Specification of Competency Standards
for the Automotive
Unit of Competency

Functional Area - Vehicle Servicing

Title	Dismantle, inspect and replace the low-voltage vehicle electrical systems and accessories
Code	111665L2
Range	This unit of competency is applicable in vehicle service workshops. Practitioners should be able to dismantle, inspect, replace and reassemble the components of low-voltage vehicle electrical systems under supervision in routine working environment. They should also be able to conduct functionality tests on the associated components and provide an oral report.
Level	2
Credit	6 *(For Reference Only)*
Competency	**Performance Requirements** 1. Knowledge (The basic electrical and electronic knowledge, location and working principle of low-voltage vehicle electrical systems and associated components, and the general servicing skills) • Master the general principle of electrical engineering and the applications on vehicles • Understand the basic principle of electronic theory and the applications on vehicles • Identify the names, locations, functions and working principles of low-voltage vehicle electrical systems and their components. • Understand the general testing procedures for determining the normal functions of the low-voltage electrical systems and associated components using the general electrical/electronic tools/equipment. • Master the proper procedures of dismantling, replacing and reassembling components of the low-voltage vehicle electrical systems. • Understanding of the relevant legal requirements on road and vehicle safety and environmental protection. 2. Performance (Dismantle, inspect, replace and reassemble the components of low-voltage vehicle electrical systems) • In accordance with the instructions in the corresponding vehicle manufacturer's service manual and relevant requirements on the environmental protection, occupational safety and health regulations, execute the dismantlement, inspection, replacement and reassembly procedures for the components of low-voltage vehicle electrical systems and their accessories under supervision in a familiar working environment, such as the: ◦ Battery, starter and charging systems ◦ Lighting, signals and meter instrument systems ◦ Wiper, central lock systems and electric window, including sunroof ◦ Anti-theft, audio and visual system ◦ Heating, ventilating and air-conditioning systems ◦ Electronic control systems ◦ Door gear systems (including tail lift control for commercial vehicles) ◦ Other related systems • Conduct performance and safety inspection after the work and provide an oral report.

Assessment Criteria	The integrated outcome requirements of this unit of competency are that the practitioner being assessed shall prove that he/she is: • Capable of explaining the basic electrical and electronic principles and their applications on vehicle electrical and electronic systems; • Capable of describing the names, locations, functions and working principles of low-voltage vehicle electrical systems and components correctly; and • Capable of dismantling, inspecting, replacing and reassembling the components of low-voltage vehicle electrical systems correctly and safely in the routine working environment according to the instructions in the corresponding vehicle manufacturer's service manual and the relevant requirements on environmental protection, occupational safety and health regulations, and providing an oral report after the work.
Remark	The credit value of this unit of competency is set on the presumption that the practitioner concerned has already possessed the skills of using general vehicle servicing tools and the maintenance of electric appliances. (This UoC replaced 108636L1)