Specification of Competency Standards
for the Automotive
Unit of Competency

Functional Area - Vehicle Servicing

Title	Diagnose various faulty liquid fuel supply systems of combustion engine vehicles
Code	111725L3
Range	This unit of competency is applicable in vehicle service workshops. Practitioners should be able to masterfully conduct complicated fault diagnoses on various combustion engine vehicle liquid fuel supply systems and conduct or arrange rectification according to the instructions in the vehicle manufacturer's service manual and the relevant requirements of environmental protection, occupational safety and health regulations. They should also be able to conduct system tests and submit simple fault report upon completion of work.
Level	3
Credit	3 *(For Reference Only)*
Competency	**Performance Requirements** 1. Knowledge (Structure and operating principles of various liquid fuel systems) • Good understanding of the structure and operating principles of various combustion engine vehicle fuel systems (e.g., petrol and diesel). • With reference to the corresponding vehicle manufacturer's servicing instructions, understand the fault diagnosis process for various fuel systems, such as using exhaust gas analysers to conduct system fault diagnosis (for spark-ignition engine only). • Master fuel system diagnosis and the operation of testing equipment and instruments, such as various types of on-board diagnostic systems. • Good understanding of relevant laws and regulations governing vehicle exhaust emissions. • Understanding of the relevant legal requirements on road and vehicle safety and environmental protection. 2. Performance (Conduct fault diagnosis on liquid fuel supply systems on combustion engine vehicles) • Accurately conduct complicated fault diagnosis on various liquid fuel supply systems of combustion engine vehicles 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. • Conduct or arrange rectification to eliminate the fault according to diagnostic results. • Accurately test the fuel systems, including using relevant equipment and instruments to conduct the tests. • Conduct a performance and safety inspection after the work and provide simple fault report focusing on: ◦ Abnormalities ◦ Measured data ◦ Major decisions. • Assess the measurement result to determine if the vehicle emissions meet the local statutory requirements.

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 accurately conducting complicated fault diagnosis on various liquid fuel supply systems of combustion engine vehicles leading to incorrect fuel injection timing, pressure and quantity with reference to the instructions in the vehicle manufacturer's service manual and the relevant requirements of environmental protection, occupational safety and health regulations; • Capable of conducting or arranging rectification according to diagnostic results; • Capable of conducting fuel system tests and submitting simple fault report upon completion of work; and • Capable of assessing vehicle emission data correctly according to the guidelines of relevant laws and regulations on vehicle emissions.
Remark	The credit value of this unit of competency is set on the presumption that the practitioner concerned has already possessed comprehensive knowledge of inspecting and repairing various types of fuel systems of combustion engine vehicles. The major legislation/rules involved in this unit of competency are as follows: • Road Traffic (Construction and Maintenance of Vehicles) Regulations • Occupational, Health and Safety Ordinance • (This UoC replaced 108696L3)