Four Wheeler Service Lead Technician

QP Code: ASC/Q1403

Version: 3.0

NSQF Level: 4

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ASC/Q1403: Four Wheeler Service Lead Technician

Brief Job Description

The individual in this job is responsible for service, repair, overhauling and diagnosis with a wide range of specialization for mechanical, electrical and electronic faults in four wheeler vehicles.

Personal Attributes

The person should be organised, team-oriented and have the ability to work independently for long hours in adverse conditions. They should be result-oriented, keen observers and have an eye for detail and quality.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. ASC/N9801: Organize work and resources (Service)
2. DGT/VSQ/N0102: Employability Skills (60 Hours)
3. ASC/N1404: Carry out diagnosis on four wheeler vehicle for repair requirements
4. ASC/N1405: Carry out service, repair and overhauling of mechanical systems in four wheeler vehicle
5. ASC/N1438: Carry out service, repair and overhauling of electrical and electronic systems in the four wheeler vehicle

Qualification Pack (QP) Parameters

Sector	Automotive
Sub-Sector	Automotive Vehicle Service
Occupation	Technical Service & Repair
Country	India
NSQF Level	4
Credits	18
Aligned to NCO/ISCO/ISIC Code	NCO-2015/3115.0602

Minimum Educational Qualification & Experience	10th Class (+ 2 years I.T.I Mechanic Auto Electrical and Electronics/Diesel Mechanic/ Mechanic Motor Vehicle (MMV) with 2 Years of experience of relevant experience OR 12th Class with 4 Years of experience of relevant experience OR Diploma (3 years from recognised body (Mechanical/Electrical/Electronics/Automobile, after Class 12th) OR Certificate-NSQF (Four Wheeler Service Technician Level 3) with 2 Years of experience
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	LMV Driving Licence
Minimum Job Entry Age	20 Years
Last Reviewed On	NA
Next Review Date	NA
NSQC Approval Date	
Version	3.0

ASC/N9801: Organize work and resources (Service)

Description

This NOS unit is about implementing safety, planning work, adopting sustainable practices for optimising use of resources

Scope

The scope covers the following :

- Maintain safe and secure working environment
- Perform work as per quality standards
- Health and hygiene
- Material/energy conservation practices
- Effective waste management practices

Elements and Performance Criteria

Maintain safe and secure working environment

To be competent, the user/individual on the job must be able to:

PC1. organise work as per organisation’s current health, safety and security policies and procedures

PC2. report any identified breaches in health, safety, and security policies and procedures to the designated person

PC3. identify the risks and hazards associated with work activities, their causes and prevention

Perform work as per quality standards

To be competent, the user/individual on the job must be able to:

PC4. ensure work area is clean and tidy

PC5. ensure that work is accomplished as per the requirements within the specified timeline

PC6. ensure team goals are given preference over individual goals

Health and hygiene

To be competent, the user/individual on the job must be able to:

PC7. sanitize workstation and equipment regularly

PC8. clean hands with soap, alcohol-based sanitizer regularly

PC9. avoid contact with ill people and self-isolate in a similar situation

PC10. wear and dispose PPEs regularly and appropriately

PC11. report advanced hygiene and sanitation issues to appropriate authority

PC12. follow stress and anxiety management techniques

Material/energy conservation practices

To be competent, the user/individual on the job must be able to:

PC13. identify ways to optimise usage of material in various tasks/activities/processes

PC14. use resources, including water, in a responsible manner

PC15. check for spills/leakages in various tasks/activities/processes

PC16. plug spills/leakages and escalate to appropriate authority if unable to rectify

PC17. carry out routine cleaning of tools, machines and equipment

PC18. check if the equipment/machine is functioning normally before commencing work and rectify wherever required

PC19. report malfunctioning (fumes/sparks/emission/vibration/noise) and lapse in maintenance of equipment

PC20. ensure electrical equipment and appliances are properly connected and turned off when not in use

Effective waste management practices

To be competent, the user/individual on the job must be able to:

PC21. identify recyclable and non-recyclable, and hazardous waste generated

PC22. segregate waste into different categories

PC23. dispose non-recyclable waste appropriately

PC24. deposit recyclable and reusable material at identified location

PC25. follow processes specified for disposal of hazardous waste

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. organisation procedures for health, safety and security, and individual role and responsibilities in this context

KU2. the organisations emergency procedures for different emergency situations and the importance of following the same

KU3. evacuation procedures for workers and visitors

KU4. how and when to report hazards as well as the limits of responsibility for dealing with hazards

KU5. potential hazards, risks and threats based on the nature of work

KU6. the implications of own work on the schedule and work of others

KU7. efficient utilisation of material and water

KU8. basics of electricity and prevalent energy efficient devices

KU9. ways to recognise common electrical problems

KU10. common practices of conserving electricity

KU11. common sources of pollution and ways to minimize it

KU12. categorisation of waste into dry, wet, recyclable, non-recyclable and items of single-use plastics

KU13. usage of different colours of dustbins

KU14. waste management and methods of waste disposal

KU15. significance of greening

KU16. organisation's policies to maintain personal health and hygiene at workplace

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. read instructions/guidelines/standard operating procedures
GS2. complete statutory documents relevant to safety and hygiene
GS3. modify work practices to improve them
GS4. ask for clarifications from superior about the job requirement
GS5. work with supervisors/team members to carry out work related tasks
GS6. complete tasks efficiently and accurately within stipulated time
GS7. inform/report to concerned person in case of any problem
GS8. make timely decisions for efficient utilization of resources
GS9. write in at least one language and complete written work with attention to detail
GS10. record data on waste disposal at workplace
GS11. be punctual, utilize time and manage workload efficiently
GS12. evaluate strategies to maintain, enhance or reduce the intensity of heightened emotional response

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Maintain safe and secure working environment	**8**	**4**	**-**	**3**
PC1. organise work as per organisation's current health, safety and security policies and procedures	-	2	-	1
PC2. report any identified breaches in health, safety, and security policies and procedures to the designated person	3	1	-	-
PC3. identify the risks and hazards associated with work activities, their causes and prevention	5	1	-	2
Perform work as per quality standards	**12**	**8**	**-**	**6**
PC4. ensure work area is clean and tidy	4	2	-	-
PC5. ensure that work is accomplished as per the requirements within the specified timeline	6	4	-	2
PC6. ensure team goals are given preference over individual goals	2	2	-	4
Health and hygiene	**12**	**8**	**-**	**5**
PC7. sanitize workstation and equipment regularly	2	2	-	2
PC8. clean hands with soap, alcohol-based sanitizer regularly	2	1	-	-
PC9. avoid contact with ill people and self-isolate in a similar situation	2	1	-	-
PC10. wear and dispose PPEs regularly and appropriately	2	2	-	1
PC11. report advanced hygiene and sanitation issues to appropriate authority	2	2	-	2
PC12. follow stress and anxiety management techniques	2	-	-	-
Material/energy conservation practices	**10**	**4**	**-**	**3**
PC13. identify ways to optimise usage of material in various tasks/activities/processes	2	-	-	1

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC14. use resources, including water, in a responsible manner	2	-	-	-
PC15. check for spills/leakages in various tasks/activities/processes	-	1	-	-
PC16. plug spills/leakages and escalate to appropriate authority if unable to rectify	-	1	-	1
PC17. carry out routine cleaning of tools, machines and equipment	2	-	-	-
PC18. check if the equipment/machine is functioning normally before commencing work and rectify wherever required	-	1	-	1
PC19. report malfunctioning (fumes/sparks/emission/vibration/noise) and lapse in maintenance of equipment	2	1	-	-
PC20. ensure electrical equipment and appliances are properly connected and turned off when not in use	2	-	-	-
Effective waste management practices	**8**	**6**	**-**	**3**
PC21. identify recyclable and non-recyclable, and hazardous waste generated	2	-	-	1
PC22. segregate waste into different categories	-	2	-	-
PC23. dispose non-recyclable waste appropriately	2	2	-	1
PC24. deposit recyclable and reusable material at identified location	2	1	-	-
PC25. follow processes specified for disposal of hazardous waste	2	1	-	1
NOS Total	**50**	**30**	**-**	**20**

National Occupational Standards (NOS) Parameters

NOS Code	ASC/N9801
NOS Name	Organize work and resources (Service)
Sector	Automotive
Sub-Sector	Generic
Occupation	Generic
NSQF Level	3
Credits	TBD
Version	1.0
Last Reviewed Date	30/12/2021
Next Review Date	28/04/2025
NSQC Clearance Date	28/04/2022

DGT/VSQ/N0102: Employability Skills (60 Hours)

Description

This unit is about employability skills, Constitutional values, becoming a professional in the 21st Century, digital, financial, and legal literacy, diversity and Inclusion, English and communication skills, customer service, entrepreneurship, and apprenticeship, getting ready for jobs and career development.

Scope

The scope covers the following :

- Introduction to Employability Skills
- Constitutional values - Citizenship
- Becoming a Professional in the 21st Century
- Basic English Skills
- Career Development & Goal Setting
- Communication Skills
- Diversity & Inclusion
- Financial and Legal Literacy
- Essential Digital Skills
- Entrepreneurship
- Customer Service
- Getting ready for Apprenticeship & Jobs

Elements and Performance Criteria

Introduction to Employability Skills

To be competent, the user/individual on the job must be able to:

PC1. identify employability skills required for jobs in various industries

PC2. identify and explore learning and employability portals

Constitutional values – Citizenship

To be competent, the user/individual on the job must be able to:

PC3. recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.

PC4. follow environmentally sustainable practices

Becoming a Professional in the 21st Century

To be competent, the user/individual on the job must be able to:

PC5. recognize the significance of 21st Century Skills for employment

PC6. practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life

Basic English Skills

To be competent, the user/individual on the job must be able to:

PC7. use basic English for everyday conversation in different contexts, in person and over the telephone

PC8. read and understand routine information, notes, instructions, mails, letters etc. written in English

PC9. write short messages, notes, letters, e-mails etc. in English

Career Development & Goal Setting

To be competent, the user/individual on the job must be able to:

PC10. understand the difference between job and career

PC11. prepare a career development plan with short- and long-term goals, based on aptitude

Communication Skills

To be competent, the user/individual on the job must be able to:

PC12. follow verbal and non-verbal communication etiquette and active listening techniques in various settings

PC13. work collaboratively with others in a team

Diversity & Inclusion

To be competent, the user/individual on the job must be able to:

PC14. communicate and behave appropriately with all genders and PwD

PC15. escalate any issues related to sexual harassment at workplace according to POSH Act

Financial and Legal Literacy

To be competent, the user/individual on the job must be able to:

PC16. select financial institutions, products and services as per requirement

PC17. carry out offline and online financial transactions, safely and securely

PC18. identify common components of salary and compute income, expenses, taxes, investments etc

PC19. identify relevant rights and laws and use legal aids to fight against legal exploitation

Essential Digital Skills

To be competent, the user/individual on the job must be able to:

PC20. operate digital devices and carry out basic internet operations securely and safely

PC21. use e- mail and social media platforms and virtual collaboration tools to work effectively

PC22. use basic features of word processor, spreadsheets, and presentations

Entrepreneurship

To be competent, the user/individual on the job must be able to:

PC23. identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research

PC24. develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion

PC25. identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity

Customer Service

To be competent, the user/individual on the job must be able to:

PC26. identify different types of customers

PC27. identify and respond to customer requests and needs in a professional manner.

PC28. follow appropriate hygiene and grooming standards

Getting ready for apprenticeship & Jobs

To be competent, the user/individual on the job must be able to:

PC29. create a professional Curriculum vitae (Résumé)

PC30. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively

PC31. apply to identified job openings using offline /online methods as per requirement

PC32. answer questions politely, with clarity and confidence, during recruitment and selection

PC33. identify apprenticeship opportunities and register for it as per guidelines and requirements

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. need for employability skills and different learning and employability related portals

KU2. various constitutional and personal values

KU3. different environmentally sustainable practices and their importance

KU4. Twenty first (21st) century skills and their importance

KU5. how to use English language for effective verbal (face to face and telephonic) and written communication in formal and informal set up

KU6. importance of career development and setting long- and short-term goals

KU7. about effective communication

KU8. POSH Act

KU9. Gender sensitivity and inclusivity

KU10. different types of financial institutes, products, and services

KU11. how to compute income and expenditure

KU12. importance of maintaining safety and security in offline and online financial transactions

KU13. different legal rights and laws

KU14. different types of digital devices and the procedure to operate them safely and securely

KU15. how to create and operate an e- mail account and use applications such as word processors, spreadsheets etc.

KU16. how to identify business opportunities

KU17. types and needs of customers

KU18. how to apply for a job and prepare for an interview

KU19. apprenticeship scheme and the process of registering on apprenticeship portal

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. read and write different types of documents/instructions/correspondence

GS2. communicate effectively using appropriate language in formal and informal settings

GS3. behave politely and appropriately with all

GS4. how to work in a virtual mode

GS5. perform calculations efficiently
GS6. solve problems effectively
GS7. pay attention to details
GS8. manage time efficiently
GS9. maintain hygiene and sanitization to avoid infection

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Introduction to Employability Skills	**1**	**1**	**-**	**-**
PC1. identify employability skills required for jobs in various industries	-	-	-	-
PC2. identify and explore learning and employability portals	-	-	-	-
Constitutional values – Citizenship	**1**	**1**	**-**	**-**
PC3. recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.	-	-	-	-
PC4. follow environmentally sustainable practices	-	-	-	-
Becoming a Professional in the 21st Century	**2**	**4**	**-**	**-**
PC5. recognize the significance of 21st Century Skills for employment	-	-	-	-
PC6. practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life	-	-	-	-
Basic English Skills	**2**	**3**	**-**	**-**
PC7. use basic English for everyday conversation in different contexts, in person and over the telephone	-	-	-	-
PC8. read and understand routine information, notes, instructions, mails, letters etc. written in English	-	-	-	-
PC9. write short messages, notes, letters, e-mails etc. in English	-	-	-	-
Career Development & Goal Setting	**1**	**2**	**-**	**-**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. understand the difference between job and career	-	-	-	-
PC11. prepare a career development plan with short- and long-term goals, based on aptitude	-	-	-	-
Communication Skills	**2**	**2**	**-**	**-**
PC12. follow verbal and non-verbal communication etiquette and active listening techniques in various settings	-	-	-	-
PC13. work collaboratively with others in a team	-	-	-	-
Diversity & Inclusion	**1**	**2**	**-**	**-**
PC14. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC15. escalate any issues related to sexual harassment at workplace according to POSH Act	-	-	-	-
Financial and Legal Literacy	**2**	**3**	**-**	**-**
PC16. select financial institutions, products and services as per requirement	-	-	-	-
PC17. carry out offline and online financial transactions, safely and securely	-	-	-	-
PC18. identify common components of salary and compute income, expenses, taxes, investments etc	-	-	-	-
PC19. identify relevant rights and laws and use legal aids to fight against legal exploitation	-	-	-	-
Essential Digital Skills	**3**	**4**	**-**	**-**
PC20. operate digital devices and carry out basic internet operations securely and safely	-	-	-	-
PC21. use e- mail and social media platforms and virtual collaboration tools to work effectively	-	-	-	-
PC22. use basic features of word processor, spreadsheets, and presentations	-	-	-	-
Entrepreneurship	**2**	**3**	**-**	**-**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC23. identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research	-	-	-	-
PC24. develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion	-	-	-	-
PC25. identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity	-	-	-	-
Customer Service	**1**	**2**	**-**	**-**
PC26. identify different types of customers	-	-	-	-
PC27. identify and respond to customer requests and needs in a professional manner.	-	-	-	-
PC28. follow appropriate hygiene and grooming standards	-	-	-	-
Getting ready for apprenticeship & Jobs	**2**	**3**	**-**	**-**
PC29. create a professional Curriculum vitae (Résumé)	-	-	-	-
PC30. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively	-	-	-	-
PC31. apply to identified job openings using offline /online methods as per requirement	-	-	-	-
PC32. answer questions politely, with clarity and confidence, during recruitment and selection	-	-	-	-
PC33. identify apprenticeship opportunities and register for it as per guidelines and requirements	-	-	-	-
NOS Total	**20**	**30**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	DGT/VSQ/N0102
NOS Name	Employability Skills (60 Hours)
Sector	Cross Sectoral
Sub-Sector	Professional Skills
Occupation	Employability
NSQF Level	4
Credits	2
Version	1.0
Last Reviewed Date	31/08/2023
Next Review Date	31/08/2026
NSQC Clearance Date	31/08/2023

ASC/N1404: Carry out diagnosis on four wheeler vehicle for repair requirements

Description

This NOS unit is about diagnosing the mechanical and electrical/electronic aggregates in a vehicle and proposing repair to be carried out.

Scope

The scope covers the following :

- Inspect and identify/validate faults
- Prepare to perform diagnostic tests
- Perform tests to identify the root cause of fault
- Conclude the repair solution for the fault

Elements and Performance Criteria

Inspect and identify/validate faults

To be competent, the user/individual on the job must be able to:

PC1. review the job card, obtain required information from customer/service advisor to assess service and repair requirements

PC2. identify the auto components related to the various aggregates in the vehicle

PC3. check the functioning of vehicle systems such as mechanical and electrical systems, air conditioning system etc.

PC4. conduct test drive to check vehicle performance and identify/validate the faults

PC5. conduct visual inspection to assess defects such as external impact/bend/leak/incorrect fluid level/wear & tear etc.

PC6. determine the precise location of faults in vehicle systems

PC7. report the malfunctions/repairs in the vehicle beyond own scope to the concerned person

Prepare to perform diagnostic tests

To be competent, the user/individual on the job must be able to:

PC8. place the vehicle on suitable platform according to nature of job to be performed

PC9. ensure workshop tools/measuring devices/equipment required for fault diagnosis in vehicle systems are collected and checked for their condition and calibration

PC10. report the malfunctions if any, in the tools/equipment to the person concerned for rectification

PC11. ensure tools/equipment are placed in an organised manner for maintaining a safe and tidy workstation

PC12. wear PPE according to nature of job to be performed

Perform tests to identify the root cause of fault

To be competent, the user/individual on the job must be able to:

PC13. take precautions to avoid damage to the vehicle and its components during diagnosis or troubleshooting the faults

PC14. follow OEM SOP and standard safety procedures while handling tool/equipment, vehicle component, fluids, hazardous substances and while working in hazardous environments

PC15. use checklists and OEM Standard Operating Procedures (SOPs) to understand if the fault is because of improper servicing, poor lubrication, low level of fluids, premature component failure, loose/poor contacts of pins in wiring harness connectors and their connection, improper driving style etc.

PC16. apply the appropriate device/equipment to make inspection and diagnose deficiencies/faults in various systems such as engine management system, force induction, emission and exhaust system, vehicle body electrical/electronic systems, braking and stability control systems, steering, suspension and drive line systems, etc.

PC17. use manufacturer's and component supplier’s specifications to identify duplicate or defective component/parts which cannot be detected during visual inspection

PC18. follow SOP set out for troubleshooting and perform tests using various mechanical, electrical/electronic measuring devices/testers/diagnostic tools/software to identify/isolate a fault

PC19. diagnose indirect faults if any, in vehicle's mechanical, electrical and electronic systems as per OEM SOP

PC20. report the malfunctions in the vehicle where solution is not available or in case of new premature failures, to the concerned person along with preliminary diagnostic details and respond to issues or questions arising

PC21. dismantle and reassemble aggregates of a vehicle for fault diagnosis

Conclude the repair solution for the fault

To be competent, the user/individual on the job must be able to:

PC22. maintain the documentation related to inspections and troubleshooting performed on the vehicle

PC23. interpret inspection, measurement and test results as required

PC24. compare results of diagnostic inspections/tests with vehicle specifications and regulatory requirements

PC25. validate the options for repair or replacement

PC26. prepare final proposal regarding repair/replacement, repairing process and time requirements with justification

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. the automotive industry in India, workshop structure and role and responsibilities of different people in the workshop

KU2. SOP for receiving vehicles, opening job card, allocation of work, invoicing, vehicle delivery, handling complaints etc.

KU3. different components/aggregates as well as auto component manufacturer's specifications for the same

KU4. technology used in functioning of various electrical, mechanical systems of the vehicle and their integration such as engine management systems (petrol, diesel, gas and hybrid), engine mechanical systems, forced induction, emission and exhaust systems, body electrical and electronic system, transmission system, brake and stability control system, air-conditioning systems, active & passive safety system, media and other systems self-starter, alternator, charging systems etc.

KU5. interconnection of systems with each other and effect of one system on other systems

KU6. fundamental terms, laws and principles used in vehicles such as: voltage, current (AC/DC/HV), resistance, power, capacitance, inductance, discrete electronic components, radio frequency, torque, traction, OHM's law, pascal's law, law of levers etc., automotive communication protocols such as Controller Area Network (CAN), Local Interconnect Network(LIN), Media Oriented Systems Transport(MOST) etc.

KU7. use of relevant measuring device/equipment and interpretation of all relevant mathematical calculations

KU8. various electrical and electronic signals such as electrical inputs, outputs, voltage, pulse-width modulation, digital signal (including infrared and fiber optics) etc.

KU9. symbols, units and terms used in wiring diagrams associated with electrical/electric systems/components of the vehicle

KU10. how to use computer, on-line application and OEM technical information/assistance portals

KU11. various sources of information available for assessing service and repair requirements of the vehicle including diagnostic displays, visual inspections, test drives, vehicle/equipment manufacturer specifications, and tolerance limits of components

KU12. industry standards required for inspection and fault reporting in oral, written, and electronic formats

KU13. typical symptoms of common faults and failures in vehicle mechanical, electrical and electronic systems

KU14. various types of health and safety hazards commonly present in the work environment such as physical hazards, electrical hazards, chemical hazards, fire hazards, equipment related hazards, health hazards, etc.

KU15. safety, health and environmental policies and regulations for the work place as well as for automotive trade in general

KU16. safety requirements recommended by the OEM for handling tool/equipment, hazardous substances and while working in hazardous environments

KU17. legal regulations that need to be considered for handling hybrid vehicles in the workshop

KU18. occupational Safety and Health (OSH) measures required for working on vehicles

KU19. various methods to dispose-off replaced failed components/parts, fluids and hazardous substances

KU20. Standard Operating Procedures (SOPs) of the organization/ dealership for inspection and diagnosis of faults in a vehicle as prescribed by the OEM/components manufacturer

KU21. SOP recommended by OEM for using tools/equipment for diagnosis or troubleshooting such as special service tools, measuring instrument, volt meters, ammeters, ohmmeters, battery tester, dedicated and computer based diagnostic equipment, oscilloscopes etc.

KU22. different types of errors or defects in the tools/equipment

KU23. documentation requirements for each procedure carried out as part of roles and responsibilities as specified by OEM/ auto component manufacturer

KU24. organizational/professional code of ethics and standards of practice

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. read and interpret workplace related documentation

GS2. communicate using terms, names, grades and other nomenclature pertaining to the automotive trade

GS3. analyse and apply the information gathered from observation, experience, reasoning or communication to act efficiency

GS4. identify potential workplace problem and take suitable action

GS5. read various sources of information available for assessing service and repair requirements

GS6. write in English/regional language

GS7. plan work according to the required schedule and location

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Inspect and identify/validate faults	**5**	**10**	**-**	**5**
PC1. review the job card, obtain required information from customer/service advisor to assess service and repair requirements	-	1	-	-
PC2. identify the auto components related to the various aggregates in the vehicle	1	1	-	1
PC3. check the functioning of vehicle systems such as mechanical and electrical systems, air conditioning system etc.	2	1	-	1
PC4. conduct test drive to check vehicle performance and identify/validate the faults	-	2	-	-
PC5. conduct visual inspection to assess defects such as external impact/bend/leak/incorrect fluid level/wear & tear etc.	2	2	-	1
PC6. determine the precise location of faults in vehicle systems	-	2	-	2
PC7. report the malfunctions/repairs in the vehicle beyond own scope to the concerned person	-	1	-	-
Prepare to perform diagnostic tests	**5**	**10**	**-**	**4**
PC8. place the vehicle on suitable platform according to nature of job to be performed	-	2	-	-
PC9. ensure workshop tools/measuring devices/equipment required for fault diagnosis in vehicle systems are collected and checked for their condition and calibration	2	2	-	2
PC10. report the malfunctions if any, in the tools/equipment to the person concerned for rectification	1	2	-	1
PC11. ensure tools/equipment are placed in an organised manner for maintaining a safe and tidy workstation	-	2	-	-
PC12. wear PPE according to nature of job to be performed	2	2	-	1

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Perform tests to identify the root cause of fault	**15**	**20**	**-**	**7**
PC13. take precautions to avoid damage to the vehicle and its components during diagnosis or troubleshooting the faults	1	1	-	1
PC14. follow OEM SOP and standard safety procedures while handling tool/equipment, vehicle component, fluids, hazardous substances and while working in hazardous environments	2	2	-	-
PC15. use checklists and OEM Standard Operating Procedures (SOPs) to understand if the fault is because of improper servicing, poor lubrication, low level of fluids, premature component failure, loose/poor contacts of pins in wiring harness connectors and their connection, improper driving style etc.	2	2	-	-
PC16. apply the appropriate device/equipment to make inspection and diagnose deficiencies/faults in various systems such as engine management system, force induction, emission and exhaust system, vehicle body electrical/electronic systems, braking and stability control systems, steering, suspension and drive line systems, etc.	2	3	-	2
PC17. use manufacturer's and component supplier’s specifications to identify duplicate or defective component/parts which cannot be detected during visual inspection	2	2	-	-
PC18. follow SOP set out for troubleshooting and perform tests using various mechanical, electrical/electronic measuring devices/testers/diagnostic tools/software to identify/isolate a fault	2	2	-	1
PC19. diagnose indirect faults if any, in vehicle's mechanical, electrical and electronic systems as per OEM SOP	2	2	-	2
PC20. report the malfunctions in the vehicle where solution is not available or in case of new premature failures, to the concerned person along with preliminary diagnostic details and respond to issues or questions arising	2	3	-	1

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC21. dismantle and reassemble aggregates of a vehicle for fault diagnosis	-	3	-	-
Conclude the repair solution for the fault	**5**	**10**	**-**	**4**
PC22. maintain the documentation related to inspections and troubleshooting performed on the vehicle	-	2	-	-
PC23. interpret inspection, measurement and test results as required	2	2	-	1
PC24. compare results of diagnostic inspections/tests with vehicle specifications and regulatory requirements	2	2	-	2
PC25. validate the options for repair or replacement	1	2	-	1
PC26. prepare final proposal regarding repair/replacement, repairing process and time requirements with justification	-	2	-	-
NOS Total	**30**	**50**	**-**	**20**

National Occupational Standards (NOS) Parameters

NOS Code	ASC/N1404
NOS Name	Carry out diagnosis on four wheeler vehicle for repair requirements
Sector	Automotive
Sub-Sector	Automotive Vehicle Service
Occupation	Technical Service & Repair
NSQF Level	5
Credits	TBD
Version	2.0
Last Reviewed Date	NA
Next Review Date	27/05/2026
NSQC Clearance Date	27/05/2021

ASC/N1405: Carry out service, repair and overhauling of mechanical systems in four wheeler vehicle

Description

This unit describes the knowledge and skills required in an individual to carry out service, repair and overhauling of mechanical system of a four wheeler vehicle.

Scope

The scope covers the following :

- Prepare to carry out service, repair and overhauling
- Perform service, repairs and overhauling job
- Perform post service/repair routine

Elements and Performance Criteria

Prepare to carry out service, repair and overhauling

To be competent, the user/individual on the job must be able to:

PC1. review the job card, obtain sufficient information from customer/service advisor to assess service and repair needs of the vehicle

PC2. identify the auto components related to the various aggregates in the vehicle

PC3. place the vehicle on suitable platform according to nature of job to be performed

PC4. conduct visual inspection to assess defects such as any external impact/bend/leak/incorrect level/wear & tear etc.

PC5. ensure workshop tools/measuring devices/equipment required for the job are collected and check their condition/calibration

PC6. report the malfunctions if any, in the tools/equipment to the person concerned for rectification

PC7. report the malfunctions/repairs in the vehicle beyond own scope to the concerned person

PC8. prepare final proposal regarding repair/replacement, repairing process and time requirements with justification

PC9. ensure tools/equipment are placed in an organised manner for maintaining safe and tidy workstation

PC10. wear PPE according to nature of job to be performed

Perform service, repairs and overhauling job

To be competent, the user/individual on the job must be able to:

PC11. take precautions to avoid damage to the vehicle and its components while working on various aggregates

PC12. follow OEM SOP and standard safety procedures while handling tool/equipment, vehicle component, fluids, hazardous substances and while working in hazardous environments

PC13. remove parts relevant to various mechanical aggregates and place them securely as specified by OEM

PC14. dismantle mechanical aggregates, if required and report additional repair requirement

PC15. test mechanical components post removal wherever applicable as per OEM SOP

PC16. clean and condition dismantled components, including mechanical and electrical aggregates, prior to assembly

PC17. perform service/repair/replacement/calibration/overhauling of mechanical system/aggregate such as engine, transmission, running systems, etc. including power assisted braking & steering systems

PC18. repair indirect faults in mechanical aggregate due to other system/component

PC19. maintain the documentation related to inspection, servicing and repair of the vehicle

Perform post service/repair routine

To be competent, the user/individual on the job must be able to:

PC20. check the performance of vehicle/aggregate post repair and report to supervisor/service advisor if further inspection is required by another specialist

PC21. ensure completeness of tasks assigned before releasing the vehicle for the next procedure

PC22. dispose off materials such as waste oil, scrap of failed parts/aggregates, as per organisation's policies

PC23. ensure all tools, auxiliary material and other equipment is removed from the work site

PC24. perform scheduled checks, calibration and timely repairs for workshop tools, equipment and workstations

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. the automotive industry in India, workshop structure and role and responsibilities of different people in the workshop

KU2. Standard Operating Procedures (SOP) for receiving vehicles, opening job card, allocation of work, invoicing, vehicle delivery, handling complaints, etc.

KU3. different components/aggregates as well as auto component manufacturer's specifications for the same

KU4. basic technology used in and functioning of various mechanical systems and components of the vehicle such as engine, drive train, running system, various lubrication system, hydraulic/pneumatic systems, cooling system, etc.

KU5. interconnection of systems with each other and one system's effect on other

KU6. fundamental terms, laws and principles such as Pascal law, law of inertia, Archimedes law of lever, gravitation, friction, thermal conduction, etc.

KU7. SOP recommended by OEM for using diagnostic and troubleshooting tools/equipment related to mechanical component/aggregate such as special service tools, measuring instrument, pressure indicators/gauges, air bleeding equipment, etc.

KU8. different types of errors or defects in the tools/equipment

KU9. various sources of information available for vehicle/equipment manufacturer specifications, tolerance limits of components and options for repair or replacement.

KU10. OEM's SOPs for service, repair and overhauling of mechanical aggregate of the vehicle

KU11. standard schedules and checklists recommended by the OEM/auto component manufacturer for servicing of mechanical component/aggregate in the vehicle

KU12. various methods for removal, dismantling, cleaning, adjusting, reassembling and testing of mechanical components for proper functioning

KU13. type and quality of consumables/materials used for the job such as seals, sealant, fasteners, lubricants etc.

KU14. various types of health and safety hazards commonly present in the work environment such as physical hazards, electrical hazards, chemical hazards, fire hazards, equipment related hazards, health hazards, etc.

KU15. safety, health and environmental policies and regulations for the work place as well as for automotive trade in general

KU16. safety requirements recommended by the OEM for handling tool/equipment, hazardous substances and while working in hazardous environments

KU17. legal regulations that need to be considered for handling hybrid vehicle in the workshop

KU18. Occupational Safety and Health (OSH) measures required for working on vehicles

KU19. various methods to dispose-off replaced failed components/parts, fluids and hazardous substances

KU20. organisational/professional code of ethics and standards of practice

KU21. documentation requirements for each procedure carried out as part of roles and responsibilities as specified by OEM/auto component manufacturer

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. read and interpret workplace related documentation

GS2. interpret the needs of customers by understanding the key issues

GS3. communicate using terms, names, grades and other nomenclature pertaining to the automotive trade

GS4. analyse and apply the information gathered from observation, experience, reasoning or communication to act efficiently

GS5. identify potential workplace problem and take suitable action

GS6. read various sources of information available for servicing, repairs and overhauling procedures.

GS7. read policies and regulations pertinent to the job, including OEM guidelines, Health and Safety instructions etc. while working on the Vehicle and its aggregates

GS8. write in English/regional language

GS9. communicate effectively at the workplace

GS10. plan work according to the required schedule and location

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Prepare to carry out service, repair and overhauling	**10**	**20**	**-**	**8**
PC1. review the job card, obtain sufficient information from customer/service advisor to assess service and repair needs of the vehicle	1	2	-	-
PC2. identify the auto components related to the various aggregates in the vehicle	1	2	-	2
PC3. place the vehicle on suitable platform according to nature of job to be performed	1	3	-	-
PC4. conduct visual inspection to assess defects such as any external impact/bend/leak/incorrect level/wear & tear etc.	1	3	-	2
PC5. ensure workshop tools/measuring devices/equipment required for the job are collected and check their condition/calibration	1	1	-	-
PC6. report the malfunctions if any, in the tools/equipment to the person concerned for rectification	1	2	-	2
PC7. report the malfunctions/repairs in the vehicle beyond own scope to the concerned person	1	1	-	-
PC8. prepare final proposal regarding repair/replacement, repairing process and time requirements with justification	1	2	-	-
PC9. ensure tools/equipment are placed in an organised manner for maintaining safe and tidy workstation	1	2	-	-
PC10. wear PPE according to nature of job to be performed	1	2	-	2
Perform service, repairs and overhauling job	**15**	**20**	**-**	**7**
PC11. take precautions to avoid damage to the vehicle and its components while working on various aggregates	1	2	-	1
PC12. follow OEM SOP and standard safety procedures while handling tool/equipment, vehicle component, fluids, hazardous substances and while working in hazardous environments	2	3	-	2

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. remove parts relevant to various mechanical aggregates and place them securely as specified by OEM	1	2	-	-
PC14. dismantle mechanical aggregates, if required and report additional repair requirement	-	2	-	-
PC15. test mechanical components post removal wherever applicable as per OEM SOP	2	3	-	1
PC16. clean and condition dismantled components, including mechanical and electrical aggregates, prior to assembly	2	2	-	-
PC17. perform service/repair/replacement/calibration/overhauling of mechanical system/aggregate such as engine, transmission, running systems, etc. including power assisted braking & steering systems	3	2	-	2
PC18. repair indirect faults in mechanical aggregate due to other system/component	2	2	-	1
PC19. maintain the documentation related to inspection, servicing and repair of the vehicle	2	2	-	-
Perform post service/repair routine	**5**	**10**	**-**	**5**
PC20. check the performance of vehicle/aggregate post repair and report to supervisor/service advisor if further inspection is required by another specialist	-	3	-	2
PC21. ensure completeness of tasks assigned before releasing the vehicle for the next procedure	-	1	-	-
PC22. dispose off materials such as waste oil, scrap of failed parts/aggregates, as per organisation’s policies	2	3	-	2
PC23. ensure all tools, auxiliary material and other equipment is removed from the work site	1	3	-	-
PC24. perform scheduled checks, calibration and timely repairs for workshop tools, equipment and workstations	2	-	-	1
NOS Total	**30**	**50**	**-**	**20**

National Occupational Standards (NOS) Parameters

NOS Code	ASC/N1405
NOS Name	Carry out service, repair and overhauling of mechanical systems in four wheeler vehicle
Sector	Automotive
Sub-Sector	Automotive Vehicle Service
Occupation	Technical Service & Repair
NSQF Level	5
Credits	TBD
Version	2.0
Last Reviewed Date	NA
Next Review Date	27/05/2026
NSQC Clearance Date	27/05/2021

ASC/N1438: Carry out service, repair and overhauling of electrical and electronic systems in the four wheeler vehicle

Description

This unit describes the knowledge and skills required in an individual to carry out service, repair and overhauling of electrical and electronic system of a vehicle.

Scope

The scope covers the following :

- Prepare to carry out service, repair and overhauling
- Perform service, repairs and overhauling
- Perform post service/repair routine

Elements and Performance Criteria

Prepare to carry out service, repair and overhauling

To be competent, the user/individual on the job must be able to:

PC1. review the job card, obtain sufficient information from customer/service advisor to assess service and repair needs of the vehicle

PC2. identify the auto components related to the various aggregates in the vehicle

PC3. place the vehicle on suitable platform according to nature of job to be performed

PC4. conduct visual inspection to assess defects such as any external impact/bend/leak/incorrect level/wear & tear etc.

PC5. ensure workshop tools/measuring devices/equipment required for the job are collected and check their condition/calibration

PC6. report the malfunctions if any, in the tools/equipment to the person concerned for rectification

PC7. prepare final proposal regarding repair/replacement, repairing process and time requirements with justification

PC8. ensure tools/equipment are placed in an organised manner for safe and tidy workstation

PC9. wear PPE according to nature of job to be performed

Perform service, repairs and overhauling

To be competent, the user/individual on the job must be able to:

PC10. report the malfunctions/repairs in the vehicle beyond own scope to the concerned person

PC11. take precautions to avoid damage to the vehicle and its components while working on various aggregates

PC12. follow OEM SOP and standard safety procedures while handling tool/equipment, vehicle component, fluids, hazardous substances and while working in hazardous environments

PC13. remove parts relevant to various electrical/electronics systems and place them securely as specified by OEM

PC14. dismantle electrical aggregate, if required and report additional repair requirement

PC15. test electrical/electronic components post removal wherever applicable as per OEM SOP

PC16. clean and condition dismantled components, including mechanical and electrical aggregates, prior to assembly

PC17. perform repair of all electrical and electronic faults including direct faults in input sensors, output actuators, wiring harnesses, computer systems, calibration/adjustment specifications, component specifications, component assembly, system modifications

PC18. repair indirect faults in electrical/electronic aggregate due to other system/component

PC19. maintain the documentation related to inspection, servicing and repair of the vehicle

Perform post service/repair routine

To be competent, the user/individual on the job must be able to:

PC20. check the performance of vehicle/aggregate post repair and report to supervisor/service advisor if further inspection is required by another specialist

PC21. ensure completeness of tasks assigned before releasing the vehicle for the next procedure

PC22. dispose off materials such as old batteries, scrap of failed parts/aggregates as per organization's policies

PC23. ensure all tools, auxiliary material and other equipment are removed from the work site

PC24. perform scheduled checks, calibration and timely repairs for workshop tools, equipment and workstations

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. the automotive Industry in India, workshop structure and role and responsibilities of different people in the workshop

KU2. Standard Operating Procedures (SOP) for receiving vehicles, opening job card, allocation of work, invoicing, vehicle delivery, handling complaints, etc.

KU3. different components/aggregates as well as auto component manufacturer's specifications for the same

KU4. fundamental terms, laws and principles of electricity used in electrical & electronic systems such as: principles of storing electrical voltage, ohms law, voltage, current (AC/DC/HV), resistance, power, capacitance, electrostatics, magnetic, inductance, discrete electronic components, and radio frequency (automotive digital computers, automotive communication protocols such as CAN, LIN, etc.)

KU5. basic technology used in and functioning of engine management system, body management system, transmission system, telematics, brake system, air-conditioning systems, active & passive safety system, media and other systems, self-starter, alternator, charging systems etc.

KU6. interconnection of systems with each other and effect of one system on another

KU7. SOP recommended by OEM for using tools and equipment for diagnosis or troubleshooting related to electrical/electronic systems such as special service tools, measuring instrument, volt meters, ammeters, ohmmeters, battery tester, dedicated and computer based diagnostic equipment, etc.

KU8. various sources of information available for assessing service and repair of the vehicle such as diagnostic displays, visual inspections, test drives, vehicle/equipment manufacturer specifications, tolerance limits of components and options for repair or replacement

KU9. SOP for service, repair and overhauling of electrical/electronics aggregate of the vehicle as prescribed by the OEM

KU10. various methods to remove, dismantle, cleaning, adjusting, reassemble and test electrical/electronic components

KU11. type and quality of consumables/materials used for the job such as seals, sealant, fasteners, lubricants etc.

KU12. various types of health and safety hazards commonly present in the work environment such as physical hazards, electrical hazards, chemical hazards, fire hazards, equipment related hazards, health hazards, etc.

KU13. safety, health and environmental policies and regulations for the work place as well as for automotive trade in general

KU14. safety requirements recommended by the OEM for handling tool/equipment, hazardous substances and while working in hazardous environments

KU15. legal regulations that need to be considered for handling hybrid vehicles in the workshop

KU16. Occupational Safety and Health (OSH) measures required for working on vehicles

KU17. various methods to dispose-off replaced failed components/parts, fluids and hazardous substances

KU18. organisational/professional code of ethics and standards of practice

KU19. documentation requirements for each procedure carried out as part of roles and responsibilities as specified by OEM/auto component manufacturer

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. read and interpret workplace related documentation

GS2. interpret the needs of customers by understanding the key issues

GS3. communicate using terms, names, grades and other nomenclature pertaining to the automotive trade

GS4. analyse and apply the information gathered from observation, experience, reasoning or communication to act efficiently

GS5. identify potential workplace problem and take suitable action

GS6. write in English/regional language

GS7. communicate effectively at the workplace

GS8. plan work according to the required schedule and location

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Prepare to carry out service, repair and overhauling	**10**	**20**	**-**	**8**
PC1. review the job card, obtain sufficient information from customer/service advisor to assess service and repair needs of the vehicle	-	2	-	-
PC2. identify the auto components related to the various aggregates in the vehicle	1	2	-	2
PC3. place the vehicle on suitable platform according to nature of job to be performed	1	3	-	-
PC4. conduct visual inspection to assess defects such as any external impact/bend/leak/incorrect level/wear & tear etc.	2	3	-	2
PC5. ensure workshop tools/measuring devices/equipment required for the job are collected and check their condition/calibration	1	1	-	-
PC6. report the malfunctions if any, in the tools/equipment to the person concerned for rectification	2	2	-	2
PC7. prepare final proposal regarding repair/replacement, repairing process and time requirements with justification	1	3	-	1
PC8. ensure tools/equipment are placed in an organised manner for safe and tidy workstation	1	2	-	-
PC9. wear PPE according to nature of job to be performed	1	2	-	1
Perform service, repairs and overhauling	**15**	**20**	**-**	**7**
PC10. report the malfunctions/repairs in the vehicle beyond own scope to the concerned person	-	2	-	-
PC11. take precautions to avoid damage to the vehicle and its components while working on various aggregates	1	1	-	1
PC12. follow OEM SOP and standard safety procedures while handling tool/equipment, vehicle component, fluids, hazardous substances and while working in hazardous environments	2	3	-	2

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. remove parts relevant to various electrical/electronics systems and place them securely as specified by OEM	1	2	-	-
PC14. dismantle electrical aggregate, if required and report additional repair requirement	-	2	-	-
PC15. test electrical/electronic components post removal wherever applicable as per OEM SOP	2	3	-	1
PC16. clean and condition dismantled components, including mechanical and electrical aggregates, prior to assembly	2	1	-	-
PC17. perform repair of all electrical and electronic faults including direct faults in input sensors, output actuators, wiring harnesses, computer systems, calibration/adjustment specifications, component specifications, component assembly, system modifications	3	2	-	2
PC18. repair indirect faults in electrical/electronic aggregate due to other system/component	2	2	-	1
PC19. maintain the documentation related to inspection, servicing and repair of the vehicle	2	2	-	-
Perform post service/repair routine	**5**	**10**	**-**	**5**
PC20. check the performance of vehicle/aggregate post repair and report to supervisor/service advisor if further inspection is required by another specialist	-	3	-	2
PC21. ensure completeness of tasks assigned before releasing the vehicle for the next procedure	-	1	-	-
PC22. dispose off materials such as old batteries, scrap of failed parts/aggregates as per organization’s policies	2	3	-	2
PC23. ensure all tools, auxiliary material and other equipment are removed from the work site	1	3	-	-
PC24. perform scheduled checks, calibration and timely repairs for workshop tools, equipment and workstations	2	-	-	1
NOS Total	**30**	**50**	**-**	**20**

National Occupational Standards (NOS) Parameters

NOS Code	ASC/N1438
NOS Name	Carry out service, repair and overhauling of electrical and electronic systems in the four wheeler vehicle
Sector	Automotive
Sub-Sector	Automotive Vehicle Service
Occupation	Technical Service & Repair
NSQF Level	5
Credits	TBD
Version	1.0
Last Reviewed Date	NA
Next Review Date	27/05/2026
NSQC Clearance Date	27/05/2021

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.

2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.

3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training centre (as per assessment criteria below).

4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training centre based on these criteria.

5. In case of successfully passing only certain number of NOSs, the trainee is eligible to take

subsequent assessment on the balance NOS's to pass the Qualification Pack.

6. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack

Minimum Aggregate Passing % at QP Level : 70

(**Please note**: Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

Assessment Weightage

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
ASC/N9801.Organize work and resources (Service)	50	30	-	20	100	15
DGT/VSQ/N0102.Employability Skills (60 Hours)	20	30	0	0	50	10
ASC/N1404.Carry out diagnosis on four wheeler vehicle for repair requirements	30	50	-	20	100	25
ASC/N1405.Carry out service, repair and overhauling of mechanical systems in four wheeler vehicle	30	50	-	20	100	25
ASC/N1438.Carry out service, repair and overhauling of electrical and electronic systems in the four wheeler vehicle	30	50	-	20	100	25
Total	**160**	**210**	**-**	**80**	**450**	**100**

Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training

Glossary

Sector	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria (PC)	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (NOS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Scope	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.
Knowledge and Understanding (KU)	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.

Organisational Context	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/ Generic Skills (GS)	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.