizational procedures and standard templates.</p> <p>P2. Determine format and structure</p> <p>P3. Establish key points for inclusion</p> <p>P4. Identify organizational requirements</p> <p>P5. Establish method of communication</p> <p>P6. Establish means of communication</p>
CU3. Draft document	<p>P1 Develop draft document to communicate key points</p> <p>P2. Obtain and include any required additional information</p> <p>P3 Prepare written information in an accurate, concise and unambiguous manner that meets intended audience and organizational requirements.</p>
CU4. Review document	<p>P1 Check draft for suitability of tone for audience, purpose, format and communication style</p> <p>P2. Check draft for readability, grammar, spelling, sentence and</p>



**National Competency Standards Level-4 in Agricultural Machinery
Technology**



	<p>paragraph construction and correct any inaccuracies or gaps in content.</p> <p>P3. Check draft for sequencing and structure</p> <p>P4. Check draft to ensure it meets organizational requirements</p> <p>P5. Ensure draft is proofread, where appropriate, by supervisor or colleague</p>
CU5. Write final document	<p>P1 Make and proofread necessary changes</p> <p>P2. Ensure document is sent to intended recipient within required time frames</p> <p>P3. File copy of document in accordance with organizational policies and procedures</p>

Knowledge & Understanding

- K1: Explain the reading and writing procedures at a level to cope with a range of workplace materials
- K2: Explain the integration of information from a number of sources in order to generate meaning
- K3: Describe the ways to write and sequence paragraphs according to the required purpose of written material
- K4: Outline the linking ideas in written material through selection and use of words, grammatical structures, headings and punctuation appropriate to the purpose
- K5: Elaborate spelling, punctuation and grammar for workplace documents at an experienced level
- K6: Explain the response to diversity, including gender and disability
- K7: Explain the implementation of ergonomic requirements for office work
- K8: Explain the environmental policies such as those relating to paper use/wastage/recycling
- K9: Describe the preparation of general information and papers according to target audience
- K10: Elaborate the ways of proofreading and editing documents to ensure clarity of meaning and conformity to organizational requirements
- K11: Describe the problem-solving skills to determine document design and production processes
- K12: Explain the usage of resources to assist in document production, such as dictionary, thesaurus, templates, style sheets
- K13: Describe the ways to produce business letters, memos, job applications, resumes, meeting agendas and minutes
- K14: Explain the ways to fold and insert letters into a standard and window faced envelope.

Critical Evidence(s) Required

The candidate needs to produce following **Critical Evidence(s)** to be competent in this competency standard:



National Competency Standards Level-4 in Agricultural Machinery Technology



A person who demonstrates competency in this unit must be able to provide evidence of the ability to interpret written information for workplace purposes and plan, draft and review a basic document before writing the final version. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

Performance requirements

This competency is to be assessed using standard and authorized work practices, safety requirements and environmental constraints. Evidence of the following is essential:

- Producing a range of documents that accurately convey required information including single and multipage business letters, memos, job applications, resumes, meeting agendas and minutes.
- Using formatting suitable for intended audience
- Knowledge of organizational policies and procedures for document production



0716-MVS&A-27. Prepare and implement negotiation

Overview: This unit covers the skills, knowledge and attitudes required to prepare for and participate in a process of negotiation.

Unit of Competency	Performance Criteria
CU1. Prepare for the negotiation	<p>P1 Identify objectives and preferred outcome of the negotiation and determine minimum acceptable outcome</p> <p>P2 Understand in relation to what can be offered and what is needed from the other party</p> <p>P3 Gather information regarding the other party objectives, needs, preferences, resources, what they want to achieve - in order to determine best negotiating points</p> <p>P4 List and rank the issues to consider that may be made.</p> <p>P5 Find examples and refine negotiation argument.</p> <p>P6 Check information to ensure it is correct and up-to-date.</p> <p>P7 Develop a negotiation plan that includes information about the other party and its interests and a set of responses and strategies to the anticipated tactics.</p> <p>P8 Prepare an agenda in advance, which includes discussion topics, participants, location and schedule</p>
CU2. Participate in negotiations	<p>P1 Analyze all aspects of the incident for degree of hazard, priorities, optional outcomes and appropriate strategies</p> <p>P2 Analyze and determine strategies and priorities on the incident sought from a range of sources</p> <p>P3 Assess long term objectives against resources and priorities</p> <p>P4 Apply a range of communication techniques to make and maintain contact with the key people</p> <p>P5 Provide clear and factual information to enable an honest and realistic assessment of the interests of the key people and their positions</p> <p>P6 Resolve the conflict and express their likely consequences clearly and do an analysis of the benefits</p> <p>P7 Re assess points of disagreements for common positive positions</p>
CU3. Coordinate	<p>P1 Assess the need for support services in terms of the determined</p>



**National Competency Standards Level-4 in Agricultural Machinery
Technology**



support services	<p>strategies and priorities</p> <p>P2 Negotiate the resources of support services according to established procedures and availability</p> <p>P3 Provide information on strategies to support services and maintain the communication</p> <p>P4 Delegate roles and responsibilities according to expertise and resources</p>
CU4. Restore order	<p>P1 Assess the incidents for degree of risk and take appropriate action to reduce and remove the impact of the incident and restore order</p> <p>P2 Take action designed to minimize risk and the preserve the safety and security of all involved</p> <p>P3 Take action to prevent the escalation of the incident appropriate to the circumstances and agreed procedures.</p> <p>P4 Carry out the use of force for the restoration of control and the maintenance of security in the least restrictive manner.</p> <p>P5 Complete reports accurately and clearly provided to the appropriate authority promptly</p> <p>P6 Review, evaluate and analyze the incident and the organizational response to it and report it promptly and accurately.</p>
CU5. Provide leadership, direction and guidance to the work group	<p>P1 Link between the function of the group and the goals of the organization</p> <p>P2 Participate in decision making routinely to develop, implement and review work of the group and to allocate responsibilities where appropriate</p> <p>P3 Give opportunities and encouragement to others to develop new and innovative work practices and strategies</p> <p>P4 Identify conflict and resolve with minimum disruption to work group function</p> <p>P5 Provide staff with the support and supervision necessary to perform work safely and without risk to health</p> <p>P6 Allocate tasks within the competence of staff and support with appropriate authority, autonomy and training</p> <p>P7 Supervise appropriately the changing priorities and situations and takes into account the different needs of individuals and the requirements of the task</p>



National Competency Standards Level-4 in Agricultural Machinery Technology



Knowledge & Understanding

- K1: Explain organization's policies, guidelines and procedures related to control and surveillance, safety and preventing and responding to incidents and breaches of orders covered in the range of variables.
- K2: Explain organization's management and accountability systems
- K3: Describe teamwork principles and strategies
- K4: Outline the principles of effective communication
- K5: Outline the guidelines for use of equipment and technology
- K6: Explain code of conduct

Critical Evidence(s) Required

The candidate needs to produce following **Critical Evidence(s)** to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of the ability to solve problems which jeopardize safety and security. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

Performance requirements

This competency is to be assessed using standard and authorized work practices, safety requirements and environmental constraints. Evidence of the following is essential:

- evidence of effective communication strategies including negotiation, counseling, mediation, advocacy demonstrated under pressure working effectively in a team environment
- evidence of knowledge and application of organizations policies, procedures and guidelines for critical incidents
- evidence of accurate and safe use of all emergency equipment
- evidence of managing effective outcomes using strategic planning, team leadership and situational analysis



0716-MVS&A-28. Maintain professionalism in the workplace

Overview: This unit of competency describes the outcomes required maintain a professional image in the workplace, including behaving ethically, demonstrating motivation, respecting timeframes and maintaining personal appearance.

Unit of Competency	Performance Criteria
CU1. Respect work timeframes	P1 Demonstrate punctuality in meeting, set working hours and times. P2 Utilize working hours follow company regulations. P3 Complete work tasks within deadlines according to order of priority P4 Supervisors are informed of any potential delays in work times or projects.
CU2. Maintain personal appearance and hygiene	P1 Clean hair, body and nails regularly. P2 Wear suitable cloths for the workplace, and respect local and cultural contexts P3 Meet specific company dress code requirements
CU3. Maintain adequate distance with colleagues and clients	P1 Respect personal space of colleagues and clients with reference to local customs and cultural contexts. P2 Keep sufficient distance from others P3 Avoid cross transmission of infections (especially through respiration).
CU4. Work in an ethical manner	P1 Follow company values/ethics codes of ethics and/or conduct, policies and guidelines. P2 Use company resources in accordance with company ethical standards. P3 Conduct personal behavior and relationships in accord with ethical standards and company policies. P4 Undertake work practices in compliance with company ethical standards, organizational policy and guidelines. P5 Instruct co-workers on ethical, lawful and reasonable directives. P6 Share company values/practices with co-workers using appropriate behavior and language. P7 Report work incidents/situations and/or resolved in accordance with company protocol/guidelines.

Knowledge & Understanding



National Competency Standards Level-4 in Agricultural Machinery Technology



- K1: Explain application of good manners and right conduct
- K2: Explain basic practices for oral and personal hygiene
- K3: Describe common products used for oral and personal hygiene
- K4: Outline the company code of conduct/values
- K5: Outline the Company regulations, performance and ethical standards
- K6: Explain work responsibilities/job functions
- K7: Describe communication skills
- K8: State workplace hygiene standards

Critical Evidence(s) Required

The candidate needs to produce following **Critical Evidence(s)** to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of the ability to maintain professionalism in the workplace .The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

Performance requirements

This competency is to be assessed using standard and authorized work practices, safety requirements and environmental constraints. Evidence of the following is essential:

- clarify and affirm work values/ethics/concepts consistently in the workplace;
- comply with required working times;
- conduct work practices satisfactorily and consistently, in compliance with work ethical standards, organizational policy and guidelines;
- Develop suitable hygiene

Keep adequate distance while interacting with colleagues and clients.



0716-MVS&A-29. Organize schedules

Overview: This unit describes the skills and knowledge required to manage appointments and diaries for personnel within an organization, using manual and electronic diaries, schedules and other appointment systems. It applies to individuals employed in a range of work environments who provide administrative support to teams and individuals.

Unit of Competency	Performance Criteria
CU1. Establish schedule requirements	<p>P1 Identify organizational requirements and protocols for diaries and staff planning tools</p> <p>P2 Identify organizational procedures for different types of appointments</p> <p>P3 Determine personal requirements for diary and schedule items for individual personnel</p> <p>P4 Establish appointment priorities and clarify in discussion with individual personnel</p>
CU2. Manage schedules	<p>P1 Identify recurring appointments and deadlines, and schedule these in accordance with individual and organizational requirements</p> <p>P2 Establish availability of attendees, and schedule new appointments in accordance with required timelines and diary commitments</p> <p>P3 Negotiate alternative arrangements and confirm when established appointments are changed</p> <p>P4 Record appointments and manage schedules in accordance with organizational policy and procedures</p>

Knowledge & Understanding

- K1: identify the key provisions of relevant legislation, standards and codes that affect aspects of business operations or the achievement of team goals
- K2: describe organizational requirements for managing appointments for personnel within the organization
- K3: summarize the range of appointment systems that could be used
- K4: outline important considerations when managing the schedules of others.

Critical Evidence(s) Required

The candidate needs to produce following **Critical Evidence(s)** to be competent in this competency standard:



***National Competency Standards Level-4 in Agricultural Machinery
Technology***



A person who demonstrates competency in this unit must be able to provide evidence of the ability to organize schedules. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

Performance requirements

This competency is to be assessed using standard and authorized work practices, safety requirements and environmental constraints. Demonstrated evidence is required of the ability to:

- Appropriately manage the schedules of various individuals through a process of careful planning and negotiation.