

QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR AUTOMOTIVE INDUSTRY

What are Occupational Standards(OS)?

- OS describe what individuals need to do, know and understand in order to carry out a particular job role or function
- OS are performance standards that individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding



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Introduction

Qualifications Pack- Auto Service Technician (Two and Three Wheelers)

SECTOR: AUTOMOTIVE

SUB-SECTOR: Automotive Vehicle Service

OCCUPATION: Technical Service & Repair

REFERENCE ID: ASC/Q1411

ALIGNED TO: NCO-2015/ 7231.0500

Brief Job Description: An Auto Service Technician (two and three wheelers) is responsible for carrying out service repair and maintenance activities of various aggregates including electrical and mechanical aggregates) of two/ three wheeler vehicles.

Personal Attributes: An individual on this job must have good communication and interpersonal skills in addition to being a team player, as the job requires coordination with other technicians as well. The individual must have a technical bend of mind to understand the technical aspects of a two/ three wheeler, which may be different from a four-wheeler. The individual must know how to drive a two/ three wheeler to practically test drive and identify any additional repair or service requirements in the electrical and mechanical aggregates.

Qualifications Pack for Auto Service Technician (Two and Three Wheelers)

Job Details	Qualifications Pack Code	ASC/Q1411		
	Job Role	Auto Service Technician (Two and Three Wheelers) (Applicable for national scenarios)		
	Credits	TBD	Version number	1.0
	Sector	Automotive	Drafted on	18/10/16
	Sub-sector	Automotive Vehicle Service	Last reviewed on	18/10/16
	Occupation	Technical Service & Repair	Next review date	20/10/18
	NSQF Clearance on			

Job Role	Auto Service Technician (Two and Three Wheelers)
Role Description	Carry out repair, routine servicing and maintenance (including electrical and mechanical aggregates) of vehicles (two and three wheelers).
NSQF level	4
Minimum Educational Qualifications	10 th Standard pass, preferably
Maximum Educational Qualifications	ITI or Diploma in Mechanical/ Electrical/ Automobile Engineering
Training (Suggested but not mandatory)	On the job training: <ul style="list-style-type: none"> Desirable for ASDC Auto Service Technician (two and three wheelers) Certificate or Diploma in Automotive Repair. Compulsory for all other qualifications.
Minimum Job Entry Age	1. ASDC recommends that candidates should seek full employment not before attaining an age of 18 years. 2. However, as per Factories Act 1948 and Shops & Establishment Act 1953: - No one can be employed before attaining age of 14. 3. Please note that under the Factories Act 1948, and Shops & Establishment Act 1953 different States may have slightly varying provision which need to be adhered to.
Experience	<ul style="list-style-type: none"> 0-3 years if ASDC Auto Service Technician Level 4 Certificate or Diploma in Automotive Repair. 3-6 months for other qualifications.
Applicable National Occupational Standards (NOS)	Compulsory: <ol style="list-style-type: none"> ASC/N1420 Carry out routine servicing and minor repairs of aggregates of two and three wheelers ASC/N0001 Plan and organise work to meet expected outcomes ASC/N0002 Work effectively in a team

Qualifications Pack for Auto Service Technician (Two and Three Wheelers)

	<p>4. ASC/N0003 Maintain a healthy, safe and secure working environment</p> <p>Optional: NA</p>
Performance Criteria	As described in the relevant OS units

Keywords /Terms	Description
Core Skills/Generic Skills	Core Skills or Generic Skills are a group of skills that are key to learning and working in today's world. These skills are typically needed in any work environment. In the context of the NOS, these include communication related skills that are applicable to most job roles.
Dealership	A business established or operated under an authorisation to sell or distribute an automotive company's goods and services.
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 NOS they are looking for.
Function	Function is an activity necessary for achieving the key purpose of the sector, occupation, or area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of NOS.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
Knowledge and Understanding	Knowledge and Understanding are statements which together specify the technical, generic, professional and organizational specific knowledge that an individual needs in order to perform to the required standard.
National Occupational Standards (NOS)	NOS are Occupational Standards which apply uniquely in the Indian context.
Occupation	Occupation is a set of job roles, which perform similar/related set of functions in an industry.
Organisational Context	Organisational Context includes the way the organization is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Performance Criteria	Performance Criteria are statements that together specify the standard of performance required when carrying out a task.
Qualifications Pack(QP)	Qualifications Pack comprises the set of NOS, together with the educational, training and other criteria required to perform a job role. A Qualifications Pack is assigned a unique qualification pack code.
Qualifications Pack Code	Qualifications Pack Code is a unique reference code that identifies a qualifications pack.
Scope	Scope is the 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 the quality of performance required.
Sector	Sector is a conglomeration of different business operations having similar businesses 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.
Sub-functions	Sub-functions are sub-activities essential to fulfil the achieving the objectives of the function.
Technical Knowledge	Technical Knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Unit Code	Unit Code is a unique identifier for a NOS unit, which can be denoted

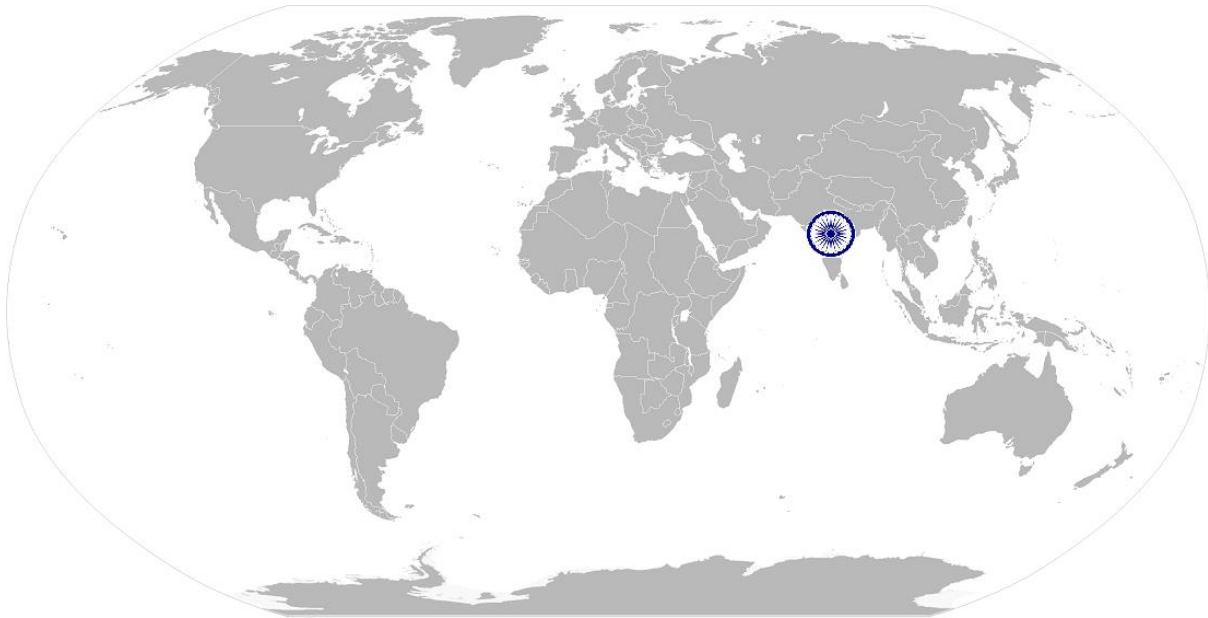
Qualifications Pack for Auto Service Technician (Two and Three Wheelers)

Acronyms

	with an 'N'
Unit Title	Unit Title gives a clear overall statement about what the incumbent should be able to do.
Vehicle	Mode of personal transport including 2-wheelers, 3-wheelers and 4-wheelers (including passenger vehicles and commercial vehicles). This includes gasoline, petrol, CNG, electrical and hybrid vehicles.
Vertical	Vertical may exist within a sub-sector representing different domain areas or the client industries served by the industry.
Keywords/ Terms	Description
NOS	National Occupational Standard(s)
NSQF	National Standards Qualifications Framework
OEM	Original Equipment Manufacturer
OS	Occupational Standard(s)
QP	Qualifications Pack

ASC/N1420 Carry out routine servicing and minor repairs of aggregates of two and three wheelers

National Occupational Standard



Overview

This Occupational Standard describes the knowledge, understanding and skills required of an Automotive Service Technician to carry out routine service minor and repairs (including electrical and mechanical aggregates) of a two and three wheeler vehicle. This also includes CNG, electrical and hybrid vehicles.

ASC/N1420 Carry out routine servicing and minor repairs of aggregates of two and three wheelers

Unit Code	ASC/N1420
Unit Title (Task)	Carry out routine servicing and minor repairs of aggregates of two and three wheelers
Description	This NOS unit is about an Auto Service Technician carrying out service, repairs and maintenance activities of various aggregates (including electrical and mechanical aggregates) of two and three wheelers.
Scope	<p>This unit/ task covers the following:</p> <ul style="list-style-type: none"> • carry out routine servicing of two/ three wheeler including various aggregates (scheduled, free and paid maintenance) • carry out maintenance activities of the two/ three wheeler vehicle (including oil, lubricant, coolant change and greasing) • carry out service and minor repair of two/ three wheeler vehicle (including mechanical and electrical aggregates)
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Carry out routine service & minor repairs of aggregates of two & three wheelers	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. understand the auto component manufacturer specifications related to the various components/ aggregates in the two/ three wheeler vehicle</p> <p>PC2. follow standard operating procedures for using workshop tools and equipment for service and minor aggregate repairs in the two/ three wheeler vehicle</p> <p>PC3. conduct test drives to assess need for repairs, calibration or any other adjustments in the electrical/ mechanical aggregates in the two/ three wheeler vehicle</p> <p>PC4. review the job card and understand work to be carried out</p> <p>PC5. ensure OEM recommended procedure and checklist is followed for routine servicing in case of non-routine service or repair, confirm tasks to be carried out with superior</p> <p>PC6. calibrate, align and adjust settings, alignment, pressures, tension, speeds and levels relevant to : engine and aggregates; transmission system, chassis, electrical and electronic components; Scooter (two stroke engine), Scooter (four stroke engine), Motor cycle (two stroke engine), Motor cycle (four stroke engine), Disc & drum brakes system; other components (including to valves, ignition, fuel and emissions; transmission, lights, tyres, steering and body fittings)</p> <p>PC7. ensure that for routine maintenance and service, the correct spare parts and appropriate grade of lubricants, coolant, oils and grease required have been</p>

ASC/N1420 Carry out routine servicing and minor repairs of aggregates of two and three wheelers

	<p>obtained</p> <p>PC8. ensure all dismantled components (including mechanical and electrical aggregates) are cleaned and conditioned prior to reassembly</p> <p>PC9. identify and change components effected due to continuous use & wear and tear e.g. air filters; belts, wiper blades, brake linings and pads</p> <p>PC10. ensure disposal of materials (including waste oil, scrap of failed parts/ aggregates) in accordance with the organisation's policies</p> <p>PC11. understand the various precautions to be taken to avoid damage to the vehicle and its components while working on other aggregates</p> <p>PC12. record all service and repairs carried out and ensure completeness of tasks assigned before releasing vehicle for the next procedure</p> <p>PC13. ensure all workshop tools, equipment and workstations are adequately maintained by carrying out scheduled checks, calibration and timely repairs where necessary</p> <p>PC14. ensure any malfunctions observed in tools and equipment are reported to the concerned persons</p> <p>PC15. ensure any other repair requirements observed in the other components/ aggregates systems (like engine, gear box etc.) while repairing/ overhauling of braking systems are reported to supervisor/ service advisor for further inspection by other specialists</p> <p>PC16. measure/ inspect the machining or any other repair done from an outside source/ local machining garages</p> <p>PC17. utilise any computer-based applications relevant to service and repairs</p> <p>PC18. ensure that trainings organized by the OEM from time-to-time are attended and knowledge levels are upgraded (esp. in case of newly launched products, product refreshes)</p>
Knowledge and Understanding (K)	
<p>A. Organizational Context (Knowledge of the company / organization and its processes)</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. standard operating procedures for servicing and minor repair of vehicles as prescribed by the OEM/ dealership</p> <p>KA2. standard schedules and checklists recommended by the OEM/ auto component manufacturer for servicing of two and three wheeler vehicles</p> <p>KA3. identification codes, nomenclature and grades of lubricants, components and aggregates</p> <p>KA4. standard operating procedures recommended by the dealership/ auto components suppliers/ OEM for using tools and equipment to be followed related to aggregates/ components (including electrical and mechanical aggregates) as per the manufacturer instructions</p> <p>KA5. standard operating procedures for rectification of errors in information (e.g.</p>

ASC/N1420 Carry out routine servicing and minor repairs of aggregates of two and three wheelers

	<p>rectification of job card, reissue of correct tools and equipment etc.)</p> <p>KA6. safety requirements for equipment and components prescribed by the OEM (e.g. preventing/ dealing with oil spillage and inflammable materials)</p> <p>KA7. documentation requirements for each procedure carried out as part of roles and responsibilities as specified by OEM/ auto component manufacturer</p> <p>KA8. organisational and professional code of ethics and standards of practice</p> <p>KA9. safety, health and environmental policies and regulations for the workplace as well as for automotive trade in general (e.g. safe working practices inside pits/ under vehicles)</p>
<p>B. Technical Knowledge</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. the basic technology used in and functioning of various components and aggregates of the vehicle Basic Technologies including: engines and fuel system (diesel, petrol, electrical, gas etc.); radiator, emission and exhaust system; clutch assembly, transmission systems (manual, automatic etc.), hydraulic and pneumatic system; disc & drum brakes system; drive-train assembly, steering system, suspension system, tyres and wheel alignment; cooling system, electrical, ignition, electronic and air-conditioning system etc.</p> <p>KB2. the tools used to assess deviations from specifications during routine servicing, maintenance and repair including Tools: 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. Specialty wrenches: alignment wrenches, chain wrenches, locking wrenches, lug wrenches etc. Trim or moulding tools: carbon scrapers, gasket scrapers, scrapers, spoons etc. Measuring equipment: Vernier calipers, micrometer, feeler gauges, multi-meter, flow meter, temp gauge, dial gauge etc. Other tools: hand tools, power tools, lifting and jacking equipment, tensioning equipment, brake roller tester, chassis dynamometer, suspension activation, security activator etc. Tools for other tasks such as cleaning of vehicles, tools, equipment and workshop</p> <p>KB3. how to select the right materials for the job such as seals, sealants, fittings, gaskets, joints, fasteners etc.</p> <p>KB4. how to carry out routine maintenance including: checking vehicle condition against OEM specifications to identify damage, corrosion, wear and tear; fluid levels, leaks and other problems in serviceability Routine maintenance including: make adjustments to settings, alignment, pressures, tension, speeds and levels Speed and levels relevant to: engine and aggregates (including fuel injection pump, ignition, intake and exhaust systems), steering system, clutch and brake assembly, transmission system (including</p>

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	<p>gearbox, differential, propeller shaft and axles), electrical and electronic components (including alternator, lights, wire harness etc.), other components (including tyres and body fittings)</p> <p>KB5. the various sources of information available for assessing service and repair requirements of the vehicle including: diagnostic displays, visual inspections test drives, vehicle/ equipment manufacturer specifications, standard operating procedures</p> <p>KB6. procedures recommended by the OEM and dealership to be used during routine servicing of various aggregates/ sub-assemblies (including mechanical and electrical aggregates)</p> <p>KB7. the type and quality of components/ parts and aggregates as specified by the OEM for use as replacement in case of fault</p> <p>KB8. the grade of lubricants, oils, coolants and grease as specified by the OEM for use</p> <p>KB9. typical causes and symptoms of operational faults and failures of a vehicle</p> <p>KB10. corrective action to be taken for common engine and aggregate system faults and failures</p> <p>KB11. faults and failures that necessitate replacement of components/ aggregates (including mechanical & electrical assemblies) and other units</p> <p>KB12. how to dispose-off replaced failed components and changed oil, lubricant, grease etc. in accordance with safety, health and environmental policies and regulations of the organization.</p> <p>KB13. precautions to be taken to ensure the following while working (including specific precautions to be taken when working with alternative fuel/ hybrid vehicles) including : no damage to the electrical/ other advanced systems (in case of hybrid/ electrical vehicles), no damage to the vehicle on which work is being done along with other vehicles parked besides, no damage to vehicle components sub-assemblies and other systems, no contact with hazardous materials</p>
Skills (S)	
A. Core Skills/ Generic Skills	Reading Skills
	<p>The user/ individual on the job should be able to:</p> <p>SA1. read job cards and instructions from supervisors and the service advisor</p> <p>SA2. read various sources of information available for assessing service and repair requirements of the vehicle including service manual and diagnostic and visual displays put up in the workshop</p> <p>SA3. read policies and regulations pertinent to the job, including OEM guidelines, health and safety instructions etc.</p>

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	<p>Writing Skills</p> <p>The user/ individual on the job should be able to:</p> <p>SA4. create documentation required on the job (including job cards, work sheets, etc.) regarding the basic details of repair, maintenance and service performed</p> <p>SA5. record all diagnostic performed on the two/ three wheelers</p> <p>SA6. write any additional requirement of work on the vehicle reported for service, maintenance or repair found during the work done as specified in the job card (for e.g. while working on the engine and transmission system, if low level of engine oil/ greasing, then convey to the superiors)</p> <p>SA7. write in at least one language</p>
	<p>Oral Communication (Listening and Speaking skills)</p> <p>The user/individual on the job should be able to:</p> <p>SA8. follow transport authorities/supervisor's instructions and have an oral dialogue if required</p> <p>SA9. communicate with co-driver / driver assistant and other personnel</p>
	<p>B. Professional Skills</p> <p>Decision Making</p> <p>The user/individual on the job should be able to:</p> <p>SB1. analyses information and evaluate results to choose the best solution and solve problems</p> <p>SB2. decide on the repair/ replacement of any aggregate (including those in the electrical and mechanical sub- assemblies) post the diagnosis (with help from a superior in case required)</p> <p>SB3. judge when to ask for help from a superior</p>
	<p>Plan and Organize</p> <p>The user/individual on the job should be able to:</p> <p>SB4. plan work according to the required schedule and location</p> <p>SB5. organise the schedule to complete work on the vehicle timely in case other aggregate repairs/ maintenance work is also required to be done</p> <p>Customer Centricity</p> <p>The user/individual on the job should be able to:</p> <p>SB6. interpret the needs of customers by evaluating job cards and talking to Service Advisor and superiors</p> <p>SB7. ensure that the service provided is of the highest order to ensure higher levels of customer satisfaction</p> <p>SB8. ensure timely communication of the additional requirements in a vehicle to the service advisor who in turn communicates it to the customer</p> <p>SB9. follow up with the Service Advisor on any unfavourable feedback received</p>

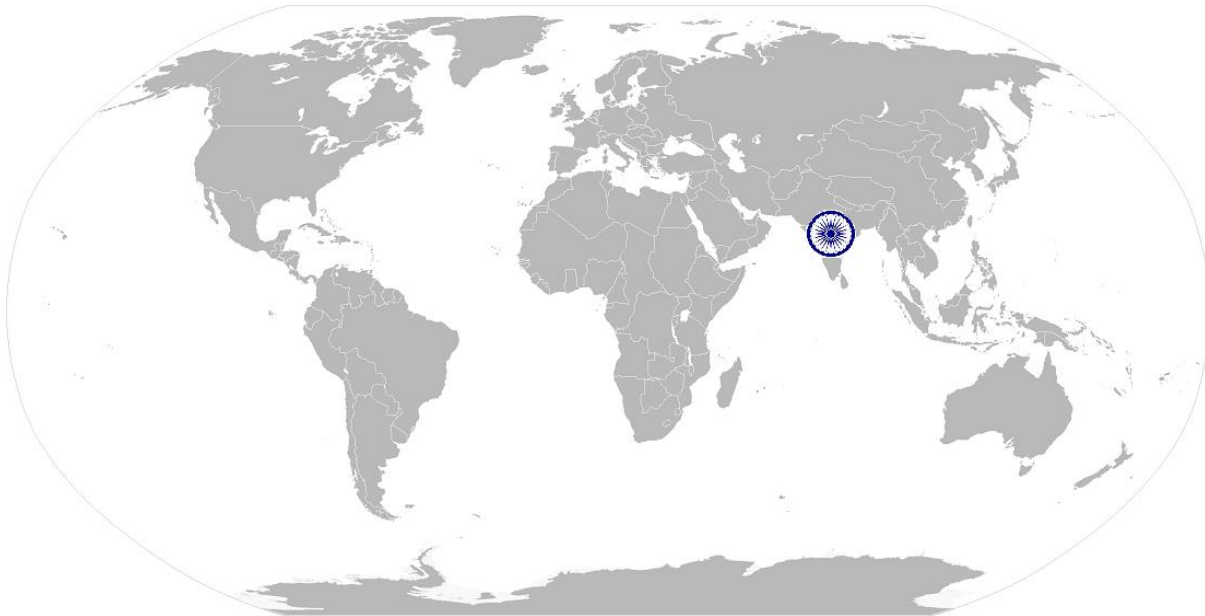
ASC/N1420 Carry out routine servicing and minor repairs of aggregates of two and three wheelers

	from customer
	Problem Solving
	The user/individual on the job should be able to: SB10. recognize a workplace problem or a potential problem and take action (e.g. leaks or oil spills in the workshop) SB11. determine problems needing priority action (e.g. while working on the engine, crank / pistons require machining as they have been worn out, inform the service advisor or supervisor for urgent action) SB12. refer problems outside area of responsibility to appropriate person (e.g. unavailability of required spare parts or materials in the workshop) SB13. gather information while working on an aggregate/ components and take appropriate action, by consulting superiors
	Analytical Thinking
	The user/individual on the job should be able to: SB14. how to learn from past mistakes and identify potential problems
	Critical Thinking
The user/individual on the job should be able to: SB15. analyses, evaluate and apply the information gathered from observation, experience, reasoning, or communication to act efficiently SB16. use the diagnosis results to take an appropriate decision on repair/ replacement of an aggregates (including mechanical and electrical sub-assemblies) in consultation with the supervisor/ aggregate specialist/ service advisor	

ASC/N1420 Carry out routine servicing and minor repairs of aggregates of two and three wheelers

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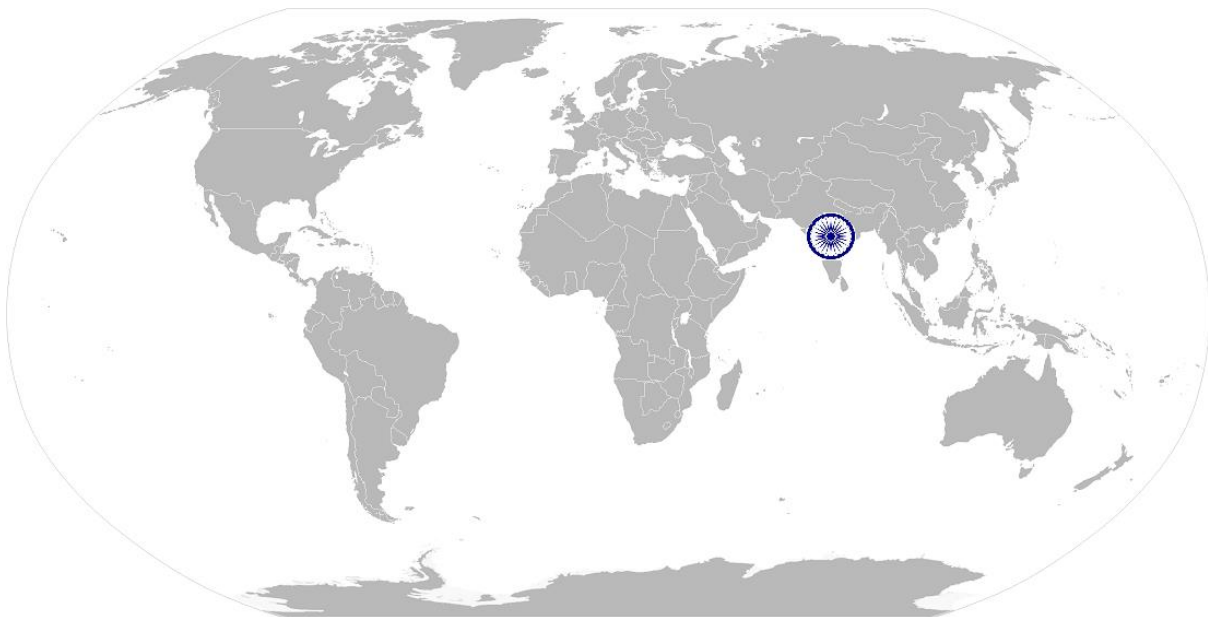
NOS Code	ASC/N1420		
Credits	TBD	Version number	1.0
Industry	Automotive	Drafted on	18/10/16
Industry Sub-sector	Automotive Vehicle Service	Last reviewed on	18/10/16
Occupation	Technical Service & Repair	Next review date	20/10/18



ASC/N0001

Plan and organise work to meet expected outcomes

National Occupational Standard




Overview

This unit is about planning and organising an individual's work in order to complete it to the required standards, on time and within budget in terms of cost and material.

ASC/N0001

Plan and organise work to meet expected outcomes

National Occupational Standard	Unit Code	ASC/N0001
	Unit Title (Task)	Plan and organise work to meet expected outcomes
	Description	This NOS unit is about planning and organising an individual's work in order to complete it to the required standards on time.
	Scope	<p>This unit/ task covers the following:</p> <ul style="list-style-type: none"> work requirements including various activities, deliverables or work output required in the given time, maintain set quality standards appropriate use of resources (both material/ equipment's and manpower)
	Performance Criteria(PC) w.r.t. the Scope	
	Element	Performance Criteria
	Work requirements including various activities within the given time and set quality standards	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. keep immediate work area clean and tidy</p> <p>PC2. treat confidential information as per the organisation's guidelines</p> <p>PC3. work in line with organisation's policies and procedures</p> <p>PC4. work within the limits of job role </p> <p>PC5. obtain guidance from appropriate people, where necessary</p> <p>PC6. ensure work meets the agreed requirements</p>
	Appropriate use of resources	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC7. establish and agree on work requirements with appropriate people</p> <p>PC8. manage time, materials and cost effectively</p> <p>PC9. use resources efficiently with minimal wastage</p>
	Knowledge and Understanding (K)	
	A. Organizational Context (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. the organisation's policies, procedures and priorities for area of work, role and responsibilities in carrying out that work</p> <p>KA2. the limits of responsibilities and when to involve others</p> <p>KA3. specific work requirements and who these must be agreed with</p> <p>KA4. the importance of having a tidy work area and how to do this</p> <p>KA5. how to prioritize workload according to urgency and importance and the benefits of this</p> <p>KA6. the organisation's policies and procedures for dealing with confidential information and the importance of complying with these</p> <p>KA7. the purpose of keeping others updated with the progress of work</p> <p>KA8. who to obtain guidance from and the typical circumstances when this may be required</p> <p>KA9. the purpose and value of being flexible and adapting work plans to reflect</p>

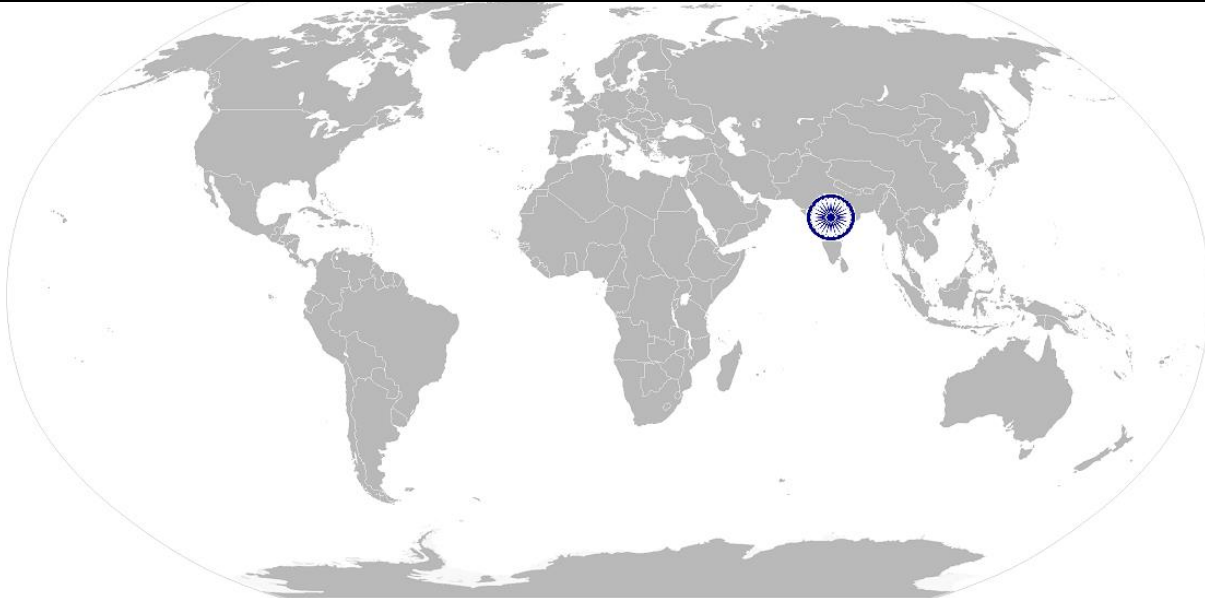
ASC/N0001 Plan and organise work to meet expected outcomes

	change
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. how to complete tasks accurately by following standard procedures KB2. technical resources needed for work and how to obtain and use these
Skills (S)	
A. Core Skills/ Generic Skills	Reading Skills
	The user/ individual on the job should have ability to : SA1. read instructions, guidelines/procedures
	Writing Skills
	The user/ individual on the job should have ability to : SA2. write simple sentences in local language and also preferably in Hindi/ English
	Oral Communication (Listening and Speaking skills)
	The user/ individual on the job should have ability to : SA3. ask for clarification and advice from appropriate persons SA4. communicate orally with colleagues
B. Professional Skills	Decision Making
	The user/individual on the job should be able to : SB1. analyses a given situation and decide on an appropriate action for completing the task within resources
	Plan and Organize
	The user/individual on the job should be able to : SB2. agree upon required output SB3. plan and organize work to achieve targets and deadlines
	Customer Centricity
	The user/individual on the job should be able to : SB4. meet or exceed internal/external customer/team expectations
	Problem Solving
	The user/individual on the job should be able to : SB5. analyses a problem and attempt to find an acceptable solution and take help of concerned people if required
	Analytical Thinking
	The user/individual on the job should be able to : SB6. anticipate and analyses a given situation from all aspects
Critical Thinking	
The user/individual on the job should be able to : SB7. apply own judgement to identify solutions in different situations	

ASC/N0001 Plan and organise work to meet expected outcomes

NOS Version Control

NOS Code	ASC/N0001		
Credits	TBD	Version number	1.0
Industry	Automotive	Drafted on	18/10/16
Industry Sub-sector	Automotive Vehicle Service	Last reviewed on	18/10/16
Occupation	Technical Service & Repair	Next review date	20/10/18



ASC/N0002

Work effectively in a team

National Occupational Standard



Overview

This unit is about working effectively with colleagues, either in own work group or in other work groups within organisation.

ASC/N0002

Work effectively in a team

Unit Code	ASC/N0002
Unit Title (Task)	Work effectively in a team
Description	This NOS unit is about working effectively within a team, either in individual's own work group or in other work groups outside the organisation.
Scope	This unit/ task covers the following: Colleagues: <ul style="list-style-type: none"> Interact & communicate effectively with colleagues including member in the own group as well as other groups
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Interact & communicate effectively with colleagues including member in the own group as well as other groups	To be competent, the user/individual on the job must be able to: <ul style="list-style-type: none"> PC1. maintain clear communication with colleagues (by all means including face-to-face, telephonic as well as written) PC2. work with colleagues to integrate work PC3. pass on information to colleagues in line with organisational requirements both through verbal as well as non-verbal means PC4. work in ways that show respect for colleagues PC5. carry out commitments made to colleagues PC6. let colleagues know in good time if cannot carry out commitments, explaining the reasons PC7. identify problems in working with colleagues and take the initiative to solve these problems PC8. follow the organisation's policies and procedures for working with colleagues
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> KA1. the organisation's policies and procedures for working with colleagues, role and responsibilities in relation to this KA2. the importance of effective communication and establishing good working relationships with colleagues KA3. different methods of communication and the circumstances in which it is appropriate to use these KA4. the importance of creating an environment of trust and mutual respect KA5. the implications of own work on the work and schedule of others
B. Technical Knowledge	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> KB1. different types of information that colleagues might need and the

ASC/N0002

Work effectively in a team

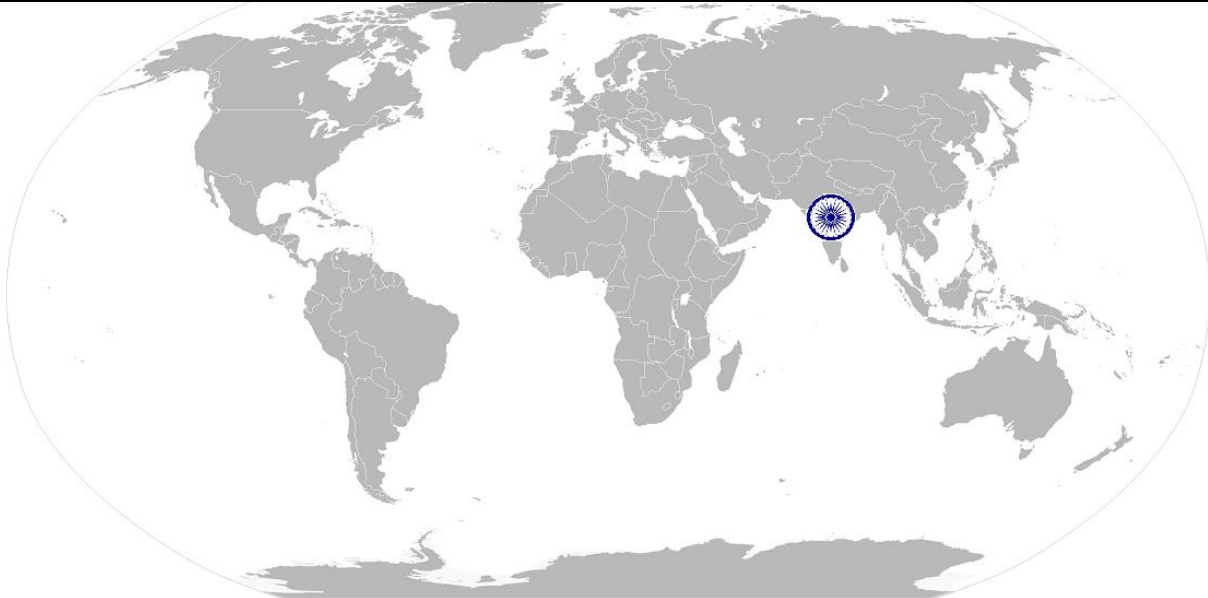
	importance of providing this information when it is required KB2. the importance of helping colleagues with problems, in order to meet quality and time standards as a team
Skills (S)	
A. Core Skills/ Generic Skills	Reading Skills
	The user/ individual on the job should have ability to : SA1. read instructions, guidelines/procedures
	Writing Skills
	The user/ individual on the job should have ability to : SA2. write simple sentences in local language and also preferably in Hindi/ English
	Oral Communication (Listening and Speaking skills)
The user/ individual on the job should have ability to : SA3. listen effectively and orally communicate information SA4. ask for clarification and advice from the concerned person	
B. Professional Skills	Decision Making
	The user/individual on the job should be able to : SB1. analyses a given situation and decide on an appropriate action for completing the task within resources
	Plan and Organize
	The user/individual on the job should be able to : SB2. agree upon required output SB3. plan and organize work to achieve targets and deadlines
	Customer Centricity
	The user/individual on the job should be able to : SB4. meet or exceed customer/team expectations
	Problem Solving
	The user/individual on the job should be able to : SB5. analyses a problem and attempt to find an acceptable solution and take help of concerned people if required
	Analytical Thinking
	The user/individual on the job should be able to : SB6. anticipate and analyses a given situation from all aspects
Critical Thinking	
The user/individual on the job should be able to : SB7. apply own judgement to identify solutions in different situations	

ASC/N0002

Work effectively in a team

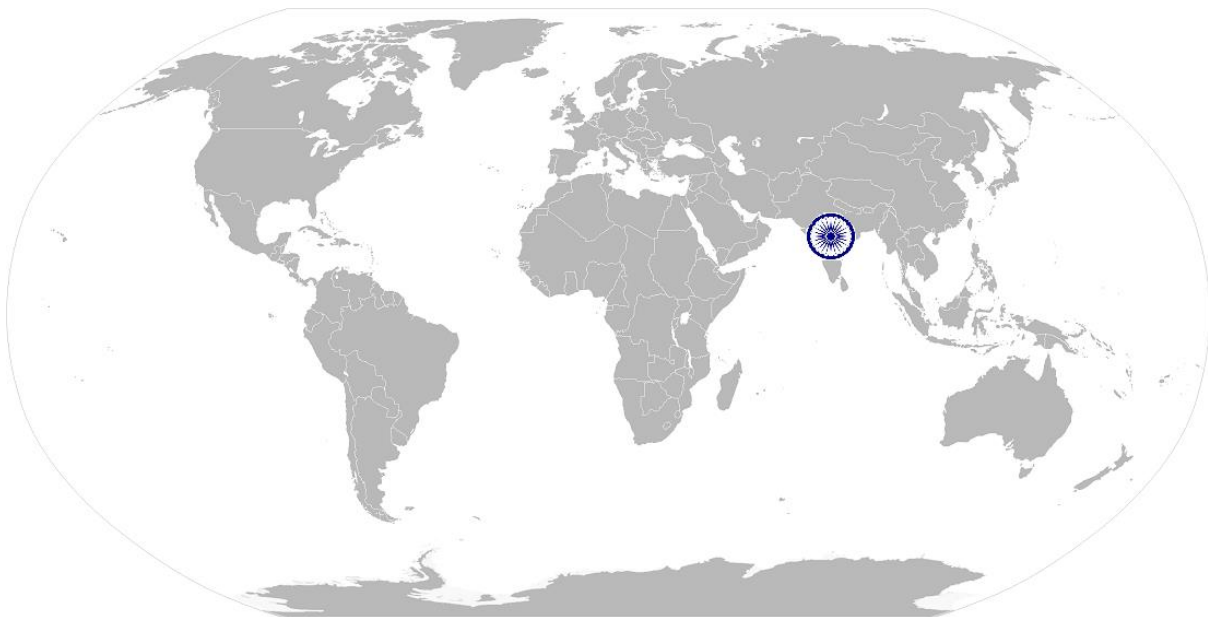
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NOS Code	ASC/N0002		
Credits	TBD	Version number	1.0
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Industry Sub-sector	Automotive Vehicle Service	Last reviewed on	18/10/16
Occupation	Technical Service & Repair	Next review date	20/10/18



ASC/N0003 Maintain a healthy, safe and secure working environment

National Occupational Standard



Overview

This unit is about monitoring work place practices and making sure they meet requirements for health, safety, security and environmental concerns.

ASC/N0003 Maintain a healthy, safe and secure working environment

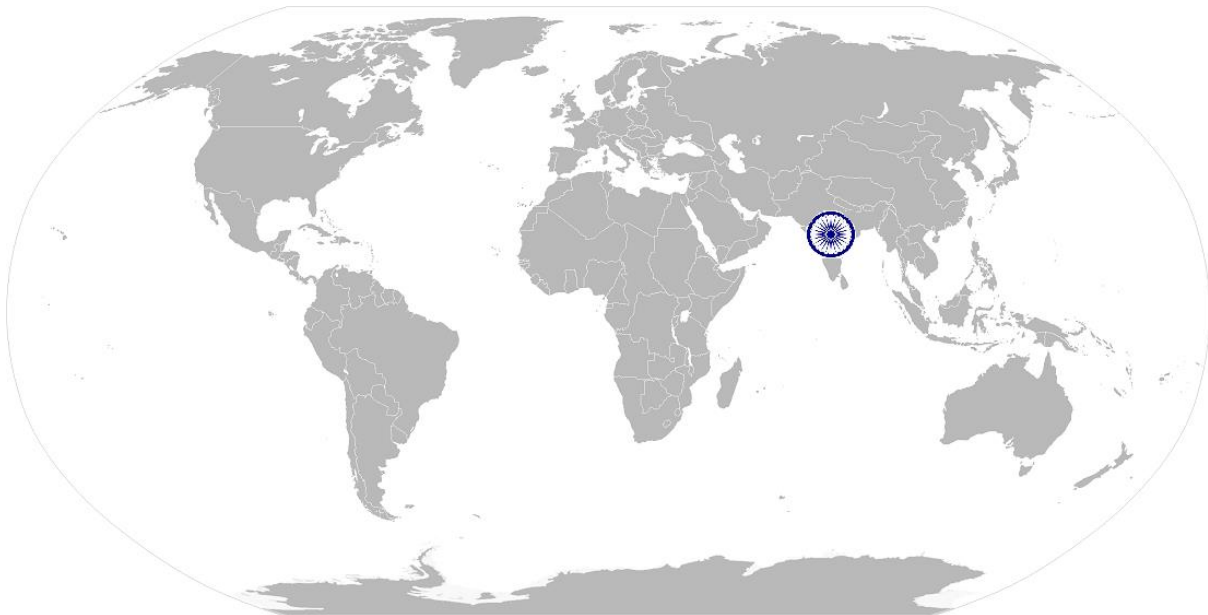
Unit Code	ASC/N0003
Unit Title (Task)	Maintain a healthy, safe and secure working environment
Description	This NOS unit is about monitoring the working environment and making sure it meets requirements for health, safety and security.
Scope	<p>This unit/ task covers the following:</p> <ul style="list-style-type: none"> Resources (both material & manpower) needed to maintain a safe working environment as per the prevalent norms & government policies including emergency procedures for illness, accidents, fires or any other reason which may involve evacuation of the premises.
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Resources needed to maintain a safe, secure working environment	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. comply with organisation's current health, safety and security policies and procedures</p> <p>PC2. report any identified breaches in health, safety, and security policies and procedures to the designated person</p> <p>PC3. coordinate with other resources at the workplace to achieve healthy, safe and secure environment for all incorporating government norms esp. for emergency situations like fires, earthquakes etc.</p> <p>PC4. identify and correct any hazards like illness, accidents, fires or any other natural calamity within the limits of individual's authority</p> <p>PC5. report any hazards outside the individual's authority to the relevant person in line with organisational procedures and warn other people who may be affected</p> <p>PC6. follow organisation's emergency procedures for accidents, fires or any other natural calamity</p> <p>PC7. identify and recommend opportunities for improving health, safety, and security to the designated person</p> <p>PC8. Complete health and safety records , ensure procedures are well defined</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. legislative requirements and organisation's procedures for health, safety and security and individual's role and responsibilities in relation to this</p> <p>KA2. what is meant by a hazard, including the different types of health and safety hazards that can be found in the workplace</p>

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processes)	<p>KA3. how and when to report hazards</p> <p>KA4. the limits of responsibility for dealing with hazards</p> <p>KA5. the organisation's emergency procedures for different emergency situations and the importance of following these</p> <p>KA6. the importance of maintaining high standards of health, safety and security</p> <p>KA7. implications that any non-compliance with health, safety and security may have on individuals and the organisation</p>
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. different types of breaches in health, safety and security and how and when to report these</p> <p>KB2. evacuation procedures for workers and visitors</p> <p>KB3. how to summon medical assistance and the emergency services, where necessary</p> <p>KB4. how to use the health, safety and accident reporting procedures and the importance of these</p>
Skills (S)	
A. Core Skills/ Generic Skills	<p>Reading Skills</p> <p>The user/ individual on the job should have ability to :</p> <p>SA1. read instructions, guidelines/ procedures/ rules</p> <p>Writing Skills</p> <p>The user/ individual on the job should have ability to :</p> <p>SA2. write simple sentences in local language and also preferably in Hindi/ English</p> <p>Oral Communication (Listening and Speaking skills)</p> <p>The user/ individual on the job should have ability to :</p> <p>SA3. listen to and orally communicate information with all concerned</p>
B. Professional Skills	<p>Decision Making</p> <p>The user/individual on the job should be able to :</p> <p>SB1. make decisions on a suitable course of action or response</p> <p>Plan and Organize</p> <p>The user/individual on the job should be able to :</p> <p>SB2. agree upon required output</p> <p>SB3. plan and organize work to achieve targets and deadlines</p> <p>Customer Centricity</p> <p>The user/individual on the job should be able to :</p> <p>SB4. meet or exceed customer/team expectations</p> <p>Problem Solving</p>

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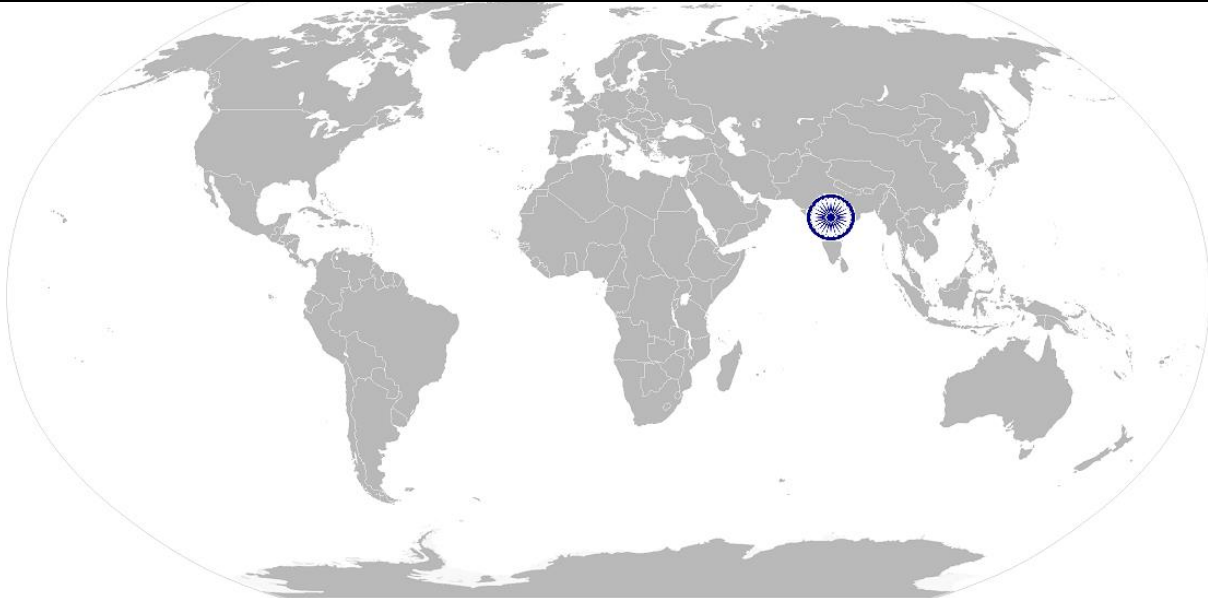
	The user/individual on the job should be able to : SB5. analyses a problem and attempt to find an acceptable solution and take help of concerned people if required
	Analytical Thinking
	The user/individual on the job should be able to : SB6. anticipate and analyses a given situation from all aspects
	Critical Thinking
	The user/individual on the job should be able to : SB7. apply own judgement to identify solutions in different situations



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NOS Version Control

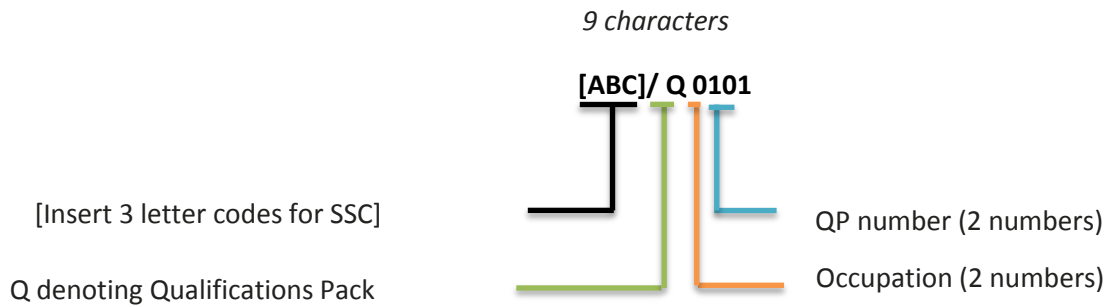
NOS Code	ASC/N0003		
Credits	TBD	Version number	1.0
Industry	Automotive	Drafted on	18/10/16
Industry Sub-sector	Automotive Vehicle Service	Last reviewed on	18/10/16
Occupation	Technical Service & Repair	Next review date	20/10/18



Annexure

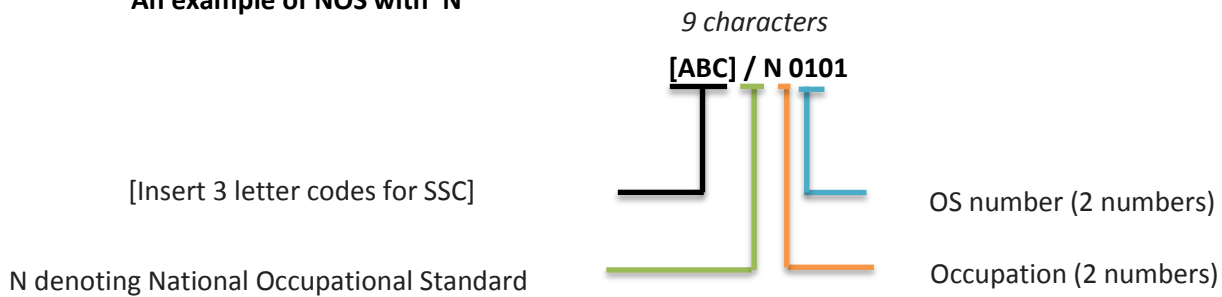
Nomenclature for QP and NOS

Qualifications Pack



Occupational Standard

An example of NOS with 'N'



Qualifications Pack for Auto Service Technician (Two and Three Wheelers)

The following acronyms/ codes have been used in the nomenclature above:

Sub-sector	Range of Occupation numbers
Manufacturing	31 - 45 & 61 - 68
Research & Development	81 - 84
Sales & Service	01 - 21
Road Transportation	96 - 97

Sequence	Description	Example
Three letters	Automotive	ASC
Slash	/	/
Next letter	Whether QP or NOS	N
Next two numbers	Occupation code	01
Next two numbers	OS number	01

Qualifications Pack for Auto Service Technician (Two and Three Wheelers)



CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role: Auto Service Technician (Two and Three Wheelers)

Qualification Pack: ASC/Q1411

Sector Skill Council: Automotive Skills Development Council

Guidelines for Assessment:

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (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 center (as per assessment criteria below).
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on this criteria.
5. To pass the Qualification Pack, every trainee should score a minimum of 70% in every NOS.
6. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.

Assessable Outcomes	Assessment Criteria	Total Marks	Out of	Theory	Practical Skills
ASC/N1420 Carry out routine servicing and minor repairs of aggregates of two and three wheelers	PC1.understand the auto component manufacturer specifications related to the various components/ aggregates in the two/ three wheeler vehicle	200	5		5
	PC2.follow standard operating procedures for using workshop tools and equipment for service and minor aggregate repairs in the two/ three wheeler vehicle		5		5
	PC3.conduct test drives/ rides to assess need for repairs, calibration or any other adjustments in the electrical/ mechanical aggregates in the two/ three wheeler vehicle		15		15
	PC4.review the job card and understand work to be carried out		5		5
	PC5.ensure OEM recommended procedure and checklist is followed for routine servicing in case of non-routine service or repair, confirm tasks to be carried out with superior		5		5

Qualifications Pack for Auto Service Technician (Two and Three Wheelers)

Assessable Outcomes	Assessment Criteria	Total Marks	Out of	Theory	Practical Skills
	PC6. calibrate, align and adjust settings, alignment, pressures, tension, speeds and levels relevant to : engine and aggregates; transmission system, chassis, electrical and electronic components; Scooter (two stroke engine), Scooter (four stroke engine), Motor cycle (two stroke engine), Motor cycle (four stroke engine), Disc & drum brakes system; other components (including to valves, ignition, fuel and emissions; transmission, lights, tyres, steering and body fittings)		20		20
	PC7.ensure that for routine maintenance and service, the correct spare parts and appropriate grade of lubricants, coolant, oils and grease required have been obtained		10		10
	PC8.ensure all dismantled components (including mechanical and electrical aggregates) are cleaned and conditioned prior to reassembly following the procedures in the OEM Manual		10		10
	PC9. identify and change components effected due to continuous use & wear and tear e.g. air filters; belts, wiper blades, brake linings and pads		20		20
	PC10.ensure disposal of materials (including waste oil, scrap of failed parts/ aggregates) in accordance with the organisation's policies		5		5
	PC11.understand the various precautions to be taken to avoid damage to the vehicle and its components while working on other aggregates		5		5
	PC12.record all service and repairs carried out and ensure completeness of tasks assigned before releasing vehicle for the next procedure		5		5
	PC13.ensure all workshop tools, equipment and workstations are adequately maintained by carrying out scheduled checks, calibration and timely repairs where necessary		5		5
	PC14.ensure any malfunctions observed in tools and equipment are reported to the concerned persons		5		5
	PC15.ensure any other repair requirements observed in the other components/ aggregates systems (like engine, gear box etc.) while repairing/ overhauling of braking systems are reported to supervisor/ service advisor for further inspection by other specialists		5		5
	PC16. measure/ inspect the machining or any other repair done from an outside source/ local machining garages		5		5

Qualifications Pack for Auto Service Technician (Two and Three Wheelers)

Assessable Outcomes	Assessment Criteria	Total Marks	Out of	Theory	Practical Skills
	PC17.utilise any computer-based applications relevant to service and repairs		5		5
	PC18.ensure that trainings organized by the OEM from time-to-time are attended and knowledge levels are upgraded (esp. in case of newly launched products, product refreshes)		5		5
	All KA, KB for the NOS			60	
		Total	200	60	140
ASC/N0001 Plan and organise work to meet expected outcomes	PC1.keep immediate work area clean and tidy	100	7		7
	PC2.treat confidential information as per the organisation's guidelines		8		8
	PC3.work in line with organisation's policies and procedures		8		8
	PC4.work within the limits of job role		8		8
	PC5.obtain guidance from appropriate people, where necessary		8		8
	PC6.ensure work meets the agreed requirements		7		7
	PC7.establish and agree on work requirements with appropriate people		9		9
	PC8.manage time, materials and cost effectively		8		8
	PC9. use resources efficiently with minimal wastage		7		7
	All KA, KB for the NOS			30	
		Total	100	30	70
ASC/N0002 Work effectively in a team	PC1.maintain clear communication with colleagues (by all means including face-to-face, telephonic as well as written)	100	9		9
	PC2.work with colleagues to integrate work		8		8
	PC3.pass on information to colleagues in line with organisational requirements both through verbal as well as non-verbal means		9		9
	PC4.work in ways that show respect for colleagues		8		8
	PC5.carry out commitments made to colleagues		9		9
	PC6.let colleagues know in good time if cannot carry out commitments, explaining the reasons		9		9
	PC7.identify problems in working with colleagues and take the initiative to solve these problems		9		9
	PC8.follow the organisation's policies and procedures for working with colleagues		9		9
	All KA, KB for the NOS			30	
		Total	100	30	70
ASC/N0003 Maintain a	PC1.comply with organisation's current health, safety and security policies and procedures	100	9		9

Qualifications Pack for Auto Service Technician (Two and Three Wheelers)

Assessable Outcomes	Assessment Criteria	Total Marks	Out of	Theory	Practical Skills
healthy, safe and secure working environment	PC2.report any identified breaches in health, safety, and security policies and procedures to the designated person		9		9
	PC3. coordinate with other resources at the workplace to achieve healthy, safe and secure environment for all incorporating government norms esp. for emergency situations like fires, earthquakes etc.		9		9
	PC4. identify and correct any hazards like illness, accidents, fires or any other natural calamity within the limits of individual's authority		9		9
	PC5.report any hazards outside the individual's authority to the relevant person in line with organisational procedures and warn other people who may be affected		9		9
	PC6.follow organisation's emergency procedures for accidents, fires or any other natural calamity		8		8
	PC7.identify and recommend opportunities for improving health, safety, and security to the designated person		8		8
	PC8. complete health and safety records , ensure procedures are well defined		9		9
			All KA, KB for the NOS		
		Total	100	30	70

SSC	QPCode	Name of the QP	NSQF Level	Equipment Name	Minimum number of Equipment required (per batch of 30 trainees)	Unit Type	Is this a mandatory Equipment to be available at the Training Center (Yes/No)	Dimension/Specification/Description of the Equipment/ ANY OTHER REMARK
Automotive	ASC/Q1411	Automotive Service Technician (2 & 3 Wheelers)	4	Steering Covers	1	units	Yes	
Automotive	ASC/Q1411	Automotive Service Technician (2 & 3 Wheelers)	4	A/C Leakage Tester	1	units	No	to suit current range of cars
Automotive	ASC/Q1411	Automotive Service Technician (2 & 3 Wheelers)	4	A/C Machine (124 Robin Air)	1	units	No	to suit current range of cars
Automotive	ASC/Q1411	Automotive Service Technician (2 & 3 Wheelers)	4	Air Compressor	1	unit	Yes	
Automotive	ASC/Q1411	Automotive Service Technician (2 & 3 Wheelers)	4	Battery Charging cum tester	1	units	Yes	Range 6 V to 12 V
Automotive	ASC/Q1411	Automotive Service Technician (2 & 3 Wheelers)	4	BC Clamp Meter	1	units	Yes	12 v range
Automotive	ASC/Q1411	Automotive Service Technician (2 & 3 Wheelers)	4	Bench Grinder	1	units	Yes	Standard range
Automotive	ASC/Q1411	Automotive Service Technician (2 & 3 Wheelers)	4	Car Seat Covers	1	set	Yes	free size to suit standard bucket seat

Automotive	ASC/Q1411	Automotive Service Technician (2 & 3 Wheelers)	4	Cotton Gloves	30	pairs	Yes	non-asbestos type
Automotive	ASC/Q1411	Automotive Service Technician (2 & 3 Wheelers)	4	Diagnostic Tool/scanner	1	units	No	with updated software
Automotive	ASC/Q1411	Automotive Service Technician (2 & 3 Wheelers)	4	Fender Covers	1	set	Yes	
Automotive	ASC/Q1411	Automotive Service Technician (2 & 3 Wheelers)	4	Hard Toed Boots	30	pairs	Yes	to suit individuals
Automotive	ASC/Q1411	Automotive Service Technician (2 & 3 Wheelers)	4	Hydraulic Jacks	4	units	Yes	to suit vehicle on training. 1T or 5 T or 10 T
Automotive	ASC/Q1411	Automotive Service Technician (2 & 3 Wheelers)	4	Hydraulic Press	1	units	Yes	
Automotive	ASC/Q1411	Automotive Service Technician (2 & 3 Wheelers)	4	Hydro Meter	1	units	Yes	12 v
Automotive	ASC/Q1411	Automotive Service Technician (2 & 3 Wheelers)	4	Multi Meter	1	units	Yes	Hand held, AC, DC with data hold
Automotive	ASC/Q1411	Automotive Service Technician (2 & 3 Wheelers)	4	Oil Draining & Filling Equipment	1	units	Yes	
Automotive	ASC/Q1411	Automotive Service Technician (2 & 3 Wheelers)	4	Parts Washing Station	1	units	Yes	
Automotive	ASC/Q1411	Automotive Service Technician (2 & 3 Wheelers)	4	Pneumatic Tools	1	set	Yes	

Automotive	ASC/Q1411	Automotive Service Technician (2 & 3 Wheelers)	4	Post Lift	2	units	Yes	
Automotive	ASC/Q1411	Automotive Service Technician (2 & 3 Wheelers)	4	Pullers	1	set	Yes	
Automotive	ASC/Q1411	Automotive Service Technician (2 & 3 Wheelers)	4	Sliding Hammer	1	units	Yes	
Automotive	ASC/Q1411	Automotive Service Technician (2 & 3 Wheelers)	4	Sun Glasses	30	units	Yes	
Automotive	ASC/Q1411	Automotive Service Technician (2 & 3 Wheelers)	4	Torque Wrenches	1	set	Yes	
Automotive	ASC/Q1411	Automotive Service Technician (2 & 3 Wheelers)	4	Vehicle Safety Station	4	units	Yes	
Automotive	ASC/Q1411	Automotive Service Technician (2 & 3 Wheelers)	4	Wheel Aligner	1	units	No	to have tie-up
Automotive	ASC/Q1411	Automotive Service Technician (2 & 3 Wheelers)	4	Wheel Balancer	1	units	No	to have tie-up