National Apprenticeship - Occupational Profile

Apprenticeship Title	**OEM Engineering Technician**
NFQ Level	Level 6 Advanced Certificate in OEM Engineering
Duration	3 Years
Occupation Title	**OEM Engineering Technician**

Typical tasks/ responsibilities

The OEM Sector manufactures a range of modern and bespoke equipment. These contain a range of complex electrical, battery, electro-mechanical, hydraulic, pneumatic and electronic technologies. The Original Equipment Manufacturing (OEM) Engineering Technician is tasked with manufacturing, assembling, testing, servicing and maintaining a range of original, engineered plant and equipment, to include unique & bespoke solutions to customer needs.

While common engineering skills will be developed over the duration of the programme, uniquely, the apprentice will cultivate the skills necessary to assemble, install, test, commission, carry out fault diagnostics on electronically controlled engine driven (diesel and gas) and electrically powered systems (battery and mains). On completion of this programme, they will have the necessary skills to analyse many different electromechanical systems including, electrical, hydraulics, pneumatics, robotic systems and to identify and resolve specific faults encountered in OEM products. The OEM Engineering Technician will also develop the expertise to provide support to customers relative to the service and maintenance of the products they manufacture.

An OEM Engineering Technician will be required to interpret technical data and use calibration, torque and testing instruments for effective product assembly, fault diagnosis and rectification. They will also be responsible for the installation and calibration of sensors and transmitting and controlling devices. Graduates of this programme will be a key member of cross functional teams such as research and development, assembly, manufacturing, electrical, testing, customer support, service & installation, product management and sales /marketing.

Skills

Core Skills

- Equipment assembly using interpretation of technical drawings, schematics, data, testing procedures and relevant quality standards in a manufacturing and engineering environment.
- Installation, servicing, testing and diagnosing of hydraulic, electro-mechanical, pneumatic, electrical wiring and automated control systems in a manufacturing and engineering environment.

Specialist Skills

- Fault diagnosis and rectification within original equipment products across electronically controlled engine driven, electrical wiring, battery and mains powered, hydraulics, pneumatic and control systems.
- Installation, servicing, testing and diagnostics of robotics systems, battery and mains powered systems and electronically controlled engines.
- Manufacturing, installation and commissioning of OEM products.
- Customer service and support in relation to the correct use and maintenance of OEM products.
- Automation; understanding the use of machinery and/or software to automatically perform and aid tasks with minimum human input. Automation use in manufacturing and industrial processing, software processes and business processes.

Common Skills

- Fitting and correct installation of various fasteners, e.g. nuts, bolts, hydraulic fittings, electrical connections etc.
- Manufacturing efficiency (LEAN) principles to the OEM workplace.
- Mathematical calculations/principles during installation, servicing, testing and fault diagnosis associated with OEM products.
- Use of common computer applications such as CAD, Solid Works, Project & Excel.
- Health & Safety current procedures, including the selection, safe use of and storage of tools, plant, equipment, components and materials.
- Manufacturing and Engineering techniques and practices.
- Awareness/Overview:
    - Telematics
    - Industry 4.0
    - Understanding of Wi-Fi or meshed networks

Personal Skills

- Good Communication Skills
- Customer Service and Support
- Ability to work as part of a team
- Ability to work independently
- Critical Thinking
- Problem Solving
- Time management/planning
- Information gathering
- Report writing
- Working on own initiative
- Overall awareness of the Working Environment and Stock Management
- Maintaining high quality standards