



**NATIONAL COMPETENCY STANDARDS  
FOR  
AUTOMOBILE PAINTER  
(NC2)**

**Department of Occupational Standards  
Ministry of Labour and Human Resources  
Thimphu Bhutan  
(February 2021)**



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FOR  
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## **FOREWORD**

The Department of Occupational Standards of the Ministry of Labour and Human Resources is pleased to present National Competency Standards (NCSs) for Automobile Painter. The standards represent the fruits of hard work and invaluable experiences gained by the department since its establishment in the latter half of 2003. The main aim of developing NCS is to set up a well-defined nationally recognized Vocational Qualifications System that will help set a benchmark for the Technical Vocational Education and Training (TVET) System in our country aligned to international best practices.

NCS is one of the base pillars in the Bhutan Vocational Qualifications Framework (BVQF) and is the first step in its implementation. The NCS are developed and revised to ensure that employees or vocational graduates possess and acquire the desired competencies required by industries and employers. In order to ensure this close match in supply and demand of competencies, NCS have been developed and revised in close consultation and partnership with industry experts and validated by the Technical Advisory Committees of the concerned economic sectors.

A vocational education and training system based on NCS shall ensure that delivered training is of a high quality and relevant to the needs of the labour market. As a result, future TVET graduates will be better equipped to meet the need and expectations of industries and employers. This positive impact on the employability of TVET graduates will enhance the reputation of vocational education and training and make it attractive to school leavers.

I gratefully acknowledge collaboration and the valuable contributions made by experts from industries during the consultation and validation processes of the standards. I look forward for continued engagement and participation of the industry and employers in the development of a quality assured demand driven TVET system and to build competent and productive national workforce that will contribute to the continued socio-economic progress of our country.

Director  
Department of Occupational Standards  
Ministry of Labour and Human Resource

## Acknowledgement

### NATIONAL COMPETENCY STANDARDS FOR AUTOMOBILE PAINTER

**Validation date** : 18/02/2021

**Date of Review** : 18/02/2024 (Max. 3 years)

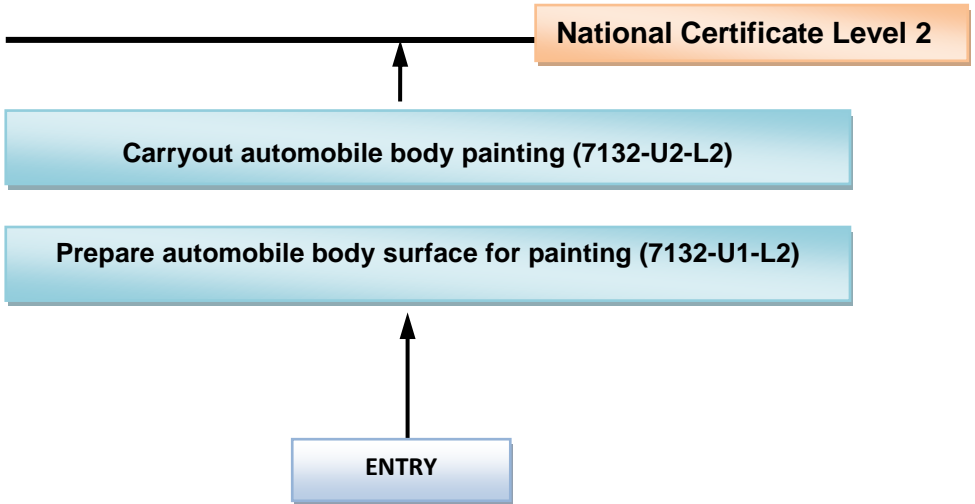
#### **Technical Advisory Committee (TAC) members for the Automobile service Sector involved in the validation of NCS:**

- 1) Tandin (**Chairperson**) TTI-Samthang
- 2) Karma Loday (**Member Secretary**), DOS, MoLHR
- 3) Rupesh Mongar, Expert, AMW Automobile Workshop
- 4) Tshering Norbu, TTI-Thimphu
- 5) Kirtiman Gurung, TTI-Thimphu
- 6) Sangay Dorji, Kuenga Automobile workshop
- 7) Damcho Thinley, Department of Technical Education, MoLHR.

#### **Subject experts involved during the consultative workshop for the development of NCS for Automobile Painter:**

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2. Ajanu Mishra, Auto Painter, Zindra Automobile, Phuntsholing.
3. Bhim Mangar, Auto Painter, Noryang Workshop, Phuntsholing.
4. Gobinda Thapa, Auto Painter, Nagtsho Engineering workshop, Phuntsholing.
5. Sanjet Lama, Auto Painter, Rabten Engineering workshop, Phuntsholing.
6. Jahin Normeya, Auto Painter, Wangdi Engineering workshop, Phuntsholing.
7. Mon Bahadur Lama, Auto Painter, Tashi Engineering workshop, Phuntsholing.

## Packaging of Qualifications for Automobile Painter





## Overview of the National Competency Standards

UNIT TITLE	ELEMENTS OF COMPETENCE
1. Prepare automobile body surface for painting	<ol style="list-style-type: none"><li>1. Carryout rough surface preparation</li><li>2. Carryout fine surface preparation</li></ol>
2. Carryout automobile body painting	<ol style="list-style-type: none"><li>1. Perform solid painting</li><li>2. Perform metallic painting</li><li>3. Perform painting on plastic parts</li><li>4. Perform polishing</li></ol>

**UNIT TITLE:** Prepare automobile body surface for painting

**DESCRIPTOR :** This unit covers the competencies required to prepare rough and fine surface for painting following standard procedures.

**CODE :** 7132- U1- L2

ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA
1. Carryout rough surface preparation	1.1 Select and use required <b>tools and equipment</b> following standard procedures. 1.2 Select and use <b>materials</b> as per the job requirement following standard procedures 1.3 Select and use <b>Personal Protective Equipment (PPE)</b> as per the job requirement following standard procedures 1.4 Assess the body surface for body filling works following standard procedures 1.5 Perform dry sanding as per the standard procedures 1.6 Perform wet sanding as per the standard procedures 1.7 Apply primer as per the standard procedures 1.8 Apply body filler as per the standard procedures 1.9 Level the body filler as per the standard procedures

<p>2. Carryout fine surface preparation</p>	<p>2.1 Apply primer as per the standard procedures</p> <p>2.2 Apply spot putty as per the standard procedures</p> <p>2.3 Perform fine sanding as per the standard procedures</p>
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<b>RANGE STATEMENT</b>	
<p>Work connected to this unit may take place in a workshop. This work may be performed individually or in a group.</p>	
<p><b>Tools and equipment may include but not limited to:</b></p>	
<ul style="list-style-type: none"> <li>• Scrapper</li> <li>• Sander machine</li> <li>• Spray gun</li> <li>• Blower</li> </ul>	<ul style="list-style-type: none"> <li>• Air compressor machine</li> <li>• Steel fibre</li> <li>• Rubber fibre</li> </ul>
<p><b>Materials may include but not limited to:</b></p>	
<ul style="list-style-type: none"> <li>• Primer</li> <li>• Putty</li> </ul>	<ul style="list-style-type: none"> <li>• Thinner</li> <li>• Water paper</li> </ul>
<p><b>PPE may include but not limited to:</b></p>	
<ul style="list-style-type: none"> <li>• Respiratory Mask</li> <li>• Hand gloves</li> </ul>	<ul style="list-style-type: none"> <li>• Working dress</li> <li>• Goggles</li> </ul>

<ul style="list-style-type: none"> <li>• Safety shoes</li> </ul>	<ul style="list-style-type: none"> <li>• Cap</li> </ul>
<p><b>Performance of this unit is expected to be carried out to the following standards</b></p>	
<ul style="list-style-type: none"> <li>• Occupational Health and Safety regulations</li> </ul>	<ul style="list-style-type: none"> <li>• Manufacturer's specifications</li> </ul>
<p><b>Critical Aspects:</b></p>	
<ul style="list-style-type: none"> <li>• Follow occupational health and safety procedures.</li> <li>• Level the body filler as per the standard procedures.</li> </ul>	

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<ul style="list-style-type: none"> <li>• Ethics and Integrity</li> <li>• Occupational Health and safety regulations</li> <li>• Basic First Aid</li> <li>• Estimation and costing</li> <li>• Types of body fillers and grades</li> <li>• Sand paper and grades</li> <li>• Power tools</li> </ul>	<ul style="list-style-type: none"> <li>• Team work</li> <li>• Communication skills</li> <li>• Problem solving</li> <li>• Negotiation</li> <li>• Time management</li> </ul>

**UNIT TITLE:** Carryout automobile body painting

**DESCRIPTOR :** This unit covers the competencies required to perform solid painting, metallic painting, and painting on plastic parts and polishing following standard procedures.

**CODE :** 7132- U2- L2

ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA
1. Perform solid painting	1.1 Select and use required <b>tools and equipment</b> following standard procedures. 1.2 Select and use required <b>materials</b> following standard procedures. 1.3 Prepare solid paint with mixing ratio as per the manufacturer's specification following standard procedures. 1.4 Degrease the surface using silicon remover as per the standard procedures. 1.5 Clean the surface using tack cloth as per the standard procedures 1.6 Protect the <b>other surfaces</b> using masking tape following standard procedures 1.7 Fill and adjust the spray gun for <b>spray pattern</b> as per the standard procedures. 1.8 Apply paint as per the standard procedures. 1.9 Dry the paint as per the drying time specified

	by manufacturer's specification.
2 Perform metallic painting	<p>2.1 Prepare metallic paint as per the mixing ratio following standard procedures.</p> <p>2.2 Degrease the surface using silicon remover as per the standard procedures.</p> <p>2.3 Clean the surface using tack cloth as per the standard procedures.</p> <p>2.4 Fill and adjust the spray gun for <b>spray pattern</b> as per the standard procedures.</p> <p>2.5 Apply metallic paint as per the standard procedures.</p> <p>2.6 Prepare clear coat as per the mixing ratio specified by manufacturer following standard procedures.</p> <p>2.7 Fill the spray gun with clear coat as per the standard procedures.</p> <p>2.8 Apply clear coat as per the standard procedures.</p> <p>2.9 Dry the paint as per the drying time specified by manufacturer following standard procedures.</p>
3 Perform painting on plastic parts	<p>3.1 Clean the plastic surface as per the standard procedures</p> <p>3.2 Apply plastic primer as per the standard</p>

	<p>procedures</p> <p>3.3 Apply primer as per the standard procedures</p> <p>3.4 Apply spot putty as per the standard procedures.</p> <p>3.5 Perform wet sanding as per the standard procedures.</p> <p>3.6 Apply paint as per the job requirement following standard procedures</p> <p>3.7 Dry the paint as per the drying time specified by manufacturer following standard procedures.</p>
<p>4 Perform polishing</p>	<p>4.1 Select and use <b>polishing materials</b> as per the job requirement following standard procedures.</p> <p>4.2 Select and use polishing machine as per the standard procedures.</p> <p>4.3 Clean the surface for polishing following standard procedures.</p> <p>4.4 Perform rough polish as per the job requirement following standard procedures.</p> <p>4.5 Perform glossy/shining polish as per the standard procedures.</p>

## RANGE STATEMENT

Work connected to this unit may take place in a workshop. This work may be performed individually or in a group.

### Tools and equipment may include but not limited to:

- |  |  |
|--|--|
| <ul style="list-style-type: none"><li>• Spray gun</li><li>• Air compressor</li></ul> | <ul style="list-style-type: none"><li>• Air pipe</li></ul> |
|--|--|

### Materials may include but not limited to:

- |   |  |
|---|--|
| <ul style="list-style-type: none"><li>• Paint</li><li>• Thinner</li></ul> | <ul style="list-style-type: none"><li>• Hardener</li><li>• Clear</li></ul> |
|---|--|

### Spray pattern may include but not limited to:

- |  |  |
|--|--|
| <ul style="list-style-type: none"><li>• Narrow</li></ul> | <ul style="list-style-type: none"><li>• Wide</li></ul> |
|--|--|

### Other surfaces may include but not limited to:

- |   |   |
|---|---|
| <ul style="list-style-type: none"><li>• Glass</li><li>• Rubber</li><li>• Mirror</li></ul> | <ul style="list-style-type: none"><li>• Headlight</li><li>• Grill</li></ul> |
|---|---|

### Polishing materials may include but not limited to:



<ul style="list-style-type: none"> <li>• Sanding polish</li> <li>• Rubbing compound</li> </ul>	<ul style="list-style-type: none"> <li>• Gloss polish</li> <li>• Liquid and cream polish</li> </ul>
<p><b>Performance of this unit is expected to be carried out to the following standards</b></p>	
<ul style="list-style-type: none"> <li>• Occupational Health and Safety regulations</li> </ul>	<ul style="list-style-type: none"> <li>• Manufacturer's specifications</li> </ul>
<p><b>Critical Aspects:</b></p>	
<ul style="list-style-type: none"> <li>• Follow occupational health and safety procedures.</li> <li>• Prepare clear coat as per the mixing ratio specified by manufacturer following standard procedures.</li> <li>• Fill and adjust the spray gun for spray pattern as per the standard procedures</li> </ul>	

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<ul style="list-style-type: none"> <li>• Ethics and Integrity</li> <li>• Occupational Health and safety regulations</li> <li>• Basic first aid</li> <li>• Estimation and costing</li> <li>• Painting boot operation</li> <li>• Types of materials and grading</li> <li>• Paint Mixing ratio</li> </ul>	<ul style="list-style-type: none"> <li>• Team work</li> <li>• Communication skills</li> <li>• Problem solving</li> <li>• Negotiation</li> <li>• Time management</li> </ul>

- |  |  |
|--|--|
| <ul style="list-style-type: none"><li>• Color mixing ratio</li><li>• Types and uses of polish</li><li>• Types of paint</li></ul> |  |
|--|--|



## **Annexure**

### **1.1 National Competency Standards (NCS)**

The National Competency Standards specify the skill, knowledge and attitudes applied to a particular occupation. Standards also specify the standards or criteria of performance of a competent worker and the various contexts in which work may take place. Standards provide explicit advice to assessors regarding the skill and knowledge to be demonstrated by candidates seeking formal recognition either following training or through work experience.

### **1.2 Purpose of National Competency Standards**

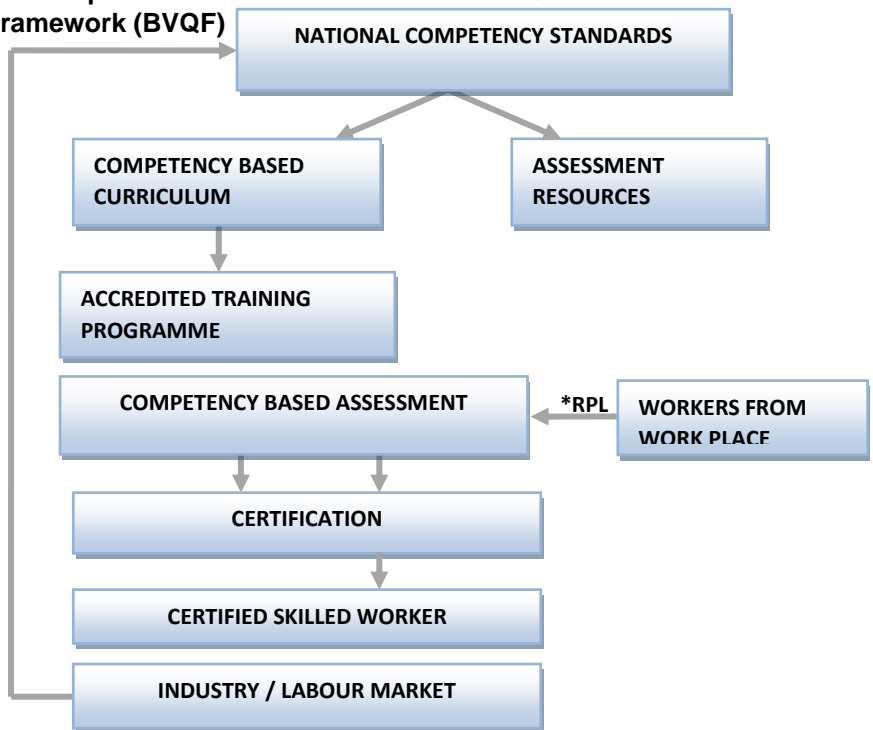
National Competency Standards serve a number of purposes including:

- Providing advice to curriculum developers about the competencies to be included in curriculum.
- Providing specifications to assessment resource developers about the competencies within an occupation to be demonstrated by candidates.
- Providing advice to industry/employers about job functions, which in turn can be used for the development of job descriptions, performance appraisal systems and work flow analysis.

### 1.3 Bhutan Vocational Qualifications Framework (BVQF)

Bhutan Vocational Qualifications Framework is an agreed system of Assessing, Certifying and Monitoring nationally recognized qualifications for all learning in the TVET sector against national competency standards, in training institutions, in the workplace, in schools or anywhere where learning takes place.

### 1.4 Components of the Bhutan Vocational Qualifications Framework (BVQF)



\* RPL = Recognition of Prior Learning

## 1.5 BVQF Levels

The Bhutan Vocational Qualifications Framework has three levels classified based on the competency of the skilled workers. The three levels are:

- National Certificate Level 3 (NC III)
- National Certificate Level 2 (NC II)
- National Certificate Level 1 (NC I)

### BVQF Level Descriptors

The qualification levels are decided based on level descriptors. The detail of the qualification level descriptor is as follows:

#### National Certificate Level 1

Carry out processes that:	Learning demand:	Responsibilities which are applied:
<ul style="list-style-type: none"><li>• Are narrow in range.</li><li>• Are established and familiar.</li><li>• Offer a clear choice of routine responses.</li><li>• Involve some prioritizing of tasks from known solutions.</li></ul>	<ul style="list-style-type: none"><li>• Basic operational knowledge and skill.</li><li>• Utilization of basic available information.</li><li>• Known solutions to familiar problems.</li><li>• Little generation of new ideas.</li></ul>	<ul style="list-style-type: none"><li>• In directed activity.</li><li>• Under general supervision and quality control.</li><li>• With some responsibility for quantity and quality.</li><li>• With no responsibility for guiding others.</li></ul>

## National Certificate Level 2

Carry out processes that:	Learning demand:	Responsibilities which are applied:
<ul style="list-style-type: none"> <li>• Require a range of well-developed skills.</li> <li>• Offer a significant choice of procedures requiring prioritization.</li> <li>• Are employed within a range of familiar context.</li> </ul>	<ul style="list-style-type: none"> <li>• Some relevant theoretical knowledge.</li> <li>• Interpretation of available information.</li> <li>• Discretion and judgments.</li> <li>• A range of known responses to familiar problems</li> </ul>	<ul style="list-style-type: none"> <li>• In directed activity with some autonomy.</li> <li>• Under general supervision and quality checking.</li> <li>• With significant responsibility for the quantity and quality of output.</li> <li>• With some possible responsibility for the output of others.</li> </ul>

## National Certificate Level 3

Carry out processes that:	Learning demand:	Responsibilities which are applied:
<ul style="list-style-type: none"> <li>• Requires a wide range of technical or scholastic skills.</li> <li>• Offer a considerable choice of</li> </ul>	<ul style="list-style-type: none"> <li>• A broad knowledge base which incorporates some theoretical concepts.</li> <li>• Analytical</li> </ul>	<ul style="list-style-type: none"> <li>• In self-directed activity.</li> <li>• Under broad guidance and evaluation.</li> <li>• With complete responsibility for quantity and</li> </ul>

<p>procedures requiring prioritization to achieve optimum outcomes.</p> <ul style="list-style-type: none"> <li>• Are employed in a variety of familiar and unfamiliar contexts.</li> </ul>	<p>interpretation of information.</p> <ul style="list-style-type: none"> <li>• Informed judgment.</li> <li>• A range of sometimes innovative responses to concrete but often unfamiliar problems.</li> </ul>	<p>quality of output.</p> <ul style="list-style-type: none"> <li>• With possible responsibility for the output of others.</li> </ul>
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## 1.6 PURPOSE

This qualification is designed for people interested in a career as an Automobile Painter at the Certificate level. It comprises of two units that cover the essential knowledge and skills required for people working as an automobile mechanic.

The pre-requisite for the candidates aspiring to pursue certificate level in automobile painter should have minimum educational requirement.

It provides industry specific skills and demands a level of performance that will enable new recruits to the industry to be immediately productive.



## **1.7 CODING USED FOR NATIONAL COMPETENCY STANDARDS**

The coding and classification system developed in Bhutan is logical, easy to use, and also aligned with international best practises. The Bhutanese coding and classification system is based on the International Standard Classification of Occupations, 2008 (ISCO-08) developed by the International Labour Organisation (ILO).

The coding of the National competency standards forms the basis of the identification code for the Vocational Education and Training Management Information System (VET – MIS) both in terms of economic sector identification and that of the individual standard.

### **Coding the individual national competency standards**

Coding the individual skills standard has a multiple purpose:

- to identify the level,
- to identify to which module the standard belongs,
- to identify in which order the standard is clustered within that module.

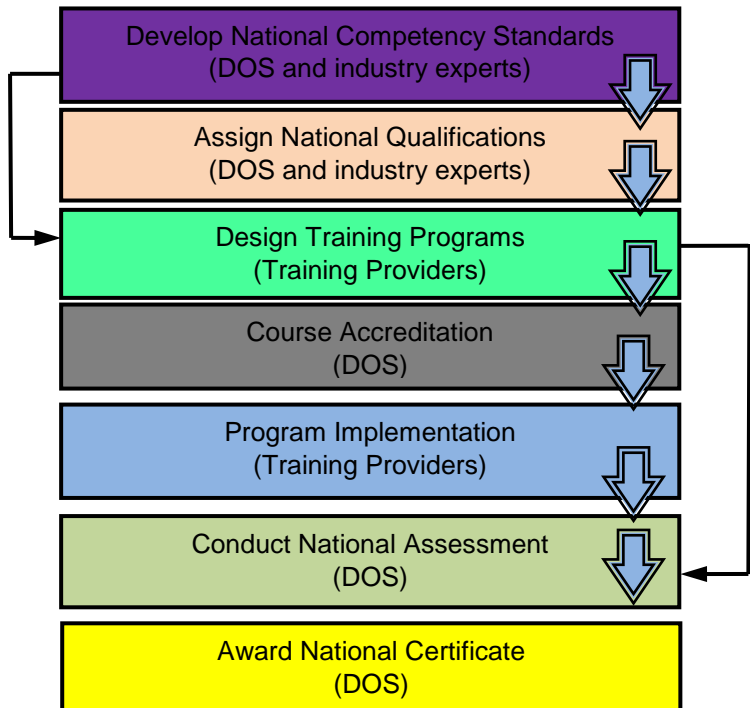
A job can include a number of competencies described in the national competency standards.

However, in order to follow a logical order, only national competency standards related to each other and following a logical sequence in terms of training delivery, from the simple to the complex, are clustered into a module. Some standards are so complex that they need to stand alone.

To illustrate with an example, the ILO assigns the code 7132 to the occupation of Automobile Painter and related trades. Therefore, in the Bhutan's context, the occupation automobile painter has been assigned the code 7132 in the National Coding System. The first unit is assigned the code U1. Levels

are assigned the code L and follow a logical progression from the National Certificate Level 1 (NC I) to the National Certificate Level 3 (NC III). Therefore the National Certificate Level 1 is assigned the code L1.

### Implementation and operational procedures for National Competency Standards (NCS)



#### Key:

MoLHR – Ministry of Labour and Human Resources  
DOS – Department of Occupational Standards

## **1.8 ASSESSMENT GUIDE**

### **Form of assessments**

- Continuous assessment together with collected evidence of performance will be used.
- Evidence of the performance shall be based on practical demonstration.
- Knowledge can be assessed through diagrams, in writing or orally (viva-voce).

### **Assessment context**

- Competency may be assessed in the actual work place or in a simulated workplace setting.

### **Assessment condition**

- The candidate shall have access to all required tools, equipments, materials and documents.
- Candidate must complete the assessment in industry accepted time frame.

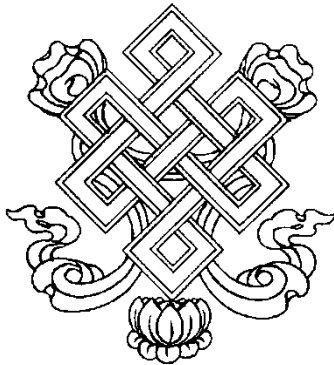
## 1.9 Validation Form for NCS

**Occupation:**

**Unit Title:**

*Please respond honestly and tick where appropriate.*

Components of NCS	Explanatory	Yes	No	Any comments
Unit Title	Focused on the Outcome of job			
Descriptor	Adequately described the parameters of job			
Elements of Competence	Focused on the outcome of job			
Performance Criteria	Is assessable & demonstrable			
Range Statement	Adequately stated the context of work			
Underpinning Knowledge	Included all the related knowledge			
Underpinning Skills	Included all the related skills			
Overall NCS	Fulfilled the minimum standards requirements of the trade and can used for developing training materials			
<b>Name of the TAC Members (Automobile Sector) Date:</b>				
<b>Name</b>	<b>Working Address</b>	<b>Signature</b>		



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