



**NATIONAL OCCUPATIONAL STANDARD**

**WATCH REPAIRER**

**LEVEL 4**

**REFERENCE CODE / 13UMS0386-4**

**OFFICIAL GAZETTE DATE-ISSUE / 26.12.2013-28863 (Repeated)**

**Occupation:** WATCH REPAIRER

**Level:** 4<sup>I</sup>

**Reference Code:** 13UMS0386-4

**Prepared by:** Confederation of Turkish  
Tradesmen and Craftsmen  
(TESK)

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Occupational Qualification Level is determined as Level Four (4) in the octal (8) level matrix.

## TERMS, SYMBOLS AND ABBREVIATIONS

**BALANCE:** The main component of a watch which ensures proper operation,

**PAIR (NIPPERS, PINCERS):** A tool used to hold the pieces,

**ISCO:** International Standard Classification of Occupations,

**OHS:** Occupational Health & Safety,

**CALIBER:** Reference number of the watch,

**CASE:** The main body, on which the mechanism is attached,

**PERSONAL PROTECTIVE EQUIPMENT (PPE):** All kinds of tools, instruments, appliances and devices which are worn, put on or hold by the worker and which protect the worker from one or more hazards arising from the work and effect the health and safety of the worker, and which are designed to suit such purpose,

**QUARTZ WATCH:** Digital, battery-operated, etc. piezoelectric watches,

**PINCERS:** The piece which operates the watch,

**MECHANISM:** The internal part of the watch,

**ASSEMBLY STAND:** Hand-tool used to repair the mechanism,

**STATIC ELECTRICITY:** Means probability of occurrence of a hazardous event and combination of results.

**RISK ASSESSMENT:** Activities carried out for detection of hazards present in or to be imported to the workplace, analyzing and grading factors causing such hazards to become risks and risks arising from the hazards and deciding on the control measures,

**STERN AND TUBE:** Adjusting lever of the watch,

**WATCH CLEANING MACHINE:** The machine used to clean the parts of the watch,

**SPRING:** Spring pin that fixes the watch band to the watch,

**CHASSIS:** The main body forming the inner mechanism of the watch,

**DANGER:** Potential of damage or injury likely to affect the worker or work place and likely to exist in the workplace or to be caused externally,

**CLEANING BAG (CAGE):** The instrument used to clean the mechanism parts removed,

**CROWN:** The piece used to set the watch,

**ROD:** The mill which is connected to the crown,

**PUMP (SPRING CASE):** The case to which spring is affixed,

**SPRING:** The spring which supports the watch,

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## **1. INTRODUCTION**

National occupational standard for Watch Repairer (Level 4) was issued by the Confederation of Turkish Craftsman and Tradesman (TESK), assigned by Vocational Qualifications Authority (VQA) as per the provisions of Law No.5544 and “Bylaw on Drawing up National Occupational Standards” and “Regulation on the Establishment, Duties and Operation Procedures and Principles of the Sector Committees of Vocational Qualification Authority” introduced pursuant to the aforementioned Law.

National occupational Standard for Watch Repairer (Level 4) was assessed upon receiving the opinions of the related institutions and organizations in the sector, and approved by VQA Board of Directors upon examination of VQA Metal Sector Committee.

## **2. DEFINITION OF THE OCCUPATION**

### **2.1. Definition of the Occupation**

Watch Repairer (Level 4) is a person who maintains and repairs all kinds of mechanical, battery operated and digital watches such as watch, pocket watch, board clock, square clock wall clock and table clock, on his/her own or within a team using initiative; taking the occupational health and safety measures and in conformity with the documents of environment protection legislation and quality management system.

### **2.2. Place of the Occupation in International Classification Systems**

**ISCO 08:** 7311 (Producers and Repairers of Precision Tools)

### **2.3. Regulations on Health, Safety and Environment**

Environmental Law No. 2872

Labor Law No. 4857

Social Security and General Health Insurance Law No.5510

Law No. 6331 on Occupational Health and Security

Regulation on Procedures and Principles of Occupational Health and Safety Trainings of the Employees

By Law on the Safety and Health Measures in the Works with Chemical Substances

By Law on the Usage of Personal Protective Equipment in the Business Places

Bylaw on the Control of Hazardous Wastes

Furthermore, it is essential to obey laws, statutory rules and regulations on occupational health and safety and environment; and to perform risk analysis regarding this issue.

### **2.4. Other Legislation Related to the Occupation**

Tradesmen and Craftsmen Occupational Organization Law No.5362

Law of the Union of Chambers and Commodity Exchanges of Turkey and Chambers and Exchange Commodities No.5174

Vocational Training Law No.3308

And it is essential to obey other current legislations, laws, statutory rules and by-laws.

### **2.5. Working Environment and Conditions**

Watch Repairer (Level 4) works indoor and outdoor, sits for long periods of time under light. There is a need for a high quality lighting system. The environment should be ergonomic, free from dust, clean, and ventilated. There are some risks of accident, injury as well as muscular and skeleton-related diseases which require occupational health and safety measures to be taken during the operation. In cases where the risks cannot be fully eliminated Watch Repairer (Level 4) wears proper personal protective equipment provided by the employer.

### **2.6. Other Requirements Regarding the Occupation**

There is no other requirement regarding occupation.

### 3. OCCUPATIONAL PROFILE

#### 3.1. Duties, Tasks and Performance Criteria

Duties Tasks		Tasks		Performance Criteria	
Code	Title	Code	Title	Code	Description
A	Applying occupational health and safety, fire and emergency rules	A.1	To apply the legal rules and the rules of the workplace, with regard to occupational health and safety (OHS)	A.1.1	Learns related norms by attending the trainings on occupational health and safety organized by the establishment or other institutions.
				A.1.2	Uses working clothes and personal protective equipments suitable to work.
				A.1.3	Keeps OHS protection and response equipments properly and in operative state.
				A.1.4	Ensures the security of the workplace and personnel by placing proper warning signs and plates in line with the instructions and keeping the same during the operation.
				A.1.5	Makes sure that inflammable and combustible materials are kept safe.
		A.2	To reduce the risk factors	A.2.1	Contributes to risk determination and evaluation studies.
				A.2.2	Attends to the studies conducted to evaluate the risk factors and obtains information and skills for reducing the same.
		A.3	To apply emergency procedures under dangerous situations	A.3.1	Carries out the activities of taking measures to determine the cases of emergency and eliminate them rapidly.
				A.3.2	Informs his/her chiefs and authorities or other relevant institutions, when required, about the dangerous situations not likely to be eliminated instantly.
				A.3.4	Applies emergency procedures related to the machine and operation performed.
		A.4	To apply emergency exit procedures	A.4.1	Applies exit or escape procedures under emergency situations.
				A.4.2	Participates in the periodical studies and practices conducted to share emergency exit and escape experiences with the concerned people and co-workers.

Duties Tasks		Tasks		Performance Criteria	
Code	Title	Code	Code	Title	Code
<b>B</b>	Working in accordance with environmental protection legislation.	<b>B.1</b>	To apply environmental protection standards and procedures.	<b>B.1.1</b>	Participates in the studies carried out to correctly determine the environmental effects of the operations conducted.
				<b>B.1.2</b>	Obtains attitudes and behaviors on protecting the environment by attending to the periodical trainings on the requirements and practices of environment protection.
				<b>B.1.3</b>	Observes the environmental effects during the work processes and takes part in the studies of prevention from hazardous results.
		<b>B.2</b>	To contribute to the reduction of environmental risks	<b>B.2.1</b>	Perform the necessary separation and classification procedure for the recovery of the recyclable materials.
				<b>B.2.2</b>	Separates the dangerous and hazardous materials from the other materials in line with the instructions given, and stores them temporarily upon taking necessary measures.
				<b>B.2.3</b>	Uses personal protective equipment during the operation and in the preparation phase, and makes sure that other personnel use the same.
				<b>B.2.4</b>	Keeps the appropriate appliances, materials and equipment to be used against spilt and leakages available.
		<b>B.3</b>	To use operational assets economically.	<b>B.3.1</b>	Uses establishment resources economically and efficiently.
				<b>B.3.2</b>	Participates in the determination and planning studies to use the establishment resources less and efficiently.



Duties Tasks		Tasks		Performance Criteria	
Code	Title	Code	Code	Title	Code
C	Working in accordance with quality management system documents	C.1	To keep the quality of the operations conducted under control	C.1.1	Checks whether the tools, appliances and materials comply with the standards, learns and teaches how to use them.
				C.1.2	Makes sure that quality requirements are applied according to the instructions on the operation forms, and checks the same.
				C.1.3	Checks the quality of the operations on the basis of operation.
				C.1.4	Fills the quality reports related to the operation.
				C.1.5	Informs the authorized persons, in accordance with the establishment procedures, about the errors and malfunctions detected by him/her during the activities, and coordinates them to be removed in cooperation with the related units.
		C.2	To take part in the prevention efforts for the faults and failures detected during the procedures	C.2.1	Listens, evaluates and solves the complaints and recommendations of junior and senior personnel.
				C.2.2	Takes all necessary measures and conducts trainings and control operations to analyze the recommendations and complaints detected in the customer survey form from his/her junior personnel and related units, and to ensure customer satisfaction.
				C.2.3	Regularly shares the success status in the survey forms from the customers with his/her team.
				C.2.4	Conducts all necessary trainings and control operations to ensure customer satisfaction.

Duties Tasks		Tasks		Performance Criteria	
Code	Title	Code	Code	Title	Code
<b>D</b>	Organizing the work (continues)	<b>D.1</b>	To clean the work environment	<b>D.1.1</b>	Cleans the work environment using machine, hand and cleaning materials, in line with the hygienic measures.
				<b>D.1.2</b>	Organizes the work environment to make it a comfortable work place.
		<b>D.2</b>	To maintain the machines, tools and appliances to be used	<b>D.2.1</b>	Perform basic maintenance and repair procedures in accordance with the instructions.
				<b>D.2.2</b>	Informs the relevant persons about extensive malfunctions.
		<b>D.3</b>	To wear work clothes and to make sure that the personnel wear the same	<b>D.3.1</b>	Chooses the work cloth appropriate for the nature of the operation and provisions of the applicable regulations.
				<b>D.3.2</b>	Checks whether the clothes are clean and appropriate.
				<b>D.3.3</b>	Wears and makes sure that other personnel wear the clothes according to the utilization.
		<b>D.4</b>	To check tools, appliances and materials in the inventory and workplace	<b>D.4.1</b>	Checks the quantity, quality and usability of the materials in the inventory or workplace, according to the work to be done.
				<b>D.4.2</b>	Informs those concerned about the missing materials detected, in terms of type, quantity etc.
				<b>D.4.3</b>	Checks the materials supplied, in terms of type, quantity, date of usage and purchase order.

Duties Tasks		Tasks		Performance Criteria	
Code	Title	Code	Code	Title	Code
<b>D</b>	Organizing the work	<b>D.5</b>	To make sure that the materials supplied are kept under suitable conditions and in appropriate places.	<b>D.5.1</b>	Classifies the materials to be kept according to the storage conditions.
				<b>D.5.2</b>	Places the classified materials to the spots appropriate for the storage conditions.
				<b>D.5.3</b>	Arranges the materials to be placed in the workplace, ensuring a comfortable working environment and without damaging them.
		<b>D.6</b>	To divide the works between junior personnel	<b>D.6.1</b>	Divides the work between the junior personnel, according to their characteristics and capacities, and the features of the work.
				<b>D.6.2</b>	Explains the work to be done to the subordinates.
		<b>D.7</b>	To check the works done by the junior personnel	<b>D.7.1</b>	Follows up whether the works assigned to his/her junior personnel are done ensuring the intended quality, and in time.
				<b>D.7.2</b>	Detects the errors and deficiencies, if any, and provide feedback.
				<b>D.7.3</b>	Makes sure that the errors and deficiencies are remedied.

Duties Tasks		Tasks		Performance Criteria	
Code	Title	Code	Code	Title	Code
<b>E</b>	Performing the measurements	<b>E.1</b>	To choose appropriate tool or equipment	<b>E.1.1</b>	Determines requirements regarding measuring based upon relevant documents.
				<b>E.1.2</b>	Selects appropriate tool or equipment on the basis of standard operating procedures in order to get desired output.
		<b>E.2</b>	To perform measurements	<b>E.2.1</b>	Performs measuring operations by using correct and appropriate measuring techniques.
				<b>E.2.2</b>	Determines or validates the dimensions on the basis of basic calculations.
		<b>E.3</b>	To follow-up calibration of measuring instruments	<b>E.3.1</b>	Performs maintenance and storage of routine equipment for manufacturer's specifications or standard operating procedures.
				<b>E.3.2</b>	Performs / has performed routine adjustments of instruments.
		<b>E.4</b>	To record the measuring results	<b>E.4.1</b>	Records measuring results properly, when required.

Duties Tasks		Tasks		Performance Criteria	
Code	Title	Code	Code	Title	Code
<b>F</b>	Making watch chassis maintenance & repair (to be continued)	<b>F.1</b>	To determine needs of customers	<b>F.1.1</b>	Determines type, functions, construction, and components of the watch case.
				<b>F.1.2</b>	Applies preliminary tests before repair operations in order to test water-resistance of the watch.
				<b>F.1.3</b>	Prepares written price proposal, informs the customer about watch case, and gives recommendations on maintenance and repair process.
				<b>F.1.4</b>	Confirms the maintenance and repair conditions with the customer and reaches an agreement.
				<b>F.1.5</b>	Receives the wristwatch from customer and gives required documents.
		<b>F.2</b>	To disassemble the chassis and components for service operations	<b>F.2.1</b>	Prepares working environment for maintenance and repair works.
				<b>F.2.2</b>	Opens the watch case properly.
				<b>F.2.3</b>	Removes the cover, sub-mechanisms, and components without damaging, scratching, or leaving fingerprint.
				<b>F.2.4</b>	Checks status of water-proof sealing of the case and replaces, if needed.
		<b>F.3</b>	To repair and renew subgroups and components of watch case.	<b>F.3.1</b>	Checks status of watch case, sub-mechanisms, and components.
				<b>F.3.2</b>	Replaces faulty, damaged, or worn watch cases, sub-mechanisms, and components.
				<b>F.3.3</b>	Chooses appropriate environment for polishing and graining case and band components.
				<b>F.3.4</b>	Installs and operates polishing and graining machinery and equipment safely.
				<b>F.3.5</b>	Checks status and cleanness of watch case at the end of operations and if any, corrects the faults and defects.

Duties Tasks		Tasks		Performance Criteria	
Code	Title	Code	Code	Title	Code
<b>F</b>	Performing maintenance and repair of watch case	<b>F.4</b>	To reassemble the watch case and band components	<b>F.4.1</b>	Reassembles and sets the watch case and band components in accordance with manufacturer's specifications.
				<b>F.4.2</b>	Lubricates the watch case, including sub-mechanisms and components, in accordance with manufacturer's specifications.
				<b>F.4.3</b>	Checks safety, operation, and work of watch case, including sub-mechanisms and components, in accordance with manufacturer's specifications.
				<b>F.4.4</b>	Applies assembly controls and measures of watch case.
		<b>F.5</b>	Kol saati koruyucuları için suya dayanıklılık testi gerçekleştirmek	<b>F.5.1</b>	Controls level of water-resistance of watch case.
				<b>F.5.2</b>	Determines equipment needed for water-resistance test, performs test, and interprets results.
				<b>F.5.3</b>	Repairs or replaces the components and watertight joints as required in accordance with test results.

Duties Tasks		Tasks		Performance Criteria	
Code	Title	Code	Code	Title	Code
<b>G</b>	Performing maintenance and repair of mechanical watches  (To be continued)	<b>G.1</b>	To arrange service conditions	<b>G.1.1</b>	Examines technical specifications of mechanical watches.
				<b>G.1.2</b>	Obtains technical guides of manufacturer in order to get correct tolerances and specifications.
				<b>G.1.3</b>	Issues required documents during delivery of mechanical watch.
				<b>G.1.4</b>	Informs the customer about price and receives required approval.
		<b>G.2</b>	To control mechanical watches	<b>G.2.1</b>	Controls watch mechanisms as per manufacturer's tolerances and specifications.
				<b>G.2.2</b>	Makes observations on status and operation of components and sub-mechanisms.
				<b>G.2.3</b>	Removes and replaces the components and sub-mechanisms in a sequence that will allow evaluating the faults correctly during disassembly and assembly processes.
				<b>G.2.4</b>	Controls whether lubricating is needed and lubricates, if needed.
		<b>G.3</b>	To detect faults in mechanical watches	<b>G.3.1</b>	Determines appropriate repair procedures as result of controls performed.
				<b>G.3.2</b>	Analyzes the performance of measuring the time correctly by using appropriate techniques and equipment.
				<b>G.3.3</b>	Performs replacements in correct order for eliminating the faults.

Duties Tasks		Tasks		Performance Criteria	
Code	Title	Code	Code	Title	Code
<b>G</b>	Performing maintenance and repair of mechanical watches	<b>G.4</b>	To repair and set mechanical watches	<b>G.4.1</b>	Chooses and uses appropriate hand tools.
				<b>G.4.2</b>	Performs disassembly and reassembly procedures of wristwatch mechanisms in accordance with standard industrial processes and manufacturer's guides.
				<b>G.4.3</b>	Performs precise corrections on sub-assemblies.
				<b>G.4.4</b>	Removes and divides into parts the sub-assemblies and components without damaging and scratching.
				<b>G.4.5</b>	Chooses and replaces appropriate spare parts.
		<b>G.5</b>	To test and set operation and performance of watch	<b>G.5.1</b>	Controls and validates operation of wristwatch mechanism and sub-assemblies.
				<b>G.5.2</b>	Performs setting as required in accordance with manufacturer's specifications.
				<b>G.5.3</b>	Repeats the tests as required in order to validate the performance.



Duties Tasks		Tasks		Performance Criteria	
Code	Title	Code	Code	Title	Code
I	Making maintenance & repair of quartz watches (to be continued)	I.1	To arrange service conditions	I.1.1	Examines technical specifications of quartz watches.
				I.1.2	Obtains technical guides of manufacturer in order to get correct tolerances and specifications.
				I.1.3	Issues required documents during delivery of quartz watch.
				I.1.4	Informs the customer about price and receives required approval.
		I.2	To dismantle the components of watch	I.2.1	Opens and closes wristwatch guards correctly.
				I.2.2	Removes watch mechanism and components without damaging or scratching.
				I.2.3	Inspects water-tightness of water-proof sealing of case in water test device and replaces it, if required.
				I.2.4	Cleans watch case and bands as required.
		I.3	To perform maintenance and repair of watch case and mechanism components	I.3.1	Checks status of watch case, sub-mechanisms, and components.
				I.3.2	Replaces faulty and worn components.
				I.3.3	Cleans components and parts.

Duties Tasks		Tasks		Performance Criteria	
Code	Title	Code	Code	Title	Code
<b>I</b>	Performing maintenance and repair of quartz watches	<b>I.4</b>	To reassemble and test watch case and watch mechanism components	<b>I.4.1</b>	Reassembles and tests watch case and watch mechanism components in accordance with manufacturer's instructions.
				<b>I.4.2</b>	Confirms that gearwheel set and other components are mounted correctly.
				<b>I.4.3</b>	Lubricates with correct type and quantity of oil as per manufacturer's specifications.
				<b>I.4.4</b>	Takes required measures for correct mounting and uses tools and equipment correctly.
				<b>I.4.5</b>	Examines and validates operation of wristwatch as per manufacturer's specifications.
				<b>I.4.6</b>	Checks performance of wristwatch, including angle test, and sets as required in accordance with manufacturer's specifications.
		<b>I.5</b>	To perform water-tightness test	<b>I.5.1</b>	Determines equipment needed for water-resistance test, performs test, and interprets results.
				<b>I.5.2</b>	Repairs or replaces the components and watertight joints as required in accordance with test results.

Duties Tasks		Tasks		Performance Criteria	
Code	Title	Code	Code	Title	Code
<b>J</b>	To attend to professional development activities	<b>J.1</b>	To conduct studies on personal professional development	<b>J.1.1</b>	Attends trainings on the basic features of machines, workbenches and devices; and keeps the certificates s/he obtains
				<b>J.1.2</b>	Follows up the emerging technologies and developments in the field of jewelry.
		<b>J.2</b>	To offer vocational trainings for junior personnel and other personnel	<b>J.2.1</b>	Transfers his/her knowledge to his/her colleagues.
				<b>J.2.2</b>	Gives information and applies trainings on watch repairing-related procedures, within a limited level.

### 3.2. Tools, Appliances and Equipment Used

1. Disc remover
2. Overhead router
3. Multimeter
4. Connectors (bolt, nut, screw, rivet etc.)
5. Assortment
6. Computer
7. Glass fiber pen brush
8. Various magnifying lenses (loupe)
9. Various drilling heads
10. Various scraping tools
11. Various pairs (Pendulum, magnetic pair, work pair)
12. Pulsed band pin remover
13. File set types
14. Brush set (Bristle, rough and soft)
15. Handheld gas blowtorch
16. Spirit stove
17. Quadrant brush
18. Watch case opening and closing tools
19. Watch sealing silicone greasing box
20. Watch strap hole punch (rotary drill system)
21. Jig saw
22. Personal Protective Equipment
23. Protection covers
24. Caliper (digital or analogue)
25. Soldering iron
26. Desktop lighting
27. Clamp types
28. Demagnetization tool
29. Mica hand tool (glass assembling tool)
30. Mica assembling and disassembling tool (octopus)
31. Anvil with tiny hole
32. Misippi and Arkansas gems (helmet stones)
33. Assembly pedestals
34. Motorized brush-Polish-Brosse (polishing motor)
35. Oxide glass brush
36. Item assortment boxes
37. Plastic tip hammer
38. Pump
39. Watch opening knife
40. Watch setting machine
41. Watch batteries
42. Watch cleaning machine

43. Watch latte
44. Simulator - automatic mechanic watch winding tool
45. Safety catch assembling-disassembling tool
46. Basic hand tools
47. Cleaning cups (glass )
48. Cleaning paste
49. Test machine (air and water)
50. Screwdriver sharpening tool
51. Ultrasonic watch cleaning tool (for the case and the strap)
52. Oil dipstick types
53. Lubricator
54. Minute hand, hour hand, second hand disassembling tool
55. Stapler set

### **3.3. Knowledge & Skills**

1. Knowledge on emergency case
2. Knowledge on tools, apparatus and equipment
3. Knowledge on connectors
4. Knowledge on environmental protection methods
5. Ability of working in a team or an organization
6. Knowledge and skill of using hand tools
7. Manual skill
8. Knowledge on recyclable wastes
9. Knowledge on hygiene
10. Knowledge on Occupational Health and Safety Precautions
11. Workplace working procedures information
12. Recording and reporting skill
13. Knowledge on occupational mathematics
14. Knowledge on occupational electricity
15. Knowledge and skill of occupational drawing
16. Knowledge of vocational terms
17. Knowledge on the legislations regarding the occupation
18. Knowledge and skill of assembling
19. Skill of working in an organization and team
20. Skill of learning and being able to share what he learned
21. Knowledge on measuring and control
22. Knowledge on impermeability test
23. Oral and written communication skills
24. Knowledge on standard materials
25. Knowledge on basic labor legislation
26. Knowledge on products
27. Skill of using the time well.

### 3.4. Attitudes and Behaviors

1. Acil ve stresli durumlarda soğukkanlı olmak
2. Informing the chiefs properly and in time
3. Perform tests and application in detecting malfunctions
4. Çalışma zamanını iş emrine uygun şekilde etkili ve verimli kullanmak
5. Adopting environmental, quality and OHS rules
6. Deneyimlerini iş arkadaşlarına aktarmak
7. To be careful and rigorous
8. Having a good aesthetical perspective
9. To stop the equipment when necessary and under emergency situations
10. Having working discipline
11. Obeying the working principles of the workplace
12. Paying attention to the usage of tools, appliances and equipments belonging to workplace
13. To ensure his/her own safety and safety of other people
14. To be willingful to improve himself/herself
15. Carefully protecting the materials and instruments which are required to be protected
16. Having professional ethics
17. To be open to research for occupational development
18. Being planned and organized
19. Knowing his/her responsibilities and fulfilling the same
20. Taking care of cleanness, tidiness, and order of workplace
21. Informing the people concerned about the situations which are not under his/her authority

#### **4. TESTING, ASSESSMENT AND CERTIFICATION**

Testing and assessment for certification with respect to national qualifications based on Director of Editing (Level 4) Occupational Standard shall be held in written and/or oral forms, theoretically and practically, in testing and assessment centers where required conditions are met.

Testing and assessment method and practice principles shall be detailed with national qualifications to be drawn up pursuant to this occupational standard. Activities regarding testing, assessment and certification shall be conducted within the framework of Vocational Qualification Authority, Testing and Certification Regulation.

**Note:** This part shall not be published in the Official Gazette. It will be published in VQA website only.

**ANNEX:** Institutions participated in the Occupational Standard Preparation Process

### **1. Professional Standards Team of Institution Preparing Professional Standard**

Nuran SENAR, TESK – Assistant Secretary General

Zehra KAYA, TESK– Training and Planning Manager

Ayfer TOPKAYA, TESK– Assistant Training and Planning Expert

### **2. Technical Work Group Members**

Mustafa YILMAZ, Yılmaz Saat– Watch Repairer

Mustafa Çakır BOYALI, Sıla Optik Saat – Watch Repairer

Tahir ÖZO, Tahir Saat Optik – Watch Repairer

Mehmet TEZCAN, Garanti Saat ve Bijuteri – Watch Repairer

Nurettin ALTUN, Şenel Saat – Watch Repairer

Murat SANCAK, Sancak Saat– Watch Repairer

Hakan ER, Erler Saat – Watch Repairer

Recai KIRICI, Tik Tak Saat – Watch Repairer

Süleyman YORGANCIOĞLU, LPI Tic. - Watch Repairer

Şerafettin KARGIN, Saat&Saat Technical Service – Watch Repairer

İsa KARAKUTAY, İsa Saat – Watch Repairer

Abdulkerim YENİNEFER, Watch Repairer

Artunç OGUZHAN, Watch Repairer

### **3. People, Institutions, and Organizations Asked for Opinion:**

Ankara Chamber of Industry

Ankara Chamber of Commerce

Altınbaş Kuyumculuk (Altınbaş Jewellery)

Atasay Kuyumculuk (Atasay Jewellery)

Western Anatolia Jewelry Union

United Metal Workers' Union



Çelik İş Trade Union

Aegean Region Chamber of Industry (EBSO)

Eagean Union of Key-Makers and Locksmiths

Unions of Chambers of Merchants and Craftsmen

Favori Kuyumculuk (Favori Jewellery)

Gazi University Technical Faculty of Education, Metal Department

Gaziantep Association of Key-Makers, Locksmiths and Ironworkers

Goldaş Kuyumculuk (Goldaş Jewellery)

Gülaylar Kuyumculuk (Gülaylar Jewellery)

Hak-İş Trade Union Confederation

The Ministry of Interior (General Directorate of Local Administrations)

Istanbul Association of Key-Makers, Locksmiths and Ironworkers

Istanbul Beneficial Association for Protecting Jewelers and Goldsmiths

Istanbul Exporters' Unions for Mines and Metals

İstanbul Chamber of Commerce

Kayseri Association of Goldsmiths and Jewelers

Küçük ve Orta Ölçekli İşletmeleri Geliştirme ve Destekleme İdaresi Başkanlığı

Midas Kuyumculuk (Midas Jewellery)

Rize Association of Jewelers

Sakarya Union of Key-Makers and Locksmiths

Ministry of Labor and Social Security

Ministry of National Education (General Directorate for Apprenticeship and Non-Formal Education)

Ministry of National Education (General Directorate of Technical Education for Boys)

Ministry of National Education (General Directorate of Technical Education for Girls)

Ministry of National Education (General Directorate of Trade and Tourism Education)

Ministry of National Education

Ministry of Health

Tekirdağ Association of Goldsmiths and Jewelers

Union of Chambers of Turkish Engineers and Architects (TMMOB), Chamber of Metallurgical Engineers

Association of Watchmakers (TUSAD)

Turkish Metal Union

Turkish Aluminum Industrialists Association

Turkish Iron and Steel Manufacturers Association

Turkish Confederation of Revolutionary Trade Unions

Turkish Exporters Assembly

Turkish Statistics Institution

Turkish Labor Institution

Turkish Confederation of Trade Unions

Turkish Confederation of Employer Associations

Turkish Metal Industrialists Union

Turkish Union of Chambers and Exchange Commodities -TOBB

Board of Higher Education (YOK)

#### 4. Sector Committee Members and Experts

Prof. Dr. Süleyman TEKELİ,	President (Board of Higher Education)
Şeref ÜNVER,	Vice President (Ministry of Education)
Yunus KISA,	Member (Ministry of Labor and Social Security)
Dr. Mete CANKAYA,	Ministry of Science Industry and Technology
Muhsin ŞAŞMAZ,	Member (Ministry of Transportation)
Çağatay KESTİR,	Member (Ministry of Energy and Natural Resources)
Serpil ÇİMEN,	Turkish Union of Chambers and Exchange Commodities -TOBB
Ahmet YARDIMCI,	Member (Confederation of Turkish Tradesman and Craftsmen)
Ahmet Turan ALNIAÇIK,	Member (Turkish Exporters Assembly)
Miray VURMAY,	Member ( Turkish Confederation of Employer Associations)
Şahin SERİM,	Hak-İş Trade Union Confederation
Dr. Aykut ENGİN,	Turkish Confederation of Employer Associations
Hacı Ali EROĞLU,	Member (Occupational Qualification Authority)
Firuzan SİLAHŞÖR,	Head of Department (Vocational Qualifications Authority)
Fatma GÖKMEN,	Representative of Sector Committee (General Directorate of the Services for Disabled and Elderly)

### **5. VQA Executive Board**

Bayram AKBAŞ,	President (Repr. Of Ministry of Labor and social Security)
Doç. Dr. Ömer AÇIKGÖZ,	Vice President (Ministry of Education)
Prof. Dr. Mahmut ÖZER,	Member (Board of Higher Education)
Bendevi PALANDÖKEN,	Member (Professional Associations)
Dr. Osman YILDIZ,	Member (Trade Unions Confederations)
Mustafa DEMİR,	Member (Employer Unions Confederations)