

Specification of Competency Standards
for the Automotive Industry
Unit of Competency

Functional Area - Vehicle Servicing

Title	Conduct fault diagnosis on various vehicle fuel supply systems
Code	108696L3
Range	This unit of competency is applicable in vehicle servicing workshops. Practitioners should be able masterly to conduct complicated fault diagnosis on various vehicle fuel supply 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	3 (For Reference Only)
Competency	<p>Performance Requirements</p> <p>1. Knowledge (Structure and operating principles of various vehicle fuel systems)</p> <ul style="list-style-type: none"> • Good understanding of the structure and operating principles of various vehicle fuel systems (e.g. petrol, diesel and liquefied gas). • With reference to the vehicle manufacturer's servicing instructions, understand the fault diagnosis process for various vehicle fuel systems, such as using exhaust gases analysers to conduct system fault diagnosis. • Master fuel system diagnosis and the operation of testing equipment and instrument, such as various types of on-board diagnostic systems. • Good understanding of relevant laws and regulations governing vehicle exhaust emissions. • Good understanding of relevant laws and regulations governing the handling of vehicle liquefied gas. • Understanding of the relevant legal requirements on road and vehicle safety and environment protection. <p>2. Performance (Conduct fault diagnosis on various vehicle fuel supply systems)</p> <ul style="list-style-type: none"> • Accurately conduct complicated fault diagnosis on various vehicle fuel supply 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. • Conduct or arrange rectification to eliminate the fault according to diagnostic results. • Accurately test the fuel systems, including using relevant equipment and instrument to conduct the tests. • Conduct performance and safety inspection after the work and provide written report focusing on: <ul style="list-style-type: none"> ○ Abnormalities ○ Measured data ○ Major decisions. • Assess from the measurement if the vehicle emissions can meet the local statutory requirements. • Handle liquefied gas system components according to relevant local statutory requirement.
Assessment Criteria	The integrated outcome requirements of this unit of competency are that the practitioner being assessed shall prove that he/she is:

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	<ul style="list-style-type: none"> • Capable of accurately conducting complicated fault diagnosis on various vehicle fuel supply systems according to the instructions in the vehicle manufacturer's service manual and the relevant requirements on environment, occupational safety and health regulations; • Capable of conducting or arranging rectification according to diagnostic results; • Capable of conducting fuel system tests and completing written report upon completion of work; • Capable of assessing vehicle emissions or smoke correctly according to relevant laws and regulations on vehicle emissions; • Capable of handling liquefied gas system components correctly according to relevant laws and regulations governing the handling of liquefied gas.
Remark	<p>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 various types of fuel systems.</p> <p>The major legislations/rules involved in this unit of competency are as follows:</p> <ul style="list-style-type: none"> • Road Traffic (Construction and Maintenance of Vehicles) Regulations – Smoke, etc. and Exhaust Emission • Air Pollution Control Ordinance • Gas Safety Ordinance