Specification of Competency Standards
for the Automotive
Unit of Competency

Functional Area - Vehicle Servicing

Title	Check and repair vehicle intelligent control systems and devices
Code	111745L4
Range	This unit of competency is applicable in vehicle service workshops. Practitioners should be able to check, repair and adjust various kinds of advanced driver-assistance systems (ADAS), vehicle intelligent control systems and devices safely according to the instructions in the 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 adjustments and tests on components upon completion of work and provide a work report after the work.
Level	4
Credit	6 *(For Reference Only)*
Competency	**Performance Requirements** 1. Knowledge (Structure and basic operating principles of vehicle intelligent control systems and devices) • Explain the structure and basic operating principles of ADAS, intelligent control systems and respective devices, such as: ◦ Surround Sensor (Camera, LiDAR, Radar, Sonar) ◦ Autonomous Drive System ◦ Remote Control and Auto Parking Systems ◦ Intelligent Body Stability System ◦ Pre-collision Warning System ◦ Pre-collision Brake System ◦ Smart Parking Assist System ◦ Active Lane Keeping System ◦ Intelligent Lighting System • With reference to the requirements in the service manual provided by the vehicle manufacturer or parts supplier, master the general checking and repairing procedure for various types of vehicle electronic/data control systems and devices. • Understand the relevant legal requirements on road and vehicle safety, and environmental protection.

	2. Performance (Check and repair various types of vehicle electronic control systems and devices) • According to the instructions in the service manual provided by the vehicle manufacturer or parts supplier and the requirements of occupational safety and health as well as that of environmental protection, safely check, repair and adjust various types of vehicle intelligent control systems and devices, including: ◦ Capable of identifying the common faults in various types of vehicle intelligent control systems and devices by visual inspection ◦ Demonstrate general/special service tools and instruments to check and measure various types of vehicle intelligent control systems and devices as well as rectify typical system faults ◦ According to the inspection result, repair the parts of various types of vehicle intelligent control systems and devices as well as circuit/data systems, including dismantling, replacing, reassembling and adjusting relevant system components and accessories ◦ According to the service manual, measure, adjust the operation and effectiveness of ADAS and intelligent control systems, and update the system programme where necessary. • After the rectification, provide a work report focusing on: ◦ Abnormalities ◦ Measurement data ◦ Major decisions and the effectiveness
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 checking, repairing (including programme updates), and adjusting general vehicle intelligent control systems and devices safely according to the instructions in the service manual provided by the vehicle manufacturer or parts supplier and the relevant requirements on environmental protection, occupational safety and health regulations; and • Capable of conducting basic adjustments and tests on components upon completion of work and providing work report.
Remark	The credit value of this unit of competency is set on the presumption that the practitioner concerned has already possessed extensive knowledge of vehicle electronic and electrical system servicing and IT skills. (This UoC replaced 108729L3)