

Automotive Skills Development Council



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

Contact Us: ASDC, NEW DELHI

E-mail: SKC.ASDC@gmail.com



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Introduction

Qualifications Pack- Manager Supplier Quality Level 6

SECTOR: AUTOMOTIVE SUB-SECTOR: MANUFACTURING SUPPORT OCCUPATION: QUALITY ASSURANCE JOB ROLE : MANAGER SUPPLIER QUALITY REFERENCE ID: ASC/Q6302 ALIGNED TO : NCO-2004/Nil

Brief Job Description: Individuals at this job need to be responsible for overall supplier quality assurance functions for all facilities including incoming inspection, issue containment and supplier corrective actions.

Personal Attributes: This job requires the individual to be able to coordinate internally and externally within the organization. The individual should be result oriented, and possess strong quality and lean management skills. The individual should also be able to demonstrate skills for problem solving, change management, risk management, relationship building and leadership.



Job Details



Qualifications Pack Code	ASC/Q 6302		
Job Role	Manager-Supplier Quality		
Credits(NSQF) [OPTIONAL]	TBD	Version number	1.1
Sector	Automotive	Drafted on	13/08/13
Sub-sector	Manufacturing Support	Last reviewed on	27/08/13
Occupation	Quality Assurance	Next review date	30/07/15

Job Role	Manager- Supplier Quality		
Role Description	managing and maintaining the quality of the vendors' processes and incoming materials as per the quality standards		
NSQF level Minimum Educational Qualifications*	6 B. Tech/Diploma in Mechanical/Electrical/Electronics		
Maximum Educational Qualifications*	Engineering Not Applicable		
Training (Suggested but not mandatory)	 Compulsory: Quality Management Systems like TS16949,Lean Six Sigma; 7 QC tools, Supplier quality metrics, APQP, Continuous improvement systems, Supplier performance measurement systems, Lean systems, Data analysis tools like 8Ds etc.,Root cause analysis methods like Fishbone/ Cause and effect diagram etc. Voluntary: Information flow systems like ERP/SAP, risk management, supplier contract management 		
Experience	ASDC Level 5 or minimum 6-8 years in Quality/ Manufacturing/SQA department		
Applicable National Occupational Standards (NOS)	Compulsory: ASC/N6302. Monitor the quality of incoming materials ASC/N6303. Inspect and qualify existing and new suppliers ASC/N6304. Collaborate with suppliers for cost reduction and process improvement ASC/N6305. Evaluate and manage performance of suppliers ASC/N0002. Work effectively in a team ASC/N0006. Maintain a safe, clean and secure working environment ASC/ N0022 Ensure implementation of 5S activities at the shop floor & the office area Qptional: N.A.		
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 organisation.
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 organisational specific knowledge that an individual needs in order to perform to the required standard.
Organisational Context	Organisational context includes the way the organisation 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 Skills	Core skills or generic skills are a group of skills that are the key to learning and 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)
NVQF	National Vocational Qualifications Framework
NSQF	National Qualifications Framework
NVEQF	National Vocational Education Qualifications Framework
QP	Qualifications Pack
SCM	Supply Chain Management
SAP	System Application and Products
РРС	Production Planning and Control
HSE	Health , Safety and Environment
PCN	Parts Change Note
PPAP	Production Part Approval Process
РО	Purchase Order
TS	TS 16949 Quality Management system
APQP	Advanced Product Quality Planning
MSA	Measurement System Analysis
SPC	Statistical Process Control
RCA	Root Cause Analysis
SCAR	Supplier Corrective Action Request
KPIs	Key Performance Indicators
MIS	Management Information Systems
TOPS 8Ds	Team Oriented Problem Solving- 8 disciplined method
ТСО	Total Cost of Ownership
Y-O-Y	Year-On-Year
NPD	New Product Development







National Occupational Standards



Overview

This unit is about managing and controlling the quality of the incoming raw materials/tools/sub-assemblies received from suppliers for the manufacturing processes







Unit Code	ASC/N6301	
Unit Title (Task)	Monitor the quality of incoming materials	
Description	This OS unit is about the supplier quality I/C manager monitoring the quality of the incoming parts/sub-assemblies/perishable goods/tools in coordination with Stores department through existing/new vendors for maintaining the customer quality standards in the final product	
Unit Title (Task) Description Scope Performance Criteria(Per Element	 The unit/ task covers the following: incoming material inspection of materials/parts/sub-assemblies/tools/gauges new material quality validation 	
Performance Criteria(P		
	Performance Criteria	
Material inspection	 To be competent, the user/individual on the job must be able to PC1. ensure the inspection of the incoming parts/sub- assemblies/materials/tools/gauges received by Stores department for following checkpoints by team members responsible for quality : items received as per the drawing no items are missing quantity of items received matches quantity indicated on invoice quantity of items received matches quantity requested by laboratory manufacturer's expiry date is acceptable shelf life (in case of perishable goods) items transported in the suitable ambient environment items are not crushed, broken or leaking any broken or leaking item has been handled and disposed of as per the requirements of the SOP on HSE any manufacturer's alerts or changes to the package insert are noted norms for Inspection & Report are followed for the shipment inventory records are updated copy of the invoice and order request is retained in the laboratory shipment is unpacked and properly integrated with existing inventory PC2. Co-ordinate the preparation of Inspection Report with support from Materials Lab and Inspection team members and recording in the system ; and appropriately for traceability / batch control. PC3. if the incoming material is not OK, then raise a rejection note and inform the supplier quarantine the material and its invoice documents till the replacement material is received from supplier 	







	once received, re- inspect the material
	repeat PC2
	 submit the invoice and other documents to Stores
	PC4. remotely monitor the quality of the material in coordination with process Quality team while usage at shop floor
	PC5. in case of any rejections/deviations reported by downstream process Quality,or field failures reported by customer Quality team ensure that the interim / permanent corrective actions are taken after investigation at the supplier end thro 8D etc.
	PC6. Review periodically impact on suppliers rating (QCD) as per SOP and decide follow through actions for communication, business impact, payments etc.
	PC7. convene meetings with suppliers in case of frequent rejections and
	understand their point of concern; brainstorm and devise countermeasures
	PC8. support the supplier in implementing the continuous improvement projects (C.I.) at their manufacturing facility processes
New material quality	To be competent, the user/individual on the job must be able to do the following in
validation	coordination with Vendor development:
	PC9. receive the drawings/specifications, and ECN/ PCN of the new material from
	R&D/NPD department
	PC10. develop an insight into the process to derive an effective audit check list
	 PC11. audit the sample part/sub-assembly manufacturing process and ensure that the guidelines of APQP, PFMEA, CP are understood & adhered to by the supplier PC12. check the dimensions of the representative part/new part/sub-assembly, and identify the best supplier meeting the Quality requirements for the new part/sub-assembly PC13. Co-ordinate specific milestones on the timeline and review the qualitative meeting of the targets for part & process. PC14. Co-ordinate the participation in PPAP at the vendor end to ensure the process meets the requirements/ targets of QCT PC15. countermeasures for the deviations, re-review of the quality PC16. signoff the PPAP / record along with the concerned departments and supplier representative; flag off the process for bulk. PC17. prepare a periodic audit schedule and accordingly inspect the new part/sub-assembly for quality and performance PC18. present the findings of the new material validation to the senior management and seek their inputs and support
Knowledge and Unders	tanding (K)
A. Organizational	The user/individual on the job needs to know and understand:
Context	KA1. product portfolio of organization
(Knowledge of the	KA2. the manufacturing processes of organization
company /	KA3. material classification criteria followed by organization
company /	KA4. policies and procedures for storage and preservation of materials







organization and	KA5. policies , compliances and systems followed for HSE		
its processes)	KA6. list of approved suppliers for each material		
	KA7. auditing and certification methodology followed for suppliers		
B. Technical	The individual on the job needs to have knowledge of:		
Knowledge	KB1. manufacturing process being followed for each product		
	KB2. incoming inspection checkpoints		
	KB3. tests performed by Metallurgy department for inspection		
	KB4. QC tools like MSA , SPC , Pareto analysis , Fishbone diagram etc.		
	KB5. Special Purpose machines(SPM) used by manufacturing processes (if any)		
	KB6. supplier environment : capacity, capability, cost structures, delivery time, reliability factors		
	KB7. packaging and transportation methods for each part and sub-assembly		
	KB8. APQP procedures		
	KB9. requirements for PPAP		
	KB10. dimension validation and performance testing methods		
	KB11. information systems like SAP, ERP etc.		
	KB12. type of P.O.s raised in SAP		
Skills (S) [Optional]			
A. Core Skills/	Communication skills		
Generic Skills	The user/individual on the job needs to know and understand how to communicate		
	with:		
	SB1. the suppliers for discrepancies observed in new parts/tool development		
	SB2. Metallurgy department for new parts' material dimension validation and quality testing		
	SB3. Vendor development department for procurement of approved new parts		
	SB4. conduct telecon / video conferences for long distance co-ordination with		
	suppliers (if required)of day to day activities		
	SB5. senior management for updating the progress and seeking their support		
	SB6. team members for reviewing the progress of day to day activities		
	SB7. process Quality team for performing the MSA analysis in case of new par		
	Teamwork and multitasking		
	The user/ individual on the job needs to know and understand how to:		
	SB8. distribute workload among team members ensuring smooth progress of		
	material inspection activity and within the desired timelines		
	SB9. coordinate with various departments like Metallurgy , Vendor Development,		
	Manufacturing, R&D, process Quality etc. based on the requirement /sub-		
	assembly validation		
	SB10. share operation knowledge with colleagues		
B. Professional Skills	Reading and Writing Skills		
	The user/ individual on the job needs to know and understand how to:		
	SB1. understand the drawings for part/tool and interpret the key characteristics		







like dimensions, profile, material etc
SB2. prepare the dimension testing reports for the parts/sub-assemblies
SB3. understand the inspection reports of the Metallurgy departments
SB4. prepare the inspection reports and maintain records
Problem Solving
The user/individual on the job needs to know and understand how to:
SB5. think through and devise the countermeasure for resolution for any quality related issue observed in the received supplier's parts or the manufacturing process followed by the supplier
SB6. prepare the fall back action plan in the environment of vendors, transport mechanisms and organizations capacity/ capability
SB7. work on actions to be taken on immediate basis in case of part rejections during trials
SB8. use escalation procedures
Critical thinking
The user/individual on the job needs to know how to:
SB9. identify problems (technical and non-technical), disruptions and delays
SB10.keep abreast of special events such as holidays/ work calendars /
maintenance shutdowns of vendors & organization and plan accordingly so
that the final schedules are adhered to
SB11.plan and monitor the ambient conditions for storage and preservation of
perishable goods as per the supplier requirements in coordination with Stores department
SB12.in consultation with Metallurgy department , inform the suppliers for
fabrication of parts with cost effective and durable alternate material







NOS Code	ASC/N6302		
Credits(NSQF) [<i>OPTIONAL</i>]	TBD	Version number	1.0
Industry	Automotive	Drafted on	13/08/13
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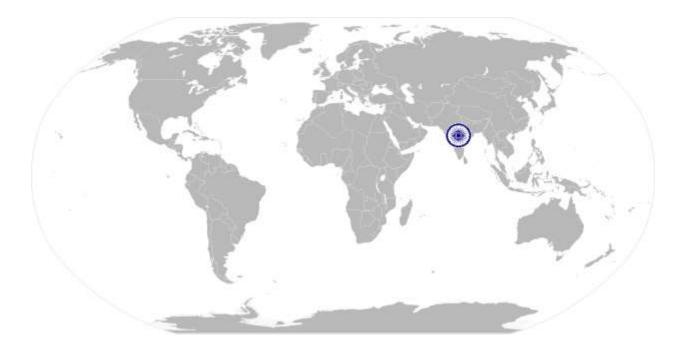
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National Occupational Standards



Overview

This unit is about evaluation and assessment of existing and new raw material suppliers for technical, quality and capacity competencies







Unit Code	ASC/N6303	
Unit Title (Task)	Audit and qualify existing and new suppliers	
Description	This OS unit is about the supplier quality assurance assistant manager ensuring evaluation and assessment of the manufacturing facilities of the existing and new suppliers in coordination with Vendor Development department for assessing their technical, capacity and commercial capabilities	
Scope	This unit/ task covers the following:	
	auditing procedure for suppliers	
	updating the supplier rating based on the audit	
Performance Criteria	(PC) w.r.t. the Scope	
Element	Performance Criteria	
Auditing procedure	 To be competent , the user/individual on the job must be able to coordinate with team and Vendor development department for auditing the supplier's facility as per the schedule for the following checkpoints : PC1. Quality : quality management Structure followed (TS16949) quality assurance through process capability and control (SPC) quality performance levels being followed by vendor for organization Capacity& capability of equipment, infrastructure, manpower to be used for parts on order work instructions display at shop floor Corrective Action and Preventive Action (CAPA) methodology change management procedures APQP guidelines implementation for new product development (PFMEA, CP) Tier-2 supplier selection and management customer specifications communication method to Tier -2 suppliers 	
	 tooling management system followed testing and inspection equipments and their incorporation in TS documents 	
	 process and product validation , audit schedule and methodology rework capabilities on-site and methodology followed identification and traceability procedures record retention TPM system implementation (Total Preventive Maintenance) 	







	Health and Safety Policy	
	 PC2. Cost : dedicated team for cost improvement costing methodology quotation development technique (RFQs response) accountability for cost of poor quality for customer warranty agreements public subsidies or financial support leveraging Tier-2 suppliers for cost and delivery cost improvement through lean manufacturing commodity hedging and price fluctuations strategic sourcing plans include make/buy studies 	
	investment plans slabal sourcing encertupities	
	 global sourcing opportunities currency risk and its effect on material costs 	
	 PC3. Logistics/Delivery: depth of Electronic Data Interchange (EDI) capabilities customer's logistic documentation process for ordering/receiving/tracking material service delivery levels process for identification & management of NPD programs service delivery levels management for Tier-2 suppliers competency in system to adapt to market fluctuations projects for maximizing value addition and minimizing waste reduction packaging methodology process for delivering customer service parts understanding of charge-back process 	
Updating supplier	To be competent , the user/individual on the job must be able to:	
rating	PC4. update the rating corresponding to each checkpoint as per the organization procedure i.e. 5-point scale , RYG etc.	
	PC5. based on the status for all checkpoints , arrive at the composite score	
	PC6. as per the composite score , upgrade or downgrade the rating of supplier through manual / ERP e.g. SRM module of SAP	
	PC7. in case of very low rating , plan suitable countermeasures from vendor and ensure re-audit of the supplier	
	 PC8. if still not satisfactory, immediately convene meetings with top management and discuss about the re-consideration of business with the supplier in coordination with Vendor development department PC9. update the records for the supplier audited in SAP 	
	r C3. upuale life records for the supplier dudited in SAP	







	PC10. re-audit the supplier as per the schedule
Knowledge and Understa	anding (K)
A. Organizational Context (Knowledge of the company / organization and its processes)	 The user/individual on the job needs to know and understand: KA1. auditing methodology used for supplier evaluation in organization KA2. policies and procedures followed by suppliers for HSE KA3. procedure and protocol for annulment of a contract with supplier KA4. Tier-2 supplier base for the supplier's organization The user/individual on the job needs to know and understand:
B. Technical Knowledge	 KB1. checklist for supplier audit KB2. APQP and TS 16949 guidelines KB3. composite score calculation technique KB4. method of updating supplier ratings in SAP KB5. suppliers organization details retrieval methods from SAP KB6. information flow for updating supplier's records KB7. information systems like SAP, ERP etc.
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	Communication skills The user/ individual on the job needs to know and understand how to:
	 SA1. communicate with team members for getting the progress for audit of each supplier SA2. conduct telecon / video conferences for discussion on countermeasures implementation if necessary with suppliers Teamwork and multitasking
	SA3. distribute workload among team members for performing each supplier's audit in an efficient and timely manner
	SA4. share operation knowledge with colleagues Presentation skills
B. Professional Skills	The user/ individual on the job needs to know and understand how to: SA5. present in front of the top management the performance of the supplier in terms of Quality and delivery for their review Interpretation skills
b. Froressional Skins	 The user/ individual on the job needs to know and understand how to: SB1. understand the documentation done by supplier complying to TS 16949 and APQP guidelines (as applicable) SB2. understand the data being mentioned in MIS tool of SAP for material rejections and use it accordingly for rating suppliers SB3. interpret the financial reports of the suppliers' organization Critical thinking The user/individual on the job needs to know and understand: SB4. problems (technical and non-technical), disruptions and delays







 SB6. to work with a fall back action plan in the event of any issue SB7. to think of new and effective methods to keep a check on the supplier performance through SAP
Decision Making
The user/individual on the job needs to know and understand how to:
SB8. decide with respect to HSE compliance violations by suppliers and seek support from top management , if required
SB9. in case of any field failure/warranty issue arising due to malfunctioning of supplier part, accordingly include it in the audit and decide the rating for the supplier







NOS Code	ASC/N6303		
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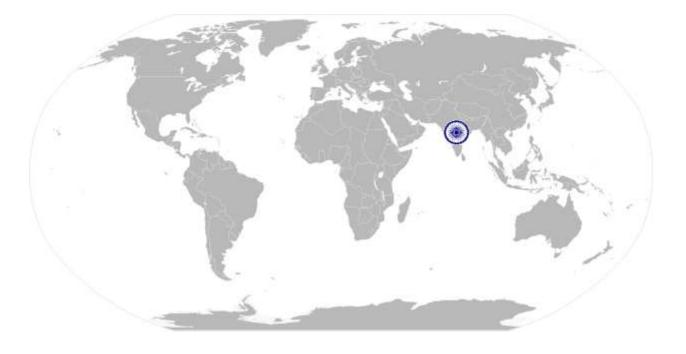
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National Occupational Standards



Overview

This unit is about working with the suppliers and implementing cost effective process improvement measures for supplier quality assurance







Unit Code	ASC/N6304
Unit Title (Task)	Collaborate with suppliers for cost reduction and process improvement
Description	This OS unit is about the supplier quality I/C or manager coordination with suppliers implementing process improvement measures to further enhance cost effectiveness of the supplier quality assurance process
Scope	This unit/ task covers the following:
	analysing the cost of poor quality for suppliers
	implementing closed loop corrective actions
	engaging suppliers in quality management systems
Performance Criteria(PC) w.r.t. the Scope
Element	Performance Criteria
Cost of poor quality	To be competent, the user/individual on the job must be able to: PC1. measure and track the cost of poor quality (COPQ) levels related to quality
	suppliers sourced parts/sub-assemblies by taking following into account:
	scrap costs due to poor quality of material received from supplier
	 line shutdown attributed to poor quality of supplier material
	freight costs due to expedited shipment by suppliers because of
	delayed delivery of materials
	 warranty expenses due to poor quality of materials from suppliers
	PC2. compare the calculated COPQ with respect to the target levels decided by supplier quality department
	PC3. based on the COPQ levels achieved , immediately discuss the same with the
	suppliers through telecom /meeting
	PC4. understand the reasons for high/medium levels of COPQ from the respective
	suppliers and immediately demand the corrective actions implementation
	PC5. monitor remotely the effectiveness of implemented corrective actions and
	then re-assess the COPQ levels on daily basis
	PC6. re- review the progress of the COPQ reduction with the respective supplier
	based on the corrective actions and repeat the steps PC4. to PC5. till the cost reaches to the desired target levels
	PC7. share the data on COPQ on periodic basis with the senior management and
	seek their support in case of any difficulties
Implementing closed	To be competent , the user/individual on the job must be able to:
loop corrective actions	PC8. identify discrepancies with respect to the suppliers' material quality,
	manufacturing process, material performance, delivery etc.
	PC9. based on the requirements of the organization , prioritise the identified

National Occupational Standard







	discrepancies jointly with the supplier and accordingly ensure investigation of the root cause
	PC10. initiate an investigation with the concerned supplier and properly identify the
	root cause of the problem using RCA techniques
	PC11. after identification of root cause , jointly brainstorm and create a list of
	possible corrective actions (CAPA) like amendments to a documented
	procedure, upgrading the skill set of an employee through a training and
	certification process, or recalibrating the manufacturing equipment.
	PC12. in addition to this , capture the COPQ associated with that non-conformance
	PC13. use that information to initiate and complete a cost recovery process with a supplier
	PC14. if required , seek the approval of senior management in case of a critical situation
	PC15. ensure the implementation of the identified corrective actions and monitor
	remotely the effectiveness of each by re-auditing the supplier
	PC16. based on the best results , inform the supplier for the best corrective action
	and instruct him to implement it on permanent basis
	PC17. repeat the process from PC8. to PC15. till the major discrepancies identified are
	resolved
	PC18. remotely monitor the suppliers' performance after CAPA implementation for
	maintaining all the norms related to QCD for the suppliers' material in control
Engaging suppliers in	To be competent , the user/individual on the job must be able to:
QMS	PC19. coordinate with suppliers and jointly devise the norms for QCD for the
	respective suppliers' materials sourcing
	PC20. if feasible , provide support to the suppliers to align their processes in such a
	manner that they should be able to meet the QCD
	PC21. coordinate jointly and maintain a web based MIS/scorecard/dashboard system
	for supplier to have continuous access to real time information with respect to
	suppliers' performance for QCD targets
	PC22. transfer information from supplier's quality system into organization's quality
	system through SAP/ERP
	PC23. collaborate with the small scale suppliers and if possible, implement a web-
	based quality management system (QMS) at suppliers' end dedicated for the
	organization; thereby reducing the cost of ownership for the supplier
	PC24. ensure that the relevant stakeholders in suppliers' organization are adequately
	trained and adept to deliver the requirements of the quality management systems (QMS)
	PC25. review the methodology of quality management followed by suppliers and
	ensure that it is in accordance to the requirements prescribed in various QMS
	systems standards
	PC26. Review the suppliers process and identify opportunities for CI through







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		elimination of NVA, introduction of poka yoke, observation of trends in
		parameters etc.
Kr	nowledge and Understa	anding (K)
Α.	Organizational Context (Knowledge of the company / organization and its processes)	 The user/individual on the job needs to know and understand: KA1. products portfolio of the suppliers' organization KA2. auditing methodology used for supplier evaluation in organization KA3. QMS standard procedures and guidelines followed by organisation KA4. policies and procedures followed by suppliers for HSE compliances KA5. Tier-2 supplier base for the supplier's organization KA6. information flow systems followed in suppliers' organization
В.	Technical Knowledge	 The user/individual on the job needs to know and understand: KB1. cost of poor quality (COPQ) calculation methodology KB2. checklist for supplier audit KB3. TS 16949/other QMS system guidelines KB4. composite score calculation technique KB5. CAPA implementation procedure and methodology KB6. RCA analysis techniques KB7. web based QMS system knowledge and methodology of information flow KB8. suppliers organization details retrieval methods from their information systems KB9. information systems like SAP , ERP etc.
c l	xills (S) [Optional]	KB9. Information systems like SAP, EKP etc.
Α.	Core Skills/ Generic	Communication skills
	Skills	 The user/ individual on the job needs to know and understand how to: SA1. communicate with team members for getting the progress for audit of each supplier SA2. conduct telecon / video conferences for discussion on countermeasures/CAPA implementation if necessary with suppliers SA3. communicate with suppliers for implementation/modification of the information flow for the respective QMS systems
		Teamwork and multitasking
		The user/ individual on the job needs to know and understand how to: SA4. distribute workload among team members for evaluating suppliers' performance SA5. retrieve information from suppliers information system and transfer it into organizations' system SA6. share operation knowledge with colleagues
		Presentation skills
		 The user/ individual on the job needs to know and understand how to: SA7. present in front of the top management the performance of the suppliers in terms of Quality and delivery for their review SA8. prepare presentations for understanding of web based QMS systems at suppliers' end







	SA9. share the QCD targets adherence records with senior management and seek their feedback
B. Professional Skills	Interpretation skills
	 The user/ individual on the job needs to know and understand how to: SB1. understand the documentation done by supplier complying to TS 16949 and other QMS system guidelines (as applicable) SB2. understand the various quality data for computation of COPQ SB3. interpret the information flow for QMS system followed in suppliers'
	Organization Critical thinking
	The user/individual on the job needs to know and understand: SB4. problems (technical and non-technical), disruptions and delays SB5. escalation procedures SB6. to work with a fall back action plan in the event of any discrepancy
	SB7. to think of new and effective methods to keep a check on the supplier performance through various web based information systems
	Decision MakingThe user/individual on the job needs to know and understand how to:SB8.review the COPQ levelsSB9.decide with respect to fall back action plan for QMS systems non-adherence by suppliers and seek support from top management , if required







NOS Code	ASC/N6304		
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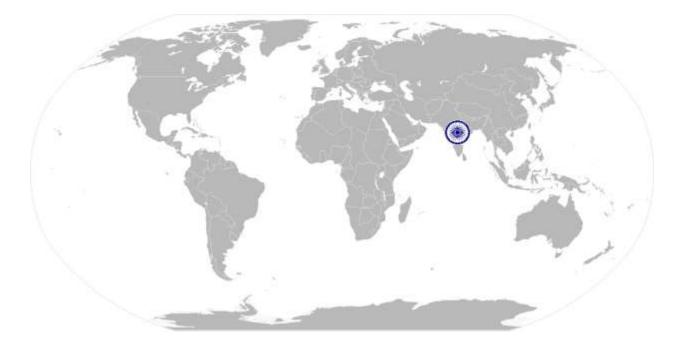
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National Occupational Standards



Overview

This unit is about managing the performance of all the suppliers for gaining cost advantages without compromising on the quality of the materials sourced from suppliers.







Unit Code	ASC/N6305
Unit Title (Task)	Evaluate and manage performance of suppliers
Description	This OS unit is about the supplier quality manager working on strategies and techniques jointly with Sourcing/Vendor development for efficiently managing performance of suppliers
Scope	This unit/ task covers the following:
	 managing the supplier contracts
	establishing metrics for supplier performance
	evaluating supplier performance
Performance Criteria(PC)) w.r.t. the Scope
Element	Performance Criteria
Supplier contract	To be competent , the user/individual on the job must be able to:
management	PC1. discuss with R&D , Metallurgy department for defining the technical
	requirements for out sourced parts/sub-assemblies before identifying the key suppliers
	PC2. ensure that the key suppliers for each part/sub-assembly are identified for all
	the manufacturing processes in coordination with Sourcing/Vendor
	development department
	PC3. prepare a team of the various quality control deputy, assistant managers, QC
	inspectors etc. assigned for all the parts/sub-assemblies
	PC4. ensure that the team is briefed about their individual roles and responsibilities
	PC5. introduce the team to the Sourcing/vendor development department team
	for better coordination
	PC6. jointly decide the linkages in supplier contracts with the supplier performance management
	PC7. provide the quality and operational metrics inputs to the Sourcing/vendor development department for defining the contract terms
	PC8. based on the market knowledge and specifications of the parts/sub-
	assemblies to be sourced , discuss in team and provide inputs for unit costs
	to Sourcing/Vendor development department
Supplier performance	To be competent , the user/individual on the job must be able to:
metrics	PC9. convene a meeting of team and the team from Sourcing and Vendor
	development/Sourcing team to discuss and finalize the Service Level
	Agreements (SLAs) for the supplier contracts
	PC10. seek the approval of senior management for the finalized supplier contract
	guidelines
	PC11. discuss with team the various performance metrics to be developed for







suppliers performance for following parameters:
PC12. Quality :
5S implementation
Percentage of Non conformance
Avg. Corrective actions /8D response time
Avg. Corrective actions /8D resolution time
Past due reports/8D s
On-time reports/ 8Ds
PC13. Delivery :
 Percentage of On-time delivery
Percentage of late deliveries
 Percentage of line items not shipped on time
 Percentage of line items shipped on time
 Actual v/s quoted lead time
PC14. Cost :
 Percentage of total cost reduction Y-O-Y
Total cost reduction Y-O-Y
PC15. Responsiveness :
Emergency requests for part change
 Emergency orders requested v/s shipped
 Compliance to payment terms
 Overall communications
PC16. Innovation :
 technical and process improvements
 best practice sharing
Cost savings
revenue enhancement
PC17. Risk:
Root cause and non-conformance incidents
Political events
 product availability
 distance from source
industry capacity
 technology change
 financial instability







	PC18. CSR :
	total recordable incidents
	 days away from work cases
	 fatality and work safety initiatives
	Green initiatives
	Green initiatives
	PC19. Customer complaints :
	COPQ associated with product returns
	PC20. if required , work with team to design an internal supplier certification program
	and determine the compliance requirements for all the suppliers
Evaluating supplier	To be competent, the user/individual on the job must be able to:
performance	PC21. develop a supplier scorecard/MIS/KPIs system for evaluation of the suppliers'
	performance for all the metrics in line with the prescribed QMS and HSE
	systems
	PC22. if required , coordinate with internal IT team and ensure integration of the
	above mentioned performance evaluation system into the information flow
	systems like SAP/ERP etc. to have a real time access to supplier performance
	status
	PC23. once designed , discuss with Sourcing / Vendor Development team about the
	evaluation system and based on their inputs , finalize the system
	PC24. coordinate with the internal supplier quality team and Vendor
	development/Sourcing and get prepared a comprehensive supplier audit
	schedule for assessment
	PC25. prepare the budget for the supplier quality assurance department activities
	with team and seek the approval of Finance department and senior
	management
	PC26. ensure the evaluation of suppliers through the decided methodology as per
	the schedule
	PC27. ensure that the PPAPs documents have been received for all the approved
	suppliers and are as per the QMS guidelines
	PC28. ensure the team has upgraded or downgraded the ratings of suppliers in the
	SAP/ERP system after the audit
	PC29. based on the results obtained from supplier evaluation , convene meetings
	with the team and discuss about continuation/annulment of the supplier
	PC30. communicate the decisions made to the Sourcing / Vendor development team
	and jointly implement the action plan
Knowlodgo-and Underst	
Knowledge and Understa	
A. Organizational	The user/individual on the job needs to know and understand:
Context (Knowledge	KA1. future business plans of the organizationKA2. products portfolio of the suppliers' organization
of the company /	KA2. products portions of the suppliers organization KA3. auditing methodology used for supplier evaluation







MS standard procedures and guidelines followed by organization upplier performance evaluation methodology upplier contract management system followed in organization olicies and procedures followed by suppliers for HSE compliances er-2 supplier base for the supplier's organization formation flow systems followed in suppliers' organization individual on the job needs to know and understand:
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formation flow systems followed in suppliers' organization individual on the job needs to know and understand:
individual on the job needs to know and understand:
upplier performance metrics
upplier performance measurement process techniques like Supplier
corecard/MIS/KPIs etc.
supplier contract terms
PAP documentation
cost of poor quality (COPQ) calculation methodology
supplier audit methodology
S 16949/other QMS system guidelines
harge back rates
ustoms/import/other duties levied for overseas suppliers
roduct unit cost calculation systems followed by Sourcing team
omposite score calculation technique
CAR reporting format
MS systems methodology of information flow
nformation systems like SAP , ERP etc.
cation skills
individual on the job needs to know and understand how to:
ommunicate with Sourcing/Vendor development department for contract
nanagement and linking with performance metrics
ommunicate with team members for getting the progress for supplier quality
ommunicate with team members for getting the progress for supplier quality ssurance activities undertaken by each team member
ommunicate with team members for getting the progress for supplier quality
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ommunicate with team members for getting the progress for supplier quality ssurance activities undertaken by each team member ommunicate with Metallurgy and R&D department for various technical equirements ommunicate with internal IT team for supplier performance data integration
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	SA10. share operation knowledge with colleagues		
	Presentation skills		
	The user/ individual on the job needs to know and understand how to: SA11. present in front of the top management the performance of the suppliers		
	metrics wise for their review		
B. Professional Skills	Interpretation skills		
	The user/ individual on the job needs to know and understand how to:		
	SB1. understand the documentation done by supplier complying to TS 16949 and other QMS system guidelines (as applicable)		
	SB2. understand the various quality data for computation of COPQ		
	SB3. interpret the data recorded in various supplier performance measurement tools		
	SB4. interpret the information flow for QMS system followed in suppliers' organization		
	SB5. analyze the various cost components of COPQ and their computation		
	Critical thinking		
	The user/individual on the job needs to know and understand:		
	SB6. action plans for resolution of problems (technical and non-technical),		
	disruptions and delays		
	SB7. escalation procedures		
	SB8. to work with a fall back action plan in the event of any discrepancy		
	SB9. to think of new and effective methods to keep a check on the supplier performance		
	SB10. manage risk at suppliers' organization in event of any		
	natural/political/economic crisis situations		
	Decision Making		
	The user/individual on the job needs to know and understand how to:		
	SB11. review the suppliers' performance and decide the fall back action plan in case		
	of any serious non-compliance issues		
	SB12. decide with respect to fall back action plan for QMS systems non-adherence		
	by suppliers and seek support from top management , if required SB13. discuss with Metallurgy and R&D department for development of outsourced		
	parts/sub-assemblies using cost effective alternate material of construction		
	SB14. decide with Sourcing/Vendor development department the alternate supplier		
	base for the outsourced parts/sub-assemblies		







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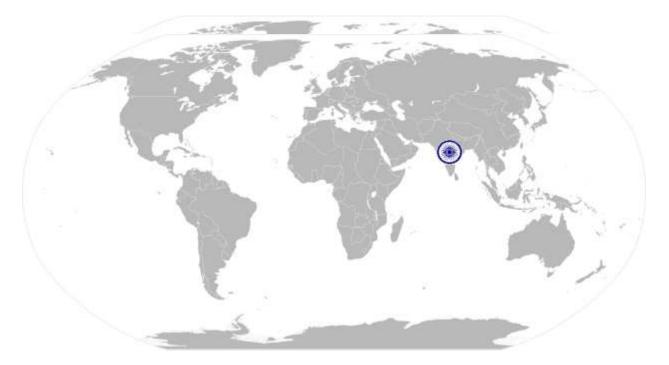
NOS Code	ASC/N6305		
Credits(NSQF) [<i>OPTIONAL</i>]	TBD	Version number	1.0
Industry	Automotive	Drafted on	13/08/13
Industry Sub-sector	Manufacturing Support	Last reviewed on	23/08/13
Occupation	Quality Assurance	Next review date	30/07/15







National Occupational Standards



Overview

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







Un	it Code	ASC/ N 0002		
	it Title	Work effectively in a team		
	ask)	· ·		
De	scription	This NOS unit is about working effectively within a team, either in individual's own work group or in other work groups outside the organisation.		
Sco	ope	This unit/task covers the following:		
		Colleagues:		
		Superiors		
		Members of own work group		
		• People in other work groups within or outside the organisation		
		Communicate:		
		Face-to-face		
		By telephone		
		In writing		
Ре	rformance Criteria (PC) w.	r.t. the Scope		
Ele	ement	Performance Criteria		
Α.	Compulsory	To be competent, the user/individual on the job must be able to:		
		PC1. Maintain clear communication with colleagues		
		PC2. Work with colleagues		
		PC3. Pass on information to colleagues in line with organisational requirements		
		PC4. Work in ways that show respect for colleagues		
		PC5. Carry out commitments made to colleagues		
		PC6. Let colleagues know in good time if cannot carry out		
		commitments, explaining the reasons		
		PC7. Identify problems in working with colleagues and take the initiative		
		to solve these problems		
		PC8. Follow the organisation's policies and procedures for working with		
		colleagues		
		PC9. Ability to share resources with other members as per priority of		
		tasks		
В.	Optional	N.A.		
Knowledge and Understanding (K)w.r.t. the scope				
	ement	Knowledge and Understanding		
Α.	Organisational Context	The user/individual on the job needs to know and understand:		
	(Knowledge of the	KA1 The expension is policies and presedures for working with		
	Company/Organisation	KA1. The organisation's policies and procedures for working with		
	and its processes)	colleagues, role and responsibilities in relation to this KA2. The importance of effective communication and establishing good		
		KA2. The importance of effective communication and establishing good working relationships with colleagues		
		KA3. Different methods of communication and the circumstances in		







ASC/N0002. Work effectively in a team		
	which it is appropriate to use these	
	KA4. The importance of creating an environment of trust and mutual	
	respect	
	KA5. The implications of own work on the work and schedule of others	
B. Technical Knowledge	The user/individual on the job needs to know and understand:	
-		
	KB1. Different types of information that colleagues might need and the	
	importance of providing this information when it is required	
	KB2. The importance of helping colleagues with problems, in order to	
	meet quality and time standards as a team	
Skills (S)w.r.t. the scope		
Element	Skills	
A. Core Skills/	Writing Skills	
Generic Skills		
Generic Skills	The user/individual on the job needs to know and understand how to:	
	SA1. Complete written work with attention to detail	
	Reading Skills	
	The user/individual on the job needs to know and understand how to:	
	SA2. Read instructions, guidelines/procedures	
	Oral Communication (Listening and Speaking skills)	
	The user/individual on the job needs to know and understand how to:	
	SA3. Listen effectively and orally communicate information	
	SA4. Ask for clarification and advice from the concerned person	
B. Professional Skills	Decision Making	
	The user/individual on the job needs to know and understand how to:	
	SB1. Make decisions on a suitable course of action or responsekeeping	
	in view resource utilization while meeting commitments	
	Plan and Organise	
	The user/individual on the job needs to know and understand how to:	
	····· ································	
	SB2. Plan and organise work to achieve targets and deadlines	
	Customer Centricity	
	The user/individual on the job needs to know and understand how to:	
	The user/individual on the job needs to know and understand now to:	
	SB3. Check that the work meets customer requirements	
	SB3. Check that the work meets customer requirements SB4. Deliver consistent and reliable service to customers	
	Problem Solving	
	The user/individual on the job needs to know and understand how to:	
	SB5. Apply problem solving approaches in different situations	
	Critical Thinking	
	The user/individual on the job needs to know and understand how to:	







SB6. Apply balanced judgments to different situations

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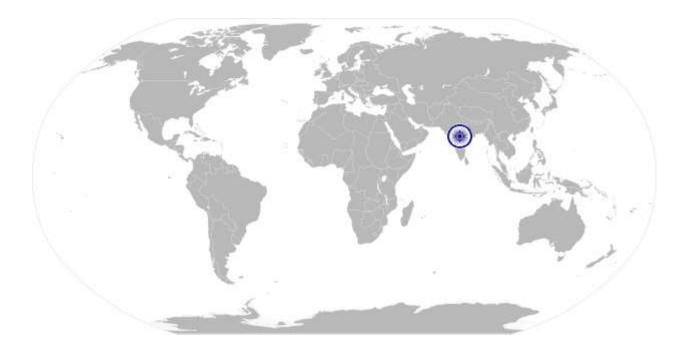
NOS Code	ASC/ N 0002		
Credits(NSQF)	TBD	Version number	1.0
Industry	Automotive	Drafted on	13/08/13
Industry Sub-sector	Manufacturing Support	Last reviewed on	23/08/13
Occupation	Quality Assurance	Next review date	30/07/15







National Occupational Standards



Overview

This unit is about establishing a Safe, Healthy and Environment friendly workplace at the organization and supplier's shop floor







Unit Code
Unit Title
(Task)
Description
Scope
•
Performance Cri

Unit Code	ASC/N0006		
Unit Title	Maintain a healthy , safe and secure working environment		
(Task)			
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 and vendor's shop floor, following practices which are not impacting the environment in a negative manner		
Scope	This unit/task covers the following:		
	Types of processes:		
	 supplier organization 		
	Supplier Quality Assurance		
	Types of products		
	individual child parts		
	 part assemblies 		
Performance Criteria (PC) w.r.t.	the Scone		
Element	Performance Criteria		
Identify and report the risks	To be competent , the user/individual on the job must be able to :		
identified			
	PC1. identify activities which can cause potential injury through sharp objects, burns, fall, electricity, gas leakages, radiation, poisonous fumes, chemicals ,loud noise		
	PC2. inform the concerned authorities about the potential risks identified in the processes, workplace area/ layout, materials used 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,	PC5. follow the instructions given on the equipment manual		
clean and environment	describing the operating process of the equipments		
friendly work place	PC6. follow the Safety, Health and Environment related practices developed by the organization		
	PC7. operate the machine using the recommended Personal		
	Protective Equipments (PPE)		
	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		
	PC9. maintain high standards of personal hygiene at the work place		
	PC10. ensure that the waste disposal takes place in the designated		
	area as per organization SOP		







	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		
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		
A. Technical Knowledge	 The user/individual on the job needs to know and understand: KB1. basic knowledge of Safety procedures(fire fighting, 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 		
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 Reading Skills 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 associate with the equipment 		
	Oral Communication (Listening and Speaking skills)		
	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 potentials 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. 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

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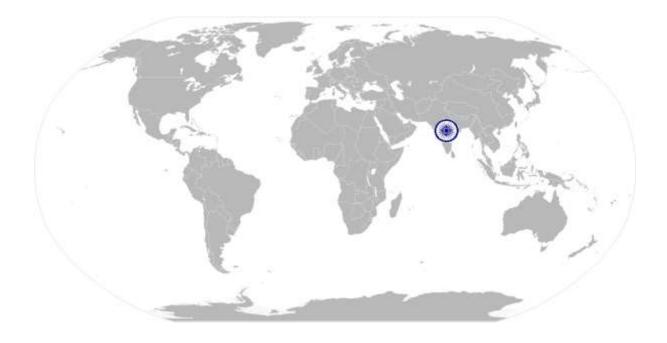
NOS Code	ASC/N0006		
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Industry	Automotive	Drafted on	13/08/13
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Occupation	Quality Assurance	Next review date	30/07/15







National Occupational Standard



Overview

This unit is about the implementing the various principles of 5S and ensure that the given guidelines are followed to ensure a clean and efficient working environment in the organization







Unit Code	ASC/N0022
Unit Title (Task)	Ensure implementation of 5S activities at the work premises.
Description	This NOS is about overseeing the implementation of all 5 S activities both at the shop floor and the office area by the team members and training the team in implementation of the 5S principles
Scope	 The individual needs to Ensure sorting, streamlining/ organizing, storage and documentation, systematic cleaning, standardization and sustenance across the plant and office premises of the organization as given in the organization guidelines
Performance Criteria (PC) w.r	
Element	Performance Criteria
Ensure proper sorting of items at the work place	 PC1. Ensure all recyclable materials are put in designated containers PC2. Ensure no Tools, fixtures & jigs are lying on workstations unless in use and no un-necessary items is lying on workbenches or work surfaces unless in use PC3. Ensure that the operators and other team members are segregating the waste in hazardous/ Non Hazardous waste as per the sorting work instructions PC4. Ensure that all the operators are following the technique of waste disposal and waste storage in the designated bins PC5. Segregate the items which are labelled at red tag items for the process area and keep them in the correct places PC6. Ensure that all the tools/ equipment/ fasteners/ spare parts are arranged as per specifications/ utility into proper trays, cabinets, lockers as mentioned in the 5S guidelines/ work instructions PC7. Check for return of any type of extra material and tools to the designated sections and make sure that no additional material/ tool is lying near the work area PC8. Oversee removal of unnecessary equipment, storage, furniture, unneeded inventory, supplies, parts and material PC9. Ensure that areas of material storage areas are not overflowing PC10. Ensure proper stacking and storage of 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
Ensure proper	PC11. Ensure that the team follows the given instructions and checks for
documentation and storage	labelling of fluids, oils. lubricants, solvents, chemicals etc. and
- streamlining & organizing	proper storage of the same to avoid spillage, leakage, fire etc.
the workplace	 PC12. Make sure that all material and tools are stored in the designated places and in the manner indicated in the 5S instructions PC13. Ensure that organizing the workplace takes place with due considerations to the principles of wasted motions, ergonomics, work & method study .





	Ensure implementation of 55 activities at work premises
Ensure cleaning of self and the work place	 PC14. Ensure that the area has floors swept, machinery clean and is generally neat and tidy. In case of cleaning, ensure that correct displays are maintained on the floor which indicate potential safety hazards PC15. Ensure workbenches and work surfaces are clean and in good condition PC16. Ensure adherence to the cleaning schedule for the lighting system to ensure proper illumination PC17. Ensure self-cleanliness - clean uniform, clean shoes, clean gloves, clean helmets, personal hygiene
Ensure standardization	 PC18. Ensure that daily cleaning standards and schedules to create a clean working environment are followed across the plant PC19. Oversee that various cleaning and organizing tasks have been developed and assigned for the work area PC20. Ensure logical and user friendly documentation and file management for all activities across the plant and create guidelines around standardization of processes PC21. Ensure timely creation and sharing of the 5S checklists PC22. Ensure that the 5S manual are available as per the timelines
Ensure sustenance	 PC23. Ensure team cooperation during the audit of 5 S activities PC24. Ensure that workmen are periodically trained to address challenges related to 5S PC25. Participate actively in employee work groups on 5S and encourage team members for active participation PC26. Oversee that the staff/operators are trained and fully understand 5s procedures PC27. Ensure that all the guidelines for What to do and What not to do to build sustainability in 5S are mentioned in the 5S check lists/ work instructions and are easily searchable PC28. Ensure continuous training of the team members on 5S in order to increase their awareness and support implementation PC29. Ensure that all visual controls, notice boards, symbols etc. at the manufacturing place are created, working and are put up as per the requirement
Knowledge and Understandi	ng (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 5S followed in the company
B. Technical Knowledge	The user/individual on the job needs to : KB5. have basic knowledge of 5S procedures KB6. know various types 5s practices followed in various areas







	KB7. understand the 5S checklists provided in the department/ team			
	KB8. have skills to identify useful & non useful items			
	KB9. have knowledge of labels , signs & colours used as indicators			
	KB10. Have knowledge on how to sort and store various types of tools, equipment, material etc.			
	KB11. know , how to identify various types of waste products			
	KB12. understand the impact of waste/ dirt/ dust/unwanted			
	substances on the process/ environment/ machinery/ human			
	body			
	KB13. have knowledge of best and environment protective ways of			
	cleaning & waste disposal			
	KB14. understand the importance of standardization in processes			
	KB15. understand the importance of sustainability in 5S			
	KB16. have knowledge of TQM process			
	KB17. have knowledge of various materials and storage norms			
	KB18. understand visual controls, symbols, graphs etc.			
Skills (S)w.r.t. the scope				
Element	Skills			
A. Core Skills/ Generic Skills	Writing Skills			
SKIIIS	The user/ individual on the job needs to know and understand how to:			
	SA7. write basic level notes and observations			
	SA8. note down observations (if any) related to the process			
	SA8. note down observations (if any) related to the process SA9. write information documents to internal departments/ internal			
	 SA8. note down observations (if any) related to the process SA9. write information documents to internal departments/ internal teams 			
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	 SA8. note down observations (if any) related to the process SA9. write information documents to internal departments/ internal teams Reading Skills The user/individual on the job needs to know and understand how to: SA10. read 5S instructions put up across the plant premises 			
	 SA8. note down observations (if any) related to the process SA9. write information documents to internal departments/ internal teams Reading Skills The user/individual on the job needs to know and understand how to: SA10. read 5S instructions put up across the plant premises Oral Communication (Listening and Speaking skills) 			
	 SA8. note down observations (if any) related to the process SA9. write information documents to internal departments/ internal teams Reading Skills The user/individual on the job needs to know and understand how to: SA10. 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: 			
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	The user/ individual on the jobs needs to know and understand how to:			
	SB5. persuade team members to follow 5 S			
	SB6. ensure that the team members understand the importance of			
	using 5 S tool			
	Creativity			
	The user/individual on the job needs to know and understand how to :			
	SB7. use innovative skills to perform and manage 5 S activities at the work desk and the shop floor			
	SB8. exhibit inquisitive behaviour to seek feedback and question on			
	the existing set patterns of work emerge, techniques in CA/CI around 5 S work practices			
	Self -Discipline			
	The user/individual on the job needs to know and understand how to:			
	 SB9. do what is right, not what is a popular practice SB10. follow shop floor rules& regulations and avoid deviations SB11. lead by example in the plant premises while performing activities 			
	related to 5S			
	SB12. ensure self-cleanliness on a daily basis			
	SB13. demonstrate the will to keep the work area in a clean and orderly			
	manner			
	Ownership			
	The user/individual on the job needs to know and understand how to:			
	SB14. accept additional responsibility for self and the team			
	SB15. encourage self and other to take greater responsibilities for managing 5S			
	SB16. identify obstacles and bottlenecks in the process and find basic level solutions for removing these obstacles			
	Decision making			
	The user/individual on the job needs to know and understand how to:			
	SB17. use previous experience in resolving problems and taking decisions			
	SB18. make timely and independent decisions on the line/ shift within the boundaries of the delegation matrix of the organization			

NOS Version Control







NOS Code	ASC/N0022		
Credits(NSQF)	TBD	Version number	1
Industry	Automotive	Drafted on	1/03/2014
Industry Sub-sector	Manufacturing/ R&D	Last reviewed on	15/03/2014
Occupation	All	Next review date	15/03/2016

