



National Competency Standards for



MOTORCYCLE MECHANIC



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

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National Competency Standards for
“Motorcycle Mechanic”

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INTRODUCTION

Pakistan is the 5th largest motorcycle market in the world after China, India, Indonesia and Vietnam. With 7,500 new motorcycles being sold everyday, Pakistan is also among the world's fastest growing two-wheeler markets soaring at rates of over 20% a year. Nearly 2.3 million motorcycles have rolled off the factories in Pakistan in the last 10 months. The production of motorcycles jumped 22.34 percent in the first four months of fiscal year 2017-18 (FY18), over the corresponding period of in FY17, according to the latest data from Pakistan Bureau of Statistics (PBS).

Keeping in view of the above the competency based national vocational qualifications have been developed by NAVTTC to train the unskilled human resource on the technical and entrepreneurial skills to be employed / self-employed and inevitably set sustainable impact on their lives by increase in their livelihood income.

Training Course is based on competency standards which are defined by the industry and the traditional role of a trainer changes and shifts towards the facilitation of training. A trainer encourages and assists trainees to learn for themselves. Trainees are likely to work in groups (pairs) and all doing something different. Some are doing practical tasks in the workshop, some writing, some not even in the classroom or workshop but in another part of the building using specialist equipment, working on computers doing research on the Internet or the library. As trainees learn at different pace they might well be at different stages in their learning, thus learning must be tailored to suit individual needs. The following facilitation methods (teaching strategies) are generally employed:

Direct Instruction Method:

This might be effective when introducing a new topic to a larger group of trainees in a relative short amount of time. In most cases this method relies on one-way communication, hence there are limited opportunities to get feedback on the trainee's understanding.

Discussion Method:

This allows trainees to actively participate in sharing knowledge and ideas. It will help the trainer to determine whether trainees understand the content of the topic. On the other hand, there is a possibility of straying off topic under discussion and some trainees dominating others on their views.

Small Group Method:

Pairing trainees to help and learn from each other often results in faster knowledge/skill transfer than with the whole class. The physical arrangement of the classroom/workshop and individual assessment may be challenging. Analogy method should be in corporate.

Problem Solving Method:

This is a very popular teaching strategy for the training. Trainees are challenged and are usually highly motivated when they gain new knowledge and skills by solving problems (Contingency skills). Trainees develop critical thinking skills and the ability to adapt to new learning situations (Transfer skills). It might be time consuming and because trainees sometimes work individually, they may not learn all the things that they are expected to learn.

Research Method:

This is used for workshops and laboratory tasks, field experiments, and case studies. It encourages trainees to investigate and find answers for themselves and to critically evaluate information. It however requires a lot of time and careful planning of research projects for the trainee.

PURPOSE OF THE QUALIFICATION

The purpose of the training is to provide skilled manpower to improve the existing motorcycle industry. This will improve the quality in servicing of motorcycles by motorcycle mechanics and the availability of skilled motorcycle mechanics will bring socio-economic benefits to all stakeholders. The specific objectives of developing these qualifications are as under:

- Improve the professional competence of motorcycle mechanics
- Capacitate the local community and trainers in modern CBT trainings, methodologies and processes as envisaged under NVQF
- Provide flexible pathways and progressions in the auto sector
- Enable the trainees to perform their duties in efficient manner
- Establish a standardized and sustainable system of training motorcycle mechanics in Pakistan

DATE OF VALIDATION

These national qualifications have been validated by the Qualifications Development Committee (QDC) on 27th - 28th of September 2018 they will remain in currency until December 2021

CODE OF QUALIFICATION

| Qualification Title | Code |
|---|------|
| National Vocational Certificate Level-2 in Automobile Technology (Motorcycle Mechanic) | |
| National Vocational Certificate Level-3 in Automobile Technology (Motorcycle Technician) | |

ENTRY REQUIREMENTS

- The entry requirement to National Vocational Certificate Level-2 in Automobile Technology (Motorcycle Mechanic) is Primary.
- For National Vocational Certificate Level-3 in Automobile Technology (Motorcycle Technician), the entry requirement is award of National Vocational Certificate Level-2 in Automobile Technology (Motorcycle Mechanic).

QUALIFICATIONS DEVELOPMENT COMMITTEE

The following members participated in the qualifications development and validation:

| S. No | Name & Designation | Organization |
|-------|--|---|
| 1. | Ijaz Hamid Chief Instructor (Auto & Diesel), | Govt. College of Technology, Railway Road, Lahore |
| 2. | Mr. Farooq Adil, Manager (After Sales) | Pak Suzuki Motor Company Ltd |
| 3. | M. Saleem, Assistant Manager Trainings | Atlas Honda Ltd |
| 4. | Muhammad Younas, Assistant Manager | Ravi Auto Company, Lahore |
| 5. | Mr. Uzair Ahmad, Auto Instructor | GTVC (B) Mardan |
| 6. | Eng. Rana Imran Sattar Lecturer (Auto Technology), Industrial Training Officer BS Tech. Department | Govt. College of Technology, Railway Road, Lahore |
| 7. | Muhammad Rizwan Sarwar Sr. Trade Instructor (Automobile) | Govt. Technical Training Institute, Sheikhpura |
| 8. | M. Asif Javid, Instructor | PVTC (VTI Kamoki) |
| 9. | Mr. Adnan Alam, Jr. Instructor | PVTC |

QUALIFICATIONS VALIDATION COMMITTEE

The Qualifications Validation Committee consisted of following members:

| S. No | Name & Designation | Organization |
|-------|--|---|
| 1. | Ijaz Hamid Chief Instructor (Auto & Diesel), | Govt. College of Technology, Railway Road, Lahore |
| 2. | Mr. Farooq Adil, Manager (After Sales) | Pak Suzuki Motor Company Ltd |
| 3. | M. Saleem, Assistant Manager Trainings | Atlas Honda Ltd |
| 4. | Mr. Shahzad Ahmed, Manager Customer Service | Yamaha Motor Pakistan (Pvt.) Ltd. |
| 5. | Mr. Faisal Sharaz, Owner, Parts Dealer, | Shahid Autos |
| 6. | Mr. Muhammad Qasim Sr. Mechanic | Ghaffar Atlas Honda Ltd |
| 7. | Mr. Rashid Habib Owner, Repair Shop | R.K. Autos |
| 8. | Mr. Muhammad Shahzad Owner, Repair Shop | Honda Master |
| 9. | Mr. Muhammad Usman, Mechanic, Honda Dealership | Madina Autos Honda Center |
| 10. | Mr. Abdur Rehman, Owner, Repair Shop | Al-Madina Autos |
| 11. | Abdul Moueed, Owner Repair Shop | Makka Traders |

REGULATIONS FOR THE QUALIFICATION AND SCHEDULE OF UNITS

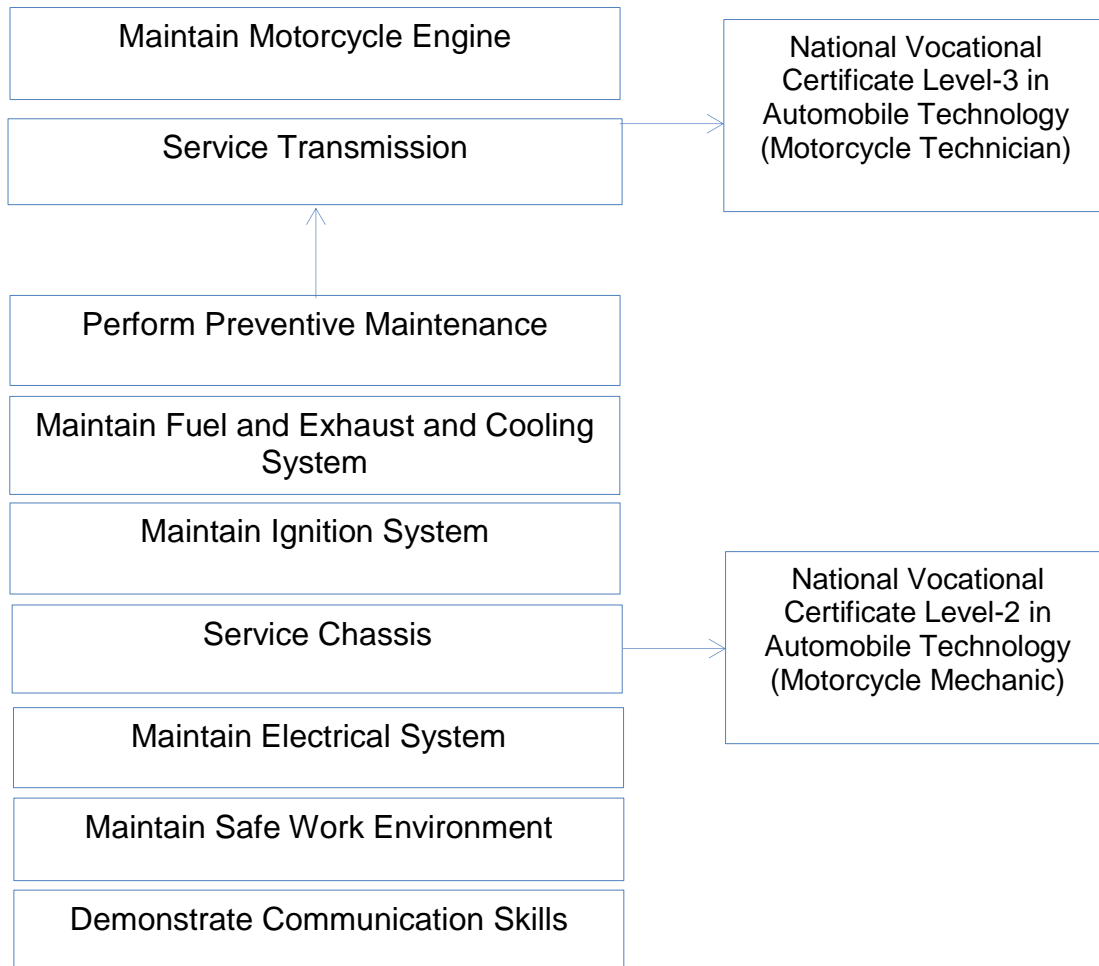
Not Applicable

SUMMARY OF COMPETENCY STANDARDS

| Code | Competency Standards | Level | Credits | Category |
|------------------|--|-------|---------|-----------|
| A. | Demonstrate Communication Skills | 2 | 03 | Generic |
| B. | Maintain Safe Work Environment | 2 | 03 | Generic |
| C. | Perform Preventive Maintenance | 2 | 30 | Technical |
| D. | Maintain Motorcycle Engine | 3 | 70 | Technical |
| E. | Maintain Fuel, Exhaust and Cooling System | 2 | 05 | Technical |
| F. | Maintain Ignition System | 2 | 08 | Technical |
| G. | Service Chassis | 2 | 14 | Technical |
| H. | Service Transmission | 3 | 10 | Technical |
| I. | Maintain Electrical System | 2 | 17 | Technical |
| 041600453 | Occupational health and safety | 2 | 3 | Technical |
| 041600455 | Communicate in the workplace to support customers and team | 3 | 6 | Technical |
| 041600459 | Work effectively in a customer service - sales environment | 3 | 7 | Technical |
| 041600460 | Develop professionalism | 3 | 3 | Technical |
| 041600461 | Comply with health and safety regulations | 3 | 2 | Technical |

Packaging of Qualifications

The national vocational qualifications are packaged as per following:



071300559 Demonstrate Communication Skills

Overview

This Competency Standard identifies the competencies required to apply communication skills at workplace in accordance with the organization guidelines and procedures. You are expected to work in a team to achieve common organizational goals and avoid conflicts. This competency standard would also enable you to use basic computer skills to communicate effectively and prepare work related documents.

| Competency Units | Performance Criteria |
|---------------------------------------|---|
| 1. Work in Team | <p>P1. Treat team members with respect and maintain positive relationship to achieve common organizational goals</p> <p>P2. Listen to instructions carefully and fully comply with them</p> <p>P3. Provide work related information to team members and identify interrelated work activities to avoid confusion</p> <p>P4. Adopt communication skills appropriate to work activities and company procedures</p> <p>P5. Identify problems and resolve them through discussion and mutual agreement</p> |
| 2. Deal with Clients | <p>P1. Collect and confirm work requirements from clients using appropriate communication procedures</p> <p>P2. Provide clear information to clients about work requirements including costs and time needed to accomplish the task</p> <p>P3. Negotiate with clients regarding wages, time, labour requirements etc.</p> |
| 3. Demonstrate Basic IT Skills | <p>P1. Create folders and files and learn major commands of operating system/windows</p> <p>P2. Type text and use major commands such as printing, editing, creating tables, header, footer, footnotes, table of contents and page number etc.</p> <p>P3. Make the document as per work specifications and client requirements</p> <p>P4. Generate reports for clients as required using appropriate computer applications</p> <p>P5. Use internet for sending/receiving emails and connecting through social or other media</p> |

Knowledge and Understanding

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

- Principles of effective and interactive communication
- 7 C's of communication and their importance
- Cultural and organizational practices for effective communication
- Effective negotiation skills
- Role of team members and functionality of work teams
- Team dynamics and stages of team development
- Conflict resolution strategies
- Negotiation techniques
- Basic architecture of computer system
- Input / output devices of computer and their functions
- Basic computer skills using MS Word, MS Excel, use of internet, sending and receiving emails etc.
- Preparing documents and work related reports

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Communicate effectively with colleagues and clients
- Develop a job completion report for the work using computer technology

061100560 Maintain Safe Work Environment

Overview

This Competency Standard identifies the competencies required to apply Occupational Safety and Health (OSH) at workplace in accordance with the organization's approved guidelines and procedures. You will be expected to identify and use Personal Protective Equipment (PPE) according to the job requirement and potential hazards at workplace. The underpinning knowledge regarding OSH will be sufficient to provide the basis for your work.

| Competency Units | Performance Criteria |
|---|---|
| <p>1. Identify Hazards at Workplace</p> | <p>P1. Read and interpret work processes and procedures correctly to identify risk of hazards at workplace</p> <p>P2. Recognize engineering processes, tools, equipment and consumable materials that have the potential to cause harm</p> <p>P3. Identify any potential hazards and take appropriate action to minimize the risk</p> |
| <p>2. Observe Occupational Safety and Health (OSH)</p> | <p>P1. Work safely at all times, complying with health and safety precautions, regulations and other relevant guidelines</p> <p>P2. Identify health and safety hazards at the workplace, so that the potential for personal injury, damage to equipment or the workplace is prevented, and corrective action is taken</p> <p>P3. Deal with problems which are within your control, and report those that cannot be resolved to the safety officer</p> <p>P4. Wear, adjust, and maintain Personal Protective Equipment to ensure correct fit and optimum protection in compliance with company procedures</p> <p>P5. Keep work area clean and clear of obstructions, and storing tools or equipment, so that the potential for accident or injury is prevented</p> |

Knowledge and Understanding

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

- Types of hazards that are most likely to cause harm to health and safety
- Health and safety precautions
- Health and safety signs and symbols
- Techniques and methods to identify the risks of hazards at workplace
- Dealing with hazards to avoid any accident or injury
- Following 5S and Kaizen Activities
- Safety reporting procedures and documentation
- Use of Personal Protective Equipment
- First aid treatment methods including methods of resuscitation
- Fire-fighting methods
- Safe methods of handling heavy loads

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Identify possible hazards at workplace
- Use correct Personal Protective Equipment (PPE) for the assigned job

List of Tools and Equipment

| S. No. | Items |
|--------|--|
| 1. | Health and Safety Manual |
| 2. | Fire Extinguisher |
| 3. | Safety Equipment, Safety Shoes, Safety Gloves, Safety Goggles, Safety Helmet and Ear Plugs |
| 4. | Smoke Detecting Alarm |
| 5. | First Aid Box |

Competency Standard C: Perform Preventive Maintenance

Overview

This competency standard is designed to provide skills and knowledge to Perform Preventive Maintenance of motorcycle by Motorcycle Mechanic, in accordance with the manufacturer's Manual. You will be able to diagnose faults related to Preventive Maintenance of motorcycle and repair faulty part/s according to set standards.

| Competency Units | Performance Criteria |
|-----------------------------------|--|
| C1. Service Air Cleaner | <p>P1. Arrange specific tools for service air cleaner.</p> <p>P2. Remove side cover as per shop manual.</p> <p>P3. Remove air filter cover as per shop manual.</p> <p>P4. Replace or clean air filter as per shop manual.</p> <p>P5. Refit air filter assembly as per shop manual.</p> |
| C2. Service Spark Plug | <p>P1. Arrange specific tools and equipment's to service Spark plug.</p> <p>P2. Remove spark plug cap and inspect for damage and deterioration.</p> <p>P3. Remove spark plug and inspect in order to judge engine condition.</p> <p>P4. Clean the spark plug with appropriate tool to scratch carbon.</p> <p>P5. Adjust spark plug gap as per shop manual.</p> <p>P6. Refit spark plug to the engine as per set standards.</p> |
| C3. Adjust Valve Clearance | <p>P1. Arrange specific tools and equipment's to adjust valve clearance.</p> |

| | |
|--|--|
| | <p>P2. Remove engine crank case cover as per shop manual.</p> <p>P3. Verify piston position at Top Dead Center (TDC) on compression stroke by Rotating the flywheel in the specific direction.</p> <p>P4. Adjust and Verify the valve clearance as per shop manual.</p> |
|--|--|

C4. Test Ignition Timing of motorcycle engine (For CB Point Vehicles)

- P1.** Arrange specific tools and equipment's to Test Ignition Timing of motorcycle engine.
- P2.** Remove crank case cover and connect tachometer & ignition timing light gun for testing ignition timing.
- P3.** Start engine and test ignition timing at different speeds as per set standards.

C5. Service Throttle and Clutch Operation of motorcycle engine

- P1.** Arrange specific tools and equipment's to Service Throttle and Clutch Operation of motorcycle engine
- P2.** Remove dust cover from throttle/ Clutch adjuster to access the adjuster nut
- P3.** Adjust throttle/ Clutch grip free play as per shop manual.
- P4.** Verify the throttle/ Clutch operation as per shop manual.

C6. Service Carburetor

- P1.** Arrange specific tools and equipment's to Service Carburetor
- P2.** Remove carburetor and disassemble as per shop manual
- P3.** Check float, needle valve, butterfly and jets as per shop manual

- P4.** Adjust float level as per shop manual
- P5.** Reassemble and install carburetor to engine as per shop manual
- P6.** Adjust mixture setting and idle RPM as per shop manual

| | |
|---|---|
| C7. Change Engine Oil and Oil Filter | <ul style="list-style-type: none"> P1. Arrange specific tools and equipment's to Change Engine Oil and Oil Filter P2. Prepare engine and Place motorcycle at main stand to remove oil filler cap/ dip stick. P3. Remove and install oil filter as per shop manual P4. Drain the engine oil completely and install the oil drain bolt with new sealing washer correctly. P5. Fill the oil in crank case as per specific quantity and grade. P6. Recheck oil level with dipstick. |
| C8. Perform Compression Test | <ul style="list-style-type: none"> P1. Arrange specific tools and equipment's to Perform Compression Test P2. Install the compression gauge into the engine as per shop manual. P3. Shift the transmission into neutral position and crank the engine up to maximum compression level. P4. Check compression gauge level as per shop manual |
| C9. Adjust Drive Chain Free Slack. | <ul style="list-style-type: none"> P1. Arrange specific tools and equipment's P2. Adjust drive chain free slack as per shop manual P3. Check and adjust alignment of drive chain form both side. |
| C10. Service Drum and | <ul style="list-style-type: none"> P1. Arrange specific tools and equipment's to |

Hydraulic Brakes

Adjust Brakes Free Play

- P2.** Loosen the lock nut to access brake adjusters.
- P3.** Adjust brake free play as per shop manual.

C 11. Adjust Steering (Handle)

- P1.** Arrange specific tools and equipment's to Adjust Steering (Handle)
- P2.** Check free play and movement of Steering (Handle) as per shop manual.
- P3.** Adjust free play and movement of Steering (Handle) as per shop manual.

Knowledge & Understanding

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

- K1. Knowledge about PPEs
- K2. Different types of fire extinguishers
- K3. Safe work environment
- K4. Safety measures and precautions
- K5. First Aid
- K6. Proper use and handling of basic tools and equipment
- K7. Knowledge about securing measuring tools
- K8. Types of engines
- K9. Different parts of Motorcycle
- K10. Schedule of Motorcycle Maintenance
- K11. Working principles and comparison of 2 and 4 Stroke Engine
- K12. Types and procedure of Oiling & greasing
- K13. Inspections and Measurements
- K14. Cleaning process of different Motorcycle parts / Components.
- K15. Adjustment of Motorcycle parts /Components
- K16. Replacement of Motorcycle Parts / Components
- K17. Different diagnostic techniques for chassis and components
- K18. Suspension system and its components
- K19. Operations of suspension system
- K20. Steering system, components and operations
- K21. Brake system, components and operations
- K22. Hydraulic Brake system
- K23. Fitting of wheels and tyres
- K24. Working principles of engine and its terminologies
- K25. Different systems of engine

- K26. Parts of engine
- K27. Diagnostic procedure of Engine
- K28. Engine dismantling procedure
- K29. Engine inspection and repair procedure
- K30. Engine assembling procedure
- K31. Engine oil circuits
- K32. Engine Timing
- K33. Working of transmission and its terminologies
- K34. Diagnostic procedure of transmission
- K35. Starting system (Kick shaft)
- K36. Clutch system
- K37. Gear mechanism system
- K38. Final Drive
- K39. Electrical Circuits and its terminology
- K40. Components of electrical system
- K41. Types of Electrical and Electronics systems
- K42. Wiring harness and color coding
- K43. Use of multi-meter and testers
- K44. Types of bulbs and switches
- K45. Manufacturers and workshop manual of given vehicle
- K46. Understanding of wiring diagram
- K47. Function of final drive (drive shaft and gears)
- K48. Hydraulic disk brake system
- K49. Working principle Fuel system
- K50. Exhaust system
- K51. Euro standards
- K52. Motorcycle driving tips and safety
- K53. Spark plug and its types
- K54. CB point and CDI system
- K55. Function of oil cooler and Radiator assembly
- K56. Rear mono shock system
- K57. Final belt drive and shaft drive system
- K58. Function of stator assembly
- K59. Function of CDI unit
- K60. Function of ignition coil

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Perform carburetor service as per shop manual
- Adjust valve clearance as per shop manual
- Adjust drive chain free slack as per shop manual

Competency Standard D: Maintain Motorcycle Engine

Overview

This competency standard is designed to provide skills and knowledge to Maintain Motorcycle Engine of motorcycle by Motorcycle Mechanic, in accordance with the manufacturer's Manual. You will be able to diagnose faults related to Engine of motorcycle and repair faulty part/s according to set standards.

| Competency Units | Performance Criteria |
|--|--|
| D1. Diagnose Faults in two stroke and four stroke engines | <p>P1. Arrange proper tools and equipment's to diagnose the fault in 2 and 4 stroke engine</p> <p>P2. Diagnose faults in 2 and 4 stroke engine for abnormal noise by using Appropriate tool</p> <p>P3. Test engine to identify oil and water leakage.</p> <p>P4. Test engine electrical to identify the electrical fault.</p> <p>P5. Perform inlet manifold vacuum test to measure vacuum</p> <p>P6. Test cylinder compression to identify ratio difference.</p> |
| D2. Service cylinder head Assembly | <p>P1. Arrange proper tools and equipment's to service cylinder head.</p> <p>P2. Disconnect cables, wires, and muffler from cylinder head for dismantling cylinder head.</p> <p>P4. Remove cylinder head assembly and its components from the engine to identify damage parts.</p> <p>P5. Replace/clean cylinder head and its components by using appropriate tools as per shop manual.</p> |

P6. Refit cylinder head and its components, connect all the cables/ wires and muffler as per shop manual.

P7. Test engine performance to verify servicing of cylinder head.

| | |
|---|---|
| D3. Service Suction mechanism of 2 stroke engine | P1. Arrange proper tools and equipment's to service suction mechanism. P2. Remove suction plate/valve for service as per shop manual P3. Install suction plate/valve as per shop manual. P4. Start engine to verify suction mechanism operation. |
|---|---|

D4. Service cylinder, Piston and Piston Rings

P1. Arrange proper tools and equipment to service cylinder and piston.

P2. Remove cylinder head assembly from the cylinder block to service cylinder block piston and piston Rings as per shop manual.

P3. Remove cylinder block, piston and inspect Its components to identify the damage parts as per Shop manual.

P4. Service/ clean cylinder block, piston and its components to remove dust.

P5. Refit Cylinder Block, piston, piston rings, cylinder head And connect all the wires, cables to the engine as per shop manual.

P6. Test engine performance to verify servicing of cylinder piston and piston rings as per shop

manual.

| | |
|---|--|
| D5. Service crank shaft assembly | <p>P1. Arrange proper Tools and equipment's to service crankshaft assembly.</p> <p>P2. Remove engine from motor cycle to remove the crankshaft assembly as per shop manual.</p> <p>P3. Remove Crank Cases, crank shaft assembly and inspect To Identify the damage parts.</p> <p>P4. Service the Crank shaft assembly to the engine unit as per shop manual.</p> <p>P5. Assemble engine unit and install into the motorcycle as per shop manual.</p> <p>P6. Conduct test to identify the servicing of crankshaft assembly.</p> |
| D6. Service lubrication system | <p>P1. Arrange proper tools and equipment's to service the lubrication system.</p> <p>P2. Remove all components of lubrication system and inspect to identify damage parts.</p> <p>P3. Service oil pump, shaft, gear and filter with appropriate equipment to remove the dust.</p> <p>P4. Refit all components as per shop manual.</p> <p>P5. Change Oil and Oil Filter of the engine as per set standards.</p> <p>P6. Conduct test of lubrication system to verify</p> |

servicing of lubrication system.

Knowledge & Understanding

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

- K1. Knowledge about PPEs
- K2. Different types of fire extinguishers
- K3. Safe work environment
- K4. Safety measures and precautions
- K5. First Aid
- K6. Proper use and handling of equipment
- K7. Knowledge about securing measuring tools
- K8. Types of engines
- K9. Schedule of Motorcycle Maintenance
- K10. Different parts of Motorcycle
- K11. Working principles and comparison of 2 and 4 Stroke Engine
- K12. Types and procedure of Oiling & greasing
- K13. Inspections and Measurements
- K14. Cleaning process of different Motorcycle parts / Components.
- K15. Replacement of Motorcycle Parts / Components
- K16. Adjustment of Motorcycle parts /Components
- K17. Working principles of engine and its terminologies
- K18. Different systems of engine
- K19. Parts of engine
- K20. Diagnostic procedure of Engine
- K21. Engine dismantling procedure
- K22. Engine inspection and repair procedure
- K23. Engine assembling procedure
- K24. Engine oil circuits
- K25. Engine Timing
- K26. Manufacturers and workshop manual of given vehicle
- K27. Working principle Fuel system
- K28. Exhaust system
- K29. Euro standards
- K30. Motorcycle driving tips and safety

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Remove and install engine from motorcycle

- Service engine cylinder and piston
- Service engine crankshaft assembly

Competency Standard E: Maintain Fuel, Exhaust and Cooling System

Overview

This competency standard is designed to provide skills and knowledge to Maintain Fuel, Exhaust and Cooling System of motorcycle by Motorcycle Mechanic, in accordance with the manufacturer's Manual. You will be able to diagnose faults related to Fuel and Exhaust System of motorcycle and repair faulty part/s according to set standards.

| Competency Units | Performance Criteria |
|---|---|
| E1. Diagnose faults in fuel and exhaust system | <p>P1. Arrange specific tools to diagnose faults in fuel and exhaust system</p> <p>P2. Test miss firing of engine</p> <p>P3. Check engine over heating to identify faults in lubrication system</p> <p>P4. Check engine exhaust smoke for rich or lean mixture</p> <p>P5. Check/ Replace Air section valve (EURO –II valve)</p> |
| E2. Service fuel tanks and its components | <p>P1. Arrange specific tools for Service fuel tanks and its components</p> <p>P2. Remove fuel tank of motorcycle as per set standards</p> <p>P3. Service fuel tank, fuel cap, fuel cock and sender unit as per set standards</p> <p>P4. Install fuel tank and components as per shop manual to verify correct operation of fuel tank and components.</p> |
| E3. Service air intake system | <p>P1. Arrange specific tools for Service air intake system</p> <p>P2. Remove air filter to identify damage or chok.</p> <p>P3. Replace / wash air filter according to set standards</p> |

| | |
|--|--|
| | P4. Install air filter to verify its correct operation. |
| E4. Service carburetor | P1. Arrange specific tools for Service carburetor P2. Remove carburetor from engine to identify faults in carburetor P3. Install carburetor in the engine to verify its correct operation. |
| E5. Service exhaust system | P1. Arrange specific tools for Service exhaust system P2. Check noise to identify abnormal sound P3. Remove muffler as per shop manual P4. Install muffler to the engine to verify its correct operation. |
| E6. Service Motorcycle Air and oil cooling system | P1. Arrange specific tools to Service Air and oil Cooling P2. Service air and oil cooling system as per shop manual. P3. Check metal fins and air cooling system as per shop manual |

Knowledge & Understanding

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

- K1. K. 1. Knowledge about PPEs
- K2. K. 2. Different types of fire extinguishers
- K3. K. 3. Safe work environment
- K4. K. 4. Safety measures and precautions
- K5. K. 5. First Aid
- K6. K. 6. Proper use and handling of equipment
- K7. K. 7. Knowledge about securing measuring tools
- K8. K. 8. Types of engines
- K9. K. 9. Schedule of Motorcycle Maintenance
- K10. K. 10. Different parts of Motorcycle
- K11. K. 11. Working principles and comparison of 2 and 4 Stroke Engine

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| K12. | K. 12. Inspections and Measurements |
| K13. | K. 13. Cleaning process of different Motorcycle parts / Components. |
| K14. | K. 14. Different systems of engine |
| K15. | K. 15. Parts of engine |
| K16. | K. 16. Manufacturers and workshop manual of given vehicle |
| K17. | K. 17. Working principle Fuel system |
| K18. | K. 18. Exhaust system |
| K19. | K. 19. Types of Cooling System |
| K20. | K. 20. Methods of Heat Transfer |
| K21. | K. 21. Euro standards |
| K22. | K. 22. Motorcycle driving tips and safety |

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Service fuel tank and its component
- Remove and install complete muffler unit and service if required.

Competency Standard F: Maintain Ignition System

Overview

This competency standard is designed to provide skills and knowledge to Repair ignition system of motorcycle by Motorcycle Mechanic, in accordance with the manufacturer's Manual. You will be able to diagnose faults related to ignition system of motorcycle and repair faulty part/s according to set standards.

| Competency Units | Performance Criteria |
|---|---|
| F1. Diagnose faults in ignition system | <p>P1. Arrange specific tools and equipment to diagnose faults in ignition system.</p> <p>P2. Connect multi-meter as per set standards.</p> <p>P3. Measure Initial, Primary ignition and Crank rotation position signal voltages as per shop manual to diagnose faults</p> |
| F2. Service stator assembly and CDI Unit | <p>P1. Arrange specific tools and equipment to for service stator assembly and CDI Unit</p> <p>P2. Remove and install stator assembly as per shop manual for replacement</p> <p>P3. Remove and install CDI unit as per set standards for replacement</p> |
| F3. Service ignition coil | <p>P1. Arrange specific tools and equipment.</p> <p>P2. Remove ignition coil to measure resistance</p> <p>P3. Measure resistance of primary coil and compare with its specific value to verify the coil condition</p> <p>P4. Check spark plug adaptor as per shop manual.</p> <p>P5. Measure resistance of secondary coil with and without plug cap and compare with its specific value to verify the coil condition</p> <p>P6. Replace ignition coil as per set standards.</p> |
| F4. Service ignition switch | <p>P1. Arrange specific tools and equipment to service ignition switch</p> <p>P2. Remove head light and disconnect ignition connectors to measure connectivity between terminals as per shop manual</p> <p>P3. Replace ignition switch if required</p> |

Knowledge & Understanding

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

- K. 1. Knowledge about PPEs
- K. 2. Different types of fire extinguishers
- K. 3. Safe work environment
- K. 4. Safety measures and precautions
- K. 5. First Aid
- K. 6. Proper use and handling of equipment
- K. 7. Knowledge about securing measuring tools
- K. 8. Types of engines
- K. 9. Schedule of Motorcycle Maintenance
- K. 10. Different parts/ component of ignition system for Motorcycle
- K. 12. Cleaning process of different Motorcycle parts / Components.
- K. 13. Types of Electrical and Electronics systems
- K. 14. Wiring harness and color coding
- K. 15. Use of multi-meter and testers
- K. 16. Manufacturers and workshop manual of given vehicle
- K. 17. Understanding of wiring diagram
- K. 19. Spark plug and its types
- K. 20. CB point and CDI system
- K. 21. Function of stator assembly
- K. 22. Function of CDI unit
- K. 23. Function of ignition coil

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Remove, service and install stator assembly of motorcycle engine
- Replace ignition coil of motorcycle engine
- Remove, service and install ignition switch of motorcycle

Competency Standard G: Service Chassis

Overview

This competency standard is designed to provide skills and knowledge to Service Chassis of motorcycle by Motorcycle Mechanic, in accordance with the manufacturer's Manual. You will be able to diagnose faults related to motorcycle chassis of motorcycle and repair faulty part/s according to set standards.

| Competency Units | Performance Criteria |
|--|---|
| G1. Service Steering System | <p>P1. Arrange specific tools and equipment's to Service Steering System</p> <p>P2. Remove inner race with screw driver without tilt or damage.</p> <p>P3. Remove outer race perpendicularly without tilting it.</p> <p>P4. Install steel balls correctly for proper steering operation as per shop manual.</p> |
| G2. Service Front Fork (Shock Absorbers). | <p>P1. Arrange specific tools and equipment's to Service Front Fork (Shock Absorbers).</p> <p>P2. Remove front fork to disassemble the shock absorbers.</p> <p>P3. Disassemble front fork to identify damage, crack or bend.</p> <p>P4. Service front forks and reassemble shock absorbers as per shop manual.</p> <p>P5. Install front fork to steering system to identify fork operation as per set standards.</p> |
| G3. Diagnose faults in suspension system | <p>P1. Arrange specific tools and equipment's to Diagnose faults in suspension system.</p> <p>P2. Check front fork operation to diagnose faults in front suspension system.</p> <p>P3. Check steering stem bearings to identify</p> |

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| | <p>looseness in steering stem</p> <p>P4. Check oil leakage from the front fork and rear cushion to identify damage or bend.</p> |
| <p>G4. Service Rear Cushion (shock Absorbers)</p> | <p>P1. Arrange specific tools and equipment's to Service Rear Cushion (shock Absorbers).</p> <p>P2. Remove rear cushion to identify leakage and damage</p> <p>P3. Disassemble Rear cushion to verify damage or bend</p> <p>P4. Service rear cushion and reassemble as per set standards.</p> <p>P5. Install Rear cushion to identify correct operation of rear cushion.</p> |
| <p>G5. Service swing arm</p> | <p>P1. Arrange specific tools and equipment's to Service swing arm</p> <p>P2. Remove and swing arms and components to identify damage</p> <p>P3. Change swing arm bushes for correct operation as per set standards.</p> <p>P4. Install swing arm to identify proper function of suspension system.</p> |
| <p>G6. Diagnose faults in braking system</p> | <p>P1. Arrange specific tools and equipment's to Diagnose faults in braking system.</p> <p>P2. Test Drive motorcycle to check correct mechanical and / or hydraulic braking function.</p> <p>P3. Press brake pedal / lever to verify brake light illuminates.</p> <p>P4. Test drive motorcycle and press pedal / lever rear / front brake to identify drum / disk brake operation</p> <p>P5. Perform checks and measurements to identify</p> |

leakage, air gap and function of hydraulic brake system.

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| <p>G7. Service braking system</p> | <p>P1. Arrange specific tools and equipment's to Service braking system</p> <p>P2. Dismantle front wheel assembly to inspect brake shoes, for damage or worn-out.</p> <p>P3. Service front wheel brake shoes and reinstall to verify correct operation of braking system.</p> <p>P4. Dismantle Rear wheel assembly to inspect brake shoes, for damage or worn-out.</p> <p>P5. Service rear wheel brake shoes and reinstall to verify correct operation of braking system.</p> <p>P6. Dismantle master cylinder, wheel cylinder to identify fault in hydraulic brake system.</p> <p>P7. Replace/Repair Master cylinder, wheel cylinder as per set standards.</p> <p>P8. Reinstall hydraulic brake system to verify correct brake operation.</p> |
| <p>G8. Service Front Wheel Assembly</p> | <p>P1. Arrange specific tools and equipment's to Service Front Wheel Assembly</p> <p>P2. Disassemble front wheel assembly to identify bearings damage or excessive free play</p> <p>P3. Service front wheel hub as per set standards</p> <p>P4. Install front wheel assembly to verify correct function of front wheel.</p> |
| <p>G9. Service Rear Wheel Assembly</p> | <p>P1. Arrange specific tools and equipment's to Service Rear Wheel Assembly</p> <p>P2. Disassemble rear wheel assembly to identify bearings for damage or excessive free play.</p> <p>P3. Service rear wheel hub as per set standards</p> <p>P4. Install rear wheel assembly to check correct</p> |

Knowledge & Understanding

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

- K1. Knowledge about PPEs
- K2. Different types of fire extinguishers
- K3. Safe work environment
- K4. Safety measures and precautions
- K5. First Aid
- K6. Proper use and handling of equipment
- K7. Knowledge about securing measuring tools
- K8. Different parts chassis of Motorcycle
- K9. Types and procedure of Oiling & greasing
- K10. Inspections and Measurements
- K11. Cleaning process of different Motorcycle parts / Components.
- K12. Replacement of Motorcycle Parts / Components
- K13. Adjustment of Motorcycle parts /Components
- K14. Different diagnostic techniques for chassis and components
- K15. Suspension system and its components
- K16. Operations of suspension system
- K17. Steering system, components and operations
- K18. Brake system, components and operations
- K19. Hydraulic Brake system
- K20. Fitting of wheels and tyres
- K21. Final Drive
- K22. Manufacturers and workshop manual of given vehicle
- K23. Function of final drive (drive shaft and gears)
- K24. Motorcycle driving tips and safety
- K25. Rear mono shock system

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Service front shock absorber assembly.
- Service hydraulic disk brake of motorcycle.
- Service steering system

Competency Standard H: Service Transmission

Overview

This competency standard is designed to provide skills and knowledge to Service Transmission of motorcycle by Motorcycle Mechanic, in accordance with the manufacturer's Manual. You will be able to diagnose faults related to Transmission of motorcycle and repair faulty part/s according to set standards.

| Competency Units | Performance Criteria |
|---|--|
| H1. Diagnose Faults in clutch and primary drive assembly | <p>P1. Arrange specific tools to Diagnose Faults in clutch and primary drive assembly.</p> <p>P2. Check clutch free play for abnormal power transmission</p> <p>P3. Accelerate rapidly from 1st to 2nd gear shifting to judge exact power transmission.</p> <p>P4. Check excessive lever pressure to judge improper clutch operation</p> <p>P5. Inspect clutch slippage and hammering sounds during speedy driving.</p> |
| H2. Service primary drive gears and clutch system | <p>P1. Arrange specific tools to Service primary drive gears and clutch system.</p> <p>P2. Disassemble clutch to identify damage or worn out of clutch plates.</p> <p>P3. Service clutch box for correct clutch operation.</p> <p>P4. Inspect primary drive gear to identify damage or wear.</p> <p>P5. Refit clutch assembly to check correct working of primary drive gear.</p> |
| H3. Service kick start and transmission assembly | <p>P1. Arrange specific tools for Service kick start transmission assembly</p> <p>P2. Disassemble engine cylinders and both case covers</p> <p>P3. Dismantle all components in both case covers to remove engine.</p> <p>P4. Disassemble crank case and inspect transmission to identify worn out and broken teeth of gears</p> <p>P5. Service kick start as per set standards.</p> |

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| | <p>P6. Service transmission as per set standards. Reassemble crank case, both case covers and cylinders correctly to verify correct engine operation.</p> |
| <p>H4. Diagnose faults in final drive</p> | <p>P1. Test drive motorcycle to check abnormal sound of drive chain system Check drive chain free-play at different speeds</p> |
| <p>H5. Service final drive chains and sprockets</p> | <p>P1. Remove rear wheel to identify faults in drive chain system. P2. Remove Chain cover and Crank case Cover P3. Replace final drive chain and sprockets as per set standards P4. Adjust drive chain free slake and test drive motorcycle to identify any abnormality</p> |

Knowledge & Understanding

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

- K. 1. Knowledge about PPEs
- K. 2. Different types of fire extinguishers
- K. 3. Safe work environment
- K. 4. Safety measures and precautions
- K. 5. First Aid
- K. 6. Proper use and handling of Special Service tools and equipment
- K. 7. Knowledge about securing measuring tools
- K. 8. Different relevant parts of Motorcycle
- K. 9. Types and procedure of Oiling & greasing
- K. 11. Fitting of wheels and tyres
- K. 15. Working of transmission and its terminologies
- K. 16. Diagnostic procedure of transmission
- K. 17. Starting system (Kick shaft)
- K. 18. Clutch system
- K. 19. Gear mechanism system
- K. 20. Final Drive
- K. 21. Function of final drive (drive shaft and gears)
- K. 22. Motorcycle driving tips and safety

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Remove, service and refit oil-bath type clutch and pressure assembly of motorcycle engine
- Service kick and transmission assembly.
- Remove and refit of drive chain and drive sprockets set.

Competency Standard I: Maintain Electrical System

Overview

This competency standard is designed to provide skills and knowledge to Maintain Electrical System of motorcycle by Motorcycle Mechanic, in accordance with the manufacturer's Manual. You will be able to diagnose faults related to Electrical System of motorcycle and repair faulty part/s according to set standards.

| Competency Units | Performance Criteria |
|--|--|
| I1. Diagnose faults in electrical systems | <p>P1. Arrange specific tools for Diagnose faults in electrical systems</p> <p>P2. Operate all switches to verify correct operation</p> <p>P3. Start engine and accelerate at different rpm to inspect miss firing.</p> |
| I2. Service battery and charging system | <p>P1. Arrange specific tools for Service battery and charging system</p> <p>P2. Top up battery and measure battery voltages to verify correct battery condition.</p> <p>P3. Measure stator assembly coils resistances to identify burn or damage.</p> <p>P4. Replace stator assembly as per set standards</p> <p>P5. Inspect rectifier with appropriate tool</p> <p>P6. Inspect wiring harness continuity to identify damage.</p> <p>P7. Start engine and measure charging voltage to verify correct charging operation.</p> |
| I3. Service Switches, Horn and Lights | <p>P1. Arrange specific tools for Service Switches, Horn and Lights</p> <p>P2. Measure continuity of grip switches to verify proper operation</p> |

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| | <p>P3. Service grip and verify correct connection of wires</p> <p>P4. Inspect all bulbs physically and replace fused bulbs as per set standards</p> <p>P5. Inspect horn for any shortage</p> <p>P6. Re assemble grip and verify correct operation of switches</p> |
| <p>I4. Service wiring harness</p> | <p>P1. Arrange specific tools to Service wiring harness</p> <p>P2. Disconnect all connections and measure continuity of wiring harness.</p> <p>P3. Repair wiring harness as per set standards.</p> <p>P4. Connect electrical connections to verify correct function.</p> |
| <p>I5. Service starting system</p> | <p>P1. Arrange specific tools to Service starting system</p> <p>P2. Measure continuity of wiring harness and push button to identify faults in wiring harness.</p> <p>P3. Service self-starter as per set standards.</p> <p>P4. Refit self-starter and start engine for verifying its correct function as per set standards.</p> |

Knowledge & Understanding

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

- K. 1. Knowledge about PPEs
- K. 2. Different types of fire extinguishers
- K. 3. Safe work environment
- K. 4. Safety measures and precautions
- K. 5. First Aid
- K. 6. Proper use and handling of relevant tools and equipment
- K. 7. Knowledge about securing measuring tools
- K. 9. Different electrical components of Motorcycle
- K. 10. Inspections and Measurements of electrical parts
- K. 12. Types of Electrical and Electronics systems

- K. 13. Wiring harness and color coding
- K. 14. Use of multi-meter and testers
- K. 15. Types of bulbs and switches
- K. 16. Understanding of manufacturers and workshop manual of given vehicle
- K. 17. Understanding of wiring diagram
- K. 19. Spark plug and its types
- K. 20. CB point and CDI system
- K. 21. Function of stator assembly
- K. 22. Function of CDI unit
- K. 23. Function of ignition coil

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Remove, check, charging and refit of lead-acid battery of motorcycle.
- Remove, check, service and refit of starter motor of self-started motorcycle.
- Remove, check and install of head-lamp of motorcycle.

Occupational health and safety

Purpose

It is for the safety of persons working in that environment.

Classification ISCED

0416 Wholesale and retail sales

Available grade

Competent / Not yet competent

Modification history

N/A

| Unit of Competency | Performance Criteria | Knowledge |
|--|--|---|
| I1. Identify and implement safe working practices | You must be able to: P1. Study of facility layout design and operations P2. Implement the health and safety measures | You must know and understand: K1. Knowledge of health and safety precautions |

Communicate in the workplace to support customers and team

Purpose

This Competency standard identifies the competencies required to communicate in the workplace to support customers and team as per organization's approved guidelines and procedures. You will be expected to communicate face-to-face with customers, use technology to communicate with customers, communicate with customers and colleagues from diverse backgrounds, work in a team, ask appropriate probing / questioning from customers and provide continuous feedback to customers / colleagues. Your underpinning knowledge about basic communication tools and correspondence tactics will be sufficient for you to provide the basics of the work.

Classification ISCED

Available grade

Competent / Not yet competent

Modification history

N/A

| Unit of Competency | Performance Criteria | Knowledge |
|---|--|---|
| B1. Communicate face-to-face with customers. | You must be able to: P1. Maintain welcoming customer environment that reflects company branding and market position and is in line with the company policy and procedures. P2. Greet customer warmly according to company policy and procedures. P3. Create effective service environment through verbal | You must be able to: K1. Explain different techniques that can be applied when communicate with customer face to face K2. Describe types of customer behavior and dealings K3. Explain different communication skills and techniques K4. Explain the basic key elements of the |

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| | <p>and non-verbal interaction according to company policy and procedures.</p> <p>P4. Use questioning and active listening to determine customer needs.</p> <p>P5. Use positive and inclusive language.</p> <p>P6. Recognize personal factors impact on customer service delivery</p> | <p>communication process.</p> <p>K5. Describe a range of communication methods that can be used to effectively communicate with customers and identify the most appropriate to use in different situations.</p> <p>K6. Explain how 'body language' impacts on the communication process.</p> |
|--|--|--|

B2. Use technology to communicate with customers.

You must be able to:

- P1. Answer telephone according to the company procedures.
- P2. Questioning and active listening to identify caller and establish and confirm requirements.
- P3. Use telephone system functions according to instructions.
- P4. Use email, social networking sites and other technologies to receive and process information and customer requests in line with company policy and procedures.
- P5. Record and promptly pass on messages or information.
- P6. Inform customer of any problems and relevant action being taken.
- P7. Perform follow-up action as necessary.

You must be able to:

- K1. Identify the recognized principles of communicating electronically, by telephone and in writing.
- K2. Describe the different methods of collecting customer feedback on telephone.
- K3. Explain the importance of collecting customer feedback and how this can be used to improve customer service.
- K4. Describe how technology can affect and enhance the service delivery process.

B3. Communicate with customers and colleagues from diverse backgrounds.

You must be able to:

- P1. Treat customers and colleagues from diverse backgrounds with respect and sensitivity.
- P2. Consider cultural differences in verbal and non-verbal communication.
- P3. Use gestures or simple words to communicate where

You must be able to:

- K1. Identify the barriers to effective communication that can arise and how best to deal with these.
- K2. Identify and explain when it is necessary to seek advice or assistance from colleagues and when to take own initiative.

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| | <p>language barriers exist.</p> <p>P4. Obtain assistance from colleagues or supervisors when required to facilitate communications.</p> | <p>K3. Describe different types of dealings techniques with different types of behaviors</p> |
| <p>B4. Work in a team.</p> | <p>You must be able to:</p> <p>P1. Display a courteous and helpful manner at all times.</p> <p>P2. Complete allocated tasks willingly, according to set timeframes.</p> <p>P3. Actively seek or provide assistance by approaching other team members when difficulties arise.</p> <p>P4. Identify and use lines of communication with supervisors and peers according to company policy.</p> <p>P5. Encourage, acknowledge and act upon constructive feedback provided by other team members.</p> <p>P6. Use questioning to minimise misunderstandings.</p> <p>P7. Identify signs of potential workplace conflict wherever possible and take action to resolve the situation using open and respectful communication.</p> <p>P8. Participate in team problem solving.</p> <p>P9. Interpret organization's goals and objectives and translate them into individual targets</p> <p>P10. Prepare plan of action to achieve individual as well as team goals</p> | <p>You must be able to:</p> <p>K1. Define team work.</p> <p>K2. Explain the importance of team work.</p> <p>K3. Define company goals and objectives as well as SOPs of the company</p> <p>K4. Explain different concepts and techniques of problem solving</p> <p>K5. Describe systematic decision making process</p> <p>K6. Describe characteristics of a successful teamwork experience.</p> |
| <p>B5. Ask appropriate probing / questioning from customers</p> | <p>You must be able to:</p> <p>P1. Use different types of questions when appropriate.</p> <p>P2. Allow the other person to answer freely.</p> <p>P3. Collect facts, information and data about the other person's</p> | <p>You must be able to:</p> <p>K1. Explain:</p> <ul style="list-style-type: none"> • Open-ended questions • Close-ended questions • High gain questions • Mirror questions • Probing questions |

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| | <p>situation.</p> <p>P4. Focus on the necessary information (information that links directly to product or service)</p> | <ul style="list-style-type: none"> • Situation questions |
| <p>B6. Provide continuous feed-back</p> | <p>You must be able to:</p> <p>P1. Give and receive feed-back with customers.</p> <p>P2. Apply appropriate body language and read customers body language.</p> <p>P3. Give and receive feed-back with internal departments.</p> <p>P4. Design a communication system / process and share information.</p> <p>P5. Gain commitment from others to work together in the interest of the customers.</p> <p>P6. Conduct meetings.</p> <p>P7. Utilize the feed-back to identify opportunities for product / service improvement.</p> | <p>You must be able to:</p> <p>K1. Explain how to use customer feed-back to improve your business</p> <p>K2. Define importance of body language.</p> <p>K3. Explain communication ethics.</p> <p>K4. Define organizational Jargon.</p> |

Work effectively in a customer service/ sales environment

Purpose

This Competency standard identifies the competencies required Work Effectively in a Customer Service/Sales Environment as per Organization's approved guidelines and procedures. You will be expected to work within organizational requirements, support the work team, maintain personal presentation, develop effective work habits, portray ethical behaviour and acquire up to date product / service knowledge. Your underpinning knowledge about Work Effectively in a Customer Service/Sales Environment will be sufficient for you to provide the basics of the work.

Classification ISCED

0416 Wholesale and retail sales

Available grade

Competent / Not yet competent

Modification history

N/A

| Unit of Competency | Performance Criteria | Knowledge |
|---|---|--|
| F1. Work within organizational requirements. | You must be able to: P1. Identify and read organisation's requirements and responsibilities and seek advice from appropriate people where necessary. P2. Interpret staff rosters and provide sufficient notice of unavailability | You must be able to: K1. Define industry awards and agreements that relate to personal job role and terms and conditions of employment. K2. Differentiate between employer and employee responsibilities. K3. Explain different relevant legislation and statutory requirements. |

for rostered hours according to workplace policy and procedures.

- P3. Develop and use a current working knowledge and understanding of employee and employer rights and responsibilities.
- P4. Comply with relevant duty of care and legal responsibilities, and support organisational culture.
- P5. Identify roles and responsibilities of colleagues and immediate supervisors.
- P6. Identify standards and values considered to be detrimental to the organisation and communicate this through appropriate channels.
- P7. Identify, recognise and follow behaviour that contributes to a safe and sustainable work environment.

F2.Support the work team.

You must be able to:

- P1. Display courteous and helpful behaviour at all times.
- P2. Take opportunities to enhance the level of assistance offered to colleagues and meet all reasonable requests for assistance within acceptable workplace timeframes.
- P3. Complete allocated tasks as required.
- P4. Seek assistance when

You must be able to:

- K1. Explain the importance of team work
- K2. Define workplace relations
- K3. Explain workplace policies, plans and procedures, including:
 - Dealing with grievances
 - Discriminatory behavior
 - Equal opportunity issues.
 - Staff rosters and notification of shift
 - Availability or non-attendance

- difficulties arise.
- P5. Use questioning techniques to clarify instructions or responsibilities.
- P6. Identify and display a non-discriminatory attitude in all contacts with customers and other staff members.

- Providing customer service to colleagues and customers.

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| <p>F3. Maintain personal presentation.</p> | <p>You must be able to:</p> <p>P1. Observe appropriate dress code and presentation as required by the workplace, job role and level of customer contact.</p> <p>P2. Follow personal hygiene procedures according to organisational policy and relevant legislation.</p> | <p>You must be able to:</p> <p>K1. Explain hygiene and personal presentation</p> <p>K2. Explain the importance of workplace ethics</p> |
| <p>F4. Develop effective work habits.</p> | <p>You must be able to:</p> <p>P1. Interpret, confirm and act on workplace information, instructions and procedures relevant to the particular task.</p> <p>P2. Ask questions to seek and clarify workplace information.</p> <p>P3. Plan and organise daily work routine within the scope of the job role.</p> <p>P4. Prioritise and complete tasks according to required timeframes.</p> <p>P5. Identify work and personal priorities and achieve a balance between competing priorities</p> | <p>You must be able to:</p> <p>K1. Explain staff counseling and disciplinary procedures</p> <p>K2. Describe workplace organizational structure.</p> |

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| F5. Portray ethical behavior | You must be able to: P1. Follow ethical code of conduct. P2. Understand your customer's code of ethics. P3. Declare conflict of interest. P4. Maintain confidentiality. P5. Honour your commitments (timeframe, deliverables etc.) P6. Use internet for business only on company time. | You must be able to: K1. Explain the importance of ethical behavior. K2. Explain the importance of commitment in sales and customer services. |
| F6. Acquire up to date product / service knowledge | You must be able to: P1. Gather information about your product / services. P2. Identify the components of your product and services. P3. Recognize the essential selling features of your products and services. P4. Translate all essential features of your product and services. P5. Analyze product success. P6. Identify your market position. P7. Familiar with all product promotions, sales manuals and product literature. P8. Keep information of latest technology advances and seek ways to use these technologies in your work. | You must be able to: K1. Explain: <ul style="list-style-type: none"> • Price per product. • Profit per product / service. • Price flection • Product strengths • Product weaknesses. • Warranty / guarantee policies. • Packaging facilities and potential. K2. Explain how your product/service fits into your customers overall operations, business plan, sales success, operation cost etc. |

Develop professionalism

Purpose

This Competency standard identifies the competencies required to Develop Professionalism as per Organization's approved guidelines and procedures. You will be expected to create a personal vision / mission, manage your attitude, practice self-discipline, manage time, manage your professional development, and participate in trainings and performance review. Your underpinning knowledge about Develop Professionalism will be sufficient for you to provide the basics of the work.

Classification ISCED

0416 Wholesale and retail sales

Available grade

Competent / Not yet competent

Modification history

N/A

| Unit of Competency | Performance Criteria | Knowledge |
|---|--|---|
| G1. Create a personal vision / mission | You must be able to: P1. Clarify / prioritize self-values and consider the value of others. P2. Clarify expectations of yourself and expectations others have of you. P3. Identify what you need to do to be successful (personal standards, targets, goals, principals) P4. Set specific short and long term goals. P5. Translate the vision into | You must be able to: K1. Explain long and short term goals. K2. Explain why personal vision and mission is important for success. K3. Describe the advantages of personal vision and mission. |

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| | <p>actionable steps.</p> <p>P6. Integrate the vision into daily practice.</p> <p>P7. Recount frequently with your vision and change accordingly.</p> | |
| G2. Manage your attitude. | <p>You must be able to:</p> <p>P1. Challenge yourself, break old habits, and move out of your comfort zone.</p> <p>P2. Practice innovative techniques for out of the box creative thinking.</p> <p>P3. Seek out support and feedback from others on the team, in the organization / community etc.</p> <p>P4. Identify daily, weekly accomplishments.</p> <p>P5. Read inspirational material, audiotapes etc.</p> | <p>You must be able to:</p> <p>K1. Explain the importance of personal and professional motivation</p> <p>K2. Identify your positive attitude.</p> <p>K3. Explain the advantages of innovative ideas and techniques during job.</p> |
| G3. Practice self-discipline | <p>You must be able to:</p> <p>P1. Accountable for your performance.</p> <p>P2. Identify what you need to do to be successful.</p> <p>P3. Communicate your priorities to others.</p> <p>P4. Make and honour appointments with yourself and others.</p> <p>P5. Practice relaxation and energizing techniques.</p> | <p>You must be able to:</p> <p>K1. Explain the importance of communication.</p> <p>K2. Explain the advantages of self-discipline.</p> |
| G4. Manage time | <p>You must be able to:</p> <p>P1. Isolate key success activities and prioritize them.</p> <p>P2. Breakdown large tasks down into manageable action steps (set time frame).</p> <p>P3. Create or adopt action plans and follow it.</p> <p>P4. Set aside appropriate blocks of time for goal-related activities.</p> | <p>You must be able to:</p> <p>K1. Explain the importance of time management to achieve different tasks.</p> |

P5. Make the best possible use of support people / recourses to accomplish tasks.

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| <p>G5.Manage your professional development</p> | <p>You must be able to: P1. Take inventory of your personal interests, abilities, skills, knowledge etc. P2. Identify and prioritize the strengths and gaps. P3. Use available assessment tools. P4. Create a personal growth strategy / career path. P5. Set personal goals and timeframe for achieving them. P6. Learn from your mistakes.</p> | <p>You must be able to: K1. Explain the importance and need of professional development.</p> |
| <p>G6.Participate in trainings and performance review</p> | <p>You must be able to: P1. Analyse, evaluate and improve performance, and report significant issues/problems to senior management P2. Demonstrate to-do attitude in profession P3. Demonstrate understanding of skills requirements P4. Use the competences acquired in trainings</p> | <p>You must be able to: K1. Define concept about performance standards. K2. Explain policies, procedures and regulations regarding human resources of the organization. K3. Explain self-planning and management techniques K4. Define goals and strategies of self- development. K5. Explain relevant knowledge about training / job requirements</p> |

Comply with health and safety regulations

Purpose

This Competency standard identifies the competencies required to comply with health and Safety Regulations as per Organization's approved guidelines and procedures. You will be expected to interpret health and safety regulations, apply basic safety procedures and apply basic emergency procedures. Your underpinning knowledge about comply with health and safety regulations will be sufficient for you to provide the basics of the work.

Classification ISCED

0416 Wholesale and retail sales

Available grade

Competent / Not yet competent

Modification history

N/A

| Unit of Competency | Performance Criteria | Knowledge |
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| H1. Interpret health and safety regulations, standards and guidelines of an organization. | You must be able to: P1. Identify, understand and apply health and safety regulations at workplace P2. Assess risk of injury and equipment damages in common work situations and report to department concerned for timely response P3. Participate in quality enhancement of products or services of the | You must be able to: K1. Explain concepts and principles of health, safety, quality and environment regulations. K2. Define types of risk of injuring and equipment damages. K3. Describe types of risk and injury at workplace. K4. Explain the procedure of dealing with risk and injury situation. |

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| | <p>organization</p> <p>P4. Comply with quality and safety standards effectively</p> <p>P5. Handle toxic and hazardous material and product with caution</p> <p>P6. Assess risk of injuries and accidents and report it to senior management for avoiding serious injuries</p> | <p>K5. Explain health and safety policies and guidelines of the organization.</p> <p>K6. define characteristics and types of toxic and hazardous material or products offered by company and their impact on environment.</p> |
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H2. Apply basic safety procedures.

You must be able to:

- P1. Follow safety procedures to achieve a safe work environment, according to all relevant WHS legislation, including codes of practice relating to particular hazards in the industry or workplace.
- P2. Identify and report unsafe work practices , including faulty plant and equipment according to company policy and procedures
- P3. Manage dangerous goods and substances according to company policy and relevant legislation.
- P4. Identify potential manual handling risks and manage manual handling tasks according to company policy.
- P5. Report work-related incidents and accidents to designated personnel.
- P6. Participate in consultative processes and procedures for WHS.

You must be able to:

- K1. Explain appropriate use of personal protective clothing.
- K2. Explain the procedure to eliminating hazards.
- K3. Explain first aid procedures.

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| <p>H3. Apply basic emergency procedures.</p> | <p>You must be able to:</p> <ul style="list-style-type: none"> P1. Follow fire and emergency procedures, including evacuation, according to company policy and legislation. P2. Identify designated personnel responsible for first aid and evacuation procedures. P3. Accurately identifies safety alarms. | <p>You must be able to:</p> <ul style="list-style-type: none"> K1. Define fire, chemical and electrical hazards K2. Explain slip, trips and falls K3. Explain the procedure of storage of dangerous goods and hazardous substances and waste. K4. Define communication and consultation processes. K5. Explain manual handling procedures. |
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LIST OF TOOLS AND EQUIPMENT

| Sr. # | Description | Quantity |
|-------|---|----------|
| 1. | Air Blow Gun | 6 |
| 2. | Air Compressor | 1 |
| 3. | Allen Key (Star) Set | 6 |
| 4. | Allen Keys Set | 6 |
| 5. | Battery Charger | 1 |
| 6. | Battery Load tester | 2 |
| 7. | Bearing Installation tool | 2 |
| 8. | Bench Vice | 6 |
| 9. | Bolt Cutter | 6 |
| 10. | Brake Air Bleeding equipment | 6 |
| 11. | Brake repair tool kit (as per required vehicle) | 1 |
| 12. | Brush (Fiber) | 12 |
| 13. | Brush (wire) | 12 |
| 14. | Bushing and seal driver | 2 |
| 15. | Cable Cutter | 6 |
| 16. | Caliper Vernier | 6 |
| 17. | Caliper Vernier Digital | 2 |
| 18. | Chain Breaker | 6 |
| 19. | Compression tester | 6 |
| 20. | Crankcase Separator | 2 |
| 21. | Crimping tool | 2 |
| 22. | Drill Machine Hand hold (Electric) | 2 |
| 23. | Emery stone | 6 |

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| 24. | Engine tachometer | 2 |
| 25. | Fire blanket | 1 |
| 26. | Fire Extinguisher | 3 |
| 27. | First Aid Box | 1 |
| 28. | Funnel | 6 |
| 29. | Gauge (Tire Pressure) | 2 |
| 30. | Gauge Carburetor float level | 6 |
| 31. | Gauge Sag | 1 |
| 32. | Hack saw Frame | 6 |
| 33. | Handy Air Reel | 6 |
| 34. | Heat gun | 2 |
| 35. | Hydrometer | 6 |
| 36. | Impact Screw Driver Set | 6 |
| 37. | Impact tools Pneumatic | 6 |
| 38. | Iron Block | 2 |
| 39. | Lever (Different Size) | 2 |
| 40. | Lift Hydraulic | 3 |
| 41. | Lift Table (Pneumatic or hydraulic) | 3 |
| 42. | Magnetic Stick | 3 |
| 43. | Micrometer (inside/ outside) | 6 |
| 44. | Multi-meter (Digital) | 6 |
| 45. | Oil Cane | 6 |
| 46. | Oil Drain Pan | 6 |
| 47. | Personal Protective Equipment (PPEs) | 25 |
| 48. | Plier Grip | 6 |
| 49. | Puller Kit | 6 |

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| 50. | Reamers | 6 |
| 51. | Ring Compressor (Clamp) | 6 |
| 52. | Ring Expander | 6 |
| 53. | Safety Stands | 6 |
| 54. | Seal installer | 3 |
| 55. | Seal remover | 3 |
| 56. | Shock Spring Compressor | 3 |
| 57. | Spark Plug Cleaner and Tester | 1 |
| 58. | Special tools for Motorcycle engine inspection and overhauling | 2 |
| 59. | Special tools for Motorcycle ignition inspection and overhauling | 2 |
| 60. | Special tools for Motorcycle transmission inspection and overhauling | 2 |
| 61. | Special tools for Motorcycle Electrical System inspection and overhauling | 2 |
| 62. | Special tools for Motorcycle Handle, wheel removal & Installer | 2 |
| 63. | Stethoscope | 3 |
| 64. | T-Handle Set (6,8,10,12,14,17) Set | 6 |
| 65. | Timing light | 3 |
| 66. | Tool Board | 3 |
| 67. | Tool Tray (24X36,12X18) | 12 |
| 68. | Tusser | 6 |
| 69. | Valve Guide installation pilot | 3 |
| 70. | Valve Lifter | 6 |
| 71. | Valve spring compressor | 2 |
| 72. | V-block | 2 |
| 73. | Washing Tray | 12 |

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| 74. | Wire Striper | 6 |
| 75. | Working Table | 6 |
| 76. | Wrench Torque | 6 |
| 77. | Wrench Torque 10 to 150NM (Digital) | 6 |

| Sr. # | Description | Quantity |
|-------|------------------------------|----------|
| 1. | General Hand Tool kit | 6 |
| 2. | Center Punch | 6 |
| 3. | Chisel (Flat) Set | 6 |
| 4. | File set fine | 6 |
| 5. | Gauge (Feeler) | 6 |
| 6. | Hammer Ball Pin (Big) | 6 |
| 7. | Hammer Ball Pin (Small) | 6 |
| 8. | Hammer Cross Pin | 6 |
| 9. | Hammer Plastic | 6 |
| 10. | Hammer Soft Rubber | 6 |
| 11. | Hammer Wooden | 6 |
| 12. | Measuring Tape | 6 |
| 13. | Plier Circlip (External) | 6 |
| 14. | Plier Circlip (Internal) | 6 |
| 15. | Plier Combination | 6 |
| 16. | Plier Cutter | 6 |
| 17. | Plier Flat Nose | 6 |
| 18. | Plier Grip | 6 |
| 19. | Plier Nose | 6 |

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| 20. | Ring Spanner Set (6 to 32mm) | 6 |
| 21. | Scraper Flat | 6 |
| 22. | Scraper Tri Angular | 6 |
| 23. | Screw Driver Flat | 6 |
| 24. | Screw Driver Phillips Set | 6 |
| 25. | Screw Driver Phillips Small | 6 |
| 26. | Screw Driver Stubby Flat | 6 |
| 27. | Screw Driver Stubby Flat | 6 |
| 28. | Screw Driver Stubby Phillips | 6 |
| 29. | Scriber (Line) | 6 |
| 30. | Socket (6,8,10,12,14,16,17,19,21,24,27,32mm) Set | 6 |
| 31. | Socket Deep (6,8,10,12,14,16,17,19, 21,22mm) Set | 6 |
| 32. | Spanner Combination Set | 6 |
| 33. | Spanner Open End Set | 6 |
| 34. | Spanner Ring Set | 6 |
| 35. | Steel rule | 6 |
| 36. | Tool Box | 6 |
| 37. | Wrench (Adjustable) 6, 12,inch | 6 |
| 38. | Wrench (Pipe) 6,12 inch | 6 |