



# Model Curriculum

**QP Name: Automotive Assembly Master Technician**

**QP Code: ASC/Q3603**

**QP Version: 2.0**

**NSQF Level: 6**

**Model Curriculum Version: 2.0**

Automotive Skills Development Council | 153, Gr Floor, Okhla Industrial Area, Phase – III, Leela Building,  
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## Training Parameters

<b>Sector</b>	Automotive
<b>Sub-Sector</b>	Manufacturing
<b>Occupation</b>	Assembly Operation
<b>Country</b>	India
<b>NSQF Level</b>	6
<b>Aligned to NCO/ISCO/ISIC Code</b>	NCO-2015/7223.0401
<b>Minimum Educational Qualification and Experience</b>	10th Class + I.T.I (Fitter) with 5 Years of experience OR Diploma (Mechanical/Automobile) from a recognized body with relevant 3 Years of experience OR Certificate-NSQF (Automotive Assembly Lead Technician Level 5) with 2 Years of Experience
<b>Pre-Requisite License or Training</b>	
<b>Minimum Job Entry Age</b>	21 years
<b>Last Reviewed On</b>	29/07/2021
<b>Next Review Date</b>	29/07/2026
<b>NSQC Approval Date</b>	29/07/2021
<b>QP Version</b>	2.0
<b>Model Curriculum Creation Date</b>	29/07/2021
<b>Model Curriculum Valid Up to Date</b>	29/07/2026
<b>Model Curriculum Version</b>	2.0
<b>Minimum Duration of the Course</b>	560 Hours 00 Minutes
<b>Maximum Duration of the Course</b>	560 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 assembly of critical components of vehicle and post-assembly activities such as quality check and records keeping.
- Prepare shift plans, manage operational productivity and measure employee performance in the Shift/ Line on a day to day basis.
- Identify and implement process improvement techniques on the shop floor.
- Maintain quality standards and manage organizational resources efficiently and effectively.
- Work effectively and efficiently as per schedules and timelines.
- Implement safety practices.
- Use resources optimally to ensure less wastage and maximum conservation.
- Communicate effectively and develop 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>					
Module 1: Introduction to the role of an Automotive Assembly Master Technician	8:00	0:00			8:00
<b>ASC/N9810: Manage work and resources (Manufacturing) NOS Version No. – 1.0 NSQF Level – 5</b>	<b>24:00</b>	<b>32:00</b>			<b>56:00</b>
Module 2: Manage work and resources according to safety and conservation standards	24:00	32:00			56:00
<b>ASC/N9812 – Interact effectively with team, customers and others NOS Version No. 1.0 NSQF Level 5</b>	<b>24:00</b>	<b>32:00</b>			<b>56:00</b>
Module 3: Communicate effectively and efficiently	24:00	32:00			56:00
<b>ASC/N9805 – Interpret engineering drawing NOS Version No. – 1.0 NSQF Level - 4</b>	<b>16:00</b>	<b>16:00</b>			<b>32:00</b>

Module 4: Interpret engineering drawing	16:00	16:00			32:00
<b>ASC/N3620 – Manage shop floor assembly operations and team</b> <b>NOS Version No. – 1.0</b> <b>NSQF Level – 6</b>	<b>56:00</b>	<b>128:00</b>			<b>184:00</b>
Module 5: Manage shop floor operations and team	56:00	128:00			184:00
<b>ASC/N3616 – Plan and perform assembly of critical auto parts and aggregates</b> <b>NOS Version No. – 2.0</b> <b>NSQF Level – 6</b>	<b>80:00</b>	<b>144:00</b>			<b>224:00</b>
Module 6: Plan and perform assembly and post-assembly activities	80:00	144:00			224:00
<b>Total Duration</b>	<b>208:00</b>	<b>352:00</b>			<b>560:00</b>

## Module Details

### Module 1: Introduction to the role of an Automotive Assembly Master Technician

#### *Bridge module*

#### Terminal Outcomes:

- Discuss the role and responsibilities of an Automotive Assembly Master 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 an Automotive Assembly Master Technician.</li> <li>• Discuss the job opportunities for an Automotive Assembly Master Technician in the automobile industry.</li> <li>• Explain about Indian automotive manufacturing market.</li> <li>• List various automobile Original Equipment Manufacturers (OEMs) and different products/ models manufactured by them.</li> <li>• Discuss manufacturing standards, procedures, quality norms and standards, etc. followed in the company.</li> <li>• List different types of products manufactured by the company.</li> <li>• Discuss various functional processes like Procurement, Store management, inventory management, quality management and key contact points for query resolution etc. followed in an organisation.</li> </ul>	
<b>Classroom Aids:</b>	
Whiteboard, marker pen, projector	
<b>Tools, Equipment and Other Requirements</b>	

## Module 2: Manage work and resources according to safety and conservation standards

### Mapped to ASC/N9810, v1.0

#### Terminal Outcomes:

- Employ appropriate ways to maintain safe and secure working environment
- Apply material and energy conservation practices at the workplace.

Duration: <24:00>	Duration: <32:00>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Discuss organisational procedures for health, safety and security and individual role and responsibilities related to the same.</li> <li>• List the potential workplace related risks, threats and hazards, their causes and preventions.</li> <li>• List personal protective equipment like safety gloves, glasses, shoes and mask used at the workplace.</li> <li>• List various types of fire extinguisher.</li> <li>• Identify various safety boards/ signs placed on the shop floor.</li> <li>• Explain 5S standards, procedures and policies followed at workplace.</li> <li>• Discuss organisational procedures to deal with emergencies and accidents at the workplace and importance of following them.</li> <li>• State the importance of conducting safety drills or training sessions.</li> <li>• Explain the process of filling daily check sheet for reporting to the concerned authorities about improvements done and risks identified.</li> <li>• Discuss how and when to report about potential hazards identified in the workplace and limits of responsibility for dealing with them.</li> <li>• Outline the importance of keeping workplace, equipment, restrooms etc. clean and sanitised.</li> <li>• Explain the importance of following hygiene and sanitation regulations developed by organisation at the workplace.</li> <li>• Discuss the importance of maintaining the availability of running water, hand wash</li> </ul>	<ul style="list-style-type: none"> <li>• Apply appropriate ways to implement safety practices to ensure safety of people at the workplace.</li> <li>• Display the correct way of wearing and disposing PPE.</li> <li>• Demonstrate the use of fire extinguisher.</li> <li>• Demonstrate how to provide first aid procedure in case of emergencies.</li> <li>• Demonstrate how to evacuate the workplace in case of an emergency.</li> <li>• Employ various techniques for checking malfunctions in the machines with the support of maintenance team and as per Standard Operating Procedures (SOP).</li> <li>• Demonstrate to arrange tools/ equipment/ fasteners/ spare parts into proper trays, cabinets, lockers as mentioned in the 5S guidelines/work instructions.</li> <li>• Apply appropriate ways to organise safety drills or training sessions for others on the identified risks and safety practices.</li> <li>• Prepare a report about the health, safety and security breaches.</li> <li>• Apply appropriate ways to check that workplace, equipment, restrooms etc. are cleaned and sanitised.</li> <li>• Role play a situation to brief the team about the hygiene and sanitation regulations developed by organisation.</li> <li>• Demonstrate the correct way of washing hands using soap and water and alcohol-based hand rubs.</li> <li>• Apply appropriate methods to support the employees to cope with stress, anxiety etc.</li> <li>• Demonstrate proper waste collection and disposal mechanism depending upon</li> </ul>

<p>and alcohol-based sanitizers at the workplace.</p> <ul style="list-style-type: none"> <li>• Discuss the significance of conforming to basic hygiene practices such as washing hands, using alcohol based hand sanitizers or soap.</li> <li>• Recall ways of reporting advanced hygiene and sanitation issues to the concerned authorities.</li> <li>• Elucidate various stress and anxiety management techniques.</li> <li>• Discuss the significance of greening.</li> <li>• Classify different categories of waste for the purpose of segregation.</li> <li>• Differentiate between recyclable and non-recyclable waste.</li> <li>• Discuss various methods of waste collection and disposal.</li> <li>• List the various materials used at the workplace.</li> <li>• Explain organisational recommended norms for storage of tools, equipment and material.</li> <li>• Discuss the importance of efficient utilisation of material and water.</li> <li>• Explain basics of electricity and prevalent energy efficient devices.</li> <li>• Explain the processes to optimize usage of material and energy/electricity.</li> <li>• Enlist common practices for conserving electricity at workplace.</li> </ul>	<p>types of waste.</p> <ul style="list-style-type: none"> <li>• Perform the steps involved in storage of tools, equipment and material after completion of work.</li> <li>• Employ appropriate ways to resolve malfunctioning (fumes/ sparks/ emission/ vibration/ noise) and lapse in maintenance of equipment as per requirements.</li> <li>• Perform the steps to prepare a sample material and energy audit reports.</li> <li>• Employ practices for efficient utilization of material and energy/electricity.</li> </ul>
<p><b>Classroom Aids:</b></p>	
<p>Whiteboard, marker pen, projector</p>	
<p><b>Tools, Equipment and Other Requirements</b></p>	
<ul style="list-style-type: none"> <li>• Housekeeping material: Cleaning agents, cleaning cloth, waste container, dust pan and brush set, liquid soap, hand towel, fire extinguisher</li> <li>• Safety gears: Safety shoes, ear plug, goggles, gloves, helmet, first-aid kit</li> </ul>	



## Module 3: Communicate Effectively and Efficiently

### Mapped to ASC/N9812, v1.0

#### Terminal Outcomes:

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

<b>Duration: &lt;24:00&gt;</b>	<b>Duration: &lt;32:00&gt;</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Explain the importance of complying with organizational requirements to share information with team members.</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>• Describe the ways to manage and coordinate with team members for work integration.</li> <li>• State the importance of team goals over individual goals, keeping commitment made to team members, and informing them in case of delays.</li> <li>• Discuss the importance of following the organisation’s policies and procedures</li> <li>• Discuss the importance of rectifying errors as per feedback and minimizing mistakes.</li> <li>• Discuss gender-based concepts, issues and legislation as well organization standards, guidelines, rights and duties of PwD.</li> <li>• Discuss the importance of PwD and gender sensitization to ensure that team shows sensitivity towards them.</li> <li>• State the importance of following organizational standards and guidelines related to PwD.</li> <li>• Recall the rights and duties at workplace with respect to PwD.</li> <li>• Outline organisation policies and procedures pertaining to written and verbal communication.</li> </ul>	<ul style="list-style-type: none"> <li>• Employ different means and methods of communication depending upon the requirement to interact with the team members.</li> <li>• Employ appropriate ways to maintain good relationships with team members and superiors.</li> <li>• Apply appropriate techniques to resolve conflicts and manage team members for smooth workflow.</li> <li>• Conduct training sessions to train the team members on proper reporting of completed work and receiving feedback.</li> <li>• Employ suitable ways to escalate problems to superiors as and when required.</li> <li>• Prepare a sample report on the progress and team performance .</li> <li>• Role play a situation on how to offer help to people with disability (PwD) if required at work.</li> </ul>
<b>Classroom Aids:</b>	
Whiteboard/blackboard, marker/chalk, duster, computer or Laptop attached to LCD projector	
<b>Tools, Equipment and Other Requirements</b>	

## Module 4: Interpret engineering drawing

### Mapped to ASC/N9805, v1.0

#### Terminal Outcomes:

- Describe the basics of engineering drawing.
- Interpret the machine drawings and symbols for understanding the job requirements.

<b>Duration: &lt;16:00&gt;</b>	<b>Duration: &lt;16:00&gt;</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Identify uniqueness, dimensioning and important features of 2D and 3D shapes.</li> <li>• Identify types of lines, angles, points and their symmetry in shapes.</li> <li>• Differentiate between first angle and third angle projection.</li> <li>• Interpret 3 axis (x, y and z axis) of projection and machine symbols used in drawing.</li> <li>• Describe GD&amp;T and use of its symbols in the drawings.</li> <li>• Identify required limits and tolerances of component from drawing.</li> <li>• Explain standards used in India for making assembly drawings.</li> <li>• Identify organisational drawing standards for interpreting the work requirements appropriately.</li> </ul>	<ul style="list-style-type: none"> <li>• Read an object in first angle and third angle projection.</li> <li>• Demonstrate appropriate way of reading and interpreting the shapes (cones, cylinder, sphere, cuboid, etc) on to a 2D and 3D projection.</li> <li>• Interpret and read orthographic and isometric views.</li> <li>• Read GD&amp;T symbols in the given drawing.</li> <li>• Employ appropriate ways of storing the drawings in a defined and appropriate place.</li> <li>• Role play a situation on how to communicate the changes in drawing to the concerned authority.</li> </ul>
<b>Classroom Aids:</b>	
Whiteboard, marker pen, projector	
<b>Tools, Equipment and Other Requirements</b>	
<ul style="list-style-type: none"> <li>• Drawing tools</li> <li>• Engineering drawing handbook</li> <li>• Sample engineering drawings</li> </ul>	

## Module 5: Manage shop floor operations and team

### Mapped to ASC/N3620, v1.0

#### Terminal Outcomes:

- Demonstrate ways to implement process improvement techniques.
- Prepare shift rosters and production MIS reports.
- Perform various activities such as maintaining availability of material, arranging trainings and maintaining production data related to employee performance measurement and development.

Duration: <56:00> Theory – Key Learning Outcomes	Duration: <128:00> Practical – Key Learning Outcomes
<ul style="list-style-type: none"> <li>• Elucidate procedure of planning manpower shift and preparing shift rosters on day to day basis as per the organisational norms and guidelines.</li> <li>• Discuss ways to reduce production losses and wastages in the production and increase minimum rejection of components during shift operation.</li> <li>• List improvement areas in the production line and corrective measures for following the identified gaps.</li> <li>• Explain process improvement techniques, Kaizens, TQM, Poka Yoke etc. and their impact on the production line to rectify the failure and gaps in the production process.</li> <li>• Identify ways for analysing breakdown trends and current maintenance process and areas of improvement in it.</li> <li>• Discuss corrective measures for reducing the breakdown and improving the maintenance process.</li> <li>• Describe use of ERP system for maintaining and updation production line data.</li> <li>• Discuss the documents and reports needed to maintain and prepare related to production process.</li> <li>• Discuss the importance and ways of involving employees in various engagement and development activities such as trainings, meets, brainstorming sessions, safety drills etc. organised in the plant.</li> <li>• List different types of information such as production targets, new guidelines, new processes etc. to be shared with team.</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare a plan for allocating manpower shifts based on the skills matrix.</li> <li>• Prepare shift rosters for the week and month based on the production plan to support the Shift In Charge/ Process head/ Shop head.</li> <li>• Apply appropriate ways for maintaining the information of leaves, IN-Out time and shift/ line overtime for the operators and helpers and sharing it with the concerned authorities.</li> <li>• Apply organisational specified procedures to send inventory requirements and follow up with the stores and purchase department for timely receipt of material.</li> <li>• Employ appropriate ways to maintain the movement and availability of required material, tools and equipment on shop floor within specified TAKT.</li> <li>• Demonstrate ways for using the resources and streamlining the activities effectively on shop floor.</li> <li>• Apply appropriate ways to communicate required information to other departments and resolving production related queries to achieve required production target and quality standards.</li> <li>• Role play a situation on how to implement ways to reduce losses and wastages and increase minimum rejection of components during shift operation.</li> <li>• Prepare MIS reports of daily and monthly production to match the production and target achieved and report to the production Incharge.</li> <li>• Apply appropriate ways to verify the correctness of production and material</li> </ul>

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| <ul style="list-style-type: none"> <li>• Discuss the importance of organising training sessions and making the team aware of the new processes, inputs and outputs.</li> <li>• Discuss organizational structure to be followed to escalate and resolve issues related to team personal grievances/ complaints etc.</li> <li>• List various grievance and problem solving tools utilized in an organisation.</li> </ul> | <ul style="list-style-type: none"> <li>• movement related data entries in the system (manual/ ERP) for the line/ shift.</li> <li>• Prepare the preventive maintenance schedule for the shop/ line and execute it on time.</li> <li>• Employ ways to analyse the various data sheets and reports related to production, maintenance, manpower deployment etc. to support the In charge/ Engineer/ Shop Head.</li> <li>• Apply ways to analyse improvement areas in the production line and identify corrective measures for the identified gaps.</li> <li>• Show how to audit production process for capability of each operation.</li> <li>• Perform steps to prepare sample report on the non-compliances for the regulatory authorities.</li> <li>• Employ appropriate ways to implement Kaizens, TQM, Poka Yoke etc. in the production line.</li> <li>• Apply ways to analyse breakdown trends and current maintenance process and identify corrective measures for the identified gaps.</li> <li>• Perform steps to monitor and review the effectiveness of process improvement techniques and corrective actions on production and preparing reports for the regulatory authorities.</li> <li>• Role play a situation on how to encourage team members for suggesting process improvement measures and their implementation process.</li> <li>• Apply ways to conduct daily floor meeting/ morning meetings/ staff meetings and share information to team such as production targets, new guidelines, new processes etc.</li> <li>• Show how to organise training sessions for team to enhance their skills and knowledge.</li> <li>• Demonstrate organisational specified procedure to identify, escalate and resolve team problems/ work grievances/ complaints etc.</li> <li>• Role play a situation on how to counsel employees for any work related issues or any personal problems.</li> </ul> |
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**Classroom Aids:**

Whiteboard, marker pen, projector

### **Tools, Equipment and Other Requirements**

- Basic tool box, Work bench with vice
- Sampling tools, sample rejection data
- Case studies, shift planning document or software

## Module 6: Plan and perform assembly and post-assembly activities

### Mapped to ASC/N3616, v2.0

#### Terminal Outcomes:

- Identify tools and equipment required for assembly operations.
- Prepare production plan and schedule to achieve production targets.
- Perform assembly of critical components of vehicle.
- Perform the steps to carry out post-assembly activities.

Duration: <80:00>	Duration: <144:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> <li>• List various components and systems of a vehicle.</li> <li>• Discuss the information derived from the job orders, wiring diagrams and engineering drawings.</li> <li>• Discuss how to take inputs from the master assembly technician for production planning.</li> <li>• Explain various assembling operations such as bolting, tightening, riveting, fastening, adhesive clamping, crimping etc.</li> <li>• Discuss the impact of various assembly operations on the vehicle.</li> <li>• Illustrate the process flow of assembly operations.</li> <li>• List tools, measuring instruments and accessories required during assembling work.</li> <li>• Discuss the process of creating CLRI sheet and implementing it on production line .</li> <li>• Summarise the steps to be performed for setting of assembly apparatus and their parameters as per the requirements.</li> <li>• List the steps to be performed for writing program in case of robotic assembly method.</li> <li>• Discuss the importance of running idle cycle of program.</li> <li>• Outline the process of assembly of auto components by using mechanical, pneumatic, hydraulic and electrical controlled assembly tools.</li> <li>• List the steps to be performed for set and adjust all the safety and high precision items in the vehicle.</li> <li>• State the importance of maintaining the TAKT time assembly station and no</li> </ul>	<ul style="list-style-type: none"> <li>• Role play a situation on how to give instructions to the lead technician about the production target and planning.</li> <li>• Perform the steps to prepare plan and schedule for assembly activities to meet the production target in co-ordination with the lead technician.</li> <li>• Read the assembly drawing, assembly Work Instructions, SOPs for identifying work requirements and selecting assembly method, equipment and apparatus.</li> <li>• Demonstrate the standard operating procedure to use tools, equipment and measuring instruments required during job.</li> <li>• Prepare a sample CLRI check sheet as per organisational guidelines.</li> <li>• Apply appropriate ways to implement CLRI check sheet effectively.</li> <li>• Perform steps to check that assembly apparatus is set as per the work instructions.</li> <li>• Show how to to set assembly parameters as per the work instructions.</li> <li>• Show how to write the assembly program in case of robotic assembly method.</li> <li>• Perform steps to run the idle cycle of program to test and validate its effectiveness and accuracy and modify it as per the requirements and SOPs/Work Instructions.</li> <li>• Demonstrate organizational specified procedure of all assembly operations such as bolting, riveting, tightening, wire stripping, crimping, soldering, high frequency welding etc.</li> <li>• Employ appropriate assembly method for assembling of auto components by using</li> </ul>

<p>stoppage of assembly line.</p> <ul style="list-style-type: none"> <li>• Discuss the do's and don'ts of the manufacturing process as per SOPs/ work instructions.</li> <li>• Discuss the tasks to be performed post-assembly.</li> <li>• Summarise the commonly occurring defects in the assembled vehicle.</li> <li>• Discuss the impact of defects on the quality of assembled vehicle.</li> <li>• Explain the inspection and testing methods for identifying the defects and checking the quality of assembled vehicle.</li> <li>• List the steps to be performed for quality check and testing of assembled vehicle.</li> <li>• Discuss the documents and records needed to be prepared and maintained related to assembly activities done.</li> <li>• Discuss the necessary precautions to avoid any hazard and accident during assembly activities.</li> <li>• Describe various parameters such as cycle time, sequencing, parameters, PPEs, inspection equipment and the fixture requirement need to be cover in SOP/WI.</li> </ul>	<p>mechanical, pneumatic, hydraulic and electrical controlled assembly tools.</p> <ul style="list-style-type: none"> <li>• Demonstrate the use of screws, nuts, clamps, rivets for fitting the required components in vehicle.</li> <li>• Demonstrate the organizational specified procedure of set and adjust all the safety and high precision items in the vehicle.</li> <li>• Apply appropriate inspection and testing methods for identifying the defects and checking the quality of assembled vehicle.</li> <li>• Demonstrate how to check that errors and tagged and marked on assembled vehicles for repairing work.</li> <li>• Perform the steps involved in process of quality check and testing of all assembled mechanical and electrical components of vehicle and taking corrective actions to correct the defects.</li> <li>• Show how to record all the test observations and errors in the log books as per organisational guidelines.</li> <li>• Prepare a sample SOP/WI for a new component covering all the parameters as per organisational guidelines.</li> </ul>
<p><b>Classroom Aids:</b></p>	
<p>Whiteboard, marker pen, projector</p>	
<p><b>Tools, Equipment and Other Requirements</b></p>	
<ul style="list-style-type: none"> <li>• PPT's, teaching aids, assembly drawing / blue print, component assembly plan</li> <li>• <b>Measuring and marking tools:</b> Steel tape, steel rule, vernier calliper, micrometre, compass, divider, scribe, T Square, bevel protractor, pin set, torque meter etc.</li> <li>• <b>Assembly tools and equipment:</b> Riveting machine, drilling machine, riveting guns, pneumatic guns, fasteners, rubber seals, soldering iron, jigs, fixtures, adhesives</li> <li>• <b>Components:</b> Bolts, nuts, screws, wires, fasteners, connectors, sealants, adhesive bonding material etc.</li> <li>• <b>Lifting devices:</b> Hoists, cranes, bins, part trolleys, pallet trucks</li> <li>• <b>Safety materials:</b> Fire extinguisher, safety helmet, safety gloves, leather aprons, safety glasses, ear plug, safety shoes and first-aid kit</li> <li>• <b>Cleaning material:</b> Tip cleaner, wire brush (M.S.), cleaning agents, cleaning cloth, waste container, dust pan and brush set, liquid soap, hand towel</li> </ul>	

# Annexure

## Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
M.E/M.Tech	Mechanical/Automobile	4	Assembly	1	Assembly	NA
B.E/B.Tech	Mechanical/Automobile	6	Assembly	1	Assembly	NA
AMIE	Mechanical/Automobile	6	Assembly	1	Assembly	NA
Diploma	Mechanical/Automobile	8	Assembly	1	Assembly	NA

Trainer Certification	
Domain Certification	Platform Certification
“Automotive Assembly Master Technician, ASC/Q3603, version 2.0”. 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 Experience		Remarks
		Years	Specialization	Years	Specialization	
M.E/M.Tech	Mechanical/Automobile	5	Assembly	1	Assembly	NA
B.E/B.Tech	Mechanical/Automobile	7	Assembly	1	Assembly	NA
AMIE	Mechanical/Automobile	7	Assembly	1	Assembly	NA
Diploma	Mechanical/Automobile	9	Assembly	1	Assembly	NA

Assessor Certification	
Domain Certification	Platform Certification
"Automotive Assembly Master Technician, ASC/Q3603, version 2.0". 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
<b>Declarative Knowledge</b>	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.
<b>Key Learning Outcome</b>	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).
<b>OJT (M)</b>	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on site
<b>OJT (R)</b>	On-the-job training (Recommended); trainees are recommended the specified hours of training on site
<b>Procedural Knowledge</b>	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.
<b>Training Outcome</b>	Training outcome is a statement of what a learner will know, understand and be able to do upon the completion of the training.
<b>Terminal Outcome</b>	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

<b>NOS</b>	National Occupational Standard(s)
<b>NSQF</b>	National Skills Qualifications Framework
<b>QP</b>	Qualifications Pack
<b>TVET</b>	Technical and Vocational Education and Training
<b>SOP</b>	Standard Operating Procedure
<b>WI</b>	Work Instructions
<b>PPE</b>	Personal Protective equipment