Assessment Requirements

Unit VF10K – Knowledge of Inspection, Testing and Replacement of Vehicle Batteries and Related Components

Content

The selection, function and safe use of battery testing equipment, to include:

a. Voltmeter
b. Multi-meter
c. Hydrometer
d. Battery condition tester

Batteries and components are:

a. Automotive batteries
b. Battery connections
c. Battery supports
d. Battery hold down devices
e. Generators
f. Drive belts

Types of batteries are:

a Standard batteries
b Low maintenance batteries
c Maintenance free batteries
d Gel filled batteries
e Smart charging

Generators can be:

a. Alternators
b. Dynamos
c. Magnetos

Tools used for testing and maintenance to include:

a. Hydrometer
b. Volt meter
c. Ammeter
d. High rate discharge meter
e. Battery chargers
f. Battery savers

Testing of batteries and charging systems

a. Electrolyte level low
b. Terminal connections loose or corroded
c. Drive belt slipping
d. Alternator or generator not charging at the correct output (meter check)
e. Faulty alternator or voltage regulator
f. Specific gravity low or high

a. Health and safety equipment Personal protection
b. Electrolyte filling and health and safety requirements
c. Correct disposal of waste

d. Working to agreed timescales
e. Keeping others informed of progress and referral of problems
f. Storage and maintenance of battery stock
g. Logical sequence for disconnecting and connecting

Fault identification methods and procedures for batteries and components, to include:

a. visual
b. aural
c. use of hand held test equipment
d. use of battery manufacturer's test equipment

Common faults associated with batteries and charging systems, to include:

a. internal battery faults
b. charging faults
c. drive belt faults
d. wiring or connection faults
e. battery mounting faults
f. battery terminal and casing faults