



Model Curriculum

QP Name: Automotive Paint Repair Technician

QP Code: ASC/Q1406

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-2015/7132.0300
Minimum Educational Qualification & Experience	8th Class pass + ITI with 2 years relevant experience OR 10th Class + 1 year ITI (Mechanic Auto Body Painting) with 1 year relevant experience OR 10th Class pass with 3 years relevant experience OR 12th Class pass with 1 year relevant experience OR Certificate-NSQF (Automotive Paint Repair Assistant Level 3) with 2 Years of relevant experience
Pre-Requisite License or Training	Driving License & Basic Computer Skills
Minimum Job Entry Age	18 years
Last Reviewed On	30/09/2021
Next Review Date	30/09/2024
NSQC Approval Date	30/09/2021
Version	2.0
Model Curriculum Creation Date	30/09/2021
Model Curriculum Valid Up to Date	30/09/2024
Model Curriculum Version	1.0
Minimum Duration of the Course	390 Hours, 0 Minutes
Maximum Duration of the Course	390 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.

- Work effectively and efficiently as per schedules and timelines.
- Implement safety practices.
- Apply practices to the use of resources to ensure less wastage and maximum conservation.
- Communicate effectively and develop interpersonal skills.
- Display sensitivity towards all genders and differently abled people.
- Perform painting works on the vehicles.

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 the role of Automotive Paint Repair Technician <i>Bridge Module</i>	05:00	00:00	-	-	05:00
ASC/N9801 - Organize Work and Resources (Service) NOS Version No. 1.0 NSQF Level 4	15:00	30:00	-	-	45:00
Module 2: Work effectively and efficiently	09:00	15:00	-	-	24:00
Module 3: Optimize resource utilization	06:00	15:00	-	-	21:00
ASC/N9802 – Interact Effectively with Colleagues, Customers and others NOS Version No. 1.0 NSQF Level 4	15:00	25:00	-	-	40:00
Module 4: Communicate effectively and efficiently	15:00	25:00	-	-	40:00
ASC/ N1417 – Carry out painting work on vehicles	90:00	210:00	-	-	300:00

NOS Version No. 1.0 NSQF Level 4					
Module 5: Carry out painting work on vehicle	90:00	210:00	-	-	300:00
Total Duration	125:00	265:00	-	-	390:00

Module Details

Module 1- Introduction to the Role of an Automotive Paint Repair Technician

Bridge Module

Terminal Outcomes:

- Identify the role, responsibilities and scope of work of an Automotive Paint Repair Technician.
- Identify the importance of following process, policies, and procedures.

Duration: 05:00	Duration: 0:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe the role and responsibilities of an automotive paint repair technician. • List the basics of driving and parking 4 wheeler vehicle. • Identify the various body panels of the vehicle. • Identify the different types of paints. • List the activities to be performed for maintaining /managing the painting booth, including tools and equipment. • List the standard operating procedures (SOP) w.r.t. Vehicle paint refinish • Identify the documentation involved in painting process. 	
Classroom Aids:	
Laptop, white board, marker, projector	
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: <09:00>	Duration: <15:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • 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,

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: <06:00>	Duration: <15:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain the ways to optimize usage of re-sources. • 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. 	<ul style="list-style-type: none"> • 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	

Module 4 - Communicate Effectively and Efficiently

Mapped to NOS ASC/N9802 v1.0

Terminal Outcomes:

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

Duration: <15:00>	Duration: <25:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • 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.	

Module 5 – Carry out painting work on vehicle

Mapped to NOS ASC/N1417, v2.0

Terminal Outcomes:

- Perform steps to carry out preparatory activities for paint application.
- Demonstrate how to carry out post paint refinish activities.

Duration: 90:00	Duration: 210:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss the importance of reviewing the job card to understand the scope of work. • Explain the organisational structure for reporting the malfunction in the vehicle beyond own scope to the concerned person. • Describe the process of collecting and checking the tools/equipment, body panel and consumables required for paint application. • Discuss the guidelines to mix and match the base coat, pearl coat and clear coat as per manufacture's specifications/guidelines. • List the precautions to be taken to avoid damages to the vehicle and its components while working on them. • Discuss the importance of maintaining documentation related to paint job done on the vehicle. • Recall various methods to dispose off materials such as old abrasive paper, etc. as per organizational policies. • Explain the automotive industry in India, workshop structure along with the role and responsibilities of different people in the workshop. • Elucidate Standard Operating Procedures for receiving vehicles, opening job card, allocation of work, etc. • Explain the steps for identification, nomenclature of various consumable/material and body panels according to manufacturer's specifications. • List the various painting processes and rust prevention techniques. • List various feather edging techniques and types of sand paper used. • Recall various dust prevention techniques. 	<ul style="list-style-type: none"> • Show how to inspect the body panels prepared by Paint repair assistant. • Perform the steps to place the vehicle/body panel on an appropriate platform as per work requirement. • Employ appropriate measures to protect the surface/body part (not to be painted). • Show how to use appropriate PPE and how to prepare work area by cleaning and placing tools/equipment in an organised manner. • Show how to clean the surface using consumables/cleaning, masking, etc. material such mineral spirits or denatured alcohol, etc. as per standard operating procedure. • Demonstrate how to mix and match the base coat, pearl coat and clear coat as per manufacture's specifications/guidelines, taking assistance of lead technician. • Demonstrate how to apply base coat, pearl coat and clear coat as per manufacture's guidelines. • Employ suitable techniques to dry/cure the parts as recommended by the manufacture. • Demonstrate how to inspect and rectify the defects, if any, at each stage of paint application. • Perform steps for rubbing and polishing as per manufacture's specifications/guidelines. • Demonstrate how to inspect the panels post completion of the job and how to report discrepancy, if any. • Perform steps to clean the tools/equipment used and return the leftovers to the concerned person after reporting the malfunctions, if any, observed.

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| <ul style="list-style-type: none"> • Discuss different types of paint defects their causes and how to prevent or rectify them. • Discuss the standard operating procedures of cleaning, masking, sanding, putty and primer application as prescribed by OEM. • Outline organisational and professional code of ethics and standard of practice. • Recall safety, health and environmental policies and regulations for the work place and for automotive trade in general. | <ul style="list-style-type: none"> • Examine the vehicle for completed task before final inspection. • Demonstrate the functioning of various types of painting equipment and material. • Demonstrate how to use, store and maintain the workshop tools/equipment. • Prepare reports/records pertaining to the paint job done on the vehicle. |
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Classroom Aids:

Laptop, white board, marker, projector

Tools, Equipment and Other Requirements

Vehicle, various body parts, tools and equipment, material, Masking tapes, paints, cleaners, primers, brushes, cleaning tools, auto-spray-painter, putty, sanding tools, polishing and finishing tools

Sample of technical data sheet

Annexure

Trainer Requirement

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
ITI	Mechanic Motor Vehicle/ Mechanic Auto Body Painting/Diesel Mechanic)	4	Four Wheeler Service	1	Four Wheeler Service	NA
ITI	Mechanic Motor Vehicle/ Mechanic Auto Body Painting/Diesel Mechanic)	5	Four Wheeler Service	0	Four Wheeler Service	NA
Certificate- NSQF Level 6	Four Wheeler Lead Technician	3	Four Wheeler Service	1	Four Wheeler Service	NA
Diploma	Automobile/ Mechanical Engineering	3	Four Wheeler Service	1	Four Wheeler Service	NA
Diploma	Automobile Mechanical Engineering	4	Four Wheeler Service	0	Four Wheeler Service	NA

Trainer Certification	
Domain Certification	Platform Certification
"Automotive Paint Repair Technician", QP: "ASC/Q1406", 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	Mechanic Motor Vehicle/ Mechanic Auto Body Painting/Diesel Mechanic	5	Four Wheeler Service	1	Four Wheeler Service	NA
ITI	Mechanic Motor Vehicle/ Mechanic Auto Body Painting/Diesel Mechanic	6	Four Wheeler Service	0	Four Wheeler Service	NA
Certificate- NSQF Level 6	Four Wheeler Lead Technician	4	Four Wheeler Service	1	Four Wheeler Service	NA
Diploma	Automobile/ Mechanical Engineering	4	Four Wheeler Service	1	Four Wheeler Service	NA
Diploma	Automobile Mechanical Engineering	5	Four Wheeler Service	0	NA	NA

Assessor Certification	
Domain Certification	Platform Certification
"Automotive Paint Repair Technician", QP: "ASC/Q1406", minimum accepted score is 80%	"Assessor", "MEP/Q2701" with scoring of minimum 80%

1. Assessment System Overview:

- Batches assigned to the assessment agencies for conducting the assessment on 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