



**Learners will investigate and create solutions to problems in response to given engineering briefs.**

**Learning Content**

Learners are able to analyse the brief, recognising the problems that need to be solved. They can suggest alternative solutions to meet the brief. They are able to recommend plans for alternative solutions that are feasible and provide a reflective account of possible solutions and recommendations that are technically correct. They are able to show an understanding of health and safety procedures. Learners are able to make appropriate observations and record results accurately. They can use a range of analytical techniques in order to produce detailed conclusions. Learners are able to evaluate processes and solutions in detail to ensure the brief is met.

**Unit Overview**

This component builds on the knowledge and skills you have learned in Components 1 and 2 and is synoptic. You will be given engineering briefs with problems you need to respond to. Your response will include possible solutions that you will test against the brief. You will be given the opportunity to carry out tests, collect and analyse data, reflect on your findings, consider any issues, and suggest solutions. This component will support you in progressing to a Level 2 or 3 qualification in a range of engineering sectors, for example aerospace, automotive, electrical, electronic, manufacturing, marine, mechanical or telecommunications. You will develop transferable skills such as problem solving, which will support your progression to Level 2 or 3 vocational or academic qualifications.

**Learning Outline:**

- AO1** Understand how to respond to an engineering brief
- AO2** Select skills and techniques in response to an engineering brief
- AO3** Apply skills and techniques in response to an engineering brief
- AO4** Evaluate and review the outcomes of the application of skills and techniques in response to an engineering brief

Command or term	Definition
Client brief	Outlines the client's expectations and requirements for the product.
Design	A drawing and/or specification to communicate the form, function and/or operational workings of a product prior to it being made or maintained.
Manufacture	To make a product for commercial gain.
Project log	A document to record the progress made, key activities and decisions taken during the development of a project

**Numeracy links:**

Measurements  
Units Interpretation and conversion

**Work Related Learning:**

Gaining knowledge to assist in a manufacturing or Engineering career.

**SMSC and British Values**

Understanding the importance teamwork in British production lines