Civil Aviation Authority

Operation of Permit-to-Fly ex-military aircraft on the UK register

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The latest version of this document is available in electronic format at www.caa.co.uk

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Summary of revisions in Edition 7

This document has been revised since Edition 5. For ease of use, all substantive revisions throughout this document are underlined in red.

The following sets out the broad topics throughout the document where *major* revisions have been made. This does not reflect small textual alterations (eg word changes etc):

Paragraph	Topic	Revision made
3.7-3.15	Organisation Control Manual - Organisation	New text clarifying the key positions within the OCM and describes the operational arrangements that must be in place: flight planning, pilot information, technical log records, convex and recurrent pilot training and continuing airworthiness.
4.5-4.6	Signpost to further guidance on continuing airworthiness	New text signposting to new CAA CAP1640 on Continuing Airworthiness Approval of Ex-Military Aircraft.
6.1-6.3	Pilot licensing general requirements	New text describing experience requirements in terms of general and display flying. For MEP, multi-pilot and turbine-powered aeroplanes, new text that OCM should detail experience levels and training requirements.
6.4-6.11	Aircraft Type Rating Exemptions	New text describing ATRE and process leading to the Final Handling Test, as well as initial and subsequent renewals of ATRE.
6.18-6.26	Currency for pilots of jet and high-performance propeller-driven aircraft	New text on currency and recency requirements for pilots of certain CAP632 aircraft and how this must be clearly set out by the operator.
6.27	Human factors	New text requiring pilots to undergo some training in human factors aspects of flying and signposting to CAA CAP1047 Civil Air Displays guide for pilots.
6.31-6.32	Experienced pilots	New text requiring 12-month dual check
6.34	Inexperienced pilots	New text regarding dual check guidance
7.29-7.35	Essential training requirements	New text setting out nature of training and requiring safety margins, with content on aerobatic training, training records (including what should be included).
8.5-8.7	Procedure for withdrawing an OCM agreement	New text setting out actions and process in the event the CAA finds serious non-compliance with OCM requirements

A5	OCM compilation guide	New provisions covering essential training requirements and pilot currency
C2	Levels of experience	*Inexperienced* definition increased from 50 to 200 hours PIC post-licence issue. Compatible amendment to the *Intermediate* definition.
E19	Training	Importance of including initial/refresher safety equipment training in pilot training record.
F3	Frequency of inspection	Amendment to F3 on basis of frequency using performance-based oversight.
F17	Initial and recurrent training records	New text summarising possible content of training folder for each pilot.
F – Annex 1	Operational arrangements – check list	New sections on Pilot training (both convex and recurrent) and Safety Management Systems.

Introduction

1. Ex-military aircraft or replicas thereof with either:

    1. a maximum Take-off Weight Authorised (MTWA) in excess of 2730 kg; or
    2. a piston engine with a rating of 800 hp or more; or
    3. a turbine or turbojet engine (excluding helicopters under an MTWA of 2730 kg);

    on the UK register may be required to operate on a Permit-to-Fly. The Permit-to-Fly specifies various conditions, including:

    'The aircraft shall be maintained by an Approved Organisation (BCAR A8-23/24/25) in accordance with a recognised maintenance programme/schedule based on the manufacturers and/or the previous military authority's published maintenance requirements.'

    and

    'The aircraft shall be operated in accordance with CAP 632 unless the CAA has confirmed in writing that compliance with the conditions of CAP 632 is not required.'

    NOTE 1: The BCAR A8-23/24/25 maintenance requirement applies to all ex-military helicopters.

    NOTE 2: The CAP 632 operational requirements do not apply to ex-military helicopters with an MTWA below 2730 kg.

2. This publication details the operational requirements applicable to these ex-military aircraft.

3. Ex-military aircraft on the UK register may not be acceptable for the issue of a Certificate of Airworthiness. The CAA will grant a Permit-to-Fly if satisfied in accordance with British Civil Airworthiness Requirements (BCAR) Chapters A3–7, and A8-23/24/25.

Overseas operations

4. A UK Permit-to-Fly is only valid for flight in UK airspace in accordance with the conditions on the Permit-to-Fly, unless an Exemption has been granted by the CAA to fly abroad. Permit-to-Fly aircraft must not be operated outside UK airspace for more than **3 calendar months** in any calendar year, unless with the specific approval of the CAA. Flight in the airspace of any other State in a

Permit-to-Fly aircraft will also require the specific permission, in writing, of that State since the aircraft does not hold an ICAO recognised Certificate of Airworthiness.

Chapter 1

Applicability

1.1 The operational requirements set out in this publication are applicable to any ex-military aircraft or replicas thereof with either:

1. an MTWA in excess of 2730 kg; or
2. a piston engine with a rating of 800 hp or more; or
3. a turbine or turbojet engine (excluding helicopters under an MTWA of 2730 kg);

operating on a Permit-to-Fly on the UK register except as outlined in paragraph 1.3 below (see also Introduction, Notes 1 and 2).

1.2 Owners and operators of these aircraft will also be required to meet the conditions set out in BCAR A8-23/24/25 and with conditions stated on the Permit-to-Fly for the aircraft concerned.

1.3 The provisions of this publication will not normally be applicable to aircraft that are military variants of civil designs which have, or are being operated on, a UK Certificate of Airworthiness. Where, in the opinion of the CAA, there are significant differences between the military variant and its civil-certificated counterpart, the CAA may insist that the procedures set out in this publication are followed.

1.4 Further guidance for the applicability of this document can be obtained under Chapter 4 Technical Requirements.

Chapter 2

Scope of this CAA publication

2.1 This publication specifies the operational requirements that an applicant for the issue of a Permit-to-Fly for an ex-military aircraft is required to meet. The maintenance requirements are set out in BCAR Chapters A3–7, and A8-23/24/25. Not only will certain provisions need to be met before the Permit to Fly can be issued, but a minimum operational and technical framework must remain in place for the Permit-to-Fly to remain valid.

2.2 This publication has been divided into separate parts covering:

- General requirements
- Technical requirements
- Specialised equipment and systems
- Pilot/crew qualifications
- Operational requirements
- Recording and audit procedure
- Safety Standards Acknowledgement & Consent

Chapter 3

General requirements

Organisational Control Manual

3.1 The operator will be required to compile and submit to the CAA an Organisational Control Manual (OCM) or an expanded Operations Manual for Safety Standards Acknowledgement & Consent (SSAC) Operations Manual (refer to Chapter 9 and Appendix G). It is not intended that the contents of this manual should follow the detailed requirements necessary for an Air Operator's Certificate, but rather that it will set out the operational procedures under which it is proposed to operate the aircraft. As a guideline, the OCM or SSAC Operations Manual should contain only the essential details necessary to comply with the requirements of this publication. Once the CAA is satisfied that the proposed operational procedures are acceptable, the OCM or SSAC Operations Manual will be agreed by formal letter issued by the CAA to the operator.

3.2 Any subsequent amendments to the OCM or SSAC Operations Manual must also be agreed by the CAA before they are incorporated. Any amendments must be clearly highlighted preferably with revision bars.

3.3 Detailed requirements to be considered when preparing the OCM are given in Appendix A and Appendix G for the SSAC Operations Manual.

3.4 Should the operator fail to adhere to the agreed operating procedure the CAA may withdraw the agreement to the OCM or SSAC Operations Manual until any deficiencies are addressed. This procedure is outlined in Chapter 8.

Organisation

3.5 The operator shall set up an organisation, acceptable to the CAA, capable of safely managing the day to day operation of the aircraft. This organisation shall be capable of reviewing the following:

- The maintenance standard of the aircraft in conjunction with the BCAR A8-23/24/25 approved organisation nominated as being responsible for the particular aircraft maintenance and continued airworthiness.
- The suitability of the aircraft condition for any intended flight within the limitations laid down in the Permit-to-Fly.
- Compliance with the conditions of the Permit-to-Fly in relation to any intended flight.

- The currency and recency of the crew (including any supernumerary crew) in relation to any intended flight.
- Operational planning for the intended flight such as weather conditions, fuel requirements, diversion requirements etc.

3.6 Qualification and terms of reference for key personnel within the organisation should be detailed within the OCM. Complexity and/or number of aircraft will dictate staffing requirements and balance of permanent and part time staff.

3.7 The roles and responsibilities for the following positions must be defined within the OCM:

1. Chief Pilot,
2. Chief Instructor and/or Instructor(s),
3. Pilots.

3.8 The operator must have the following operational arrangements in place:

3.9 **Flight Planning:** The operator must have a system for the supply and review of flight planning information and documentation for all pilots. The operator must have documentation specific to aircraft type, including aircrew manuals, pilot's notes, Permit-to-Fly. These must be available for the review of all pilots.

3.10 **Pilot Information:** The operator must have a system in place to be able to confirm a pilot's licence, personal details, currency, flight and daily maintenance authorisation status.

3.11 **OCM:** The operator must have a CAA agreed OCM which must be available to all pilots. A system must be in place to confirm that all pilots have read the OCM.

3.12 **Technical Log Records:** The operator must have a Technical Log for each aircraft operated. Pilots should be given guidance on its completion.

3.13 **Pilot Training – Convex:** The operator must have a CAA agreed training schedule. This must include a system for the recording of all pilot, ground and flight training, including results whether satisfactory or not.

3.14 **Pilot Training – Recurrent:** The operator must maintain detailed training records for any ground training, dual checks (on type or similar agreed type), Essential Knowledge Quizzes and Essential Training Requirements. Record dual check outcomes and any required corrective action.

3.15 **Continuing Airworthiness Arrangements:** The operator must have a Maintenance Agreement/Contract with an A8-23/24/25 organisation, a process for detailing the next maintenance due, a process for handling defects and a process for handling Letters to Operators (LTOs) and Mandatory Permit Directives (MPDs).

Safety management

3.16 Safety is of paramount importance in all areas of aviation. High safety standards are achieved not by the imposition of rules and regulations but through the development of a positive safety culture in all connected with the operation of aircraft. The development of such a culture can be achieved in a number of ways, but that recommended by the CAA is the adoption of a Safety Management System (SMS). The SMS allows an operator to assess the approach to safety and the risks to which the operation is open.

3.17 SMS can be tailored to meet the needs of small and large operations and in some form may already exist in organisations. The test of any organisation and its embedded safety system is that it can withstand scrutiny in the event of incident and satisfy investigators that all reasonable safety measures have been taken.

3.18 The CAA website contains guidance for SMS including specific guidance for small non-complex organisations. This guidance is available at www.caa.co.uk/sms. The website includes templates for SMS manual contents, safety report forms and hazard logs. An example of a simple risk assessment procedure using the matrix system is shown in Appendix B.

3.19 The CAA website also includes an evaluation tool for assessing the organisations safety management processes. The tool can be used to self-analyse the safety management processes and identify where improvements can be made if necessary. The evaluation tool consists of a number of questions covering management commitment and responsibility, safety accountabilities, the appointment of key safety staff members, emergency response planning, safety documentation, hazard identification, risk assessment and mitigation, safety performance monitoring, management of change and incident management. The evaluation tool is available at www.caa.co.uk/sms under the Phase 1 SMS Evaluation Tool for Non-Complex Organisations and is also included at Appendix B.

3.20 Alongside the evaluation tool, and to be used in parallel with it, is a simple hazard log. This is based on a subjective assessment, based on experience and evidence, of the likelihood of each identified hazard occurring coupled with the severity of the outcome. Multiplying likelihood by severity provides an initial risk assessment. Mitigating factors can then be applied to give a final risk assessment.

3.21 During audits (see Appendix F) the CAA Inspectors will discuss SMS with operators. Their discussions will be based around the evaluation tool at Appendix B. The evaluation tool provides a suggested indication of how the effectiveness of a company SMS can be assessed.

Consultation with the CAA

3.22 Operators who propose to purchase an ex-military aircraft with the intention of obtaining a Permit-to-Fly are advised to consult the following CAA departments early in the planning cycle to determine if a Permit-to-Fly will be issued and under what limitations to operations.

- **Applications and Approvals Department** (Telephone Helpline 01293 768374 or email aanda@caa.co.uk) on application, maintenance and procedural matters;
- **Aircraft Certification** (Telephone 01293 573988 or ga@caa.co.uk) on matters associated with the design and eligibility of the type;
- **Operations and Authorisations** (Telephone 01293 573988 or email cap632@caa.co.uk) on operational and CAP 632 matters; and
- **Shared Service Centre (SSC)** (Telephone 01293 573700 or email fclweb@caa.co.uk) for licensing and training matters relating to turbine powered aeroplanes, multi-crew aeroplanes and all helicopters.

Charges for the issue and renewal of a Permit-to-Fly

3.23 The CAA may in the future levy charges which would be additional to the normal charges payable for the Issue or Renewal of any Permit-to-Fly. Charges apply to Aircraft Type Rating Exemptions issued by the General Aviation Unit, and details can be found in the Official Scheme of Charges. The applicant may be required to pay for any additional work that proves necessary.

Chapter 4

Technical requirements

4.1 The investigation of the aircraft by the CAA for the issue of a Permit-to-Fly will be carried out in accordance with BCAR Chapters A3–7, and or A8-23/24/25. Where the aircraft being considered is either:

1. above an MTWA of 2730 kg; or
2. has a piston engine with a rating of 800 hp or more; or
3. has a turbine or turbojet engine (excluding helicopters under an MTWA of 2730 kg);

4.2 The level of design investigation will be determined by the three groupings, Simple, Intermediate and Complex:

- **Simple:** single piston engine types.
- **Intermediate:** multiple piston engine or turbine (single or multiple) engine types with simple mechanical flying controls or with power controls having an independent back-up system which ensures continued safe flight.
- **Complex:** all other types, in particular those types having features which require a high degree of specialised knowledge and equipment to maintain (e.g. types with no independent backup system to powered flying controls or with auto-stabilisation systems or electronic engine controls).

NOTE: Classification of a particular aircraft type is the responsibility of the CAA.

4.3 Maintenance, continued airworthiness and Permit-to-Fly renewal of ex-military aircraft or replicas thereof with either:

1. an MTWA in excess of 2730 kg; or
2. a piston engine with a rating of 800 hp or more; or
3. a turbine or turbojet engine (excluding helicopters under an MTWA of 2730 kg);

are to be controlled by a suitable approved BCAR A8-23/24/25 Organisation.

4.4 It is the operator's responsibility to ensure that valid agreements are in place, and regular liaison is carried out with their BCAR A8-23/24/25 maintenance organisation agreed for the aircraft type(s) concerned. Maintenance arrangements must be agreed with the CAA.

4.5 Further Guidance for the Airworthiness Requirements:

Design, Restoration and Continuing Airworthiness Approval of Ex-military Aircraft CAP 1640

This publication provides guidance for those who are seeking to obtain a Permit to Fly for an ex-military aircraft, or who wish to restore, maintain and operate such an aircraft issued with a Permit to Fly. It is applicable to an aircraft that may not have been designed and manufactured to specified civil standards as is generally the case of ex-military aircraft; and is ineligible for the issue of a Certificate of Airworthiness.

This publication is available from the CAA website www.caa.co.uk/cap1640

Chapter 5

Specialised equipment and systems

General

5.1 Many ex-military aircraft have specialised technical equipment or systems specific to the role of the aircraft or the conditions under which it was designed to operate, or both. From design considerations for intermediate and complex types, the CAA will grant a Permit-to-Fly on the basis of a reasonable military service accident record (discounting military action and high-risk training). To maintain or improve this record under civil control, it is expected that the aircraft will be operated as far as possible to the standards used in military service. For example, this would mean, that if a serviceable oxygen system was required in military service irrespective of the nature of the flight, the CAA would wish this to continue unless the CAA was totally satisfied that there were no hazards in operating without oxygen, even at low altitude (e.g. due to cockpit carbon monoxide levels). Specialised systems may include:

- Oxygen, either liquid or gaseous
- Pressurisation
- Ejection seats
- Flying clothing
- Emergency and back-up systems, brake-parachutes etc
- External fuel tanks, pylons etc

5.2 To support this principle, the aircraft should be operated in accordance with the instruction manuals used whilst in military service, e.g. Pilots Notes, Flight or Aircrew Manuals, Operating Data Manuals etc.

5.3 In some cases additional limitations or procedures may be necessary for operation in the civil environment. Where required, all such manuals, additional limitations or procedures will be specified as a condition on the Permit-to-Fly. These must be fully detailed in the OCM.

5.4 Where specialised equipment, facilities or personnel are required to ensure the serviceability of the equipment (e.g. ejection systems) these will be provided by, or be under the control of, the appropriate BCAR A8-23/24/25 Organisation.

Oxygen systems

Piston aircraft

5.5 It is recommended that piston engine aircraft have serviceable oxygen systems when operating above FL 100, or at all heights when adverse environmental conditions may exist.

Turbine aircraft

5.6 It is recommended that the oxygen system be fully serviceable in all types of turbine-powered aircraft whether or not the operator proposes to fly the aircraft above FL100. In the case of high-performance aircraft, specific training, such as pressure breathing training, may be required.

Aircraft pressurisation

5.7 It is recommended that pressurisation systems should be fully serviceable.

Ejection seats

5.8 Where ejection seats are an integral part of the aircrew escape system, as specified in the relevant Pilots Notes, Flight or Aircrew Manuals, it is recommended that they be fully serviceable for all flights. Approval should be sought from the CAA (Application and Approvals) at the earliest opportunity if it is intended to operate with inert ejection seats (or other escape systems). It is unlikely that the CAA will allow swept-wing aircraft fitted with ejection seats to be flown unless the equipment is fully operational.

5.9 Ejection seat cartridge lives are typically 2 years installed, within a 6 year shelf life. To be fully serviceable the cartridges installed must be within their appropriate lives.

Flying clothing

5.10 Certain items of flying clothing and personal equipment form an integral part of the aircraft safety equipment; life-saving jacket with dinghy connections or Personal Equipment Connector with oxygen connections for example. Where the appropriate systems are required for flight, these additional items must also be available and fully serviceable.

Emergency and back-up systems

5.11 Such systems will invariably be an integral part of the aircraft build standard and will have been installed with certain emergencies in mind (i.e. emergency undercarriage lowering or hood opening/jettison). The CAA will require all such systems to be serviceable for all flights.

External equipment

5.12 The carriage of external weapons or stores during flight will not be allowed. Flight with external jettisonable fuel tanks will be subject to agreement with the CAA. Empty wing pylons, where their carriage does not materially affect the flight characteristics of the aircraft, will be allowed provided that the pylon jettison circuits are inhibited.

Chapter 6

Pilot/crew qualification

Pilot licensing - general requirements

6.1 Ex-military aircraft on the UK register with a 'Permit-to-Fly' may be piloted by either private or commercial licence holders. Pilots must hold a current civil licence with a current civil class or type rating appropriate to the ex military type[s] being flown or where no civil type rating exists, an Aircraft Type Rating Exemption from the need to hold a type rating and a current medical certificate. Any questions relating to licence matters should be addressed to CAA SSC.

6.2 There are no specific minimum experience requirements before a pilot can fly a CAP632 aircraft. However, the following should be used as a guide for CAP632 operators when considering the minimum level of experience required before flying a CAP632 aircraft. The Chief Pilot should consider the general level of overall experience of a pilot given the broad spectrum of backgrounds, whilst taking into account the complexity of the type operated.

General Flying. For pilots only intending to conduct general flying in a specific CAP632 aircraft type, a minimum of 200 hours total time is expected, of which not less than 100 hours should be as pilot-in-command.

Display Flying. For pilots intending to conduct display flying in a specific CAP632 aircraft type, a minimum of 500 hours total time is expected, of which not less than 300 hours should be as pilot-in-command. Further requirements for display flying are contained within CAP403 Flying Displays and Special Events www.caa.co.uk/cap403 .

6.3 The following general requirements are applicable to ex-military aircraft:

- **Single-Engine Piston (SEP) aeroplanes** - All ex-military SEP aeroplanes can be flown on a current SEP Class Rating with appropriate levels of complexity (retractable undercarriage, variable pitch propellers etc). The OCM is to detail the minimum experience levels and training requirements for pilots converting to the type.
- **Multi-Engine Piston (MEP), single-pilot aeroplanes** - All ex-military MEP, single-pilot aeroplanes can be flown on a current MEP Class Rating with appropriate levels of complexity (retractable undercarriage, variable pitch propellers etc). The OCM is to detail the minimum experience levels and training requirements for pilots converting to the type.

- **Multi-Engine Piston (MEP), multi-pilot aeroplanes** - To fly any multi-pilot aeroplane the pilots require to hold a type rating or, where no type rating exists, an Aircraft Type Rating Exemption. See paragraph 6.7 for details of obtaining an Aircraft Type Rating Exemption. The OCM should detail the minimum experience levels and training requirements for pilots converting to the type.
- **Any turbine-powered aeroplane** - To fly an ex-military turbine-powered aeroplane a pilot must hold an Aircraft Type Rating Exemption. See paragraph 6.7 for details of obtaining an Aircraft Type Rating Exemption. The OCM should detail the minimum experience levels and training requirements for pilots converting to the type.
- **Any helicopter** - To fly any ex-military helicopter a pilot requires a type rating or, where no type rating exists, an Aircraft Type Rating Exemption. See paragraph 6.7 for details of obtaining an Aircraft Type Rating Exemption. The OCM should detail the minimum experience levels and training requirements for pilots converting to the type.

Aircraft Type Rating Exemptions

Aircraft Type Rating Exemption (Training) ATRE(T)

6.4 Where there is no type rating for a particular type of aircraft, pilots are required to hold an Aircraft Type Rating Exemption (ATRE). Initially pilots will train on the aircraft by making an application to the CAA for an Aircraft Type Rating Exemption (Training). This has to be agreed and issued before the training commences. Once the training has been completed and the Final Handling Test has been assessed as a 'pass' and signed by the Chief Instructor then the pilot can apply to the CAA for an initial full Aircraft Type Rating Exemption.

6.5 Prior to the start of training, pilots are to agree with CAA General Aviation Unit the training syllabus appropriate to their experience levels and the name(s) of the person(s) responsible for the training; normally the Chief Pilot or Chief Instructor of the aircraft operating organisation. The General Aviation Unit will issue an Aircraft Type Rating Exemption (Training) for training which will specify the period of the training and the name of the person(s) responsible for the conduct of the training.

6.6 The Aircraft Type Rating Exemption (Training) is valid for 12 months.

Aircraft Type Rating Exemptions

6.7 After suitable training and testing and on the recommendation of the Chief Pilot or Chief Instructor of the CAP632 operator, an Aircraft Type Rating Exemption will be issued to a pilot by the General Aviation Unit.

6.8 An initial full Aircraft Type Rating Exemption is valid for a 6 month period from the date of issue. Subsequent Aircraft Type Rating Exemptions are then valid for a period of 12 months from the date of issue.

6.9 **Renewal of an Initial Issue Aircraft Type Rating Exemption:** An application to renew the initial issue Aircraft Type Rating Exemption must be submitted together with evidence that:

1. no fewer than five separate flights on the specific type as pilot in command in the preceding 6 months and
2. a further dual check completed on the specific type within the preceding 6 months.

6.10 **Subsequent Renewal of an Aircraft Type Rating Exemption:** An application to renew the Aircraft Type Rating Exemption must be submitted together with evidence that:

1. no fewer than five separate flights as pilot in command have been completed on the type itself or a similar agreed type (as agreed with the Chief Instructor or Chief Pilot) in the preceding 12 months; and
2. a dual check completed in the preceding 12 months on the type of aircraft flown (or similar agreed type).

6.11 Both (1) and (2) above must be completed on an annual basis. Where the pilot has not completed either (1) or (2), an Aircraft Type Rating Exemption (Training) may be issued to enable the pilot to receive further training. However on a case-by-case basis where a pilot is current and experienced on a number of similar types (e.g. a test pilot), this requirement may be relaxed with the approval of the General Aviation Unit.

6.12 Pilots operating on an Aircraft Type Rating Exemption must hold an otherwise appropriate valid licence which includes an appropriate valid class or type rating.

6.13 An Aircraft Type Rating Exemption is issued for each specific type of aircraft.

Applications for Aircraft Type Rating Exemptions

6.14 Applications for an Aircraft Type Rating Exemption should be made on the form 'CAP 632 Aircraft Rating Exemption - Application for Initial Issue and Re-issue' available from, www.caa.co.uk/srg1306

The appropriate payment should be made using the Payment Authorisation Form FCS1500 available from, www.caa.co.uk/fcs1500

The completed forms should be sent to:

ga@caa.co.uk or General Aviation Unit, 2E, Civil Aviation Authority, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR
Tel: 01293 573988

Pilot training on jet and high-performance propeller-driven aircraft

6.15 Pilots wishing to be accepted for flying jet and high-performance propeller-driven aircraft should have the appropriate flying experience. Conversion, refresher and technical training requirements for these aircraft will be assessed on an individual basis and must be agreed in advance of training commencing with CAA General Aviation Unit where an Aircraft Type Rating Exemption is required. Where no Aircraft Type Rating Exemption is required, the performance requirement may be met by detailing the minimum experience levels and training requirements in the agreed OCM. Organisations will maintain a current list of pilots who have been accepted by the Authority.

6.16 Pilots who have little or no military jet or high-performance piston-engine experience will invariably be required by the Chief Pilot to undergo rigorous and detailed conversion training including, where appropriate, specific aviation medicine training.

6.17 Guidance as to recommended experience levels for the training and supervision of pilots is given at Appendix C.

6.18 Regular training is essential for pilots to maintain the skills required to fly any aircraft. but particularly jet or high-performance aircraft. There are two aspects of currency that CAP632 operators should consider: currency on aircraft type; and currency in respect of the nature of operations flown in that aircraft over a recent time period to demonstrate ability to conduct those operations safely.

6.19 For CAP632 aircraft, type currency refers to whether or not a pilot has the necessary paperwork to fly the aircraft. This means ensuring all necessary paperwork class ratings– i.e. SEP remains valid. Typically, this would mean that the pilot has completed any annual recurrent training on type, including a dual check on type or similar agreed type.

6.20 Currency in respect of operations flown refers to when the pilot last flew the aircraft and the operations conducted. If the pilot has not flown for a specified number of days (or calendar months) then the OCM should state the requirement for the pilot to regain this currency. It is possible therefore that a pilot can be current on the aircraft type but be outside the operational requirements set out in the OCM.

6.21 The operator should include details for both paperwork and currency within the OCM for each type of aircraft operated.

6.22 Guidance for conducting the 'Essential Training Requirements' or 'dual checks' is given in Chapter 7.

Pilot currency

6.23 CAP632 operators should ensure that pilots remain current on the type of aircraft flown, and this is especially important for jet or high-performance aircraft. It should also have regard to the nature of the operations flown.

Organisations are to specify in the OCM minimum requirements for pilot currency bearing in mind experience levels of the pilots concerned. Where possible, maximum advantage is to be taken of dual control aircraft in maintaining currency. The following criteria are recommended.

Currency for aircraft involved in air display flying

6.24 For CAP632 aircraft involved in air display flying, specific display pilot minimum currency requirements in terms of the number of aerobatic display routines are set out in CAP403 Chapter 10. Operators should set these as an absolute minimum standard and pilots are encouraged, particularly during the winter months or pre-season work up, to undertake sufficient practise to ensure that a sufficiently high standard of safety is maintained. Display routines and practices must be recorded in the pilot's logbook.

6.25 Display pilots must also hold a valid CAA Display Authorisation, as set out in Chapter 10 of CAP403.

Currency for aircraft involved in operations other than air displays

6.26 If the aircraft is not flown at air displays, the operator must set out in the OCM for each type of aircraft operated the minimum currency in terms of minimum number of hours flown over a specified number of days (or calendar months), and what steps are required for the pilot to regain currency.

Human Factors

6.27 Pilots must also undergo some training or instruction in the Human Factors aspects of flying which are critical to safe operations. Pilots of ex-military aircraft whether or not they are participating in flying displays must be well motivated, have plenty of free time, be relatively free of personal worries and enjoy a reasonable degree of personal fitness. For more information on human factors, see CAP1047 – Civil Air Displays: A Guide for Pilots. www.caa.co.uk/cap1047

Experienced pilots - aircraft operated on an Aircraft Type Rating Exemption or Type Rating

6.28 Aircraft Type Rating Exemption or Type Rating expired, one year or more out of currency or less than 5 flights on type, or similar agreed types, within 12 months:

- Training as specified by CAA General Aviation Unit for the renewal of the Aircraft Type Rating Exemption or Type Rating.
- More than 6 months but less than one year out of currency with a valid Aircraft Type Rating Exemption or Type Rating:
- Full ground briefing on aircraft systems, limitations, normal and emergency operations brief.
- Dual check at the Chief Pilot's discretion taking account of pilot experience and currency on other types and availability of a suitable dual control representative type.
- Supervised start/supervised solo at Chief Pilot's discretion.
- Pilot current on type available in the tower or other appropriately experienced pilot designated by the Chief Pilot.
- Solo general handling flights and display practice, if appropriate, at the Chief Pilot's discretion.

Experienced pilots - aircraft operated on a Class Rating (SEP and MEP)

6.29 The OCM is to detail the currency requirements depending upon aircraft complexity. The requirements above should be taken as guidelines for high-performance aircraft.

Experienced pilots - all aircraft

6.30 More than 90 days since last flight on type - a general handling flight and, if appropriate, a display practice.

6.31 Irrespective of currency, a dual check should be carried out every 12 months on the type of aircraft flown or similar agreed type.

6.32 Guidance for conducting the 'Essential Training Requirements' or 'dual checks' is given in Chapter 7.

Inexperienced pilots

6.33 Until a pilot has met the requirements to be considered self-authorising on type (see Appendix C) a dual check by the Chief Instructor will be required if they have not flown the aircraft within a 28 day period. Irrespective of currency, a dual check should also be carried out every 6 months.

6.34 Guidance for conducting the 'Essential Training Requirements' or 'dual checks' is given in Chapter 7.

Chapter 7

Operational requirements

Flight test

7.1 Flight Testing of all ex-military aircraft operating on a Permit-to-Fly is required in certain circumstances and shall only be conducted to an approved schedule. The flight test shall only be flown by pilots who comply with the requirements set out in Information Notice 2014-052 "Eligibility of Pilots to conduct Check Flights" (www.caa.co.uk/informationnotices).

Operational control

7.2 Article 69 "Obligations of pilot in command" and Article 75 "Take-off and landing conditions" of the Air Navigation Order 2016, both place specific responsibilities on the commander of a CAP632 aircraft before that aircraft takes off. The final decision on any proposed flight profile, or indeed whether or not to fly at all, rests with the commander of the aircraft.

7.3 The CAA also requires all other relevant safety considerations are taken into account before any CAP632 flight takes place. In the case of inexperienced pilots, either on aircraft type or in the style of flying, it is essential that the organisation's Chief Pilot exercises a measure of operational control.

7.4 In the case of pilots new to high-performance piston or any turbine engine aircraft, direct flight authorisation by a suitably qualified supervisor, ideally the organisation's Chief Pilot, will be required until the pilot has gained sufficient experience to be considered as self-authorising (see Appendix C).

7.5 Organisations are to detail in the OCM how the level of supervision outlined in 7.2 and 7.3 is to be achieved and monitored.

7.6 Appendix D contains a recommended example of a pre-flight brief which lists the basic points which should be considered before all flights.

7.7 Pilots may fly under the auspices of other OCMs as long as they meet the criteria of that organisation.

Operational limitations

7.8 The CAA requires that aircraft operated in accordance with the requirements of CAP632 will do so taking into account the limitations on the relevant Permit-to-Fly and the appropriate edition of the relevant Pilot's Notes or Aircrew Manual, details of which should be included in the OCM. Where the aircraft is ex-RAF, the appropriate edition of AP 4099J or AP 101B (or the appropriate document for

ex-RN and ex-Army aircraft) should be detailed in the aircraft's Airworthiness Approval Notes as the master document.

7.9 The CAA or the CAP632 operator may decide that an aircraft should not be operated to the full limitations accepted by the military. There may be a case for limiting the maximum permitted IAS or 'g' loading or indeed the maximum cockpit or cabin differential pressure. Any limitations agreed must be clearly stated in the OCM, and any curtailment of performance that is a consequential result of that decision must be clearly identified.

7.10 Owners and operators are encouraged to take into consideration the age, rarity value and the need for continued preservation of an aircraft when considering any additional limitations. In general terms, additional limitations should be placed on the aircraft with sympathetic appreciation of the above factors whilst allowing the aircraft to be safely flown and, where appropriate, displayed.

Low flying

7.11 Flying aircraft safely at low level in accordance with the normal rules of the air requires extensive training and continuous practice. Significant hazards exist when operating at low level such as bird strike, the high workload of low level navigation, and the possible late sighting of other traffic. Further, the time available to resolve emergency situations is considerably reduced at low level. It is strongly recommended that ex-military aircraft operated under CAP632 should not be flown at less than 1,000 ft above ground level except for the purpose of take off or landing or when practising for or taking part in a flying display.

Aircraft fitted with live ejection seats and ejection policy

7.12 Where an aircraft is fitted with live ejection seats, all occupants must be suitably trained in their use and be medically fit, before being allowed to fly in the aircraft. Moreover, operators are to ensure that occupants meet the seat manufacturer's body-mass criteria for the seat type.

7.13 Forced landings should only be carried out in jet aircraft as a last resort, unless they can be made onto a suitable airfield. If ejection or abandonment is inevitable, every effort must be made to ensure that the aircraft falls into an unpopulated area. Where possible, ejection should be initiated over the coast with the aircraft pointing out to sea. If time permits, the engine(s) should be shut down prior to ejection or abandonment.

7.14 Where an aircraft is fitted with live ejection seats, Ejection Seat Safety Devices (e.g. seat pins) are to be carried in the aircraft on ALL flights and high speed taxi tests in a position where they can easily be identified by the emergency services without assistance from the aircraft's flight or ground crews.

Aircraft fitted with drop tanks

7.15 Drop tanks should only be jettisoned as a last resort and when their retention would imperil the aircraft and crew and bring increased risk to persons on the ground. All premeditated jettisons are to be made over unpopulated areas, preferably over the sea, clear of shipping.

7.16 Pilots should be aware that empty drop tanks have a negligible effect on gliding or range performance of jet aircraft. Therefore, consideration should be given to retaining them in the event of forced landing.

Flying clothing

7.17 The CAA requires that all occupants flying jet aircraft shall wear protective helmets equipped with suitable visors. For occupants of other aircraft, such helmets are considered to be highly desirable.

7.18 The pilots, crew and any passengers flying in ex-military aircraft should, in addition to wearing a suitable helmet equipped with visor, wear a fire-retardant flying suit, leather gloves and suitable boots. When flying in coastal areas a life jacket capable of withstanding aircraft abandonment should be worn. This should be capable of being inflated during a parachute descent. The wearing of an immersion suit and carriage of a life-raft is recommended in the appropriate circumstances.

7.19 Further guidance regarding appropriate flying clothing is given at Appendix E.

Flight in excess of 250 Kt below FL 100

7.20 Aircraft can only be flown at speeds in excess of 250 kt below FL 100 with the specific permission of the CAA. Applications for such permissions are to be made to the CAA General Aviation Unit annually. Operators are to ensure that the conditions detailed on the permission are complied with. The permission also allows aircraft participating in a Flying Display to exceed 250 knots below FL 100.

Carriage of passengers

7.21 When passengers are carried the operator shall maintain a record of the individual's name, address and next of kin details. Additionally CAP632 operators must record on what basis the passenger is flown (SSAC, cost sharing or no valuable consideration).

7.22 If valuable consideration is given or promised, directly or indirectly, for the purpose of conferring on a particular person the right to fly in the aircraft then the operator will be required to hold an exemption from Article 42 of the ANO 2016.

7.23 If passengers are flown on a cost sharing basis only the direct costs can be shared, that is to say the costs for consumables such as fuel and oil and landing fees but not the costs of insurance, hangarage, annual maintenance etc. Operators flying passengers on a cost sharing basis may be called upon to provide proof that they are only recovering the direct costs of the flight and that there is no actual or perceived cross subsidy within their operation.

7.24 Operators who wish to apply for an exemption from Article 42 of the ANO 2016 in order to carry passengers for valuable consideration, shall comply with the requirements to conduct flights under the provisions of 'Safety Standards Acknowledgement and Consent' (SSAC) - refer to Appendix G.

7.25 It is strongly recommended that when passengers are flown in ex-military aircraft operated under CAP632 the minimum height for flight, except for the purpose of take off or landing, is 1,000 feet above ground level.

7.26 Chief Pilots are to consider pilot experience levels before permitting pilots to fly with passengers. In general, it is recommended that pilots should be considered as being experienced and self authorising (see Appendix C) before they fly with passengers.

7.27 OCMs should include a Passenger Briefing covering all aspects of flight including use of safety equipment. The Passenger Briefing should include a statement that the aircraft operates on a Permit to Fly and is not certified to an internationally recognised standard.

Essential Training Requirements

7.28 CAP632 operators must develop an 'Essential Training Requirement' for each type of aircraft operated under the OCM. The 'Essential Training Requirement' should require each pilot to practise each of the training elements at least a minimum of once per chosen period e.g. 6 months or 12 months. The following elements should be considered where appropriate:

- Ejection seat drills;
- Steep turns;
- Stalling clean and approach configuration - fully developed or with recovery at the incipient stage;
- Incipient spin recognition and recovery - essential if aerobatics are to be flown;
- Escape manoeuvres for each type of aerobatic element;
- Practise forced landing;
- In flight emergencies including:

- Practise fire drill;
- Practise engine relight drill;
- Rejected Take-off
- Low level engine failure

- Normal and flapless circuits and crosswind landing;
- Take-off technique;
- Performance (including runway state);
- Simulated asymmetric approach.

NOTE: This list is not exhaustive and should be tailored for each aircraft type.

7.29 Pilots should be aware that in circumstances where the time available to act is very short, increased experience and currency are likely to reduce the risk of inappropriate action and improve the likelihood that the aircraft will be recovered safely.

7.30 Pilots should ensure that additional safety margins are in place, particularly during the earlier part of the flying season, or if experience and/or recency are limited.

7.31 Aerobatic Training: Pilots intending to conduct aerobatic flying must be trained in performing the relevant escape manoeuvres for each aerobatic element flown. The recurrent training should include an oral questioning assessment of the pilot's theoretical knowledge of escape manoeuvres and circumstances when such manoeuvres should be used. Additionally, a demonstration of the pilot's handling competency to safely conduct such escape manoeuvres.

7.32 Training Records: Operators must maintain detailed training records for all pilots. Each OCM should contain the Pilot Training Record Template to be used to record the training completed. If the training forms require updating then an OCM amendment should be submitted.

7.33 It is important that all training is recorded and kept on the individual pilot training record and retained by the operator. This should include:

1. dates of training,
2. instructor details,
3. duration of training,
4. narrative of student's performance,
5. any additional training required,

6. details of any recurrent ground training including safety equipment,
7. dual checks (on type or similar agreed type),
8. Essential Knowledge Quizzes and
9. Essential Training Requirements that have been completed.

7.34 Where a pilot flies the same (or similar) type of aircraft for more than one CAP632 operator it may be acceptable to provide copies of training completed by one CAP632 operator to the other CAP632 operators. On receipt of the training record copies, the Chief Pilot or Chief Instructor should check and sign that the training completed meets their own training requirements and approve as appropriate the pilot to fly under their own OCM. These copies should then be retained on the individual pilot's training record.

7.35 It is important that any initial training (convex) and recurrent (annual) training is recorded.

Chapter 8

Recording and audit procedure

Recording

8.1 The OCM will detail the records the organisation intends to maintain. The operator will be required, at a minimum, to record:

- Aircraft flying hours/landings/cycles and details of maintenance accomplished (as required under Article 226 "Aircraft continuing airworthiness record system for non-EASA aircraft" of the ANO (2016).
- Record of flights, including a record of each flight where 250 KIAS was exceeded.
- Operational and technical problems encountered and the measures taken to overcome them.
- Pilot (and crew) flying and ground training records.

CAA audit

8.2 Operations carried out under the provisions of CAP632 will be subject to periodic audit by the CAA. The CAA must be satisfied that all operations continue to be performed in accordance with the procedures agreed between the CAA and the operator. As part of this requirement, the operator will be required to maintain certain operational and technical records and make these available to the CAA on request. The timing of the audit, normally annually, will be by mutual agreement although the CAA reserves the right to visit at any time.

8.3 CAP632 operators will be required to address any audit findings to rectify the non-conformance(s) and to take actions to control any future repetition. Failure to take satisfactory action will affect the continued operation.

8.4 Guidance on the conduct of the audit visit is given at Appendix F. Examples of the Operational and Maintenance Support Arrangements checklists to be used during the audit are at Annex 1 and 2 to Appendix F.

Procedure for withdrawing agreement to an OCM agreement

8.5 Where a serious non-compliance with OCM requirements is found by the CAA during an audit, or where a significant breach of the CAA's agreement is identified the agreement to the OCM may be suspended or revoked by the CAA. This will result in operations being stopped with immediate effect.

8.6 The CAP632 operator will be sent a letter by the CAA outlining the reasons for

this action. The letter will also contain details of any remedial action required by the operator and details of the CAA's internal review process.

8.7 In most circumstances, the CAP632 operator concerned will be given the opportunity to rectify any deficiencies identified by the CAA within timescales agreed with the CAA. The CAA may reinstate the OCM agreement once the deficiencies have been rectified by the CAP632 operator to the satisfaction of the CAA.

Chapter 9

Safety standards acknowledgement and consent

Introduction

9.1 Certain activities such as commercial aviation involve higher expectations of safety outcomes because the activities have become integrated into the pursuit of everyday economic or social activity. However, activities of an adventurous nature, such as SSAC flights, may justify a higher acceptance of personal risk by the participant as the purpose of the activity is primarily for the recreational value.

9.2 Further information regarding the principles of SSAC can be found under Annex C of the GA Policy Framework (www.caa.co.uk/ga).

SMS – Risk Assessment

9.3 The operators Safety Management System should be expanded to identify those additional risks associated with the carriage of passengers and evidence provided that these have been mitigated to an acceptable level. The assessment should include safety risks to the participants as well as to other airspace users and those on the ground. Further guidance is available from CAP 1059 (Safety Management Systems: Guidance for small, non-complex organisations).

Passenger information

9.4 It must be explained to participants that the operation does not meet AOC standards and that the activity could result in serious injury or death. The operator is responsible for ensuring that passengers are made fully aware of the different risks they are undertaking.

9.5 Participants will be required to accept those risks on the basis of being provided with reasonable and appropriate information to enable participants to understand the level of risk they are accepting in taking part in the activity. Where practicable, the risks should be contextualised with comparative data being provided. Tangible evidence will be required that the level of risk has been explained to the participant and that risk has been acknowledged and accepted.

9.6 Should a potential passenger choose not to accept the risk, a full refund of monies paid should be available without withholding or condition.

SSAC Operations Manual

9.7 In order to apply for an exemption to conduct flights under SSAC an expanded OCM will be required. The contents of this SSAC Operations Manual shall

contain the information covered in Appendix G which includes the OCM items in Appendix A. No prescribed format is mandated for SSAC Operations Manuals but they should be structured in a manner which provides easy access to information for all operational staff.

9.8 Applicants will be required to demonstrate a high level of organisational competence. Whilst the level of regulation is less than that required for an AOC, the requirements detailed are proportionate to the intended activity and constitute the necessary measures to provide for a safe operation.

Airworthiness requirements

9.9 Applications for SSAC will only be accepted for aircraft with current Certificates of Validity which meet the criterion of the “simple” category as defined in Supplement 2 paragraph 1.2 to BCAR A8-25.

NOTE: This guidance material is issued in advance of changes to the ANO to introduce legislation to cover SSAC operations and is subject to change as the legislation is developed.

9.10 An application supporting the operator case for SSAC should be made to CAA. This application should come from an organisation holding the privilege to supply reports to CAA under A8-25 Supplement 2 or, if organisation transition has not yet occurred, an organisation holding an E4 privilege under BCAR A8-20 and ideally an M5 privilege. As part of the application, a justification for operation under SSAC should be supplied. As part of the justification report the applicant should specify:

1. The anticipated utilisation of the aircraft in the SSAC role as compared with current utilisation. This includes assessment of changes in operation such as increased circuit flying, shorter flights, more aerobatic flying etc.

2. Proposed changes to the maintenance programme as a result of the change in usage for the aircraft based on 1) above. This may involve changes to inspection/check intervals, routine maintenance intervals and health monitoring methods along with changes to the handling of defect reports.

3. Results of a review of the modification and repair standards for the aircraft concerned, and the suitability of those standards for the intended SSAC role. Modifications fitted on a trial basis should not be considered for SSAC usage.

4. Results of a review of applicable MPDs for the aircraft to determine whether revisions to the methods of compliance or inspection intervals are justified, or any currently permitted alternative means of compliance remain applicable for SSAC operation.

5. Proposed revisions to aircraft placarding.

6. Any proposed revisions to aircraft occupancy levels.
NOTE: maximum occupancy levels above those specified for a Permit to Fly aircraft in the ANO will not be accepted. Any change in occupancy levels would also require an application for an addendum to the relevant AAN.

9.11 An aircraft survey may be required but where possible the application will be handled as a documentation change.

9.12 Final acceptance of the airworthiness case under the current Permit to Fly along with any additional limitations will be indicated by letter from the CAA to the approved person or organisation and may be used in support of the operator case to satisfy the requirements for operation.

APPENDIX A

Guide to the compilation of the organisational control manual

Introduction

A1 The content of the OCM will reflect the size and complexity of the organisation and the type(s) operated. In general terms, the more complex and demanding the aircraft, the more detail that will be required in the OCM.

A2 The OCM should cover three broad aspects, namely, details of the overall organisation followed by sections dealing with operational and applicable maintenance aspects. Where an organisation is responsible for operating more than one aircraft, operational information must be available for each individual aircraft unless they are of the same type. It is recommended that information common to all types is contained in the main body of the OCM and that type specific information is confined to appropriate annexes.

A3 Where the operational policy of the organisation is that the aircraft will be operated in accordance with a recognised manual e.g. Pilot's Notes, the CAA will require a copy of this document.

Overall organisation

A4 The following headings should be covered within this Section:

- Appointments and responsibilities of key personnel
- Operational organisation
- Maintenance organisation
- Audit and reporting procedures
- Procedure for amending organisational control manual

Operational organisation

A5 The following headings should be covered in the Section dealing with the operational organisation:

- Statement of operating policy for the aircraft.
- Operational control of flights and flight authorisation.

- Pilots signature sheet - Pilots flying aircraft operated under the OCM are required to operate in accordance with the OCM and must sign the OCM to that effect.

- Crew composition and duties; crew duty limitations.
- Pilot / crew qualification including Type Rating Exemptions (training and full).
- Training:
  - Periodic checks;
  - Essential Training Requirements;
  - Pilot flight and technical training records;
  - Pilot final handling test report;
  - Further training report;
  - Formation/aerobatic clearance;
  - Self authorisation approvals;
- Currency:
  - Type currency;
  - Operational currency;
  - Process to regain currency if this has lapsed;
- Display Authorisation [if applicable].
- Policy on carriage of passengers (including medical suitability and recording of next of kin details).
- Operational performance policy.
- Weight and CG considerations.
- Minimum fuel states.
- Weather minima - at base and for diversions.
- Diversion criteria.
- In-flight emergencies - policy for handling:
  - Where ejection seats are operational - policy on forced landings / ejection;
  - Where jettisonable external tanks are approved and fitted – policy on tank jettison.
- Flying clothing/safety equipment.

- Display criteria (sequences are not required to be set out here).
- Reporting of incidents and occurrences.
- Recording of 250 KIAS exceedences.

Maintenance considerations

A6 The following headings should be covered in the section covering Maintenance considerations:

- Proposed maintenance procedures in accordance with BCAR A8-23/24/25 with details of letters of agreement.
- Method by which maintenance and operational areas will interface with particular reference to interchange of relevant information on aircraft status.
- Aircraft serviceability including notification details of when the next aircraft maintenance is due based upon hours, calendar date, cycles or landings (as appropriate)
- Policy for maintenance away from base, particularly safety precautions for ejection seats or other live explosive devices. Refuelling unless straightforward. Responsibility for completion of technical logs.
- Policy towards allowable deficiencies with associated flight limitations.
- Pilot maintenance items including certification of training by the appropriate BCAR A8-23/24/25 approved organisation.

Annexes

A7 The annexes should include:

- A list of the aircraft to be operated including the registrations.
- Any type specific information not already covered.

APPENDIX B

CAP 632 Safety Management

SMS evaluation tool

B1 The principle of the SMS evaluation tool is to allow operators to assess whether or not their organisation has a positive safety management culture. Affirmative answers indicate a positive situation. Negative responses always require corrective action.

B2 During audits the CAA Inspectors will discuss Safety Management with operators. Their discussions will be based around the SMS evaluation tool below. The SMS evaluation tool also provides a suggested method of how the effectiveness of a Safety Management culture can be internally assessed.

NOTE: Not all questions will apply to all organisations.

	CAA guidance material ref		Compliance Y/ N / partial	Comments / Reference to compliance
Management commitment and responsibility	1.1	Is there a written safety policy endorsed by the Accountable Manager?		
	1.2	Does Senior Management continuously promote and demonstrate its commitment to the safety policy?		
	1.3	Has the safety policy been communicated effectively throughout the organisation?		
	1,4	Does the safety policy cover the points in this guidance material?		
Safety accountabilities	2.1	Are the safety accountabilities and responsibilities of the Accountable Manager and other key staff members clearly defined and published for all staff and contractors to see?		

	2.2	Does the Accountable Manager have full responsibility for the SMS and authority to make decisions regarding the budget?		
	2.3	Has the management structure of the organisation been defined?		
	2.4	Are all staff members aware of their safety roles and responsibilities?		
Appointment of key safety staff members	3.1	Has a focal point/Safety Manager for the SMS been appointed?		
	3.2	Is there a direct reporting line between the SMS focal point/ Safety Manager and the Accountable Manager?		
	3.3	Does the SMS focal point/ Safety Manager have the appropriate SMS knowledge and understanding?		
	3.4	Does the organisation have a Safety Committee or equivalent?		
	3.5	Does the Safety Committee or equivalent monitor the safety performance and the effectiveness of the SMS?		
	3.6	Does the Safety Committee or equivalent meet at least annually and are the meetings minuted?		
Emergency response planning	4.1	Has an emergency response plan been developed and is it kept up to date?		
	4.2	Are the roles, responsibilities and actions of key staff members defined in the ERP?		

	4.3	Does the ERP include all the considerations in this guidance material if appropriate?		
	4.4	Is the ERP regularly reviewed and tested?		
Safety documentation	5.1	Does the safety management manual or safety documentation in existing manuals contain all the elements as detailed in this guidance material?		
	5.2	Is it regularly reviewed?		
	5.3	Is there a system for the recording and storage of SMS documentation and records i.e. hazard logs, risk assessments, safety reports from staff/contractors and safety cases?		
Hazard identification	6.1	Is there a confidential safety reporting system?		
	6.2	Are safety reports assigned an 'owner' and reviewed by the Safety Committee or equivalent?		
	6.3	Is there feedback to the reporter?		
	6.4	Is there a written procedure describing how hazards are identified?		
	6.5	Have the major hazards associated with the organisation been identified?		

Simple risk assessment procedure using a matrix system

B3 This simple procedure should suit the needs of most GA operators. If you require advice on risk assessment please contact the General Aviation Unit, Safety and Airspace Regulation Group, CAA on 01293 573988.

B4 The assessment process must be undertaken by someone who is aware of the risks associated with the activity being assessed and who will use sound judgment in the preparation of the assessment. The assessor should also be aware that, in the event of a subsequent accident or incident, their risk assessment process may be challenged.

Risk = The severity of the hazard x the likelihood of occurrence

Types of hazard

B5 The following list provides examples of CAP 632 operator hazards.
It is not exhaustive merely an example of the types of hazard that should be considered:

- Fire in the air
- Mid-air collision
- Heavy landing
- Passenger incapacitation in the air
- Fuel exhaustion
- Passenger incapacitation on the ground
- Ditching
- Lightning strike
- Pilot incapacitation
- Structural failure
- Control failure
- Aircraft accidents involving crowd casualties
- Aircraft crash
- Articles falling from aircraft
- Runway blockage
- Fire on the ground
- Contaminated fuel
- Loose articles in cockpit
- Weather diversion
- Loss of control

Assessment

B6 Assessment of severity of hazard and likelihood of occurrence is subjective and is based on personal experience of the activity under assessment or statistical evidence when available.

Severity of hazard

B7 The severity of a hazard should be assessed under the following headings, depending on the possible outcome should the hazard become a reality, and allocated a score:

Severity of consequences		
Aviation definition	Meaning	Value
Catastrophic	Results in an accident, death or equipment destroyed	5
Hazardous	Serious injury or major equipment damage	4
Major	Serious incident or injury	3
Minor	Results in a minor incident	2
Negligible	Nuisance of little consequence	1

Likelihood of occurrence

B8 The likelihood of the hazard occurring should be assessed against the following headings and again allocated a score:

Likelihood of occurrence		
Qualitative definition	Meaning	Value
Frequent	Likely to occur many times (has occurred frequently)	5
Occasional	Likely to occur sometimes (has occurred infrequently)	4
Remote	Unlikely to occur but possible (has occurred rarely)	3
Improbable	Very unlikely to occur (not known to have occurred)	2
Extremely improbable	Almost inconceivable that the event will occur	1

Note: The definitions used above are an example only. You may find it more useful to define quantitative definitions, such as, number of events in a given time period or events per number of flights depending on your type of operation.

Risk tolerability table

B9 The risk rating is the figure obtained when the severity assessment is multiplied by the likelihood assessment.

B10 A resultant figure of less than 6 indicates a low risk; a figure between 6 and 15 a medium risk; and a figure greater than 15 a high risk.

Risk likelihood	Risk severity				
	Catastrophic 5	Hazardous 4	Major 3	Minor 2	Negligible 1
Probable 5	Unacceptable	Unacceptable	Unacceptable	Review	Acceptable
Occasional 4	Unacceptable	Unacceptable	Review	Review	Acceptable
Remote 3	Unacceptable	Review	Review	Acceptable	Acceptable
Extremely remote 2	Unacceptable	Review	Review	Acceptable	Acceptable
Extremely improbable 1	Review	Acceptable	Acceptable	Acceptable	Acceptable

Unacceptable: The risk is unacceptable and major mitigation measures are required to reduce the level of risk to as low as reasonably practicable.

Review: The level of risk is of concern and mitigation measures are required to reduce the level of risk to as low as reasonably practicable. Where further risk reduction/mitigation is not practical or viable, the risk may be accepted, provided that the risk is understood and has the endorsement of the Accountable Manager.

Acceptable: Risk is considered acceptable but should be reviewed if it reoccurs or changes that affect the risk are made.

Mitigation

B11 Mitigation action should be taken whenever possible to reduce risk ratings even when the risk is low.

B12 High risk ratings should generally be deemed unacceptable and mitigation always sought to reduce the rating to an acceptable level - medium or better.

Hazard Log production

B13 Once severity and likelihood levels and mitigation measures (where appropriate) have been decided they should be entered in the matrix.

Identified hazard	Associated risk (consequence)	Existing mitigation measures in place	Current level of risk	Further mitigation measures	Revised level of risk	Action by and when
			Severity likelihood tolerability		Severity likelihood tolerability	

Note: The content of the above table is for example only and does not imply or infer a risk level.

Risk assessment audit trail

Organisations should record and retain the details of their risk assessment process.

APPENDIX C

Guidance on experience requirements to fly jet or high-performance piston engine aeroplanes

Introduction

C1 The notes below are intended to provide guidance to owners/operators of jet or high-performance piston engine aircraft that are operated under CAP 632 as to the training and supervision which might be applied to the pilots operating such aircraft. It is intended only as guide for Chief Pilots. Due to the variation in skill and ability of different pilots there will be occasions when more or less training and supervision would be appropriate; in other words, each pilot must be judged on his or her individual merits.

Levels of experience

C2 Three levels of experience are recommended; the training and supervision of pilots with total experience falling between the designated levels should be adjusted accordingly.

- **Inexperienced** up to 200 hours PIC post licence issue.
- **Intermediate** between 200 hours PIC post licence issue and 450 hours PIC.
- **Experienced** Over 450 hours PIC.

Minimum recommended experience required before a pilot should be considered for self authorisation

Experience Level at the start of training	Experience Level before consideration for Self Authorisation
Inexperienced	50 hours on type/similar types
Intermediate	50hrs on type/similar types reducing to 15hrs depending on hours PIC
Experienced	Training + 5 hours PIC on type/similar types

Self authorisation

C3 When considering pilots for self-authorisation, Chief Pilots should take into account the pilot's experience levels, as outlined above, the abilities of the pilot concerned and the complexity of the aircraft being flown. Further, self-authorisation should not initially be blanket clearance covering all flights. It would be appropriate for a pilot to be approved to self-authorise local flights in the first instance but not land away flights or aerobatics/formation until such time as sufficient experience was gained in these areas.

C4 It is recommended that any pilot in the 'inexperienced' and 'intermediate' experience levels be subjected to such authorisation restrictions and that 'experienced' pilots should also be so restricted if their background experience warrants it. For example, it would be inappropriate for a pilot with over 450 hours PIC on simple single engine piston class aeroplanes to fly some of the available jet aeroplanes without some restrictions being applied.

APPENDIX D

Specimen pre-flight briefing

D1 The following non-exhaustive list is a guide to the items that should be checked prior to flight. It is recommended that such a list is easily accessible wherever pre-flight planning is undertaken.

1. General handling sorties

- OCM signed.
- Flight correctly authorised - (self authorisation approved?).
- Home airfield information - runway in use? Work in progress? etc.
- Check latest met for home airfield and operating area.
- Diversion chosen - airfield information - is it open? Will they accept you? Runway in use? Work in progress?
- Landing fuel at base for chosen diversion.
- Departure details passed to ATC.
- Royal flights.
- Local nav warnings.
- Passenger briefed - next of kin details - sick bag.
- Are you within currency limits?
- Are you physically and medically fit to fly?
- Are you fatigued or rushed?
- Are you dressed to survive?
- Life jacket, immersion suit, liferaft?
- Check all latest information on operating procedures.
- Current maps and charts.
- Tech log.
- Emergencies – in current practice.

2. Navigation sorties (additional to 1 above)

- Route weather forecast.
- Bad weather plan.
- NOTAMS checked.
- Destination notified.
- Destination airfield - weather/airfield information.
- Diversion at destination - booked - landing fuel.
- Documentation - tech log.
- Pilot maintenance certificate.
- Departure and arrival airfield performance calculations.

3. Formation sorties (additional to 1 and 2 above)

- Qualified.
- Formation briefing.
- Formation positions.
- Formation changes.
- Emergencies, loss of leader?

APPENDIX E

Guidance on appropriate flying clothing and safety equipment (dress to survive)

Flying clothing

E1 Use of the correct flying clothing is an important factor in the safe operation of ex-military aircraft. This class of aircraft, even the older piston engine types, are capable of operating at speeds and heights well in excess of the average light aircraft and in-service experience has led to the development of specifically designed flying clothing. Military aircrew are equipped and trained to survive accidents and incidents: civilian operators of ex-military aircraft are strongly encouraged, and in certain circumstances, required, to follow the survival best practice developed by the services.

Flying suits

E2 Flying suits are the only practical garment for flying in ex-military aircraft. In addition to protection, they also assist with the storage of maps and documents and prevent loose articles falling into the cockpit, particularly important in aircraft without cockpit floors or storage areas, such as the Spitfire, the Corsair or even the Harvard.

E3 Flying suits offer protection in the case of abandonment or ejection and, if properly fireproofed, in the case of fire. Given the possible close proximity between fuel and the pilot, particularly in piston engine ex-military aircraft, wearing of a fire resistant flying suit such as those made of Nomex is very desirable and highly recommended.

Flying boots

E4 The use of correctly sized boots specifically designed to give good ankle support is particularly important in the abandonment or ejection scenario. Good ankle support is very beneficial in a parachute landing and it is important that, in the case of an ejection, the boots are not lost on ejection.

Flying helmets

E5 Flying helmets are required for flying in all jet aircraft and highly recommended for all other ex-military aircraft (see paragraph 7.17).

E6 The helmet clearly offers protection during abandonment, ejection and the subsequent parachute landing. However, it also has an important head protection role during a forced landing and, with an adequate visor in the down

position, in the event of a bird strike. Given the speeds of ex-military aircraft, even when limited to 250 knots, a bird strike in the cockpit area can, and has in the past, caused pilot incapacitation.

Flying gloves

E7 Cape leather or USAF style flying gloves offer considerable protection against cockpit fires and should be worn for all flights.

Immersion suits

E8 The sea temperature around UK only exceeds +10°C for a relatively short period during the summer months. Survival times in the sea fall rapidly as the water temperature falls below +10°C and, equally importantly, the ability to carry out any task, such as climbing into a life raft, becomes very rapidly impaired.

E9 The current military practice is that all fast jet aircrew will wear immersion suits for all flights in the UK throughout the period that the sea temperature is below +10°C, irrespective of whether the flight is planned to be over the sea or not.

E10 Operators of jet aircraft, particularly those based near the sea or who regularly fly in coastal areas, should give serious consideration to the use of immersion suits at appropriate times.

Other survival equipment

Life jackets

E11 For many years it has been a standard military practice for life jackets to be worn on all fast jet flights in the UK. Given that the furthest distance inland from the sea that can be achieved in the UK is about 70 nm and the speed of jet aircraft, this would seem a sensible precaution to take.

E12 A life jacket should be worn at all times for any flying over, or near, the sea in any aircraft.

E13 The life jacket should be adequate for the task, which, in the case of ex-military piston engine aircraft, means that it should be strong enough to withstand the likely forces involved in an abandonment and parachute descent. It is unlikely that a jacket designed for use in light aircraft would be robust enough for this purpose. For aircraft fitted with an ejection seat, the correct style of military life jacket is the only one suitable for the purpose. If a life raft is carried, the life jacket must have suitable connections to attach the raft to the jacket.

Life raft

E14 Most ex-military aircraft are designed to carry a life raft, normally in a seat pack which can be attached to the life jacket. The life raft considerably increases the chances of survival in a sea or remote area survival situation.

Ejection seats

E15 As discussed in Chapter 5 paragraph 5.8, most ex-military aircraft fitted with ejection seats will be required to have them serviceable. For those where this is not mandatory, mainly the Jet Provost aircraft, it is highly recommended that operators give serious consideration to the survival advantages of live ejection seats.

Parachutes

E16 Parachutes should be worn on all flights in ex-military aircraft. The only exception to this might be large multi-engine aircraft such as the B17 or B25 but even in these cases carriage of suitable parachutes may be a prudent precaution.

E17 In those jet aircraft where the ejection seat is inhibited, a parachute should still be worn by all occupants of the aircraft.

Other considerations

Training

E18 It is of little value to carry expensive and beneficial safety equipment if the potential user, be it pilot, crew or passenger, cannot use it because of lack of knowledge or training. It is imperative that correct training, both initial and refresher training, is carried out on all safety equipment in use. For those occupants who do not have an appropriate military background this training must be comprehensive, particularly when advanced survival aids such as ejection seats are being used.

E19 Any training conducted, both initial and refresher training, on any safety equipment in use should be recorded in the individual training record for that pilot.

Equipment serviceability

E20 Safety equipment will only be required for use on one occasion but when called upon to work, it must work. Serviceability of the equipment is therefore vital. Some equipment such as ejection seats will require servicing as part of the general aircraft maintenance but other equipment such as flying suits, flying helmets, parachutes and life jackets will be the responsibility of the operator or individual pilot. Common sense dictates that these items should be serviced in accordance with the manufacturers' recommendations or, where no recommendation exists, at regular intervals and at least annually.

APPENDIX F

Guidance on the conduct of the audit visit

Introduction

F1 The notes below are designed to assist owners/operators of aircraft that are operated under CAP 632 in preparing for the annual audit inspection. Not all aspects covered below will be applicable to every operation but the detailed scope of the paperwork to be inspected will be as defined in the agreed OCM.

Frequency of inspection

F2 Audit inspection visits are made on a pre-planned basis on a date that is mutually convenient to both the General Aviation Unit and the organisation.

F3 Audit inspection visits will be made on a variable basis using performance-based oversight, but will normally be less than annually.

The audit inspection

F4 The audit inspection is a formal review of the organisation's operation and paperwork as laid down in CAP 632 and as specified in the OCM. The size and complexity of the organisation needs to be in keeping with the number and types of aircraft operated and the experience levels of the pilots involved. The following areas are, where relevant, to be addressed.

Operational organisation

The organisation has adequate facilities to enable all appropriate pre-flight information to be gathered and pre-flight decisions to be made. Specifically, the following must be available, either in-house or easily accessible on the aerodrome, to pilots, operations staff and supervisors:

1. Meteorological information.
2. Flight planning information including:
   a) Up to date charts;
   b) Up to date flight planning documents;
   c) Access to NOTAMs;
   d) Access to AICs.

3. Aircraft documentation for planning purposes (Aircrew Manuals, Pilots Notes, Operational Data Manuals and any specific, more stringent limitations imposed by the Permit-to-Fly and/or the owner/operator).
4. Aircraft technical documentation (Technical log, deferred defects list, Release to Service etc).
5. Pilot currency information including:
   a) Licence and medical currency;
   b) Licence Exemption currency, if applicable;
   c) Date of last flight on type, or similar types;
   d) Date of last display on type, or similar types, if relevant;
   e) Date of next dual check, if appropriate;
   f) Authorisation requirements.
6. The Organisation Control Manual - complete including all amendments. OCM must be signed by all current pilots.

General documentation

F5 Historical documentation relating to previous flights, training, technical requirements and carriage of passengers must be retained by the organisation for audit purposes. The level of documentation will be specified in the OCM and will vary depending on the scope of the OCM.

Documentation - technical

Aircraft technical log

F6 An Aircraft Technical Log must be kept in accordance with Article 226 “Aircraft continuing airworthiness record system for non-EASA aircraft of the ANO (2016). The specific layout of the Technical Log will be agreed with the A8-23/24/25 Maintenance Organisation and may principally be used as a maintenance document. However, particularly in some smaller organisations, the Technical Log may also be the principal method of recording all flight times.

Permit maintenance release

F7 A maintenance document as detailed in the BCAR A3-7. It must be readily accessible to pilots.

Inspection Status

F8 There must be a means whereby pilots can ascertain the status of aircraft serviceability and when the next maintenance is due based upon date, hours, landings, cycles etc.

Deferred defects list

F9 There must be a means whereby pilots can ascertain the status of unserviceabilities, rectification carried out, and any defects, including any associated limitations, where rectification has been deferred.

Authorisation sheets

F10 Many organisations will choose to record all flights on authorisation sheets, usually to the standard RAF pattern.

Documentation - pilot and training

Pilot licence and personal details record

F11 To include all licence, DA and Aircraft Type Rating Exemption expiry dates.

Aircraft documentation for training and reference purposes

F12 All appropriate Pilots Notes, Aircrew Manuals, ODM's plus any training notes or other aids must be easily accessible and available for all pilots.

Ground school technical record

F13 A record of all type conversion or continuation groundschool training and tests carried out.

Pilot flight training records

F14 Details of all flying training carried out including a post flight assessment by the instructor.

Pilot final handling test report

F15 Record of post conversion FHT including certification by Chief Pilot/Chief Instructor of pilot competency.

Further training report

F16 Details of any continuation training carried out. Can also include formation/aerobatic clearance and self authorisation approval.

Initial and Recurrent Training Records

F17 The operator should have a training folder for each pilot. The training folder should contain copies of any initial conversion training and recurrent training.

The recurrent training should include annual dual checks, Essential Knowledge Quizzes, Essential Training Requirements and recurrent ground training including safety equipment.

Pilot maintenance authorisation

F18 Clearance by the A8-23/24/25 approved organisation for the named pilot to carry out maintenance items outside the scope of pre and post flight checks such as air and oxygen charging, changing bulbs etc.

Documentation - other

F19 Recording of occasions when 250 KIAS was exceeded below FL100.

F20 Carriage of Passenger form.

Inspection of documentation - technical

F21 It will normally not be necessary to inspect all the documentation generated in any one year. Sample flights will be chosen at random to be fully investigated in terms of:

1. Was the aircraft serviceable and in check at the time of the flight?
2. Was the pilot competent and current to carry out the flight?
3. Was all post flight action fully carried out?

Inspection of documentation - pilots and training

F22 The organisation retains records of pilots' currency and training. This will vary in depth and content dependant on the complexity of the organisation, the scope of the OCM and the experience levels of the pilots. The information can be maintained in any agreed format including individual pilot folders or, where only experienced pilots are involved, on a comprehensive record board. Information on a cross-section of pilots will be inspected to ensure compliance with the OCM.

Maintenance arrangements

Airworthiness responsibility and co-ordination

F23 review of the Maintenance Agreement. Including liaison contact and defined engineering responsibilities. Do the arrangements actually work in practice?

F24 This may include a survey of the aircraft in service, i.e. ready to fly and not on maintenance.

Aircraft maintenance program

F25 Does the agreed maintenance program reflect the current usage and operation of the aircraft?

Aircraft documentation

F26 Copies of all appropriate aircraft documentation, Permit-to-Fly, Exemptions and Inspection Status must be easily accessible and available for all pilots.

Post inspection actions

Verbal debrief

F27 The management of the organisation will be given a verbal debrief on the major findings of the inspection visit prior to departure. Any significant non-conformities will be brought to the management's attention during this debrief with the indication that a written report will follow. Any good features will also be commented upon.

Follow-up action

Observations made and notified for information purpose only

F28 The CAA inspector will notify the organisation management of any observation he may have on the operation. Such observations are not non-conformities, and require no follow-up action.

Identified significant non-conformities

F29 Significant non-compliances will be brought to the attention of the organisation management in writing. A set period of time, dependent of the importance of the error, will be given to rectify the matter.

Identified serious non-conformities in need of immediate remedial action

F30 Consideration will be given to the agreement to the OCM until major or dangerous non-compliances are remedied. The management of the organisation will be given clear evidence, in writing, of the errors and the steps that are being considered will be confirmed. The management will be required to submit a written explanation of the circumstances leading to the failure to meet the OCM requirements and the measures they intend to put into place to rectify the problems.

F31 CAP632 operators will be required to address any audit findings to rectify the non-conformance(s) and to take actions to control any future repetition. Failure to take satisfactory action will affect the continued operation.

Annex 1 to Appendix F

Operational arrangements - check list

Operator: **EMA:**	**Date:** **Location:**	
Flight planning		
The operator must have a system for the supply and review of flight planning information and documentation for all pilots. The operator must have documentation specific to aircraft type, including aircrew manuals, pilot's notes, Permit-to-Fly. These must be available for the review of all pilots.	Meteorological information	
	Flight planning documents	
	Charts	
	AIC's / NOTAMS	
	Aircraft planning documentation	
	Comments:	
Pilot information		
The operator must have a system in place to be able to confirm a pilot's licence, personal details, currency, flight and daily maintenance authorisation status.	Licence and personal details	Pilot reviewed:
	Type currency	Dual check/ETR
	Operational currency	Air display or other
	Flight / maintenance Authorisations	
	Comments:	
Operation Control Manual (OCM)		
The operator must have a CAA agreed OCM which must be available to all pilots. A system must be in place to confirm that all pilots have read the OCM.	Agreed amendment state	OCM version:
	Signed by pilots	
	Comments:	

Technical log records		
The operator must have a Technical Log for each aircraft operated. Pilots should be given guidance on its completion.	Technical log	Sector 1: Sector 2:
	250 knot record	
	Carriage of passenger record	
	Comments:	
Pilot training - Convex		
The operator must have a CAA agreed training schedule. This must include a system for the recording of all pilot, ground and flight training, including results whether satisfactory or not.	Pre-entry requirements before training commences	
	Training schedule/syllabus	
	Training corrective actions where appropriate	
	Technical exams	
	Flight records	
	FHT report	
	Human factors training	
	Further training	
	Comments:	
Pilot training - Recurrent		
The operator must maintain detailed training records for any ground training, dual checks (on type or similar agreed type), Essential Knowledge Quizzes and Essential Training Requirements.	Recurrent Ground Training including Safety Equipment	
	Dual Checks	
	EKQ	
	ETR	

Record dual check outcomes and any required corrective action.	Comments:	
Continuing airworthiness arrangements		
The operator must have a Maintenance Agreement with an A8-23/24/25 organisation.	Point of contact with A8-23/24/25	Name & Position
	Maintenance agreement	Current-Yes/No
	Frequency of submitting auth sheet/flying hours to A8-23/24/25	At base Away from base
	Process for A8-23/24/25 to notify operator of next maintenance due-hrs/date/ldgs	
	Process for handling defects	At base Away from base
	Process for handling LTOs & MPDs	
	Comments:	
Safety Management Systems		
Development of a positive safety culture can be achieved in a number of ways, but that recommended by the CAA is the adoption of a Safety Management System (SMS). The SMS allows an operator to assess the approach to safety and the risks to which the operation is exposed.	Existence of an SMS	Yes/No Evidence of effectiveness

Annex 2 to Appendix F

Maintenance support arrangements - check list

<table>
<tr><td colspan="2">Operator:
EMA:</td><td colspan="2">Date/location:
Aircraft type: complex/intermediate/simple</td></tr>
<tr><td colspan="4">Airworthiness responsibility</td></tr>
<tr><td colspan="2" rowspan="5">The operator must hold copies of the pre-flight/daily check sheets reflecting the maintenance schedule. The operator will be required to record Operational and technical problems encountered and the measures taken to overcome them. The operator is responsible for ensuring the aircraft is in compliance with the maintenance program and mandatory permit directives.</td><td>Pre-flight checks</td><td></td></tr>
<tr><td>Daily checks</td><td></td></tr>
<tr><td>Defect rectification</td><td></td></tr>
<tr><td>Maintenance program</td><td></td></tr>
<tr><td>MPDs</td><td></td></tr>
<tr><td colspan="4">Comments:</td></tr>
<tr><td colspan="4">Airworthiness co-ordination</td></tr>
<tr><td colspan="2" rowspan="5">The Operator must hold appropriate approvals to maintain its own aircraft or have a contract with an approved BCAR A8-23/24/25 organisation, for which it is able to review the capability for the particular aircraft maintenance and continuing airworthiness (M5/E4) approvals. Qualification and terms of reference for the key personnel within the organisation should be detailed within the OCM. This contract must define each party’s responsibilities.</td><td>Maintenance liaison contact</td><td></td></tr>
<tr><td>Maintenance agreement</td><td></td></tr>
<tr><td>Operator capability to review maintenance standards</td><td></td></tr>
<tr><td>Key personnel terms of reference</td><td></td></tr>
<tr><td>Defined ops/eng. responsibilities</td><td></td></tr>
<tr><td colspan="4">Comments:</td></tr>
</table>

Aircraft maintenance program		
The operator must have the aircraft maintained to an agreed maintenance program	Check cycle	
	Program review	
	Program accepted by CAA	
Comments:		
Aircraft technical log		
The operator must have a technical log for each aircraft operated. Crews should be given guidance on its completion. Policy towards allowable deficiencies with associated flight limitations.	Format	
	Permit maintenance release	
	Deferred defects	
Comments:		
Maintenance records		
The operator must make arrangements to maintain the aircraft records including maintenance records, flying times, inspection status, exemptions, flight lest.	Aircraft records	
	Flying times	
	Permit-to-Fly (PMR)	
	Exemptions	
	Flight test (PFRC)	
Comments:		

APPENDIX G

SSAC Operations Manual

Contents

G1 An operator shall ensure that the SSAC Operations Manual contains the following:

General / basic

Administration and control of operations manual

1. Pilots signature sheet
2. Introduction
    a) A statement that the manual complies with all applicable regulations and with the terms and conditions of the SSAC Exemption.
    b) A statement that the manual contains operational instructions that are to be complied with by the relevant personnel.
    c) A list and brief description of the various parts, their contents, applicability and use.
    d) Explanations and definitions of terms and words needed for the use of the manual.
3. System of amendment and revision
    a) Details of the person(s) responsible for the issuance and insertion of amendments and revisions.
    b) A record of amendments and revisions with insertion dates and effective dates.
    c) Immediate amendment or revision in the interest of safety.
    d) A description of the system for the annotation of pages and their effective dates.
    e) A list of effective pages.
    f) Annotation of changes (on text pages and, as far as practicable, on charts and diagrams).
    g) Temporary revisions.

h) A description of the distribution system for the manuals, amendments and revisions.

Organisation and responsibilities

1. A description of the organisational structure including the general company organogram, subordination and reporting lines of all.
2. Nominated postholders. The name of each nominated postholder to include the Accountable Manager, Compliance Manager, Safety Manager, Chief Pilot and Continuing Airworthiness Manager.
3. Responsibilities and duties of operations management personnel. A description of the duties, responsibilities and authority of operations management personnel pertaining to the safety of flight operations and the compliance with the applicable regulations.
4. Authority, duties and responsibilities of the commander.
   A statement defining the authority, duties and responsibilities of the commander.

Operational control and supervision

1. Supervision of the operation by the operator. This must show how the safety of flight operations and the qualifications of personnel are supervised. In particular, the procedures related to the following items must be described:
   a) Licence and qualification validity;
   b) Competence of operations personnel; and
   c) Control, analysis and storage of records, flight documents, additional information and data.
2. System of promulgation of additional operational instructions and information.
   A description of any system for promulgating information which may be of an operational nature but is supplementary to that in the Operations Manual. The applicability of this information and the responsibilities for its promulgation must be included.
3. Accident prevention and flight safety programme. A description of the main aspects of the flight safety programme.
4. Powers of the Authority. A description of the powers of the Authority and guidance to staff on how to facilitate inspections by Authority personnel.

Compliance monitoring system

1. A description of the Compliance Monitoring System adopted including at least:

a) Responsibilities

b) Audit Procedures

c) Compliance Monitoring Programme

d) Compliance inspections and audits

e) Reporting system and processing of reports

f) Reporting forms and recording system

Safety management system

1. A system stating safety policy and objectives:

   a) Management commitment and responsibilities

   b) Safety accountabilities of managers

   c) Appointment of key safety personnel

   d) SMS implementation plan

   e) Coordination of emergency response planning

   f) Documentation

2. Safety Risk Management:
   a) Hazard identification process

   b) Risk assessment and mitigation process relevant to intended activity

3. Safety assurance:

   a) Safety performance monitoring and measurement

   b) The management of change

   c) Continuous improvement of the SMS

4. Safety promotion:

   a) Training and education

   b) Safety communication

Qualification requirements

A description of the required licence, rating(s), qualification/competency, experience, training, checking and recency for operations personnel to conduct their duties.

Crew health precautions

1. The relevant regulations and guidance to crew members concerning health including:
    a) Alcohol and other intoxicating liquor
    b) Narcotics
    c) Drugs
    d) Sleeping tablets
    e) Pharmaceutical preparations
    f) Immunisation
    g) Deep diving
    h) Blood donation
    i) Sleep and rest
    j) Surgical operations

Flight time limitations

1. Flight and duty time limitations and rest requirements.
2. A scheme including at least:
    a) Maximum duty period
    b) Maximum number of flights permitted within a duty period
    c) Days off requirement
    d) Duty to inform other operators of duty and flight time

Operating procedures

1. Procedures for:
    a) Establishing the minimum altitudes/flight levels for VFR flights; and
    b) Criteria and responsibilities for the authorisation of the use of aerodromes
    c) En-route operating minima for VFR Flights
    d) Instructions for route selection with respect to the availability of surfaces which permit a safe forced landing.
    e) Determination of the quantities of fuel and oil carried.

f) Mass and centre of gravity. Methods, procedures and responsibilities for preparation and acceptance of mass and centre of gravity calculations;

g) Operator's aeroplane technical log. The responsibilities and the use of the operator's aeroplane technical log must be described, including samples of the format used.

h) Procedures, aimed at achieving safety whilst the aeroplane is on the ramp

i) Recording of 250 KIAS exceedances

2. Procedures for the refusal of embarkation:

a) Procedures to ensure that persons who appear to be intoxicated or who are under the influence of drugs are refused embarkation.

b) Procedures to ensure that passengers who due to their physical or mental condition may present a hazard to the safety of the flight or to themselves are refused embarkation.

3. Flight procedures:

a) Policy and procedures for in-flight fuel management

b) Adverse and potentially hazardous atmospheric conditions. Procedures for operating in, and/or avoiding adverse and potentially hazardous atmospheric conditions.

4. Passenger briefing procedures:

a) Method of briefing of passengers advising them of the risks associated with the proposed activity.

b) Procedure for passengers consenting to that risk and recording of acceptance of the risk

c) Briefings with regard to use of safety equipment, normal and non-normal procedures associated with the intended activity

5. The establishment of a Minimum Equipment List and the process for authorising flight in accordance with the approved list.

Maintenance considerations

1. Proposed maintenance procedures in accordance with BCAR A8-23/24/25 with details of letters of agreement including details of the maintenance programme/schedule for higher aircraft utilisation and continuing aircraft maintenance oversight.

2. Method by which maintenance and operational areas will interface with particular reference to interchange of relevant information on aircraft status.
3. Policy for maintenance away from base. Refuelling unless straightforward. Responsibility for completion of technical logs. Process for recording and rectifying defects.
4. Pilot maintenance items including certification of training by the appropriate BCAR A8-23/24/25 approved organisation.

Handling, notifying and reporting occurrences

Procedures for the handling, notifying and reporting occurrences. This section must include:

a) Definitions of occurrences and of the relevant responsibilities of all persons involved

b) Reference to forms used for reporting all types of occurrences, instructions on how they are to be completed, the addresses to which they should be sent and the time allowed for this to be done;

c) In the event of an accident, descriptions of which company departments, Authorities and other organisations that have to be notified, how this will be done and in what sequence.

Aeroplane operating matters − type related

General information and units of measurement

General technical information on the aeroplane type to be operated. Identification of the reference documents to be utilised by crews for operational information and limitations.

Normal procedures

The normal procedures and duties assigned to the crew, the appropriate check-lists, and the system for use of the checklists.

Abnormal and emergency procedures

The abnormal and emergency procedures, the appropriate check-lists, the system for use of the check-lists. The following abnormal and emergency procedures and duties must be included:

a) Engine failure

b) Fire drills

c) System failures

d) Emergency landing/ditching

e) Aircraft abandonment

f) Distress communications and alerting ATC to emergencies

Performance

1. Take-off performance, including minimum take off field length.
2. Landing performance, including minimum field length.
3. Considerations affecting landing distance including surface condition and system failures.

Flight planning

1. The method for calculating fuel needed for the various stages of flight including minimum fuel states.

Mass and balance

Instructions and data for the calculation of the mass and balance including:

a) Standard loading plans

b) Information and instructions for completion of mass and balance documentation, including manual and computer, if required

c) Limiting masses and centre of gravity for the individual aeroplanes used by the operator

d) Dry operating mass and corresponding centre of gravity or index

Minimum equipment list

A minimum equipment list (MEL) taking account of the aeroplane type operated and the type(s)/area(s) of operation. The MEL must include the navigational equipment and take into account the required performance for the route and area of operation. The MEL (if applicable) must be agreed with the Chief Engineer.

Aeroplane systems

A description of the aeroplane systems, related controls and indications and operating instructions.

Route / aerodrome instructions and information

1. A list of approved operating locations.

2. A description of the aeronautical charts that must be carried on board in relation to the type of flight and the route to be flown, including the method to check their validity.
3. Procedures to access aeronautical information and weather information services.

Training

1. Training syllabi and checking programmes for all operations personnel assigned to operational duties in connection with the preparation and/or conduct of a flight.
2. Training syllabi and checking programmes must include:
   a) Procedures for training and checking
   b) A program of ground and periodic flight training and checking
   c) Pilot flight and technical training records
   d) Formation and aerobatic clearance
   e) Authorisation approvals