

MENTORTRAIN – Higher Technician in Motor Vehicles

Learning outcomes	Competences to be assessed	Soft skills
<p>LO1 Electric, Safety and Comfort Systems</p>	<p>The apprentice:</p> <ul style="list-style-type: none"> – Fits electric circuits relating the running parameters of their components with the fundamentals and laws of electricity and electromagnetism. – Interprets the operational status of electric, safety and comfort systems of vehicles relating their functionality with maintenance processes. – Diagnoses failures in electric, safety and comfort circuits of vehicles interpreting the indications or values of the running parameters. – Determines the repair procedures analysing the causes and effects of the failures identified. – Performs maintenance operations on the electric, safety and comfort systems of vehicles, interpreting defined maintenance procedures. – Plans important modifications and reforms in the area of electromechanics, relating the specifications of a certain reform with current legislation. 	<ul style="list-style-type: none"> -Responsibility when required -Operate as an effective team member -Behave in accordance with the values of the company and treat colleagues and customers with respect and courtesy. -Build effective relationships with colleagues and customers -Gain trust and pay attention to colleagues and customers concerns and needs -Communicate effectively on a range of topics and with all sorts of different people -Deliver results and achieve challenging goals. -Contribute to problem-solving discussions and enjoy finding solutions to own and other people’s problems. -Suggest ways to make the business more efficient and contribute to its commercial growth. -Constantly learn in order to improve own performance and that of the business -Share knowledge and skills.

<p>LO2</p> <p>Force Transmission Systems and Running Gear.</p>	<p>The apprentice:</p> <ul style="list-style-type: none"> – Fits fluid circuits relating the function of their elements with the operational status of the circuit. – Interprets the operational status of the running gear and force transmission systems relating their functionality with maintenance processes. – Diagnoses breakdowns in the running gear and force transmission systems, interpreting the indications or values of the running parameters. – Determines repair procedures analysing the causes and effects of the breakdowns identified. – Performs maintenance operations on the suspension, steering and braking systems, interpreting defined techniques. – Performs maintenance operations of clutches, converters, gearboxes, differentials and transmission elements, interpreting defined techniques. – Applies measures for risk prevention, personal safety and environmental protection assessing work conditions and risk factors. 	
<p>LO3</p> <p>Heat Engines and Their Auxiliary Systems</p>	<p>The apprentice:</p> <ul style="list-style-type: none"> – Determines the running characteristics of Otto engines and Diesel engines analysing their manufacturing parameters and the functionality of their elements. – Verifies the wear and tear and deformations of heat engine elements and the lubrication and cooling systems, justifying the procedures used for verification. – Determines the running characteristics of the Otto engines and Diesel engines auxiliary systems analysing their manufacturing parameters and the functionality of their elements. 	

	<ul style="list-style-type: none"> – Diagnoses breakdowns in the Otto engines and Diesel engines auxiliary systems, interpreting the indications or values of the running parameters. – Determines the repair procedures analysing the causes and effects of the breakdowns identified. – Performs operations for the repair of breakdowns on engines and their auxiliary systems interpreting defined maintenance techniques. 	
<p>LO4</p> <p>Non-structural Removable and Fixed Elements</p>	<p>The apprentice:</p> <ul style="list-style-type: none"> – Draws sketches of parts and tools selecting the information described in the technical documentation and the established regulations. – Defines basic machining operations, interpreting the parameters that identify the same. – Replaces removable elements, accessories and upholstery interpreting the dismantling and fitting techniques and processes. – Identifies deformations of non-structural metallic and synthetic elements selecting the repair method, according to the specific deformation. – Applies techniques for the replacement of fixed elements relating the joint method with the elements to be joined according to the resistance characteristics. – Develops constructive solutions in order to carry out optional transformations and design small tools, assessing execution conditions and functionality. 	
LO5	The apprentice:	

<p>Surface Treatment and Coating</p>	<ul style="list-style-type: none"> – Determines the repair process be applied by analysing the characteristics of the different layers of protection, levelling and trimming of surfaces. – Applies protection, levelling, sealing and soundproofing techniques, interpreting work procedures. – Applies colourimetric techniques, in order to obtain the colour of the vehicle paint analysing the stipulated rules of formulation and mixture. – Applies surface trimming techniques, interpreting the given specifications and defined procedures. – Identifies the produced defects in the application of paint analysing the causes and their correction processes. – Applies measures for risk prevention, personal safety and environmental protection assessing work conditions and risk factors. 	
<p>LO6 Vehicle Structural Parts</p>	<p>The apprentice:</p> <ul style="list-style-type: none"> – Recognises the parts and function of the structure relating techniques for the assembly of their components with the manufacturing and repair processes. – Identifies structural deformations in vehicles relating applied burdens with the structural characteristics of the bodywork. – Diagnoses structural deformations in vehicles interpreting the established techniques and procedures. – Prepares estimates on bodywork repair assessing the characteristics of the damages to be repaired. – Repairs structural parts of vehicles in the mainframe analysing repair techniques. – Plans important modifications and reforms in vehicle bodyworks relating to the specifications of a certain reform with current legislation. 	
<p>LO7</p>	<p>The apprentice:</p>	

<p>Vehicles Maintenance Management and Logistics</p>	<ul style="list-style-type: none"> – Prepares vehicle maintenance plans analysing the intervening variables and taking into account methods and times. – Prepares work distribution plans, relating workload with the operational status of facilities and equipment. – Prepares large fleet maintenance plans, analysing their specific needs and requirements. – Organises the running of a spare parts section in order to establish its physical distribution and stock control analysing management models. – Manages the treatment of waste produced by the maintenance of vehicles and repair operations identifying polluting agents and describing their effect on the environment. – Prepares quality plans for the running of a garage relating to management effectiveness, degree of satisfaction with the service and environmental impact with the application of the established legislation. – Prepares reports, estimates and other documents through computer programs analysing results. 	
<p>LO8 Communication and Relationships Techniques</p>	<p>The apprentice:</p> <ul style="list-style-type: none"> – Applies communication techniques analysing their characteristics and possibilities. – Helps potential customers, relating their needs with the characteristics of the service or product. – Transmits the business image relating the same with the characteristics and goals of the company. – Manages complaints and suggestions analysing problems and identifying applicable legislation. – Monitors the quality of the service provided, analysing the degree of satisfaction of potential customers. 	

