



Automotive Assembly Technician

QP Code: ASC/Q3601

Version: 2.0

NSQF Level: 4

Automotive Skills Development Council || 153, Gr Floor, Okhla Industrial Area, Phase - III, Leela Building
New Delhi - 110020

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ASC/Q3601: Automotive Assembly Technician

Brief Job Description

The individual at this job performs assembly of vehicle and its components.

Personal Attributes

The person should be patient, organised, team-oriented and have the ability to work for long hours in adverse conditions. They should be keen observers and have an eye for detail and quality.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [ASC/N9803: Organize work and resources \(Manufacturing\)](#)
2. [ASC/N9802: Interact effectively with colleagues, customers and others](#)
3. [ASC/N9805: Interpret engineering drawing](#)
4. [ASC/N3611: Perform vehicle assembly operations](#)

Qualification Pack (QP) Parameters

| | |
|---|--|
| Sector | Automotive |
| Sub-Sector | Manufacturing |
| Occupation | Assembly Operation |
| Country | India |
| NSQF Level | 4 |
| Aligned to NCO/ISCO/ISIC Code | NCO-2015/8211.1201 |
| Minimum Educational Qualification & Experience | 12th Class OR Certificate-NSQF (Automotive Assembly Operator) with 1-2 Years of experience |
| Minimum Level of Education for Training in School | |
| Pre-Requisite License or Training | NA |
| Minimum Job Entry Age | 18 Years |

| | |
|---------------------------|------------|
| Last Reviewed On | 23/09/2020 |
| Next Review Date | 23/09/2025 |
| NSQC Approval Date | |
| Version | 2.0 |

ASC/N9803: Organize work and resources (Manufacturing)

Description

This NOS unit is about implementing safety, planning work, adopting sustainable practices for optimising use of resources

Scope

The scope covers the following :

- Maintain safe and secure working environment
- Health and hygiene
- Perform work as per quality standards
- Effective waste management practices
- Material/energy conservation practices

Elements and Performance Criteria

Maintain safe and secure working environment

To be competent, the user/individual on the job must be able to:

- PC1. identify hazardous activities and the possible causes of risks or accidents in the workplace
- PC2. follow safe working practices while dealing with hazards to ensure safety of self and others
- PC3. carry out routine check of the machine for identifying potential hazards
- PC4. use appropriate protective clothing/equipment for specific tasks and work
- PC5. follow safety hazards and preventive techniques during fire drill
- PC6. report any identified breaches in health, safety and security policies and procedures to the designated person

Health and hygiene

To be competent, the user/individual on the job must be able to:

- PC7. ensure workstation and equipment are regularly clean and sanitized
- PC8. clean hands with soap, alcohol-based sanitizer regularly
- PC9. avoid contact with ill people and self-isolate in a similar situation
- PC10. wear and dispose PPEs regularly and appropriately
- PC11. report advanced hygiene and sanitation issues to appropriate authority
- PC12. follow stress and anxiety management techniques

Perform work as per quality standards

To be competent, the user/individual on the job must be able to:

- PC13. ensure that work is accomplished as per the requirements within the specified timeline
- PC14. ensure team goals are given preference over individual goals

Effective waste management practices

To be competent, the user/individual on the job must be able to:

- PC15. follow the fundamentals of 5S for waste management
- PC16. segregate waste into different categories

PC17. follow processes specified for disposal of hazardous waste

PC18. identify recyclable, non-recyclable and hazardous waste

PC19. dispose non-recyclable, recyclable and reusable waste appropriately at identified location

Material/energy conservation practices

To be competent, the user/individual on the job must be able to:

PC20. identify ways to optimize usage of material in various tasks/activities/processes

PC21. check for spills/leakages in various tasks/activities/processes

PC22. plug spills/leakages and escalate to appropriate authority if unable to rectify

PC23. check if the equipment/machine is functioning normally before commencing work and rectify wherever required

PC24. report malfunctioning (fumes/ sparks/emission/vibration/noise) and lapse in maintenance of equipment

PC25. ensure electrical equipment and appliances are properly connected and turned off when not in use

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. organisation procedures for health, safety and security, individual role and responsibilities in this context

KU2. the organisation's emergency procedures for different emergency situations and the importance of following the same

KU3. evacuation procedures for workers and visitors

KU4. how and when to report hazards as well as the limits of responsibility for dealing with hazards

KU5. potential hazards, risks and threats based on the nature of work

KU6. preventative and remedial actions to be taken in case of exposure to toxic material

KU7. various types of fire extinguisher

KU8. various types of safety signs and their meaning

KU9. appropriate first aid treatment relevant to different condition e.g. bleeding, minor burns, eye injuries etc.

KU10. relevant standards, procedures and policies related to 5S followed in the company

KU11. the various materials used and their storage norms

KU12. efficient utilisation of material and water

KU13. basics of electricity and prevalent energy efficient devices

KU14. common practices of conserving electricity

KU15. common sources and ways to minimize pollution

KU16. categorisation of waste into dry, wet, recyclable, non-recyclable and items of single-use plastics

KU17. usage of different colors of dustbins

KU18. waste management techniques

KU19. significance of greening

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1. read safety instructions/guidelines
- GS2. modify work practices to improve them
- GS3. ask for clarifications from superior about the job requirement
- GS4. work with supervisors/team members to carry out work related tasks
- GS5. complete tasks efficiently and accurately within stipulated time
- GS6. inform/report to concerned person in case of any problem
- GS7. make timely decisions for efficient utilization of resources
- GS8. write reports such as accident report, in at least English/regional language
- GS9. be punctual and utilize time efficiently

Assessment Criteria

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|--------------|-----------------|---------------|------------|
| <i>Maintain safe and secure working environment</i> | 11 | 5 | - | 7 |
| PC1. identify hazardous activities and the possible causes of risks or accidents in the workplace | 2 | 1 | - | 2 |
| PC2. follow safe working practices while dealing with hazards to ensure safety of self and others | 2 | - | - | 1 |
| PC3. carry out routine check of the machine for identifying potential hazards | 2 | 1 | - | 1 |
| PC4. use appropriate protective clothing/equipment for specific tasks and work | 2 | 1 | - | 1 |
| PC5. follow safety hazards and preventive techniques during fire drill | 2 | 1 | - | 1 |
| PC6. report any identified breaches in health, safety and security policies and procedures to the designated person | 1 | 1 | - | 1 |
| <i>Health and hygiene</i> | 7 | 5 | - | 2 |
| PC7. ensure workstation and equipment are regularly clean and sanitized | 2 | 2 | - | 1 |
| PC8. clean hands with soap, alcohol-based sanitizer regularly | 1 | 1 | - | 1 |
| PC9. avoid contact with ill people and self-isolate in a similar situation | 1 | - | - | - |
| PC10. wear and dispose PPEs regularly and appropriately | 1 | - | - | - |
| PC11. report advanced hygiene and sanitation issues to appropriate authority | 1 | 1 | - | - |
| PC12. follow stress and anxiety management techniques | 1 | 1 | - | - |
| <i>Perform work as per quality standards</i> | 5 | 3 | - | 2 |
| PC13. ensure that work is accomplished as per the requirements within the specified timeline | 2 | 2 | - | 1 |

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|--------------|-----------------|---------------|------------|
| PC14. ensure team goals are given preference over individual goals | 3 | 1 | - | 1 |
| <i>Effective waste management practices</i> | 15 | 10 | - | 4 |
| PC15. follow the fundamentals of 5S for waste management | 3 | 2 | - | 1 |
| PC16. segregate waste into different categories | 2 | 1 | - | - |
| PC17. follow processes specified for disposal of hazardous waste | 2 | 2 | - | 1 |
| PC18. identify recyclable, non-recyclable and hazardous waste | 4 | 2 | - | 1 |
| PC19. dispose non-recyclable, recyclable and reusable waste appropriately at identified location | 4 | 3 | - | 1 |
| <i>Material/energy conservation practices</i> | 12 | 7 | - | 5 |
| PC20. identify ways to optimize usage of material in various tasks/activities/processes | 2 | 1 | - | 1 |
| PC21. check for spills/leakages in various tasks/activities/processes | 2 | 1 | - | 1 |
| PC22. plug spills/leakages and escalate to appropriate authority if unable to rectify | 2 | 1 | - | - |
| PC23. check if the equipment/machine is functioning normally before commencing work and rectify wherever required | 2 | 2 | - | 1 |
| PC24. report malfunctioning (fumes/sparks/emission/vibration/noise) and lapse in maintenance of equipment | 2 | 1 | - | 1 |
| PC25. ensure electrical equipment and appliances are properly connected and turned off when not in use | 2 | 1 | - | 1 |
| NOS Total | 50 | 30 | - | 20 |

National Occupational Standards (NOS) Parameters

| | |
|----------------------------|---|
| NOS Code | ASC/N9803 |
| NOS Name | Organize work and resources (Manufacturing) |
| Sector | Automotive |
| Sub-Sector | Generic |
| Occupation | Generic |
| NSQF Level | 3 |
| Credits | TBD |
| Version | 1.0 |
| Last Reviewed Date | 23/09/2020 |
| Next Review Date | 23/09/2025 |
| NSQC Clearance Date | |

ASC/N9802: Interact effectively with colleagues, customers and others

Description

This NOS unit is about communicating with customers and colleagues/superiors, either in own work group or in other work groups within organisation.

Scope

The scope covers the following :

- Communicate effectively with colleagues, customers and others
- Interact with supervisor or superior

Elements and Performance Criteria

Communicate effectively with colleagues, customers and others

To be competent, the user/individual on the job must be able to:

PC1. maintain clear communication with colleagues, customers and others, wherever needed, through all means i.e. face-to-face, telephonic or written

PC2. adjust communication styles to reflect gender and persons with disability (PWD) sensitivity

PC3. work in a way that shows respect for colleagues and others

PC4. follow the organisation's policies and procedures while working in a team

PC5. respect personal space of colleagues and customers

Interact with supervisor or superior

To be competent, the user/individual on the job must be able to:

PC6. identify work requirements by receiving instructions from reporting supervisor

PC7. escalate problems to supervisors that cannot be handled including repairs and maintenance of machine

PC8. report the completed work

PC9. rectify errors as per feedback

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. the importance of effective communication and establishing good working relationships with colleagues and supervisor

KU2. different methods of communication as per the circumstances

KU3. gender based concepts, issues and legislation

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. read instructions/guidelines/procedures

- GS2. listen effectively and orally communicate information
- GS3. ask for clarification and advice from the concerned person
- GS4. maintain positive and effective relationships with colleagues and customers
- GS5. evaluate the possible solution(s) to the problem
- GS6. deliver consistent and reliable service to customers
- GS7. complete written work with attention to detail
- GS8. check that the work meets customer requirements

Assessment Criteria

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|--|--------------|-----------------|---------------|------------|
| <i>Communicate effectively with colleagues, customers and others</i> | 36 | 11 | - | 14 |
| PC1. maintain clear communication with colleagues, customers and others, wherever needed, through all means i.e. face-to-face, telephonic or written | 8 | - | - | 4 |
| PC2. adjust communication styles to reflect gender and persons with disability (PwD) sensitivity | 8 | - | - | - |
| PC3. work in a way that shows respect for colleagues and others | 7 | 4 | - | 3 |
| PC4. follow the organisation's policies and procedures while working in a team | 7 | 4 | - | 3 |
| PC5. respect personal space of colleagues and customers | 6 | 3 | - | 4 |
| <i>Interact with supervisor or superior</i> | 14 | 19 | - | 6 |
| PC6. identify work requirements by receiving instructions from reporting supervisor | 7 | 4 | - | - |
| PC7. escalate problems to supervisors that cannot be handled including repairs and maintenance of machine | - | 5 | - | 3 |
| PC8. report the completed work | 7 | 5 | - | - |
| PC9. rectify errors as per feedback | - | 5 | - | 3 |
| NOS Total | 50 | 30 | - | 20 |

National Occupational Standards (NOS) Parameters

| | |
|----------------------------|--|
| NOS Code | ASC/N9802 |
| NOS Name | Interact effectively with colleagues, customers and others |
| Sector | Automotive |
| Sub-Sector | Generic |
| Occupation | Generic |
| NSQF Level | 3 |
| Credits | TBD |
| Version | 1.0 |
| Last Reviewed Date | 23/09/2020 |
| Next Review Date | 23/09/2025 |
| NSQC Clearance Date | |

ASC/N9805: Interpret engineering drawing

Description

This NOS unit is about reading and interpreting all concepts, symbols, methods, views, etc. of engineering drawing.

Scope

The scope covers the following :

- Interpret information from various views, projection, 2D and 3D shapes
- Identify drawing standards and symbols
- Modification and storage of drawing

Elements and Performance Criteria

Interpret information from various views, projection, 2D and 3D shapes

To be competent, the user/individual on the job must be able to:

- PC1. interpret engineering drawing's uniqueness, dimensions and important features in 2D and 3D shapes
- PC2. identify the difference between 2D and 3D shapes
- PC3. explain difference between first angle projection and third angle projection in mechanical engineering drawing
- PC4. interpret all the 3 axes (x, y and z axis) and geometrical shapes (cones, cylinder, sphere, cuboid, etc) on to a 2D and 3D projection
- PC5. identify details of the machine component which are not clearly visible by interpreting section views

Identify drawing standards and symbols

To be competent, the user/individual on the job must be able to:

- PC6. interpret Geometric Dimensioning and Tolerancing (GD&T) symbols in the drawings
- PC7. interpret symbols of Radius, controlled radius, spherical radius, diameter, spherical diameter, square, counterbore, spotface, depth, countersink, "by", maximum dimension, minimum dimension, reference, dimension origin etc
- PC8. identify the sequence of operations which enables the selection and prioritization of the datums
- PC9. read and interpret information from Tolerance Zone boundaries for part features in terms of shape and size

Modification and storage of drawing

To be competent, the user/individual on the job must be able to:

- PC10. observe any modification, changes required in the drawing and communicate the same to the concerned team in the organization
- PC11. store the drawings in an easily accessible place, avoiding damage from moisture, chemicals and fire

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. relevant organisational standards such as work standard, Standard Operating Procedure, quality process, maintenance standards etc. followed in the company
- KU2. importance of cycle-time and required output as per work order and work instructions
- KU3. drawing standards used by the company
- KU4. use of drawing tools such as scales, compass, types of pencils, CAD and CAM software etc.
- KU5. the basics of engineering drawing, orthographic projection, isometric projection, GD&T etc.
- KU6. importance of various projections, views, symbols and dimensions of drawing
- KU7. use of geometric shapes like lines, angles, circles, etc for interpreting the drawing

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1. read and interpret workplace related drawing
- GS2. communicate the changes and requirements to supervisor by using relevant drawing terms and nomenclature
- GS3. attentively listen and comprehend the information given by the supervisor/team members
- GS4. write in English/regional language
- GS5. recognise problem in drawing and take suitable action
- GS6. analyse and apply the information gathered from observation, experience, reasoning or communication to act efficiently

Assessment Criteria

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|--------------|-----------------|---------------|------------|
| <i>Interpret information from various views, projection, 2D and 3D shapes</i> | 21 | 11 | - | 10 |
| PC1. interpret engineering drawing's uniqueness, dimensions and important features in 2D and 3D shapes | 5 | 3 | - | 2 |
| PC2. identify the difference between 2D and 3D shapes | 4 | 2 | - | 2 |
| PC3. explain difference between first angle projection and third angle projection in mechanical engineering drawing | 4 | - | - | 2 |
| PC4. interpret all the 3 axes (x, y and z axis) and geometrical shapes (cones, cylinder, sphere, cuboid, etc) on to a 2D and 3D projection | 5 | 3 | - | 2 |
| PC5. identify details of the machine component which are not clearly visible by interpreting section views | 3 | 3 | - | 2 |
| <i>Identify drawing standards and symbols</i> | 23 | 15 | - | 8 |
| PC6. interpret Geometric Dimensioning and Tolerancing (GD&T) symbols in the drawings | 6 | 4 | - | 2 |
| PC7. interpret symbols of Radius, controlled radius, spherical radius, diameter, spherical diameter, square, counterbore, spotface, depth, countersink, "by", maximum dimension, minimum dimension, reference, dimension origin etc | 6 | 4 | - | 2 |
| PC8. identify the sequence of operations which enables the selection and prioritization of the datums | 5 | 3 | - | 2 |
| PC9. read and interpret information from Tolerance Zone boundaries for part features in terms of shape and size | 6 | 4 | - | 2 |
| <i>Modification and storage of drawing</i> | 6 | 4 | - | 2 |
| PC10. observe any modification, changes required in the drawing and communicate the same to the concerned team in the organization | 3 | 2 | - | 1 |

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|--------------|-----------------|---------------|------------|
| PC11. store the drawings in an easily accessible place, avoiding damage from moisture, chemicals and fire | 3 | 2 | - | 1 |
| NOS Total | 50 | 30 | - | 20 |

National Occupational Standards (NOS) Parameters

| | |
|---------------------|-------------------------------|
| NOS Code | ASC/N9805 |
| NOS Name | Interpret engineering drawing |
| Sector | Automotive |
| Sub-Sector | Generic |
| Occupation | Generic |
| NSQF Level | 4 |
| Credits | TBD |
| Version | 1.0 |
| Last Reviewed Date | 23/09/2020 |
| Next Review Date | 23/09/2025 |
| NSQC Clearance Date | |

ASC/N3611: Perform vehicle assembly operations

Description

This NOS is about performing assembly of vehicle and its components like fuel system, transmission system, braking, steering, electrical and electronic components, aesthetic parts, seating arrangements etc.

Scope

The scope covers the following :

- Identify the work requirements
- Perform pre-assembly activities
- Conduct the assembly operations
- Conduct the post-assembly operations

Elements and Performance Criteria

Identify the work requirements

To be competent, the user/individual on the job must be able to:

- PC1. identify the work to be done by interpreting the assembly drawing/work instructions/SOPs
- PC2. select the appropriate method of assembly on the basis of drawing information
- PC3. identify the tools, measuring instruments, equipment, auto components/parts and sub-assemblies required for the job

Perform pre-assembly activities

To be competent, the user/individual on the job must be able to:

- PC4. check and clean the assembling equipment of any dust and impurities
- PC5. fill CLRI (Clean, lubricate, retighten & inspection) check sheet and report to the supervisor about any abnormalities identified and action taken to resolve them
- PC6. setup the equipment required as per the selected assembling method
- PC7. ensure that the right programme is selected in case of robotic assembly method as defined in the SOP
- PC8. lift the auto component manually or by hoist and place the same securely on the designated slot/space as indicated in the drawing/work instructions
- PC9. inspect and mark the defects if any, such as in paint, dents, grooves, cracks, rough edges etc. on the physical body of the auto component
- PC10. check all the semi-precision mechanical, pneumatic, hydraulic and electrical parts in the auto components by using the correct methodology as indicated in the Work Instructions/SOPs
- PC11. check adhesion of roof-lining, insulation material, roof-rail etc. of the auto component

Conduct the assembly operation

To be competent, the user/individual on the job must be able to:

- PC12. perform assembly operation and assemble the safety parts i.e. bearings, shafts etc., electrical semi-precision parts such as electric wire harness, Electronic Control Unit (ECU), automatic lock system, fuel injection system and other similar parts

- PC13. perform installation of the Oil and Lube systems by placing and fitting the funnel, filters, hose pipes, glands, sockets, suction guns and regulator valves as prescribed in the Work Instructions/ SOPs/Control Plans
- PC14. carry out sealing of the required areas to prevent any leakage of water/air etc. during the usage of the component
- PC15. carry out labeling on the auto components specifying the information related to assembly process and quality norms followed

Conduct the post-assembly operations

To be competent, the user/individual on the job must be able to:

- PC16. apply appropriate lubricant on the component as per manufacturer's specifications
- PC17. check and confirm that water, diesel or petrol, brake oil, gear oil, engine oil etc. are filled as per the required volume and type
- PC18. check the assembled auto components as per the control plan, work instructions for product quality
- PC19. dispose scrap or waste material into the disposal area in accordance with the company's policies and environmental regulations

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. relevant standards and procedures followed in the company
- KU2. various components and systems of a vehicle
- KU3. various assembly operations and methods
- KU4. the process flow of the assembly operations
- KU5. SOP recommended by the manufacturer for using hand tools, measuring instruments and equipments required during the assembly process
- KU6. impact of various assembly process like bolting, torqueing, tightening, fitting, greasing, hammering, sealing, clamping on the final component/vehicle
- KU7. application of various sealing compounds, gaskets and adhesives
- KU8. connection of all the electrical terminals as per wiring diagram
- KU9. various types of defects and their effect on final assembly
- KU10. the post assembling processes like inspection, cleaning etc.
- KU11. the various inspection methods for inspecting the final assembly
- KU12. safety requirements during the assembling work

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1. read and interpret drawings, work instructions, equipment manuals and process documents
- GS2. communicate the assembly process requirements to the lead technician and co-workers
- GS3. communicate issues to the supervisor that occur during assembling process
- GS4. attentively listen and comprehend the information given by the lead technician/team members

- GS5. write any work related information in English/regional language
- GS6. recognise a workplace problem and take suitable action
- GS7. analyse and apply the information gathered from observation, experience, reasoning or communication to act efficiently
- GS8. plan and organise work according to the principles of 5S
- GS9. complete the assigned tasks with minimum supervision
- GS10. report to the supervisor or deal with a colleague individually, depending on the type of concern

Assessment Criteria

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|--------------|-----------------|---------------|------------|
| <i>Identify the work requirements</i> | 8 | 6 | - | 5 |
| PC1. identify the work to be done by interpreting the assembly drawing/work instructions/SOPs | 1 | 2 | - | 1 |
| PC2. select the appropriate method of assembly on the basis of drawing information | 4 | - | - | 2 |
| PC3. identify the tools, measuring instruments, equipment, auto components/parts and sub-assemblies required for the job | 3 | 4 | - | 2 |
| <i>Perform pre-assembly activities</i> | 12 | 17 | - | 8 |
| PC4. check and clean the assembling equipment of any dust and impurities | 1 | 2 | - | 1 |
| PC5. fill CLRI (Clean, lubricate, retighten & inspection) check sheet and report to the supervisor about any abnormalities identified and action taken to resolve them | 1 | 4 | - | 2 |
| PC6. setup the equipment required as per the selected assembling method | 1 | 2 | - | - |
| PC7. ensure that the right programme is selected in case of robotic assembly method as defined in the SOP | 1 | - | - | - |
| PC8. lift the auto component manually or by hoist and place the same securely on the designated slot/space as indicated in the drawing/work instructions | 2 | 2 | - | - |
| PC9. inspect and mark the defects if any, such as in paint, dents, grooves, cracks, rough edges etc. on the physical body of the auto component | 2 | 2 | - | 2 |
| PC10. check all the semi-precision mechanical, pneumatic, hydraulic and electrical parts in the auto components by using the correct methodology as indicated in the Work Instructions/SOPs | 3 | 3 | - | 2 |
| PC11. check adhesion of roof-lining, insulation material, roof-rail etc. of the auto component | 1 | 2 | - | 1 |

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|--------------|-----------------|---------------|------------|
| <i>Conduct the assembly operation</i> | 7 | 17 | - | 4 |
| PC12. perform assembly operation and assemble the safety parts i.e. bearings, shafts etc., electrical semi-precision parts such as electric wire harness, Electronic Control Unit (ECU), automatic lock system, fuel injection system and other similar parts | 3 | 7 | - | 1 |
| PC13. perform installation of the Oil and Lube systems by placing and fitting the funnel, filters, hose pipes, glands, sockets, suction guns and regulator valves as prescribed in the Work Instructions/ SOPs/Control Plans | 2 | 5 | - | 1 |
| PC14. carry out sealing of the required areas to prevent any leakage of water/air etc. during the usage of the component | 1 | 3 | - | 1 |
| PC15. carry out labeling on the auto components specifying the information related to assembly process and quality norms followed | 1 | 2 | - | 1 |
| <i>Conduct the post-assembly operations</i> | 3 | 10 | - | 3 |
| PC16. apply appropriate lubricant on the component as per manufacturer's specifications | 1 | 2 | - | 1 |
| PC17. check and confirm that water, diesel or petrol, brake oil, gear oil, engine oil etc. are filled as per the required volume and type | 1 | 3 | - | 1 |
| PC18. check the assembled auto components as per the control plan, work instructions for product quality | - | 3 | - | - |
| PC19. dispose scrap or waste material into the disposal area in accordance with the company's policies and environmental regulations | 1 | 2 | - | 1 |
| NOS Total | 30 | 50 | - | 20 |

National Occupational Standards (NOS) Parameters

| | |
|----------------------------|-------------------------------------|
| NOS Code | ASC/N3611 |
| NOS Name | Perform vehicle assembly operations |
| Sector | Automotive |
| Sub-Sector | Manufacturing |
| Occupation | Assembly Operation |
| NSQF Level | 4 |
| Credits | TBD |
| Version | 2.0 |
| Last Reviewed Date | 23/09/2020 |
| Next Review Date | 23/09/2025 |
| NSQC Clearance Date | |

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training centre (as per assessment criteria below).
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training centre based on these criteria.
5. In case of successfully passing only certain number of NOSs, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.
6. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack

Minimum Aggregate Passing % at QP Level : 70

(Please note: Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

Assessment Weightage

Compulsory NOS

| National Occupational Standards | Theory Marks | Practical Marks | Project Marks | Viva Marks | Total Marks | Weightage |
|--|--------------|-----------------|---------------|------------|-------------|-----------|
| ASC/N9803.Organize work and resources (Manufacturing) | 50 | 30 | - | 20 | 100 | 10 |
| ASC/N9802.Interact effectively with colleagues, customers and others | 50 | 30 | - | 20 | 100 | 5 |
| ASC/N9805.Interpret engineering drawing | 50 | 30 | - | 20 | 100 | 10 |
| ASC/N3611.Perform vehicle assembly operations | 30 | 50 | 0 | 20 | 100 | 75 |

| National Occupational Standards | Theory Marks | Practical Marks | Project Marks | Viva Marks | Total Marks | Weightage |
|---------------------------------|--------------|-----------------|---------------|------------|-------------|------------|
| Total | 180 | 140 | 0 | 80 | 400 | 100 |

Acronyms

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| NOS | National Occupational Standard(s) |
| NSQF | National Skills Qualifications Framework |
| QP | Qualifications Pack |
| TVET | Technical and Vocational Education and Training |
| PPE | Personal Protective Equipment |
| PwD | Person with Disability |
| SOP | Standard Operating Practices |
| PwD | Persons with Disability |
| SOP | Standard Operating Procedure |
| GD&T | Geometric Dimensioning & Tolerancing |
| CAD | Computer-Aided Drafting |
| CAM | Computer-Aided Manufacturing |
| PLC | Programmable Logic Controller |
| CLRI | Cleaning, Lubrication, Re-tightening and Inspection |
| ECU | Electronic Control Unit |
| LIFO | Last in First Out |
| FIFO | First in First Out |
| ERP | Enterprise Resource Planning |
| MES | Manufacturing Execution System |

Glossary

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| Sector | Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests. |
| Sub-sector | Sub-sector is derived from a further breakdown based on the characteristics and interests of its components. |
| Occupation | Occupation is a set of job roles, which perform similar/ related set of functions in an industry. |
| Job role | Job role defines a unique set of functions that together form a unique employment opportunity in an organisation. |
| Occupational Standards (OS) | OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts. |
| Performance Criteria (PC) | Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task. |
| National Occupational Standards (NOS) | NOS are occupational standards which apply uniquely in the Indian context. |
| Qualifications Pack (QP) | QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code. |
| Unit Code | Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N' |
| Unit Title | Unit title gives a clear overall statement about what the incumbent should be able to do. |
| Description | Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for. |
| Scope | Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required. |
| Knowledge and Understanding (KU) | Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard. |

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| Organisational Context | Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility. |
| Technical Knowledge | Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities. |
| Core Skills/Generic Skills (GS) | Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today’s world. These skills are typically needed in any work environment in today’s world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles. |
| Electives | Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives. |
| Options | Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options. |