



# **CIVIL AVIATION PUBLICATION**

## **CAP 29**

### **PERMIT TO FLY**

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# CIVIL AVIATION PUBLICATIONS

## CAP 29

### PERMIT TO FLY

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### 1. INTRODUCTION

#### 1.1 General

Under the ICAO Convention a civil aircraft may not fly for the purpose of international flight unless there is in force a valid Certificate of Airworthiness (C of A) as issued by the Kingdom of Bahrain. When the aircraft is unable to comply with this requirement the CAA may issue a Flight Permit in accordance with the ANTR 21, Subpart P. The objective of this CAP is to provide guidance to Bahraini operators for making application for a Permit to Fly.

#### 1.2 Purposes

In accordance with ANTR 21, Subpart P, a Permit to Fly shall be issued to aircraft that do not meet, or have not been shown to meet, applicable airworthiness requirements but are capable of safe flight under defined conditions and for the following purposes:

- (1) Development; such as
  - testing of new aircraft or modifications
  - testing of new concepts of airframe, engine propeller and equipment;
  - testing of new operating techniques;
- (2) Showing compliance with regulations or certification specifications; such as
  - certification flight testing for type certification, supplemental type certificates, changes to type certificates or Technical Standard Order authorisation;
- (3) Exporting the aircraft;
  - Before the aircraft is registered in the State where the C of A will be issued.
- (4) Flying the aircraft for BCAA acceptance;
  - In the case of inspection flight test by the BCAA before the C of A is issued.
- (5) Flying the aircraft to a location where maintenance or airworthiness review are to be performed, or to a place of storage;
  - Ferry flights in cases where maintenance is not performed in accordance with approved programmes, where an AD has not been complied with where certain equipment outside the Master Minimum Equipment List (MMEL) is unserviceable or when the aircraft has sustained damage beyond the applicable limits.



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- (6) flying an aircraft at a weight in excess of its maximum certificated takeoff weight for flight beyond the normal range over water, or over land areas where adequate landing facilities or appropriate fuel is not available;
  - Oversees ferry flights with additional fuel capacity.
- (7) Flying aircraft meeting the applicable airworthiness requirements before conformity to the environmental requirements has been found;
  - Flying an aircraft which has been shown to comply with all applicable airworthiness requirements but not with environmental requirements.
- (8) To enable an aircraft to be flown to a place where the requirements for the reinstatement of a previously issued Bahrain C of A (which may have been revoked or suspended) can be complied with.

*Note: The above listing is not exhaustive and is of cases when a permit to fly MAY be issued; it does not mean that in the described cases a permit to fly MUST be issued. Other legal means may also be available.*

### 1.3 Eligibility

Any natural or legal person shall be eligible as an applicant for a permit to fly (owner/operator). A person eligible for an application for permit to fly is also eligible for application for the approval of the flight conditions.

As the holder of this permit will be responsible for ensuring that all the conditions and limitations associated with the permit to fly are continuously satisfied, the applicant for the permit should be a person or organisation suitable for assuming these responsibilities.

This would normally be the Accountable Manager or Quality Manager and any application should have been reviewed in accordance with the organisation's SMS

## 2. APPLICATION FOR PERMIT TO FLY

An application for a permit to fly shall be made to BCAA using form ALD/AIR/F036. To support the application, the organisation responsible for designing, modifying or maintaining the aircraft should recommend the approval of any flight conditions.

Each application for a permit to fly shall include:

- (a) The purpose(s) of the flight(s);
- (b) The ways in which the aircraft does not comply with the applicable airworthiness requirements;
- (c) The intended date of the flight;



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- (d) The planned stoppage points; and
- (e) Proposed flight conditions.

### 3. FLIGHT CONDITIONS

#### 3.1 General

Proposed flight conditions must be submitted by the applicant for BCAA acceptance. If the complete set of data is not available at the time of application, the missing elements can be provided later.

The flight conditions shall include:

- (a) the proposed flight conditions;
- (b) the documentation supporting these conditions; and
- (c) a declaration that the aircraft is capable of safe flight under the flight conditions.

*Note: Safe flight normally means continued safe flight and landing but in some limited cases (e.g. higher risk flight testing) it can mean that the aircraft is able to fly in a manner that will primarily ensure the safety of over flown third parties, the flight crew and, if applicable other occupants. The applicant should take reasonable care to minimise safety risks and to be satisfied that there is a reasonable probability that the aircraft will carry out the flight without damage or injury to the aircraft and its occupants or to other property or persons whether in the air or on the ground.*

#### 3.2 Flight Conditions

Flight conditions should include:

- (a) The configuration(s) for which the permit to fly is requested;
- (b) Any condition or restriction necessary for safe operation of the aircraft, including:
  - (1) The conditions or restrictions put on itineraries or airspace, or both, required for the flight(s);
  - (2) The conditions and restrictions put on the flight crew to fly the aircraft;
  - (3) The restrictions regarding carriage of persons other than flight crew;
  - (4) The operating limitations, specific procedures or technical conditions to be met;
  - (5) The specific flight test programme (if applicable);
  - (6) The specific continuing airworthiness arrangements including maintenance instructions and regime under which they will be performed.



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- (c) The substantiation that the aircraft is capable of safe flight under the conditions or restrictions of subparagraph (b);

*Note: The substantiations should include analysis, calculations, tests or other means used to determine under which conditions or restrictions the aircraft can perform safely a flight.*

- (d) The method used for the control of the aircraft configuration, in order to remain within the established conditions. The applicant should establish a method for the control of any change or repair made to the aircraft, for changes and repairs that do not invalidate the conditions established for the permit to fly. All other changes should be approved in accordance with ANTR 21.A.713 and when necessary a new permit to fly should be issued in accordance with ANTR 21.A.711.

### 4. SUPPORTING DOCUMENTATION

#### 4.1 General

In addition to the application with proposed flight conditions the operator must supply sufficient documentation to support the application.

- (a) The following items may be required:
- (1) Technical data to which the aircraft must perform (Flight Manual/MEL).
  - (2) Operational equipment necessary for safe operation of the aircraft.
  - (3) Aircraft weight limits.
  - (4) Fuel distribution limits.
  - (5) Centre of gravity limits.
  - (6) Aircraft manoeuvre limitations.
  - (7) Flight equipment usage limitations.
  - (8) Airspeed limits.
  - (9) Meteorological limits, including conditions to be avoided, inspections required should these conditions be encountered inadvertently, and weather minimums
- (b) Verification, to the degree possible, that the aircraft is capable of safe flight; Manufacture's no technical objection may be required.
- (c) Operator's Maintenance Exposition ensuring that the manual has the following procedures:





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- (1) Provisions for conveying the BCAA Permit, with any restrictions and conditions, to the operating crew.
- (2) A system for recording each flight conducted under the permit.
- (3) Procedures to determine that the proposed special flight complies with the ANTRs and is not prohibited by any Airworthiness Directive.
- (4) Procedures to allow additional crewmembers and other authorised persons to be carried aboard the aircraft during the flights when the aircraft flight characteristics have not been appreciably changed or its operation in flight substantially affected.
- (5) Procedures to ensure the display of the current airworthiness certificate and Permit.
- (6) Procedures to ensure the review of the manual data.

### **5. ONE ENGINE INOPERATIVE FLIGHT**

For one engine inoperative flights, the following should be considered:

- (a) The aircraft involved is a four engine aircraft or a turbine engine powered aircraft equipped with three engines.
- (b) The applicable aircraft has been previously test flown with one engine inoperative in accordance with its approved Aircraft Flight Manual.
- (c) The approved Aircraft Flight Manual must contain the following information;
  - (1) Maximum weight.
  - (2) Configuration of the inoperative propeller, if applicable.
  - (3) Runway length for takeoff, including temperature accountability.
  - (4) Altitude range.
  - (5) Certificate limitations.
  - (6) Ranges of operational limits.
  - (7) Performance information.
  - (8) Operating procedures.
- (d) The operator's manual must include the following information;



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- (1) A limitation ensuring that the operating weight on any flight is the minimum necessary with the necessary reserve fuel to land.
- (2) A limitation ensuring that takeoffs are made from dry runways unless, based on a showing of actual runway operating take-off techniques on wet runways with one engine inoperative, takeoffs with full controllability from wet runways have been approved for the specific model aircraft and included in the approved Aircraft Flight Manual.
- (3) Procedures for operation from airports in which the runways may require a takeoff or approach over populated areas.
- (4) Inspection procedures for determining the operating conditions of the operative engines.
- (5) A restriction that no person may take-off from an airport in which the initial climb is over thickly populated areas or weather conditions at the takeoff and destination airport are less than that required for Visual Flight Rules (VFR) flight.
- (6) Procedures that ensures carrying only essential flight crewmembers aboard the airplane during the flight.
- (7) Procedures that ensure flight crewmembers are thoroughly familiar with the operator's operating procedures and the approved Airplane Flight Manual for one engine inoperative flight.

### 6. FLIGHT AT EXCESS WEIGHT

For flying an aircraft at a weight in excess of its maximum certificated takeoff weight for flight beyond the normal range over water, or over land areas where adequate landing facilities or appropriate fuel is not available flights, the following must be considered

- (a) The excess weight that may be authorized for overweight operations should be limited to additional fuel, fuel carrying facilities, and navigational equipment necessary for the flight. It is recommended that the applicant discuss the proposed flight with the Type Certificate holder of the aircraft to determine the availability of technical data on the installation of additional fuel carrying facilities and/or navigational equipment.
- (b) In evaluating the installation of additional facilities, the design organisation must find that the changed aircraft is safe for operation. To assist in arriving at such a determination, the following questions are normally considered:
  - (1) Does the technical data include installation drawings, structural substantiating reports, weight, balance, new centre of gravity limits computations, and aircraft performance limitations in sufficient detail to allow a conformity inspection of the aircraft to be made?



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- (2) In what ways does the aircraft not comply with the applicable airworthiness requirements?
  - (3) Are the fuel tanks vented to the outside? Are all areas in which tanks are located ventilated to reduce fire, explosion, and toxicity hazards?
  - (4) Are the tanks even when empty strong enough to withstand the differential pressure at maximum operating altitude for a pressurized aircraft?
  - (5) Have means been provided for determining the fuel quantity in each tank prior to flight?
  - (6) Are shutoff valves, accessible to the pilot, provided for each additional tank to disconnect these tanks from the main fuel system?
  - (7) Are the additional fuel tank filler connections designed to prevent spillage within the aircraft during servicing?
  - (8) Is the engine oil supply and cooling adequate for the extended weight and range?
- (c) The following types of limitations may be necessary for safe operation of the aircraft:
- (1) Revised operational airspeeds for use in the overweight condition.
  - (2) Increased pilot skill requirements.
  - (3) A prescribed sequence for using fuel from various tanks as necessary to keep the aircraft within its centre of gravity range.
  - (4) Notification to the control tower of the overweight takeoff condition to permit use of a runway to minimize flight over congested areas.
  - (5) Avoidance of severe turbulence. If encountered, the aircraft should be inspected for damage as soon as possible.

*Note: Supporting documentation from the manufacturer should be obtained.*

## 7. ISSUE OF A PERMIT TO FLY

### 7.1 General

- (a) The BCAA may issue a permit to fly using form number ALD/AIR/F058 and/or by letter.
- (b) The permit to fly will specify the purpose(s) and any conditions and restrictions approved under the flight conditions approval.



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- (c) A Permit to Fly may be issued for a period not exceeding 7 calendar days.
- (d) A Permit to Fly is automatically invalidated once the aircraft reaches the stated destination.
- (e) The Permit to Fly, with any restrictions and Special Conditions, together with the;
  - (1) Flight Condition approval; and
  - (2) Certificate of Fitness for Flight;shall be issued in duplicate.

One copy shall be attached to the current Technical Log page in the aircraft and one copy kept with the operator's Quality Manager.

### 7.2 Restrictions

The following is a list of examples that may appear as restrictions attached to the Permit to Fly:

- (a) Required Crew Only, no passengers to be carried.
- (b) The aircraft shall not be flown for the purpose of public transport or aerial work.
- (c) The aircraft shall be flown under Visual Flight Rules
- (d) The aircraft shall be flown on Non ETOPS routes.
- (e) The aircraft shall be flown on Non RVSM routes.
- (f) The aircraft shall be flown un-pressurised below flight level \_\_\_\_\_.

### 7.3 Special Conditions

The following is a list of examples that may appear as conditions attached to the Permit to Fly:

- (a) The aircraft shall fly only for the purpose of enabling it to:
  - (1) qualify for the issue or renewal of a certificate of airworthiness or of the validation thereof or the approval of a modification of the aircraft, after an application has been made for such issue, renewal, validation or approval as the case may be; or
  - (2) proceed to or from a place at which any inspection, approval, test or weighing of, or the installation of equipment in, the aircraft is to take place for (*purpose*),



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after such an application has been made, or at which the installation of furnishings in, or the painting of, the aircraft is to be undertaken; or

- (3) proceed to or from a place at which the aircraft is to be or has been stored.
- (b) The aircraft and its engines shall be certified as fit for flight by the holder of an aircraft maintenance engineer's licence granted under the ANTRs, being a licence which entitles him to issue that certificate.

*Note: An example of the Certificate of Fitness for Flight form is shown at Appendix 1.*

- (c) The aircraft shall carry the minimum flight crew specified in any certificate of airworthiness or validation, which has previously been in force under the ANTRs in respect of the aircraft, or is or has previously been in force in respect of any other aircraft of identical design.
- (d) The flight crew shall have conducted approved training in any abnormal manoeuvre required for the operation within the previous 90 days. Abnormal manoeuvres may include;
- (a) one engine inoperative take-off, climb, approach, landing and missed approach for aircraft with 3 or more engines; or
- (b) Take-off and missed approach with gear locked down.
- (e) The aircraft shall not fly over any congested area of a city, town or settlement except to the extent that it is necessary to do so to take off from or land at a Government aerodrome or an aerodrome owned or managed by the Minister, or a licensed aerodrome, in accordance with normal aviation practice.
- (f) Flight shall be conducted in accordance with appropriate special conditions or limitations contained in the appropriate section of the Approved Maintenance Schedule and Aircraft Flight Manual.

*Note: A Permit to Fly cannot be issued when the Flight Manual (including supplements) does not contain the approval and corresponding data for the abnormal manoeuvre.*

- (g) The operator of an aircraft issued with a "Permit to Fly" on the basis that the aircraft does not meet the requirements of the Certificate of Airworthiness, shall obtain clearance from each State over flown.
- (h) The manuals, placards, listings, and instrument markings and other necessary information required by applicable certification specifications shall be presented in the English language.
- (i) A copy of the Flight Ferry Permit and Special Conditions shall be carried on board the aircraft when operating under its provisions.



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### **8. REQUIREMENTS ONCE PERMIT TO FLY IS ISSUED**

#### **8.1 Changes**

- (a) Any change that invalidates the flight conditions or associated substantiation established for the permit to fly shall be further approved by the BCAA.
- (b) A change affecting the content of the permit to fly requires the issuance of a new permit to fly.
- (c) Changes to the conditions or associated substantiations that are approved but do not affect the text on the permit to fly do not require issuance of a new permit to fly. In case a new application is necessary, the substantiation for approval of the flight conditions only needs to address the change.

#### **8.2 Transferability**

- (a) A permit to fly is not transferable.
- (b) Notwithstanding subparagraph (a) for a permit to fly issued for the purpose of for non-commercial flying activity on individual non-complex aircraft or types for which a certificate of airworthiness is not appropriate, where ownership of an aircraft has changed, the permit to fly shall be transferred together with the aircraft provided the aircraft remains on BCAA register.

#### **8.3 Inspections**

The holder of, or the applicant for, a permit to fly shall provide access to the aircraft concerned at the request of BCAA.

#### **8.4 Duration and continued validity**

A permit to fly shall be issued for period applied for, and shall remain valid subject to:

- (a) Compliance with the conditions and restrictions associated to the permit to fly;
- (b) The permit to fly not being surrendered or revoked;
- (c) The aircraft remaining on BCAA register.

#### **8.5 Extension of permit to fly**

Renewal of the permit to fly shall be processed as a change in accordance with Paragraph 5.1 above.



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### **8.6 Obligations of the Holder of a Permit to Fly**

The holder of a permit to fly shall ensure that all the conditions and restrictions associated with the permit to fly are satisfied and maintained.

### **8.7 Recordkeeping**

- (a) All documents produced to establish and justify the flight conditions shall be held by the holder of the permit, and shall be retained in order to provide the information necessary as and when requested by BCAA.
- (b) All documents associated to the issue of permits, including inspection records, documents supporting the approval of flight conditions and the permit to fly itself shall be held by the related approved organisation at the disposal of BCAA.

## **9. CHARGES**

Charges will be made for the cost of the investigation on a cost recovery basis. Additional charges will be incurred in respect of functions performed abroad as may be determined by the CAA.



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### APPENDIX 1

#### EXAMPLE OF CERTIFICATE OF FITNESS FOR FLIGHT

(Company Name, Logo, etc.)	<b>CERTIFICATE OF FITNESS FOR FLIGHT</b>				
<b>AIRCRAFT DETAILS</b>					
Type	Reg. No.	Tech Log Page:	Date		
<p>The CERTIFICATE OF FITNESS FOR FLIGHT is issued in accordance with the Bahrain Air Navigation Technical Regulations (ANTR 21, Subpart P).</p> <p>It is hereby certified that the aircraft defined hereon has been inspected and is fit for flight provided it is properly loaded.</p> <p>This Certificate is valid until _____, or until the airworthiness condition of the aircraft is altered, whichever is the earlier.</p>					
Signed		Airframe Authorisation No.			
Signed		Engine Authorisation No.			
Date		Time (GMT)		Bahrain CAA Permit to Fly Certificate No.	
<p>(1) <i>This Certificate shall be issued in duplicate (carbon copy).</i></p> <p>(2) <i>The original should be attached to the current Tech. Log page, and the copy retained elsewhere on the ground.</i></p>					



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