

## SECTION D

### CATEGORY B1 LINE MAINTENANCE

#### CERTIFYING TECHNICIAN/BASE MAINTENANCE TECHNICIAN – MECHANICAL

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## D1 THE CATEGORY B1 LICENCE

The B1 licence is a mechanical based licence and permits the holder to issue certificates of release to service following line maintenance, including aircraft structure, power plants and mechanical and electrical systems. Replacement of avionic line replaceable units requiring simple tests without the use of test equipment to prove their serviceability is also included within the privileges of this licence. A Category B1 licence holder also has a role in base maintenance in supporting the Category C certifier who is the final CRS/SMI signatory.

The B1 licence is sub-divided into sub-categories as below:

- B1.1 Aeroplanes Turbine-Engines
- B1.2 Aeroplanes Piston-Engines
- B1.3 Helicopters Turbine-Engines
- B1.4 Helicopters Piston-Engines

The sub-categories above are broadly made up of the following BCAR categories:

- Category A Airframe LWTR (Aeroplanes 2)
- Category C Engine LWTR (Piston or Turbine Engine)
- Category X Electrical LWTR
- A8-13 Avionic Extension Limited Authorisation

## D2 PART-147 APPROVED TRAINING ROUTE

A course of training can be undertaken under the auspices of a Part-147 approved basic training school. The course will consist of a minimum of 2400 hours instruction. The purpose of the course is to teach the individual the basic underpinning theoretical knowledge required of the category B1 role and to provide basic skills and maintenance practices training to establish basic practical competence. The course includes theory exams and practical skills assessments as part of the training and qualification philosophy.

### D2.1 B1.1 (Aeroplanes Turbine-Engine) and B1.3 (Helicopter Turbine-Engine)

The approved course must be followed by a minimum of 2 years practical maintenance experience to consolidate the training received.

### D2.2 B1.2 (Aeroplanes Piston-Engine) and B1.4 (Helicopter Piston-Engine)

The approved course must be followed by a minimum of 1 year's practical maintenance experience to consolidate the training received.

**Note: A full Part-66 B1 licence issued in a particular sub-category also entitles the holder to exercise the privileges of a Category A licence for other aircraft types, not endorsed on the Part-66 licence as type ratings, subject to the task training and authorisation requirements for those types being satisfied.**

For information on Part-147 approved organisations refer to Section K.

## D3 EXPERIENCE REQUIREMENTS

### D3.1 General

An applicant for a category B1 licence must have completed a prescribed period of aircraft maintenance experience. This experience is to be relevant to the licence category required and to the maintenance experience of operating aircraft. This experience should include maintenance on aircraft structure, powerplant, mechanical and electrical systems and replacement of avionic LRU's requiring simple tests to prove their serviceability.

### D3.2 'Recent Practical Maintenance Experience'

All applicants must have gained at least one year's experience on aircraft typical of the category or sub-category applied for. Of this one year's experience, six months must have been gained in the 12 months immediately before application. The remainder must have been gained in the 7 years before application.

### D3.3 Self Starter and Other Experienced Applicants

**Category B1.1 or B1.3** applicants who have not attended a Part-147 approved course of training, should have at least 5 years practical maintenance experience on operating aircraft. Experienced engineers within the UK, such as Skilled Workers, Armed Forces, Coast Guards or Police, may be eligible for a reduction in experience required (refer to sub-section D4).

**Category B1.2 or B1.4** applicants who have not attended a Part-147 approved course of training, should have at least 3 years practical maintenance experience on operating aircraft. Experienced engineers within the UK, such as Skilled Workers, Armed Forces, Coast Guards or Police, may be eligible for a reduction in experience required (refer to sub-section D4).

## D4 REDUCTION IN EXPERIENCE REQUIREMENTS

A reduction in the experience requirement may be considered for certain applicants who fall into either category below. There are currently no standard assessment terms for these applications and therefore applicants are advised, before applying for licence issue, to ensure they meet the experience criteria in accordance with Part-66.A.30 and AMC 66.A.30 (a). Where an assessment of course material and/or experience is requested by the applicant, an assessment charge will be made in accordance with the CAA Scheme of Charges.

### D4.1 ‘Skilled Worker’

A skilled worker is a person who has successfully completed a course of training, acceptable to the CAA, involving the manufacture, repair, overhaul or inspection of mechanical, electrical or electronic equipment. The training would have included the use of tools and measuring devices.

### D4.2 Experience Required

**B1.1 and B1.3** applicants must demonstrate 3 years experience where the applicant has already qualified in another profession as above.

**B1.2 and B1.4** applicants must demonstrate 2 years experience in a civil maintenance environment appropriate to the category applied for, where the applicant has already qualified in another profession as above.

### D4.3 ‘Other Experienced Applicants’

Aircraft maintenance experience gained outside a civil aircraft maintenance environment can include experience gained in armed forces, coast guards and police.

### D4.4 Experience Required

**B1.1 and B1.3** applicants must demonstrate 1 years experience in a civil maintenance environment appropriate to the category applied for, where the applicant can provide satisfactory evidence of working in one of the above disciplines.

**B1.2 and B1.4** applicants must demonstrate 1 years experience in a civil maintenance environment appropriate to the category applied for, where the applicant can provide satisfactory evidence of working in one of the above disciplines.

### D4.5 ‘Non EU Applicants’

Aircraft maintenance engineers with experience working on operational civil aircraft outside of the EU

member states, may claim that experience towards the grant of a Part-66 licence, providing that the experience is deemed acceptable by the CAA.

### D4.6 Experience Required

Experience claimed towards a Part-66 licence must meet the standards of Part-145 and must be correctly authenticated in a manner acceptable to the CAA.

## D5 BASIC THEORETICAL KNOWLEDGE REQUIREMENTS

### D5.1 General

Basic knowledge levels for each category licence have been allocated relating to the complexity of certifications appropriate to the particular licence. A Category B1 applicant must demonstrate an adequate level of knowledge in the required subjects as detailed in this section.

Knowledge level requirements and general information relating to examination requirements and procedures can be found in Section J.

### D5.2 Aeroplanes Turbine-Engines (B1.1)

Module 1	Mathematics
Module 2	Physics
Module 3	Electrical Fundamentals
Module 4	Electronic Fundamentals
Module 5	Digital Techniques/Electronic Instrument Systems
Module 6	Materials & Hardware
Module 7	Maintenance Practices
Module 8	Basic Aerodynamics
Module 9	Human Factors
Module 10	Aviation Legislation
Module 11	Aeroplanes Aerodynamics, Structures & Systems
Module 15	Gas Turbine Engines
Module 17	Propeller

### D5.3 Aeroplanes Piston-Engines (B1.2)

Module 1	Mathematics
Module 2	Physics
Module 3	Electrical Fundamentals
Module 4	Electronic Fundamentals
Module 5*	Digital Techniques/Electronic Instrument Systems
Module 6	Materials & Hardware
Module 7	Maintenance Practices
Module 8	Basic Aerodynamics
Module 9	Human Factors
Module 10	Aviation Legislation
Module 11B	Aeroplanes Aerodynamics, Structures & Systems
Module 16	Piston Engine
Module 17	Propeller

**D5.4 Helicopter Turbine-Engines (B1.3)**

Module 1	Mathematics
Module 2	Physics
Module 3	Electrical Fundamentals
Module 4	Electronic Fundamentals
Module 5	Digital Techniques/Electronic Instrument Systems
Module 6	Materials & Hardware
Module 7	Maintenance Practices
Module 8	Basic Aerodynamics
Module 9	Human Factors
Module 10	Aviation Legislation
Module 12	Helicopter Aerodynamics, Structures & Systems
Module 15	Gas Turbine Engine

**D5.5 Helicopter Piston Engines (B1.4)**

Module 1	Mathematics
Module 2	Physics
Module 3	Electrical Fundamentals
Module 4	Electronic Fundamentals
Module 5*	Digital Techniques/Electronic Instrument Systems
Module 6	Materials & Hardware
Module 7	Maintenance Practices
Module 8	Basic Aerodynamics
Module 9	Human Factors
Module 10	Aviation Legislation
Module 12	Helicopter Aerodynamics, Structures & Systems
Module 16	Piston Engine

**D5.6 Essay Paper**

In addition to the multi-choice question paper relating to appropriate level and modules required, an essay paper must be taken. The essay paper will comprise questions drawn from the syllabus subjects covering Maintenance Practices (Module 7), Human Factors (Module 9) and Aviation Legislation (Module 10).

**D6 CREDITS FROM THEORETICAL KNOWLEDGE REQUIREMENTS****D6.1 General**

Partial examination exemptions may be given to applicants who wish to extend their current licence to include a further basic Category/sub-Category and to those applicants who hold accepted academic qualifications as detailed in this section.

**D6.2 Extension of a Licence to include another Category**

The modular syllabus of Part-66 often requires different levels of knowledge for the different licence categories (A, B1 and B2) within a module; therefore there are

conversion examinations applicable to certain modules for licence holders wishing to include another category. The most common cases of category conversion are detailed in Section G.

The CAA will conduct all conversion part module examinations (unless approval has been granted by the Authority for a Part-147 Organisation to conduct the examinations). Applications should be made in the normal way. Further general information on examinations can be found in Section J.

**D6.3 Academic Qualifications**

Standard examination exemptions may apply to **Bachelor of Science** or **Bachelor of Engineering degrees** from a University located within the United Kingdom. In the cases above, in accordance with Part-66.A.25, Part-66.B.400 and Part-66.B.405, the CAA will need to evaluate the course in order to confirm the exemption.

If a University located in another EU Member State awarded a degree, the applicant should apply to the competent authority of that State for recognition.

Where the CAA evaluates a course and exemptions are confirmed, the modules listed below will be credited.

Applicants with a **Mechanical Degree** will be credited Module 1 (Mathematics) and Module 2 (Physics).

Applicants with **Aeronautical Engineering or Air Transport Engineering Degrees** will be credited Module 1 (Mathematics), Module 2 (Physics) and Module 8 (Basic Aerodynamics).

Applicants with **Electrical or Electronic Degrees** will be credited Module 1 (Mathematics), Module 2 (Physics), Module 3 (Electrical Fundamentals) and Module 4 (Electronic Fundamentals).

Applicants with an **Avionic Degree** will be credited Module 1 (Mathematics), Module 2 (Physics), Module 3 (Electrical Fundamentals), Module 4 (Electronic Fundamentals) and Module 8 (Basic Aerodynamic).

**D6.4 Assessment of Academic Qualifications**

For an assessment of a qualification mentioned above, for the purpose of exemption from any of the requirements for the issue or extension of a licence to act as an aircraft maintenance engineer, the applicant shall pay a charge in accordance with our scheme of charges.

However, applicants should be aware that the cost of the assessment could exceed the amount required for the training and cost of the exam.

It is therefore recommended that applications for assessment of a qualification be made by the organisation providing the qualification, in order that a common exemption can be attained, where agreed.

## D7 **MAKING YOUR APPLICATION**

Refer to Appendix A to Section A for information on form numbers.

Form 19 (SRG/1014) should be used in respect of all Category B initial issue applications. Current forms may be downloaded from our web site ([www.srg.caa.co.uk](http://www.srg.caa.co.uk)). A new guidance document that is linked to the application form will provide easy to follow guidance on the basic licensing requirements, which parts of the application to complete and what may be required in support of your application. Refer to Section A, Appendix B.

### D7.1 **Supporting Documents**

**Course Completion Certificates** – issued by CAA approved organisations or Part-147 organisations in other EU Member States

**Logbook** – confirming experience.

**Note: Having clear concise supporting data will enable us to issue licences more effectively and with less risk of errors or rejections. The CAA will not contact the applicant for clarification of details on application.**

## D8 **IF YOUR APPLICATION FAILS**

Please refer to Section B17.

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