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
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/I.T.I (Motor Mechanic) with 0-6 months of experience OR Certificate-NSQF (Two Wheeler Service Assistant) with 1-2 Years of experience
Pre-Requisite License or Training	Driving License and Basic Computer Skills
Minimum Job Entry Age	18 Years
Last Reviewed On	21/05/2020
Next Review Date	21/05/2025
NSQC Approval Date	
Version	2.0
Model Curriculum Creation Date	21/05/2020
Model Curriculum Valid Up to Date	21/05/2025
Model Curriculum Version	1.0
Minimum Duration of the Course	456 Hours, 0 Minutes
Maximum Duration of the Course	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
Bridge Module	**08:00**	**00:00**	**-**	**-**	**08:00**
Introduction to Role of a Two Wheeler Service Technician *Bridge Module*	08:00	00:00	-	-	08:00
ASC/N9801 - Organize Work and Resources (Service) **NOS Version No. 1.0** **NSQF Level 4**	**16:00**	**24:00**	-	-	**40:00**
Work effectively and efficiently	08:00	16:00	-	-	24:00
Optimize resource utilization	08:00	08:00	-	-	16:00
ASC/N9802 – Interact Effectively with Colleagues, Customers and others **NOS Version No. 1.0** **NSQF Level 4**	**16:00**	**24:00**	-	-	**40:00**
Communicate effectively and efficiently	16:00	24:00	-	-	40:00
ASC/N1420 – Perform routine servicing and minor repairs	**128:00**	**240:00**	-	-	**368:00**

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

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.

Duration: *08:00*	**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, Documents of standard operating procedures, code of conduct, checklists, schedules	
Tools, Equipment and Other Requirements	

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.

Duration: *08:00*	**Duration:** *16:00*
Theory – Key Learning Outcomes	**Practical – 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.	• 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.

Optimize Resource Utilization
Mapped to NOS ASC/N9801

Terminal Outcomes:

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

Duration: *08:00*	**Duration: *08:00***
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 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	

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.

Duration: *16:00*	**Duration: *24:00***
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the organizational structure for communicating with colleagues, seniors and others. • Discuss the ways to adjust the communication styles to reflect sensitivity towards gender and persons with disability (PwD). • Explain the importance of respecting personal space of colleagues and customers. • State the procedure to receive work instructions and report problems to the supervisor. • List the various organizational policies and procedures to be followed at the workplace. • Describe different ways to rectify commonly occurring errors. • Explain the importance of complying with the instructions/guidelines and procedures while performing tasks related to the job specifications. • Discuss the importance of PwD and gender sensitization.	• Employ different means of communication depending upon the requirement while interacting with others. • Demonstrate using new ways to maintain good relationships with colleagues and supervisor. • Prepare a sample report to send the work status to the supervisor. • Demonstrate how to communicate with different genders and persons with disability (PwD) in a sensitive manner.
Classroom Aids:	
White board/black board marker/chalk, duster, computer or Laptop attached to LCD projector	
Tools, Equipment and Other Requirements	
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

Duration: *60:00*	**Duration**: *100:00*
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 manufacturer specifications and safety requirement with respect to (w.r.t) components/aggregates of the vehicle • Discuss the job card with lead technician to plan servicing, maintenance and repair activities • List the various sources of information required to assess service/repair requirements • 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. • Discuss ways to check for any repair requirements in braking or suspension systems and notify the concerned person/specialist • Discuss the symptoms of wear and tear which lead to replacement of components such as filters, belts, wipers, etc. • Explain the importance of using appropriate spare parts and other material for service/maintenance such as grade of oil, lubricants, grease, etc. • Discuss the symptoms of technical faults, their causes and rectification procedures • Explain the precautions to be taken while servicing/repairing a vehicle to avoid any kind of damages • Discuss the documents to be maintained for each procedure	• Demonstrate how to do test ride of the vehicle to assess service and repair requirements • Employ appropriate techniques to identify errors/defects in tools, equipment and accessories • Employ appropriate procedure to report malfunction in vehicles, tools and equipment beyond scope of work to concerned person • Perform the steps for calibration, adjustments and alignment of various components such as engine, chassis, electrical components etc. • Analyse if any repair work was done by local garage/outside source on the vehicle • Demonstrate how to check vehicle condition against the maintenance checklist and releasing vehicle only on task completion • Perform the steps for fitting the replaced part after cleaning the same • Employ different ways to take corrective actions for common faults and failures • Analyse any other repair requirements to be escalated further for inspection • Employ different ways to check if lubricants/fluids need refilling/topping up and collect the same from stores to fill up • 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 • 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 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