Specification of Competency Standards
for the Automotive
Unit of Competency

Functional Area - Vehicle Servicing

Title	Maintain and repair the non-live electrified vehicle systems
Code	111705L3
Range	This unit of competency is applicable in vehicle service workshops. Practitioners should be able to maintain and repair the non-live electrified vehicle systems safely according to the instructions in the corresponding vehicle manufacturer's service manual and the relevant requirements on environmental protection, occupational safety and health regulations. They should also be able to conduct basic tests on components, and provide work report upon completion of work.
Level	3
Credit	3 *(For Reference Only)*

Competency	**Performance Requirements**
	
	1. Knowledge (The electrical systems of electrified vehicle)
	• Understand the electrical systems and components of electrified vehicles, such as:
	  ○ Rechargeable energy storage system and components
	  ○ Electric power control and modulation system
	  ○ Meter console
	  ○ Drive units
	  ○ Onboard charging unit
	  ○ Fuel cell unit, its control and associated components (For fuel cell electric vehicles only)
	  ○ Hydrogen charging and storage system (For fuel cell electric vehicles only)
	• Good understanding of the application and function of special service tool and equipment for electrical systems.
	• Good understanding of the maintenance and repair procedures according to the instructions in the corresponding vehicle manufacturer's service manual.
	• Understanding of the relevant legal requirements on road and vehicle safety and environmental protection.

	2. Performance (Maintenance and repair of the non-live electrified vehicle systems)
	• According to the instructions in the corresponding vehicle manufacturer's servicing manual and the requirements of occupational safety and health as well as that of environmental protection, safely process maintain and repair on the non-live electrified vehicle systems, including:
	  ◦ Apply the appropriate tools and equipment for work
	  ◦ Identify the common faults in the components by visual inspection and special service tools and equipment
	  ◦ Test and assess the operation and effectiveness of the components.
	  ◦ Rectify typical system faults
	  ◦ Renew the faulty components and reinstall the rectified components
	• Conduct performance and safety inspection after the work and provide work report focusing on:
	  ◦ Abnormalities
	  ◦ Measured data
	  ◦ Major decisions

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 safely conducting maintenance and repair on the non-live electrified vehicle systems, the fuel cell and hydrogen storage system (for fuel cell electric vehicles only), 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 • Capable of conducting basic tests on the systems and components, and providing work report upon completion of work.
Remark	The credit value of this unit of competency is set on the presumption that the practitioner concerned has already possessed good knowledge of the operation, working principles and maintenance of electrified vehicles. The practitioner concerned should be a recognised competent person in electrified vehicles, such as a registered vehicle mechanic who has completed an electric vehicle – low voltage training course, or equivalent; and be a competent person in hydrogen fuel cell electric vehicles recognised by the authority concerned (for fuel cell electric vehicle service only). The major ordinance involved in this unit of competency is as follows: • Relevant ordinances to the Road Traffic (Construction and Maintenance of vehicles) Regulations • Gas Safety Ordinance • Occupational Safety and Health Ordinance (This UoC replaced 108691L2)