

# BEM Micro-credential



BEM content (for all partners)	Title/name of the credential	<b>Hydraulic steering (on garbage trucks)</b>		
	Function of the micro-credentials / purpose	The purpose of the micro-credential program is to enable participants to independently perform tasks of diagnosing and eliminating faults, preventive and periodic maintenance of system equipment and entering, setting and monitoring parameters of hydraulic systems on special upgrades on truck chassis.		
	Possible target groups	Employees in manufacturing companies, public utility companies, the unemployed, people who want to retrain and adults.		
	Branch/sector of application	Metal-processing industry		
	Fields of application / work environment	Companies engaged in the production of utility equipment, maintenance service in utility companies		
	Typical work/professional tasks	Production and assembly of hydraulic installation, replacement of parts, setting of parameters, service services		
	Learning outcomes (personal and job related)	<p>Knowledge</p> <ul style="list-style-type: none"> <li>distinguishes the physical properties of fluids with emphasis on hydraulic oils;</li> <li>compares the characteristics of hydraulic oils from different manufacturers;</li> <li>defines: energy, work, pressure, temperature and fluid viscosity;</li> <li>recognizes hydraulic components;</li> <li>distinguishes between pumps according to the principle of operation;</li> <li>describe the main parts of different pumps;</li> <li>distinguishes valve types according to application;</li> <li>describe the characteristics of hydrotechnical equipment;</li> <li>describe the working principle of hydraulic motors;</li> <li>explain the working principle of hydraulic cylinders;</li> <li>explain the types and purpose of hydraulic connecting elements;</li> <li>explain the purpose of hydraulic system filters;</li> <li>explain the purpose of hydraulic accumulators;</li> </ul>	<p>Skills</p> <ul style="list-style-type: none"> <li>create a functional hydraulic control scheme for on garbage trucks;</li> <li>uses catalogs of manufacturers of hydraulic components;</li> <li>create a specification of the required material;</li> <li>create technical drawings using the appropriate application software for the needs of developing the conceptual solution of the hydraulic system;</li> <li>uses software to simulate the operation of the hydraulic scheme;</li> <li>installs hydraulic components of the system;</li> <li>connects system elements according to the management scheme;</li> <li>adjust system parameters;</li> <li>determine the manifestations of the failure based on the performed diagnostics, collected information on the state and correct operation of the hydraulic system</li> <li>plans and needs spare parts and consumables;</li> </ul>	<p>Competences</p> <ul style="list-style-type: none"> <li>Elaboration of technical solutions of project-technological documentation of hydraulic systems;</li> <li>Mounts hydraulic system elements based on technical documentation;</li> <li>Maintenance of hydraulic systems</li> <li>Diagnosing and troubleshooting components of the hydraulic assembly, device or system</li> <li>Undertaking safety measures on health at work, environmental protection and fire protection in the repair and assembly of machines and equipment;</li> </ul>

			<ul style="list-style-type: none"><li>• eliminates malfunctions based on established procedures;</li><li>• puts the hydraulic system into operation after the fault has been removed;</li><li>• disassembles parts in accordance with technical documentation during cleaning, lubrication, as well as replacement of worn parts and working fluids;</li><li>• dispose of material in a safe manner and separate material ready for recycling;</li><li>• conducts final tests and lets the system perform one work cycle;</li><li>• corrects the operation of the system as necessary;</li></ul>		
	Validation	<p>Criteria</p> <ul style="list-style-type: none"><li>• Reliability (compliance of the assessment with established, public, and precise evaluation criteria)</li><li>• Validity (the assessment reflects learning outcomes - achievement of outcomes, student engagement, and progress)</li><li>• Variety in assessment methods (selection and application of different methods and techniques to ensure validity, reliability, and objectivity of assessments)</li><li>• Non-discriminatory evaluation, ensuring no bias or exclusion on any grounds.</li></ul>	<p>Procedures</p> <ul style="list-style-type: none"><li>• Forming an examination commission</li><li>• Establishing a list of exam tasks</li><li>• Drawing work tasks</li><li>• Verifying competence through task completion</li><li>• Recording exam results</li><li>• Issuing certificates</li></ul>		
	Recognised/accepted (documented by MoU)	Company name:			
	Provider(s)	RESOR d.o.o.			
		Vocational schools			
		Publicly recognized organizations for education activities (JPOA)			
Additional information (if needed)	Entry level / prerequisites	Level 3 or Level 4 NOKS (National Qualifications Framework) achieved through the completion of three- or four-year vocational education programs in the fields of mechanical engineering and metalworking or electrical engineering.			
	Possible duration (recommendation)				
					125 hours
Specific content (national) (if needed)	Position in the chain of educational programmes	Non-Formal Education			
	Reference to NQF	Level 4 NOKS; Level 4 EQF (European Qualifications Framework)			
	Credits	5			