

Just the Job Information Sheet

Job title/s: Aeronautical Engineer

Job description

Aeronautical Engineers maintain, repair or overhaul aircraft engines, mechanical systems and structures. Also all electronic equipment used on the aircraft.

Aeronautical engineers may do some or all of the following:

- Test for aircraft defects and design and make repairs or modifications.
- Evaluate product data and design for conformance to engineering principles, customer requirements and quality standards
- Develop, evaluate or modify design equipment or tools to repair or maintain aircraft
- Write technical reports or other documentation that instructs others on how to use, maintain and calibrate (adjust to measure accurately) this equipment
- Provide technical and regulatory advice
- Have contact with aircraft engineering trades people, other aeronautical engineers, suppliers of aircraft or aeronautical equipment, aircraft manufacturers, airline owners and Civil Aviation Authority staff

Qualifications required

Secondary Education

A tertiary entrance qualification is needed to enter tertiary training. Bursary or NCEA equivalent maths, physics and chemistry is preferred.

Pre-employment training is provided by Air New Zealand Training School and Nelson Marlborough Institute of Technology. Training to become an Aeronautical Engineer is also available in the Royal New Zealand Air Force.

Training can also be carried out on the job with a company which is willing to support the trainee. ATTTO supports these trainees and facilitates the delivery of NZQA qualification in the Aviation sector, including the following.

NATIONAL CERTIFICATE in Aeronautical Engineering (Level 4)
with strands in Aeronautical Non Destructive Testing, Armament, Avionics, Aircraft Mechanical, Aircraft Powerplant, Rotorcraft and Aircraft Structures

This certificate is the major one of three within the Aeronautical Engineering sub-field. It is designed for people working in the aeronautical engineering industry and recognises the skills required to carry out maintenance, overhauls and repairs to aircraft, aircraft systems and aircraft components or equipment. The certificate is structured to ensure that holders have a concentration of skills in one of seven Aeronautical Engineering strands, supported by a range of skills and knowledge across the whole Aeronautical Engineering sub-field.

The certificate is flexible in that it enables candidates to structure the qualification to suit their chosen career path or an employer's requirements. Candidates complete core compulsory unit standards then select a strand in the discipline of their choice, and choose options from the whole Aeronautical Engineering sub-field to support the strand.

This qualification incorporates seven compulsory core unit standards common to the National Certificate in Aeronautical Engineering Support and the National Certificate in Aircraft

Servicing so that people wishing to change direction in their work are able to use these unit standards towards the other qualifications.

For more information about Aeronautical Engineering qualifications, go to www.attto.org.nz.

Training costs

Aeronautical Engineering Modern Apprenticeship

Modern Apprenticeships are an initiative of the Labour Government and were designed to increase the number of young people in apprenticeships, to increase the range of industries and occupations that offer apprenticeships and to ensure that apprenticeships will lead to the achievement of National Certificates.

ATTTO is the Modern Apprenticeship Coordinator for Aeronautical Engineering and our job is to work with the employer and apprentice to develop a personal training programme. We regularly review the apprentice's progress and are available to advise and help with any issues. There is no cost to the workplace for these services.

Modern Apprenticeships usually take three years to complete and result in the National Certificate in Aeronautical Engineering Level 4.

Occasionally employers will take on Modern Apprentices straight from school, but most prefer that potential Modern Apprentices first complete pre-employment training resulting in the National Certificate in Aeronautical Engineering (Related Technology) Level 3.

Aeronautical engineers should aim to be a CAA (Civil Aviation Authority) Aircraft Maintenance Engineer Licence (AMEL) holder. A level 6 diploma has been developed along side the AMEL so licensed engineers are recognised for the study put in to pass these exams and gain the licence.

Information for Potential Modern Apprentices

In order to become a Modern Apprentice in Aeronautical Engineering you will need to:

- Be employed by an employer who is supportive of the Modern Apprenticeship scheme.
- Be between the ages of 16 and your 22nd birthday.

Modern Apprentices have the support of a Modern Apprentice Co-ordinator who helps to establish individual training plans and be on hand to assist with any problems that may arise.

Location of job

Aeronautical engineers are located at airports all over New Zealand. An aeronautical engineer usually works in a hanger or workshop maintaining aircraft and aircraft components.

Career path

An Aeronautical Engineers will progress from trainee/apprentice to tradesman and may move into supervisory or management roles within maintenance companies or airlines, oversee a team of engineers or become self-employed consultants working on a wide range of projects.

Salary range

Salaries can vary but Aeronautical Engineers generally earn between \$40,000 and \$100,000 depending on skills, experience and job responsibilities.

Other careers this profession could lead to

Aeronautical engineering is highly specialised and most people remain working in the aviation industry.

How to increase the chances of successfully entering this industry

Having experience and or an interest in fixing engines and machinery or work as a trainee in aeronautical engineering company will help when applying for an apprenticeship.

Other places to source information about this job

ATTTO – www.attto.org.nz

Careers Services website – www.careers.govt.nz

CAA – www.caa.govt.nz

Institute of Professional Engineers – www.ipenz.org.nz

RNZAF-www.airforce.mil.nz

Aviation Industry Association www.aia.org.nz

Air New Zealand Airline Training www.plane-training.com

Nelson Marlborough Institute of Technology (NMIT) www.nmit.ac.nz