Specification of Competency Standards
for the Automotive
Unit of Competency

Functional Area - Vehicle Servicing

Title	Check and repair the air-conditioning, cooling and power steering systems of electrified vehicles
Code	111702L3
Range	This unit of competency is applicable in vehicle service workshops. Practitioners should be able to dismantle, check and repair the air conditioning, cooling and power steering systems of fuel cell electric, battery electric and hybrid electric vehicles safely according to the instructions in the corresponding vehicle manufacturer's service manual and the relevant requirements on environment, occupational safety and health regulations. They should also be able to conduct basic tests on the associated systems and components and provide work report upon completion of work.
Level	3
Credit	8 *(For Reference Only)*
Competency	**Performance Requirements** 1. Knowledge (air-conditioning, cooling and power steering systems of fuel cell electric, battery electric and hybrid electric vehicles) • Describe the structure and operation of the air conditioning, cooling and power steering systems equipped on fuel cell electric, battery electric and hybrid electric vehicles. • Apply the proper dismantling procedures of the air-conditioning, cooling and power steering systems according to the instructions in the corresponding vehicle manufacturer's service manual. • Understand the check and repair procedure according to the instructions in the corresponding vehicle manufacturer's service manual, such as the cooling system bleeding process, use of the correct air-conditioning compressor lubricant, etc. • Properly use the special tools and equipment to dismantle, check and repair the air-conditioning, cooling and power steering systems. • Understand the relevant legal requirements on road and vehicle safety, and environmental protection. 2. Performance (Dismantle, check and repair the air-conditioning, cooling and power steering systems of fuel cell electric, battery electric and hybrid electric vehicles) • 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, dismantle, check and repair the air-conditioning, cooling and power steering systems of fuel cell electric, battery electric and hybrid electric vehicles safely, including: ◦ Identify the common faults of the components by visual inspection ◦ Test and assess the operation and effectiveness of the components. ◦ Rectify typical system and component faults • Conduct performance and safety inspection after the work and provide work report focusing on: ◦ Abnormalities ◦ Measurement 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 dismantling and repairing the air-conditioning, cooling and power steering systems of the fuel cell electric, battery electric and hybrid electric vehicles safely according to the instructions in the corresponding vehicle manufacturer's servicing manual and the relevant requirements on environment, occupational safety and health regulations, after the system power-down is confirmed by the checking result of special service tools/authorised competent person; • Capable of conducting the checking procedures of the air-conditioning, cooling and power steering systems of the fuel cell electric, electric and hybrid electric vehicles safely according to the instructions in the corresponding vehicle manufacturer's servicing manual and the relevant requirements of environmental protection, occupational safety and health regulations; and • Capable of conducting basic tests on the associated 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 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. The servicing process should be under the high-voltage system power-down condition and is confirmed by the checking result of special service tools/authorised competent person. The major ordinance involved in this unit of competency is as follows: • Relevant ordinances to the Road Traffic (Construction and Maintenance of Vehicles) Regulations • Occupational Safety and Health Ordinance (This UoC replaced 108693L2)