

## 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

**JOB ROLE:** AUTO SERVICE TECHNICIAN (TWO AND THREE WHEELERS)

**REFERENCE ID:** ASC/Q 1411

**ALIGNED TO:** NCO-2004/7231.50

**Auto Service Technician (two and three wheelers)** is also known as Mechanic, Technician, 2 Wheeler Technician, Repair & Maintenance Technician.

**Brief Job Description:** An Auto Service Technician(two and three wheelers)is responsible for the repairing and routine servicing & maintenance(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.

Job Details

Qualifications Pack Code	ASC/ Q 1411		
Job Role	Auto Service Technician(two and three wheelers)		
Credits(NSQF)	TBD	Version number	1.1
Industry	Automotive	Drafted on	10/06/13
Sub-sector	Automotive Vehicle Service	Last reviewed on	10/06/13
Occupation	Technical Service & Repair	Next review date	10/06/15

Job Role	Auto Service Technician(two and three wheelers)
Role Description	Carry out repair and routine servicing and maintenance (including electrical and mechanical aggregates) of vehicles (two and three wheelers)
NSQF level	4
Minimum Educational Qualifications	Class X
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"> <li>Desirable for ASDC Auto Service Technician (two and three wheelers) Certificate or Diploma in Automotive Repair</li> <li>Compulsory for all other qualifications</li> </ul>
Experience	<ul style="list-style-type: none"> <li>1-2 years if ASDC Auto Service Technician Level 4 Certificate or Diploma in Automotive Repair</li> <li>3-5 years for other qualifications</li> </ul>
Occupational Standards (OS)	<p><b>Compulsory:</b></p> <p><b>ASC/ N 1420:</b> <a href="#">Carry out routine servicing and minor repairs of aggregates of two and three wheelers</a></p> <p><b>ASC/ N 0001:</b> <a href="#">Plan and organise work to meet expected outcomes</a></p> <p><b>ASC/ N 0002:</b> <a href="#">Work effectively in a team</a></p> <p><b>ASC/ N 0003:</b> <a href="#">Maintain a healthy, safe and secure working environment</a></p> <p><b>Optional:</b> N.A.</p>
Performance Criteria	As described in the relevant NOS 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 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)
NVEQF	National Vocational Education Qualifications Framework
NVQF	National Vocational Qualifications Framework
NSQF	National Skills Qualifications Framework
OEM	Original Equipment Manufacturer
OS	Occupational Standard(s)
QP	Qualifications Pack

ASC/ N 1420: Carry out routine servicing and minor repairs of aggregates of two and three wheelers

# National Occupational Standards



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## 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/ N 1420: Carry out routine servicing and minor repairs of aggregates of two and three wheelers**

National Occupational Standard	<b>Unit Code</b>	<b>ASC/ N 1420</b>
	<b>Unit Title (Task)</b>	<b>Carry out routine servicing and minor repairs of aggregates of two and three wheelers</b>
	<b>Description</b>	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.
	<b>Scope</b>	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>• carry out routine servicing of two/ three wheeler including various aggregates (scheduled, free and paid maintenance)</li> <li>• carry out maintenance activities of the two/ three wheeler vehicle (including oil, lubricant, coolant change and greasing)</li> <li>• carry out minor service and repair of two/ three wheeler vehicle (including mechanical and electrical aggregates)</li> </ul>
	<b>Performance Criteria (PC) w.r.t. the Scope</b>	
	<b>Element</b>	<b>Performance Criteria</b>
	<b>Carry out routine service &amp; minor repairs of aggregates of two &amp; three wheelers</b>	<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:</p> <ul style="list-style-type: none"> <li>• engine and aggregates</li> <li>• transmission system</li> <li>• chassis</li> <li>• electrical and electronic components</li> <li>• Scooter (two stroke engine)</li> <li>• Scooter (four stroke engine)</li> <li>• Motor cycle (two stroke engine)</li> <li>• Motor cycle (four stroke engine)</li> <li>• Disc &amp; drum brakes system</li> <li>• other components (including to valves, ignition, fuel and emissions, transmission, lights, tyres, steering and body fittings)</li> </ul>

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	<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 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 requiring change due to continuous wear and tear including:</p> <ul style="list-style-type: none"> <li>• oil and air filters</li> <li>• belts</li> <li>• wiper blades</li> <li>• brake linings and pads</li> <li>• drive</li> </ul> <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. able to 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>
<b>Knowledge and Understanding (K) w.r.t. the scope</b>	
<b>Element</b>	<b>Knowledge and Understanding</b>
<b>A. Organisational Context</b> (Knowledge of the Company/ Organisation and its processes)	<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</p>

**ASC/ N 1420: Carry out routine servicing and minor repairs of aggregates of two and three wheelers**

	<p>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. 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>B. Technical Knowledge</b></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 including:</p> <ul style="list-style-type: none"> <li>• engines and fuel system (diesel, petrol, electrical, gas etc.)</li> <li>• radiator</li> <li>• emission and exhaust system</li> <li>• clutch assembly</li> <li>• transmission systems (manual, automatic etc.)</li> <li>• hydraulic and pneumatic system</li> <li>• disc &amp; drum brakes system</li> <li>• drive-train assembly</li> <li>• steering system</li> <li>• suspension system</li> <li>• tyres and wheel alignment</li> <li>• cooling system</li> <li>• electrical, ignition, electronic and air-conditioning system etc.</li> </ul> <p>KB2. the tools used to assess deviations from specifications during routine servicing, maintenance and repair including use of:</p> <ul style="list-style-type: none"> <li>• pressure indicators: fuel pressure testers, manifold gauge sets, oil pressure gauges, tire pressure gauges etc.</li> <li>• pullers: ball joint separators, bearing pullers, gear puller tools, slide hammers etc.</li> <li>• specialty wrenches: alignment wrenches, chain wrenches, locking wrenches, lug wrenches etc.</li> </ul>

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	<ul style="list-style-type: none"> <li>• trim or moulding tools: carbon scrapers, gasket scrapers, scrapers, spoons etc.</li> <li>• measuring equipment: vernier calipers, micrometre, feeler gauges, multi-metre, flow metre, temp gauge, dial gauge etc.</li> <li>• other tools: hand tools, power tools, lifting and jacking equipment, tensioning equipment, brake roller tester, chassis dynamometer, suspension activation, security activator etc.</li> <li>• tools for other tasks such as cleaning of vehicles, tools, equipment and workshop</li> </ul> <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:</p> <ul style="list-style-type: none"> <li>• checking vehicle condition against OEM specifications to identify damage, corrosion, wear and tear, fluid levels, leaks and other problems in serviceability</li> <li>• make adjustments to settings, alignment, pressures, tension, speeds and levels relevant to: <ul style="list-style-type: none"> <li>- engine and aggregates (including fuel injection pump, ignition, intake and exhaust systems)</li> <li>- steering system</li> <li>- clutch and brake assembly</li> <li>- transmission system (including gearbox, differential, propeller shaft and axles)</li> <li>- electrical and electronic components (including alternator, lights, wire harness etc.)</li> <li>- other components (including tyres and body fittings)</li> </ul> </li> </ul> <p>KB5. the various sources of information available for assessing service and repair requirements of the vehicle including:</p> <ul style="list-style-type: none"> <li>• diagnostic displays</li> <li>• visual inspections</li> <li>• test drives</li> <li>• vehicle/equipment manufacturer specifications</li> <li>• standard operating procedures</li> </ul> <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>
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	<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 &amp; 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</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):</p> <ul style="list-style-type: none"> <li>• no damage to the electrical / other advanced systems (in case of hybrid/ electrical vehicles)</li> <li>• no damage to the vehicle on which work is being done along with other vehicles parked besides</li> <li>• no damage to vehicle components sub-assemblies and other systems</li> <li>• no contact with hazardous materials</li> </ul>
<b>Skills (S) w.r.t. the scope</b>	
<b>Element</b>	<b>Skills</b>
<b>A. Core Skills/ Generic Skills</b>	<b>Writing skills</b>
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. create documentation required on the job (including job cards, work sheets, etc.) regarding the basic details of repair , maintenance and service performed</p> <p>SA2. record all diagnostic performed on the two/ three wheelers</p> <p>SA3. 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>SA4. write in at least one language</p>
	<b>Reading skills</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. read job cards and instructions from supervisors and the service advisor</p> <p>SA6. 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>SA7. read policies and regulations pertinent to the job, including OEM guidelines, health and safety instructions etc.</p>
	<b>Oral Communication (Listening and Speaking skills)</b>
	<p>The user/individual on the job needs to know and understand how to:</p>

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	<p>SA8. clearly communicate workplace information and ideas with colleagues (verbal &amp; non-verbal)</p> <p>SA9. use terms, names, grades and other nomenclature pertaining to the automotive trade, tools, specific workshop equipment etc.</p> <p>SA10. communicate with colleagues to handle verbal enquiries, such as clarifying instructions and responding to requests for information</p> <p>SA11. interact with the customer through service advisor/ supervisor in case any additional work needs to be done on the two/ three wheeler which may not have been indicated in the job card and found during the work being carried out as per the job card</p>
<b>B. Professional Skills</b>	<b>Decision making</b>
	The user/individual on the job needs to know and understand how to:
	SB1. analyse information and evaluate results to choose the best solution and solve problems
	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)
	SB3. judge when to ask for help from a superior
	<b>Plan and Organise</b>
	The user/individual on the job needs to know and understand how to:
	<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>
	<b>Customer centricity</b>
	The user/individual on the job needs to know and understand how to:
	SB6. interpret the needs of customers by evaluating job cards and talking to Service Advisor and superiors
	SB7. ensure that the service provided is of the highest order to ensure higher levels of customer satisfaction
	SB8. ensure timely communication of the additional requirements in a vehicle to the service advisor who in turn communicates it to the customer
	SB9. follow up with the Service Advisor on any unfavourable feedback received from customer
	<b>Problem solving</b>
	The user/individual on the job needs to know and understand how to:
	SB10. recognise 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)

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	SB13. gather information while working on an aggregate/ components and take appropriate action, by consulting superiors
	<b>Analytical thinking</b>
	The user/individual on the job needs to know and understand how to:
	SB14. assess repairs required based on technical faults identified as specified in the job card/ supervisor notes
	SB15. refer complex problems (outside the current scope of work) to a superior in case any additional work requirement comes up
	<b>Critical thinking</b>
	The user/individual on the job needs to know and understand how to:
	SB16. analyse, evaluate and apply the information gathered from observation, experience, reasoning, or communication to act efficiently
	SB17. 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/ N 1420: Carry out routine servicing and minor repairs of aggregates of two and three wheelers

## NOS Version Control

NOS Code	ASC/ N 1420		
Credits(NSQF)	TBD	Version number	1
Industry	Automotive	Drafted on	10/06/13
Industry Sub-sector	Automotive Vehicle Service	Last reviewed on	10/06/13
		Next review date	10/06/15

ASC/ N 0001: Plan and organise work to meet expected outcomes

# National Occupational Standards



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## 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/ N 0001: Plan and organise work to meet expected outcomes

<b>Unit Code</b>	<b>ASC/ N 0001</b>
<b>Unit Title (Task)</b>	<b>Plan and organise work to meet expected outcomes</b>
<b>Description</b>	This NOS unit is about planning and organising an individual's work in order to complete it to the required standards on time.
<b>Scope</b>	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>work requirements including various activities, deliverables or work output required in the given time, maintain set quality standards</li> <li>appropriate use of resources (both material / equipment's and manpower)</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Work requirements including various activities within the given time and set quality standards</b>	<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>
<b>Appropriate use of resources</b>	<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 in a responsible manner</p>
<b>Knowledge and Understanding (K) w.r.t. the scope</b>	
<b>Element</b>	<b>Knowledge and Understanding</b>
<b>A. Organisational Context</b> (Knowledge of the Company/Organisation 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</p>

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	to reflect change
<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. how to complete tasks accurately by following standard procedures</p> <p>KB2. technical resources needed for work and how to obtain and use these</p>
<b>Skills (S) w.r.t. the scope</b>	
<b>Element</b>	<b>Skills</b>
<b>A. Core Skills/ Generic Skills</b>	<b>Writing Skills</b>
	The user/individual on the job needs to know and understand how to:
	SA1. write in at least one language
	<b>Reading Skills</b>
	The user/individual on the job needs to know and understand how to:
	SA2. read instructions, guidelines/procedures
<b>B. Professional Skills</b>	<b>Oral Communication (Listening and Speaking skills)</b>
	The user/individual on the job needs to know and understand how to:
	SA3. ask for clarification and advice from appropriate persons
	SA4. communicate orally with colleagues
	<b>Decision Making</b>
	The user/individual on the job needs to know and understand how to:
<b>B. Professional Skills</b>	SB1. make a decision on a suitable course of action appropriate for accurately completing the task within resources
	<b>Plan and Organise</b>
	The user/individual on the job needs to know and understand how to:
	SB2. agree objectives and work requirements
	SB3. plan and organise work to achieve targets and deadlines
	<b>Customer Centricity</b>
<b>B. Professional Skills</b>	The user/individual on the job needs to know and understand how to:
	SB4. deliver consistent and reliable service to customers
	SB5. check own work and ensure it meets customer requirements
	<b>Problem Solving</b>
	The user/individual on the job needs to know and understand how to:
	SB6. refer anomalies to the concerned persons
<b>B. Professional Skills</b>	<b>Analytical Thinking</b>
	The user/individual on the job needs to know and understand how to:
	SB7. analyse problems and identify work -arounds taking help from

**ASC/ N 0001: Plan and organise work to meet expected outcomes**

	concerned persons where required
	<b>Critical Thinking</b>
	The user/individual on the job needs to know and understand how to:
	SB8. apply own judgement to identify solutions in different situations



ASC/ N 0001: Plan and organise work to meet expected outcomes

## NOS Version Control

NOS Code	ASC/ N 0001		
Credits(NSQF)	TBD	Version number	1
Industry	Automotive	Drafted on	10/06/13
Industry Sub-sector	NA	Last reviewed on	10/06/13
		Next review date	10/06/15

ASC/ N 0002: Work effectively in a team

# National Occupational Standards



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## Overview

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

## ASC/ N 0002: Work effectively in a team

<b>Unit Code</b>	<b>ASC/ N 0002</b>
<b>Unit Title (Task)</b>	<b>Work effectively in a team</b>
<b>Description</b>	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.
<b>Scope</b>	<p>This unit/task covers the following:</p> <p>Colleagues:</p> <ul style="list-style-type: none"> <li>Interact &amp; communicate effectively with colleagues including member in the own group as well as other groups</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Interact &amp; communicate effectively with colleagues including member in the own group as well as other groups</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. maintain clear communication with colleagues (by all means including face-to-face, telephonic as well as written)</p> <p>PC2. work with colleagues to integrate work</p> <p>PC3. pass on information to colleagues in line with organisational requirements both through verbal as well as non-verbal means</p> <p>PC4. work in ways that show respect for colleagues</p> <p>PC5. carry out commitments made to colleagues</p> <p>PC6. let colleagues know in good time if cannot carry out commitments, explaining the reasons</p> <p>PC7. identify problems in working with colleagues and take the initiative to solve these problems</p> <p>PC8. follow the organisation's policies and procedures for working with colleagues</p>
<b>Knowledge and Understanding (K) w.r.t. the scope</b>	
<b>Element</b>	<b>Knowledge and Understanding</b>
<b>A. Organisational Context</b> (Knowledge of the Company/Organisation and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. the organisation's policies and procedures for working with colleagues, role and responsibilities in relation to this</p> <p>KA2. the importance of effective communication and establishing good working relationships with colleagues</p> <p>KA3. different methods of communication and the circumstances in which it is appropriate to use these</p> <p>KA4. the importance of creating an environment of trust and mutual respect</p> <p>KA5. the implications of own work on the work and schedule of others</p>
<b>B. Technical Knowledge</b>	The user/individual on the job needs to know and understand:

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	<p>KB1. different types of information that colleagues might need and the importance of providing this information when it is required</p> <p>KB2. the importance of helping colleagues with problems, in order to meet quality and time standards as a team</p>
<b>Skills (S)w.r.t. the scope</b>	
<b>Element</b>	<b>Skills</b>
<b>A. Core Skills/ Generic Skills</b>	<b>Writing Skills</b>
	The user/individual on the job needs to know and understand how to:
	SA1. complete written work with attention to detail
	<b>Reading Skills</b>
	The user/individual on the job needs to know and understand how to:
	SA2. read instructions, guidelines/procedures
<b>B. Professional Skills</b>	<b>Oral Communication (Listening and Speaking skills)</b>
	The user/individual on the job needs to know and understand how to:
	SA3. listen effectively and orally communicate information
	SA4. ask for clarification and advice from the concerned person
	<b>Decision Making</b>
	The user/individual on the job needs to know and understand how to:
	SB1. make decisions on a suitable course of action or response keeping in view resource utilization while meeting commitments
	<b>Plan and Organise</b>
	The user/individual on the job needs to know and understand how to:
	SB2. plan and organise work to achieve targets and deadlines
	<b>Customer Centricity</b>
	The user/individual on the job needs to know and understand how to:
	SB3. check that the work meets customer requirements
	SB4. deliver consistent and reliable service to customers
	<b>Problem Solving</b>
	The user/individual on the job needs to know and understand how to:
	SB5. apply problem solving approaches in different situations
	<b>Critical Thinking</b>
	The user/individual on the job needs to know and understand how to:
	SB6. apply balanced judgements to different situations

ASC/ N 0002: Work effectively in a team

## NOS Version Control

NOS Code	ASC/ N 0002		
Credits(NSQF)	TBD	Version number	1
Industry	Automotive	Drafted on	10/06/13
Industry Sub-sector	NA	Last reviewed on	10/06/13
		Next review date	10/06/15

ASC/ N 0003: Maintain a healthy, safe and secure working environment

# National Occupational Standards



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## Overview

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

## ASC/ N 0003: Maintain a healthy, safe and secure working environment

<b>Unit Code</b>	<b>ASC/ N 0003</b>
<b>Unit Title (Task)</b>	<b>Maintain a healthy, safe and secure working environment</b>
<b>Description</b>	This NOS unit is about monitoring the working environment and making sure it meets requirements for health, safety and security.
<b>Scope</b>	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>Resources (both material &amp; manpower) needed to maintain a safe working environment as per the prevalent norms &amp; government policies including emergency procedures for illness, accidents, fires or any other reason which may involve evacuation of the premises</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Resources needed to maintain a safe, secure working environment</b>	<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 the healthy, safe and secure environment for all incorporating all 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 safely and 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 all health and safety records are updates and procedures well defined</p>
<b>Knowledge and Understanding (K) w.r.t. the scope</b>	
<b>Element</b>	<b>Knowledge and Understanding</b>
<b>A. Organisational Context (Knowledge of the Company/Organisation and its processes)</b>	<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> <p>KA3. how and when to report hazards</p>

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	<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>B. Technical Knowledge</b>	<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>
<b>Skills (S) w.r.t. the scope</b>	
<b>Element</b>	<b>Skills</b>
<b>A. Core Skills/ Generic Skills</b>	<b>Writing Skills</b>
	The user/individual on the job needs to know and understand how to:
	SA1. complete accurate, well written work with attention to detail
	<b>Reading Skills</b>
	The user/individual on the job needs to know and understand how to:
	SA2. read instructions, guidelines/procedures/rules
<b>B. Professional Skills</b>	<b>Oral Communication (Listening and Speaking skills)</b>
	The user/individual on the job needs to know and understand how to:
	SA3. listen to and orally communicate information with all concerned
	<b>Decision Making</b>
	The user/individual on the job needs to know and understand how to:
	SB1. make decisions on a suitable course of action or response
<b>B. Professional Skills</b>	<b>Plan and Organise</b>
	The user/individual on the job needs to know and understand how to:
	SB2. plan and organise work to achieve targets and deadlines
	<b>Customer Centricity</b>
	The user/individual on the job needs to know and understand how to:
	SB3. build and maintain positive and effective relationships with colleagues and customers
<b>B. Professional Skills</b>	<b>Problem Solving</b>
	The user/individual on the job needs to know and understand how to:

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	SB4. apply problem solving approaches in different situations
	<b>Analytical Thinking</b>
	The user/individual on the job needs to know and understand how to:
	SB5. analyse data and activities
	<b>Critical Thinking</b>
	The user/individual on the job needs to know and understand how to:
	SB6. apply balanced judgements to different situations



**ASC/ N 0003: Maintain a healthy, safe and secure working environment**

**NOS Version Control**

NOS Code	ASC/ N 0003		
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Industry	Automotive	Drafted on	10/06/13
Industry Sub-sector	NA	Last reviewed on	10/06/13
		Next review date	10/06/15

**Qualification Pack for Automotive Service Technician ( Two & Three Wheelers)**

**Criteria for assessment of Trainees**

JOB ROLE	Service Technician ( Two & three Wheelers) L
Qualification Pack	ASC/Q 1411
No. Of NOS	1 Role specific ,3 generic

NOS Title/ NOS Elements	NOS & Performance Criterion Description	Marks allocation	
ASC/N 1420	Carry out routine servicing & minor repairs of two / three wheelers	Viva	Practical
<b>Carry out routine service &amp; minor repairs of aggregates of two &amp; three wheelers</b>	To be competent, the user/individual on the job must be able to:		
	PC1. understand the auto component manufacturer specifications related to the various components/ aggregates in the two/ three wheeler vehicle	5	15
	PC2. follow standard operating procedures for using workshop tools and equipment for service and minor aggregate repairs in the two/ three wheeler vehicle		
	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	25	50
	PC4. review the job card and understand work to be carried out		
	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		
	PC6. calibrate, align and adjust settings, alignment, pressures, tension, speeds and levels relevant to: <ul style="list-style-type: none"> <li>• engine and aggregates</li> <li>• transmission system</li> <li>• chassis</li> <li>• electrical and electronic components</li> <li>• Scooter (two stroke engine)</li> <li>• Scooter (four stroke engine)</li> <li>• Motor cycle (two stroke engine)</li> <li>• Motor cycle (four stroke engine)</li> <li>• Disc &amp; drum brakes system</li> <li>• other components (including to valves, ignition, fuel and emissions, transmission, lights, tyres, steering and body fittings)</li> </ul>	5	10
	PC7. ensure that for routine maintenance and service, the correct spare parts and appropriate grade of lubricants,	5	15

**Qualification Pack for Automotive Service Technician ( Two & Three Wheelers)**

	<p>coolant, oils and grease required have been 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 requiring change due to continuous wear and tear including:</p> <ul style="list-style-type: none"> <li>• oil and air filters</li> <li>• belts</li> <li>• wiper blades</li> <li>• brake linings and pads</li> <li>• drive</li> </ul> <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. able to 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>	15	30
		10	15
	<b>subtotal</b>	<b>65</b>	<b>135</b>
<b>ASC/N 0001</b>	<b>Plan &amp; organize work to meet expected outcome</b>	<b>Viva</b>	<b>Practical</b>
<b>Work requirements including various activities within the given time and</b>	<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>		

**Qualification Pack for Automotive Service Technician ( Two & Three Wheelers)**

<b>set quality standards</b>	PC2. treat confidential information as per the organisation's guidelines PC3. work in line with organisation's policies and procedures PC4. work within the limits of job role PC5. obtain guidance from appropriate people, where necessary PC6. ensure work meets the agreed requirements	13	27
<b>Appropriate use of resources</b>	PC7. establish and agree on work requirements with appropriate people PC8. manage time, materials and cost effectively PC9. use resources in a responsible manner	18	42
	<b>subtotal</b>	<b>30</b>	<b>70</b>
<b>ASC/N 0002</b>	<b>Work effectively in a team</b>	<b>Viva</b>	<b>Practical</b>
<b>Interact &amp; communicate effectively with colleagues including member in the own group as well as other groups</b>	To be competent, the user/individual on the job must be able to: 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	30	65
	<b>subtotal</b>	<b>30</b>	<b>65</b>
<b>ASC/N 0003</b>	<b>Maintain safe , healthy environment friendly workplace</b>	<b>Viva</b>	<b>Practical</b>
<b>Resources needed to maintain a safe, secure working environment</b>	To be competent, the user/individual on the job must be able to: PC1. comply with organisation's current health, safety and security policies and procedures PC2. report any identified breaches in health, safety, and security policies and procedures to the designated person PC3. Coordinate with other resources at the workplace to achieve the healthy, safe and secure environment for all incorporating all government norms esp. for emergency situations like fires, earthquakes etc. PC4. identify and correct any hazards like illness, accidents,		

**Qualification Pack for Automotive Service Technician ( Two & Three Wheelers)**

	fires or any other natural calamity safely and within the limits of individual's authority 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 PC6. follow organisation's emergency procedures for accidents, fires or any other natural calamity PC7. identify and recommend opportunities for improving health, safety, and security to the designated person PC8. complete all health and safety records are updates and procedures well defined	35	70
	<b>subtotal</b>	<b>35</b>	<b>70</b>
	<b>Total</b>	<b>160</b>	<b>340</b>