

## QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR SKILL COUNCIL FOR PERSONS WITH DISABILITY

### Rights of Persons with Disabilities Act - 2016

Principles for empowerment of persons with disabilities, —

- Respect for inherent dignity, individual autonomy including the freedom to make one's own choices, and independence of persons;
- Non-discrimination;
- full and effective participation and inclusion in society;
- Respect for difference and acceptance of persons with disabilities as part of human diversity and humanity;
- Equality of opportunity;
- Accessibility;
- Equality between men and women;
- Respect for the evolving capacities of children with disabilities and respect for the right of children with disabilities to preserve their identities

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## Introduction

### Qualifications Pack- Auto Service Technician Level 4

<b>Qualifications Pack Code</b>	<b>PWD/ASC/Q1402</b>
<b>Sector</b>	<b>Persons with Disability</b>
<b>Originating Sector Skill Council</b>	<b>Automotive</b>
<b>Version number</b>	<b>1.0</b>

**Adoption of Job Role for PwD-** Job mapping is critical for skill training of PwD so that the livelihood opportunity looks at him/ her not because he/ she is having a disability but because of the skill. Mapping with a disability involves research with subject matter experts (SMEs) with a view on the industry requirement without compromising on performance outcome. In cases, mapping is also supported by the use of assistive tools/ technology.

#### Mapped to Expository

Sr. No.	Expository Code	Expository Name	Minimum Entry Criteria	Expository Linked On
1	E001	Expository for Locomotor Disability	Same as the Qualification Pack	30-11-2018



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# Automotive Skills Development Council



QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR AUTOMOTIVE INDUSTRY

## What are National Occupational Standards

- 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 Level 4

**SECTOR:** AUTOMOTIVE

**SUB-SECTOR:** AUTOMOTIVE VEHICLE SERVICE

**OCCUPATION:** TECHNICAL SERVICE & REPAIR

**JOB ROLE:** AUTO SERVICE TECHNICIAN LEVEL 4

**REFERENCE ID:** ASC/ Q 1402

**ALIGNED TO:** NCO-2004/7231.40

**Auto Service Technician Level 4** is also known as Mechanic, Technician, Automobile Mechanic, Repair and Maintenance Technician.

**Brief Job Description: An Auto Service Technician Level 4** is responsible for the repair and routine servicing & maintenance (including electrical and mechanical aggregates) of 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 related to various aggregates (including both mechanical & electrical) in a vehicle, which would also help in understanding the fault diagnosis in the vehicle. The individual must know how to drive a vehicle to practically test drive and identify any additional repair or service requirements in the vehicle or any of components or aggregates.

Job Details	Qualifications Pack Code	ASC/ Q 1402		
	Job Role	Auto Service Technician Level 4		
	Credits (NSQF)	TBD	Version number	1.0
	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 Level 4
Role Description	Carry out minor repairs and routine service and maintenance of vehicles
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 Level 4 Certificate or Diploma in Automotive Repair</li> <li>Compulsory for all other qualifications</li> </ul>
Experience	<ul style="list-style-type: none"> <li>1-2years 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)	<b>Compulsory:</b> <b>ASC/ N 1402:</b> <a href="#">Assist in performing diagnosis of vehicle for repair requirements</a> <b>ASC/ N 1403:</b> <a href="#">Carry out routine service and minor repairs of mechanical&amp; electrical aggregates</a> <b>ASC/ N 0001:</b> <a href="#">Plan and organize work to meet expected outcomes</a> <b>ASC/ N 0002:</b> <a href="#">Work effectively in a team</a> <b>ASC/ N 0003:</b> <a href="#">Maintain a healthy, safe and secure working environment</a>  <b>Optional:</b> N.A
Performance Criteria	As described in the relevant NOS units

Definitions

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 authorization 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 need 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.
Organizational Context	Organizational 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.
<b>Keywords /Terms</b>	<b>Description</b>
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

Acronyms

ASC/ N 1402: Assist in performing diagnosis of vehicle for repair requirements

# National Occupational Standards



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## Overview

This Occupational Standard describes the knowledge, understanding and skills required of an individual to assist in diagnosis of faults and troubleshooting problems in a vehicle (of both mechanical and electrical aggregates) and take necessary repair action post the root cause analysis. The diagnosis would include diesel, petrol, CNG, electrical and hybrid vehicles across 2-wheelers, 3- wheelers and 4-wheelers (including passenger vehicles and commercial vehicles).



**ASC/ N 1402: Assist in performing diagnosis of vehicle for repair requirements**

<b>National Occupational Standard</b>	<b>Unit Code</b>	<b>ASC/ N 1402</b>
	<b>Unit Title (Task)</b>	<b>Assist in performing diagnosis of vehicle for repair requirements</b>
	<b>Description</b>	This NOS unit is about assisting in troubleshooting problems and fault diagnosis of the vehicle (including both mechanical and electrical aggregates)
	<b>Scope</b>	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>assist the senior technician in identifying &amp; diagnosis of the operational fault responsible for the root cause of the vehicle trouble</li> <li>assist in taking necessary action post the root cause analysis to repair the vehicle</li> </ul>
	<b>Performance Criteria (PC) w.r.t. the Scope</b>	
	<b>Element</b>	<b>Performance Criteria</b>
	<b>Assist in the diagnosis of the root cause of the vehicle trouble</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 vehicle</p> <p>PC2. understand the functioning of each system, component and aggregate (including both mechanical and electrical aggregates) of a vehicle</p> <p>PC3. follow standard operating procedures for using workshop tools and equipment for fault diagnosis or troubleshoot problem in a vehicle</p> <p>PC4. conduct test drives to assist the Senior Technician in finding the fault basis the performance of the vehicle during the test drive</p> <p>PC5. review the job card and understand customer complaints</p> <p>PC6. follow standard operating procedure set out for diagnosing faults under the supervision of a Senior Technician</p> <p>PC7. follow instructions of seniors for specific tasks related to diagnosing faults in the various sub-assemblies and aggregates in a vehicle</p> <p>PC8. use checklists and standard OEM operating procedures to understand if the fault is because of improper servicing, or low levels of oils, coolants, grease etc. or poor quality oil/ air filters etc.</p> <p>PC9. dismantle and assemble aggregates</p> <p>PC10. ensure any malfunctions observed in tools and equipment are reported to the concerned persons</p> <p>PC11. ensure any malfunctions or repair requirements observed in vehicles (and beyond own scope of work) are reported to the concerned person</p> <p>PC12. understand the various precautions to be taken to avoid damage to the vehicle and its components while working on diagnosis or troubleshooting the vehicle for any faults</p> <p>PC13. ensure safe movement and parking of the vehicle in the workshop especially in case some aggregate to be diagnosed had been disassembled</p> <p>PC14. 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> <p>PC15. drive a relevant 2/3/4 wheeler vehicle which is an important part of the diagnosis of the type of vehicle that is dealt by the relevant OEM</p>

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Knowledge and Understanding(K) w.r.t. the scope	
Element	Knowledge and Understanding
<b>A. Organisational Context</b> (Knowledge of the Company/ Organisation and its processes)	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> <li>KA1. standard operating procedures of the Organisation/ Dealership for inspection and diagnosis of faults in a vehicle as prescribed by the OEM/ Components Manufacturer</li> <li>KA2. standard operating procedures recommended by the Dealership/ Suppliers/OEM for using tools and equipment for diagnosis or troubleshooting of various aggregates</li> <li>KA3. standard operating procedures for rectification of errors in information (e.g. rectification of job card, reissue of correct tools and equipment etc. during the diagnosis)</li> <li>KA4. safety requirements for equipment and components during the diagnosis or troubleshooting the various aggregates for root cause analysis of the fault</li> <li>KA5. documentation requirements for each procedure carried out as part of roles and responsibilities as specified by OEM/ auto component manufacturer for the diagnosis of troubleshooting the vehicle for faults</li> <li>KA6. organisational and professional code of ethics and standards of practice</li> <li>KA7. safety, health, environmental policies and regulations for the workplace as well as for Automotive trade in general (e.g. safe practices while working in pits/ under vehicles)</li> </ul>
<b>B. Technical Knowledge</b>	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> <li>KB1. the basic technology used in and functioning of various components and aggregates of the vehicle including:                             <ul style="list-style-type: none"> <li>• engines and fuel system (diesel, petrol, electrical, gas, hybrid etc.)</li> <li>• cooling system</li> <li>• air supply systems</li> <li>• emission and exhaust system</li> <li>• ignition systems</li> <li>• clutch assembly</li> <li>• clutch operating system</li> <li>• gearbox (manual and automatic)</li> <li>• drivelines and hubs</li> <li>• drive-train assembly and transmission systems (manual, automatic etc.)</li> <li>• steering system</li> <li>• suspension system</li> <li>• brake system (including regenerative braking systems)</li> <li>• tyres and wheels (including wheel alignment)</li> <li>• radiator</li> <li>• batteries and power storage system</li> <li>• power-generating systems (including charging systems especially for</li> </ul> </li> </ul>



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	<p>electrical and hybrid vehicles)</p> <ul style="list-style-type: none"> <li>• electrical wire harness, lighting, ignition, electronic and air-conditioning systems etc.</li> <li>• energy recuperation systems, if applicable (e.g. in electric, gas and hybrid vehicles)</li> <li>• electronic systems including active and passive safety, media and other systems</li> <li>• electronic control unit</li> <li>• hydraulic and pneumatic system</li> <li>• various lubrication systems</li> </ul> <p>KB2. the tools used to assess and confirm technical faults that cannot be determined through a visual inspection, 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</li> <li>• measuring equipment: vernier callipers, micrometer, feeler gauges, multi-metre, flow metre, temp gauge, dial gauge etc.</li> <li>• electrical and electronic testing equipment: volt meters, ammeters, ohmmeters, battery testing equipment, dedicated and computer based diagnostic equipment, oscilloscopes etc.</li> </ul> <p>KB3. 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 for diagnosis</li> </ul> <p>KB4. typical symptoms of common technical faults in a vehicle</p> <p>KB5. the various values and tolerance limits of various components across the mechanical/ electrical aggregates (e.g. within the engine assembly the following sub-aggregates : bore diameter, Liner fitment, piston height and butt clearance of piston rings, permissible imbalance in crankshaft (main and BE journal), axial and radial play in the camshaft etc.)</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>
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. create documentation required on the job (including diagnosis cards, work sheets, etc.) regarding the basic diagnosis and of various fault identification tests performed using various equipment as per the OEM/ auto component and aggregate guidelines</p> <p>SA2. complete and maintain workplace records on inspection, diagnosis and repair activities</p>

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	SA3. write any additional work to be done (on the job card) basis the diagnosis of the vehicle (in major mechanical & electrical aggregates) and convey it to the superiors
	SA4. write in at least one language
	<b>Reading skills</b>
	The user/individual on the job needs to know and understand how to:
	SA5. read and interpret workplace related documentation including job cards, safety instructions, OEM guidelines etc. from senior technicians, supervisors and service advisor
	SA6. read various sources of information available for vehicle diagnosis including service manual and diagnostic and visual displays put up in the workshop
	SA7. read policies and regulations pertinent to the job, including OEM guidelines, health and safety instructions etc.
	<b>Oral Communication (Listening and Speaking skills)</b>
	The user/individual on the job needs to know and understand how to:
	SA8. clearly communicate workplace information and ideas with colleagues (verbal and non-verbal)
SA9. use terms, names, grades, and other nomenclature pertaining to the Automotive trade, tools, specific workshop equipment etc.	
SA10. communicate with colleagues and customers to handle verbal enquiries, such as clarifying indicated faults and problems indicated on a job card which would lead to the proper diagnosis of the issue to do an effective root cause analysis	
SA11. communicate to the supervisor and service advisor, the results of the test performed and appropriate values to find the root case of the problem (e.g in case of High Engine Oil Consumption (HEOC) issue, post the dismantled engine convey the appropriate condition of piston ring, crank shaft and cylinder block etc.)	
<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:
	SB4. plan work according to the required schedule and location
	SB5. organize schedule to complete diagnosis on the vehicle so that repair/ replacement of aggregates/ components post diagnosis can start and vehicle

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	<p>can be delivered in a timely and cost effective manner.</p>
	<p><b>Customer centricity</b></p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB6. interpret the needs of customers by understanding the key issue plaguing the poor performance of the vehicle and doing a proper diagnosis consulting the Service Advisor, supervisor and senior technicians to minimise the repeat complains</p> <p>SB7. ensure that the service provided is of the highest order to ensure higher levels of customer satisfaction</p> <p>SB8. follow up with the Service Advisor on any unfavourable feedback received from customer on the complaints reported on the vehicle</p>
	<p><b>Problem solving</b></p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB9. recognise a workplace problem or a potential problem and take action prior to diagnosis (e.g. during diagnosis of the engine, ensure that engine aggregates are placed in proper place so that it doesn't cause any hindrance to other vehicles parked near the vehicle which is being diagnosed)</p> <p>SB10. determine problems needing priority action while diagnosis of the vehicle</p> <p>SB11. refer problems outside area of responsibility to appropriate person</p>
	<p><b>Analytical thinking</b></p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB12. analyse the complexity of work to determine if it can be successfully carried out (e.g. refer a vehicle to a Superior or specialist in case of diagnosis for any critical fault is required)</p>
	<p><b>Critical thinking</b></p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB13. analyse, evaluate and apply the information gathered from observation, experience, reasoning, or communication to act efficiently</p> <p>SB14. 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</p>

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**NOS Version Control**

<b>NOS Code</b>	ASC/ N 1402		
<b>Credits (NSQF)</b>	TBD	<b>Version number</b>	1
<b>Industry</b>	Automotive	<b>Drafted on</b>	12/06/13
<b>Industry Sub-sector</b>	Automotive Vehicle Service	<b>Last reviewed on</b>	12/06/13
		<b>Next review date</b>	12/06/15

ASC/ N 1403: Carry out routine service and minor repairs of mechanical and electrical aggregates

# 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 and repairs (including electrical and mechanical aggregates) of a vehicle, including 2- wheelers, 3-wheelers and 4-wheelers (including passenger vehicles and commercial vehicles). This includes diesel, petrol, CNG, electrical and hybrid vehicles.

**ASC/ N 1403: Carry out routine service and minor repairs of mechanical and electrical aggregates**

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<b>Unit Code</b>	<b>ASC/ N 1403</b>
<b>Unit Title (Task)</b>	<b>Carry out routine service and minor repairs of mechanical &amp; electrical aggregates</b>
<b>Description</b>	This NOS unit is about an Automotive Service Technician carrying out service, repairs and maintenance activities of various aggregates (including electrical and mechanical aggregates).
<b>Scope</b>	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>• carry out routine and schedule servicing of various aggregates in a vehicle (including free and paid service)</li> <li>• carry out other maintenance activities in a vehicle which are not a part of schedule maintenance (e.g. oil, lubricant, coolant change and greasing)</li> <li>• carry out minor service and repair in a 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 and minor repairs of mechanical &amp; electrical aggregates</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 vehicle</p> <p>PC2. follow standard operating procedures for using workshop tools and equipment for service and minor aggregate repairs in the vehicle</p> <p>PC3. conduct test drives to assess need for repairs, calibration or any other adjustments in the electrical/ mechanical aggregates in the 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 and other routine service and maintenance of various parts and aggregates including:</p> <ul style="list-style-type: none"> <li>• engine and aggregates</li> <li>• other engine sub-assemblies like turbocharger, radiator etc.</li> <li>• gear box and it aggregates</li> <li>• propeller shafts and other transmission systems</li> <li>• clutch and brake systems and sub-assemblies</li> <li>• chassis</li> <li>• electrical and electronic components</li> <li>• steering systems</li> <li>• suspension system</li> <li>• other components (including to valves, ignition, fuel and emissions, transmission, lights, tyres, steering and body fittings)</li> </ul> <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>



**ASC/ N 1403: Carry out routine service and minor repairs of mechanical and electrical aggregates**

	<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. measure/ inspect the machining or any other repair done from an outside source/ local machining garages</p> <p>PC17. 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>
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**Knowledge and Understanding (K) w.r.t. the scope**

Element	Knowledge and Understanding
<p><b>A. Organisational Context</b> (Knowledge of the Company/ Organisation 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 repair of vehicles as prescribed by the OEM/ dealership</p> <p>KA2. standard schedules and checklists recommended by the OEM/ auto components manufacturer for servicing of 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 component manufacturer/ OEM for using tools and equipment to be followed related to various aggregates and components in a vehicle (including electrical</p>

**ASC/ N 1403: Carry out routine service and minor repairs of mechanical and electrical aggregates**

	<p>and mechanical aggregates) as per the tool 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 component systems of the vehicle including:</p> <ul style="list-style-type: none"> <li>• engines and fuel system (diesel, petrol, electrical, gas etc.)</li> <li>• other engine allied aggregates (e.g. radiator, turbocharger etc.)</li> <li>• emission and exhaust system</li> <li>• clutch assembly</li> <li>• gear box assembly and aggregates (manual, automatic etc.)</li> <li>• propeller shaft and other allied transmission systems</li> <li>• hydraulic and pneumatic system</li> <li>• brake 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, 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> <li>• trim or moulding tools: carbon scrapers, gasket scrapers, scrapers, spoons etc.</li> <li>• measuring equipment: vernier callipers, micrometre, feeler gauges, multi-metre, flow metre, temp gauge, dial gauge etc.</li> </ul>

**ASC/ N 1403: Carry out routine service and minor repairs of mechanical and electrical aggregates**

	<ul style="list-style-type: none"> <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, wiper motor, 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</p> <p>KB7. the type and quality of components specified by the OEM for use as replacement parts</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 &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</p>
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**ASC/ N 1403: Carry out routine service and minor repairs of mechanical and electrical aggregates**

	<p>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> <p>KB14. when to ask for assistance from a superior</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>
	<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. 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>SA3. 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>SA4. read job cards and instructions from supervisors and the service advisor</p> <p>SA5. 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>SA6. 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> <p>SA7. clearly communicate workplace information and ideas with colleagues (verbal &amp; non-verbal)</p> <p>SA8. use terms, names, grades and other nomenclature pertaining to the automotive trade, tools, specific workshop equipment etc.</p> <p>SA9. communicate with colleagues to handle verbal enquiries, such as clarifying instructions and responding to requests for information</p> <p>SA10. interact with the customer through Service Advisor/ Supervisor in case any additional work needs to be done on the vehicle which may not have been</p>

**ASC/ N 1403: Carry out routine service and minor repairs of mechanical and electrical aggregates**

	indicated in the job card and found during the work being carried out as per the job card
<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:
	SB4. plan work according to the required schedule and location
	SB5. organise the schedule to complete work on the vehicle timely in case other aggregate repairs/ maintenance work is also required to be done
	<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)	
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	

**ASC/ N 1403: Carry out routine service and minor repairs of mechanical and electrical aggregates**

	<p><b>Critical thinking</b></p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SB16. analyse, evaluate and apply the information gathered from observation, experience, reasoning, or communication to act efficiently</p> <p>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</p>
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ASC/ N 1403: Carry out routine service and minor repairs of mechanical and electrical aggregates

## NOS Version Control

<b>NOS Code</b>	ASC/ N 1403		
<b>Credits(NSQF)</b>	TBD	<b>Version number</b>	1
<b>Industry</b>	Automotive	<b>Drafted on</b>	10/06/13
<b>Industry Sub-sector</b>	Automotive Vehicle Service	<b>Last reviewed on</b>	10/06/13
		<b>Next review date</b>	10/06/15

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

<b>National Occupational Standard</b>	<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>	This unit/task covers the following: <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>	To be competent, the user/individual on the job must be able to: <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>	PC7. establish and agree on work requirements with appropriate people
		PC8. manage time, materials and cost effectively
		PC9. use resources in a responsible manner
<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>	The user/individual on the job needs to know and understand: <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>	

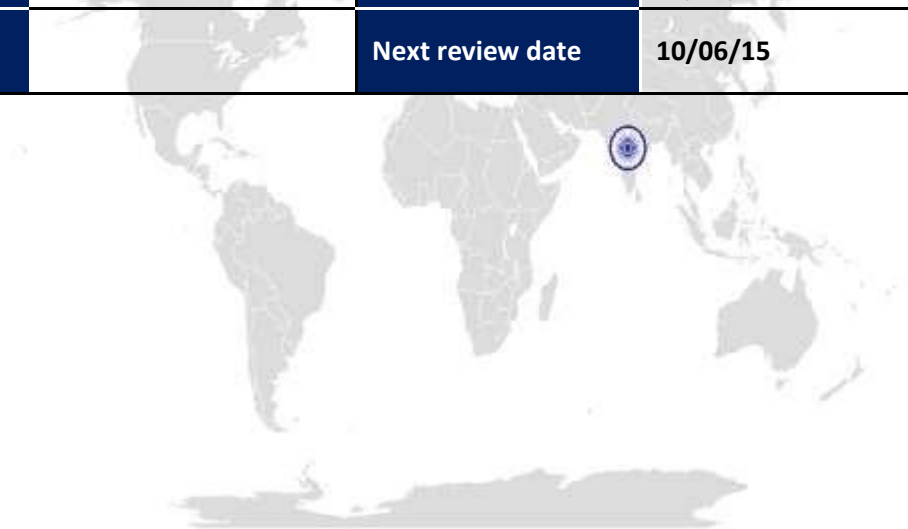
**ASC/ N 0001: Plan and organize work to meet expected outcomes**

	to reflect change
<b>B. Technical Knowledge</b>	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
<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>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>B. Professional Skills</b>	<b>Decision Making</b>
	The user/individual on the job needs to know and understand how to: 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>
	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>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 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 organize work to meet expected outcomes

NOS Version Control

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



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

National Occupational Standard	<b>Unit Code</b>	ASC/ N 0002
	<b>Unit Title (Task)</b>	Work effectively in a team
	<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 organization.
	<b>Scope</b>	This unit/task covers the following: Colleagues: <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>	To be competent, the user/individual on the job must be able to: <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)	The user/individual on the job needs to know and understand: <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:	

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

	<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**

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

**National Occupational Standard**

<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>	This unit/task covers the following: <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>	To be competent, the user/individual on the job must be able to: <ul style="list-style-type: none"> <li>PC1. comply with organisation's current health, safety and security policies and procedures</li> <li>PC2. report any identified breaches in health, safety, and security policies and procedures to the designated person</li> <li>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.</li> <li>PC4. identify and correct any hazards like illness, accidents, fires or any other natural calamity safely and within the limits of individual's authority</li> <li>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</li> <li>PC6. follow organisation's emergency procedures for accidents, fires or any other natural calamity</li> <li>PC7. identify and recommend opportunities for improving health, safety, and security to the designated person</li> <li>PC8. complete all health and safety records are updates and procedures well defined</li> </ul>	
<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)	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> <li>KA1. legislative requirements and organisation's procedures for health, safety and security and individual's role and responsibilities in relation to this</li> <li>KA2. what is meant by a hazard, including the different types of health and safety hazards that can be found in the workplace</li> <li>KA3. how and when to report hazards</li> <li>KA4. the limits of responsibility for dealing with hazards</li> </ul>	

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

	<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>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>B. Professional Skills</b>	<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>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>Problem Solving</b>
	The user/individual on the job needs to know and understand how to: 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**

<b>NOS Code</b>	ASC/ N 0003		
<b>Credits (NSQF)</b>	TBD	<b>Version number</b>	1
<b>Industry</b>	Automotive	<b>Drafted on</b>	10/06/13
<b>Industry Sub-sector</b>	NA	<b>Last reviewed on</b>	10/06/13
		<b>Next review date</b>	10/06/15

**Qualification Pack for Auto service Technician L4**

Criteria for assessment of Trainees
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JOB ROLE	Auto Service Technician L4
Qualification Pack	ASC/Q 1402
No. Of NOS	2 Role specific ,3 generic

NOS Title/ NOS Elements	NOS & Performance Criterion Description	Marks allocation	
		Viva	Practical
<b>ASC/N 1402</b>	<b>Assist in performing diagnosis of the vehicle repair</b>		
<b>Assist in the diagnosis of the root cause of the vehicle trouble</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 vehicle PC2. understand the functioning of each system, component and aggregate (including both mechanical and electrical aggregates) of a vehicle PC3. follow standard operating procedures for using workshop tools and equipment for fault diagnosis or troubleshoot problem in a vehicle PC4. conduct test drives to assist the Senior Technician in finding the fault basis the performance of the vehicle during the test drive PC5. review the job card and understand customer complaints PC6. follow standard operating procedure set out for diagnosing faults under the supervision of a Senior Technician PC7. follow instructions of seniors for specific tasks related to diagnosing faults in the various sub-assemblies and aggregates in a vehicle PC8. use checklists and standard OEM operating procedures to understand if the fault is because of improper servicing, or low levels of oils, coolants, grease etc. or poor quality oil/ air filters etc. PC9. dismantle and assemble aggregates PC10. ensure any malfunctions observed in tools and equipment are reported to the concerned persons PC11. ensure any malfunctions or repair requirements observed in vehicles (and beyond own scope of work) are reported to the concerned person PC12. understand the various precautions to be taken to avoid damage to the vehicle and its components while working on diagnosis or troubleshooting the vehicle for any faults PC13. ensure safe movement and parking of the vehicle in the	15	30
		30	40

**Qualification Pack for Auto service Technician L4**

	<p>workshop especially in case some aggregate to be diagnosed had been disassembled</p> <p>PC14. 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> <p>PC15. drive a relevant 2/3/4 wheeler vehicle which is an important part of the diagnosis of the type of vehicle that is dealt by the relevant OEM</p>	10	5
	<b>subtotal</b>	<b>55</b>	<b>75</b>
<b>ASC/N 1403</b>	<b>Carry out routine service &amp; minor repair</b>	<b>Viva</b>	<b>Practical</b>
<p><b>Carry out routine service and minor repairs of mechanical &amp; electrical aggregates</b></p>	<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 vehicle</p> <p>PC2. follow standard operating procedures for using workshop tools and equipment for service and minor aggregate repairs in the vehicle</p> <p>PC3. conduct test drives to assess need for repairs, calibration or any other adjustments in the electrical/ mechanical aggregates in the 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 and other routine service and maintenance of various parts and aggregates including:</p> <ul style="list-style-type: none"> <li>• engine and aggregates</li> <li>• other engine sub-assemblies like turbocharger, radiator etc.</li> <li>• gear box and it aggregates</li> <li>• propeller shafts and other transmission systems</li> <li>• clutch and brake systems and sub-assemblies</li> <li>• chassis</li> <li>• electrical and electronic components</li> <li>• steering systems</li> <li>• suspension system</li> <li>• other components (including to valves, ignition, fuel and emissions, transmission, lights, tyres, steering and body fittings)</li> </ul>	20	30
		15	10

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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. measure/ inspect the machining or any other repair done from an outside source/ local machining garages</p> <p>PC17. 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>	10	20
		10	20
		15	45
	<b>subtotal</b>	<b>70</b>	<b>125</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</b>	To be competent, the user/individual on the job must be able to:		

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<p><b>within the given time and set quality standards</b></p>	<p>PC1. keep immediate work area clean and tidy            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</p>	<p align="center">10</p>	<p align="center">10</p>
<p><b>Appropriate use of resources</b></p>	<p>PC7. establish and agree on work requirements with appropriate people            PC8. manage time, materials and cost effectively            PC9. use resources in a responsible manner</p>	<p align="center">10</p>	<p align="center">20</p>
	<p align="center"><b>subtotal</b></p>	<p align="center"><b>20</b></p>	<p align="center"><b>30</b></p>
<p align="center"><b>ASC/N 0002</b></p>	<p align="center"><b>Work effectively in a team</b></p>	<p align="center"><b>Viva</b></p>	<p align="center"><b>Practical</b></p>
<p><b>Interact &amp; communicate effectively with colleagues including member in the own group as well as other groups</b></p>	<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)            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</p>	<p align="center">20</p>	<p align="center">30</p>
	<p align="center"><b>subtotal</b></p>	<p align="center"><b>20</b></p>	<p align="center"><b>30</b></p>
<p align="center"><b>ASC/N 0003</b></p>	<p align="center"><b>Maintain safe , healthy environment friendly workplace</b></p>	<p align="center"><b>Viva</b></p>	<p align="center"><b>Practical</b></p>
<p><b>Resources needed to maintain a safe, secure working environment</b></p>	<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            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</p>		

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	<p>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>	25	50
	<b>subtotal</b>	<b>25</b>	<b>50</b>
	<b>Total</b>	<b>190</b>	<b>310</b>