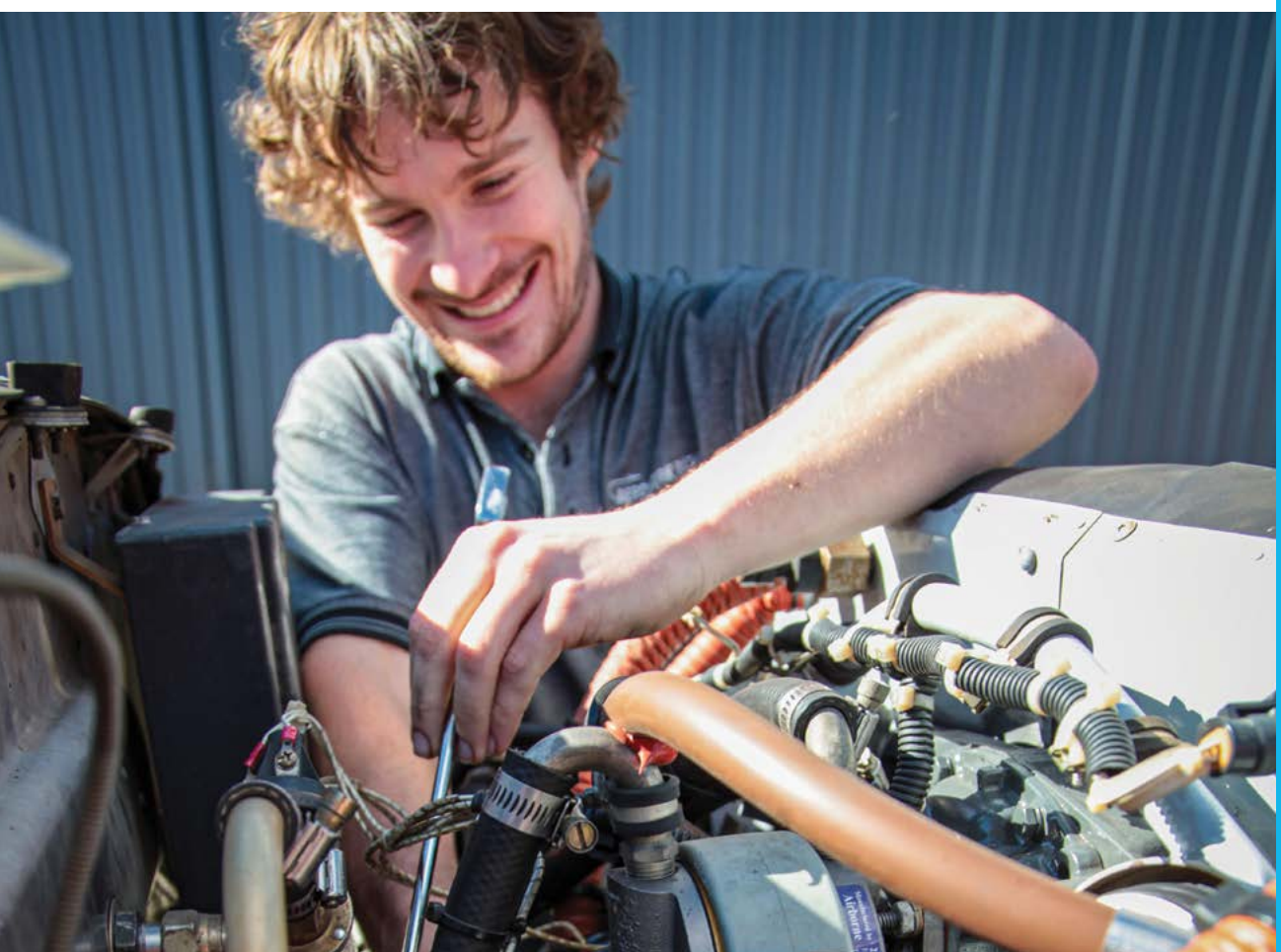
Australian Government
Civil Aviation Safety Authority

ENGINEER
CAREER GUIDE



Cover images: Civil Aviation Safety Authority

ISBN 978-1-921475-77-1 (print)
ISBN 978-1-921475-79-5 (pdf)

2310.4768

CONTENTS

Is aircraft engineering for me? 02

Where could a career in aircraft engineering take me? 03
Career profile – Warren Bossie 04
AMEs and LAMEs 06
Licence types 06
Career profile – Michael Yip 08

Starting out as an aircraft maintenance engineer? 10
Career profile – Sven Glanzner 11
Choosing a training pathway 12
Career profile – Bruce Connors 14
What will I study? 15
Mechanical 15
Avionics 15
Structures 15
Career profile – Saskia Ford 16
Career profile – Udaya Walpita 18

From AME to LAME – how do I get a licence? 20

Choosing a workplace 21
Career profile – Bethany Lee 22
Career profile – Emma Mahoney 24

Further information 25

IS AIRCRAFT ENGINEERING FOR ME?

Do you love the idea of working with state-of-the-art technology? Do you like to know how things work? Do you enjoy finding practical solutions to problems?

If so, aircraft engineering could be for you!

Aircraft engineers get to work on some of the newest and most powerful flying machines on earth.

> As an aircraft engineer, you will always be at the centre of things in aviation; no aircraft takes off without being checked and signed-off by an engineer.

An aircraft engineer must be methodical, meticulous and love hands-on work. Aircraft engineers enjoy bringing all their training and experience together to find and fix a physical problem – and of course there is the instant satisfaction of seeing your hard work really take off!

The diversity of aircraft flying today means you will always have something interesting at your fingertips. As an aircraft maintenance engineer (AME – pronounced aye-mee) or licensed aircraft maintenance engineer (LAME – pronounced 'lay-mee') you could specialise in checking and maintaining:

- **aircraft engines and components** – from simple piston engines to complex microprocessor controlled jet aircraft engines
- **structural integrity** – ranging from wood and fabric to advanced composites and complex metal alloys.
- **electrical systems** – some aircraft have the capacity to generate enough energy to power a small town.
- **flight management, navigation and communication systems** – utilising microprocessor, satellite and laser technologies.

To be successful in aircraft engineering, you will need:

- strong attention to detail
- a preference for mathematics and science
- the ability to work well individually and as part of a team.

If this sounds like you, read on: you could be on your way to a satisfying career keeping Australia's fleet of more than 15,000 private and commercial aircraft flying safely.

image: aapsky | stock.adobe.com

WHERE COULD A CAREER IN AIRCRAFT ENGINEERING TAKE ME?

Aircraft engineers are in demand by airlines and aviation companies.

You could progress from an apprentice to a licensed professional and there are lots of areas to specialise in. Aircraft engineering could also be a pathway into aeronautical engineering which is a highly theoretical field utilised in the manufacturing side of aviation, as well as in the structures, mechanical and avionic maintenance fields.

Licensed aircraft maintenance engineers are particularly in demand, especially ones who are Australian-qualified. To gain an aircraft engineer's licence, you need to meet technical training and proficiency requirements, have an understanding of aviation regulations, legislation and have gained the relevant practical experience.

The more qualifications and variety of engine/system/type licences you have, the better your employment and career opportunities.

Australia's aircraft engineer trade qualifications conform to international standards, so you could find yourself working for a global maintenance company with the opportunity to work anywhere in the world.

CAREER PROFILE – WARREN BOSSIE

MANAGER FLEET & BUSINESS AIRCRAFT REGULATORY SERVICES, HAWKER PACIFIC

When I was in school I had an interest in electronics, and specifically, radio equipment. I didn't really want a job where I would be tied up in an office, so working with aircraft where I could be out in the field some of the time seemed like a reasonable idea.

I started out as an apprentice radio engineer. Under the supervision of a LAME, I learnt to maintain a wide range of aircraft, from single-engine piston to high capacity airliners.

Over my career, I've learnt about structures, mechanics, design engineering, metallurgy, aerodynamics and regulations. I've managed maintenance facilities and worked as an airworthiness inspector and am now a senior manager in a highly regarded aviation company, managing the ongoing maintenance and certification requirements for external customers and an internal fleet of aircraft.

I have found there are plenty of opportunities to move between companies and sectors to gain experience and qualifications.

One of the highlights of my career was being part of a team to introduce snow skis to a new type of aircraft. We also needed to obtain civil certification for the Spanish-built CASA 212-400 series aircraft that needed the skis fitted. So the project included working with CASA in Australia, the ski manufacturer in Canada, the aircraft manufacturer in Spain, the European civil aviation authority and our client, the Australian Antarctic Division.

image courtesy: Warren Bossie

For over a year, I travelled continually between these locations as we developed the skis and the manuals and the procedures we would follow to become a world recognised operator of ski equipped aircraft and cold climate operations. The project was successful; we were operational in the season when we were scheduled to commence and the aircraft operated successfully out of the box. Being a critical part of that team was very rewarding and something I will value for a long time.

Aircraft engineering keeps your mind occupied. Aircraft have so many complex systems, there's always something new to research, new technology to train with and regulatory changes to be aware of. Working in a team gives you opportunity to learn from people with different skills and training and this expands both your knowledge and your opportunities.

It's always challenging and interesting.

> Working with people who love aviation and all things aircraft and helping them achieve their dreams makes going to work worthwhile. Also, you can never know what incredible opportunity might lie just around the corner.

I've been able to travel all over the world and meet some truly great people who are very passionate about aircraft. With each new job I have undertaken, I have picked up some new knowledge or skills.

Being willing to share your own knowledge and experience is also important. It is extremely rewarding to help someone develop their career and achieve their goals, especially when they become qualified and can then mentor others.

It doesn't matter where you start; go with the trade and aircraft type that interests you. One thing is for sure, you can change direction further up the road especially once you have become licenced or qualified as a design engineer. Aviation is a tree with many branches. There are plenty of opportunities to learn and develop if you are willing to pursue them.

AMEs and LAMEs

An aircraft maintenance engineer (AME) works under the direction of a licensed aircraft maintenance engineer (LAME) to carry out servicing and maintenance work. They must meet a range of local and international aviation standards to ensure the aircraft is airworthy.

An AME's job is to maintain and service aircraft:

- in approved maintenance organisations located in Australia and
- in approved maintenance organisations operated by Australian or overseas companies located overseas.

LAMEs can also carry out servicing and maintenance work, but their main role is to supervise the work of other engineers in the team and sign off on the work, certifying that the job has been completed to the required standard and the aircraft is ready to fly.

In most cases, an aircraft engineering team will be made up of a number of apprentices, aviation maintenance workers, AMEs and LAMEs across different specialisations (mechanical, structures and avionics). The ability to communicate clearly and effectively as part of a team is very important for an aircraft engineer.

Licence types

CASA's licensing system for aircraft engineers is prescribed in Part 66 of the *Civil Aviation Safety Regulations 1998*. The legislation sets out the licence types, conditions of each licence and requirements for how they are obtained. Hence any type of aircraft engineering licence is known as a 'Part 66 licence'.

A LAME can hold a Part 66 licence in one or more of the licence categories or subcategories once they have met the required technical training and proficiency requirements. To qualify and apply for a licence, you must have successfully completed the basic knowledge (theory training) and examinations for the particular category or subcategory of licence, through either a CASA-approved maintenance training organisation or via self-study. You will also need to demonstrate a good understanding of the legislation and have gained the relavant basic practical experience for the particular licence.

image: highwaystarz | stock.adobe.com

The licence categories are:

Category A

- **A1** – turbine-engined aeroplanes
- **A2** – piston-engined aeroplanes
- **A3** – turbine-engined helicopters
- **A4** – piston-engined helicopters

Category B1

- **B1.1** – turbine-engined aeroplanes
- **B1.2** – piston-engined aeroplanes
- **B1.3** – turbine-engined helicopters
- **B1.4** – piston-engined helicopters

Category B2

Avionics

Category C

Large aircraft in a base maintenance activity

Aircraft maintenance engineer licences are perpetual, but to keep licences current, aircraft maintenance engineers are required to have 6 months experience in the field during the previous 24 months.

Due to the ever-increasing complexity of aircraft, LAMEs are encouraged to undertake ongoing training, using courses such as those offered by manufacturers, employers or external contractors.

More information about Part 66 licensing can be found on the maintenance personnel licensing page at casa.gov.au

CAREER PROFILE – MICHAEL YIP

DIRECTOR OF MAINTENANE BECKER HELICOPTERS

I had 2 options during my tenth year of schooling: continue going to school or get an apprenticeship. My mother told me not to become a motor mechanic: "like your dad, it won't lead you anywhere!"

That was not really inspiring considering I had been breaking, building and wiring mechanical things from an early age. I had never thought about an aviation career and had no real interest in aviation other than making plastic models. I just needed a job.

Two family friends were already in the aviation industry, and with all the family pressure building up, it eventually sounded interesting.

So, I gave in and mum just did what mums do and secured the interviews with Qantas, Hawker De Haviland's, the RAAF, and finally with Rex Aviation at Bankstown Airport.

Two weeks later I was lucky enough to be selected as 1 of 4 apprentices out of 250 applicants. On my signup day, with my mum and dad in attendance, the 2 interviewers gave me the best feedback from the guys I was assigned to. They have all retired now, but I still consider them friends and thank them for the opportunity.

Aircraft engineering is a passion and that shows through in everything you do. This starts from writing a resume to your first handshake during an interview. There are lots of personalities that a potential employer is managing, so they will be looking for people to enhance their team.

image courtesy: Becker helicopters

image: Civil Aviation Safety Authority

> Always ask 'why', at least 5 times to yourself or your peers, then you will drill down to the specifics of your queries. Show enthusiasm and professionalism in everything that you project, and the smart managers will support everything you do.

As a career it has a bit of everything and for that, it is very rewarding. There is a serious side that deserves respect and there is a bureaucratic side that will frustrate you. Being a part of the worldwide aviation community, you will have the opportunity to make lifelong friends around Australia and during the many travel destinations you will get to visit as an aircraft engineer.

But overall, if you get in the right environment, this industry and all the opportunities that open up are just plain fun.

STARTING OUT AS AN AIRCRAFT MAINTENANCE ENGINEER?

So you've decided aircraft engineering could be the career for you – what's next?

Many aircraft maintenance engineers (AME) begin their careers with an airline, the Australian Defence Force or a general aviation maintenance organisation. Whether you work in civil aviation or the military, you should focus on studying towards gaining a Certificate IV in Aeroskills qualification (trade specific). Although this qualification does not directly qualify for a licence issued by CASA, if completed through a CASA approved Part 147 Maintenance Training Organisation (MTO) it can form part of the pathway toward the issue of a licence, provided CASA examination standards are met.

> Once you've gained this level of qualification and are actively maintaining aircraft, you are well on your way towards gaining an aircraft maintenance engineer licence issued by CASA.

Australia also now has a number of specialised aviation high schools where students can begin aircraft maintenance studies as part of their Year 11 and 12 course.

image: Civil Aviation Safety Authority

CAREER PROFILE – SVEN GLANZNER

AIRCRAFT MAINTENANCE ENGINEER (MECHANICAL), QANTASLINK BRISBANE

I was working in a dead-end job, when a friend talked me into looking into aircraft maintenance engineering. I was always pretty good at mechanical things, but I just didn't have the confidence when it came to writing. And, I've always been interested in anything that flies. I can't help it; if I hear an engine overhead, I still look up.

So, I went to South Metropolitan TAFE, spoke to the lecturers, and enrolled in the Aeroskills Certificate II a few months later. I decided to take my career further and complete a 12 month course.

I may have done well at TAFE but starting work was a bit of a shock because there was so much I didn't know. But I worked towards my goal, and the rest of the team really took the effort to teach and train me.

I think this is when everything started to fall into place. After 4 years, I finished my apprenticeship and got the job I have now, at QantasLink in Brisbane. I just got in the car and made a road trip of it, Perth to Brisbane, taking my time and stopping in places I'd never been before. It made me realise the kinds of opportunities that my career could give me.

A normal day on the job for me would be anything from airframe and hydraulic inspections to engine maintenance and engine changes. We do all types of maintenance as well as troubleshooting if there's a defect.

I love the troubleshooting the most – actually fixing things and changing critical components, like defect rectifications for an engine or propeller system. You feel like you have achieved something. You go home and you know what you've been doing matters.

I actually enjoy everything I do – it gives me a great sense of achievement.

I've started studying for my diploma which will give me even more options for my future. I'm still pretty hard on myself – I figure I have to be to get licensed. But I would definitely recommend a career as an aircraft maintenance engineer. It's really the kind of job that can bring you a great future, if you put in the hard work.

image courtesy: Qantaslink

Choosing a training pathway

There are 2 training pathway options available to qualify for grant of a Part 66 aircraft engineer licence. They are undertaking:

- formalised licence category training and examination, and assessment of practical experience, conducted by a CASA approved Part 147 Maintenance Training Organisation, or
- licence category training utilising the Part 66 self-study training and examination pathway, sit relevant Part 66 module (theory) exams and submit to CASA a practical experience logbook.

More information about the training pathways is available on the 'How to become a licensed aircraft maintenance engineer (LAME)' page on the CASA website.

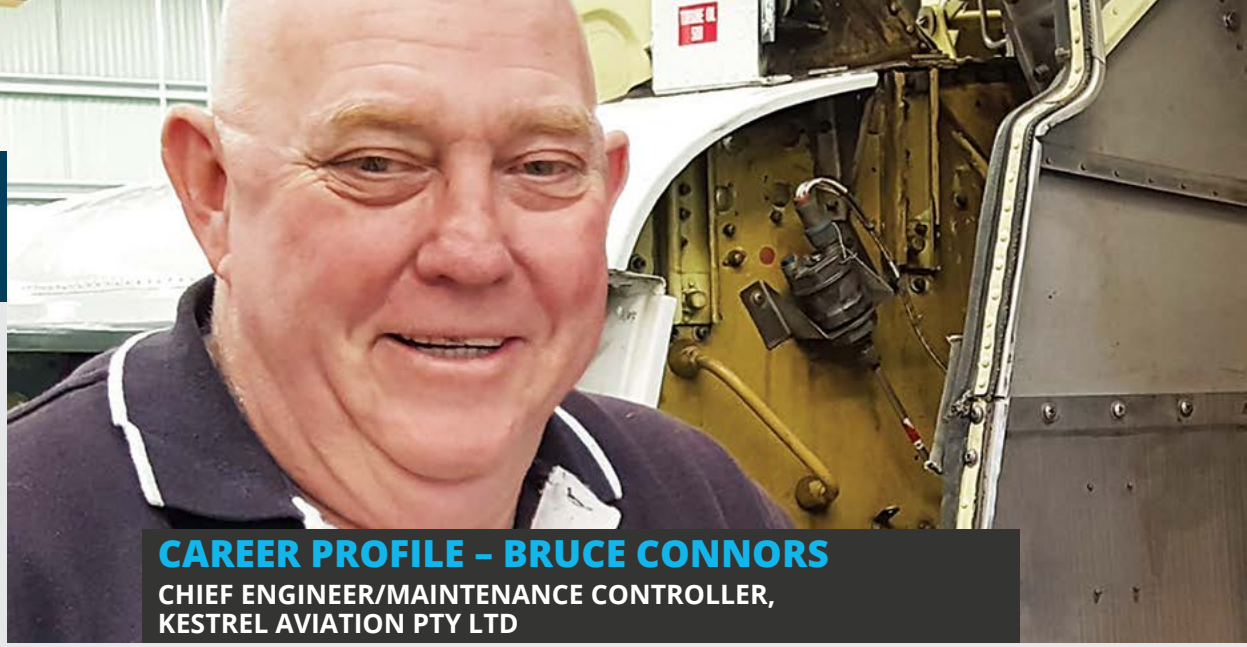
Capital cities have well-established training organisations offering aircraft maintenance courses, and in some larger regional centres there may be privately-run or government-funded training organisations. For Part 66 licensing, CASA will only recognise training and assessments provided by a CASA-approved Part 147 maintenance training organisation. A list of these organisations can be found in Advisory Circular 147-02 on the CASA website.

It's a good idea to take the time to find a training provider that best meets your specific requirements, and make contact before leaving school or arranging for work experience.

image: auremar | stock.adobe.com

To ensure you have all the information you need before you start, it may be useful to ask the following questions:

- Is this organisation a CASA-approved Part 147 maintenance training organisation?
- Are there classes near you?
- What are the entry requirements?
- Is it possible to tour the facilities?
- What subjects are they teaching and when?
- Do they have, or can they arrange, external studies/distance education?
- Can they help with work experience requirements?
- When can you start? Do you have to start at the beginning of the year?
- What are the course fees?
- Can you apply for government funding?
- Do they recognise prior learning, training and/or experience?
- Do they have evening classes?
- What qualifications do the instructors have?
- What help is available (student services etc.)?
- Do they know of any employers willing to take on an apprentice or trainee?
- Do they offer diploma qualification training courses?
- What arrangements are in place for people who are training externally or in remote areas to have their experience assessed?
- Will this assessment cost any more than normal fees?
- How do you enrol?
- When do enrolments close?
- Is it possible to accelerate through the course?
- Can full-time training be provided?



CAREER PROFILE – BRUCE CONNORS

CHIEF ENGINEER/MAINTENANCE CONTROLLER, KESTREL AVIATION PTY LTD

You may say aircraft engineering was in the blood. My father was a LAME and from a young age I was around aircraft.

When I was growing up during the 1960s access to the hangars at Essendon airport was easier and it was very busy which made it exciting for a young boy. At the age of 17, I joined the Royal Australian Navy because it was recruiting aircraft maintenance engineers at that time.

I completed my apprenticeship with the Navy and became qualified on the Westland Sikorsky Sea King helicopter. While with the Navy I spent time and travelled overseas on the HMAS Melbourne, the Australian Navy's last aircraft carrier.

After leaving the Navy it took about 2 years to get back working on aircraft. In my career since I have worked in Australia, Asia, Europe, America and the Middle East. Memorable moments have been watching a Jumbo 747 take off after extensive maintenance over 9 months, and the many friends along the way. The qualities and skills best suited to being a successful LAME include good communication, being able to work well with others, and a willingness to learn as aviation is about constant learning, so be prepared never to know everything.

Currently as chief engineer I am assessing and co-ordinating tasks by considering human factors and safety of work through scheduling tasks. My job involves ensuring that all works required are carried out within time and budget restraints providing a safe, reliable aircraft/helicopter and doing quality checks on physical work and paperwork.

In these days of smart phones and computers you still require good understanding of reading, writing, mathematics and a basic knowledge and interest in physics, as we sometimes have to calculate percentages, forces and tolerances and have the ability to write this down.

I would recommend aircraft engineering to anyone interested as it has taken me across the world and I have met some good friends. The money's not bad either!

image courtesy: Kestrel Aviation

What will I study?

You will be able to choose a stream of aircraft engineering to specialise in. This could be:

› mechanical

› avionics

› structures.

Mechanical

Mechanical engineers work on aircraft engines and aircraft systems such as electrical flight controls, undercarriage and braking systems, fuel, hydraulics, cabin pressurisation and more. Many of these systems are now computer controlled which means that aircraft maintenance engineers require thorough training in modern aircraft systems technology.

Avionics

Avionics engineers work on aircraft electrical, instrument, communication and navigation systems. These systems include complex computer technology and involve high-tech equipment such as radar, electrical generators, navigation, communications, fly-by-wire, auto flight and digital systems, to name just a few.

Structures

Structures engineers repair and manufacture parts for the body of an aircraft. They may work with high-tech composite materials, ranging from aircraft-grade metals to new generation materials such as carbon fibre, boron and Kevlar, the same materials found in space vehicles and Formula 1 race cars.

Choosing appropriate subjects while you are still at high school will give you a head start into further training. For most courses you must have Year 10 Maths and English, but it is also preferable to have completed Years 11 and 12.

CAREER PROFILE – SASKIA FORD

AVIONICS LAME AND AIRWORTHINESS INSPECTOR

I had completed the first year of a Bachelor of Arts degree in Journalism and taken a year off due to family illness overseas. At this time, like most students, I had an evening job at a hotel bar in Darwin, where I met a group of British engineers travelling the world in a specially modified aircraft.

A couple of them were aircraft engineers. I didn't know exactly what they did, but I knew it sounded a lot more interesting than what I was doing.

I found out where they studied (in the UK) and called the college. I spoke with the head of the engineering school, who convinced me to enrol (I still had no real idea what I would be studying!). I have a British passport and could live and work in the UK so I left Australia 3 weeks later.

I studied at Brunel College of Technology on a Civil Aviation Authority approved full-time course for licensed aircraft maintenance engineers. The course had a large practical component as well as the theory. The college owned 2 non-flying training aircraft that could be used for maintenance purposes, so we spent several weeks a year at the airport learning about them and were also expected to organise practical work with a maintenance organisation during every vacation.

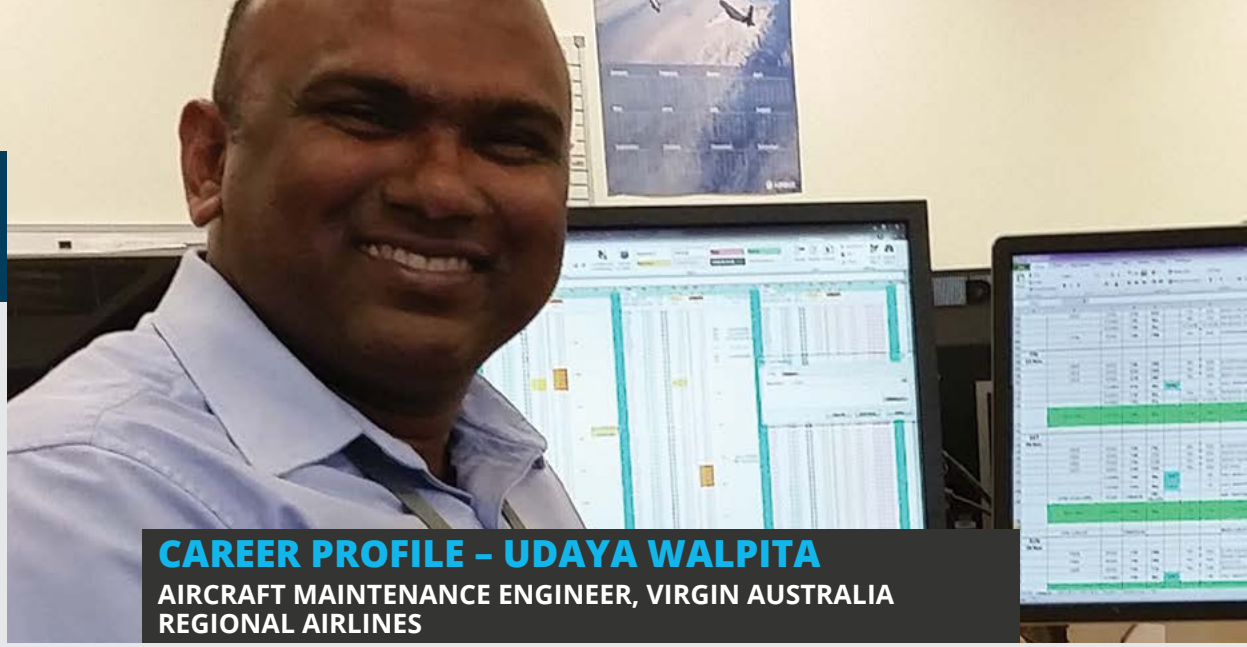
images: Civil Aviation Safety Authority

I qualified as an avionics LAME in the electrics, instruments, radio, radar and autopilots categories. In the UK when I qualified these were the 5 avionics categories which have now evolved into the B2 category. It was unusual to qualify in all 5 categories and I was the first woman in the UK to get all 5 at the first attempt, and only the second woman to hold 5 licences – not bad for an Aussie girl from Darwin!

I worked as a LAME in the UK, Australia and Europe from graduation until I had my first baby in 2001. Working in a male-dominated industry was a challenge at the best of times, but was particularly challenging while pregnant.

> I joined an aviation training school in Darwin in 2005, but did not enjoy the structure or the isolation. I returned to industry and worked with a large company as a LAME before joining CASA as an airworthiness inspector in 2009. If you want an aviation career that pays well, is stable and allows you to travel; knuckle down, work hard and you'll find that only the sky is the limit!

images: Civil Aviation Safety Authority



CAREER PROFILE – UDAYA WALPITA

AIRCRAFT MAINTENANCE ENGINEER, VIRGIN AUSTRALIA REGIONAL AIRLINES

As a child I watched aeroplanes flying in the sky. As I struggled to make my paper kite fly, it was hard for my young brain to imagine how these heavy machines could fly with people on board! One day I went to see a science exhibition and there was a working model of a helicopter. Instead of watching the rest of the exhibition, I spent the whole time looking at it and listening to the instructor from the air force. That day I decided that I should choose a career in aircraft engineering. I started reading books about aircraft. By the time I finished high school, I had a very good knowledge about the construction and science behind them.

I have completed a degree in Aeronautical engineering and served in military before I migrated to Australia. Due to my passion of working with tools, I wanted to do an apprenticeship and expose myself more to the practical side of aircraft maintenance engineering. I finished my apprenticeship and started working as an aircraft maintenance engineer at Virgin Australia Regional Airlines.

Unfortunate incidents may happen at any time in our life. Due to an injury to my arm, I was given medical advice to refrain from the physically demanding tasks for a period of time. My workplace offered me an office-based maintenance planner role and it gave me the opportunity to experience the back-end challenges of the aircraft maintenance engineering. I believe that the combination of qualifications, experience and attitude helped me to get the job as a planner.

image courtesy: Virgin Australia Regional Airlines

image: Civil Aviation Safety Authority

> Aircraft engineering is a very useful and fulfilling career. There is always something new to learn, and a good combination of qualifications, experience and professionalism are important to be successful as an aircraft maintenance engineer or planner. Consistent and continuous improvement is a lifetime requirement for this job.

The primary concern of anyone with a job in aviation has to be safety. This is no different for an aircraft maintenance engineer or planner, who plays a very important role in aviation safety overall. You may be faced with situations where there are time and logistic pressures, but you still need to use the correct parts, correct documentation and procedures regardless of the time limitations.

Aircraft engineering has good career prospects. We are living in a time where technology is changing air travel to the point where an aircraft will be able to fly terminal to terminal without a pilot. Even then aircraft engineering professionals will be needed.

FROM AME TO LAME – HOW DO I GET A LICENCE?

An AME maintains and services aircraft:

› in approved maintenance organisations located in Australia, and

› in approved maintenance organisations operated by Australian or overseas companies located overseas.

AMEs perform maintenance under the supervision of a LAME. Only LAMEs can certify the completion of maintenance on aircraft, their engines or aircraft systems.

LAMEs work at a more senior level of aircraft maintenance engineering. LAMEs not only carry out maintenance work on aircraft, but may also supervise maintenance carried out by other individuals and certify for completion of that maintenance.

LAMEs are also responsible for issuing a certificate of release to service, which verifies that all maintenance and defects raised during the maintenance event for the aircraft have been carried out to required maintenance instructions and certified by properly qualified individuals and the aircraft is considered to be airworthy for release back into service.

To qualify as a LAME, you will need to meet technical training and proficiency requirements - for example, basic knowledge and basic experience - that are applicable to the category of licence being applied for.

Licensing of aircraft maintenance engineers is one means that CASA uses to maintain the safety of aircraft and air travel, both for the aviation industry and the general public.

The licensing system ensures that all maintenance of aircraft, engines and systems are:

› carried out by people who are properly trained, skilled and competent

› supervised and certified/signed-off by people who are properly trained, skilled and competent.

CASA does this by:

› specifying that maintenance on aircraft can only be certified by an appropriately qualified LAME

› controlling the qualifications an AME must obtain before they are licensed to certify maintenance

› controlling who can train and assess the proficiency of an AME to ensure they meet the required standards.

CHOOSING A WORKPLACE

Where you will be working in the aviation maintenance industry is entirely up to you. Here are a few questions to consider:

- Does the maintenance organisation give me the quality and range of experience I need?
- Does the maintenance organisation have an apprentice or traineeship scheme?
- Will they allow me enough time for my studies?
- Do the organisation's staff seem friendly and helpful?
- What will my career prospects be once I finish training?
- What does the organisation expect of me?
- Are there opportunities for overtime and/ or extra work?
- What sort of reputation do they have?

Time spent researching the experience required to gain a licence is very worthwhile. Establish what you need, and talk to prospective employers to find out if they can cater to your requirements.

image: Civil Aviation Safety Authority

CAREER PROFILE – BETHANY LEE

DESIGN ENGINEER, HAWKER PACIFIC AVIONICS

At 4 years of age I proudly proclaimed to my family that I would be going to the moon. I spent most of my early childhood jumping off the garden wall, cubbyhouse and the garden shed with an assortment of towels and umbrellas in an attempt to gain my wings.

At school, I had a very keen interest in the science, technology, engineering and maths (STEM) fields. My desire to be an astronaut was the driving force. At 15, I joined the Royal Australian Air Force Cadets where I learnt all about the mechanics of flight and received a scholarship for powered flight. I was the first female at my squadron's flight school in over 10 years.

I completed a double degree in aerospace engineering and marine geology. My highlights included designing a hybrid crop sprayer for a team project and writing my thesis on The Aerodynamics of Tails in Larger Birds, spending several weeks working with the Andean Condors at Taronga Zoo.

In my final year of university I was fortunate enough to gain an internship with Hawker Pacific Avionics and was then offered a full time position as a design engineer, where I've been for 4 and a half years.

image courtesy: Hawker Pacific Avionics

image: Civil Aviation Safety Authority

I am the only female in a design team of 4 people and we work very closely with each other. I will usually be working on 3 or 4 projects concurrently that involve composing and reviewing structural drawings and validations, procuring parts, approving quotes and communicating with clients.

> Each project requires a new creative solution that also must meet the aviation regulations. No 2 projects are the same. This is challenging, but also a lot of fun. And who doesn't like to climb in and out of aircraft all day?

There are so many places you can go with aircraft engineering – from a maintenance engineer, to a design engineer, to a project manager. A highlight of my career so far has been managing a project for an aeromedical interior fitout, to turn the inside of an aircraft into an air ambulance. I really enjoyed the extra responsibilities of being a project manager and watching a project develop from start to finish.

CAREER PROFILE – EMMA MAHONEY

LAME, HAWKER PACIFIC AVIONICS

I was unsure what type of career I wanted after school, but knew I wanted to work with my hands. I saw an ad in the paper for pre-vocation courses and decided to give a course in aviation maintenance a try. It was the best decision I ever made!

I studied at Aviation Australia in Cairns. I really enjoyed the practical activities and excursions to real hangar environments. The most challenging part was getting my head around the electrical theory; I'm definitely a mechanic!

I have worked in the aviation industry for 16 years, gaining experience in everything from baggage handling and customer service, to stores and logistics work, to tech services and accounts along the way. One of my most memorable moments was the day my first AME licence arrived in the mail.

I am now a LAME at Hawker Pacific Avionics. For me, aircraft engineering is such a fun and rewarding career. I love working with a wide range of aircraft, and no 2 days on the job are the same. One day I could be doing a heavy maintenance check on a Dash 8, the next day I might be troubleshooting a defect on a Kingair, or travelling to a remote community to rescue a broken down aircraft.

I also teach certificate II, certificate IV and diploma classes part-time at Aviation Australia. I would like to spend more time teaching, and perhaps undertake a degree in management.

Getting a maintenance job was hard for me in the beginning as none of the maintenance organisations in my local area had hired a woman before and were pretty reluctant to do so. Once I I finished my apprenticeship, work was easier to find.

I think women make very good engineers. Many of the women I meet in the industry are very good at what they do. The attitudes of the past are rapidly changing and females are accepted in hangar facilities these days.

I think the most important skills for an aircraft engineer to have are the ability to communicate well and have good problem solving skills. Having patience also helps. Aircraft engineering is really interesting work, and you can make a good living.

image courtesy: Hawker Pacific Avionics

FURTHER INFORMATION

- qantas.com/au/en/about-us/qantas-careers.html Qantas Engineering offers a variety of exciting indentured aircraft maintenance and other trade apprenticeships. Apprenticeships are based at Sydney, Melbourne and Brisbane airports.
- virginaustralia.com/au/en/about-us/careers/ Virgin is always looking for the right people. Discover what career opportunities are currently available.
- careers.rex.com.au Looking for a career opportunity in a regional area? Rex Regional Express offers great career opportunities in regional Australia.
- www.skills.vic.gov.au provides information on apprenticeships and traineeships.
- www.myskills.gov.au features national recognised vocational education and training in Australia.
- www.australianapprenticeships.gov.au provides information on apprenticeships and skills and training information.
- www.training.gov.au provides information on national recognised training and registered training organisations who have the approval to deliver the national recognised training courses.
- www.casa.gov.au/careers

image: Duncan Grant

casa.gov.au