

Level 3 Award in Electric/Hybrid Vehicle Vehicle System Repair and Replacement (2 Days)

Course Synopsis



Target Audience

Light Vehicle Diagnostic/Master Technicians, Technical Trainers/Instructors, Automotive Engineers and Designers

Overview

This course is specifically designed to cover all aspects of Hybrid/Electrically Propelled Technology. Covering the basic procedures of safety in handling High Voltage systems through to content that looks at in depth on how the Propulsion and Re-Generation system is controlled. Along with the management of the Inverter power unit, a thorough understanding of Battery management and how information is used to maximize the efficiency of the system will be gained. Other subjects covered include High Voltage Air Conditioning compressors, DC-DC Converters, PTC Heater assemblies along with high pressure hydraulic braking systems and the management between conventional braking and regeneration braking balance. Suitable for Technicians carrying out repairs and replacement of Hybrid/Electrically Propelled HV components.

This course content is designed towards a Nationally recognised level 3 qualification VRQ (Vocational Related Qualification) and if successful the delegate will receive a Qualification certificate which can be put towards a program of Continuous Professional Development (CPD). A copy of the qualification's Learning outcomes and Assessment criteria can be downloaded by going to the IMI Awards website.

Subjects Covered

- Terminology
- Types of Hybrid/EV layouts
- Operational conditions
- Auto-Stop Systems
- Construction and function of Hybrid systems
- Handling Hybrid components and safety procedures
- Construction and function of Electrically propelled/Hybrid systems
- Safe Shut-down procedures and Methods of electrical measurement
- Construction and function of components Identification of Control units, components and motor assembly – Practical (Subject to hardware availability)
- Battery construction and operation
- Brushless Motor Construction and operation
- 3-Phase principles
- Motor control
- Electrical Regeneration
- Inverter Voltage rectification and regulation

Certification

I.D No: 603/1468/0 - IMI Level 3 Award in Electric/Hybrid Vehicle Repair and Replacement

