

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



Contents

1. Introduction and Contacts.....P1
2. Qualifications Pack.....P2
3. Glossary of key terms.....P3
4. OS Units.....P5
5. Assessment Criteria.....P22

Introduction

Qualifications Pack- Executive, Proto Manufacturing

SECTOR: AUTOMOTIVE

SUB-SECTOR: R & D SUPPORT

OCCUPATION: TESTING AND VALIDATION

JOB ROLE: EXECUTIVE –PROTO MANUFACTURING

REFERENCE ID: ASC/Q6501

ALIGNED TO: NCO-2004/Nil

Brief Job Description: Individuals at this job need to coordinate with different departments and functions for manufacturing of prototype vehicle/parts that will finally be used for testing and validation.

Personal Attributes: The individual should be willing to work at shop floor for long hours. The individual should possess coordination and interpersonal skills. The individual should also be able to demonstrate skills for information ordering, imagination, analytical reasoning, technology, customer orientation, oral expression and comprehension

Contact Us:

ASDC, 1/6,
Siri Institutional Area,
Khel Gaon Road,
New Delhi-110049 (India)

E-mail:
SKC.ASDC@gmail.com



Job Details	Qualifications Pack Code	ASC/Q6501		
	Job Role	Executive-Proto Manufacturing		
	Credits(NSQF)	TBD	Version number	1.0
	Sector	Automotive	Drafted on	13/09/13
	Sub-sector	R & D SUPPORT	Last reviewed on	23/09/13
	Occupation	Testing and validation	Next review date	Under revision expected date of revised version 31-Dec 15
	NSQC Clearance on	20/07/15		

Job Role	Executive – Proto Manufacturing
Role Description	Coordinate with different departments for managing and manufacturing prototype vehicle/parts.
NSQF level	4
Minimum Educational Qualifications*	B. Tech/Dip. in Mechanical/ Automobile Engineering
Maximum Educational Qualifications*	Not Applicable
Training (Suggested but not mandatory)	<ul style="list-style-type: none"> Compulsory: operational knowledge of design tools CAD/CAE/PRO-E, MS Office, 3D modeling and simulation techniques, Rapid prototyping, Production processes in the organization/ vendors Voluntary: Information flow systems like ERP/SAP/PLM
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 Act 1948 :</p> <p>- No one can be employed before attaining the age of 14</p> <p>3 Please note that under the Factories Act 1948, States may have slightly varying provision which need to be adhered to.</p>
Experience	ASDC Level 4 Certificate in manufacturing process e.g. Assembly or minimum 2-3years in R & D department pertaining to Proto manufacturing
Applicable National Occupational Standards (NOS)	<p>Compulsory:</p> <ol style="list-style-type: none"> ASC/N6501:Develop the prototype for existing product modification ASC/N6502:Develop the prototype based on future business plan ASC/N 0021:Maintain 5S at the work premises ASC/N 0006:Maintain a safe and healthy working environment
Performance Criteria	As described in the relevant OS units

Keywords /Terms	Description
Sector	Sector is a conglomeration of different business operations having similar business 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.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Function	Function is an activity necessary for achieving the key purpose of the sector, occupation, or an 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 OS.
Sub-function	Sub-functions are sub-activities essential to fulfill the achieving the objectives of the function.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the knowledge and understanding they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria	Performance criteria are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (OS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
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 OS they are looking for.
Scope	Scope is a 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 quality of performance required.
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.
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.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/ Generic	Core skills or generic skills are a group of skills that are the key to learning and

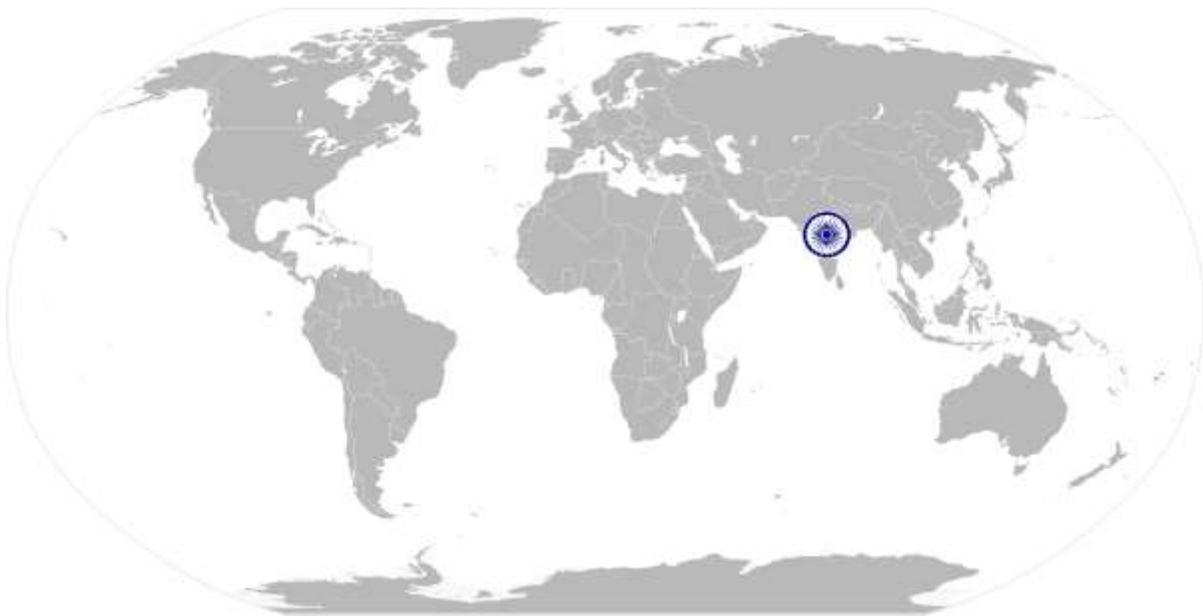
Acronyms

Skills	working in today’s world. These skills are typically needed in any work environment in today’s world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
Keywords /Terms	Description
NOS	National Occupational Standard(s)
NSQF	National Standards Qualifications Framework
QP	Qualifications Pack
BOM	Bills of Material
SAP	System Application and Products
CAD/CAE	Computer Added Design/ Engineering
APQP	Advance Product Quality Planning
DFMEA/ PFMEA	Design/ Process Failure Modes and Effects Analysis
SOP	Standard Operating Procedure

ASC/N6501

Develop the prototype for existing product modification

National Occupational Standards



Overview

This unit is about developing the prototype for modification of existing product based on field report or based on sales and marketing inputs

ASC/N6501

Develop the prototype for existing product modification

National Occupational Standard	Unit Code	ASC/N6501
	Unit Title (Task)	Develop the prototype for existing product modification
	Description	This OS unit is about the individual coordinating for developing prototype for the existing product modification based on field investigation reports
	Scope	The unit/ task covers the following: <ul style="list-style-type: none"> • coordinate and work with R&D for design release • in-house and sourcing from vendor for proto parts • proto manufacturing for testing and validation
	Performance Criteria(PC) w.r.t. the Scope	
	Element	Performance Criteria
	Design release for proto parts/vehicle	To be competent , the user/individual on the job must be able to: <ul style="list-style-type: none"> PC1. coordinate internally with R&D for the design release of proto vehicle/parts of the existing model PC2. check what are the changes in product have been made by R&D with respect to existing model in terms of <ul style="list-style-type: none"> - product design changes - product dimensional changes - product material strength/composition changes PC3. ensure co-ordination & communication/documentation of those changes suggested by R&D team for in-house and vendor sourcing of the required parts PC4. sign off the proto- stage after release as per SOP
	In-house and sourcing from vendor for proto parts	To be competent , the user/individual on the job must be able to: <ul style="list-style-type: none"> PC5. check based on the change suggested whether modified part is being manufactured in-house or sourced from different vendor PC6. release the modified part design to in-house manufacturing unit or to the vendor depending upon from where modified part can be sourced PC7. coordinate with in-house manufacturing unit and vendor for timeline for delivering modified parts based on parts modification feasibility PC8. ensure that parts are getting delivered to the R&D department meeting the timeline requirement
	Coordinate for Proto manufacturing and validation	To be competent , the user/individual on the job must be able to: <ul style="list-style-type: none"> PC9. coordinate with production team for proto manufacturing as per design released by R&D department; ensure adequate numbers as may be required for customer/ verification and validation are planned. PC10. based on production schedule inform the time line to the testing and validation team for proto testing and validation PC11. handover the proto vehicle/part to the testing validation team after production of the same

ASC/N6501

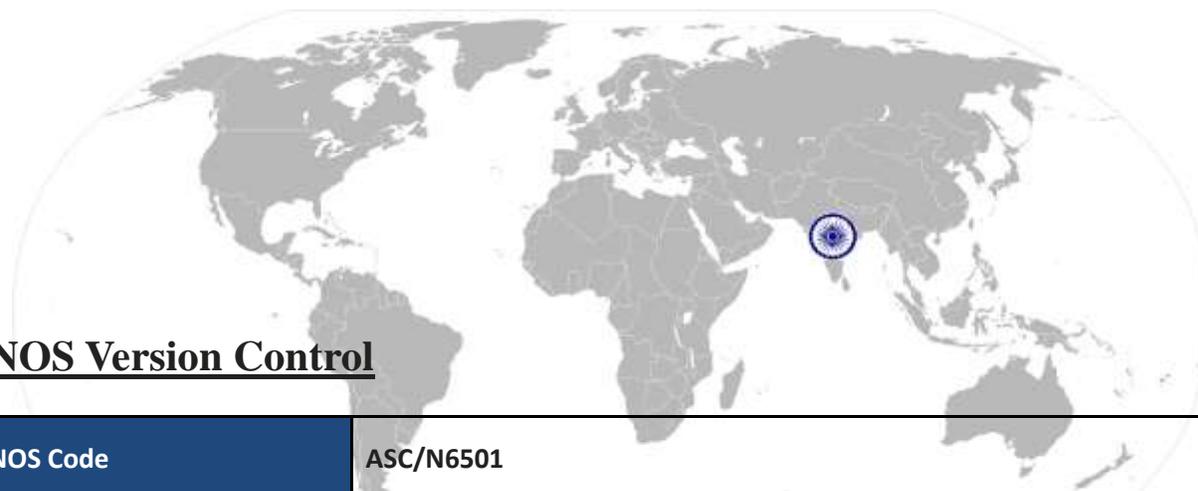
Develop the prototype for existing product modification

	PC12. Co-ordinate with Materials Lab, QA, standards Room etc for verification of the dimensional and material / special characteristics as necessary for the change in the design at appropriate stage . Keep records maintaining traceability to facilitate interpretation of test results later.
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: KA1. product portfolio of organization KA2. the manufacturing processes of organization KA3. the list of approved vendors for the outsourced materials KA4. protocol for communication with various department KA5. personnel and other HR policies of the organization
B. Technical Knowledge	The individual on the job needs to have knowledge of: KB1. good understanding of prototyping and testing process KB2. understanding on homologation and validation process KB3. knowledge in tools like CAD, CAM,PRO -E etc KB4. information systems like SAP, ERP,PLM etc.
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	Interpretation skills
	The user/ individual on the job needs to know and understand how to: SA1. read and understand the usage of different parts in the vehicle SA2. good product knowledge and strong coordination skill SA3. document all the prototyping activities findings in form of MS Word documents , MS Excel spreadsheets etc.
	Communication skills
	The user/ individual on the job needs to know and understand how to: SA4. communicate with the concerned departments for gathering part/component drawings and other related information SA5. follow up with concerned manufacturing unit on the progress of prototype development
	Teamwork and multitasking
	The user/ individual on the job needs to know and understand how to: SA6. work effectively with the NPD team members for ensuring proto manufacturing in a timely and efficient manner SA7. share operation knowledge with colleagues and peers

ASC/N6501

Develop the prototype for existing product modification

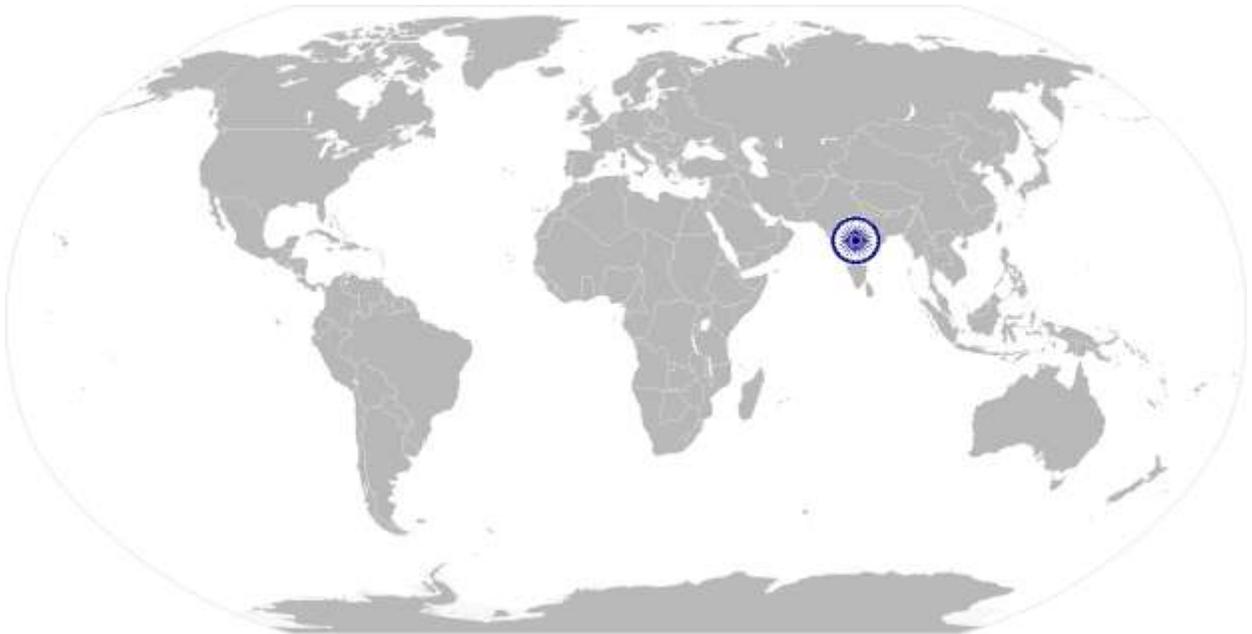
B. Professional Skills	Problem Solving
	The user/individual on the job needs to know and understand how to: SB1. escalate on immediate basis in case parts are timely not available in-house or at the vendor end SB2. work with punctuality and commitment
	Critical thinking
	The user/individual on the job needs to know how to: SB3. identify problems (technical and non-technical), disruptions and delays



NOS Version Control

NOS Code	ASC/N6501		
Credits(NSQF)	TBD	Version number	1.0
Industry	Automotive	Drafted on	13/09/13
Industry Sub-sector	R&D Support	Last reviewed on	23/09/13
Occupation	Testing and Validation	Next review date	Under revision expected date of revised version 31-Dec 15

National Occupational Standards



Overview

This unit is about developing the prototype based on the long term business plan of an organization

ASC/N6502

Develop the prototype based on future business plan

National Occupational Standard	Unit Code	ASC/N6502
	Unit Title (Task)	Develop the prototype based on organization future business plan
	Description	This OS unit is about the individual coordinating with different department and functions for developing the prototype based on organization future business plan
	Scope	<p>This unit/ task covers the following:</p> <ul style="list-style-type: none"> • coordinate with R&D for design release for new prototype manufacturing • material sourcing in coordination with strategic sourcing department • Proto manufacturing for testing and validation
	Performance Criteria(PC) w.r.t. the Scope	
	Element	Performance Criteria
	Coordinate with R&D for new proto design release	<p>To be competent , the user/individual on the job must be able to:</p> <p>PC1. coordinate internally with R&D for the design release of proto vehicle/parts of the new product based on customer/market requirement</p> <p>PC2. see the simulation of the complete product for better understanding about the new proto</p> <p>PC3. support in evaluating the design from manufacturing/assembly line perspective on the early stage of the project</p> <p>PC4. coordinate in bridging the gap, if any, related to new proto development between design team and product team</p> <p>PC5. ensure documentation of new product requirement suggested by R&D team</p> <p>PC6. sign off the proto- stage after release of SOP</p>
	Sourcing of new proto parts	<p>To be competent , the user/individual on the job must be able to:</p> <p>PC7. check and record what are new product required for new proto manufacturing</p> <p>PC8. coordinate with strategic sourcing for development and sourcing of new parts as per design release</p> <p>PC9. order the parts for prototype assembly according to design release</p> <p>PC10. coordinate with in-house manufacturing unit and vendor for timeline for delivering modified parts based on parts modification feasibility</p> <p>PC10. ensure parts are getting delivered to the R&D department meeting the timeline requirement</p>
	Coordinate for Proto manufacturing and validation	<p>PC11. coordinate with production team for new proto manufacturing as per design released by R&D department; ensure adequate numbers as may be required for Customer/ verification and validation are planned.</p> <p>PC12. based on production schedule inform the time line to the testing and validation team for proto testing and validation</p>

ASC/N6502

Develop the prototype based on future business plan

	PC13. handover the proto vehicle/part to the testing validation team after production of the same Co-ordinate with Materials Lab, QA, standards Room etc for verification of the dimensional and material / special characteristics as necessary for the change in the design at appropriate stage . Keep records maintaining traceability to facilitate interpretation of test results later?
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: KA1. roles, responsibilities and scope of work for different departments KA2. product portfolio of organization KA3. the manufacturing processes of organization KA4. the list of approved vendors for the outsourced materials KA5. protocol for communication with various department KA6. Personnel and other HR policies of the organization
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. good understanding of prototyping and testing process KB2. understanding on homologation and validation process KB3. knowledge in tools like CAD, CAM,CAE,PRO-E etc KB4. Information systems like SAP, ERP etc. KB5. knowledge of simulation software, DFMEA, APQP
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	Interpretation skills
	The user/ individual on the job needs to know and understand how to: SA1. read and understand the usage of different parts in the vehicle SA2. good product knowledge and strong coordination skill SA3. document all the prototyping activities findings in form of MS Word documents , MS Excel spreadsheets etc.
	Communication skills
	The user/ individual on the job needs to know and understand how to: SA4. communicate with the concerned departments for gathering part/component SA5. follow up with concerned manufacturing unit on the progress of product medication SA6. writing and reading skill to communicate the modification suggested
	Teamwork and multitasking
	The user/ individual on the job needs to know and understand how to: SA7. work effectively with the team members for ensuring proto manufacturing in a timely and efficient manner SA8. share operational knowledge with colleagues and peers
B. Professional Skills	Problem Solving

ASC/N6502

Develop the prototype based on future business plan

	The user/individual on the job needs to know and understand how to: SB1. work on escalation on immediate basis in case parts are timely not available in-house or at the vendor end SB2. work with punctuality and commitment
	Critical thinking
	The user/individual on the job needs to know how to: SB3. identify problems (technical and non-technical), disruptions and delays

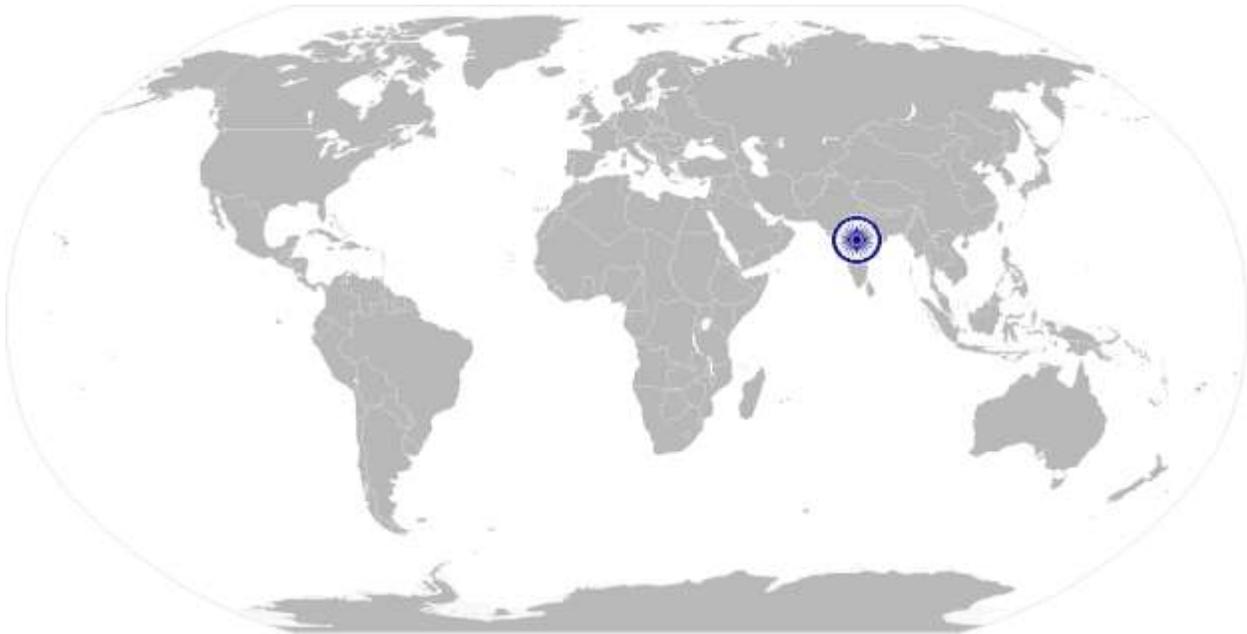
NOS Version Control

NOS Code	ASC/N6502		
Credits(NSQF) [OPTIONAL]	TBD	Version number	1.0
Industry	Automotive	Drafted on	13/09/13
Industry Sub-sector	R&D Support	Last reviewed on	23/09/13
Occupation	Testing and Validation	Next review date	Under revision expected date of revised version 31-Dec 15

ASC/N0021

Maintain 5S at the work premises

National Occupational Standards



Overview

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

ASC/N0021

Maintain 5S at the work premises

National Occupational Standard	Unit Code	ASC/N 0021
	Unit Title (Task)	Maintain 5S at the work premises
	Description	This OS unit is about creating a Safe and Healthy work place, adhering to the safety guidelines in the working area of the organization, following practices which are not impacting the environment in a negative manner
	Scope	This unit/task covers the following: Types of products <ul style="list-style-type: none"> • prototypes for product • prototype for individual component
	Performance Criteria (PC) w.r.t. the Scope	
	Element	Performance Criteria
	Identify and report the risks identified	To be competent , the user/individual on the job must be able to : PC1. identify activities which can cause potential injury PC2. Inform the concerned authorities about the potential risks identified in the processes, workplace area/ layout etc. PC3. inform the concerned authorities about damages which can potentially harm man/ machine during operations PC4. create awareness amongst other by sharing information on the identified risks
	Create and sustain a Safe, clean and environment friendly work place	PC5. follow the instructions given on the equipment manual describing the operating process of the equipments PC6. follow the Safety, Health and Environment related practices developed by the organization PC7. maintain a clean and safe working environment near the workplace PC8. maintain high standards of personal hygiene at the work place PC9. ensure that the waste disposal takes place in the designated area as per organization SOP PC10. 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
	Knowledge and Understanding (K)w.r.t. the scope	
	Element	Knowledge and Understanding
A. Organizational Context (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	

ASC/N0021

Maintain 5S at the work premises

A. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. basic knowledge of Safety procedures(fire fighting, first aid)within the organization</p> <p>KB2. basic knowledge of risks associated with each occupation in the organization</p> <p>KB3. knowledge of personal hygiene and how an individual can contribute towards creating a highly safe and clean working environment</p>
Skills (S)w.r.t. the scope	
Element	Skills
A. Core Skills/ Generic Skills	Writing Skills
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. write basic level notes and observations</p>
	Reading Skills
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA2. read safety instructions put up in R&D department premises</p> <p>SA3. read safety precautions mentioned in equipment manuals and panels to understand the potential risks associate with the equipment</p>
	Oral Communication (Listening and Speaking skills)
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA4. effectively communicate information to team members and Inform employees in the plant and concerned functions about potentials Safety, Health and Environment related risks observed</p> <p>SA5. question associates in order to understand the safety related issues</p> <p>SA6. attentively listen with full attention and comprehend the information given by the speaker during safety drills and training programs</p>
B. Professional Skills	Judgmental Thinking
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. use common sense and make judgments during day to day basis</p> <p>SB2. use reasoning skills to identify and resolve basic problems</p>

ASC/N0021

Maintain 5S at the work premises

NOS Version Control

NOS Code	ASC/N0021		
Credits(NSQF)	TBD	Version number	1.0
Industry	Automotive	Drafted on	13/09/13
Industry Sub-sector	R&D Support	Last reviewed on	23/09/13
Occupation	Testing and Validation	Next review date	Under revision expected date of revised version 31-Dec 15



ASC/N0006

Maintain a safe and healthy working environment

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/N0006

Maintain a safe and healthy working environment

National Occupational Standard	Unit Code	ASC/N 0006
	Unit Title (Task)	Maintain a safe and healthy working environment
	Description	This NOS is about ensuring all 5 S activities both at the shop floor and the office area to facilitate increase in work productivity
	Scope	The individual needs to <ul style="list-style-type: none"> Ensure sorting, streamlining & organizing, storage and documentation, cleaning, standardization and sustenance across the plant and office premises of the organization
	Performance Criteria (PC) w.r.t. the Scope	
	Element	Performance Criteria
	Ensure sorting	<p>PC1. Follow the sorting process and check that the tools, fixtures & jigs that are lying on workstations are the ones in use and un-necessary 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>
	Ensure proper documentation and storage (organizing , streamlining)	<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/N0006

Maintain a safe and healthy working environment

	places and in the manner indicated in the 5S instructions
Ensure cleaning of self and the work place	<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 & 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>
Ensure sustenance	<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>
Knowledge and Understanding (K) w.r.t. the scope	
Element	Knowledge and Understanding
A. Organizational Context (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. relevant standards, procedures and policies related to 5S followed in the company</p>
B. Technical Knowledge	<p>The user/individual on the job needs to :</p> <p>KB1. have basic knowledge of 5S procedures</p> <p>KB2. know various types 5s practices followed in various areas</p> <p>KB3. understand the 5S checklists provided in the department/ team</p> <p>KB4. have skills to identify useful & non useful items</p> <p>KB5. have knowledge of labels , signs & colors used as indicators</p> <p>KB6. Have knowledge on how to sort and store various types of tools, equipment, material etc.</p> <p>KB7. know , how to identify various types of waste products</p> <p>KB8. understand the impact of waste/ dirt/ dust/unwanted substances on the process/ environment/ machinery/ human body</p>

ASC/N0006

Maintain a safe and healthy working environment

	<p>KB9. have knowledge of best ways of cleaning & waste disposal</p> <p>KB10. understand the importance of standardization in processes</p> <p>KB11. understand the importance of sustainability in 5S</p> <p>KB12. have knowledge of TQM process</p> <p>KB13. have knowledge of various materials and storage norms</p> <p>KB14. understand visual controls, symbols, graphs etc.</p>
Skills (S)w.r.t. the scope	
Element	Skills
A. Core Skills/ Generic Skills	Writing Skills
	The user/ individual on the job needs to know and understand how to: SA1. write basic level notes and observations SA2. note down observations (if any) related to the process SA3. write information documents to internal departments/ internal teams
	Reading Skills
	The user/individual on the job needs to know and understand how to: SA4. read 5S instructions put up across the plant premises
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA5. effectively communicate information to team members inform employees in the plant and concerned functions about 5S SA6. question the process head in order to understand the 5S related issues SA7. attentively listen with full attention and comprehend the information given by the speaker during 5S training programs
B. Professional Skills	Judgmental Thinking
	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 using 5S
	Persuasion
	The user/ individual on the jobs needs to know and understand how to: SB3. persuade co team members to follow 5 S SB4. ensure that the co team members understand the importance of using 5 S tool
	Creativity
	The user/individual on the job needs to know and understand how to : SB5. use innovative skills to perform and manage 5 S activities at the work desk and the shop floor SB6. exhibit inquisitive behavior to seek feedback and question on the existing set patterns of work
	Self –Discipline

ASC/N0006

Maintain a safe and healthy working environment

	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB7. do what is right, not what is a popular practices</p> <p>SB8. follow shop floor rules& regulations and avoid deviations; make 5S an integral way of life</p> <p>SB9. ensure self-cleanliness on a daily basis</p> <p>SB10. demonstrate the will to keep the work area in a clean and orderly manner</p>
--	--

NOS Version Control

NOS Code	ASC/N0021		
Credits(NSQF)	TBD	Version number	1.0
Industry	Automotive	Drafted on	13/09/13
Industry Sub-sector	Manufacturing/ R&D	Last reviewed on	23/09/13
Occupation	Testing and Validation	Next review date	Under revision expected date of revised version 31-Dec 15

Criteria for assessment of Trainees

JOB ROLE	Executive Proto Manufacturing L5
Qualification Pack	ASC/Q 6501
No. Of NOS	2 Role specific ,2 generic

NOS Title/ NOS Elements	NOS & Performance Criterion Description	Marks allocation		
		Theory	Viva	Practical
ASC/N 6501	Develop the prototype for existing product modification			
Design release for proto parts/vehicle	<p>To be competent , the user/individual on the job must be able to:</p> <p>PC1. coordinate internally with R&D for the design release of proto vehicle/parts of the existing model</p> <p>PC2. check what are the changes in product have been made by R&D with respect to existing model in terms of</p> <ul style="list-style-type: none"> - product design changes - product dimensional changes - product material strength/composition changes <p>PC3. ensure co-ordination & communication/documentation of those changes suggested by R&D team for in-house and vendor sourcing of the required parts</p> <p>PC4. sign off the proto- stage after release as per SOP</p>	20	30	30
In-house and sourcing from vendor for proto parts	<p>To be competent , the user/individual on the job must be able to:</p> <p>PC5. check based on the change suggested whether modified part is being manufactured in-house or sourced from different vendor</p> <p>PC6. release the modified part design to in-house manufacturing unit or to the vendor depending upon from where modified part can be sourced</p> <p>PC7. coordinate with in-house manufacturing unit and vendor for timeline for delivering modified parts based on parts modification feasibility</p> <p>PC8. ensure that parts are getting delivered to the R&D department meeting the timeline requirement</p>	30	10	
Coordinate for Proto manufacturing and validation	<p>To be competent , the user/individual on the job must be able to:</p> <p>PC9. Co-ordinate with production team for proto manufacturing as per design released by R&D department; ensure adequate numbers as may be required for customer/ verification and validation</p>	10		10

	<p>are planned.</p> <p>PC10. based on production schedule inform the time line to the testing and validation team for proto testing and validation</p> <p>PC11. handover the proto vehicle/part to the testing validation team after production of the same</p> <p>PC12. Co-ordinate with Materials Lab, QA, standards Room etc for verification of the dimensional and material / special characteristics as necessary for the change in the design at appropriate stage. Keep records maintaining traceability to facilitate interpretation of test results later?</p>		10	30
	subtotal		100	110
ASC/N 6502	Develop the prototype based on organization future business plan	Theory	Viva	Practical
Coordinate with R&D for new proto design release	<p>To be competent , the user/individual on the job must be able to:</p> <p>PC1. coordinate internally with R&D for the design release of proto vehicle/parts of the new product based on customer/market requirement</p> <p>PC2. see the simulation of the complete product for better understanding about the new proto</p> <p>PC3. support in evaluating the design from manufacturing/assembly line perspective on the early stage of the project</p> <p>PC4. coordinate in bridging the gap, if any, related to new proto development between design team and product team</p> <p>PC5. ensure documentation of new product requirement suggested by R&D team</p> <p>PC6. sign off the proto- stage after release of SOP</p>		20	50
Sourcing of new proto parts	<p>To be competent , the user/individual on the job must be able to:</p> <p>PC11. check and record what are new product required for new proto manufacturing</p> <p>PC12. coordinate with strategic sourcing for development and sourcing of new parts as per design release</p> <p>PC13. order the parts for prototype assembly according to design release</p> <p>PC14. coordinate with in-house manufacturing unit and vendor for timeline for delivering modified parts</p>		10	30

<p>Coordinate for Proto manufacturing and validation</p>	<p>based on parts modification feasibility</p> <p>PC15. ensure parts are getting delivered to the R&D department meeting the timeline requirement</p> <p>PC16. Coordinate with production team for new proto manufacturing as per design released by R&D department; ensure adequate numbers as may be required for customer/ verification and validation are planned.</p> <p>PC17. based on production schedule inform the time line to the testing and validation team for proto testing and validation</p> <p>PC14. handover the proto vehicle/part to the testing validation team after production of the same Co-ordinate with Materials Lab, QA, standards Room etc for verification of the dimensional and material / special characteristics as necessary for the change in the design at appropriate stage . Keep records maintaining traceability to facilitate interpretation of test results later.</p>		20	50
	subtotal		50	130
ASC/N 0021	Maintain 5S at the work premises		Viva	Practical
<p>Identify and report the risks identified</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	50
<p>Create and sustain a Safe, clean and environment friendly work place</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</p>			

	<p>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
	subtotal		70	90
ASC/N 0006	Maintain a safe and healthy working environment		Viva	Practical
Ensure sorting	<p>PC1. Follow the sorting process and check that the tools, fixtures & jigs that are lying on workstations are the ones in use and un-necessary 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>		10	20
Ensure proper documentation and storage (organizing , streamlining)	<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>		10	20

	<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>			
Ensure sustenance	<p>PC14. Follow the daily cleaning standards 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>		20	30
	Sub total		50	90
	Total	160	270	420