QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR ELECTRONICS INDUSTRY

Contents

What are Occupational Standards(OS)?

- OS describe what individuals need to do, know and understand in order to carry out a particular job role or function
- OS are performance standards that individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding

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Introduction

Qualifications Pack- Field Technician: Other Home Appliances

SECTOR: ELECTRONICS

SUB-SECTOR: CONSUMER ELECTRONICS

OCCUPATION: AFTER SALES SERVICE

REFERENCE ID: ELE/Q3104

ALIGNED TO: NCO-2004/7249.90

Other Home Appliances Field Technician: Also called, 'Other Home Appliance Repair Technician', this is an after sales service job for installing and providing support to the water purifier and other Home appliances as mixer/grinder buyers.

Brief Job Description: The individual at work installs the appliance and interacts with customers to diagnose the problem and possible causes. Once the problem and causes have been identified, the individual rectifies minor problems, replaces faulty modules for failed parts, or recommends factory repairs for bigger faults.

Personal Attributes: The individual must be willing to work in the field and travel through the day from one customer's premise to another. Punctuality, amenable behaviour, patience, good interpersonal relationship building, trustworthiness, integrity, and critical thinking are important attributes for this job.

Job Details

Qualifications Pack Code	**ELE/Q3104**		
Job Role	**Field Technician – Other Home Appliances**		
Credits	**TBD**	**Version number**	**1.0**
Sector	**Electronics**	**Drafted on**	**01/05/16**
Sub-sector	**Consumer Electronics**	**Last reviewed on**	**01/05/16**
Occupation	**After Sales Service**	**Next review date**	**01/05/17**
NSQC Clearance on	**NA**		

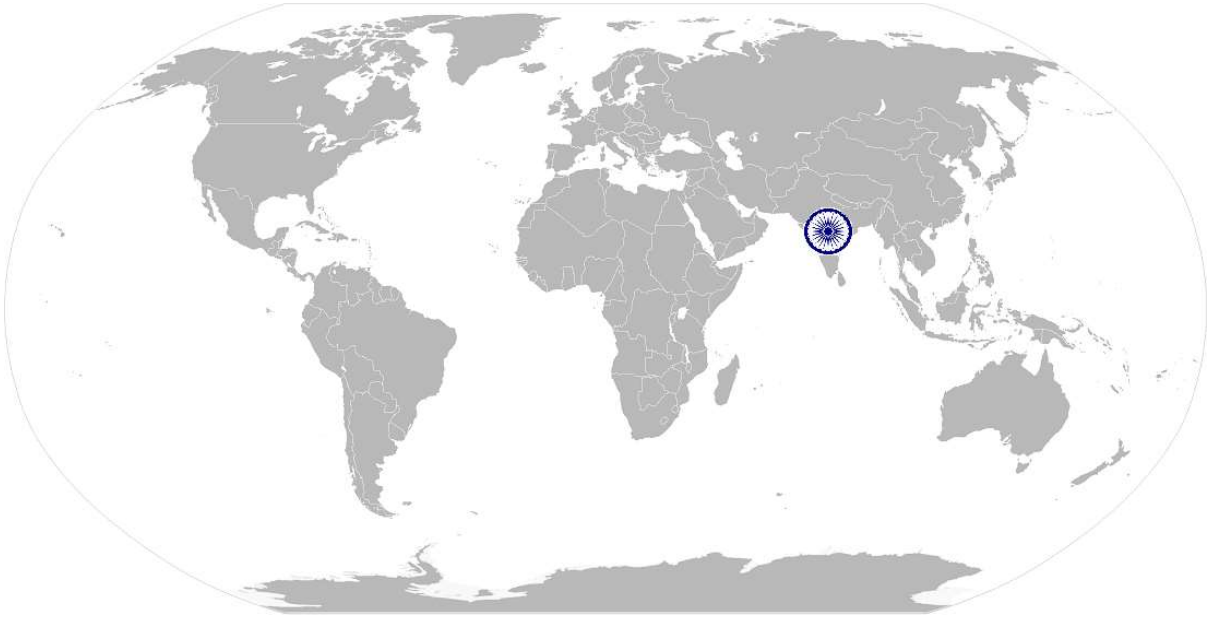
Job Role	**Field Technician – Other Home Appliances** Also called, ' Home Appliance Repair Technician'
Role Description	Install the appliance, decipher the symptoms and diagnose the problems in the appliance by carrying out basic volt-ampere test, earth check and isolating electro-mechanical faults.
NVEQF/NVQF level	4
Minimum Educational Qualifications*	8th Standard passed
Maximum Educational Qualifications*	NA
Training (Suggested but not mandatory)	NA
Minimum Job Entry Age	18 Years Old
Experience	Minimum 2 years as helper for 8th/ 9th passed
Applicable National Occupational Standards (NOS)	**Compulsory:** 1. ELE/N3101 Engage with customer for service 2. ELE/N9901 Interact with colleagues **Option-1 :** 1. ELE/N3118 Install the water purifier 2. ELE/N3119 Repair dysfunctional water purifier **Option-2 :** 1. ELE/N3120 Repair dysfunctional mixer/juicer/grinder 2. ELE/N3121 Repair dysfunctional microwave oven
Performance Criteria	As described in the relevant OS units

Definitions

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 fulfil 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 (NOS)	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
HV	High Voltage
NOS	National Occupational Standard(s)
NVQF	National Vocational Qualifications Framework
NSQF	National Qualifications Framework
NVEQF	National Vocational Education Qualifications Framework
PCB	Printed Circuit Board
QP	Qualifications Pack
TFC	Thin film composite
TMF	Tubular membrane filter

National Occupational Standard



Overview

This unit is about interacting with customers to understand their requirements and build confidence.

ELE/N3101 **Engage with customer for service**

National Occupational Standard

Unit Code	**ELE/N3101**
Unit Title (Task)	**Engage with customer for service**
Description	This OS unit is about interacting with customer to understand their requirement with respect to problem in the appliance
Scope	This unit/ task covers the following: • Interact with the customer prior to visit • Interact with customer at their premises • Suggest possible solutions to customer • Achieve productivity and quality as per company's norms
Performance Criteria(PC) w.r.t. the Scope	
Element	**Performance Criteria**
Interacting with customer prior to visit	To be competent, the user/ individual must be able to: PC1. check customer complaint registered at customer care or installation schedule PC2. call customer to confirm problem and fix time for visit PC3. greet the customer and confirm the problem registered PC4. be polite and patient when interacting with customer PC5. check about warranty status of appliance and annual maintenance contract PC6. anticipate possible problems to carry tools and parts accordingly PC7. ascertain customer location in order to make the route plan for the day
Interacting with customer at their premises	To be competent, the user/ individual must be able to: PC8. enquire about the symptoms and history of problems in the appliance PC9. ask about the age of appliance and status of upkeep PC10. identify the problem based on customer's information PC11. communicate the problems identified and educate on possible reasons PC12. inform about costs involved
Suggesting possible solutions to customer	To be competent, the user/ individual must be able to: PC13. discuss the problem(s) identified with customer PC14. suggest possible solutions and costs involved PC15. explain the time required and methodology for servicing necessary PC16. seek customer's approval on further action
Achieving productivity and quality	To be competent, the user/ individual must be able to: PC17. accurately assess the problem and solution(s) necessary PC18. offer most appropriate and cost-effective service as per customer's requirement PC19. communicate problem effectively in order to secure customer's confidence PC20. ensure customer satisfaction and positive feedback PC21. record minimum customer complaints post service

	PC22. avoid repeat problem post service PC23. prepare most optimum route plan to complete daily target visits
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	The individual on the job needs to know and understand: KA1. company's policies on: customer care KA2. company's code of conduct KA3. organisation culture and typical customer profile KA4. company's reporting structure KA5. company's documentation policy
B. Technical Knowledge	The individual on the job needs to know and understand: KB1. company's products and recurring problems reported in consumer appliances KB2. how to communicate with customers in order to put them at ease KB3. basic electrical and mechanical modules of various appliances KB4. electronics involved in the type of appliance KB5. models of different appliances and their common and distinguishing features KB6. functionality of different features of appliances and new features KB7. etiquette to be followed at customer's premises KB8. precautions to be taken while handling field calls and dealing with customers KB9. relevant reference sheets, manuals and documents to carry in the field
Skills (S)	
A. Core Skills/ Generic Skills	**Reading and writing skills** The individual on the job needs to know and understand: SA1. how to read product and module serial numbers and interpret details such as make, date, availability SA2. how to note problems on job sheet and details of work done
B. Professional Skills	**Interpersonal skills** The individual on the job needs to know and understand how: SB1. to put customer at ease and generate customer's confidence SB2. to listen carefully and interpret their statement of symptoms
	Communication skills The individual on the job needs to know and understand how: SB3. to seek inputs at assess the problems SB4. how to communicate in local language SB5. how to educate and inform customer about contractual issues such as warranty, cost of service and module replacement SB6. to educate on precautions to be taken post repairs to avoid recurrence of problem
	Behavioral skills The individual on the job needs to know and understand:

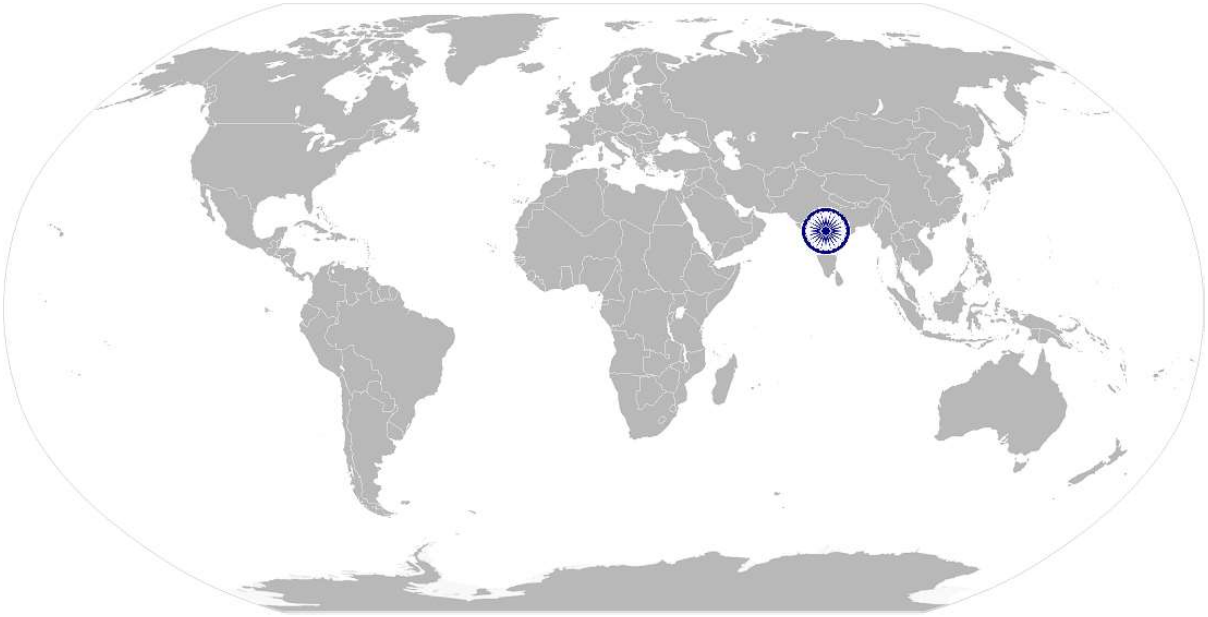
ELE/N3101 Engage with customer for service

	SB7. importance of personal grooming SB8. significance of etiquette such as maintaining the appropriate physical distance with customer during conversation, not entering bedroom without permission SB9. importance of being patient and courteous with all types of customers SB10. being polite and courteous under all circumstances SB11. importance of maintaining clean surface/work area
	Decision making skills
	SB12. decide on the spot on whether interaction of customer with supervisor is necessary or not SB13. when to call customer care and close the call after work is done to customer's satisfaction and documentation is complete

NOS Version Control

NOS Code	ELE/N3101		
Credits	TBD	Version number	1.0
Industry	Electronics	Drafted on	18/02/14
Industry Sub-sector	Consumer Electronics	Last reviewed on	24/03/14
		Next review date	24/03/15

National Occupational Standard



Overview

This unit is about installing the newly-purchased water purifier at customer's premises.

National Occupational Standard

ELE/N3118 **Install the water purifier**

Unit Code	ELE /N3118
Unit Title (Task)	Install the water purifier
Description	This OS unit is about installing the newly purchased water purifier at customer's location and make it ready to use
Scope	This unit/ task covers the following: • Undertake pre-installation site visit • Remove packaging and check accessories • Fix the water purifier at identified location • Check water purifier's functioning • Complete the documentation • Interact with supervisor or superior • Achieve productivity and quality as per company's norms

Performance Criteria(PC) w.r.t. the Scope	
Element	**Performance Criteria**
Undertaking pre-installation site visit	To be competent, the user/ individual must be able to: PC1. visit the customer's premise before carrying out the installation PC2. interact with the customer to understand whether the water purifier would be placed under the sink (UTS) or on the wall PC3. check that the location meets structural requirements such as distance from power supply, vicinity to plumbing point, etc. PC4. make the customer aware of any pre installations/masonry/electrical work to be carried out and educate the customer about requirement of adequate water pressure at the inlet source PC5. make necessary markings for placement of the water purifier unit PC6. seek appointment for the next visit
Removing packaging and checking accessories	To be competent, the user/ individual must be able to: PC7. remove the packaging in which the purifier was shipped to customer from point of sale/ warehouse PC8. check that the product matches the customer order in terms of colour and make PC9. check that all supporting accessories purchased have are there in the pack PC10. check that tools and fitments required for the installation are available PC11. clear up the packaging material waste and dispose as per company's norms
Fitting the water purifier	To be competent, the user/ individual must be able to: PC12. check if pre installation requirements are met PC13. make measurements at the location identified and drill holes ensuring no internal wiring damage takes place PC14. mount the filter and ensure that the screws are fastened securely

ELE/N3118 **Install the water purifier**

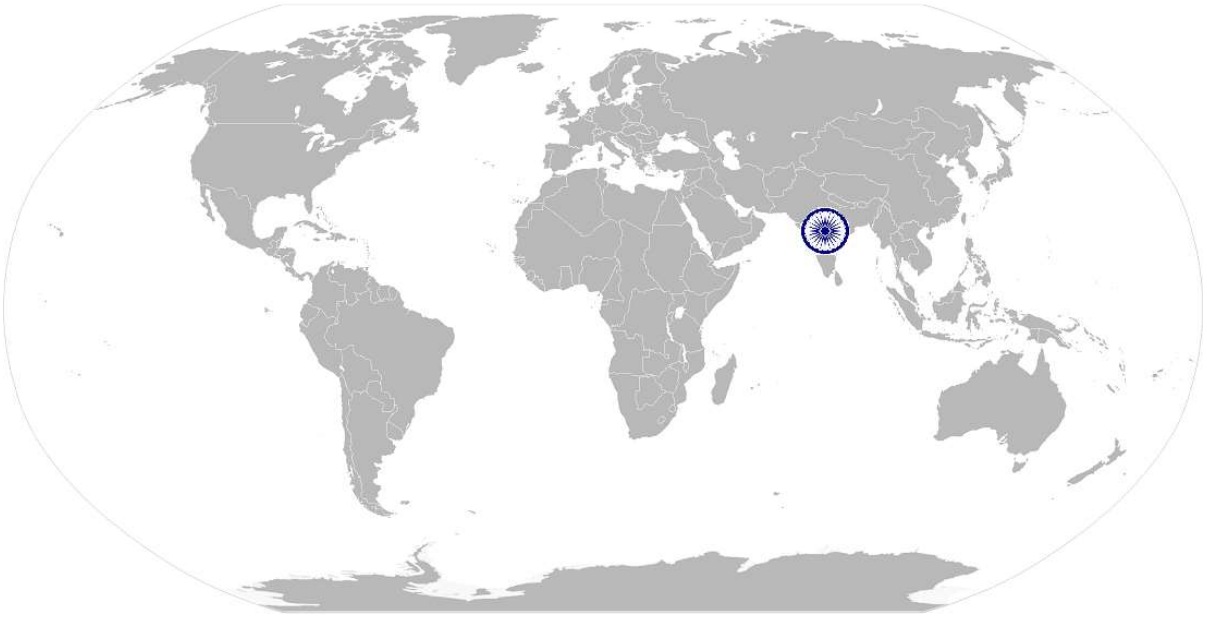
	PC15. drain the inlet line before connecting it to the water purifier PC16. connect the outlet pipe to the drain (if applicable) PC17. connect the purifier to the nearest power supply point
Checking functioning	To be competent, the user/ individual must be able to: PC18. ensure that the filter is aligned as per instructions in the installation manual PC19. run the purifier and ensure there are no leaks at any point PC20. demonstrate the features and utility to the customer PC21. explain maintenance procedures to be followed while using the water purifier
Completing documentation	To be competent, the user/ individual must be able to: PC22. fill in customer acknowledgement form PC23. seek customer's signature PC24. complete other documentation for recording completion of installation PC25. call customer care and inform about job completed
Interacting with supervisor or superior	To be competent, the user/ individual must be able to: PC26. understand the work requirement from superior, periodically PC27. report to superior on the work completed PC28. escalate the customer issues and problems that are unresolved in the field PC29. document the work completed on the company ERP software for tracking and future references
Achieving productivity and quality	To be competent, the user/ individual must be able to: PC30. remove packaging without damage to the water purifier unit and accessories PC31. position the water filter as per requirements specified in instructions manual PC32. educate customer on importance of proper placing PC33. carry and use the correct tools and equipment for installation PC34. operate and check that they are in a safe and stable condition PC35. complete installation in time target given PC36. educate customer on proper operation and maintenance procedures PC37. complete daily field schedule as per instructions/format within the designated time
Knowledge and Understanding (K)	
B. Organizational Context (Knowledge of the company / organization and its processes)	The individual on the job needs to know and understand: KA1. company's policies on: incentives, delivery standards, and personnel management, call closure KA2. company's sales, installation and after sales support policy KA3. importance of the individual's role in the workflow KA4. reporting structure KA5. company's policy on product's warranty and other terms and conditions
B. Technical Knowledge	The individual on the job needs to know and understand: KB1. Installation site requirements (structural requirements, plumbing etc.) KB2. water flow diagram and electrical circuit diagram of the appliance KB3. water purification process and different layers of filter present within the unit such as sediment filter, carbon block filter, TFC/TFM membrane, inline carbon filter etc. KB4. different technologies in water purification (such as reverse osmosis, de ionisation etc.)

	KB5. different features and functionalities of various models KB6. safety precautions to be taken while installing KB7. manual-based procedure of installing the water purifier KB8. packaging waste disposal procedures KB9. other products of the company KB10. safety rules, policies and procedures KB11. quality standards to be followed
Skills (S) [Optional]	
C. Core Skills/ Generic Skills	**Reading and writing skills**
	The user/individual on the job needs to know and understand how: SA1. to read job sheet for installation as registered by customer care/ company's ERP system SA2. to document the completed work SA3. to read the standard operating procedures for different types of water purifiers SA4. to read about different types of water purifiers, their basic electro-mechanical structure and functionality of features
	Teamwork and multitasking
	The user/individual on the job needs to know and understand how: SA5. to share work load as required SA6. to achieve the targets given on installation per day or month
D. Professional Skills	**Water Purifier operation**
	The user/individual on the job needs to know and understand how: SB1. the water flows through various switches, valves and different layers of filter SB2. to operate the water purifier and use the various features SB3. to fix various accessories and parts that have accompanied the unit SB4. to check features and functionalities after installation
	Using tools and machines
	The user/individual on the job needs to know and understand how: SB5. to operate tools such as electric drill, screw drivers, wrenches, tube cutters/benders, spanners, etc. SB6. to make appropriate settings after plugging in
	Reflective thinking
	The user/individual on the job needs to know and understand how: SB7. to improve work processes SB8. to reduce repetition of errors in installation
	Critical thinking
	The user/individual on the job needs to know and understand how: SB9. to spot process disruptions and delays SB10. to report on any customer concerns to superiors without delay

NOS Version Control

NOS Code	ELE/N3118		
Credits	TBD	Version number	1.0
Industry	Electronics	Drafted on	18/02/14
Industry Sub-sector	Consumer Electronics	Last reviewed on	24/03/14
		Next review date	24/03/15

National Occupational Standard



Overview

This unit is about moving from one customer's premise to another in order to rectify faults in dysfunctional water purifier as recorded by the customer with customer care unit.

ELE/N3119 **Repair dysfunctional water purifier**

National Occupational Standard

Unit Code	ELE/N3119
Unit Title (Task)	Repair dysfunctional water purifier
Description	This OS unit is about understanding the customer's complaints, identifying the fault and fixing the water purifier
Scope	This unit/ task covers the following: • Understand the symptoms in the water purifier and identify the fault • Replace dysfunctional part in the water purifier unit • Confirm functionality of the repaired unit • Achieve productivity and quality as per company's norms

Performance Criteria(PC) w.r.t. the Scope	
Element	**Performance Criteria**
Understanding symptoms and identifying fault	To be competent, the user/ individual must be able to: PC1. diagnose the fault based on customer interaction and initial inspection PC2. check if the water pressure is as specified by company standards PC3. shut off the system by turning of water supply and unplug the unit PC4. place a piece of cloth or towel under the unit in order to avoid any water spills on the floor PC5. carry out basic inspection of feed water valve, tank valve, tubing, housing etc. PC6. separate and inspect every part of the unit if the fault is not identified through basic inspection PC7. send to factory for in depth diagnosis, if problem remains un-identified at site
Replacing dysfunctional module in water purifier	To be competent, the user/ individual must be able to: PC8. replace component at location, if the fault identified is because of damage of components such as valves or wearing out of membrane or filter PC9. remove and replace the faulty module with a functional one, either on a second visit or as pre-identified and collected from the service centre, if the problem is at the PCB level or components that cannot be replaced at site
Confirming functionality of repaired unit	To be competent, the user/ individual must be able to: PC9. reassemble the unit PC10. start supply of water to the unit and confirm that unit is functioning PC11. check that all the modules of the unit work as per specifications PC12. demonstrate and confirm functionality of the unit with customer PC13. educate the customer about cleaning procedures and other best practices PC14. collect necessary payments from the customer, if applicable PC15. fill in customer acknowledgement form PC16. complete other documentation procedures to record complaint closure
Achieving productivity and quality	To be competent, the user/ individual must be able to: PC17. ensure damage free handling of the unit PC18. diagnose the problem accurately and in assigned time

	PC19. identify the problem modules accurately such as inlet valve, auto shut off valve, saddle valve, housing, O ring, PCB PC20. fix the dysfunctional water purifier in designated time PC21. rectify completely to avoid repeat fault in the water purifier PC22. record minimum customer complaints post service PC23. meet daily target on attending to number of complaints PC24. select the right spares according to recorded complaints at the customer care PC25. clearly communicate type of module required to the service centre, if a faulty module is to be replaced PC26. secure repairs completion receipt from customer PC27. educate customer on water purifier maintenance and correct practices to follow in order to avoid further problems PC28. ensure 100% customer satisfaction PC29. recover payments as per rate sheet/ communication from customer care PC30. sell related products such as new equipment or Annual Maintenance Contracts (AMC) as per company policy
Knowledge and Understanding (K)	
C. Organizational Context (Knowledge of the company / organization and its processes)	The individual on the job needs to understand: KA1. company's policies on: incentives, delivery standards and personnel management and customer service standards KA2. reporting and documentation processes KA3. water purifier manufacturing capabilities of the organization KA4. importance of the individual's role in the system KA5. reporting structure
B. Technical Knowledge	The individual on the job needs to know and understand: KB1. water flow diagram and electrical circuit diagram of the appliance KB2. water purification process and different layers of filter present within the unit such as sediment filter, carbon block filter, TFC/TFM membrane, inline carbon filter etc. KB3. different technologies in water purification (such as reverse osmosis etc.) KB4. parameters such as production rate, water chemistry, drain rate, input water pressure/temperature etc. KB5. different types of water purifiers manufactured by the company KB6. features of different water purifier models of the company KB7. functioning of the appliance and its various filters KB8. basic electronics (knowledge of components such as diode, transformer, LED, photo transistor, capacitor, resistor, inductor, thermistor, ICs KB9. chemical and other properties of various filters of the appliance KB10. fundamentals of electricity such as ohms law, difference between ac and dc, calculation of energy consumption of appliances, understanding of domestic wiring, understanding of series and parallel connections KB11. troubleshooting knowledge with respect to water purifiers KB12. hazards, their causes and prevention/personal safety KB13. frequently occurring faults such as low/no water production, leaks, bad tasting water etc.

	KB14. components/modules of the water purifier and their prices KB15. other products of the company
Skills (S) [Optional]	
E. Core Skills/ Generic Skills	**Reading, writing and computer skills**
	The individual on the job needs to know and understand: SA1. how to read warnings, instructions and other text material on product labels, and components SA2. how to read job sheet and complaints SA3. how to read product operating manuals SA4. how to operate computers and software installed SA5. how to read and understand electrical and electronic symbols, multiples and SI units
	Documentation skills
	The individual on the job needs to know and understand: SA6. how to document completion note for customer SA7. how to record completion information in the ERP system
F. Professional Skills	**Using tools and machines**
	The individual on the job needs to know and understand: SB1. to operate/use TDS tester, tube cutter, tube bender, temperature meter, pressure gauges, wrenches, pliers, screw drivers
	Fault diagnosis skills
	The individual on the job needs to know and understand: SB2. to detect basic electrical faults such as improper/no earth, defective power cord, connector or internal wiring defect, short/ loose/open contacts, blown fuse SB3. company specified procedures to change filters, resin and membrane of different models of water purifier SB4. to diagnose reasons for low/no water production due to feed water valve or tank valve not being on or kinked tubing SB5. to identify reasons for leaks in the filter housing due to loose housing, damaged or misaligned O ring, cracks in the housing SB6. to detect worn out auto shut off valve through symptoms such as loud vibrating noise, drain water never shutting off etc. SB7. to detect other problems such as clogged filters, storage tank problems, clogged flow resistor, inadequate/excessive water pressure, improper saddle valve mounting etc.
	Communication skills
	The individual on the job needs to know and understand: SB8. how to interact with customer to understand the problem faced SB9. how to market and sell accessories and products of the company SB10. importance of communicating in language

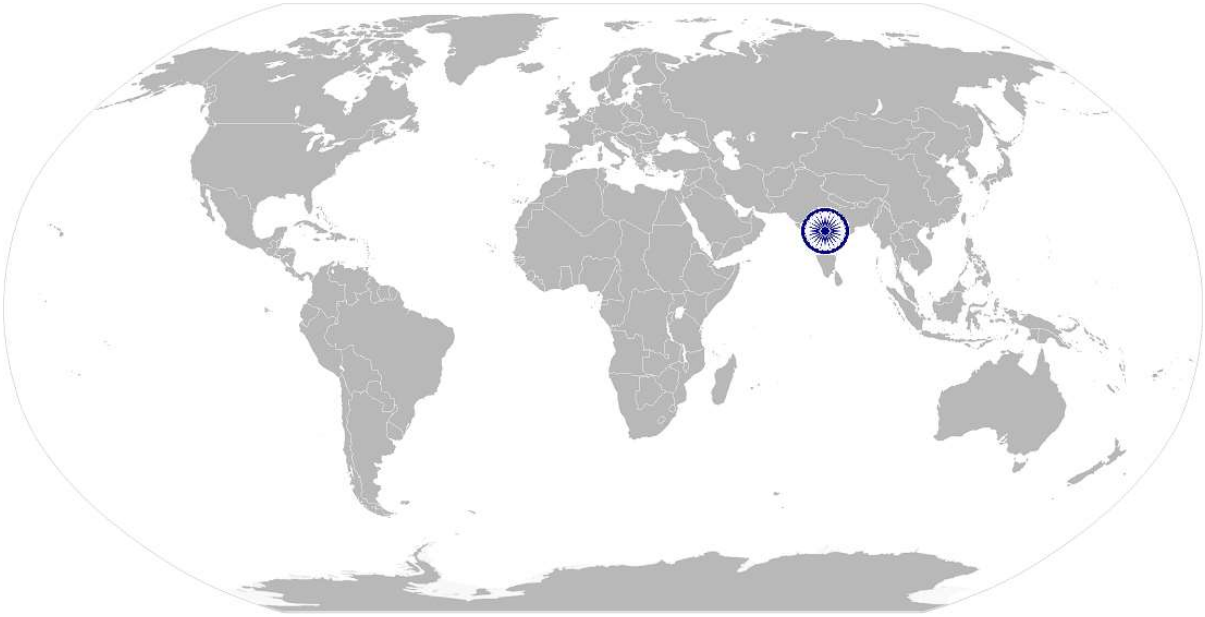
ELE/N3119 **Repair dysfunctional water purifier**

	SB11. precautions and etiquette while dealing with customer SB12. be polite, patient and punctual
	Critical thinking
	The individual on the job needs to know and understand: SB13. to match symptoms of the fault noticed to the cause of the problem SB14. anticipate and avoid hazards that may occur during repairs because of tools, materials used or repair processes

NOS Version Control

NOS Code	ELE/N3119		
Credits	TBD	Version number	1.0
Industry	Electronics	Drafted on	18/02/14
Industry Sub-sector	Consumer Electronics	Last reviewed on	24/03/14
		Next review date	24/03/15

National Occupational Standard



Overview

This unit is about moving from one customer's premise to another in order to rectify faults in small appliances such as mixers, juicers, grinders as recorded by the customer with customer care unit.

ELE/N3120 **Repair dysfunctional mixer/juicer/grinder**

National Occupational Standard

Unit Code	**ELE/N3120**
Unit Title (Task)	**Repair dysfunctional mixer/juicer/grinder**
Description	This OS unit is about understanding the customer's complaints, identifying the fault and fixing the mixer/juicer/grinder
Scope	This unit/ task covers the following: • Understand the symptoms in the appliance and identify the fault • Replace dysfunctional part of the small appliance • Confirm functionality of the repaired unit • Achieve productivity and quality as per company's norms

Performance Criteria(PC) w.r.t. the Scope	
Element	**Performance Criteria**
Understanding symptoms and identifying fault	To be competent, the user/ individual must be able to: PC1. understand usage pattern of the mixer/grinder from the customer PC2. diagnose the fault based on customer interaction and initial inspection PC3. unplug the unit , turn overload switch back to original position if the appliance turned off due to overload PC4. carry out basic tests such as power supply inspection, volt ampere test and earth test power supply PC5. separate and inspect every module of the unit if the fault is not identified through basic tests PC6. send to factory for in depth diagnosis, if problem remains un-identified at site
Replacing dysfunctional module in mixer/juicer/grinder	To be competent, the user/ individual must be able to: PC7. replace component at location, if the fault identified is because of damage of components such as relay or thermostat PC8. remove and replace the faulty module with a functional one, either on a second visit or as pre-identified and collected from the service centre, if the problem is at the PCB level or components that cannot be replaced at site
Confirming functionality of repaired unit	To be competent, the user/ individual must be able to: PC9. reassemble the unit PC10. switch on power supply and confirm that unit is functioning PC11. demonstrate and confirm functionality of the unit with customer PC12. educate the customer about cleaning procedures, using different jars for different purposes and other best practices PC13. collect necessary payments from the customer, if applicable PC14. fill in customer acknowledgement form PC15. complete other documentation procedures to record complaint closure
Achieving productivity and quality	To be competent, the user/ individual must be able to: PC16. ensure damage free handling of the unit PC17. diagnose the problem accurately and in assigned time

	PC18. identify the problem modules accurately such as the power supply, overload circuit breaker, motors, PCB PC19. fix the dysfunctional appliance in designated time PC20. rectify completely to avoid repeat fault in the appliance PC21. record minimum customer complaints post service PC22. meet daily target on attending to number of complaints PC23. select the right spares according to recorded complaints at the customer care PC24. clearly communicate type of module required to the service centre, if a faulty module is to be replaced PC25. secure repairs completion receipt from customer PC26. educate customer on maintenance and correct practices to follow in order to avoid further problems PC27. ensure 100% customer satisfaction PC28. recover payments as per rate sheet/ communication from customer care PC29. sell related products such as new equipment or Annual Maintenance Contracts (AMC) as per company policy
Knowledge and Understanding (K)	
D. Organizational Context (Knowledge of the company / organization and its processes)	The individual on the job needs to understand: KA1. company's policies on: incentives, delivery standards and personnel management and customer service standards KA2. reporting and documentation processes KA3. importance of the individual's role in the system KA4. reporting structure
B. Technical Knowledge	The individual on the job needs to know and understand: KB1. different models of mixers, grinders and their features and functionalities KB2. functioning of the appliance and its various modules KB3. basic electrical fundamentals with regard to functioning of motors, circuit breakers, etc. KB4. basic electronics (knowledge of components such as diode, transformer, LED, photo transistor, capacitor, resistor, inductor, thermistor, ICs KB5. functioning of various electromechanical parts of the mixer/grinder KB6. fundamentals of electricity such as ohms law, difference between ac and dc, calculation of energy consumption of appliances, understanding of domestic wiring, understanding of series and parallel connections KB7. troubleshooting knowledge with respect to small home appliances KB8. hazards, their causes and prevention/personal safety KB9. frequently occurring faults such as abnormal noise during use, jars overflowing, jar leaking etc. KB10. components/modules of different small home appliances and their prices KB11. energy ratings such BEE rating and concepts of e waste KB12. other products of the company
Skills (S) [Optional]	

ELE/N3120 **Repair dysfunctional mixer/juicer/grinder**

G. Core Skills/ Generic Skills	**Reading, writing and computer skills**
	The individual on the job needs to know and understand: SA1. how to read warnings, instructions and other text material on product labels, and components SA2. how to read job sheet and complaints SA3. how to read product operating manual SA4. how to read and understand electrical and electronic symbols, multiples and SI units
	Documentation skills
	The individual on the job needs to know and understand: SA5. how to document completion note for customer SA6. how to record completion information in the ERP system
H. Professional Skills	**Using tools and machines**
	The individual on the job needs to know and understand: SB1. to operate/use multi-meter, clamp meter, tube cutter, tube bender, screw drivers, wrenches, pliers etc.
	Fault diagnosis skills
	The individual on the job needs to know and understand: SB2. to detect basic electrical faults such as improper/no earth, defective power cord, connector or internal wiring defect, short/ loose/open contacts, blown fuse SB3. to diagnose reasons for abnormal noise during use such as loose jar coupler, overloading of jar, worn out blade shaft, worn out jar bush, worn out/broken motor coupler SB4. to diagnose reasons for appliance not running due to dysfunctional motor, overload circuit breaker tripping, no power supply etc. SB5. to identify reasons for overflowing/leaking of contents from the jar such as faulty fitting of dome lid cap, dome gasket, overloading of the jar etc. SB6. to detect problems in the indicator switch due to lack of power supply, tripping of overload circuit breaker etc.
	Communication skills
	The individual on the job needs to know and understand: SB7. how to interact with customer to understand the problem faced SB8. how to market and sell accessories and products of the company SB9. importance of communicating in language SB10. precautions and etiquette while dealing with customer SB11. be polite, patient and punctual
	Critical thinking
	The individual on the job needs to know and understand:

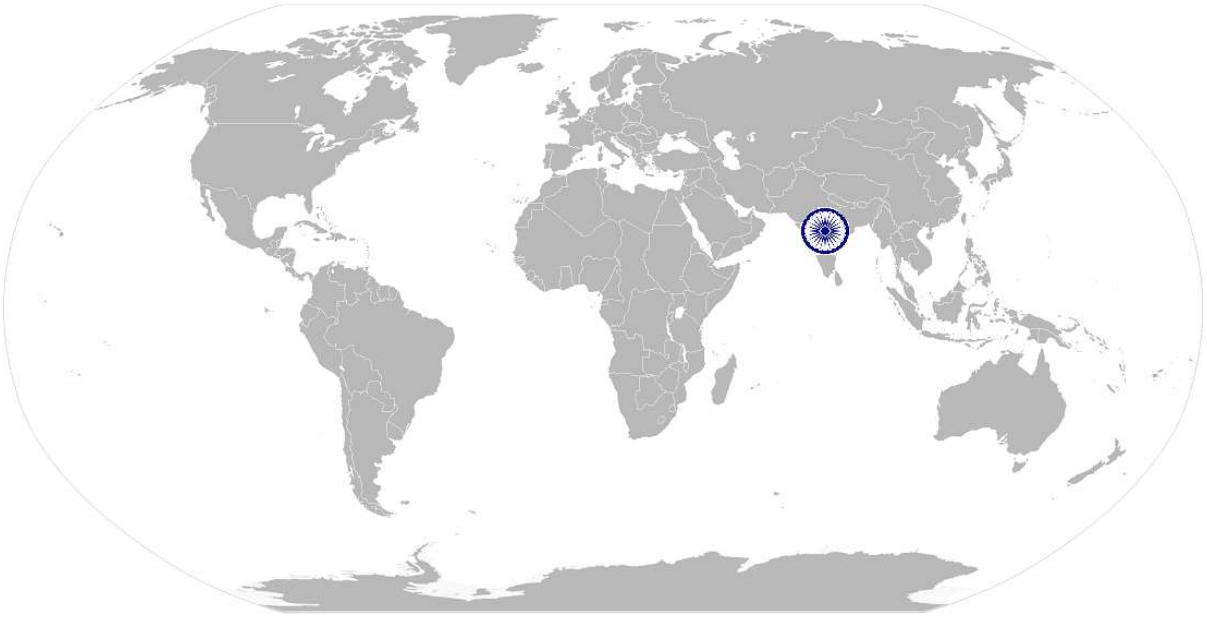
ELE/N3120 Repair dysfunctional mixer/juicer/grinder

	SB12. to match symptoms of the fault noticed to the cause of the problem SB13. anticipate and avoid hazards that may occur during repairs because of tools, materials used or repair processes

NOS Version Control

NOS Code	ELE/N3120		
Credits	TBD	Version number	1.0
Industry	Electronics	Drafted on	18/02/14
Industry Sub-sector	Consumer Electronics	Last reviewed on	24/03/14
		Next review date	24/03/15

National Occupational Standard



Overview

This unit is about moving from one customer's premise to another in order to rectify faults in dysfunctional microwave as recorded by the customer with customer care unit.

ELE/N3121 **Repair dysfunctional Microwave oven**

National Occupational Standard

Unit Code	ELE/N3121
Unit Title (Task)	Repair dysfunctional microwave oven
Description	This OS unit is about understanding the customer's complaints, identifying the fault and fixing the microwave oven
Scope	This unit/ task covers the following: • Understand the symptoms in the microwave and identify the fault • Replace dysfunctional part in the microwave • Confirm functionality of the repaired unit • Achieve productivity and quality as per company's norms

Performance Criteria(PC) w.r.t. the Scope	
Element	**Performance Criteria**
Understanding symptoms and identifying fault	To be competent, the user/ individual must be able to: PC1. understand usage pattern of the microwave from the customer PC2. diagnose the fault based on customer interaction and initial inspection PC3. unplug the unit , carry out basic tests such as power supply inspection, volt ampere test and earth test power supply PC4. separate and inspect every module of the unit if the fault is not identified through basic tests PC5. send to factory for in depth diagnosis, if problem remains un-identified at site
Replacing dysfunctional module in microwave	To be competent, the user/ individual must be able to: PC6. replace component at location, if the fault identified is because of damage of components such as relay or thermostat PC7. remove and replace the faulty module with a functional one, either on a second visit or as pre-identified and collected from the service centre, if the problem is at the PCB level or components that cannot be replaced at site
Confirming functionality of repaired unit	To be competent, the user/ individual must be able to: PC8. reassemble the unit PC9. switch on power supply and confirm that unit is functioning PC10. demonstrate and confirm functionality of the unit with customer PC11. educate the customer about cleaning and maintenance procedures PC12. collect necessary payments from the customer, if applicable PC13. fill in customer acknowledgement form PC14. complete other documentation procedures to record complaint closure
Achieving productivity and quality	To be competent, the user/ individual must be able to: PC15. ensure damage free handling of the unit PC16. diagnose the problem accurately and in assigned time PC17. identify the problem modules accurately such as the power supply, timer/control panel, magnetron, motor etc. PC18. fix the dysfunctional appliance in designated time

	PC19. rectify completely to avoid repeat fault in the appliance PC20. record minimum customer complaints post service PC21. meet daily target on attending to number of complaints PC22. select the right spares according to recorded complaints at the customer care PC23. clearly communicate type of module required to the service centre, if a faulty module is to be replaced PC24. secure repairs completion receipt from customer PC25. educate customer on maintenance and correct practices to follow in order to avoid further problems PC26. ensure 100% customer satisfaction PC27. recover payments as per rate sheet/ communication from customer care PC28. sell related products such as new equipment or Annual Maintenance Contracts (AMC) as per company policy
Knowledge and Understanding (K)	
E. Organizational Context (Knowledge of the company / organization and its processes)	The individual on the job needs to understand: KA1. company's policies on: incentives, delivery standards and personnel management and customer service standards KA2. reporting and documentation processes KA3. microwave manufacturing capabilities of the organisation KA4. importance of the individual's role in the system KA5. reporting structure
B. Technical Knowledge	The individual on the job needs to know and understand: KB1. different models of microwave ovens and their features and functionalities KB2. functioning of the appliance and its various modules KB3. basic electrical fundamentals with regard to functioning of motors, circuit breakers, etc. KB4. basic electronics (knowledge of components such as diode, transformer, LED, photo transistor, capacitor, resistor, inductor, thermistor ICs KB5. functioning of various electromechanical parts of the microwave KB6. fundamentals of electricity such as ohms law, difference between ac and dc, calculation of energy consumption of appliances, understanding of domestic wiring, understanding of series and parallel connections KB7. troubleshooting knowledge with respect to microwaves KB8. hazards, their causes and prevention/personal safety KB9. frequently occurring faults such as intermittent heating, no heating, timing problem, display problem etc. KB10. components/modules of different microwaves and their prices KB11. energy ratings such BEE rating and concepts of e waste KB12. other products of the company
Skills (S) [Optional]	
	Reading, writing and computer skills
	The individual on the job needs to know and understand:

ELE/N3121 **Repair dysfunctional Microwave oven**

I. Core Skills/ Generic Skills	SA1. how to read warnings, instructions and other text material on product labels, and components SA2. how to read job sheet and complaints SA3. how to read product operating manuals SA4. how to operate computers and software installed SA5. how to read and understand electrical and electronic symbols, multiples and SI units
	Documentation skills
	The individual on the job needs to know and understand: SA6. how to document completion note for customer SA7. how to record completion information in the ERP system
J. Professional Skills	**Using tools and machines**
	The individual on the job needs to know and understand: SB1. to operate/use multi-meter, clamp meter, microwave leakage detector, microwave power detector, thermometer, screwdriver etc.
	Fault diagnosis skills
	The individual on the job needs to know and understand: SB2. to detect basic electrical faults such as improper/no earth, defective power cord, connector or internal wiring defect, short/ loose/open contacts, blown fuse SB3. to diagnose problem of oven running but not heating due to shorted diode, HV transformer or magnetron, damaged magnetron dome, magnetron insulator breakdown, shorted HV capacitor or HV wiring SB4. to diagnose reasons low heating due to ageing magnetron, cracked magnet, burned dome or magnetron insulator breakdown SB5. to identify reasons for intermittent/uneven heating due to oxidised/burned connection to magnetron filament terminals, burned connector due to poor crimp or weakened connection SB6. to detect electrical power problems such as loose terminal connections, open motor windings etc. SB7. to detect other problems such as defective touch panel/keypad, defective control board, defective sensor unit, burned slip on connector, defective triac, open fuse/open HV capacitor, open HV diode etc.
	Communication skills
	The individual on the job needs to know and understand: SB8. how to interact with customer to understand the problem faced SB9. how to market and sell accessories and products of the company SB10. importance of communicating in language SB11. precautions and etiquette while dealing with customer SB12. be polite, patient and punctual

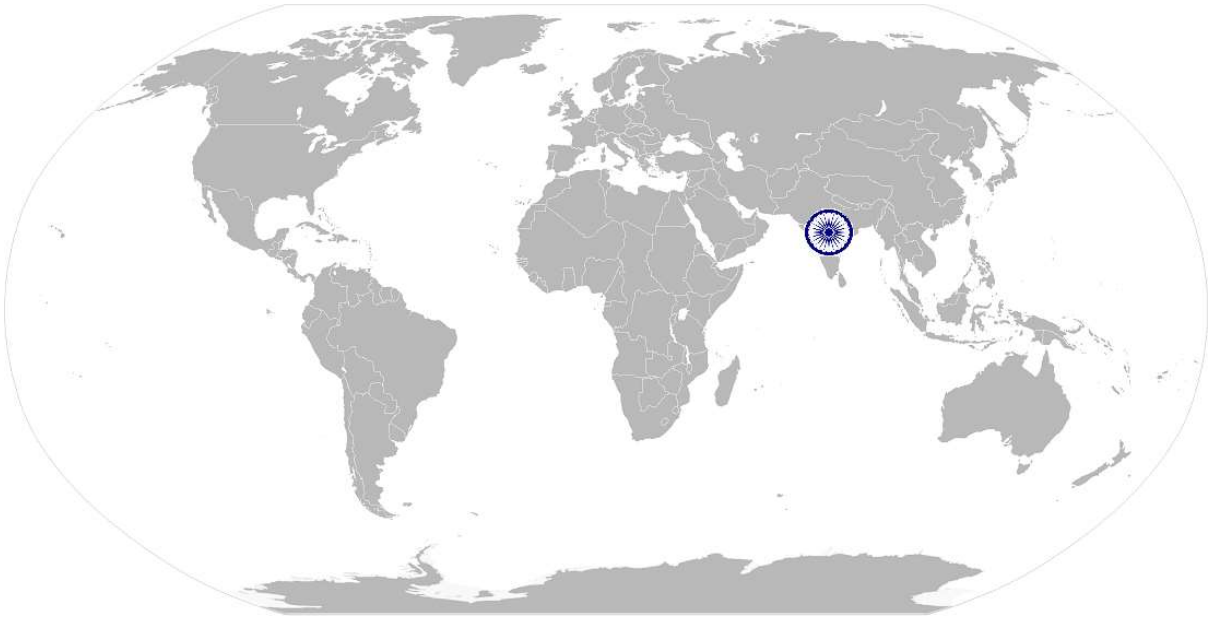
ELE/N3121 **Repair dysfunctional Microwave oven**

	Critical thinking
	The individual on the job needs to know and understand: SB13. to match symptoms of the fault noticed to the cause of the problem SB14. anticipate and avoid hazards that may occur during repairs because of tools, materials used or repair processes

NOS Version Control

NOS Code	ELE/N3121		
Credits	TBD	Version number	1.0
Industry	Electronics	Drafted on	18/02/14
Industry Sub-sector	Consumer Electronics	Last reviewed on	24/03/14
		Next review date	24/03/15

National Occupational Standard



Overview

This unit is about the individual's level of communication with colleagues and other departments within the organisation. It determines the ability to work as a team member to achieve the required deliverables on schedule.

ELE/N9901 **Interact with colleagues**

National Occupational Standard

Unit Code	ELE/N9901
Unit Title (Task)	Interact with colleagues
Description	This OS unit is about communicating with colleagues and seniors in order to achieve smooth work flow
Scope	This unit/ task covers the following: • Interact with supervisor or superior • Coordinate with colleagues

Performance Criteria(PC) w.r.t. the Scope	
Element	**Performance Criteria**
Interacting with supervisor	To be competent, the user/ individual must be able to: PC1. understand work requirements, targets and incentives PC2. learn about new product models, their features and functions PC3. report problems identified in the field PC4. escalate customer concerns that cannot be handled on field PC5. resolve personnel issues PC6. receive feedback on work standards and customer satisfaction PC7. communicate any potential hazards at a particular location PC8. meet given targets PC9. deliver work of expected quality despite constraints PC10. have a happy and satisfied customer
Interacting with colleagues	To be competent, the user/ individual must be able to: PC11. resolve inter-personnel conflicts and achieve smooth workflow PC12. receive spares from tool room or stores PC13. deposit faulty modules and tools to stores PC14. pass on customer complaints to colleagues in a respective geographical area PC15. assist colleagues with resolving field problems PC16. clearly demarcate roles of each team member

Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	The individual on the job needs to know and understand: KA1. company's policies on: incentives, delivery standards, and personnel management KA2. importance of the individual's role in the workflow KA3. reporting structure
B. Technical Knowledge	The individual on the job needs to know and understand: KB1. how to communicate effectively KB2. how to build team coordination

ELE/N9901 **Interact with colleagues**

Skills (S) [Optional]	
A. Core Skills/ Generic Skills	**Teamwork and multitasking**
	The individual on the job needs to know and understand how: SA1. to deliver product to next work process on time
B. Professional Skills	**Decision making**
	The individual on the job needs to know and understand: SB1. how to report potential areas of disruptions to work process SB2. when to report to supervisor and when to deal with a colleague depending on the type of concern
	Reflective thinking
	The individual on the job needs to know and understand: SB3. how to improve work process
	Critical thinking
	The individual on the job needs to know and understand: SB4. how to spot process disruptions and delays

NOS Version Control

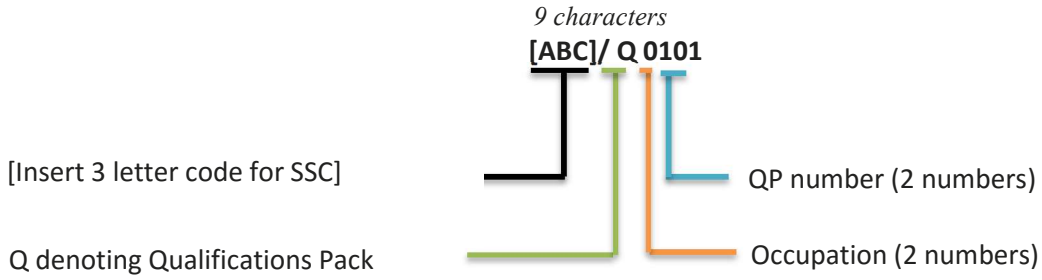
NOS Code	ELE/N9901		
Credits	TBD	Version number	1.0
Industry	Electronics	Drafted on	18/02/14
Industry Sub-sector	Consumer Electronics	Last reviewed on	24/03/14
		Next review date	24/03/15

ELE/N9901 **Interact with colleagues**

Annexure

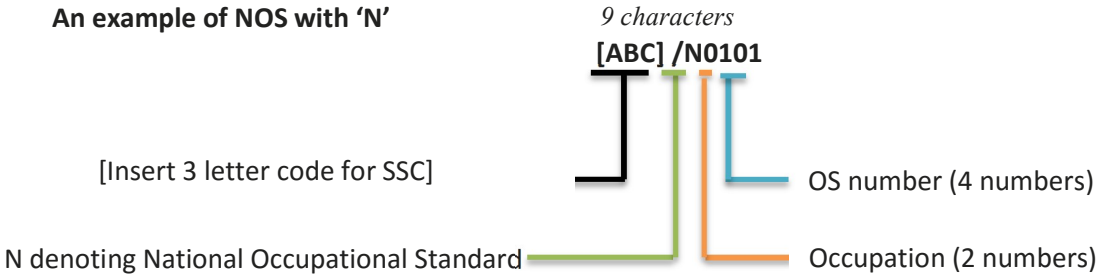
Nomenclature for QP and NOS

Qualifications Pack



Occupational Standard

An example of NOS with 'N'



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The following acronyms/codes have been used in the nomenclature above:

Sub-sector	Range of Occupation numbers
Passive Components	01 - 10
Semiconductors	11 - 20
PCB Manufacturing	21 - 30
Consumer Electronics	31 - 40
IT Hardware	41 - 50
PCB Assembly	51 - 55
Solar Electronics	56 - 60
Strategic Electronics	61 - 65
Automotive Electronics	66 - 70
Industrial Electronics	71 - 75
Medical Electronics	76 - 80
Communication Electronics	81 - 85
PCB Design	86 - 90
LED	91 - 95

Sequence	Description	Example
Three letters	Industry name	ELE
Slash	/	/
Next letter	Whether **Q**P or **N**OS	Q
Next two numbers	Occupation code	01
Next two numbers	OS number	01

CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role	**Field Technician – Other Home Appliances**
QP #	**ELE/Q3104**
Sector Skill Council	**Electronics Sector Skills Council of India**

Guidelines for Assessment:

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. Individual assessment agencies will create *unique question papers for theory part for each candidate at each examination/training center* (as per assessment criteria below)
4. Individual assessment agencies will create *unique evaluations for skill practical for every student at each examination/training center* based on this criteria
5. To pass the Qualification Pack, every trainee should score a minimum of 70% in every NOS
6. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.

				Marks Allocation	
Element	**Performance Criteria**	**Total Marks (400)**	**Out Of**	**Theory**	**Skills Practical**
ELE/N3101 Engage with customer for service					
Interacting with customer prior to visit	PC1. check customer complaint registered at customer care or installation schedule	**100**	3	1	2
	PC2. call customer to confirm problem and fix time for visit		3	1	2
	PC3. greet the customer and confirm the problem registered		4	2	2
	PC4. be polite and patient when interacting with customer		4	2	2
	PC5. check about warranty status of appliance and annual maintenance contract		4	2	2
	PC6. anticipate possible problems to carry tools and parts accordingly		4	2	2
	PC7. ascertain customer location in order to make the route plan for the day		3	1	2
	PC8. enquire about the symptoms and history of problems in the appliance		5	2	3

Interacting with customer at their premises	PC9. ask about the age of appliance and status of upkeep		5	2	3
	PC10. identify the problem based on customer's information		5	2	3
	PC11. communicate the problems identified and educate on possible reasons		5	2	3
	PC12. inform about costs involved		5	2	3
Suggesting possible solutions to customer	PC13. discuss the problem(s) identified with customer		6	2	4
	PC14. suggest possible solutions and costs involved		6	2	4
	PC15. explain the time required and methodology for servicing necessary		6	2	4
	PC16. seek customer's approval on further action		6	2	4
Achieving productivity and quality	PC17. accurately assess the problem and solution(s) necessary		4	1	3
	PC18. offer most appropriate and cost-effective service as per customer's requirement		4	2	2
	PC19. communicate problem effectively in order to secure customer's confidence		4	2	2
	PC20. ensure customer satisfaction and positive feedback		4	2	2
	PC21. record minimum customer complaints post service		4	2	2
	PC22. avoid repeat problem post service		3	1	2
	PC23. prepare most optimum route plan to complete daily target visits		3	1	2
		TOTAL	100	40	60
ELE/N3118 Install the water purifier					
Undertaking pre-installation site visit	PC1. visit the customer's premise before carrying out the installation	**100**	2	1	1
	PC2. interact with the customer to understand whether the water purifier would be placed under the sink (UTS) or on the wall		3	1	2
	PC3. check that the location meets structural requirements such as distance from power supply, vicinity to plumbing point, etc.		2	1	1
	PC4. make the customer aware of any pre installations/masonry/electrical work to be carried out and educate the customer about requirement of adequate water pressure at the inlet source		2	1	1
	PC5. make necessary markings for placement of the water purifier unit		2	1	1
	PC6. seek appointment for the next visit		2	1	1
Removing packaging and checking accessories	PC7. remove the packaging in which the purifier was shipped to customer from point of sale/ warehouse		2	1	1
	PC8. check that the product matches the customer order in terms of colour and make		2	1	1
	PC9. check that all supporting accessories purchased have are there in the pack		2	1	1
	PC10. check that tools and fitments required for the installation are available		2	1	1

	PC11. clear up the packaging material waste and dispose as per company's norms		2	1	1
Fitting the water purifier	PC12. check if pre installation requirements are met		3	1	2
	PC13. make measurements at the location identified and drill holes ensuring no internal wiring damage takes place		4	2	2
	PC14. mount the filter and ensure that the screws are fastened securely		3	1	2
	PC15. drain the inlet line before connecting it to the water purifier		3	1	2
	PC16. connect the outlet pipe to the drain (if applicable)		3	1	2
	PC17. connect the purifier to the nearest power supply point		3	1	2
Checking functioning	PC18. ensure that the filter is aligned as per instructions in the installation manual		5	2	3
	PC19. run the purifier and ensure there are no leaks at any point		5	2	3
	PC20. demonstrate the features and utility to the customer		5	1	4
	PC21. explain maintenance procedures to be followed while using the water purifier		5	2	3
Completing documentation	PC22. fill in customer acknowledgement form		2	1	1
	PC23. seek customer's signature		2	1	1
	PC24. complete other documentation for recording completion of installation		3	1	2
	PC25. call customer care and inform about job completed		3	1	2
Interacting with supervisor or superior	PC26. understand the work requirement from superior, periodically		3	1	2
	PC27. report to superior on the work completed		3	1	2
	PC28. escalate the customer issues and problems that are unresolved in the field		3	1	2
	PC29. document the work completed on the company ERP software for tracking and future references		3	1	2
Achieving productivity and quality	PC30. remove packaging without damage to the water purifier unit and accessories		2	1	1
	PC31. position the water filter as per requirements specified in instructions manual		2	1	1
	PC32. educate customer on importance of proper placing		2	1	1
	PC33. carry and use the correct tools and equipment for installation		2	1	1
	PC34. operate and check that they are in a safe and stable condition		2	1	1
	PC35. complete installation in time target given		2	0	2
	PC36. educate customer on proper operation and maintenance procedures		2	1	1
	PC37. complete daily field schedule as per instructions/format within the designated time		2	1	1
			100	**40**	**60**

ELE/N3119 Repair dysfunctional Water Purifier					
Understanding symptoms and identifying fault	PC1. diagnose the fault based on customer interaction and initial inspection	**100**	4	2	2
	PC2. check if the water pressure is as specified by company standards		3	1	2
	PC3. shut off the system by turning of water supply and unplug the unit		3	1	2
	PC4. place a piece of cloth or towel under the unit in order to avoid any water spills on the floor		3	1	2
	PC5. carry out basic inspection of feed water valve, tank valve, tubing, housing etc.		3	1	2
	PC6. separate and inspect every part of the unit if the fault is not identified through basic inspection		4	2	2
	PC7. send to factory for in depth diagnosis, if problem remains un-identified at site		4	2	2
Replacing dysfunctional module in water purifier	PC8. replace component at location, if the fault identified is because of damage of components such as valves or wearing out of membrane or filter		11	4	7
	PC9. remove and replace the faulty module with a functional one, either on a second visit or as pre-identified and collected from the service centre, if the problem is at the PCB level or components that cannot be replaced at site		11	4	7
Confirm functionality of the repaired unit	PC9. reassemble the unit		3	1	2
	PC10. start supply of water to the unit and confirm that unit is functioning		3	1	2
	PC11. check that all the modules of the unit work as per specifications		4	2	2
	PC12. demonstrate and confirm functionality of the unit with customer		4	2	2
	PC13. educate the customer about cleaning procedures and other best practices		3	1	2
	PC14. collect necessary payments from the customer, if applicable		3	1	2
	PC15. fill in customer acknowledgement form		3	1	2
	PC16. complete other documentation procedures to record complaint closure		3	1	2
Achieving productivity and quality target	PC17. ensure damage free handling of the unit		2	1	1
	PC18. diagnose the problem accurately and in assigned time		2	1	1
	PC19. identify the problem modules accurately such as inlet valve, auto shut off valve, saddle valve, housing, O ring, PCB		2	1	1
	PC20. fix the dysfunctional water purifier in designated time		2	1	1
	PC21. rectify completely to avoid repeat fault in the water purifier		2	1	1
	PC22. record minimum customer complaints post service		2	1	1
	PC23. meet daily target on attending to number of complaints		2	1	1
	PC24. select the right spares according to recorded complaints at the customer care		2	1	1

	PC25. clearly communicate type of module required to the service centre, if a faulty module is to be replaced		2	1	1
	PC26. secure repairs completion receipt from customer		2	1	1
	PC27. educate customer on water purifier maintenance and correct practices to follow in order to avoid further problems		2	0	2
	PC28. ensure 100% customer satisfaction		2	0	2
	PC29. recover payments as per rate sheet/ communication from customer care		2	1	1
	PC30. sell related products such as new equipment or Annual Maintenance Contracts (AMC) as per company policy		2	1	1
		TOTAL	100	40	60
ELE/N3120 Repair dysfunctional mixer/juicer/grinder					
Understanding symptoms and identifying fault	PC1. understand usage pattern of the mixer/grinder from the customer	**100**	4	2	2
	PC2. diagnose the fault based on customer interaction and initial inspection		5	2	3
	PC3. unplug the unit , turn overload switch back to original position if the appliance turned off due to overload		4	2	2
	PC4. carry out basic tests such as power supply inspection, volt ampere test and earth test power supply		4	2	2
	PC5. separate and inspect every module of the unit if the fault is not identified through basic tests		4	2	2
	PC6. send to factory for in depth diagnosis, if problem remains un-identified at site		4	2	2
Replacing dysfunctional module in mixer/juicer/grinder	PC7. replace component at location, if the fault identified is because of damage of components such as relay or thermostat		12	4	8
	PC8. remove and replace the faulty module with a functional one, either on a second visit or as pre-identified and collected from the service centre, if the problem is at the PCB level or components that cannot be replaced at site		12	4	8
Confirm functionality of the repaired unit	PC9. reassemble the unit		4	2	2
	PC10. switch on power supply and confirm that unit is functioning		3	1	2
	PC11. demonstrate and confirm functionality of the unit with customer		4	2	2
	PC12. educate the customer about cleaning procedures, using different jars for different purposes and other best practices		4	2	2
	PC13. collect necessary payments from the customer, if applicable		3	1	2
	PC14. fill in customer acknowledgement form		3	1	2
	PC15. complete other documentation procedures to record complaint closure		3	1	2
	PC16. ensure damage free handling of the unit		2	1	1

Achieving productivity and quality target	PC17. diagnose the problem accurately and in assigned time		2	1	1
	PC18. identify the problem modules accurately such as the power supply, overload circuit breaker, motors, PCB		2	1	1
	PC19. fix the dysfunctional appliance in designated time		2	1	1
	PC20. rectify completely to avoid repeat fault in the appliance		2	1	1
	PC21. record minimum customer complaints post service		2	1	1
	PC22. meet daily target on attending to number of complaints		1	0	1
	PC23. select the right spares according to recorded complaints at the customer care		2	1	1
	PC24. clearly communicate type of module required to the service centre, if a faulty module is to be replaced		2	0	2
	PC25. secure repairs completion receipt from customer		2	1	1
	PC26. educate customer on maintenance and correct practices to follow in order to avoid further problems		2	1	1
	PC27. ensure 100% customer satisfaction		2	0	2
	PC28. recover payments as per rate sheet/ communication from customer care		2	0	2
	PC29. sell related products such as new equipment or Annual Maintenance Contracts (AMC) as per company policy		2	1	1
		TOTAL	100	40	60
ELE/N3121 Repair dysfunctional Microwave oven					
Understanding symptoms and identifying fault	PC1. understand usage pattern of the microwave from the customer	**100**	5	2	3
	PC2. diagnose the fault based on customer interaction and initial inspection		5	2	3
	PC3. unplug the unit , carry out basic tests such as power supply inspection, volt ampere test and earth test power supply		5	2	3
	PC4. separate and inspect every module of the unit if the fault is not identified through basic tests		5	2	3
	PC5. send to factory for in depth diagnosis, if problem remains un-identified at site		5	2	3
Replacing dysfunctional module in microwave	PC6. replace component at location, if the fault identified is because of damage of components such as relay or thermostat		12	4	8
	PC7. remove and replace the faulty module with a functional one, either on a second visit or as pre-identified and collected from the service centre, if the problem is at the PCB level or components that cannot be replaced at site		12	4	8
Confirm functionality of the repaired unit	PC8. reassemble the unit		4	2	2
	PC9. switch on power supply and confirm that unit is functioning		4	2	2

	PC10. demonstrate and confirm functionality of the unit with customer		4	2	2
	PC11. educate the customer about cleaning and maintenance procedures		4	2	2
	PC12. collect necessary payments from the customer, if applicable		4	1	3
	PC13. fill in customer acknowledgement form		3	1	2
	PC14. complete other documentation procedures to record complaint closure		3	1	2
Achieving productivity and quality target	PC15. ensure damage free handling of the unit		2	1	1
	PC16. diagnose the problem accurately and in assigned time		1	0	1
	PC17. identify the problem modules accurately such as the power supply, timer/control panel, magnetron, motor etc.		2	1	1
	PC18. fix the dysfunctional appliance in designated time		2	1	1
	PC19. rectify completely to avoid repeat fault in the appliance		2	1	1
	PC20. record minimum customer complaints post service		2	1	1
	PC21. meet daily target on attending to number of complaints		1	0	1
	PC22. select the right spares according to recorded complaints at the customer care		2	1	1
	PC23. clearly communicate type of module required to the service centre, if a faulty module is to be replaced		2	1	1
	PC24. secure repairs completion receipt from customer		2	1	1
	PC25. educate customer on maintenance and correct practices to follow in order to avoid further problems		2	1	1
	PC26. ensure 100% customer satisfaction		2	1	1
	PC27. recover payments as per rate sheet/ communication from customer care		1	0	1
	PC28. sell related products such as new equipment or Annual Maintenance Contracts (AMC) as per company policy		2	1	1
		TOTAL	100	40	60
ELE/N9901 Interact with colleagues					
Interacting with supervisor	PC1. understand work requirements, targets and incentives	**100**	5	2	3
	PC2. learn about new product models, their features and functions		5	2	3
	PC3. report problems identified in the field		5	2	3
	PC4. escalate customer concerns that cannot be handled on field		5	2	3
	PC5. resolve personnel issues		5	2	3
	PC6. receive feedback on work standards and customer satisfaction		5	2	3

	PC7. communicate any potential hazards at a particular location		5	2	3
	PC8. meet given targets		5	2	3
	PC9. deliver work of expected quality despite constraints		5	2	3
	PC10. have a happy and satisfied customer		5	2	3
Interacting with colleagues	PC11. resolve inter-personnel conflicts and achieve smooth workflow		8	3	5
	PC12. receive spares from tool room or stores		8	3	5
	PC13. deposit faulty modules and tools to stores		8	3	5
	PC14. pass on customer complaints to colleagues in a respective geographical area		9	4	5
	PC15. assist colleagues with resolving field problems		9	4	5
	PC16. clearly demarcate roles of each team member		8	3	5
		TOTAL	100	40	60