

## 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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## Contents

1. Introduction and Contacts.....P.1
2. Qualifications Pack.....P.2
3. Glossary of Key Terms .....P.3
4. NOS Units.....P.6
5. Assessment Criteria .....P 25

## Introduction

### Qualifications Pack-Machining Assistant OrHelper L 2

**SECTOR:** AUTOMOTIVE

**SUB-SECTOR:** MANUFACTURING

**OCCUPATION:** MACHINING

**JOB ROLE:** MACHINING ASSISTANT OR HELPER LEVEL 2

**REFERENCE ID:** ASC/ Q 3502

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

**Machining Helper:** An assistant to the operator and the entire team, the helper supports peripheral activities/ non-core activities in the manufacturing process

**Brief Job Description:**The Helper role is responsible for small time routine jobs like cleaning,washing,fetching and holding tool for the operators, loading and unloading of work pieces on the machine setup , bringing raw material and spare parts from the stores etc.

**Personal Attributes:** Basic understanding of the machining and housekeeping process, Basic reading, writing and communication skills, safety orientation, ability to do physical tasks like lifting, holding etc- Ability to lift objects required during the operations – either manually or using lifts, chains without displaying fatigue, hands and feet dexterity, good vision

Qualifications Pack For Machining Assistant OR Helper

Job Details	Qualifications Pack Code	ASC/Q 3502		
	Job Role	Machining Assistant OR Helper		
	Credits(NSQF)	TBD	Version number	1.0
	Industry	Automotive	Drafted on	01/7/2013
	Sub-sector	Manufacturing	Last reviewed on	26/7/2013
	Occupation	Machining	Next review date	Under revision expected date of revised version 31-Dec-15
	NSQC Clearance on	05/08/15		

Job Role	Machining Assistant OR Helper level 2
Role Description	The Helper role is responsible for small time routine jobs like cleaning, washing, fetching and holding tool for the operators, loading and unloading of work pieces on the machine setup , bringing raw material and spare parts from the stores etc
NSQF level	2
Minimum Educational Qualifications	Class 8-9 pass
Maximum Educational Qualifications	ITI
Training (Suggested but not mandatory)	Basic machining and housekeeping skills
Minimum Job Entry Age	<p>1 ASDC recommends that candidates should seek full employment not before attaining an age of 18 years.</p> <p>2 However, as per Factories Act1948 :</p> <ul style="list-style-type: none"> <li>- No one can be employed before attaining the age of 15</li> <li>- A person between the age of 15 – 18 (both inclusive) could be employed only With employers who follow safety and security systems &amp; processes and also that the employee in this bracket will be working under supervision.</li> </ul> <p>3 Please note that under the Factories Act 1948, different States may have slightly varying provision which need to be adhered to.</p>
Experience	0-2 years of experience
Occupational Standards (OS)	<p><a href="#">ASC/N 3501:Support the machinist in the routine machining activities</a></p> <p><a href="#">ASC/N 3502: Support the machinist in post machining process</a></p> <p><a href="#">ASC/N 0006:Maintain a safe and healthy working environment</a></p> <p><a href="#">ASC/N 0021:Maintain 5S at the work premises</a></p> <p><b>Optional:</b> _____</p> <p>N.A.</p>
Performance Criteria	As described in the relevant NOS units

*Qualifications Pack For Machining Assistant OR Helper*

**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.
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.

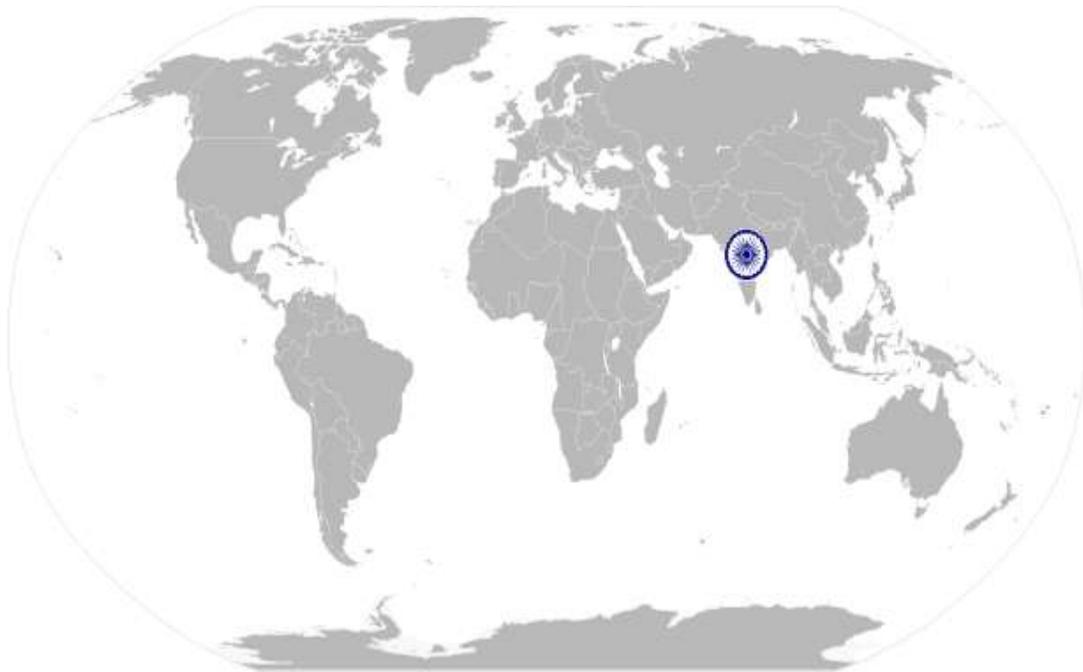
*Qualifications Pack For Machining Assistant OR Helper*

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.
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)
NSQF	National Skills Qualifications Framework
OEM	Original Equipment Manufacturer
OS	Occupational Standard(s)
QP	Qualifications Pack

**Acronyms**

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# National Occupational Standards



## Overview

This unit is about supporting the operator and the team in day to day routine tasks as part of the machining process like fetching and holding tools, loading work pieces, maintenance of machine parts

ASC/N 3501

Support the machinist in the routine machining activities

National Occupational Standard

<b>Unit Code</b>	ASC/N 3501
<b>Unit Title (Task)</b>	Support the machinist in the routine machining activities
<b>Description</b>	This unit is about supporting the operator and the team in day to day routine tasks as part of the machining process like fetching and holding tools, loading work pieces, maintenance of machine parts
<b>Scope</b>	<p>This unit/task covers the following:</p> <p>Types of machining:</p> <ul style="list-style-type: none"> <li>Manual and Automatic processes</li> </ul> <p>Types of products</p> <ul style="list-style-type: none"> <li>Auto Components</li> <li>Car Assembly – Body Assembly</li> </ul> <p>Internal Interfaces:</p> <ul style="list-style-type: none"> <li>Assembly line</li> <li>Paint shop</li> <li>Materials Management</li> <li>Maintenance</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Fetching and holding tools for the operator</b>	<p>PC1. Bring right toolkits for the operator and check whether all required tools are available in the tool kit</p> <p>PC2. Hold the tools during operations in the correct manner as specified by the operator and the standard operating procedures so that the operator can easily complete the assigned job</p>
<b>Loading work pieces on the machines using fasteners and hand tools</b>	<p>PC3. Support the assistant operator in arranging the work pieces in the specified manner as given in the setting document</p> <p>PC4. Ensure that there is no damage done to the work pieces while loading them on the machining apparatus using pulleys, chains and other hoisting mechanisms</p>
<b>Replace worn tools and sharpen dull cutting tools and dies</b>	PC5. Use bench grinders and cutting grinder machines to replace the tools and dies
<b>Support the assistant operator/ machinist in machine operations</b>	<p>PC6. Use templates, measuring instruments and hand tools for the process of installation and adjustment of drills, cutters, dies and guides</p> <p>PC7. Adjust tool positions and machine control mechanisms through the cranking (turning) process to ensure clearances and tolerances as specified in the operating manual</p> <p>PC8. Extract the jammed pieces using fingers, wire hooks and lift bars</p>
<b>Maintenance and cleaning of machine and workplace</b>	<p>PC9. Store equipment auxiliaries and spare parts in proper designated areas</p> <p>PC10. Regularly clean the equipment and process auxiliaries (cutting tools, dies) to remove any dust, moisture, waste material which would have got collected on the equipment and remove the metal chips and extra coolant</p>

**ASC/N 3501**

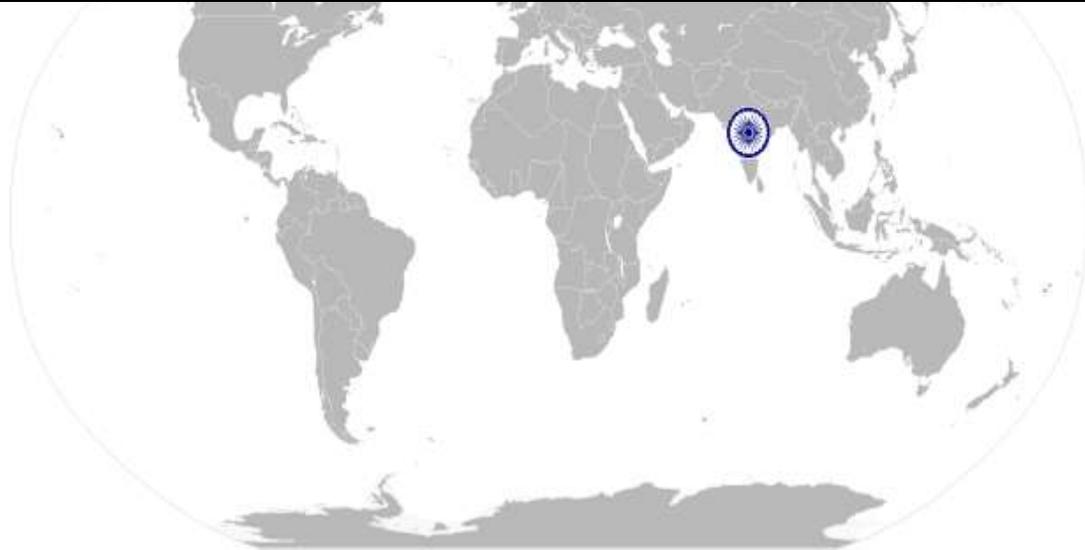
**Support the machinist in the routine machining activities**

	PC11. Regularly clean the working area in the weld shop and create a healthy, clean and safe working environment
<b>Knowledge and Understanding (K) w.r.t. the scope</b>	
<b>Element</b>	<b>Knowledge and Understanding</b>
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: KA1. relevant standards and procedures followed in the company KA2. different types of products manufactured by the company
<b>B. Technical Knowledge</b>	The user/individual on the job needs to know and understand: KB1. different types of machining processes KB2. different types of tools used in the machining process KB3. basic principles of 5 S in manufacturing – Cleaning, sorting KB4. the application of coolants and lubricants KB5. basic Arithmetic and calculation methods
<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 basic level notes and observations SA2. draw basic level drawings and charts
	<b>Reading Skills</b>
	The user/individual on the job needs to know and understand how to: SA3. read documents and notes SA4. interpret/ Comprehend the information given in the documents and notes SA5. read and interpret symbols given on equipment and work area
	<b>Oral Communication (Listening and Speaking skills)</b>
	The user/individual on the job needs to know and understand how to: SA6. discuss task lists and job requirements with co-workers SA7. effectively communicate information to team members SA8. question operator/ supervisor in order to understand the nature of the problem SA9. attentively listen with full attention and comprehend the information given by the speaker
<b>B. Professional Skills</b>	<b>Plan and Organize</b>

ASC/N 3501

**Support the machinist in the routine machining activities**

	<p>The user/individual on the job needs to know and understand how to :</p> <p>SB1. plan and organize the activities/ work allocated by supervisor and operator</p> <p>SB2. organize all equipment and kits so that sorting is easy on a day to day basis</p>
	<p><b>Judgmental Thinking</b></p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB3. use common sense and make judgments during day to day basis</p> <p>SB4. use reasoning skills to identify and resolve basic problems</p>
	<p><b>Desire to learn and take initiatives</b></p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB5. follow instructions and work on areas of improvement identified</p> <p>SB6. complete the assigned tasks with minimum supervision</p> <p>SB7. complete the job defined by the supervisor within the timelines and quality norms</p>
	<p><b>Problem solving</b></p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB8. refer problems outside area of responsibility to appropriate person</p>



ASC/N 3501

Support the machinist in the routine machining activities

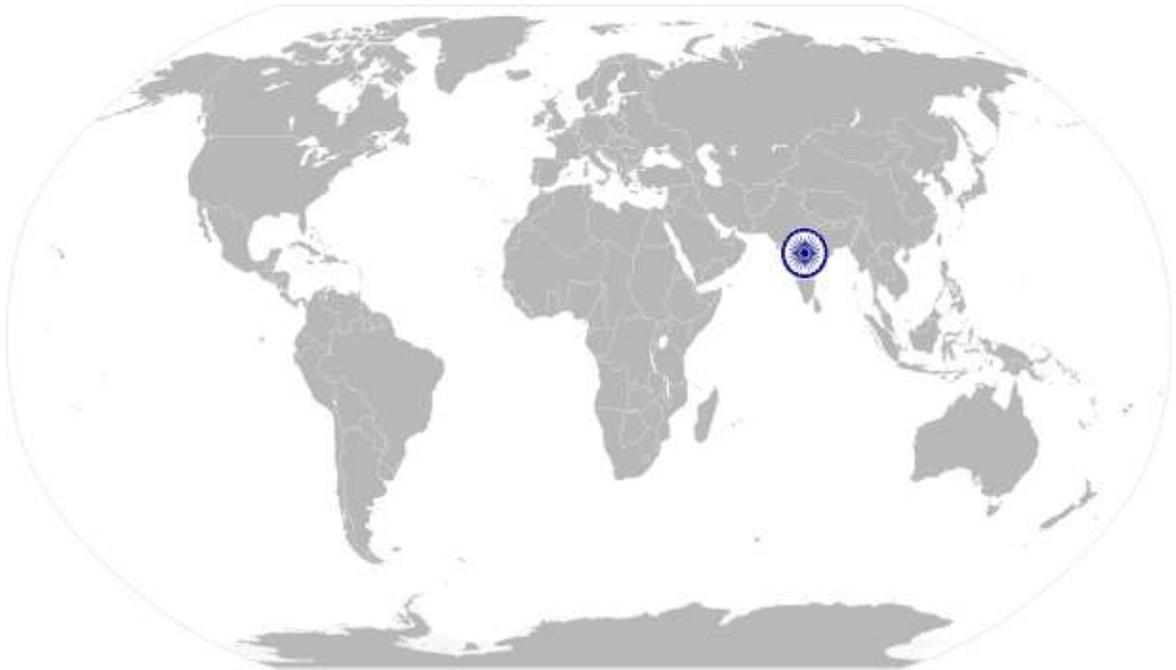
## NOS Version Control

<b>NOS Code</b>	ASC/ N 3501		
<b>Credits(NSQF)</b>	TBD	<b>Version number</b>	1.0
<b>Industry</b>	Automotive	<b>Drafted on</b>	01/7/2013
<b>Industry Sub-sector</b>	Manufacturing	<b>Last reviewed on</b>	26/7/2013
<b>Occupation</b>	Machining	<b>Next review date</b>	Under revision expected date of revised version 31-Dec-15



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# National Occupational Standards



## Overview

This unit is about supporting the operator and the manufacturing team in post production process - Unload work pieces using various tools, help the assistant operator in basic quality checks of machined parts and count the good quality and bad qualities and help the assistant operator in maintaining records

ASC/N 3502

Support the machinist in post machining process

National Occupational Standard

<b>Unit Code</b>	ASC/N 3502
<b>Unit Title (Task)</b>	Support the machinist in post machining process
<b>Description</b>	This unit is about supporting the operator and the manufacturing team in post-production process - Unload work pieces using various tools, help the assistant operator in basic quality checks of machined parts and count the good quality and bad qualities and help the assistant operator in maintaining records.
<b>Scope</b>	<p>This unit/task covers the following:</p> <p>Types of machining:</p> <ul style="list-style-type: none"> <li>• Automatic</li> </ul> <p>Types of products</p> <ul style="list-style-type: none"> <li>• Auto Components</li> <li>• Car Assembly – Body Assembly</li> </ul> <p>Internal Interfaces:</p> <ul style="list-style-type: none"> <li>• Assembly line</li> <li>• Paint shop</li> <li>• Materials Management</li> <li>• Maintenance</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Unloading work pieces on the machines</b>	<p>PC1. Support the assistant operator in removing the output products from the machining apparatus in the specified manner as given in the setting document</p> <p>PC2. Use lifting tools like lifts, pulleys, chains, hoists and ensure that there is no damage done to the machined pieces while un loading them</p>
<b>Do Debarring</b>	<p>PC3. With the help of the correct tool remove the extra burrs and chips from the metal surface</p>
<b>Check quality of the machined pieces (Gauging)</b>	<p>PC4. Support the assistant operator in measuring the specifications of the finished product using devices like micrometers, vernier calipers, gauges, rulers, weighing scales and any other inspection equipment</p> <p>PC5. Bring right inspection tools for the operator and check whether all required tools are available near the inspection platform</p> <p>PC6. Support the operator/ asst. operator in noting down the observations of the basic inspection process and identify pieces which are ok and also not meeting the specified standards</p> <p>PC7. Separate the defective pieces into two categories – pieces which can be repaired/ modified and pieces which are beyond repair and maintain records of each category</p>
<b>Knowledge and Understanding (K)</b>	
<b>B. Organizational Context (Knowledge)</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. relevant standards and procedures followed in the company</p>

ASC/N 3502

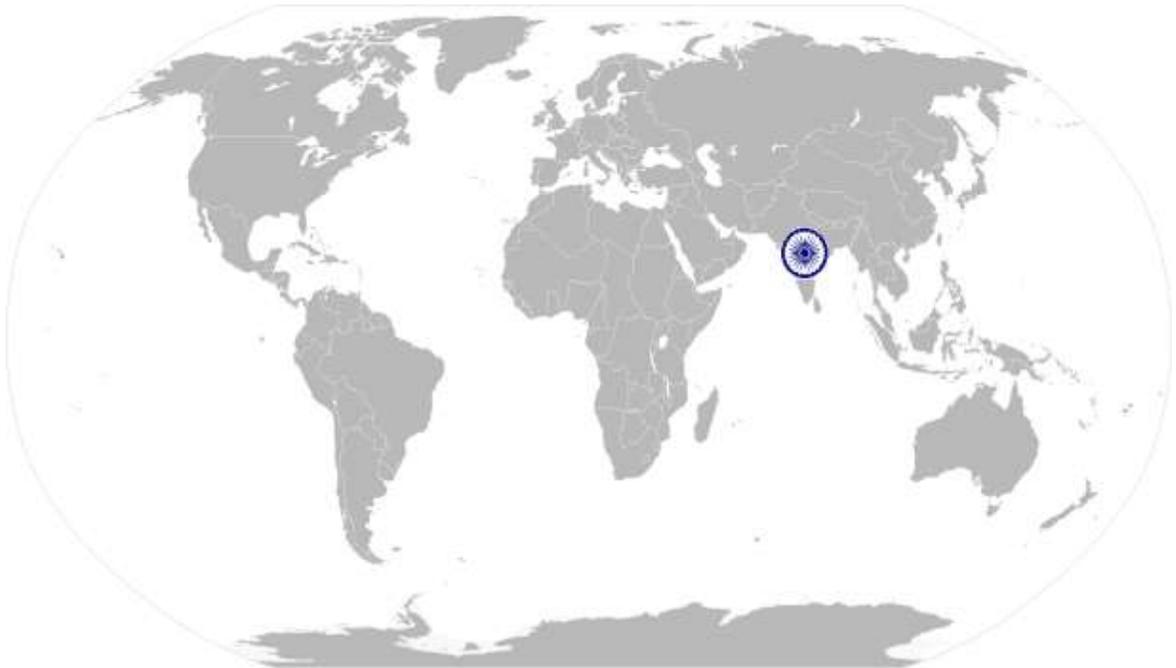
**Support the machinist in post machining process**

of the company / organization and its processes)	KA2. different types of products manufactured by the company KA3. basic norms for Quality in Production process
<b>B. Technical Knowledge</b>	The user/individual on the job needs to know and understand: KB1. different types of machining processes KB2. different types of tools used in the measurement and inspection process KB3. different tools used for lifting objects KB4. basic principles of 5 S in manufacturing – Cleaning, sorting KB5. basic Arithmetic and calculation methods
<b>Skills (S) w.r.t. the scope</b>	
<b>Element</b>	<b>Skills</b>
<b>C. Core Skills/ Generic Skills</b>	<b>Writing Skills</b>
	The user/ individual on the job needs to know and understand how to: SA1. write basic level notes and observations SA2. draw basic level drawings and charts
	<b>Reading Skills</b>
	The user/individual on the job needs to know and understand how to: SA3. read documents and notes SA4. interpret/ Comprehend the information given in the documents and notes SA5. read and interpret symbols given on equipment and work area
	<b>Oral Communication (Listening and Speaking skills)</b>
	The user/individual on the job needs to know and understand how to: SA6. discuss task lists and job requirements with co-workers SA7. effectively communicate information to team members SA8. question operator/ supervisor in order to understand the nature of the problem SA9. attentively listen with full attention and comprehend the information given by the speaker
<b>A. Professional Skills</b>	<b>Plan and Organize</b>
	The user/individual on the job needs to understand how to : SB1. organize the activities/ work allocated by supervisor and operator SB2. organize all equipment and kits so that sorting is easy on daily basis
	<b>Judgmental Thinking</b>
	The user/individual on the job needs to know and understand how to: SB3. use common sense and make judgments during day to day basis SB4. use reasoning skills to identify and resolve basic problems
	<b>Desire to learn and take initiatives</b>

ASC/N 3502

Support the machinist in post machining process

	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB5. follow instructions and work on areas of improvement identified</p> <p>SB6. complete the assigned tasks with minimum supervision</p> <p>SB7. complete the job defined by the supervisor within the timelines and quality norms</p>
	<p><b>Quality Consciousness</b></p>
	<p>SB8. ability to identify defective parts in the manufacturing line by comparing manufactured pieces with the work standard</p>



ASC/N 3502

Support the machinist in post machining process

## NOS Version Control

<b>NOS Code</b>	ASC/ N 3502		
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<b>Occupation</b>	Machining	<b>Next review date</b>	Under revision expected date of revised version 31-Dec-15



ASC/N 0006

Maintain a safe and healthy working environment

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# National Occupational Standards



## Overview

This unit is about establishing a Safe, Healthy and Environment friendly workplace

ASC/N 0006

Maintain a safe and healthy working environment

National Occupational Standard	<b>Unit Code</b>	ASC/N 0006
	<b>Unit Title (Task)</b>	Maintain a safe and healthy working environment
	<b>Description</b>	This OS unit is about creating a Safe and Healthy work place, adhering to the safety guidelines in the working area, following practices which are not impacting the environment in a negative manner
	<b>Scope</b>	<p>This unit/task covers the following:</p> <p>Types of processes:</p> <ul style="list-style-type: none"> <li>• Welding</li> <li>• Casting</li> <li>• Forging</li> <li>• Machining</li> </ul> <p>Types of products</p> <ul style="list-style-type: none"> <li>• Auto Components</li> <li>• Car Assembly – Body Assembly</li> </ul>
	<b>Performance Criteria (PC) w.r.t. the Scope</b>	
	<b>Element</b>	<b>Performance Criteria</b>
	<b>Identify and report the risks identified</b>	<p>PC1. Identify activities which can cause potential injury through sharp objects, burns, fall, electricity, gas leakages, radiation, poisonous fumes, loud noise</p> <p>PC2. Inform the concerned authorities about the potential risks identified in the processes, workplace area/ layout, materials used etc</p> <p>PC3. Inform the concerned authorities about machine breakdowns, damages which can potentially harm man/ machine during operations</p> <p>PC4. Create awareness amongst other by sharing information on the identified risks</p>
	<b>Create and sustain a Safe, clean and environment friendly work place</b>	<p>PC5. Follow the instructions given on the equipment manual describing the operating process of the equipment</p> <p>PC6. Follow the safety, health and environment related practices developed by the organization</p> <p>PC7. Operate the machine using the recommended personal protective equipment (ppe)</p> <p>PC8. Maintain a clean and safe working environment near the work place and ensure there is no spillage of chemicals, production waste, oil, solvents etc</p> <p>PC9. Maintain high standards of personal hygiene at the work place</p> <p>PC10. Ensure that the waste disposal happens in the designated area</p>
	<b>Knowledge and Understanding (K)w.r.t. the scope</b>	
	<b>Element</b>	<b>Knowledge and Understanding</b>

ASC/N 0006

### Maintain a safe and healthy working environment

<b>C. Organizational Context</b> (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: KA1. relevant standards, procedures and policies related to Health, Safety and Environment followed in the company
<b>A. Technical Knowledge</b>	The user/individual on the job needs to know and understand: KB1. basic knowledge of Safety procedures( firefighting, first aid) within the organization KB2. basic knowledge of various types of PPEs and their usage KB3. basic knowledge of risks associated with each occupation in the organization KB4. knowledge of personal hygiene and how an individual can contribute towards creating a highly safe and clean working environment
<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 basic level notes and observations
	<b>Reading Skills</b>
	The user/individual on the job needs to know and understand how to: SA2. read safety instructions put up across the plant premises SA3. read safety precautions mentioned in equipment manuals and panels to understand the potential risks associated with the equipment
	<b>Oral Communication (Listening and Speaking skills)</b>
	The user/individual on the job needs to know and understand how to: SA4. effectively communicate information to team members and inform employees in the plant and concerned functions about potential Safety, Health and Environment related risks observed SA5. question operator/ supervisor in order to understand the safety related issues SA6. attentively listen with full attention and comprehend the information given by the speaker during safety drills and training programs
<b>B. Professional Skills</b>	<b>Judgmental Thinking</b>
	The user/individual on the job needs to know and understand how to: SB1. use common sense and make judgments during day to day basis SB2. use reasoning skills to identify and resolve basic problems

ASC/N 0006

Maintain a safe and healthy working environment

## NOS Version Control

<b>NOS Code</b>	ASC/N 0006		
<b>Credits(NSQF)</b>	2	<b>Version number</b>	1.0
<b>Industry</b>	Automotive	<b>Drafted on</b>	01/7/2013
<b>Industry Sub-sector</b>	Manufacturing	<b>Last reviewed on</b>	26/7/2013
<b>Occupation</b>	Machining	<b>Next review date</b>	Under revision, expected date of revised version 31-Dec-15

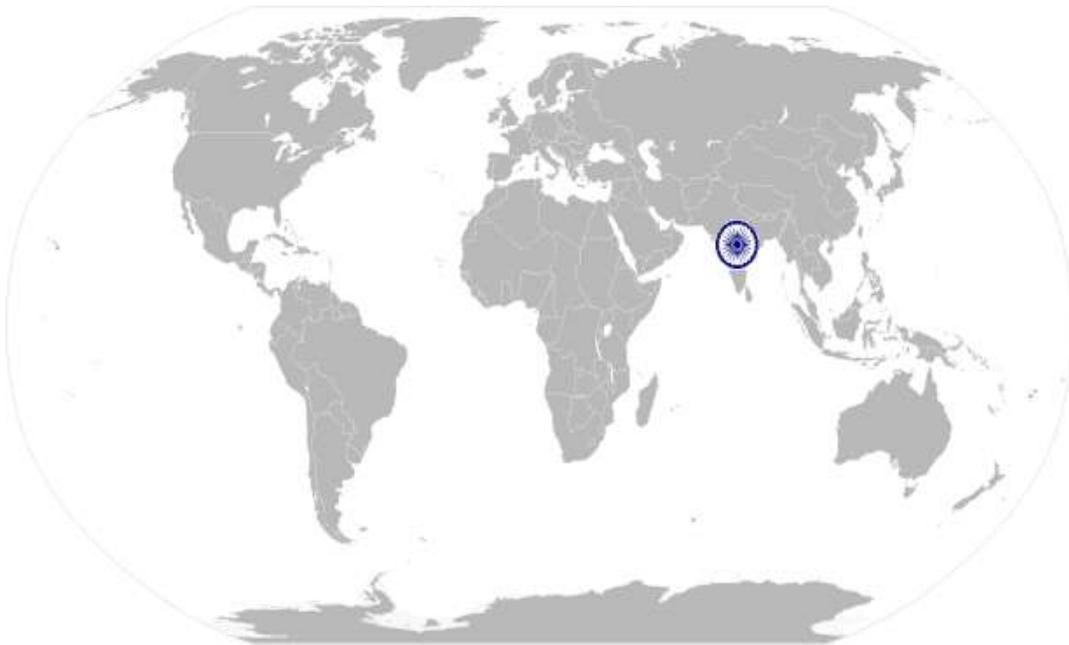


ASC/N 0021

Maintain 5S at the work premises

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# National Occupational Standard



## Overview

This unit is about the understanding all principles of 5S and follow the given guidelines to ensure a clean and efficient working environment in the organization

ASC/N 0021

Maintain 5S at the work premises

National Occupational Standard

<b>Unit Code</b>	<b>ASC/N 0021</b>
<b>Unit Title (Task)</b>	<b>Maintain 5S at the work premises</b>
<b>Description</b>	This NOS is about ensuring all 5 S activities both at the shop floor and the office area to facilitate increase in work productivity
<b>Scope</b>	The individual needs to <ul style="list-style-type: none"> <li>Ensure sorting, streamlining &amp; organizing, storage and documentation, cleaning, standardization and sustenance across the plant and office premises of the organization</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Ensure sorting</b>	<p>PC1. Follow the sorting process and check that the tools, fixtures &amp; jigs that are lying on workstations are the ones in use and unnecessary items are not cluttering the workbenches or work surfaces.</p> <p>PC2. Ensure segregation of waste in hazardous/ non Hazardous waste as per the sorting work instructions</p> <p>PC3. Follow the technique of waste disposal and waste storage in the proper bins as per SOP</p> <p>PC4. Segregate the items which are labeled as red tag items for the process area and keep them in the correct places</p> <p>PC5. Sort the tools/ equipment/ fasteners/ spare parts as per specifications/ utility into proper trays, cabinets, lockers as mentioned in the 5S guidelines/ work instructions</p> <p>PC6. Ensure that areas of material storage areas are not overflowing</p> <p>PC7. Properly stack the various types of boxes and containers as per the size/ utility to avoid any fall of items/ breakage and also enable easy sorting when required</p> <p>PC8. Return the extra material and tools to the designated sections and make sure that no additional material/ tool is lying near the work area</p> <p>PC9. Follow the floor markings/ area markings used for demarcating the various sections in the plant as per the prescribed instructions and standards</p>
<b>Ensure proper documentation and storage (organizing, streamlining)</b>	<p>PC10. Follow the proper labeling mechanism of instruments/ boxes/ containers and maintaining reference files/ documents with the codes and the lists</p> <p>PC11. Check that the items in the respective areas have been identified as broken or damaged</p> <p>PC12. Follow the given instructions and check for labeling of fluids, oils, lubricants, solvents, chemicals etc. and proper storage of the same to avoid spillage, leakage, fire etc.</p> <p>PC13. Make sure that all material and tools are stored in the designated</p>

ASC/N 0021

**Maintain 5S at the work premises**

	places and in the manner indicated in the 5S instructions
<b>Ensure cleaning of self and the work place</b>	<p>PC14. Check whether safety glasses are clean and in good condition</p> <p>PC15. Keep all outside surfaces of recycling containers are clean</p> <p>PC16. Ensure that the area has floors swept, machinery clean and generally clean. In case of cleaning, ensure that proper displays are maintained on the floor which indicate potential safety hazards</p> <p>PC17. Check whether all hoses, cabling &amp; wires are clean, in good condition and clamped to avoid any mishap or mix up</p> <p>PC18. Ensure workbenches and work surfaces are clean and in good condition</p> <p>PC19. Follow the cleaning schedule for the lighting system to ensure proper illumination</p> <p>PC20. Store the cleaning material and equipment in the correct location and in good condition</p> <p>PC21. Ensure self-cleanliness - clean uniform, clean shoes, clean gloves, clean helmets, personal hygiene</p>
<b>Ensure sustenance</b>	<p>PC1. Follow the daily cleaning standards and schedules to create a clean working environment</p> <p>PC2. Attend all training programs for employees on 5 S</p> <p>PC3. Support the team during the audit of 5 S</p> <p>PC4. Participate actively in employee work groups on 5S and encourage team members for active participation</p> <p>PC5. Follow the guidelines for What to do and What not to do to build sustainability in 5S as mentioned in the 5S check lists/ work instructions</p>
<b>Knowledge and Understanding (K) w.r.t. the scope</b>	
<b>Element</b>	<b>Knowledge and Understanding</b>
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. relevant standards, procedures and policies related to 5S followed in the company</p>
<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to :</p> <p>KB5. have basic knowledge of 5S procedures</p> <p>KB6. know various types 5s practices followed in various areas</p> <p>KB7. understand the 5S checklists provided in the department/ team</p> <p>KB8. have skills to identify useful &amp; non useful items</p> <p>KB9. have knowledge of labels , signs &amp; colours used as indicators</p> <p>KB10. Have knowledge on how to sort and store various types of tools, equipment, material etc.</p> <p>KB11. know , how to identify various types of waste products</p> <p>KB12. understand the impact of waste/ dirt/ dust/unwanted</p>

ASC/N 0021

**Maintain 5S at the work premises**

	<p>substances on the process/ environment/ machinery/ human body</p> <p>KB13. have knowledge of best ways of cleaning &amp; waste disposal</p> <p>KB14. understand the importance of standardization in processes</p> <p>KB15. understand the importance of sustainability in 5S</p> <p>KB16. have knowledge of TQM process</p> <p>KB17. have knowledge of various materials and storage norms</p> <p>KB18. understand visual controls, symbols, graphs 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>
	The user/ individual on the job needs to know and understand how to: <ul style="list-style-type: none"> <li>SA7. write basic level notes and observations</li> <li>SA8. note down observations (if any) related to the process</li> <li>SA9. write information documents to internal departments/ internal teams</li> </ul>
	<b>Reading Skills</b>
	The user/individual on the job needs to know and understand how to: <ul style="list-style-type: none"> <li>SA10. read 5S instructions put up across the plant premises</li> </ul>
	<b>Oral Communication (Listening and Speaking skills)</b>
The user/individual on the job needs to know and understand how to: <ul style="list-style-type: none"> <li>SA11. effectively communicate information to team members inform employees in the plant and concerned functions about 5S</li> <li>SA12. question the process head in order to understand the 5S related issues</li> <li>SA13. attentively listen with full attention and comprehend the information given by the speaker during 5S training programs</li> </ul>	
<b>B. Professional Skills</b>	<b>Judgmental Thinking</b>
	The user/individual on the job needs to know and understand how to: <ul style="list-style-type: none"> <li>SB3. use common sense and make judgments during day to day basis</li> <li>SB4. use reasoning skills to identify and resolve basic problems using 5S</li> </ul>
	<b>Persuasion</b>
	The user/ individual on the jobs needs to know and understand how to: <ul style="list-style-type: none"> <li>SB5. persuade co team members to follow 5 S</li> <li>SB6. ensure that the co team members understand the importance of using 5 S tool</li> </ul>
	<b>Creativity</b>

ASC/N 0021

Maintain 5S at the work premises

	<p>The user/individual on the job needs to know and understand how to :</p> <p>SB7. use innovative skills to perform and manage 5 S activities at the work desk and the shop floor</p> <p>SB8. exhibit inquisitive behaviour to seek feedback and question on the existing set patterns of work</p>
	<p><b>Self –Discipline</b></p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB9. do what is right, not what is a popular practices</p> <p>SB10. follow shop floor rules&amp; regulations and avoid deviations; make 5S an integral way of life</p> <p>SB11. ensure self-cleanliness on a daily basis</p> <p>SB12. demonstrate the will to keep the work area in a clean and orderly manner</p>



ASC/N 0021

Maintain 5S at the work premises

## NOS Version Control

<b>NOS Code</b>	ASC/N 0021		
<b>Credits(NSQF)</b>	TBD	<b>Version number</b>	1.0
<b>Industry</b>	Automotive	<b>Drafted on</b>	1/03/2014
<b>Industry Sub-sector</b>	Manufacturing/ R&D	<b>Last reviewed on</b>	15/03/2014
<b>Occupation</b>	Machining	<b>Next review date</b>	Under revision expected date of revised version 31-Dec-15



### Criteria for assessment of Trainees

JOB ROLE	Machining Assistant Or Helper L2
Qualification Pack	ASC/Q 3502
No. Of NOS	2 Role specific ,2 generic

NOS Title/ NOS Elements	NOS & Performance Criterion Description	Marks allocation		
		Theory	Viva	Practical
<b>ASC/N 3501</b>	<b>Support the machinist in the routine machining activities</b>			
<b>Fetching and holding tools for the operator</b>	PC1. Bring right toolkits for the operator and check whether all required tools are available in the tool kit  PC2. Hold the tools during operations in the correct manner as specified by the operator and the standard operating procedures so that the operator can easily complete the assigned job		5	20
<b>Loading work pieces on the machines using fasteners and hand tools</b>	PC3. Support the assistant operator in arranging the work pieces in the specified manner as given in the setting document  PC4. Ensure that there is no damage done to the work pieces while loading them on the machining apparatus using pulleys, chains and other hoisting mechanisms		10	20
<b>Replace worn tools and sharpen dull cutting tools and dies</b>	PC5. Use bench grinders and cutting grinder machines to sharpen & replace the tools and dies		10	25
<b>Support the assistant operator/ machinist in machine operations</b>	PC6. Use templates , measuring instruments and hand tools for the process of installation and adjustment of drills, cutters, dies and guides  PC7. Adjust tool positions and machine control mechanisms through the cranking (turning) process to ensure clearances and tolerances as specified in the operating manual  PC8. Extract the jammed pieces using fingers, wire hooks and lift bars		15	45
<b>Maintenance and cleaning of machine and workplace</b>	PC9. Store equipment auxiliaries and spare parts in proper designated areas  PC10. Regularly clean the equipment and process auxiliaries (cutting tools, dies) to remove any dust, moisture,			

	waste material which would have got collected on the equipment and remove the metal chips and extra coolant PC11. Regularly clean the working area in the weld shop and create a healthy, clean and safe working environment		15	45
	<b>Subtotal</b>		55	155
<b>ASC/N 3502</b>	<b>Support the machinist in post machining process</b>	<b>Theory</b>	<b>Viva</b>	<b>Practical</b>
<b>Unloading work pieces on the machines</b>	PC1. Support the assistant operator in removing the output products from the machining apparatus in the specified manner as given in the setting document PC2. Use lifting tools like lifts, pulleys, chains, hoists and ensure that there is no damage done to the machined pieces while unloading them		10	40
<b>Do Deburring</b>	PC3. With the help of the correct tool remove the extra burrs and chips from the metal surface		5	15
<b>Check quality of the machined pieces (Gauging)</b>	PC4. Support the assistant operator in measuring the specifications of the finished product using devices like micrometers, vernier calipers, gauges, rulers, weighing scales and any other inspection equipment PC5. Bring right inspection tools for the operator and check whether all required tools are available near the inspection platform PC6. Support the operator/ asst. operator in noting down the observations of the basic inspection process and identify pieces which are ok and also not meeting the specified standards PC7. Separate the defective pieces into two categories – pieces which can be repaired/ modified and pieces which are beyond repair and maintain records of each category		20	50
	<b>Subtotal</b>		35	105
<b>ASC/N 0006</b>	<b>Maintain a safe and healthy working environment</b>	<b>Theory</b>	<b>Viva</b>	<b>Practical</b>

<p><b>Identify and report the risks identified</b></p>	<p>PC1. Identify activities which can cause potential injury through sharp objects, burns, fall, electricity, gas leakages, radiation, poisonous fumes, chemicals ,loud noise</p> <p>PC2. Inform the concerned authorities about the potential risks identified in the processes, workplace area/ layout, materials used etc.</p> <p>PC3. Inform the concerned authorities about machine breakdowns, damages which can potentially harm man/ machine during operations</p> <p>PC4. Create awareness amongst other by sharing information on the identified risks</p>		20	40
<p><b>Create and sustain a Safe, clean and environment friendly work place</b></p>	<p>PC5. Follow the instructions given on the equipment manual describing the operating process of the equipment</p> <p>PC6. Follow the Safety, Health and Environment related practices developed by the organization</p> <p>PC7. Operate the machine using the recommended Personal Protective Equipment (PPE)</p> <p>PC8. Maintain a clean and safe working environment near the work place and ensure there is no spillage of chemicals, production waste, oil, solvents etc.</p> <p>PC9. Maintain high standards of personal hygiene at the work place</p> <p>PC10. Ensure that the waste disposal is done in the designated area and manner as per organization SOP.</p> <p>PC11. Inform appropriately the medical officer/ HR in case of self or an employee's illness of contagious nature so that preventive actions can be planned for others</p>		50	40
	<b>Subtotal</b>		<b>70</b>	<b>80</b>
<b>ASC/N 0021</b>	<b>Maintain 5S at the work premises</b>	<b>Theory</b>	<b>Viva</b>	<b>Practical</b>
<p><b>Ensure sorting</b></p>	<p>PC1. Follow the sorting process and check that the tools, fixtures &amp; jigs that are lying on workstations are the ones in use and un-necessary items are not cluttering the workbenches or work</p>			

	<p>surfaces.</p> <p>PC2. Ensure segregation of waste in hazardous/ non Hazardous waste as per the sorting work instructions</p> <p>PC3. Follow the technique of waste disposal and waste storage in the proper bins as per SOP</p> <p>PC4. Segregate the items which are labeled as red tag items for the process area and keep them in the correct places</p> <p>PC5. Sort the tools/ equipment/ fasteners/ spare parts as per specifications/ utility into proper trays, cabinets, lockers as mentioned in the 5S guidelines/ work instructions</p> <p>PC6. Ensure that areas of material storage areas are not overflowing</p> <p>PC7. Properly stack the various types of boxes and containers as per the size/ utility to avoid any fall of items/ breakage and also enable easy sorting when required</p> <p>PC8. Return the extra material and tools to the designated sections and make sure that no additional material/ tool is lying near the work area</p> <p>PC9. Follow the floor markings/ area markings used for demarcating the various sections in the plant as per the prescribed instructions and standards</p>		10	20
			10	20
<b>Ensure proper documentation and storage ( organizing , streamlining)</b>	<p>PC10. Follow the proper labeling mechanism of instruments/ boxes/ containers and maintaining reference files/ documents with the codes and the lists</p> <p>PC11. Check that the items in the respective areas have been identified as broken or damaged</p> <p>PC12. Follow the given instructions and check for labeling of fluids, oils. lubricants, solvents, chemicals etc. and proper storage of the same to avoid spillage, leakage, fire etc.</p> <p>PC13. Make sure that all material and tools are stored in the designated places and in the manner indicated in the 5S instructions</p>		10	20
	PC14. Follow the daily cleaning standards			

<b>Ensure sustenance</b>	<p>and schedules to create a clean working environment</p> <p>PC15. Attend all training programs for employees on 5 S</p> <p>PC16. Support the team during the audit of 5 S</p> <p>PC17. Participate actively in employee work groups on 5S and encourage team members for active participation</p> <p>PC18. Follow the guidelines for What to do and What not to do to build sustainability in 5S as mentioned in the 5S check lists/ work instructions</p>		10	20
	<b>Sub total</b>		<b>40</b>	<b>80</b>
	<b>Total</b>	<b>300</b>	<b>200</b>	<b>420</b>