









Model Curriculum

QP Name: Two Wheeler Service Technician

QP Code: ASC/Q1411

QP Version: 4.0

NSQF Level: 4

Model Curriculum Version: 1.0

Automotive Skill Development Council 153, Gr Floor, Okhla Industrial Area, Phase – III, Leela Building, New Delhi – 110020









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Training Parameters

Sector	Automotive
Sub-Sector	Automotive Vehicle Service
Occupation	Technical Service and Repair
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2015/7231.0501
Minimum Educational Qualification & Experience	10th Class + 1 year ITI OR 10th Class pass with 2 years relevant experience OR 11th Class Pass OR Certificate-NSQF (Two Wheeler Service Assistant Level 3) with 2 Years of experience
Pre-Requisite License or Training	Driving License and Basic Computer Skills
Minimum Job Entry Age	18 Years
Last Reviewed On	22/09/2020
Next Review Date	22/09/2025
NSQC Approval Date	22/09/2020
Version	4.0
Model Curriculum Creation Date	22/09/2020
Model Curriculum Valid Up to Date	22/09/2025
Model Curriculum Version	1.0
Minimum Duration of the Course	480 Hours, 0 Minutes
Maximum Duration of the Course	480 Hours, 0 Minutes









Program Overview

This section summarizes the end objectives of the program along with its duration.

Training Outcomes

At the end of the program, the learner should have acquired the listed knowledge and skills.

- Perform routine service/maintenance/minor repairs of the vehicle.
- Work effectively and efficiently as per schedules and timelines while complying with the health and hygiene norms.
- Implement safety practices.
- Optimize the use of resources to ensure less wastage and maximum conservation.
- Interact effectively with others using interpersonal skills.

Compulsory Modules

The table lists the modules and their duration corresponding to the Compulsory NOS of the QP.

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
Bridge Module	05:00	00:00	-	-	05:00
Module 1: Introduction to Role of a Two Wheeler Service Technician Bridge Module	05:00	00:00	-	-	05:00
ASC/N9801 - Organize Work and Resources (Service) NOS Version No. 1.0 NSQF Level 4	20:00	35:00	-	-	55:00
Module 2: Work effectively and efficiently	10:00	15:00	-	-	25:00
Module 3: Optimize resource utilization	10:00	20:00	-	-	30:00
DGT/VSQ/N0102 -Employability Skills (60 hours) NOS Version No. – 1.0 NSQF Level – 5	24:00	36:00			60:00
Module 4: Introduction to Employability Skills	0.5:00	1:00			1.5:00
Module 5: Constitutional values - Citizenship	0.5:00	1:00			1.5:00
Module 6: Becoming a Professional in the 21st Century	1:00	1.5:00			2.5:00









				500	
Module 7: Basic English Skills	4:00	6:00			10:00
Module 8: Career Development & Goal Setting	1:00	1:00			2:00
Module 9: Communication Skills	2:00	3:00			5:00
Module 10: Diversity & Inclusion	1:00	1.5:00			2.5:00
Module 11: Financial and Legal Literacy	2:00	3:00			5:00
Module 12: Essential Digital Skills	4:00	6:00			10:00
Module 13: Entrepreneurship	3:00	4:00			7:00
Module 14: Customer Service	2:00	3:00			5:00
Module 15: Getting ready for apprenticeship & Jobs	3:00	5:00			8:00
ASC/N1420 – Perform routine servicing and minor repairs NOS Version No. 2.0 NSQF Level 4	90:00	240:00	30:00	-	360:00
Module 16: Perform Service, Maintenance and Repair	90:00	240:00	30:00	-	360:00
Total Duration	139:00	311:00	30:00	-	480:00









Module Details

Module 1: Introduction to Role of a Two Wheeler Service Technician

Bridge Module

Terminal Outcomes:

- Discuss how to work as per the defined role and responsibilities of a Two Wheeler Service Technician.
- Discuss the scope of work of Two Wheeler Service Technician.

Discuss the scope of work of I wo Wheeler	
Duration: 05:00	Duration: 00:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 List the role and responsibilities of a two wheeler service technician 	
 Explain the basic structure and technology used in different models of a two wheeler 	
 Discuss the standard operating procedures (SOP) to be followed for service and minor repair of two wheelers and for using tools and equipment 	
 Outline the safety, health and environment policy to be followed for the automotive sector 	
 List the standard checklists and schedules recommended by OEM 	
 Discuss the documentation involved in the different processes such as job sheet, status report, etc. 	
 Describe how to work as per organisational policies and professional code of conduct 	
Classroom Aids:	
Laptop, white board, marker, projector, Documer conduct, checklists, schedules	nts of standard operating procedures, code of

Tools, Equipment and Other Requirements









Module 2: Work Effectively and Efficiently *Mapped to NOS* ASC/N9801, v1.0

Terminal Outcomes:

- Employ appropriate ways to maintain a safe and secure working environment.
- Perform work as per the quality standards.

Duration: 10:00 Duration: 15:00

Theory - Key Learning Outcomes

- Outline the organizational structure to be followed to report about health, safety and security breaches to the concerned authorities.
- List the potential workplace related risks and hazards, their causes and preventions.
- State the methods to keep the work area clean and tidy.
- Discuss how to complete the given work within the stipulated time period.
- Explain how to maintain a proper balance between team and individual goals.
- Discuss epidemics and pandemics and their impact on society at large.
- Discuss the significance of conforming to basic hygiene practices such as washing hands, using alcohol-based hand sanitizers.
- Discuss the use of proper PPE for maintaining health and hygiene at workplace and the process of wearing/discarding them.
- Define self-quarantine or self-isolation.
- Discuss the importance of identifying and reporting symptoms to the concerned authorities.
- Explain the significance of following prescribed rules and guidelines during an epidemic or a pandemic.
- Discuss organizational hygiene and sanitation guidelines and ways of reporting breaches/gaps if any.
- Discuss the ways of dealing with stress and anxiety during an epidemic or a pandemic.

Practical – Key Learning Outcomes

- Perform routine cleaning of tools, equipment and machines.
- Employ various techniques for checking malfunctions in the equipment as per Standard Operating Procedure (SOP).
- Apply basic housekeeping practices to ensure that the work area is clean, such as mopping spills and leaks, cleaning grease stains etc.
- Demonstrate how to evacuate the workplace in case of an emergency.
- Show how to sanitize and disinfect one's work area regularly.
- Demonstrate the correct way of washing hands using soap and water.
- Demonstrate the correct way of sanitizing hands using alcohol-based hand rubs.
- Display the correct way of wearing and removing PPE such as face masks, hand gloves, face shields, PPE suits, etc.
- Demonstrate appropriate social and behavioural etiquette (greeting and meeting people, spitting/coughing/sneezing, etc.).
- Prepare a list of relevant hotline/emergency numbers.

Classroom Aids:

White board/black board marker/chalk, duster, computer or Laptop attached to LCD projector

Tools, Equipment and Other Requirements









Personal Protection Equipment: safety glasses, head protection, rubber gloves, safety footwear, warning signs and tapes, fire extinguisher and first aid kit

Sanitization kit, disinfectants, alcohol-based sanitizers, different types of face masks, shields, suits, etc.









Module 3: Optimize Resource Utilization *Mapped to NOS* ASC/N9801, v1.0

Terminal Outcomes:

- Use the resources efficiently.
- Apply conservation practices at the workplace.

Duration: 10:00	Duration: 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 Explain the ways to optimize usage of resources. Discuss various methods of waste management and its disposal. List the different categories of waste for the purpose of segregation Differentiate between recyclable and non-recyclable waste State the importance of using appropriate colour dustbins for different types of waste. Discuss the common sources of pollution and ways to minimize it. 	 Perform basic checks to identify any spills and leaks and that need to be plugged /stopped. Demonstrate different disposal techniques depending upon different types of waste. Employ different ways to check if equipment/machines are functioning as per requirements and report malfunctioning, if observed. Employ ways for efficient utilization of material and water Use energy efficient electrical appliances and devices to ensure energy conservation
Classroom Aids:	
White heard/black heard marker/chalk duster of	omputer or Lanton attached to LCD projector

White board/black board marker/chalk, duster, computer or Laptop attached to LCD projector

Tools, Equipment and Other Requirements

Different type of waste bins to collect and segregate waste for disposal









Module 4: Introduction to Employability Skills Mapped to DGT/VSQ/N0102

Terminal Outcomes:

• Discuss about Employability Skills in meeting the job requirements

Duration : <0.5:00>	Duration : <1:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
• Discuss the importance of Employability Skills in meeting the job requirements	 List different learning and employability related GOI and private portals and their usage
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Module 5: Constitutional values - Citizenship Mapped to DGT/VSQ/N0102

Terminal Outcomes:

• Discuss about constitutional values to be followed to become a responsible citizen

Show how to practice different
Show how to practice different
Show how to practice different environmentally sustainable practices









Module 6: Becoming a Professional in the 21st Century Mapped to DGT/VSQ/N0102

Terminal Outcomes:

• Demonstrate professional skills required in 21st century

Duration : <1:00>	Duration: <1.5:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 Discuss 21st century skills. Describe the benefits of continuous learning 	Exhibit 21st century skills like Self-Awareness, Behavior Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn etc. in personal or professional life.
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Module 7: Basic English Skills Mapped to DGT/VSQ/N0102

Terminal Outcomes:

• Practice basic English speaking.

Duration : <4:00>	Duration : <6:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 Describe basic communication skills Discuss ways to read and interpret text written in basic English 	 Show how to use basic English sentences for everyday conversation in different contexts, in person and over the telephone Read and interpret text written in basic English Write a short note/paragraph / letter/e - mail using basic English
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	









Module 8: Career Development & Goal Setting Mapped to DGT/VSQ/N0102

Terminal Outcomes:

• Demonstrate Career Development & Goal Setting skills.

Duration : <1:00>	Duration : <1:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
Discuss need of career development plan	 Demonstrate how to communicate in a well-mannered way with others. Create a career development plan with well-defined short- and long-term goals
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Module 9: Communication Skills Mapped to DGT/VSQ/N0102

Terminal Outcomes:

• Practice basic communication skills.

actical – Key Learning Outcomes
Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette









Module 10: Diversity & Inclusion Mapped to DGT/VSQ/N0102

Terminal Outcomes:

• Describe PwD and gender sensitisation.

Duration : <1:00>	Duration : <1.5:00>				
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes				
Discuss the significance of reporting sexual harassment issues in time	 Demonstrate how to behave, communicate, and conduct oneself appropriately with all genders and PwD 				
Classroom Aids:					
Whiteboard, marker pen, projector					
Tools, Equipment and Other Requirements					

Module 11: Financial and Legal Literacy Mapped to DGT/VSQ/N0102

Terminal Outcomes:

• Describe ways of managing expenses, income, and savings.

Duration : <3:00>					
Practical – Key Learning Outcomes					
 Outline the importance of selecting the right financial institution, product, and service Demonstrate how to carry out offline and online financial transactions, safely and securely 					
Classroom Aids:					
Whiteboard, marker pen, projector					
Tools, Equipment and Other Requirements					









Module 12: Essential Digital Skills Mapped to DGT/VSQ/N0102

Terminal Outcomes:

• Demonstrate procedure of operating digital devices and associated applications safely.

Duration : <4:00>	Duration : <6:00>			
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes			
 Describe the role of digital technology in today's life Discuss the significance of using internet for browsing, accessing social media platforms, safely and securely 	 Show how to operate digital devices and use the associated applications and features, safely and securely Create sample word documents, excel sheets and presentations using basic features Utilize virtual collaboration tools to work effectively 			
Classroom Aids:				
Whiteboard, marker pen, projector				
Tools, Equipment and Other Requirements				

Module 13: Entrepreneurship Mapped to DGT/VSQ/N0102

Terminal Outcomes:

• Describe opportunities as an entrepreneur.

Duration : <3:00>	Duration: <4:00>			
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes			
 Explain the types of entrepreneurship and enterprises Discuss how to identify opportunities for potential business, sources of funding and associated financial and legal risks with its mitigation plan Describe the 4Ps of Marketing-Product, Price, Place and Promotion and apply them as per requirement 	Create a sample business plan, for the selected business opportunity			
Classroom Aids:				
Whiteboard, marker pen, projector				
Tools, Equipment and Other Requirements				
·				









Module 14: Customer Service Mapped to DGT/VSQ/N0102

Terminal Outcomes:

• Describe ways of maintaining customer.

Duration: <3:00> Practical – Key Learning Outcomes			

Module 15: Getting ready for apprenticeship & Jobs *Mapped to DGT/VSQ/N0102*

Terminal Outcomes:

Describe ways of preparing for apprenticeship & Jobs appropriately.

Duration : <3:00>	Duration : <5:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 Discuss the significance of maintaining hygiene and confidence during an interview List the steps for searching and registering for apprenticeship opportunities 	 Create a professional Curriculum Vitae (CV) Use various offline and online job search sources such as employment exchanges, recruitment agencies, and job portals respectively Perform a mock interview
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	









Module 16: Perform Service, Maintenance and Repair Mapped to NOS ASC/N1420, v1.0

Terminal Outcomes:

• Demonstrate how to perform service, maintenance and repair of a two wheeler vehicle

Demonstrate how to perform service, maintenance and repair of a two wheeler vehicle							
Duration: 90:00	Duration: 240:00						
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes						
 Explain the technology used in functioning of various components of the two-wheeler such as engine, cooling system, drum brakes system etc. Discuss the 	Demonstrate how to do test ride of the vehicle to assess service and repair requirements						
manufacturer specifications and safety requirement with respect to (w.r.t) components/aggregates of the vehicle	 Employ appropriate techniques to identify errors/defects in tools, equipment and accessories 						
 Discuss the job card with lead technician to plan servicing, maintenance and repair activities 	 Employ appropriate procedure to report malfunction in vehicles, tools and equipment beyond scope of work to concerned person 						
 List the various sources of information required to assess service/repair requirements 	 Perform the steps for calibration, adjustments and alignment of various components such as engine, chassis, 						
 List the types of tools, equipment and accessories to be used for checking deviation at the time of service, such as pressure indicators, pullers, special 	 electrical components etc. Analyse if any repair work was done by local garage/outside source on the vehicle 						
wrenches etc.Discuss ways to check for any repair requirements in braking or suspension	 Demonstrate how to check vehicle condition against the maintenance checklist and releasing vehicle only on task completion 						
systems and notify the concerned person/specialist	 Perform the steps for fitting the replaced part after cleaning the same 						
 Discuss the symptoms of wear and tear which lead to replacement of components such as filters, belts, wipers, etc. 	Employ different ways to take corrective actions for common faults and failures						
 Explain the importance of using appropriate spare parts and other material 	 Analyse any other repair requirements to be escalated further for inspection 						
for service/maintenance such as grade of oil, lubricants, grease, etc.	 Employ different ways to check if lubricants/fluids need refilling/topping up and collect the same from stores to fill up 						
Discuss the symptoms of technical faults, their causes and rectification procedures Typicing the procedures to be taken while.	 Apply appropriate ways to dispose off faulty components and replaced oil, 						
 Explain the precautions to be taken while servicing/repairing a vehicle to avoid any kind of damages 	lubricants, grease etc. as well as return leftover consumable/parts, tools/equipment back to the store						
 Discuss the documents to be maintained for each procedure 	 Demonstrate how to use computer-based diagnostic tools to identify faults in vehicle's electronics/electrical aggregates 						
	Apply ways to properly maintain the						

workshop by conducting scheduled









check/calibration/repairs of tools, equipment and workstations

Classroom Aids:

Laptop, white board, marker, projector

Tools, Equipment and Other Requirements

Automated ramp, manual operated hydraulic ramp, vehicle washer, spark plug cleaner & tester, PUC monitor, waste oil collection trolley, moisture separator, pneumatic tools, screw driver, wrenches, battery tester, oil dispenser, lubricating machine, garage air compressors etc.









Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Specialization Educational	Relevant Industry Experience		Training Experience		Remarks	
Qualification		Years	Specialization	Years	Specialization	
ITI	Mechanic Motor Vehicle/ Mechanic Auto Electrical and Electronics	4	2 wheeler Service	1	2 wheeler service	NA
ITI	Mechanic Motor Vehicle/ Mechanic Auto Electrical and Electronics	5	2 wheeler Service	0	2 wheeler service	NA
Diploma	Automobile Engineering/ Mechanical Engineering	3	2 wheeler Service	1	2 wheeler Service	NA
Diploma	Automobile Engineering/ Mechanical Engineering	4	2 wheeler Service	0	2 wheeler Service	NA

Trainer Certification					
Domain Certification	Platform Certification				
"Two Wheeler Service technician", "ASC/Q1411", minimum accepted score is 80%	"MEP/Q2601, Trainer (VET and Skills), Version-2", with scoring of minimum 80%.				









Assessor Requirements

Assessor Prerequisites						
Minimum Educational	nal Experience		Training Experience		Remarks	
Qualification		Years	Specialization	Years	Specialization	
ITI	Mechanic Motor Vehicle/ Mechanic Auto Electrical and Electronics	5	2 wheeler Service	1	2 wheeler service	NA
ITI	Mechanic Motor Vehicle/ Mechanic Auto Electrical and Electronics	6	2 wheeler Service	0	2 wheeler service	NA
Diploma	Automobile Engineering/ Mechanical Engineering	4	2 wheeler Service	1	2 wheeler Service	NA
Diploma	Automobile Engineering/ Mechanical Engineering	5	2 wheeler Service	0	2 wheeler Service	NA

Assessor Certification				
Domain Certification	Platform Certification			
"Two Wheeler Service technician", "ASC/Q1411", minimum accepted score is 80%	"MEP/Q2701, Assessor (VET and Skills), Version-2", with scoring of minimum 80%			









Assessment Strategy

1. Assessment System Overview:

- Batches assigned to the assessment agencies for conducting the assessment on SDMS/SIP or email
- Assessment agencies send the assessment confirmation to VTP/TC looping SSC
- Assessment agency deploys the ToA certified Assessor for executing the assessment
- SSC monitors the assessment process & records

2. Testing Environment:

The assessor should:

- Confirm that the centre is available at the same address as mentioned on SDMS or SIP
- Check the duration of the training.
- Check the Assessment Start and End time to be as 10 a.m. and 5 p.m.
- If the batch size is more than 30, then there should be 2 Assessors.
- Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.
- Check the mode of assessment—Online (TAB/Computer) or Offline (OMR/PP).
- Confirm the number of TABs on the ground are correct to execute the Assessment smoothly.
- Check the availability of the Lab Equipment for the particular Job Role.

3. Assessment Quality Assurance levels/Framework:

- Question papers are created by the Subject Matter Experts (SME)
- Question papers created by the SME are verified by the other subject Matter Experts
- Questions are mapped with NOS and PC
- Question papers are prepared considering that level 1 to 3 are for the unskilled & semi-skilled individuals, and level 4 and above are for the skilled, supervisor & higher management
- Assessor must be ToA certified & trainer must be ToT Certified
- Assessment agency must follow the assessment guidelines to conduct the assessment

4. Types of evidence or evidence-gathering protocol:

- Time-stamped & geotagged reporting of the assessor from assessment location
- Centre photographs with signboards and scheme specific branding
- Biometric or manual attendance sheet (stamped by TP) of the trainees during the training period
- Time-stamped & geotagged assessment (Theory + Viva + Practical) photographs & videos

5. Method of verification or validation:

- Surprise visit to the assessment location
- Random audit of the batch
- Random audit of any candidate

6. Method for assessment documentation, archiving, and access

- Hard copies of the documents are stored
- Soft copies of the documents & photographs of the assessment are uploaded/accessed from Cloud Storage
- Soft copies of the documents & photographs of the assessment are stored in the Hard Drives









References

Glossary

Term	Description
Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood in order to accomplish a task or to solve a problem.
Key Learning Outcome	Key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (theory) and skills (practical application).
OJT (M)	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on site
OJT (R)	On-the-job training (Recommended); trainees are recommended the specified hours of training on site
Procedural Knowledge	Procedural knowledge addresses how to do something, or how to perform a task. It is the ability to work, or produce a tangible work output by applying cognitive, affective or psychomotor skills.
Training Outcome	Training outcome is a statement of what a learner will know, understand and be able to do upon the completion of the training .
Terminal Outcome	Terminal outcome is a statement of what a learner will know, understand and be able to do upon the completion of a module. A set of terminal outcomes help to achieve the training outcome.









Acronyms and Abbreviations

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
PwD	Persons with Disability
OEM	Original Equipment Manufacturer