



# Model Curriculum

**QP Name: Two Wheeler Service Technician**

**QP Code: ASC/Q1411**

**QP Version: 2.0**

**NSQF Level: 4**

**Model Curriculum Version: 1.0**

Automotive Skill Development Council  
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## Training Parameters

<b>Sector</b>	Automotive
<b>Sub-Sector</b>	Automotive Vehicle Service
<b>Occupation</b>	Technical Service and Repair
<b>Country</b>	India
<b>NSQF Level</b>	4
<b>Aligned to NCO/ISCO/ISIC Code</b>	NCO-2015/7231.0501
<b>Minimum Educational Qualification &amp; Experience</b>	10th Class (from recognised board) with 1-2 Years of experience OR Certificate-NSQF (Two Wheeler Service Assistant Level 3) with 1-2 Years of experience
<b>Pre-Requisite License or Training</b>	Driving License and Basic Computer Skills
<b>Minimum Job Entry Age</b>	18 Years
<b>Last Reviewed On</b>	21/05/2020
<b>Next Review Date</b>	21/05/2025
<b>NSQC Approval Date</b>	20/11/2020
<b>Version</b>	2.0
<b>Model Curriculum Creation Date</b>	21/05/2020
<b>Model Curriculum Valid Up to Date</b>	21/05/2025
<b>Model Curriculum Version</b>	1.0
<b>Minimum Duration of the Course</b>	456 Hours, 0 Minutes
<b>Maximum Duration of the Course</b>	456 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
<b>Bridge Module</b>	<b>08:00</b>	<b>00:00</b>	-	-	<b>08:00</b>
Introduction to Role of a Two Wheeler Service Technician <i>Bridge Module</i>	08:00	00:00	-	-	08:00
<b>ASC/N9801 - Organize Work and Resources (Service)</b> <b>NOS Version No. 1.0</b> <b>NSQF Level 4</b>	<b>16:00</b>	<b>24:00</b>	-	-	<b>40:00</b>
Work effectively and efficiently	08:00	16:00	-	-	24:00
Optimize resource utilization	08:00	08:00	-	-	16:00
<b>ASC/N9802 – Interact Effectively with Colleagues, Customers and others</b> <b>NOS Version No. 1.0</b> <b>NSQF Level 4</b>	<b>16:00</b>	<b>24:00</b>	-	-	<b>40:00</b>
Communicate effectively and efficiently	16:00	24:00	-	-	40:00
<b>ASC/N1420 – Perform routine servicing and minor repairs</b>	<b>128:00</b>	<b>240:00</b>	-	-	<b>368:00</b>

<b>NOS Version No. 2.0</b> <b>NSQF Level 4</b>					
Perform Service, Maintenance and Repair	128:00	240:00	-	-	368:00
<b>Total Duration</b>	<b>168:00</b>	<b>288:00</b>	-	-	<b>456:00</b>

# Module Details

## 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.

<b>Duration:</b> 08:00	<b>Duration:</b> 00:00
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• List the role and responsibilities of a two wheeler service technician</li> <li>• Explain the basic structure and technology used in different models of a two wheeler</li> <li>• Discuss the standard operating procedures (SOP) to be followed for service and minor repair of two wheelers and for using tools and equipment</li> <li>• Outline the safety, health and environment policy to be followed for the automotive sector</li> <li>• List the standard checklists and schedules recommended by OEM</li> <li>• Discuss the documentation involved in the different processes such as job sheet, status report, etc.</li> <li>• Describe how to work as per organisational policies and professional code of conduct</li> </ul>	
<b>Classroom Aids:</b>	
Laptop, white board, marker, projector, Documents of standard operating procedures, code of conduct, checklists, schedules	
<b>Tools, Equipment and Other Requirements</b>	

## Work Effectively and Efficiently

### Mapped to NOS ASC/N9801

#### Terminal Outcomes:

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

<b>Duration: 08:00</b>	<b>Duration: 16:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>● Outline the organizational structure to be followed to report about health, safety and security breaches to the concerned authorities.</li> <li>● List the potential workplace related risks and hazards, their causes and preventions.</li> <li>● State the methods to keep the work area clean and tidy.</li> <li>● Discuss how to complete the given work within the stipulated time period.</li> <li>● Explain how to maintain a proper balance between team and individual goals.</li> <li>● Discuss epidemics and pandemics and their impact on society at large.</li> <li>● Discuss the significance of conforming to basic hygiene practices such as washing hands, using alcohol-based hand sanitizers.</li> <li>● Discuss the use of proper PPE for maintaining health and hygiene at workplace and the process of wearing/discarding them.</li> <li>● Define self-quarantine or self-isolation.</li> <li>● Discuss the importance of identifying and reporting symptoms to the concerned authorities.</li> <li>● Explain the significance of following prescribed rules and guidelines during an epidemic or a pandemic.</li> <li>● Discuss organizational hygiene and sanitation guidelines and ways of reporting breaches/gaps if any.</li> <li>● Discuss the ways of dealing with stress and anxiety during an epidemic or a pandemic.</li> </ul>	<ul style="list-style-type: none"> <li>● Perform routine cleaning of tools, equipment and machines.</li> <li>● Employ various techniques for checking malfunctions in the equipment as per Standard Operating Procedure (SOP).</li> <li>● Apply basic housekeeping practices to ensure that the work area is clean, such as mopping spills and leaks, cleaning grease stains etc.</li> <li>● Demonstrate how to evacuate the workplace in case of an emergency.</li> <li>● Show how to sanitize and disinfect one's work area regularly.</li> <li>● Demonstrate the correct way of washing hands using soap and water.</li> <li>● Demonstrate the correct way of sanitizing hands using alcohol-based hand rubs.</li> <li>● Display the correct way of wearing and removing PPE such as face masks, hand gloves, face shields, PPE suits, etc.</li> <li>● Demonstrate appropriate social and behavioural etiquette (greeting and meeting people, spitting/coughing/sneezing, etc.).</li> <li>● Prepare a list of relevant hotline/emergency numbers.</li> </ul>
<b>Classroom Aids:</b>	
White board/black board marker/chalk, duster, computer or Laptop attached to LCD projector	
<b>Tools, Equipment and Other Requirements</b>	

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.



## Optimize Resource Utilization

### Mapped to NOS ASC/N9801

#### Terminal Outcomes:

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

<b>Duration: 08:00</b>	<b>Duration: 08:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>● Explain the ways to optimize usage of resources.</li> <li>● Discuss various methods of waste management and its disposal.</li> <li>● List the different categories of waste for the purpose of segregation</li> <li>● Differentiate between recyclable and non-recyclable waste</li> <li>● State the importance of using appropriate colour dustbins for different types of waste.</li> <li>● Discuss the common sources of pollution and ways to minimize it.</li> </ul>	<ul style="list-style-type: none"> <li>● Perform basic checks to identify any spills and leaks and that need to be plugged /stopped.</li> <li>● Demonstrate different disposal techniques depending upon different types of waste.</li> <li>● Employ different ways to check if equipment/machines are functioning as per requirements and report malfunctioning, if observed.</li> <li>● Employ ways for efficient utilization of material and water</li> <li>● Use energy efficient electrical appliances and devices to ensure energy conservation</li> </ul>
<b>Classroom Aids:</b>	
White board/black board marker/chalk, duster, computer or Laptop attached to LCD projector	
<b>Tools, Equipment and Other Requirements</b>	
Different type of waste bins to collect and segregate waste for disposal	

## Communicate Effectively and Efficiently

### Mapped to NOS ASC/N9802

#### Terminal Outcomes:

- Use effective communication and interpersonal skills.
- Apply sensitivity while interacting with different genders and people with disabilities.

<b>Duration: 16:00</b>	<b>Duration: 24:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>● Explain the organizational structure for communicating with colleagues, seniors and others.</li> <li>● Discuss the ways to adjust the communication styles to reflect sensitivity towards gender and persons with disability (PwD).</li> <li>● Explain the importance of respecting personal space of colleagues and customers.</li> <li>● State the procedure to receive work instructions and report problems to the supervisor.</li> <li>● List the various organizational policies and procedures to be followed at the workplace.</li> <li>● Describe different ways to rectify commonly occurring errors.</li> <li>● Explain the importance of complying with the instructions/guidelines and procedures while performing tasks related to the job specifications.</li> <li>● Discuss the importance of PwD and gender sensitization.</li> </ul>	<ul style="list-style-type: none"> <li>● Employ different means of communication depending upon the requirement while interacting with others.</li> <li>● Demonstrate using new ways to maintain good relationships with colleagues and supervisor.</li> <li>● Prepare a sample report to send the work status to the supervisor.</li> <li>● Demonstrate how to communicate with different genders and persons with disability (PwD) in a sensitive manner.</li> </ul>
<b>Classroom Aids:</b>	
White board/black board marker/chalk, duster, computer or Laptop attached to LCD projector	
<b>Tools, Equipment and Other Requirements</b>	
Sample of escalation matrix, organisation structure.	

## Perform Service, Maintenance and Repair Mapped to NOS ASC/N1420

### Terminal Outcomes:

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

<b>Duration: 60:00</b>	<b>Duration: 100:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Explain the technology used in functioning of various components of the two-wheeler such as engine, cooling system, drum brakes system etc. Discuss the manufacturer specifications and safety requirement with respect to (w.r.t) components/aggregates of the vehicle</li> <li>• Discuss the job card with lead technician to plan servicing, maintenance and repair activities</li> <li>• List the various sources of information required to assess service/repair requirements</li> <li>• 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 wrenches etc.</li> <li>• Discuss ways to check for any repair requirements in braking or suspension systems and notify the concerned person/specialist</li> <li>• Discuss the symptoms of wear and tear which lead to replacement of components such as filters, belts, wipers, etc.</li> <li>• Explain the importance of using appropriate spare parts and other material for service/maintenance such as grade of oil, lubricants, grease, etc.</li> <li>• Discuss the symptoms of technical faults, their causes and rectification procedures</li> <li>• Explain the precautions to be taken while servicing/repairing a vehicle to avoid any kind of damages</li> <li>• Discuss the documents to be maintained for each procedure</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate how to do test ride of the vehicle to assess service and repair requirements</li> <li>• Employ appropriate techniques to identify errors/defects in tools, equipment and accessories</li> <li>• Employ appropriate procedure to report malfunction in vehicles, tools and equipment beyond scope of work to concerned person</li> <li>• Perform the steps for calibration, adjustments and alignment of various components such as engine, chassis, electrical components etc.</li> <li>• Analyse if any repair work was done by local garage/outside source on the vehicle</li> <li>• Demonstrate how to check vehicle condition against the maintenance checklist and releasing vehicle only on task completion</li> <li>• Perform the steps for fitting the replaced part after cleaning the same</li> <li>• Employ different ways to take corrective actions for common faults and failures</li> <li>• Analyse any other repair requirements to be escalated further for inspection</li> <li>• Employ different ways to check if lubricants/fluids need refilling/topping up and collect the same from stores to fill up</li> <li>• Apply appropriate ways to dispose off faulty components and replaced oil, lubricants, grease etc. as well as return leftover consumable/parts, tools/equipment back to the store</li> <li>• Demonstrate how to use computer-based diagnostic tools to identify faults in vehicle's electronics/electrical aggregates</li> <li>• Apply ways to properly maintain the workshop by conducting scheduled</li> </ul>

	check/calibration/repairs of tools, equipment and workstations
<b>Classroom Aids:</b>	
Laptop, white board, marker, projector	
<b>Tools, Equipment and Other Requirements</b>	
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 Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
ITI/Diploma	Automobile Engineering/ Mechanical Engineering/ Motor Vehicle Mechanic	3	2 wheeler Service	1	2 wheeler Service	NA
ITI/Diploma	Automobile Engineering/ Mechanical Engineering/ Motor Vehicle Mechanic	4	2 wheeler Service	0	2 wheeler Service	NA
Certificate-NSQF Level 6	Two Wheeler Master Technician	3	2 wheeler Service	1	2 wheeler Service	NA

Trainer Certification	
Domain Certification	Platform Certification
“Two Wheeler Service technician”, “ASC/Q1411”, minimum accepted score is 80%	“Trainer”, “MEP/Q2601”, with scoring of minimum 80%.

## Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
ITI/Diploma	Automobile Engineering/ Mechanical Engineering/ Motor Vehicle Mechanic	4	2 wheeler Service	2	2 wheeler Service	NA
ITI/Diploma	Automobile Engineering/ Mechanical Engineering/ Motor Vehicle Mechanic	5	2 wheeler Service	0	2 wheeler Service	NA
Certificate-NSQF Level 6	Two Wheeler Master Technician	4	2 wheeler Service	2	2 wheeler Service	NA

Assessor Certification	
Domain Certification	Platform Certification
“Two Wheeler Service technician”, “ASC/Q1411”, minimum accepted score is 80%	“Assessor”, “MEP/Q2701”, 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