



## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

# Transnational Skill Standards Field Engineer RACW (India)

REFERENCE ID: TOS/ESSCI/Q3105

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

### Mapping for Field Engineer (ELE/Q3105) with UK Summit Skill NOS for Consumer Electronics Products

Link to Indian Qualification Pack:[www.essc-india.org/univ.html#](http://www.essc-india.org/univ.html#)

Link to UK Qualification: [nos.ukes.org.uk/papers/search.aspx](http://nos.ukes.org.uk/papers/search.aspx)

#### How to Read this Document

This document has two sections - **Section I** and **Section II**.

**Section I:** Compares the NOS listing in the Indian QP – Field Engineer RACW (ELE/Q3105) with Summit Skills NOS for Consumer Electronics.

**Section II:** Compares the competencies described in each of the Indian NOS with those of UK.

The language of the compared competencies of the two countries differs. However, the competency pointers of the described competency can be mapped. Wherever the competency pointer maps it is reported as 'None' under the column 'Gap in Indian NOS'. Wherever the competency pointers do not map, it is identified as a gap and the corresponding UK competency is noted under the column 'Gap in Indian NOS'.

#### Usage of Benchmarked Transnational Standards

There will be two types of users of these benchmarked standards. One type will be of those individuals who are already trained and are certified on the corresponding Indian QP. This set of individuals will have to undergo a bridge course comprising of the identified gaps only. Thereafter, they will be assessed under the aegis of a UK Awarding body through the Indian SSC on the competency portions acquired via the bridge course. All qualifying individuals will be awarded a co-branded certificate comprising of logo of Skill India, Indian SSC and UK Awarding Body.

Those individuals who wish to be certified afresh will have to undergo training on both the Indian QP and the gaps in the Indian NOS with regard to UK competencies. Thereafter, they will be assessed under the aegis of a UK Awarding body through the Indian SSC and they will obtain a co-branded certificate comprising of logo of Skill India, Indian SSC and UK Awarding Body.

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

**Section I:** NOS Mapping of Field Engineer RACW QP (ELE/Q3105) with the Summit Skill Generic NOSs SUMBSE01-03 and Consumer Electronics NOSs SUMCEEP01-02.

NOS Mapping: A Summary				
Indian NOS Code	Indian NOS	UK NOS Code	UK NOS	Remarks, if any
ELE/N3101	Engage with customer for service	SUMBSE02	Establish and maintain relationships in the building services engineering sector	Indian NOS partially covers UK NOS
ELE/N3112	Install newly purchased refrigerator	SUMCEEPS01	Install, test and handover consumer electrical and electronic products and systems	Indian NOS covered in UK NOS
ELE/N3114	Install newly purchased air conditioner		Install, test and handover consumer electrical and electronic products and systems	Indian NOS covered in UK NOS
ELE/N3116	Install newly purchased washing machine		Install, test and handover consumer electrical and electronic products and systems	Indian NOS covered in UK NOS
ELE/N3113	Attend to service complaints – refrigerator	SUMCEEPS02	Identify and rectify faults in consumer electrical and electronic products and systems	Indian NOS partially covered in UK NOS
ELE/N3115	Attend to service complaints – air conditioner		Identify and rectify faults in consumer electrical and electronic products and systems	Indian NOS partially covered in UK NOS
ELE/N3117	Attend to service complaints – washing machine		Identify and rectify faults in consumer electrical and electronic products and systems	Indian NOS partially covered in UK NOS
ELE/N9901	Interact with colleagues	SUMBSE03	Coordinate a work site in the building services engineering sector	Indian NOS partially covered in UK NOS
No Match		SUMBSE01	Apply health and safety and environmental legislation in the building services engineering sector	No Corresponding Indian NOS

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### Section II: Compares the competencies in Indian NOS with those of UK NOS.

NOS Mapping Descriptions			
<b>Indian QP Title</b>	Field Engineer RACW	<b>UK Qualification</b>	Technician Consumer Electronics
<b>Indian QP Code</b>	ELE/Q3105	<b>UK Qualification Code</b>	None
<b>Indian NOS Code</b>	Engage with customer for service	<b>UK NOS Code</b>	Establish and maintain relationships in the building services engineering sector
<b>Indian NOS</b>	ELE/N3101	<b>UK NOS</b>	SUMBSE02
<b>Scope</b>	This unit is about interacting with customers to understand their requirements and build confidence.	<b>Overview</b>	<p>This standard is for people who are required to develop and maintain positive relationships with clients and customers associated with installation and/or maintenance activities in the building services engineering sector in accordance with appropriate industry standards and regulations, the specification, working practices, the working environment and the natural environment.</p> <p>This standard is appropriate to the air conditioning, electro technical, consumer electrical and electronic products, heating &amp; The person undertaking the responsibility for establishing and maintaining client and customer relationships must be able to: ventilating, plumbing, and refrigeration, industries.</p> <p>Present and provide accurate technical and functional information, advice and guidance liaise with clients and customers with respect to their needs and expectations respond as appropriate to client and customer needs and expectations</p> <p>Please note that industry specific terminology is identified by italic text and its explanation and/or meaning can be found in the glossary of this standard.</p>

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### Competency Mapping

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
<b>Engage with customer for service</b>	<b>Establish and maintain relationships in the building services engineering sector</b>	
PC1. check customer complaint registered at customer care or installation schedule		P1. identify the clients and customers that need to be supplied with technical and functional information
PC2. call customer to confirm problem and fix time for visit		P2. obtain the current and relevant technical and functional information that needs to be provided to the clients and customers
PC3. greet the customer and confirm the problem registered		P3. Provide accurate guidance and advice to the clients and customers on technical and functional matters associated with the building services engineering system that has been installed and/or maintained in terms of: P3.1. Health and safety issues P3.2. safe and effective operation
PC4. be polite and patient when interacting with customer		P5. demonstrate to the clients and customers, as appropriate, the operation of the building services engineering system that has been installed and/or maintained
PC5. check about warranty status of appliance and annual maintenance contract		
PC6. anticipate possible problems to carry tools and parts accordingly	P7. establish and maintain productive working relationships with clients and customers, including dealing with disagreements in an amicable and constructive way, so that good relationships are maintained	None
PC7. ascertain customer location in order to make the route plan for the day		None

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Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
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	P6. confirm in relation to the installation and/or maintenance activity: P6.1. the client and customer expectations and requirements P6.2. the building services engineering system is in a satisfactory condition P6.3. the hand over process	None
PC12. inform about costs involved		
PC13. discuss the problem(s) identified with customer		
PC14. suggest possible solutions and costs involved	P4. provide information in accordance with <b>organizational procedures</b>	None
PC15. explain the time required and methodology for servicing necessary		
PC16. seek customer's approval on further action		
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		

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Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
PC21. record minimum customer complaints post service		
PC22. avoid repeat problem post service	P4. provide information in accordance with <b>organizational procedures</b>	None
PC23. prepare most optimum route plan to complete daily target visits		P7. establish and maintain productive working relationships with clients and customers, including dealing with disagreements in an amicable and constructive way, so that good relationships are maintained
		P9. report, record and recommend, in accordance with organizational procedures and as appropriate, any variation to the installation and/or maintenance activity to the clients, customers and other relevant people
		P8. respond effectively to requests for technical and functional information from clients and customers
		P10. comply with organizational standards for appearance and behavior
<b>Knowledge &amp; Understanding; Organisational Context</b>	<b>Knowledge &amp; Understanding</b>	
		K1. the importance of customer service in relation to installation and/or maintenance activity
		K2. how to identify the clients and customers that need to be supplied with technical and functional information
		K3. sources of technical and functional information such as: K3.1. the specification for the building services engineering

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Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
		system K3.2. the specification for the installation and/or maintenance activity K3.3. the manufacturer's instructions
		K4. the responsibilities and limitations of your job role with respect to supplying technical and functional information
		K5. the technical and functional information that you are providing and its implications on the operation of the building services engineering system and/or its equipment, accessories and components that have been installed and/or maintained
		K6. the organizational procedures and policies regarding the handover and demonstration of an building services engineering system and/or its equipment, accessories and components that have been installed and/or maintained
		K7. the operating principles, controls and settings of the building services engineering system and/or its equipment, accessories and components that have been installed and/or maintained importance of providing technical and functional information clearly, courteously and professionally



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Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
KA1. company's policies on: customer care	K8. The methods and organizational procedures for establishing positive relations with clients and customers K4. the responsibilities and limitations of your job role with respect to supplying technical and functional information	None
KA2. company's code of conduct		
KA3. organization culture and typical customer profile	K9 the working requirements and practices of the clients and customers in the working environment where the installation and/or maintenance activity is taking place	None
KA4. company's reporting structure		
KA5. company's documentation policy	K8 the methods and organizational procedures for establishing positive relations with clients and customers	None
Technical Knowledge	Technical Knowledge	
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		

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Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
KB7. etiquette to be followed at customer's premises	K8. the methods and organizational procedures for establishing positive relations with clients and customers	None
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	K3.2. the specification for the installation and/or maintenance activity K3.3. the manufacturer's instructions	None
		K10. which situations warrant written technical and functional information
		K11. the safety implications and operational consequences of supplying inaccurate or incomplete technical and functional information to clients and customers
		K12. methods of checking the clients' and customers' understanding of the technical and functional information provided
		K13. legislation regarding health and safety, data protection, equal opportunities and regulations that affect the way that technical and functional information is delivered to clients and customers
		K14. the clients' and customers' rights including any contractual agreements

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NOS Mapping Descriptions			
<b>Indian QP Title</b>	Field Engineer RACW	<b>UK Qualification</b>	Technician Consumer Electronics
<b>Indian QP Code</b>	ELE/Q3105	<b>UK Qualification Code</b>	None
<b>Indian NOS Code</b>	ELE/N3112	<b>UK NOS Code</b>	SUMCEPS01
<b>Indian NOS</b>	Install newly purchased refrigerator	<b>UK NOS</b>	Install, test and handover consumer electrical and electronic products and systems
<b>Scope</b>	This unit is about installing the newly purchased refrigerator at customer's premises.	<b>Overview</b>	This standard is for people who install consumer electrical and electronic products and systems in premises. The person carrying out this work must be able to comply with the procedures and methods for installing and handing over consumer electrical and

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Scope		Overview	<p>electronic products and systems in accordance with the current versions of the appropriate industry standards and regulations, the specification, industry recognized working practices, the working environment and the natural environment. They must know and understand the operation, operating principles, application and limitations of different types of consumer electrical and electronic products and systems, and the techniques for their installation and testing.</p>

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### Competency Mapping

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
<b>Install newly purchased refrigerator</b>	<b>Install, test and handover consumer electrical and electronic products and systems</b>	
		P2. apply relevant organizational procedures P3. identify hazards and risks P4. complete documentation in accordance with the requirements of the organizational procedures P7. Report to the relevant people in accordance with organizational procedures: P7.1. Potential hazards and risks P7.2. potentially harmful materials and substances
PC1. remove the refrigerator packaging in which it was shipped to customer		
PC2. check that the product matches the customer order in terms of color and make		
PC3. check that all supporting accessories purchased are there in the pack	P5. select materials, accessories and components needed to complete the installation activity and confirm that they are: P5.1. of the right type and size P5.2. fit for purpose in accordance with the product(s) and/or system(s)'s design P5.3. suitable for the working environment	None
PC4. check tools and fitments required for the installation are available		None

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Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
PC5. clear up the packaging material waste and dispose as per company's norms	P12. implement organizational procedures for the safe transport and/or disposal of unwanted products, material, substances and/or liquids in accordance with suppliers' and manufacturers' instructions	None
PC6. seek customer's input on placement of refrigerator		
PC7. maintain required distance from wall and floor	P6. position, secure and connect the product(s) and/or system(s) and their associated components in accordance with: P6.1. the product(s) and/or system(s)'s design P6.2. manufacturer's instructions	None
PC8. check nearest plug point and distance of refrigerator from it		None
PC9. place on appropriate stand or platform as recommended by company		None
PC10. educate customer on placing refrigerator in obstruction-free area, importance of proper placing and every day care		None
		P9. comply with organizational procedures in the event of: P9.1. injuries to self and/or others P9.2. emergencies P9.3. evacuation procedures
PC11. fit in water-disposal beaker, handle, shelves, basket and side buckets		
PC12. set cooling and freezer temperature knobs according to the season		
PC13. connect the refrigerator to power supply		
PC14. demonstrate the features and utility		

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Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
PC15. explain the precautions to be taken while using the refrigerator		
PC16. explain about heating of outside walls of the refrigerator		
PC17. fill in customer acknowledgement form	P10. obtain customer/client acceptance of the of the product(s) and/or system(s) in accordance with organizational procedures P11. ensure that all relevant documentation is correctly completed and recorded in accordance with organizational procedures	None
PC18. seek customer's signature		None
PC19. complete other documentation for recording completion of installation		None
PC20. call customer care and inform about job completion	P12. implement organizational procedures for: P12.1 handing over the to the customer/client P12.2. informing relevant people about issues outside the limitations of your responsibility	None
PC21. understand the work requirement from superior, periodically		None
PC22. report to superior on the work completed		None
PC23. escalate customer issues and problems that are unresolved at field level		None
PC24. document the work completed on the company ERP software for tracking and future references	P11. ensure that all relevant documentation is correctly completed and recorded in accordance with organizational procedures	None
PC25. refer customer queries on non-field service areas		
PC26. interact with service technicians from time to time in order to understand problems faced on field		
PC27. educate junior level technicians about installation procedures and customer handling		

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Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
PC28. ensure no damage to the refrigerator unit or accessories while removing packaging		
PC29. use the correct tools and equipment for installation	P5. select materials, accessories and components needed to complete the installation activity and confirm that they are: P5.1. of the right type and size P5.2. fit for purpose in accordance with the product(s) and/or system(s)'s	None
PC30. position and install in safe and stable condition	P1. confirm as required: P1.1. the location of the products and/or systems with the customer P1.2. that the supplies available are compatible with the products and/or systems to be installed P1.3. there is a hazard free access to the location P1.4. a programmer of work with the relevant people in accordance with organizational procedures	None
PC31. complete installation in time target given		
PC32. report in time, work status and prepare required documentation as per company rules		
PC33. clean the work area after completing the installation activity		
<b>Knowledge &amp; Understanding; Organisational Context</b>	<b>Knowledge &amp; Understanding</b>	
		K4. how to verify that job information and documentation is current and relevant and that the



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Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
		instruments, access equipment and tools are fit for purpose
KA1. company's policies on: incentives, delivery standards, and personnel management, call closure	K5. the appropriate industry standards and regulations relevant to installing, testing and handing over consumer electrical and electronic products and systems K14. how to ensure that all relevant documentation is correctly completed and recorded in the appropriate systems in accordance with organizational procedures	None
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		
Technical Knowledge	Technical Knowledge	
KB1. Installation site requirements (structural requirements, ventilation, etc.)	K2. how to confirm: K2.1 the location of the product(s) and/or system(s) with the customer K2.2. that that the supplies available are compatible with the products and/or systems to be installed K2.3. that there is a hazard free access to the work location	None
KB2. different types of refrigerators such as traditional, frost-free, Peltier	K1. the applications, operation, operating principles, advantages and limitations of different products and/or systems and their associated components	None

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
KB3. different features and functionalities of various models		
		K6. how to verify that job information and documentation is current and relevant and that the instruments and tools to be used are fit for purpose
		K7. how to interpret relevant data, diagrams and drawings
		K8. how to select materials, accessories and components needed to complete the activity and confirm that they are: K8.1. of the right type and size K8.2. fit for purpose in accordance with the product(s) and/or system(s)'s design K8.3. suitable for the working environment
		K9. the methods and techniques for positioning, securing and connecting the product(s) and/or system(s) and their associated components
		K16. the limitations of your responsibility when installing, testing and handing over consumer electrical and electronic products and/or systems
		K17. the organizational procedures for: K17.1 handing over the product(s) and/or system(s) to the customer K17.2 informing relevant people about issues outside the limitations of your responsibility

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Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
KB4. safety precautions to be taken while installing		
KB5. manual-based procedure of installing the refrigerators	K12. the tests, as required, on the product and/or system to ensure it is fault free and operates in accordance with: P12.1 the product(s) and/or system(s)'s design P12.2 manufacturer's instructions	None
		K13. how to obtain customer acceptance of the product(s) and/or system(s) in accordance with organizational procedures
KB6. packaging waste disposal procedures	K15. the methods for the safe transport and/or disposal of unwanted products, material, substances and/or liquids in accordance with organizational procedures, suppliers' and manufacturers' instructions	None
KB7. use of test equipment and tools such as multi-meter, oscilloscope		
KB8. other products of the company		
KB9. safety rules, policies and procedures	K3. how to produce a risk assessment and method statement for the work to be carried out, including the identification and use of personal protective equipment, in accordance with; K3.1. the product or system design K3.2. organizational procedures	None
KB10. quality standards to be followed		

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NOS Mapping Descriptions			
<b>Indian QP Title</b>	Field Engineer RACW	<b>UK Qualification</b>	Technician Consumer Electronics
<b>Indian QP Code</b>	ELE/Q3105	<b>UK Qualification Code</b>	None
<b>Indian NOS Code</b>	ELE/N3113	<b>UK NOS Code</b>	SUMCEEPS02
<b>Indian NOS</b>	Attend to service complaints - refrigerator	<b>UK NOS</b>	Identify and rectify faults in consumer electrical and electronic products and systems
<b>Scope</b>	This unit is about technician visiting customer's premise in order to provide support for rectifying refrigerator related faults as per complaint recorded at customer care.	<b>Overview</b>	This standard is for people who identify and rectify faults in consumer electrical and electronic products and systems either as part of a service and maintenance activity on customer premises or in a repair workshop. The person carrying out this work must be able to carry out the processes and procedures for the identification and rectification of faults in accordance with the current versions of the appropriate industry standards and regulations, the specification, industry recognized working practices, the working environment and the natural environment. They must: <ul style="list-style-type: none"> <li>• know and understand the operation, operating principles, application and limitations of</li> </ul>

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Scope		Overview	<p>different types of consumer electrical and electronic products and systems and their associated modules and components.</p> <ul style="list-style-type: none"> <li>• be able to apply the correct methods and procedures when identifying and rectifying faults in consumer electrical and electronic products and systems</li> </ul>

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

### Competency Mapping

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
<b>Attend to service complaints - refrigerator</b>	<b>Identify and rectify faults in consumer electrical and electronic products and systems</b>	
PC1. verify if thermostat settings are appropriate		
PC2. diagnose the fault in the unit as per customer interaction and initial inspection	P1. obtain clear and detailed information about the reported fault(s) in the product(s) and/or system(s) from relevant: P1.1 sources of information P1.2 service and/or maintenance records P1.3 manual and visual checks	None
		P2. advise the relevant people clearly and accurately about the potential disruption and consequences of carrying out the processes and procedures for the identification and rectification of faults
		P3. confirm a program of work with the relevant people in accordance with organizational procedures
		P4. produce a risk assessment and method statement, as required, for the work to be carried out, including the identification and use of personal protective equipment
		P5. verify that job and product(s) and/or system(s) information and documentation is current and relevant and that, as required, the access equipment and tools are fit for purpose

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
		P6. confirm that the supplies available are compatible with the product(s) and/or system(s)
		P7. interpret relevant data, diagrams and drawings for the product(s) and/or system(s)
		P8. select the instruments to be used and confirm they are fit for purpose
PC3. unplug the unit, carry out basic tests such as power supply inspection, volt ampere test and earth test power supply, compressor, motors, PCB, condenser	P10. complete safe-isolation as and when required to ensure the safe identification and rectification of faults in the products and/or systems and their associated components	None
PC4. follow the electrical circuit path and inspect each component in that sequence in order to identify the faulty module	P12. identify, locate, analyze and rectify faults	None
PC5. send to factory for in-depth diagnosis, if problem cannot be identified at site		
PC6. repair at location, if the fault identified is due to damage of components such as relay or thermostat		P13. repair, remove and replace, as required, in accordance with industry recognized methods, techniques and procedures: P13.1 cables /flexes/hoses P13.2 product(s) and/or system(s) modules and components
PC7. Remove and replace module during either second visit or as per complaint registered with customer care and as collected from the service center, if the dysfunctional module/part is specialized such as PCB and cannot be repaired immediately	P14. ensure, if the fault(s) cannot be corrected immediately, the safety of the product(s) and/or system(s) and their associated modules and components	None

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
PC8. if the fault identified is a gas leak, take necessary actions for the refrigerator to be transported to the service center for brazing	P11. comply with industry practices and organizational procedures to ensure the co-ordination, as required, of the activities of other persons in the work location affected by: P11.1 the identification and location of the fault(s) P11.2 the rectification of the fault(s)	None
PC9. reassemble the unit	P15. inspect and test, as appropriate, and in accordance with industry recognized methods and practices, the repaired and/or replaced modules and components	None
PC10. switch on power supply and confirm that the unit is functioning		None
PC11. check that all the modules of the unit work as per specifications		None
PC12. demonstrate and confirm functionality of the unit to the customer		
PC13. educate the customer about cleaning procedures and best practices		
PC14. collect necessary payments from the customer		
PC15. fill in customer acknowledgement form	P17 comply with organizational procedures for:	None
PC16. complete other documentation procedures to record complaint closure	P17.1 handing over the product(s) and/or system(s) to the customer/client P17.2 informing relevant people about issues outside the limitations of your responsibility P17.3 the safe transport and/or disposal of unwanted products, material, substances and/or liquids in accordance with suppliers' and manufacturers' instructions P17.4 the completion of	None



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Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
	relevant documentation and recording of product(s) and/or system(s) data/information on the completion of the fault rectification activity	
PC17. diagnose the problem accurately and in short time		
PC18. identify the problem modules such as the power supply, compressor, motors, PCB, condenser optimize the time taken to fix the dysfunctional refrigerator	P12. identify, locate, analyze and rectify faults	None
PC19. rectify to avoid repeat fault in the fridge		
PC20. meet daily target for attending to number of complaints		
PC21. record minimum customer complaints post service		
PC22. select the right spares according to recorded complaints at the customer care	P9 select materials, accessories, components and/or modules needed to complete the fault identification, rectification and repair activity, and confirm that they are: P9.1 of the right type and size P9.2 fit for purpose in accordance with the product(s) and/or system(s)'s design P9.3 suitable for the working environment	None
PC23. educate customer on refrigerator maintenance in order to avoid problems		
PC24. ensure damage free handling of the unit		
PC25. achieve 100% customer satisfaction		

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
PC26. make sale of related products such as new equipment or annual maintenance contracts (AMC)		
PC27. interact with service technicians from time to time in order to understand problems faced on field		
PC28. educate junior level technicians about commonly occurring problems and diagnosis procedures		
<b>Knowledge &amp; Understanding; Organisational Context</b>	<b>Knowledge &amp; Understanding</b>	
		K2 how to obtain clear and detailed information about the reported fault(s) and any modules or components which need to be repaired or replaced from relevant:
		K2.1 sources of information
		K2.2 services and/or maintenance records
		K2.3 manual product(s) and/or system(s) checks
		K3. the organizational procedures and industry practices when carrying out the processes for the identification and rectification of faults for: K3.1 advising the relevant people about the potential disruption and consequences of the work activity K3.2 confirming a program of work with the relevant people K3.3 producing a risk assessment and method statement

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
		K4. how to verify that job information and documentation is current and relevant and that the instruments, access equipment and tools are fit for purpose
		K5. how to interpret relevant data, diagrams and drawings
		K6. the correct procedures for safe-isolation
		K9. the tests and testing procedures to ensure that the product(s) and/or system(s) is fault free and operates in accordance with: K9.1 the product(s) and/or system(s)'s design K9.2 manufacturer's instructions
		K10. how to ensure, if the fault(s) cannot be corrected immediately, the safety of the product(s) and/or system(s) and their associated modules and components
		K11. organizational procedures for: K11.1 handing over the product(s) and/or system(s) to the customer/client
		K11.2 informing relevant people about issues outside the limitations of your responsibility K11.3 the safe transport and/or disposal of unwanted products, material, substances and/or liquids in accordance with suppliers' and manufacturers' instructions

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
		K12. the appropriate industry standards and regulations relevant to fault identification and rectification in consumer electrical and electronic products and systems
KA1. company's policies on: incentives, delivery standards and personnel management and customer service standards		
KA2. reporting and documentation processes	K11.4 the completion of relevant documentation and recording of product(s) and/or system(s) data/information on the completion of the fault rectification activity	None
KA3. refrigerator manufacturing capabilities of the organization		
KA4. importance of the individual's role in the system		
KA5. reporting structure		
<b>Technical Knowledge</b>	<b>Technical Knowledge</b>	
KB1. different types of refrigerators, e.g., frost free, direct cool and peltier refrigerators and differences in their operation	K1. the applications, operation, operating principles, advantages and limitations of different product(s) and/or system(s) and their associated components	None
KB2. features of different refrigerators of the company		
KB3. refrigeration cycle and functioning of the appliance and its various modules		
KB4. method of refrigeration, its use and functioning of refrigerator sealed system		

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
KB5. types of refrigerants such as R12, R22, R134a, R290, R600a, R410, R32 use of different brazing sticks, types of brazing torches and their application		
KB6. types of brazing torches, types of fluxes and their application		
KB7. basic electronics (knowledge of components such as diode, transformer, LED, photo transistor, capacitor, resistor, inductor, thermistor, lcs		
KB8. functioning of various electromechanical parts of the refrigerator	K1 the applications, operation, operating principles, advantages and limitations of different product(s) and/or system(s) and their associated components	None
KB9. 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		
KB10. troubleshooting knowledge with respect to refrigerators	K7 the methods, techniques and processes for identifying, locating, analyzing and rectifying faults K8 the methods, techniques and procedures for repairing, removing and replacing, as required: K8.1 cables/flexes/hoses K8.2 product(s) and/or system(s) modules and components	None

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
KB11. hazards, their causes and prevention/personal safety		
KB12. frequently occurring faults such as noise, water dripping and insufficient cooling, their causes and solutions		
KB13. components/modules of the refrigerator and their prices		
KB14. refrigerator energy ratings such BEE rating		
KB15. other products of the company		

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

NOS Mapping Descriptions			
<b>Indian QP Title</b>	Field Engineer RACW	<b>UK Qualification</b>	Technician Consumer Electronics
<b>Indian QP Code</b>	ELE/Q3105	<b>UK Qualification Code</b>	None
<b>Indian NOS Code</b>	ELE/N3114	<b>UK NOS Code</b>	SUMCEEPS01
<b>Indian NOS</b>	Install newly purchased air conditioner	<b>UK NOS</b>	Install, test and handover consumer electrical and electronic products and systems
<b>Scope</b>	This unit is about installing the newly-purchased air conditioner at customer's premises.	<b>Overview</b>	This standard is for people who install consumer electrical and electronic products and systems in premises. The person carrying out this work must be able to comply with the procedures and methods for installing and handing over consumer electrical and electronic products and systems in accordance with the current versions of the appropriate industry standards and regulations, the specification, industry recognized working practices, the working environment and the natural environment. They must know and understand the operation, operating principles, application and limitations of different types of consumer electrical and electronic products and systems, and the techniques for their installation and testing.

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

### Competency Mapping

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
<b>Install newly purchased air conditioner</b>	<b>Install, test and handover consumer electrical and electronic products and systems</b>	
PC1. visit the customer's premise before carrying out the installation	P1. confirm as required: P1.1 the location of the products and/or systems with the customer P1.2 that the supplies available are compatible with the products and/or systems to be installed P1.3 there is a hazard free access to the location P1.4 a program of work with the relevant people in accordance with organizational procedures P1.5 manual and visual checks	None
PC2. interact with the customer to understand where the air conditioner is to be installed, i.e., window, split, high, low, etc.		None
PC3. check that the location meets structural requirements such as distance from power supply, distance from windows/doors being opened frequently		None
PC4. make the customer aware of any pre installations/masonry/electrical work to be carried out and educate the customer about requirement of concealed drainage and electric conduits		None
		P2. produce a risk assessment and method statement, as required, for the work to be carried out, including the identification and use of personal protective equipment
		P3. verify that job and product(s) and/or system(s) information and documentation is current and relevant and that the instruments, access equipment and tools are fit for purpose
		P4. interpret relevant data, diagrams and drawings for the product(s) and/or system(s)



## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
PC5. make necessary markings for placement of indoor and outdoor units		
PC6. seek appointment for the next visit		
PC7. remove the air conditioner packaging in which it was shipped to customer from point of sale/ warehouse		
PC8. check that the product matches the customer order in terms of color and make		
		<p>P5. select materials, accessories and components needed to complete the installation activity and confirm that they are:</p> <p>P5.1 of the right type and size</p> <p>P5.2 fit for purpose in accordance with the product(s) and/or system(s)'s design</p> <p>P5.3 suitable for the working environment</p>
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	P12 implement organizational procedures for the safe transport and/or disposal of unwanted products, material, substances and/or liquids in accordance with suppliers' and manufacturers' instructions	None
PC12. check if pre installation requirements are met		
PC13. maintain required distance from door/window		

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
PC14. make measurements at the location identified and drill holes ensuring no internal wiring damage takes place	P6. position, secure and connect the product(s) and/or system(s) and their associated components in accordance with: P6.1 the product(s) and/or system(s)'s design P6.2 manufacturer's instructions	None
PC15. mount the indoor unit and ensure that the screws are fastened securely		None
PC16. place the outdoor unit at a suitable location and attach it firmly to wall/floor		None
PC17. connect the indoor and the outdoor units using the field copper pipe of appropriate size and interconnecting cables		None
PC18. fill in additional gas if the distance between the indoor and the outdoor units is more than what is recommended		None
PC19. make necessary power supply connections		None
		P7. complete the safe-isolation of supplies as and when required to ensure the safe installation and connection of the product(s) and/or system(s) and their associated components
		P8. ensure that all necessary connections to the product(s) and/or system(s) and their associated components are secure, electrically and/or mechanically sound, safe and fit-for-purpose
PC20. align the air conditioner as per the instructions manual		
PC21. demonstrate the features and utility	P9. perform tests, as required, on the product and/or system to ensure it is fault free and operates in accordance with:	none

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
	P9.1 the product(s) and/or system(s)'s design P9.2 manufacturer's instructions	
PC22. explain the precautions to be taken while using the air conditioner		
PC23. fill in customer acknowledgement form	P10. obtain customer/client acceptance of the of the product(s) and/or system(s) in accordance with organizational procedures P11. ensure that all relevant documentation is correctly completed and recorded in accordance with organizational procedures	None
PC24. seek customer's signature		None
PC25. complete other documentation for recording completion of installation		None
PC26. call customer care and inform about job completed	P12.2. informing relevant people about issues outside the limitations of your responsibility	None
PC27. understand the work requirement from superior, periodically		
PC28. report to superior on the work completed		
PC28. report to superior on the work completed		
PC29. escalate the customer issues and problems that are unresolved in the field	P12.2 informing relevant people about issues outside the limitations of your responsibility	None
PC30. document the work completed on the company ERP software for tracking and future references	P11. ensure that all relevant documentation is correctly completed and recorded in accordance with organizational procedures	None
PC31. interact with service technicians from time to time in order to understand problems faced on field		
PC32. educate junior level technicians about installation procedures and customer		

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
handling		
PC33. remove packaging without damage to the air conditioner unit and accessories		
PC34. position air conditioner as per requirements specified in instructions manual		
PC35. educate customer on importance of proper placing		
PC36. inform about switching off the unit during voltage fluctuations and use of stabilizers, if necessary		
PC37. carry and use the correct tools and equipment for installation	P5. select materials, accessories and components needed to complete the installation activity and confirm that they are:	None
PC38. operate and check that they are in a safe and stable condition	P5.1 of the right type and size P5.2 fit for purpose in accordance with the product(s) and/or system(s)'s design P5.3 suitable for the working environment	None
PC39. complete installation in time target given		
PC40. educate customer on proper operation and maintenance procedures		
PC41. complete daily field schedule as per instructions/format within the designated time		
<b>Knowledge &amp; Understanding; Organisational Context</b>	<b>Knowledge &amp; Understanding</b>	
KA1. company's policies on: incentives, delivery standards, and personnel management, call closure	K5. the appropriate industry standards and regulations relevant to installing, testing and handing over consumer electrical and electronic products and systems K14. how to ensure that all	None, (K6 and K4 is a duplicate entry in the UK NOS)

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
	relevant documentation is correctly completed and recorded in the appropriate systems in accordance with organizational procedures	
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</b>	<b>Technical Knowledge</b>	
KB1. Installation site requirements (structural requirements, ventilation, etc.)	K2. how to confirm: K2.1 the location of the product(s) and/or system(s) with the customer K2.2 that the supplies available are compatible with the products and/or systems to be installed K2.3 that there is a hazard free access to the work location	None
KB2. different types of air conditioners such as window, split, cassette etc.	K1. the applications, operation, operating principles, advantages and limitations of different products and/or systems and their associated components	None
KB3. different features and functionalities of various models		
	K4. how to verify that job information and documentation is current and relevant and that the instruments, access equipment and tools are fit for purpose	None
	K6. how to verify that job information and documentation is current and	None

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
	relevant and that the instruments and tools to be used are fit for purpose	
		K7. how to interpret relevant data, diagrams and drawings
		K8. how to select materials, accessories and components needed to complete the activity and confirm that they are: K8.1 of the right type and size K8.2 fit for purpose in accordance with the product(s) and/or system(s)'s design
		K8.3. suitable for the working environment
		K9. the methods and techniques for positioning, securing and connecting the product(s) and/or system(s) and their associated components
		K10. the correct procedures for the safe-isolation of supplies as and when required to ensure the safe installation and connection of the product(s) and/or system(s) and their associated components
KB4. safety precautions to be taken while installing	K11. methods and techniques to ensure that all necessary connections to the product(s) and/or system(s) and their associated components are secure, electrically and/or mechanically sound, safe and fit-for-purpose	None
KB5. manual-based procedure of installing the air conditioner	K12. the tests, as required, on the product and/or system to ensure it is fault free and operates in accordance with: P12.1 the product(s) and/or system(s)'s design P12.2 manufacturer's	None

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
	instructions	
		K13. how to obtain customer acceptance of the product(s) and/or system(s) in accordance with organizational procedures
KB6. packaging waste disposal procedures	K15. the methods for the safe transport and/or disposal of unwanted products, material, substances and/or liquids in accordance with organizational procedures, suppliers' and manufacturers' instructions	None
KB7. use of test equipment and tools such as multi-meter, oscilloscope		
KB8. other products of the company		
		K16. the limitations of your responsibility when installing, testing and handing over consumer electrical and electronic products and/or systems
		K17. the organizational procedures for: K17.1 handing over the product(s) and/or system(s) to the customer K17.2 informing relevant people about issues outside the limitations of your responsibility
KB9. safety rules, policies and procedures		
KB10. quality standards to be followed		

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

NOS Mapping Descriptions			
<b>Indian QP Title</b>	Field Engineer RACW	<b>UK Qualification</b>	Technician Consumer Electronics
<b>Indian QP Code</b>	ELE/Q3105	<b>UK Qualification Code</b>	None
<b>Indian NOS Code</b>	ELE/N3115	<b>UK NOS Code</b>	SUMCEEPS02
<b>Indian NOS</b>	Attend to service complaints – Air conditioner	<b>UK NOS</b>	Identify and rectify faults in consumer electrical and electronic products and systems
<b>Scope</b>	This unit is about moving from one customer's premise to another in order to rectify faults in dysfunctional air conditioner as recorded by the customer with customer care unit.	<b>Overview</b>	This standard is for people who identify and rectify faults in consumer electrical and electronic products and systems either as part of a service and maintenance activity on customer premises or in a repair workshop. The person carrying out this work must be able to carry out the processes and procedures for the identification and rectification of faults in accordance with the current versions of the appropriate industry standards and regulations, the specification, industry recognized working practices, the working environment and the natural environment. They must: <ul style="list-style-type: none"> <li>• know and understand the operation, operating principles, application and limitations of</li> </ul>



## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Scope		Overview	different types of consumer electrical and electronic products and systems and their associated modules and components. • be able to apply the correct methods and procedures when identifying and rectifying faults in consumer electrical and electronic products and systems

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

### Competency Mapping

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
<b>Attend to service complaints – Air conditioner</b>	<b>Identify and rectify faults in consumer electrical and electronic products and systems</b>	
PC1. understand usage pattern of the air conditioner from the customer		
PC2. diagnose the fault based on customer interaction and initial inspection	P1 obtain clear and detailed information about the reported fault(s) in the product(s) and/or system(s) from relevant: P1.1 sources of information P1.2 service and/or maintenance records P1.3 manual and visual checks	None
		P2. advise the relevant people clearly and accurately about the potential disruption and consequences of carrying out the processes and procedures for the identification and rectification of faults
		P3. confirm a program of work with the relevant people in accordance with organizational procedures
		P4. produce a risk assessment and method statement, as required, for the work to be carried out, including the identification and use of personal protective equipment
		P5. verify that job and product(s) and/or system(s) information and documentation is current and relevant and that, as required, the access equipment and tools are fit for purpose
		P6. confirm that the supplies available are compatible with the product(s) and/or system(s)

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
		P7. interpret relevant data, diagrams and drawings for the product(s) and/or system(s)
		P8. select the instruments to be used and confirm they are fit for purpose
		P9. select materials, accessories, components and/or modules needed to complete the fault identification, rectification and repair activity, and confirm that they are: P9.1 of the right type and size P9.2 fit for purpose in accordance with the product(s) and/or system(s)'s design P9.3 suitable for the working environment
PC3. unplug the unit, carry out basic tests such as power supply inspection, volt ampere test and earthing test power supply, compressor, motors, PCB, condenser	P10. complete safe-isolation as and when required to ensure the safe identification and rectification of faults in the products and/or systems and their associated components	None
PC4. separate and inspect every module of the unit if the fault is not identified through basic tests	P12. identify, locate, analyze and rectify faults	None
PC5. send to factory for in depth diagnosis, if problem remains un-identified at site		
PC6. replace component at location, if the fault identified is because of damage of components such as relay or thermostat	P13. repair, remove and replace, as required, in accordance with industry recognized methods, techniques and procedures: P13.1 cables /flexes/hoses P13.2 product(s) and/or system(s) modules and components	None

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
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 center, if the problem is at the PCB level or components that cannot be replaced at site	P14. ensure, if the fault(s) cannot be corrected immediately, the safety of the product(s) and/or system(s) and their associated modules and components	None
		P15 inspect and test, as appropriate, and in accordance with industry recognized methods and practices, the repaired and/or replaced modules and components
PC8. carry out brazing operation at the customer premise or pass the complaint on to a specialist in-charge of handling brazing, if the fault identified is a gas leak	P11. comply with industry practices and organizational procedures to ensure the co-ordination, as required, of the activities of other persons in the work location affected by: P11.1. the identification and location of the fault(s) P11.2. the rectification of the fault(s)	None
PC9. reassemble the unit		
PC10. switch on power supply and confirm that unit is functioning	P16. perform tests, as required, on the product(s) and/or system(s) to ensure it is fault free and operates in accordance with:	None
PC11. check that all the modules of the unit work as per specifications	P16.1. the product(s) and/or system(s)'s design P16.2. manufacturer's instructions	None
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		

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
PC14. collect necessary payments from the customer, if applicable		
PC15. fill in customer acknowledgement form	P17.4 the completion of relevant documentation and recording of product(s) and/or system(s) data/information on the completion of the fault rectification activity	None
PC16. complete other documentation procedures to record complaint closure		None
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 the power supply, compressor, fan motors, PCB	P12 identify, locate, analyze and rectify faults	None
PC20. fix the dysfunctional air conditioner in designated time		
PC21. rectify completely to avoid repeat fault in the air conditioner		
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 center, if a faulty module is to be replaced		
PC26. secure repairs completion receipt from customer		
PC27. educate customer on air conditioner maintenance and correct practices to follow in order to avoid further		

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
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		
PC31. interact with service technicians from time to time in order to understand problems faced on field		
PC32. educate junior level technicians about commonly occurring problems and diagnosis procedures		
<b>Knowledge &amp; Understanding; Organisational Context</b>	<b>Knowledge &amp; Understanding</b>	
KA6. company's policies on: incentives, delivery standards and personnel management and customer service standards		
KA7. reporting and documentation processes	K11.4. the completion of relevant documentation and recording of product(s) and/or system(s) data/information on the completion of the fault rectification activity	None
KA8. air conditioner manufacturing capabilities of the organization		
KA9. importance of the individual's role in the system		
KA10. reporting structure		

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
<b>Technical Knowledge</b>	<b>Technical Knowledge</b>	
KB16. different types of air conditioners, e.g., window, split air, cassette conditioners and differences in their operation	K1. the applications, operation, operating principles, advantages and limitations of different product(s) and/or system(s) and their associated components	None
KB17. features of different air conditioners of the company		
KB18. functioning of the appliance and its various modules		
KB19. method of air conditioning, its use and functioning of sealed system		
KB20. Basics of types of refrigerants such as R12, R22, R134a, R290, R600a, R410, R32 use of different brazing sticks, types of brazing torches and their application		
KB21. types of brazing torches, types of fluxes and their application		
KB22. basic electronics (knowledge of components such as diode, transformer, LED, transistor, capacitor, resistor, inductor, thermistor, lcs		
KB23. functioning of various electromechanical parts of the air conditioner	K1. the applications, operation, operating principles, advantages and limitations of different product(s) and/or system(s) and their associated components	None
		K2. how to obtain clear and detailed information about the reported fault(s) and any modules or components which need to be repaired or replaced from relevant:

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
		K2.1 sources of information K2.2 services and/or maintenance records K2.3 manual product(s) and/or system(s) checks
		K3. the organizational procedures and industry practices when carrying out the processes for the identification and rectification of faults for: K3.1 advising the relevant people about the potential disruption and consequences of the work activity K3.2 confirming a program of work with the relevant people K3.3 producing a risk assessment and method statement
		K4. how to verify that job information and documentation is current and relevant and that the instruments, access equipment and tools are fit for purpose
		K5. how to interpret relevant data, diagrams and drawings
		K6. the correct procedures for safe-isolation
KB24. 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		



## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
KB25. troubleshooting knowledge with respect to air conditioners	<p>K7. the methods, techniques and processes for identifying, locating, analyzing and rectifying faults</p> <p>K8. the methods, techniques and procedures for repairing, removing and replacing, as required:</p> <p>K8.1 cables/flexes/hoses</p> <p>K8.2 product(s) and/or system(s) modules and components</p>	None
		<p>K9. the tests and testing procedures to ensure that the product(s) and/or system(s) is fault free and operates in accordance with:</p> <p>P9.1 the product(s) and/or system(s)'s design</p> <p>P9.2 manufacturer's instructions</p>
		<p>K10 . how to ensure, if the fault(s) cannot be corrected immediately, the safety of the product(s) and/or system(s) and their associated modules and components</p>

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
		<p>K11. organizational procedures for:</p> <p>K11.1 handing over the product(s) and/or system(s) to the Customer/client</p> <p>K11.2 informing relevant people about issues outside the limitations of your responsibility</p> <p>K11.3 the safe transport and/or disposal of unwanted products, material, substances and/or liquids in accordance with suppliers' and manufacturers' instructions</p>
		<p>K11.4 the completion of relevant documentation and recording of product(s) and/or system(s) data/information on the completion of the fault rectification activity</p>
KB26. hazards, their causes and prevention/personal safety	K12. the appropriate industry standards and regulations relevant to fault identification and rectification in consumer electrical and electronic products and systems	None
KB27. frequently occurring faults such as poor/no cooling, noisy unit, condensation water over flowing		
KB28. components/modules of the air conditioner and their prices		
KB29. energy ratings such BEE rating and concepts of e waste		
KB30. other products of the company		

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

NOS Mapping Descriptions			
<b>Indian QP Title</b>	Field Engineer RACW	<b>UK Qualification</b>	Technician Consumer Electronics
<b>Indian QP Code</b>	ELE/Q3105	<b>UK Qualification Code</b>	None
<b>Indian NOS Code</b>	ELE/N3116	<b>UK NOS Code</b>	SUMCEEPS01
<b>Indian NOS</b>	Install newly purchased washing machine	<b>UK NOS</b>	Install, test and handover consumer electrical and electronic products and systems
<b>Scope</b>	This unit is about installing the newly purchased washing machine at customer's premises.	<b>Overview</b>	This standard is for people who install consumer electrical and electronic products and systems in premises. The person carrying out this work must be able to comply with the procedures and methods for installing and handing over consumer electrical and electronic products and systems in accordance with the current versions of the appropriate industry standards and regulations, the specification, industry recognized working practices, the working environment and the natural environment. They must know and understand the operation, operating principles, application and limitations of different types of consumer electrical and electronic products and systems, and the techniques for their installation and testing.

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

### Competency Mapping

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
<b>Install newly purchased washing machine</b>	<b>Install, test and handover consumer electrical and electronic products and systems</b>	
PC1. remove the washing machine packaging in which it was shipped to customer		
PC2. check that the product matches the customer order in terms of color and make		
PC3. check that all supporting accessories purchased are there in the pack	P1.2 that the supplies available are compatible with the products and/or systems to be installed	None
		P2. produce a risk assessment and method statement, as required, for the work to be carried out, including the identification and use of personal protective equipment
		P4. interpret relevant data, diagrams and drawings for the product(s) and/or system(s)
		P5. select materials, accessories and components needed to complete the installation activity and confirm that they are: P5.1 of the right type and size P5.2 fit for purpose in accordance with the product(s) and/or system(s) design P5.3 suitable for the working environment

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
		P7 complete the safe-isolation of supplies as and when required to ensure the safe installation and connection of the product(s) and/or system(s) and their associated components
PC4. remove all transport pins inside the drum of the washing machine before starting the machine		
PC5. check tools and fitments required for the installation are available		
PC6. clear up the packaging material waste and dispose as per company's norms	P12. implement organizational procedures for the safe transport and/or disposal of unwanted products, material, substances and/or liquids in accordance with suppliers' and manufacturers' instructions	None
PC7. seek customer's input on placement of washing machine	P1.1. the location of the products and/or systems with the customer	None
PC8. make sure that the necessary plumbing installations for water inlet and outlet are available	P5. position, secure and connect the product(s) and/or system(s) and their associated components in accordance with:	None
PC9. follow instructions in the installation manual to place the machine at appropriate distance from the water tank	P5.1 the product(s) and/or system(s)'s design P5.2 manufacturer's instructions	None
PC10. ensure that the machine is placed against an exterior wall in order to the drain hose running along the inside wall		None
PC11. check nearest plug point and distance of washing machine from it		None

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
PC12. place on appropriate stand or platform as recommended by company		None
PC13. educate customer on placing washing machine in obstruction-free area	P1.3. there is a hazard free access to the location	None
PC14. identify the water inlet valve in the household plumbing		
PC15. ensure that the valve is turned off		
PC16. connect the PVC hose water inlet of the washing machine to the valve	P8. ensure that all necessary connections to the product(s) and/or system(s) and their associated components are secure, electrically and/or mechanically sound, safe and fit-for-purpose	None
PC17. connect the waste water outlet from the washing machine to the waste system such that the dirty water does not get siphoned back into the washing machine		None
PC18. connect the washing machine to power supply/stabilizer		None
PC19. demonstrate the features and utility		
PC20. explain the precautions to be taken while using the washing machine		
PC21. use the correct tools and equipment for installation	P3. verify that job and product(s) and/or system(s) information and documentation is current and relevant and that the instruments, access equipment and tools are fit for purpose	None
PC22. make inlet, outlet and power supply connections securely	P8. ensure that all necessary connections to the product(s) and/or system(s) and their associated components are secure, electrically and/or mechanically sound, safe and fit-for-purpose	None
PC23. operate and check that there are no leaks and the machine is in a safe and stable condition		None

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
PC24. educate customer on proper operation and maintenance procedures		
PC25. fill in customer acknowledgement form	P10. obtain <i>customer/client</i> acceptance of the of the	None
PC26. seek customer's signature	<b>product(s) and/or system(s)</b> in accordance with <b>organizational procedures</b>	None
PC27. complete other documentation for recording completion of installation	P11. ensure that all relevant documentation is correctly completed and recorded in accordance with organizational procedures	None
PC28. call customer care and inform about job completion		
PC29. understand the work requirement from superior		
PC30. report to superior on the work completed		
PC31. escalate the customer issues and problems unresolved at field level	P12.2 informing relevant people about issues outside the limitations of your responsibility	None
PC32. carry out daily field schedule as per instructions		
PC33. refer unrelated customer queries		
PC34. report work status and prepare required documentation as per company standards		
PC35. interact with service technicians from time to time in order to understand problems faced on field		
PC36. educate junior level technicians about installation procedures and customer handling		
PC37. remove packaging without damage to the washing machine or accessories		

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
PC38. position the washing machine as per location guidelines given in the installation manual	P9. perform tests, as required, on the product and/or system to ensure it is fault free and operates in accordance with: P10.1 the product(s) and/or system(s)'s design P10.2 manufacturer's instructions	None
PC39. educate customer on importance of proper placing		
PC40. inform about switching off the unit during voltage fluctuations and use of voltage regulators, if necessary		
PC41. complete installation in time target given		
PC42. document the work completed on the company ERP software for tracking and future references		
<b>Knowledge &amp; Understanding; Organisational Context</b>	<b>Knowledge &amp; Understanding</b>	
	K4. how to verify that job information and documentation is current and relevant and that the instruments, access equipment and tools are fit for purpose	None, K6 and K4 is a duplicate entry in the UK NOS
KA1. company's policies on: incentives, delivery standards, and personnel management, call closure	K5. the appropriate industry standards and regulations relevant to installing, testing and handing over consumer electrical and electronic products and systems K14. how to ensure that all relevant documentation is correctly completed and recorded in the appropriate systems in accordance with organizational procedures	None



## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
KA2. company's sales, installation and after sales support policy		
		K6. how to verify that job information and documentation is current and relevant and that the instruments and tools to be used are fit for purpose
		K7. how to interpret relevant data, diagrams and drawings
		K8. how to select materials, accessories and components needed to complete the activity and confirm that they are: K8.1 of the right type and size K8.2 fit for purpose in accordance with the product(s) and/or system(s) design K8.3 suitable for the working environment
		K9. the methods and techniques for positioning, securing and connecting the product(s) and/or system(s) and their associated components
		K10. the correct procedures for the safe-isolation of supplies as and when required to ensure the safe installation and connection of the product(s) and/or system(s) and their associated components
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		

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
<b>Technical Knowledge</b>	<b>Technical Knowledge</b>	<b>Gap</b>
KB1. installation-site requirements (structural and plumbing requirements)	K2. how to confirm: K2.1 the location of the product(s) and/or system(s) with the customer K2.2 that the supplies available are compatible with the products and/or systems to be installed K2.3 that there is a hazard free access to the work location	None
KB2. different types of washing machines such as front load and top load	K1. the applications, operation, operating principles, advantages and limitations of different products and/or systems and their associated components	None
KB3. different features and functionalities of various models		
KB4. safety precautions to be taken while installing	K11. methods and techniques to ensure that all necessary connections to the product(s) and/or system(s) and their associated components are secure, electrically and/or mechanically sound, safe and fit-for-purpose	None
KB5. manual-based procedure of installing the washing machine	K12. the tests, as required, on the product and/or system to ensure it is fault free and operates in accordance with: P12.1 the product(s) and/or system(s)'s design P12.2 manufacturer's instructions	None

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
		K13. how to obtain customer acceptance of the product(s) and/or system(s) in accordance with organizational procedures
KB6. packaging waste disposal procedures	K15. the methods for the safe transport and/or disposal of unwanted products, material, substances and/or liquids in accordance with organizational procedures, suppliers' and manufacturers' instructions	None
		K16. the limitations of your responsibility when installing, testing and handing over consumer electrical and electronic products and/or systems
		K17. the organizational procedures for: K17.1 handing over the product(s) and/or system(s) to the customer K17.2 informing relevant people about issues outside the limitations of your responsibility
KB7. use of test equipment and tools such as multi-meter, volt - ohmmeter		
KB8. other products of the company		
KB9. safety rules, policies and procedures	K3. how to produce a risk assessment and method statement for the work to be carried out, including the identification and use of personal protective equipment, in accordance with; K3.1 the product(s) and/or system(s) design K3.2 organizational procedures	None
KB10. quality standards to be followed		

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

NOS MAPPING - DESCRIPTION			
<b>Indian QP Title</b>	Field Engineer RACW	<b>UK Qualification</b>	Technician Consumer Electronics
<b>Indian QP Code</b>	ELE/Q3105	<b>UK Qualification Code</b>	None
<b>Indian NOS Code</b>	ELE/N3117	<b>UK NOS Code</b>	SUMCEEPS02
<b>Indian NOS</b>	Attend to service complaints – washing machine	<b>UK NOS</b>	Identify and rectify faults in consumer electrical and electronic products and systems
<b>Scope</b>	This unit is about visiting customer's premise in order to provide support for rectifying washing machine related faults as per the complaint recorded at customer care.	<b>Overview</b>	This standard is for people who identify and rectify faults in consumer electrical and electronic products and systems either as part of a service and maintenance activity on customer premises or in a repair workshop. The person carrying out this work must be able to carry out the processes and procedures for the identification and rectification of faults in accordance with the current versions of the appropriate industry standards and regulations, the specification, industry recognized working practices, the working environment and the natural environment. They must: <ul style="list-style-type: none"> <li>• know and understand the operation, operating principles, application</li> </ul>

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

<p><b>Scope</b></p>		<p><b>Overview</b></p>	<p>and limitations of different types of consumer electrical and electronic products and systems and their associated modules and components.</p> <ul style="list-style-type: none"> <li>• be able to apply the correct methods and procedures when identifying and rectifying faults in consumer electrical and electronic products and systems</li> </ul>
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## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

### Competency Mapping

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
<b>Attend to service complaints – washing machine</b>	<b>Identify and rectify faults in consumer electrical and electronic products and systems</b>	
PC1. diagnose the fault in the unit as per customer interaction and initial inspection		
PC2. identify the cycle(fill/wash and rinse/spin and drain) during which the problem occurs based on customer interaction	P1. obtain clear and detailed information about the reported fault(s) in the product(s) and/or system(s) from relevant: P1.1 sources of information P1.2 service and/or maintenance records P1.3 manual and visual checks	None
		P2. advise the relevant people clearly and accurately about the potential disruption and consequences of carrying out the processes and procedures for the identification and rectification of faults
		P3. confirm a program of work with the relevant people in accordance with organizational procedures
		P4. produce a risk assessment and method statement, as required, for the work to be carried out, including the identification and use of personal protective equipment
		P5. verify that job and product(s) and/or system(s) information and documentation is current and relevant and that, as required, the access equipment and tools are fit for purpose

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
		P6. confirm that the supplies available are compatible with the product(s) and/or system(s)
		P7. interpret relevant data, diagrams and drawings for the product(s) and/or system(s)
		P9. select materials, accessories, components and/or modules needed to complete the fault identification, rectification and repair activity, and confirm that they are: P9.1 of the right type and size P9.2 fit for purpose in accordance with the product(s) and/or system(s)'s design P9.3 suitable for the working environment
PC3. ensure that the unit is unplugged before carrying out any tests	P10. complete safe-isolation as and when required to ensure the safe identification and rectification of faults in the products and/or systems and their associated components	None
		P11. comply with industry practices and organizational procedures to ensure the co-ordination, as required, of the activities of other persons in the work location affected by: P11.1 the identification and location of the fault(s) P11.2 the rectification of the fault(s)
PC4. inspect basic parts such as valve strainers, fill hose, drain line, pressure tube, water valves, pressure sensor	P12. identify, locate, analyze and rectify faults	None

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
PC5. carry out basic tests such as power supply inspection, volt ampere test and continuity test		None
PC6. Dis-assemble the washing machine and check for faults in the control/service panel, lid switch, temperature selector switch, water level control switch, timer, etc.		None
PC7. follow the electrical circuit path and inspect each component in that sequence in order to identify any electrical faults in the unit		
PC8. ensure that all parts such as motors, transformer, pulley and belt system, motor starting switch, solenoid, clutch lining have been inspected		
PC9. send to factory for in depth diagnosis, if unable to identify problem at site		
PC10. if the fault identified is due to a problem in the water source, ensure that water supply is turned on and that there are no kinks in the hoses	P12. identify, locate, analyze and rectify faults	None
PC11. if the problem is due to soap deposition inside the machine, clean the same and run the machine through a complete wash cycle	P12. identify, locate, analyze and rectify faults	None
PC12. if the fault identified is due to damage of components such as water inlet valve, capacitor, fuse, circuit breaker or door knob, timer replace immediately	P13. repair, remove and replace, as required, in accordance with industry recognized methods, techniques and procedures: P13.1 cables /flexes/hoses	None



## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
PC13. if the dysfunctional module/part is specialized and cannot be replaced immediately, remove and replace during second visit with a functional one as collected from the service center	P14. ensure, if the fault(s) cannot be corrected immediately, the safety of the product(s) and/or system(s) and their associated modules and components	None
		P15 inspect and test, as appropriate, and in accordance with industry recognized methods and practices, the repaired and/or replaced modules and components
PC15. reassemble the unit		
PC16. switch on power supply and confirm that the unit is functioning as per specifications	P16. perform tests, as required, on the product(s) and/or system(s) to ensure it is fault free and operates in accordance with: P16.1 the product(s) and/or system(s)'s design P16.2 manufacturer's instructions	None
PC17. demonstrate and confirm functionality of the unit with the customer		
PC18. collect necessary payments from the customer		
PC19. fill in customer acknowledgement form	P17.4 the completion of relevant documentation and recording of product(s) and/or system(s) data/information on the completion of the fault rectification activity	None
PC20. complete other documentation procedures to record complaint closure		None
PC21. secure repairs completion receipt from customer		
PC22. educate customer on washing machine maintenance in order to avoid further problems		
PC23. ensure damage free handling of the unit		

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
PC24. optimize the time taken to fix the dysfunctional washing machine		
PC25. rectify to avoid repeat fault in the washing machine		
PC26. meet daily target for attending to number of complaints		
PC27. record 100% customer satisfaction on feedback form, post service		
PC28. make sale of related products or annual maintenance contracts		
PC29. interact with service technicians from time to time in order to understand problems faced on field		
PC30. educate junior level technicians about commonly occurring problems and diagnosis procedures		
<b>Knowledge &amp; Understanding; Organisational Context</b>	<b>Knowledge &amp; Understanding</b>	<b>Gap</b>
KA1. company's policies on: incentives, delivery standards and personnel management and customer service standards		
KA2. reporting and documentation processes	P11.4 the completion of relevant documentation and recording of product(s) and/or system(s) data/information on the completion of the fault rectification activity	None
KA3. washing machine manufacturing capabilities of the organization		
KA4. importance of the individual's role in the system		
KA5. reporting structure		

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
<b>Technical Knowledge</b>	<b>Technical Knowledge</b>	Gap
KB1. different cycles in the machine running process and possible symptoms of faults in respective cycles	K1. the applications, operation, operating principles, advantages and limitations of different product(s) and/or system(s) and their associated components	None
KB2. controls and features of different washing machine models of the company		
KB3. faults common to all types of washing machines and faults specific to different models		
		K2. how to obtain clear and detailed information about the reported fault(s) and any modules or components which need to be repaired or replaced from relevant: K2.1 sources of information K2.2 services and/or maintenance records K.3 manual product(s) and/or system(s) checks
		K3. the organizational procedures and industry practices when carrying out the processes for the identification and rectification of faults for: K3.1 advising the relevant people about the potential disruption and consequences of the work activity K3.2 confirming a program of work with the relevant people K3.3 producing a risk assessment and method statement

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
		K4. how to verify that job information and documentation is current and relevant and that the instruments, access equipment and tools are fit for purpose
		K5. how to interpret relevant data, diagrams and drawings
		K6. the correct procedures for safe-isolation
KB5. fundamentals of electricity such as ohms law, difference between ac and dc, calculation of energy consumption of the appliance, understanding of domestic wiring, understanding of series and parallel connections		
KB6. basics of gears, behavior of gear mechanism, understanding of linear and angular movements, concepts such as rpm, torque etc.	K1. the applications, operation, operating principles, advantages and limitations of different product(s) and/or system(s) and their associated components	None
KB7. troubleshooting knowledge with respect to washing machine	K7. the methods, techniques and processes for identifying, locating, analyzing and rectifying faults K8. the methods, techniques and procedures for repairing, removing and replacing, as required: K8.1 cables/flexes/hoses K8.2 product(s) and/or system(s) modules and components	None
KB8. types of switches such as thermal, mechanical, electronic, magnetic, electromagnetic, electromechanical, pressure optical and bimetal	K1. the applications, operation, operating principles, advantages and limitations of different product(s) and/or system(s) and their associated components	None

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
KB9. fundamentals of motors, types of motors and their working methods		
KB10. functioning of components and parts such as solenoids and plungers		
		K9. the tests and testing procedures to ensure that the product(s) and/or system(s) is fault free and operates in accordance with: P9.1 the product(s) and/or system(s)'s design P9.2 manufacturer's instructions
		K10. how to ensure, if the fault(s) cannot be corrected immediately, the safety of the product(s) and/or system(s) and their associated modules and components
		K11 organizational procedures for: K11.1 handing over the product(s) and/or system(s) to the customer/client K11.2 informing relevant people about issues outside the limitations of your responsibility K11.3 the safe transport and/or disposal of unwanted products, material, substances and/or liquids in accordance with suppliers' and manufacturers' instructions K11.4 the completion of relevant documentation and recording of product(s) and/or system(s) data/information on the completion of the fault rectification activity

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
KB11. hazards, their causes and prevention/personal safety		
KB12. frequently occurring faults such as noise, water not filling/over filling, water not draining their causes and solutions		
KB13. components/modules of the washing machine and their prices		
KB14. other products of the company		

NOS Mapping Descriptions			
<b>Indian QP Title</b>	Field Engineer RACW	<b>UK Qualification</b>	Technician Consumer Electronics
<b>Indian QP Code</b>	ELE/Q3105	<b>UK Qualification Code</b>	None
<b>Indian NOS Code</b>	ELE/N9901	<b>UK NOS Code</b>	Coordinate a work site in the building services engineering sector
<b>Indian NOS</b>	Interact with colleagues	<b>UK NOS</b>	SUMBSE03
<b>Scope</b>	This unit is about the individual's level of communication with colleagues and other departments within the organization. It determines the ability to work as a team member to achieve the required deliverables on schedule.	<b>Overview</b>	This standard is for people who are required to coordinate the work site for the installation and/or maintenance activities associated with building services engineering systems and is appropriate to the air conditioning, consumer electrical and electronic products, domestic heating, electro technical, heating & ventilation, plumbing and refrigeration industries. The person

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Scope		Overview	<p>undertaking the responsibility for the coordination of the work site must be able to oversee, as relevant, the work of other operatives and/or other contractors, and in accordance with relevant industry standards and regulations, the specification, working practices, the working environment and the natural environment confirm:</p> <p>the work to be undertaken</p> <ul style="list-style-type: none"> <li>• a program of work with relevant people</li> <li>• the organization of the appropriate resources</li> <li>• that equipment, accessories and components are fit-for-purpose</li> <li>• that work is carried out safely</li> <li>• all relevant documentation is completed accurately</li> </ul> <p>The person carrying out this work should know and understand the extent of their role and responsibilities, including how best to motivate, monitor and communicate with others in accordance with organizational procedures.</p>

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

### Competency Mapping

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
<b>Interact with colleagues</b>	<b>Coordinate a work site in the building services engineering sector</b>	
PC1. understand work requirements, targets and incentives	P1. produce a risk assessment and method statement for the work to be carried out on the identified building services engineering system	None
PC2. learn about new product models, their features and functions		
		P2. allocate duties and responsibilities to operatives, when appropriate, to make best use of their competence
		P3. instruct the operatives, where relevant, about their duties and responsibilities clearly and concisely
PC3. report problems identified in the field	P4. confirm that any instructions given are understood	None
PC4. escalate customer concerns that cannot be handled on field		
PC5. resolve personnel issues	P5. coordinate effectively, when relevant, the work of other contractors	None
PC6. receive feedback on work standards and customer satisfaction	P6. monitor, as appropriate, that the work of operatives is safe, fit-for-purpose, cost effective and in accordance with: P6.1 industry recognized working practices P6.2 the specification P6.3 the current versions of appropriate industry standards and regulations	None
PC7. communicate any potential hazards at a particular location	P7. ensure that safe and appropriate action is taken promptly where a non-	



## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
	compliance is identified during the program of work	
PC8. meet given targets		
		P8. ensure that all documentation associated with the installation and/or maintenance work is in accordance with: P8.1 organizational procedures P8.2 the current versions of appropriate industry standards and regulations
PC9. deliver work of expected quality despite constraints		
PC10. Have feedback from a happy and satisfied customer		
		P10. verify that the equipment, accessories and components are: P10.1 compatible to the working environment P10.2 in accordance with the specification P10.3 of the required and correct type P10.4 delivered on time and undamaged P10.5 suitable and safely stored
PC11. resolve inter-personnel conflicts and achieve smooth workflow	P9. liaise with the relevant people to resolve issues which are outside the scope of your job role	None
		P11. confirm that the installation and/or maintenance work completed is in accordance with: P11.1 the specification P11.2 the current versions of appropriate industry standards and regulations
PC12. receive spares from tool room or stores		

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
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 & Understanding; Organisational Context	Knowledge & Understanding	Gaps in Indian NOS
KA1. company's policies on: incentives, delivery standards, and personnel management	K2. how to interpret organizational procedures and monitor changing conditions at the work site	None
		K1. your role and responsibilities in relation to: K1.1 monitoring and implementing health and safety on the work site K1.2 the work to be undertaken K1.3 allocating roles and responsibilities K1.4 monitoring the work of operatives K1.5 liaising with relevant people
KA2. importance of the individual's role in the workflow		
KA3. reporting structure		
Technical Knowledge	Technical Knowledge	Gaps in Indian NOS
KB1. how to communicate effectively	K4. how to communicate effectively with relevant people	None
KB2. how to build team coordination	K3. how to coordinate operatives you are responsible for in relation to: K3.1 supervision and motivation K3.2 identification of competence K3.3 planning work allocations, duties and responsibilities	None

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
		K5. the current versions of appropriate industry standards and regulations relevant to the identified building services engineering system
		K6. the organizational procedures for: K6.1 completing the necessary documentation K6.2 agreeing a programmer of work with relevant people K6.3 confirming that the installation and/or maintenance work is completed K6.4 identification of competence
		K7. methods that will verify that the equipment, accessories and components are: K7.1 compatible to the working environment K7.2 in accordance with the specification K7.3 of the required and correct type K7.4 delivered on time and undamaged K7.5 suitable and safely stored
		K8. how to manage the available storage facility at the work site

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

NOS Mapping Descriptions			
<b>Indian QP Title</b>	Field Engineer RACW	<b>UK Qualification</b>	Technician Consumer Electronics
<b>Indian QP Code</b>	ELE/Q3105	<b>UK Qualification Code</b>	None
<b>Indian NOS Code</b>	None	<b>UK NOS Code</b>	Apply health and safety and environmental legislation in the building services engineering sector
<b>Indian NOS</b>	None	<b>UK NOS</b>	SUMBSE01
<b>Scope</b>		<b>Overview</b>	<p>This standard is about establishing and maintaining working practices and procedures across a specified range of building services engineering sector installation and/or maintenance activities that give consideration to health and safety, the natural environment and the working environment. This would include identifying hazards and risks, applying appropriate procedures and working practices to protect yourself and others.</p> <p>This work may be carried out in the context of plumbing, electro technical, refrigeration and air conditioning, heating and ventilation, or consumer electrical and electronic products.</p> <p>The person carrying out this work must</p>

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

<p><b>Scope</b></p>		<p><b>Overview</b></p>	<p>possess the skills and knowledge to be able to use building services engineering sector equipment, components, materials and substances effectively, efficiently, in accordance with the specification giving consideration to the natural environment and the working environment in terms of waste materials and if appropriate water usage.</p>
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## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

### Competency Mapping

Performance Criteria - Indian NOS	Performance Criteria - UK NOS	Gaps in Indian NOS
	<b>Apply health and safety and environmental legislation in the building services engineering sector</b>	
		P1. identify the appropriate industry standards and regulations
		P2. apply relevant organizational procedures
		P3. identify hazards and risks
		P4. complete documentation in accordance with the requirements of the organizational procedures
		P5. review the organizational procedures to ensure that they will not cause potential hazards and risks
		P6. implement organizational procedures, suppliers' and manufacturers' instructions appropriate to the safe use, maintenance, handling, transport and storage of: P6.1 tools, plant and access equipment P6.2 equipment and components P6.3 materials and substances
		P7. report to the relevant people in accordance with organizational procedures: P7.1 potential hazards and risks P7.2 potentially harmful materials and substances
		P8. ensure that the conduct of people when undertaking the installation and/or maintenance activity does not cause potential hazards and risks

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

		<p>P9. comply with organizational procedures in the event of:</p> <p>P9.1 injuries to self and/or others</p> <p>P9.2 emergencies</p> <p>P9.3 evacuation procedures</p>
		<p>P10. implement organizational procedures for the safe transport and/or disposal of waste material, substances and liquids in accordance with suppliers' and manufacturers' instructions</p>
<b>Knowledge &amp; Understanding; Organisational Context</b>	<b>Knowledge &amp; Understanding</b>	<b>Gap</b>
		K1. appropriate industry standards and regulations
		K2. your responsibilities in accordance with organizational procedures
		K3. the application, advantages and limitations of different working practices
		K4. how to recognize materials and substances that can potentially be harmful
		K5. the documentation associated with the organizational procedures' requirements
		K6. the organizational procedures for dealing with the presence of harmful materials and substances
		K7. where and how to locate relevant health and safety information needed to complete the installation and/or maintenance activity in accordance with organizational procedures
		K8. what constitutes a hazard or risk

## TRANSNATIONAL SKILL STANDARDS FOR ELECTRONICS SECTOR

		K9. the methods for handling of hazardous materials and substances in accordance with organizational procedures
		K10. The organizational procedures, suppliers' and manufacturers' instructions for safe use, maintenance, handling, transport and storage of: K10.1 tools, plant and access equipment K10.2 equipment and components K10.3 materials and substances
		K11. the warning signs for hazardous materials and substances
		K12. the methods for the safe transport and/or disposal of waste material, substances and liquids in accordance with: K12.1 organizational procedures K12.2 suppliers' and manufacturers' instructions
		K13. the organizational procedures relevant to reporting issues relating to: K13.1 health and safety K13.2 harmful substances and material K13.3 emergencies on site

**\*General Note:** In the NOS, Range statement is not separated out. It is integrated holistically into the PCs and technical knowledge within the QPs.