Model Curriculum

QP Name: End of Life Vehicle Dismantler

QP Code: ASC/Q1442

QP Version: 1.0

NSQF Level: 4

Model Curriculum Version: 1.0

Automotive Skills 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 & Repair
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2015/7213.0201
Minimum Educational Qualification and Experience	10th Class + 2 years ITI (Mechanic Motor Vehicle/Diesel Mechanic/Mechanic Auto Electrical and Electronics) OR 10th Class + 1 year ITI with 1 year of relevant experience OR 10th Class pass with 2 years of relevant experience OR 12th Class pass with 1 year of relevant experience OR Certificate-NSQF (Four Wheeler Service Assistant Level 3/Electric Vehicle Service Assistant Level 3) with 2 Years of relevant experience
Pre-Requisite License or Training	Driving License
Minimum Job Entry Age	18 years
Last Reviewed On	28th July, 2022
Next Review Date	28th July, 2025
NSQC Approval Date	28th July, 2022
QP Version	1.0
Model Curriculum Creation Date	28th July, 2022
Model Curriculum Valid Up to Date	28th July, 2025
Model Curriculum Version	1.0
Minimum Duration of the Course	390 Hours 00 Minutes
Maximum Duration of the Course	390 Hours 00 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 dismantling of various aggregates of different types of vehicle by following environmental and regulatory norms.
- Perform routine service/maintenance/minor repairs of the heavy commercial vehicle.
- Work effectively and efficiently as per schedules and timelines.
- Implement safety practices.
- Optimize the use of resources to ensure less wastage and maximum conservation.

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					
Module 1: Introduction to the role of an End of Life Vehicle Dismantler	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 – 3	**15:00**	**25:00**	-	-	**40:00**
Module 4: Communicate effectively and efficiently	15:00	25:00	-	-	40:00
ASC/N1482: Carry out activities to disassemble the end of vehicle NOS Version No. – 1.0 NSQF Level – 4	**115:00**	**125:00**	**60:00**	-	**300:00**
Module 5: Carry out activities to disassemble the end of vehicle	115:00	125:00	60:00	-	300:00
Total Duration	**150:00**	**180:00**	**60:00**		**390:00**

Module Details

Module 1: Introduction to the role of an End of Life Vehicle Dismantler

Bridge module

Terminal Outcomes:

- Discuss the role and responsibilities of an End of Life Vehicle Dismantler.

Duration: *<05:00>*	**Duration**: *<00:00>*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• List the role and responsibilities of an End of Life Vehicle Dismantler. • Discuss the job opportunities for an End of Life Vehicle Dismantler in the automobile industry. • Explain about Indian auto manufacturing market. • List various types of vehicles and different products/ models manufactured by Original Equipment Manufacturers (OEMs). • Illustrate the workshop structure. • Describe role and responsibilities of different people in the workshop. • Discuss the maintenance standards and procedures followed in organisation. • Identify the standard checklists and schedules recommended by OEM.	
Classroom Aids:	
Whiteboard, marker pen, projector, standard checklists and schedules samples	
Tools, Equipment and Other Requirements	

Module 2: Work Effectively and Efficiently

Mapped to ASC/N9801, v1.0

Terminal Outcomes:

- Employ appropriate ways to maintain 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**
• 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:	
Whiteboard, marker pen, 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 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**
• 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	

Module 4: Communicate Effectively and Efficiently

Mapped to 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**
• 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. • 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:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	
Sample of escalation matrix, organisation structure.	

Module 5: Carry out activities to disassemble the end of vehicle

Mapped to ASC/N1482, v1.0

Terminal Outcomes:

- Identify tools and equipment required for dismantling the various types of vehicles.
- Demonstrate how to use dismantle the various aggregates of end of life vehicles.

Duration: *<115:00>*	**Duration**: *<125:00>*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Classify various types of vehicles. • List various components /aggregates and the manufacturer's specifications of different types of vehicles. • Discuss basic technology used, functioning and interconnections of various systems and components of a vehicle. • Recall fundamental terms, laws and principles of electricity used in vehicle. • Explain legal regulations that need to be taken into account for handling electric vehicles. • Discuss various sources of information available for assessing a vehicle. • Discuss standard schedules and checklists recommended by the OEM/ auto component manufacturer for dismantling of vehicles. • Describe an end of life vehicle parts and material as hazardous waste, reusable, recyclable and disposable. • List the types of tools and equipment used in dismantling of a vehicle. • Describe selection criteria of lubricants, seals, sealants, fittings, gaskets, joints, fasteners, etc. for the work. • List the activities need to perform for preparing a vehicle for inspection, de-pollution and disassembling etc. • Discuss the safety precautions need to follow during dismantling of a vehicle. • Describe organizational/professional code of ethics and standards of practice. • List the steps to be performed for dismantling of a vehicle. • Describe procedure of checking, segregation and storage of dismantled end of life vehicle components. • Discuss the documents to be maintained w.r.t depollution, dismantling work	• Show how to collect workshop tools/ measuring devices/ equipment required for the job. • Apply appropriate ways to check the defects and calibration of tools/ measuring devices/ equipment before use. • Show how to park the vehicle properly. • Demonstrate how to prepare vehicle for inspection, de-pollution and disassembling etc. • Perform steps to report about malfunctions/repairs in the tools/ equipment and vehicle to the concerned person. • Apply appropriate ways to check the vehicle for any faults, leaks etc. • Employ various precautions and safety measures to ensure that no damage is caused to the vehicle during work. • Demonstrate depollution operations by following SOP. • Show how to drain vehicle fluids (oil, brake fluid, steering fluid, antifreeze, fuel, refrigerant, etc.), remove the battery, filters, catalyst, wheel balancing weight, parts identified as containing mercury, etc. • Show how to store or dispose various liquid/fluids recovered from the vehicle according to the environmental and organisational storage and disposal guidelines. • Apply appropriate ways to assess vehicle's pyrotechnic devices. • Show how to deploy using a suitable procedure or remove pyrotechnic devices for subsequent neutralisation. • Demonstrate how to dismantle the various parts and systems of a vehicle. • Apply appropriate ways to inspect and segregate the components and material

performed on the End of Life vehicle. • Explain the health and safety measures and regulations w.r.t. equipment and components during fault diagnosis.	into defined categories. • Apply appropriate ways to check the condition of removed spare parts/aggregate post disassembly. • Prepare sample report for the supervisor if further inspection/cleaning is required or that parts are ready for resale. • Show how to fix tag/label on the spare parts as per organisational standards. • Show how to clean the work area after completion of work. • Demonstrate use of pallet truck or crane to move and place the mechanical or body parts to the desired storage/scrap location. • Demonstrate organisational procedure of scheduled checks, calibration, timely repairs for workshop tools, equipment and workstations.
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	
• PPT's, teaching aids, different types of vehicle • Vehicle, various body parts, engine, tools and equipment, material, consumables, components/aggregates, lubricants, grease, oil, etc. • Pressure indicators: fuel pressure testers, manifold gauge sets, oil pressure gauges, tire pressure gauges etc., pullers: ball joint separators, bearing pullers, gear puller tools, slide hammers etc., trim or moulding tools: carbon scrapers, gasket scrapers, scrapers, spoons etc., measuring equipment: vernier calipers, micrometre, feeler gauges, multi-metre, flow metre, temp gauge, dial gauge etc., other tools: hand tools, power tools, lifting/jacking equipment, tensioning equipment, security activator etc., tools for other tasks such as cleaning of vehicles, brake bleeding, wheel alignment, AC gas charging etc. • **Safety materials**: Fire extinguisher, safety gloves, aprons, safety glasses, helmet, safety shoe and first-aid kit • **Cleaning material**: Tip cleaner, wire brush (M.S.), cleaning agents, cleaning cloth, waste container, dust pan and brush set, liquid soap, hand towel	

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
ITI	Mechanic Motor Vehicle/Mechanic Auto Electrical and Electronics/Diesel Mechanic	4	Mechanic Motor Vehicle/Mechanic Auto Electrical and Electronics/Diesel Mechanic	1	Mechanic Motor Vehicle/Mechanic Auto Electrical and Electronics/Diesel Mechanic	NA
ITI	Mechanic Motor Vehicle/Mechanic Auto Electrical and Electronics/Diesel Mechanic	5	Mechanic Motor Vehicle/Mechanic Auto Electrical and Electronics/Diesel Mechanic	0	Mechanic Motor Vehicle/Mechanic Auto Electrical and Electronics/Diesel Mechanic	**NA**
Diploma	Automobile Engineering/ Mechanical Engineering	3	Automobile Engineering/ Mechanical Engineering	1	Automobile Engineering/ Mechanical Engineering	**NA**
Diploma	Automobile Engineering/ Mechanical Engineering	4	Automobile Engineering/ Mechanical Engineering	0	Automobile Engineering/ Mechanical Engineering	**NA**
Certificate NSQF- Level 6	Four Wheeler Master Technician	3	Four Wheeler Master Technician	1	Four Wheeler Master Technician	**NA**

Trainer Certification	
Domain Certification	**Platform Certification**
"End of Life Vehicle Dismantler, ASC/Q1442, version 1.0". Minimum accepted score is 80%.	"Trainer, MEP/Q2601 v1.0" Minimum accepted score is 80%.

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training/Assessment Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
ITI	Mechanic Motor Vehicle/Mechanic Auto Electrical and Electronics/Diesel Mechanic	5	Mechanic Motor Vehicle/Mechanic Auto Electrical and Electronics/Diesel Mechanic	1	Mechanic Motor Vehicle/Mechanic Auto Electrical and Electronics/Diesel Mechanic	NA
ITI	Mechanic Motor Vehicle/Mechanic Auto Electrical and Electronics/Diesel Mechanic	6	Mechanic Motor Vehicle/Mechanic Auto Electrical and Electronics/Diesel Mechanic	0	Mechanic Motor Vehicle/Mechanic Auto Electrical and Electronics/Diesel Mechanic	**NA**
Diploma	Automobile Engineering/ Mechanical Engineering	4	Automobile Engineering/ Mechanical Engineering	1	Automobile Engineering/ Mechanical Engineering	**NA**
Diploma	Automobile Engineering/ Mechanical Engineering	5	Automobile Engineering/ Mechanical Engineering	0	Automobile Engineering/ Mechanical Engineering	**NA**
Certificate NSQF- Level 6	Four Wheeler Master Technician	4	Four Wheeler Master Technician	1	Four Wheeler Master Technician	**NA**

Assessor Certification	
Domain Certification	**Platform Certification**
"End of Life Vehicle Dismantler, ASC/Q1442, version 1.0". Minimum accepted score is 80%.	"Assessor; MEP/Q2701 v1.0" Minimum accepted score is 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:
    - 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 created by the Subject Matter Experts (SME)
    - Question papers created by the SME 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
SOP	Standard Operating Procedure
WI	Work Instructions
PPE	Personal Protective equipment