

CORE COMPETENCIES

Unit of Competency	Learning Outcomes	Methodology	Assessment Approach
1. Service Automotive Battery	1.1 Identify and explain the operation and safe handling of different types of battery 1.2 Demonstrate the testing of an automobile battery 1.3 Demonstrate the correct procedure for removing and replacing batteries 1.4 Demonstrate the correct procedure for servicing and charging batteries 1.5 Demonstrate the procedure of jump starting a battery	<ul style="list-style-type: none"> • Demonstration • Discussion • Dual training • Distance learning 	<ul style="list-style-type: none"> • Demonstration of practical skills • Direct observation • Interview
2. Service Ignition System	2.1 Identify and explain the function of ignition system components 2.2 Check ignition coil, ballast resistor and high-tension cable resistance. 2.2 Check distributor assembly	<ul style="list-style-type: none"> • Demonstration • Discussion • Dual training • Distance learning 	<ul style="list-style-type: none"> • Interview • Written • Practical • Direct Observation
3. Test and Repair Wiring/ Lighting System	3.1 Explain principle of auto electricity 3.2 Identify components of auto lighting system and explain its function 3.3 Install wiring/lighting system 3.4 Test electrical system, identify faults and determine preferred repair action 3.5 Carry out necessary repairs in the electrical system	<ul style="list-style-type: none"> • Demonstration • Discussion • Dual training • Distance learning 	<ul style="list-style-type: none"> • Interview • Written • Practical • Direct Observation
4. Service Starting System.	4.1 Test starting system components and identify faults. 4.2 Disassemble starter 4.3 Repair/replace starter component/parts 4.4 Test starting system component and identify faults 4.5 Assemble starter	<ul style="list-style-type: none"> • Demonstration • Discussion • Dual training • Distance learning 	<ul style="list-style-type: none"> • Demonstration of practical skills • Direct observation • Interview
5. Service Charging System.	5.1 Test charging system components and identify faults. 5.2 Disassemble alternator 5.3 Repair/replace alternator component/parts 5.4 Test charging system component and identify faults 5.5 Assemble alternator	<ul style="list-style-type: none"> • Demonstration • Discussion • Dual training • Distance learning 	<ul style="list-style-type: none"> • Demonstration of practical skills • Direct observation • Interview
6. Service Engine Mechanical System	6.1 Explain coolant circulation within cooling system. 6.2 Check thermostat condition 6.3 Perform leakage test on cooling system 6.4 Repair/Replace water pump 6.5 Apply coolant additives 6.6 Explain oil cycle within the engine 6.7 Identify types, Classifications and Applications of engine oil 6.8 Overhaul oil pump, replace oil fitter and change oil	<ul style="list-style-type: none"> • Demonstration • Discussion • Dual training • Distance learning 	<ul style="list-style-type: none"> • Written examination • Demonstration of practical skills • Direct observation • Interview

Unit of Competency	Learning Outcomes	Methodology	Assessment Approach
	6.9 Explain Fuel Octane Rating 6.10 Identify Fuel pump types/classification 6.11 Perform carburetor adjustment 6.12 Overhaul carburetor 6.13 Overhaul turbo charger 6.14 Check turbo charger operation 6.15 Overhaul fuel diesel injector 6.16 Calibrate/Install injector		<ul style="list-style-type: none">
7. Service Clutch System	7.1 Diagnosing clutch failure/problem 7.2 Pulling out and mounting clutch component parts 7.3 Dismantling/Installing clutch mechanism 7.4 Overhauling hydraulic clutch mechanism 7.5 Performing clutch parts failure analysis 7.6 Setting/Adjusting clutch system components 7.7 Bleeding clutch hydraulic system	<ul style="list-style-type: none"> Demonstration Discussion Dual training Distance learning 	<ul style="list-style-type: none"> Demonstration of practical skills Direct observation Interview
8. Service Differential and Front Axle	8.1 Inspect drive shaft and joint properly & safety 8.2 Dismount & mount differential assembly properly & safety 8.3 Dismantle & assemble differential parts properly & safety 8.4 Diagnose differential parts failure accurately 8.5 Set/Adjust differential components precisely 8.6 Overhaul rear/front wheel hub properly & safety 8.7 Analyze king pin condition accurately 8.8 Inspect/replace I beam properly & safety	<ul style="list-style-type: none"> Demonstration Discussion Dual training Distance learning 	<ul style="list-style-type: none"> Demonstration of practical skills Direct observation Interview
9. Service Steering System	9.1 Service steering system. 9.2 Diagnose power steering system failure. 9.3 Adjust/align tie-rod end to wheel. 9.4 Dismantle/Install steering component. 9.5 Conduct wheel alignment.	<ul style="list-style-type: none"> Demonstration Discussion Dual training Distance learning 	<ul style="list-style-type: none"> Demonstration Direct Observation
10. Service Brake System	10.1 Identify the types of hydraulic brake (hydraulic ABS) and its corresponding component and function. 10.2 Explain the operating principle of ABS equipped brake. 10.3 Interpret schematic diagrams and circuitry. 10.4 Performed brake system preventive maintenance. 10.5 Diagnose brake system failure. 10.6 Performed ABS component testing. 10.7 Pull-out and disassemble hydraulic brake component.	<ul style="list-style-type: none"> Demonstration Discussion Dual training Distance learning 	<ul style="list-style-type: none"> Written examination Demonstration of practical skills Direct observation Interview

Unit of Competency	Learning Outcomes	Methodology	Assessment Approach
	10.8 Check, assemble and mount hydraulic brake component. 10.9 Use appropriate tools and instrument.		
11. Service Suspension System	11.1 Identify the types of suspension system, component and its operating principle (conventional and air suspension). 11.2 Diagnose Suspension system failure. 11.3 Disassemble and assemble suspension system (conventional type). 11.4 Inspect and replace suspension system component (conventional type). 11.5 Service air suspension system.	<ul style="list-style-type: none"> • Demonstration • Discussion • Dual training • Distance learning 	<ul style="list-style-type: none"> • Written examination • Demonstration of practical skills • Direct observation • Interview
12. Perform Under Chassis Preventive Maintenance	12.1 Check clutch and brake fluid and lines 12.2 Inspect/change power transmission/different gear oil 12.3 Inspect/replace power steering fluid 12.4 Check/refill automatic transmission fluid 12.5 Inspect/bleed air tank 12.6 Check tire and tire pressure 12.7 Check under chassis body bolts and nuts	<ul style="list-style-type: none"> • Demonstration • Discussion • Dual training • Distance learning 	<ul style="list-style-type: none"> • Interview • Practical • Direct Observation
13. Overhaul Manual Transmission	13.1 Identify types of transmission and components. 13.2 Testing transmission. 13.3 Pull-out and dismount manual transmission and associate component. 13.4 Disassemble manual transmission. 13.5 Inspect and check manual transmission component. 13.6 Assemble manual transmission component. 13.7 Install, mount manual transmission and associated 13.8 Test manual transmission performance.	<ul style="list-style-type: none"> • Demonstration • Discussion • Dual training • Distance learning 	<ul style="list-style-type: none"> • Written examination • Demonstration of practical skills • Direct observation • Interview