Specification of Competency Standards
for the Automotive
Unit of Competency

Functional Area - Vehicle Servicing

Title	Dismantle, repair and assemble the traction motors of electrified vehicles
Code	111701L3
Range	This unit of competency is applicable in vehicle service workshops. Practitioners should be able to dismantle, repair and assemble the traction motors and associated components safely according to the instructions in the corresponding electrified vehicle manufacturer's service manual and the relevant requirements on environmental protection, occupational safety and health regulations. They should also be able to conduct functional tests on the traction motor and provide work report upon completion of work.
Level	3
Credit	4 *(For Reference Only)*
Competency	**Performance Requirements** 1. Knowledge (The traction motor and associated components) • Understand the structure and operation of the traction motors and associated components of electrified vehicles. • Demonstrate the dismantlement, repair and assembly procedure according to the instructions in the corresponding vehicle manufacturer's service manual. • Familiar with the special servicing tools and equipment for dismantling, repairing and assembling the traction motors and associated components. • Understanding of the relevant legal requirements on road and vehicle safety, and environmental protection. 2. Performance (Dismantle, repair and assemble the traction motors and associated components of electrified vehicles) • According to the instructions in the corresponding vehicle manufacturer's service manual and the requirements of occupational safety and health as well as that of environmental protection, dismantle, repair and assemble the traction motors and associated components of electrified vehicles safely, including: ◦ Identify the common faults of the removed traction motor and associated components by special servicing tools and equipment and visual inspection ◦ Analyse the testing results for locating faults ◦ Rectify the typical component faults ◦ Replace the lubricant of the correct type and quantity ◦ Install the bolts and nuts with correct tightening torque and sequence ◦ Conduct functional tests for the traction motor and components after assembly • Conduct performance and safety inspection after the assembly work and provide work report focusing on: ◦ Abnormalities ◦ Measurement data ◦ Major decisions

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 conducting dismantling, repairing and assembling the traction motors and associated components of electrified vehicles safely according to the instructions in the corresponding vehicle manufacturer's service manual and the relevant requirements on environmental protection, occupational safety and health regulations, after the system power-down is confirmed by the checking result of special service tools / authorised competent person; and • Capable of conducting functional tests for the traction motor and components and providing work report upon completion of work.
Remark	The credit value of this unit of competency is set on the presumption that the practitioner concerned already possesses good knowledge of the structure and operation of electrified vehicles. The practitioner concerned should be a recognised competent person in electrified vehicles, such as a registered vehicle mechanic who has completed an electric vehicle – low voltage training course, or equivalent. The major ordinance involved in this unit of competency is as follows: • Relevant ordinances to the Road Traffic (Construction and Maintenance of Vehicles) Regulations • Occupational Safety and Health Ordinance (This UoC replaced108692L2)