

Specification of Competency Standards
for the Automotive Industry
Unit of Competency

Functional Area - Vehicle Servicing

Title	Diagnose, test and repair electric and hybrid vehicle high voltage batteries
Code	108725L3
Range	This unit of competency is applicable in electric vehicle servicing workshops. Practitioners should be able to work on functional or potentially functional battery system and the related high-voltage components in electric and hybrid vehicles, including plug-in hybrid electric vehicles; diagnose, repair and overhaul high-voltage batteries safely according to the instructions in the vehicle manufacturer's service manual, occupational and health and environmental protection legislation. They should also be able to conduct performance tests to the high voltage batteries upon completion of works and providing written report.
Level	3
Credit	3 (For Reference Only)
Competency	<p>Performance Requirements</p> <p>1. Knowledge (Common faults of the high voltage batteries of electric and hybrid vehicle and diagnosis procedures)</p> <ul style="list-style-type: none"> • Master the common faults of the high voltage batteries of electric and hybrid vehicle on: <ul style="list-style-type: none"> ○ Over heat ○ Crash ○ Leak ○ Smoke ○ Soak • Master the fault diagnosis process for high voltage batteries of electric and hybrid vehicle with reference to the instructions in the manufacturer's service manual. Such as: <ul style="list-style-type: none"> ○ Pressure Test (IP test) ○ Isolation / non-conductive test ○ Symmetric / balances test • Understand relevant legal requirements on road & safety and environment protection. <p>2. Performance (Conduct diagnosis and rectify the faults of the high voltage batteries of electric and hybrid vehicle)</p> <ul style="list-style-type: none"> • Accurately conduct complicated fault diagnosis on the high voltage batteries of electric and hybrid vehicle according to the instructions in the manufacturer's service manual and the requirements concerning occupational health and safety and that of environmental protection, including the use of special equipment and instruments to assist the diagnostic process. • According to the diagnostic result to process the rectification work. • Conduct functional tests. • Conduct performance and safety inspection after the work and provide written report, focusing: <ul style="list-style-type: none"> ○ Abnormalities ○ Measuring data ○ Major decisions
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"> • Capable of conducting complicated fault diagnosis on the high voltage batteries of electric and hybrid vehicle according to the instructions in the manufacturer's service manual and the relevant requirements on environment, occupational safety and health regulations; and

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	<ul style="list-style-type: none">• Capable of conducting or arranging rectification according to diagnostic results;• Capable of conducting functional tests and completing simple fault report upon completion of work and providing working report.
Remark	The credits value of this unit of competency is set on the presumption that the practitioner concerned has already possessed the knowledge of the high voltage batteries of electric and hybrid vehicle.