



*Alliance for Batteries Technology, Training and Skills*

*2019-2023*

## **Automotive Repair and Inspection**

### **Personel**



Co-funded by the  
Erasmus+ Programme  
of the European Union



## Automotive Repair and Inspection Personnel

Electric vehicle (EV) repair and maintenance personnel are responsible for the repair and maintenance of electric vehicles. They work in EV repair shops and dealerships and are responsible for ensuring that the vehicles are operating efficiently and effectively. They need to have a strong understanding of electrical and mechanical systems, as well as experience with EV repair and maintenance.

They are responsible for performing regular inspections and preventative maintenance on the vehicles, identifying and resolving issues that arise during operation, and making necessary repairs or modifications to improve vehicle performance. They also need to be able to work closely with other technicians and mechanics, and with EV owners to ensure that the vehicles are safe and reliable to operate. They may also be responsible for troubleshooting and diagnosing problems with EV systems, such as the battery, power electronics, and drivetrain, as well as for replacing or repairing faulty components. They also need to be familiar with the regulations and standards related to EV repair and maintenance.

### ESCO Occupations - [ESCO - Occupations - European Commission \(europa.eu\)](https://ec.europa.eu/esco/)

ID	NAME	Concept URI
2141.8	maintenance and repair engineer	<a href="http://data.europa.eu/esco/occupation/615920c5-4f63-4eb3-8b60-afaaed3ab1ff">http://data.europa.eu/esco/occupation/615920c5-4f63-4eb3-8b60-afaaed3ab1ff</a>
7231.10	vehicle technician	<a href="http://data.europa.eu/esco/occupation/4ad4024e-d1d3-4dea-b6d1-2c7948111dce">http://data.europa.eu/esco/occupation/4ad4024e-d1d3-4dea-b6d1-2c7948111dce</a>
7543.3	battery test technician	<a href="http://data.europa.eu/esco/occupation/43eb6228-8241-47d6-875e-7ccc214291d5">http://data.europa.eu/esco/occupation/43eb6228-8241-47d6-875e-7ccc214291d5</a>

### Context

<b>Minimum EQF</b>	4/5/6
<b>Value Chain</b>	Operation, Repair, and Maintenance

	Second Life
<b>Departments</b>	Production and Maintenance Quality Intellectual/Legal Recycling
<b>Specialisations</b>	Battery Repair Engineer Electric Battery Repairer Technician for Battery Analysis Cell Inspection Technician Electrical battery storage inspector Inspection engineer

### Cross-sectoral Specific Competence

Name	Type (S/K)	Description/Context	Level	ESCO
Inspect Quality of Product / Sampling	S	<ul style="list-style-type: none"> <li>- Perform visual and mechanical control activities ensuring the functionality of the overall product</li> <li>- Inspect for discontinuities, Visual identification, damages.</li> <li>- Perform visual and mechanical control activities</li> <li>- Determine malfunction</li> </ul>	Practitioner	inspect quality of product
Analysis Methods	K	<ul style="list-style-type: none"> <li>- Create analyzes and report to management on quality issues and root causes of batteries.</li> </ul>	Practitioner	analysis methods
Audits	S	<ul style="list-style-type: none"> <li>- Analyze HV batteries out of the battery assembly process and execute product audits as part of the quality plan.</li> </ul>	Practitioner	conduct workplace audits
Equipment and tools handling	S	<ul style="list-style-type: none"> <li>- Perform visual and mechanical control activities with proper equipment</li> <li>- Use the relevant quality tools/systems to analyze data and deal with non-conformances</li> <li>- Maintains and cares for the shop tools and equipment.</li> </ul>	Practitioner	
Process Improvement	S	<ul style="list-style-type: none"> <li>- Improvement of working procedures and processes</li> </ul>	Awareness	Identify process improvement
Remove Defective Product	S	<ul style="list-style-type: none"> <li>- removes, replaces, and repairs tires, undercarriages, and other components</li> </ul>	Practitioner	Remove defective product
Maintenance Processes (Repair, Replace, Inspect, Service)	K	<ul style="list-style-type: none"> <li>- removes, replaces, repairs and inspects vehicle parts, components or systems</li> <li>- Maintains and cares for the shop tools and equipment.</li> <li>- Maintains a clean work area and performs miscellaneous housekeeping duties associated with the job.</li> <li>-</li> </ul>	Practitioner	Maintenance and repair
Safety	K	<ul style="list-style-type: none"> <li>- Examines protective guards, loose bolts, and specified safety</li> </ul>	Practitioner	Safety engineering

Procedures		devices on equipment, and make adjustments.		
		- Insures safe work and procedures		

### Sector Specific Competence

Name	Type (S/K)	Description/Context	Level	ESCO
Battery charge/discharge	K	- changes or recharges batteries	Practitioner	Repair battery components

### Soft Competence

Name	Type (S/K)	Description/Context	Level	ESCO
Communication	k	- Together with the rest of the team, act as a key player to develop and maintain a safe work environment. - Participate in teams focused on delivering quality improvements.	Expert	communication
Problem Solving/Troubleshooting	S	- Perform inspections and troubleshoot cause of physical testing failures, when appropriate.	Expert	problem solving & troubleshoot
Teamwork	K	- Participate in teams focused on delivering quality improvements. - Exchange experience with other battery analysis departments across locations within the company - work closely with production	Practitioner	teamwork

### General Transversal Competence

Name	Type (S/K)	Description/Context	Level	ESCO
Reporting	S	- complete daily reports - report findings - Report accomplishments and roadblocks	Practitioner	Follow reporting procedures
Documentation	S	- Establish and maintain documentation	Practitioner	use technical documentation; observe documents
Computer Literacy / Office	S	- Knowledge on regular office suite and used applications	Awareness	Have computer literacy

### Academic Competence (can be taken from University programme)

Name	Type	Description/Context	Level	ESCO
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	(S/K)			
Mechanical Engineering	K	- Perform manual and machine assembly and disassembly of serial, pre-serial and prototype parts of the traction battery	Practitioner	mechanical engineering
Electrical Engineering	K	- have previous experience of working in electricity	Practitioner	Electrical engineering

