

# AIRCRAFT MAINTENANCE ENGINEER (STRUCTURAL)

- ALSO KNOWN AS:
- AIRFRAME TECHNICIAN
  - AIRCRAFT BODY REPAIRER
  - AEROSPACE STRUCTURAL ENGINEER
  - AIRCRAFT SHEET METAL TECHNICIAN
  - COMPOSITE STRUCTURE SPECIALIST

## SHAPE THE FUTURE OF FLIGHT.

As an Aircraft Maintenance Engineer (Structural), you'll be the architect of airworthiness, ensuring that every aircraft's skeleton is strong, sleek, and ready to slice through the skies. Your expertise will transform sheets of metal and composite materials into aerodynamic marvels, making you the unsung hero behind every smooth landing.

### KEY SKILLS

Skills which may benefit anyone considering a job as a aircraft maintenance engineer (structural) include:

- ✔ Blueprint interpretation
- ✔ Composite repair
- ✔ Metalworking
- ✔ Non-destructive testing
- ✔ Precision

### CAREER PROGRESSION

In this role, you may have the opportunity to progress to other positions. Career progression opportunities include:

- Aerospace Engineer
- Team Leader
- Mechanical Engineer
- Composite Engineer

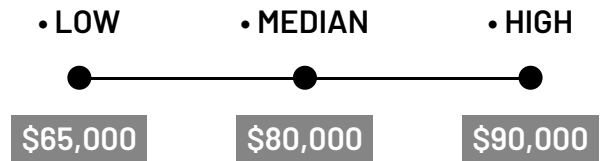
### VALUES & ATTRIBUTES

Values and attributes of anyone considering a job as a aircraft maintenance engineer (structural) include:

- ✔ Meticulous
- ✔ Safety-conscious
- ✔ Dexterous
- ✔ Problem solver
- ✔ Quality-focused
- ✔ Realistic – "Do-er"

### SALARY EXPECTATION

The expected salary for an Aircraft Maintenance Engineer (Structural) can vary across different areas of manufacturing and may vary as you become more experienced.



### RELATED INDUSTRIES

- ▶ Aerospace and Defence
- ▶ Transport Equipment and Machinery

### RECOMMENDED SCHOOL SUBJECTS

- Aerospace Systems
- Engineering Skills

### CORE SCHOOL SUBJECTS

- General Mathematics
- Essential English
- Engineering
- Physics

## JOB OVERVIEW

Aircraft Maintenance Engineers (Structural) play a vital role in the aviation industry, specialising in the maintenance, repair, and modification of aircraft structures. Their work encompasses everything from routine inspections to major structural repairs, ensuring the integrity and aerodynamic efficiency of aircraft.

These skilled professionals contribute significantly to flight safety and aircraft longevity, directly impacting the operational lifespan and cost-effectiveness of airline fleets. They work with a diverse range of materials, from traditional aluminium alloys to advanced composites, requiring a unique blend of traditional craftsmanship and cutting-edge material science knowledge.

A typical day for an Aircraft Maintenance Engineer (Structural) might involve assessing structural damage, fabricating replacement parts, performing corrosion treatments, and ensuring all repairs meet stringent aviation standards. The role demands exceptional spatial awareness, precision, and the ability to interpret complex technical drawings.

## WHAT WILL YOU DO?

Your role may include duties as follows:

1. Inspect aircraft structures for damage, corrosion, or wear
2. Fabricate and install structural components and skin panels
3. Perform repairs on metal and composite airframes
4. Conduct non-destructive testing on aircraft structures
5. Modify aircraft structures according to approved design changes

## HOW TO BECOME A AIRCRAFT MAINTENANCE ENGINEER (STRUCTURAL)

Becoming an Aircraft Maintenance Engineer (Structural) requires specific qualifications and licensing. Here's a general pathway to enter this specialised field:

1. Complete Year 12 with a focus on mathematics, physics, and English
2. Consider undertaking a Certificate II in Aeroskills (MEA20418) which provides good foundation skills
3. Research potential employers in the aviation industry, including airlines, maintenance repair and overhaul (MRO) facilities, and aircraft manufacturers
4. Prepare a strong resume highlighting your qualifications and any relevant experience, and apply for entry-level positions or apprenticeships in aircraft maintenance
5. Gain practical experience through an apprenticeship or traineeship with an approved maintenance organisation
6. Obtain a Civil Aviation Safety Authority (CASA) Aircraft Maintenance Engineer License
7. Consider specialising in specific aircraft types or systems through additional training and certifications

## VOCATIONAL EDUCATION & TRAINING

Vocational education and training are crucial for aspiring Aircraft Maintenance Engineers (Structural). These programs provide the specialised knowledge and skills required in this high-tech field. An apprenticeship with is the best pathway to gain employment in this role.

- Certificate IV in Aeroskills (Structures)(MEA40718)

As an apprentice you will combine work with formal training, allowing you to gain practical skills and knowledge in a specific trade while earning a salary.

**Duration:** Apprenticeships typically last up to 3 years for full-time participants. Part-time apprenticeships may take longer, depending on the individual's work schedule and training progress.

**Work and study combination:** As an apprentice you will work either full-time or part-time while receiving formal training from a Registered Training Organisation (RTO). School-based apprenticeships may be available.

**Eligibility:** Generally, apprenticeships do not require any formal qualifications to enter, making them accessible to a wide range of individuals, including if you are a school leaver or someone looking to change careers. There are minimum age requirements and there may be other eligibility criteria.

**Completion:** On completion you will receive a nationally recognised trade qualification, showcasing your skill and experience.

### Advancing your career

For those looking to advance into leadership roles or deepen their expertise:

- Diploma of Aeroskills (Structures)(MEA50418)
- Diploma of Aviation Maintenance Management (MEA50422)
- Advanced Diploma of Aviation Maintenance Management (MEA60222)

## UNIVERSITY & HIGHER EDUCATION

While not always required, university education can provide advanced knowledge and open opportunities for career progression. Relevant degree programs might include:

- Bachelor of Engineering specialising in aerospace mechanical
- Bachelor of Aviation maintenance management

The pathway to university often involves completing a vocational qualification and gaining industry experience before pursuing higher education. University programs offer in-depth understanding of structural engineering principles, materials science, and aerospace design.

These skills can be particularly valuable for those aiming for senior technical or management positions in the aviation industry, or for those interested in avionics research and development.