

**Specification of Competency Standards**  
**for the Automotive Industry**  
**Unit of Competency**

Functional Area - Vehicle Servicing

Title	Conduct fault diagnosis on vehicle engine and component systems
Code	108697L3
Range	This unit of competency is applicable in vehicle servicing workshops. Practitioners should be able masterly to conduct complicated fault diagnosis on various vehicle engine and component systems and conduct or arrange rectification according to the instructions in the vehicle manufacturer's service manual and the relevant requirements on environment, occupational safety and health regulations. They should also be able to conduct system tests and complete simple fault report upon completion of work.
Level	3
Credit	9 (For Reference Only)
Competency	<p>Performance Requirements</p> <p>1. Knowledge (Structure and operating principles of vehicle engine and component systems)</p> <ul style="list-style-type: none"> <li>• Master the structure and operating principles of vehicle engine and component systems, such as: <ul style="list-style-type: none"> <li>○ vehicle engine</li> <li>○ vehicle cooling systems</li> <li>○ vehicle ignition systems</li> <li>○ vehicle emission control systems</li> <li>○ various types of engine management systems.</li> </ul> </li> <li>• With reference to the vehicle manufacturer's servicing instructions, understand the fault diagnosis process for vehicle engine and component systems.</li> <li>• Master vehicle engine and component systems diagnosis and the operation of testing equipment and instrument, such as various types of on-board diagnostic systems.</li> <li>• Understanding of the relevant legal requirements on road and vehicle safety and environment protection.</li> </ul> <p>2. Performance (Conduct fault diagnosis on vehicle engine and component systems)</p> <ul style="list-style-type: none"> <li>• Master conduct complicated fault diagnosis on various vehicle engine and component systems according to the instructions in the vehicle manufacturer's service manual and the requirements of occupational health and safety and that of environmental protection, including the use of special equipment and instruments to assist the diagnostic process.</li> <li>• Conduct or arrange rectification to eliminate the fault according to diagnostic results.</li> <li>• Accurately test the vehicle engine and component systems, including using relevant equipment and instrument to conduct the tests.</li> <li>• Conduct performance and safety inspection after the work and provide written report focusing on: <ul style="list-style-type: none"> <li>○ Abnormalities</li> <li>○ Measured data</li> <li>○ Major decision</li> </ul> </li> </ul>
Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are that the practitioner being assessed shall prove that he/she is:</p> <ul style="list-style-type: none"> <li>• Capable of masterly conducting complicated fault diagnosis on various vehicle engine and component systems according to the instructions in the vehicle manufacturer's service manual and the relevant requirements on environment, occupational safety and health regulations;</li> <li>• Capable of making rectification for vehicle engine and component systems according to diagnostic results; and</li> </ul>

**Specification of Competency Standards**  
**for the Automotive Industry**  
**Unit of Competency**

Functional Area - Vehicle Servicing

	<ul style="list-style-type: none"><li>• Capable of conducting vehicle engine and component systems tests and completing written report upon completion of work.</li></ul>
Remark	The credits value of this unit of competency is set on the presumption that the practitioner concerned has already possessed the knowledge of inspecting and repairing vehicle engine and component systems.