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1. PURPOSE

This Advisory Circular provides information and guidance material for the issuance of Special Flight Permit.

2. APPLICABILITY

This Advisory Circular (AC) is applicable to all owners/operators of aircraft registered in Ethiopia intending to operate an aircraft under a special flight permit.

3. REFERENCES

- ✓ ECARAS Part 5
- ✓ ICAO Document 9389, 8335
- ✓ ICAO Document 9760, Volume I Chapter 5.4
- ✓ Annex 8, Part II
- ✓ Airworthiness Hand Book
- ✓ ECAA FORM: AWS 018 Application form for Test or Ferry flight Permit
- ✓ ECAA Form: AWS002B Aircraft Status Report

4. GENERAL

- A. Special flight permits are issued for aircraft that currently may not meet applicable airworthiness requirements, but are capable of safe flight. A special flight permit is not an authorization to deviate from the requirements of ECARAS.
- B. The following general guidelines establish the working base for the regulatory oversight of special flight permits:
- (1) ECARAS Part 5.5.4.1.7 (a) (1), (2), (3), (4) applies to those aircraft that may not currently meet applicable airworthiness requirements and that will be operated for the following purposes:
 - (a) Flying to a base where repairs, modifications, maintenance, or inspections are to be performed, or to a point of storage;
 - (b) Testing after repairs, modifications, or maintenance have been performed;
 - (c) Delivering or exporting the aircraft;
 - (d) Evacuating aircraft from areas of impending danger;
 - (2) ECARAS Part 5. 5.4.1.7 (a) (5) applies to those aircraft that meet all the applicable airworthiness requirements except those that cannot be met because of an overweight condition. The aircraft is operating at mass in excess of the aircraft's maximum Certified Takeoff Mass for flight beyond normal range over water or land areas where adequate landing facilities or appropriate fuel is not available. The excess mass is limited to additional fuel, fuel-carrying facilities, and navigation equipment necessary for the flight. A special flight permit under the provisions of this regulation may be issued for any temporary non-commercial operation of an overweight aircraft.

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(3) ECARAS Part 5. 5.4.1.7 (b) applies only to holders of operating certificates issued under ECARAS Part 9 for aircraft operated and maintained under a continuous airworthiness maintenance program. The instructions for issuance of a Special flight permit with a continuing authorization are contained in Airworthiness hand book.

- C. A special flight permit allows operation of an aircraft outside Ethiopia territory, as long as the aircraft is operated for the intended purpose, and within the timeframe specified on the permit (normally for delivery or export purposes of the aircraft). The permit does not authorize flight over countries other than Ethiopian without permission of those countries;
- D. A special flight permit does not allow commercial operations of the aircraft.
- E. Flight tests for the purpose of completion of a maintenance action may be conducted by entering the requirement on to the aircraft flight and technical log. No special flight permit is required.
- F. If an Airworthiness Directives (AD) requires compliance before further flight and does not have a provision for issuance of a Special Flight Permit, the operation of the aircraft to which it applies would not be appropriate, and a Special Flight Permit must not be issued.
- G. A special flight permit should not be confused with a special flight authorisation, which allows operation of a foreign registered aircraft in Ethiopia that is operating on a special flight permit or special certificate of airworthiness issued by a Ethiopian Civil Aviation Authority (ECAA). This Circular does not deal with special flight authorisations.

5. APPLICATION REQUIREMENTS

- A. ECARAS Part 5, 5.4.1.2 (a) States that “Any registered owner of Ethiopia registered aircraft or agent of the owner, may apply for an airworthiness certificate for that aircraft”.
- B. The holder of a CoR (Certificate of Registration) is normally the person who has the custody and airworthiness control of the aircraft (otherwise defined as the “owner”).

6. STATUS OF THE SPECIAL FLIGHT PERMIT

6.1. DURATION

- A. A special flight permit is normally issued for a specific duration to allow for the prescribed flight or flights. The certificate will be in force for the specified period, or until cancelled, whichever occurs first.
- B. A special flight permit cannot be extended.

6.2. CANCELLATION/SUSPENSION

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- A. An authorised person or ECAA has the power to suspend or cancel a special flight permit by giving written notice to the permit holder if the approved person or ECAA considers it is necessary to do so in the interests of aviation safety. A suspension on a permit will be lifted on a date prescribed by the approved person or ECAA.

6.3. DISPLAY

- A. The aircraft operator must display, the current Airworthiness Certificate and the Special Flight Permit along with its operating limitations.
 B. An Ethiopian special flight permit must be made available to the pilot of the aircraft.

6.4. CONDITIONS AND LIMITATIONS

- A. Specific conditions and limitations pertaining to the permit operations are contained in the permit;
 B. There are a range of possible conditions, limitations, directions and combinations thereof which could be reflected in the permit. However the following limitations are considered to be essential in all flight authorizations:
- (1) A copy of the authorization should be displayed in the aircraft at all times when operating under the terms of the authorization;
 - (2) The registration marks assigned to the aircraft by the State of registry should be displayed on the aircraft in conformity with the requirement of ECARAS Part 4;
 - (3) Persons or property should not be carried for compensation or hire;
 - (4) No persons should not be carried in the aircraft unless that the person is essential to the purpose of the flight and has been advised of the contents of the authorization and the airworthiness status of the aircraft.
 - (5) The aircraft should be operated only by crew holding appropriate certificates or licences issued or validated by ECAA.
 - (6) All flights should be conducted in accordance with the applicable general operating rules of the states in or over which the operations are conducted;
 - (7) All flights should be conducted so as to avoid areas having heavy traffic or any other areas where flights might create hazardous exposure to person or property;
 - (8) All flights should be conducted within the performance operating limitations prescribed in the aeroplane flight manual and those additional limitations specified by the state of registry for that particular aircraft and

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- (9) All flights should be conducted prior the expiry date of the authorization.
 C. Other limitations are listed in appendix A.

7. AIRCRAFT INSPECTION

- A. It is responsibility of the Authority inspectors to determine whether or not inspections or tests are necessary to ensure that the aircraft is capable of safe flight for the intend purpose
- B. The Authority must make, or require the applicant to make, appropriate inspections or tests considered necessary for safe flight.
- C. The authority must personally inspect damaged aircraft or an aircraft for which the airworthiness is questionable in any respect.
- D. The airworthiness inspector may delegate inspection authority to an authorized person. When an inspection is performed under these conditions it must be recorded in the aircraft logbook by the person delegated the authority to conduct the inspection.
- E. When the AWI inspector requires the applicant to make the inspection, the applicant must be advised that such inspections must be:
- (1) Accomplished by an appropriately certificated maintenance technician or Approved Maintenance Organization familiar with all the procedures and requirements contained in this chapter; and
 - (2) Documented by an appropriate entry in the aircraft logbook by the authorized person who conducted the inspection.
- F. The AWI inspector should personally inspect damaged aircraft or an aircraft where the airworthiness is questionable in any respect.

8. SPECIAL OPERATING LIMITATIONS

- A. The Authority should establish limitations as deemed necessary for safe operation. Since individual circumstances may vary greatly, a list of limitations applicable in every case cannot be provided. The objective is to assure safe operation of the aircraft. If necessary, solicit the technical assistance of other inspectors or specialties. Limitations should be clear and concise so they can be easily understood. In addition to the limitations deemed necessary for the particular flight, the following items should be considered when establishing operating limitations:
- (1) Conformity to the aircraft's technical data.
 - (2) Operational equipment necessary for safe operation of the aircraft.
 - (3) Special crew member and pilot qualifications required. For flights which involve long distances where various weather conditions may be encountered, the pilot-in-command

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should also be appropriately instrument rated.

- (4) Aircraft weight limits.
- (5) Fuel and fuel distribution limits.
- (6) Center of gravity limits.
- (7) Manoeuvres to which the aircraft is limited.
- (8) Limits on usage of flight equipment, such as autopilots, etc.
- (9) Meteorological conditions to be avoided and the inspections required if inadvertently encountered.
- (10) Airspeed limits.
- (11) Operation in the overweight condition must be conducted to avoid cities, towns, villages, and congested areas, or any other areas where the flights might create hazardous exposure to persons or property.
- (12) Runway selections if considered necessary for safety.
- (13) Communications required with airport tower personnel to inform them prior to takeoff or landing of the non-standard condition of the aircraft. When flight over another country is planned, the inspector must emphasize to the applicant that special permission must be obtained from the country over which the aircraft will be operated.
- (14) Any other limitation that should be prescribed for the particular flight.

9. SPECIAL FLIGHT PERMIT FOR OVERWEIGHT OPERATIONS

- A. ECARAS Part 5.5.4.1.7(a) (5) applies to those aircraft that meet all the applicable airworthiness requirements except those that cannot be met because of an overweight condition.
- B. All installations, for example, a long-range fuel system or navigational equipment are changes to the aircraft's type design and must be installed in accordance with approved data. Where any installation is not carried out in accordance with approved data, before applying for a SFP, an exemption from the airworthiness and maintenance requirements should be sought.
- C. The installation(s) added to the aircraft for the intended overweight flight must be recorded in accordance with the regulations.

9.1. AUXILIARY FUEL SYSTEM INSTALLATIONS

- A. In the approval of the auxiliary fuel system installations by ECAA or an authorised person for the purpose of ECARAS, the following items should be considered:
 - (1) The aircraft and auxiliary fuel system must meet all applicable airworthiness requirements, except for those the aircraft cannot meet because of its overweight condition. The aircraft and auxiliary fuel system must be found safe for the intended flight.

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- (2) Fuel tank(s) installed in a pressurised area should be tested for the maximum pressure differential existing between cabin pressurisation and aircraft maximum operating altitude with fuel tank(s) empty.
- (3) Adequate ventilation must be provided for the fuel tank(s) and the area in which the fuel tank(s) are located to prevent the accumulation of fumes that would be detrimental to the flight crew or present a fire or explosion hazard.
- (4) A means must be provided to readily determine the quantity of fuel in the auxiliary tank(s) prior to takeoff. In addition, a means must be provided to indicate the quantity of fuel in tanks that have a vapour/excess fuel return line, both prior to takeoff and during flight.
- (5) The location of the fuel tank(s) in the aircraft is a major factor in determining that the aircraft is safe for flight because the added fuel and fuel facilities have the greatest effect on the aircraft's CG. In addition, the fuel system installation must not restrict entrance to or exit from the aircraft as provided by the applicable design standards and operational requirements.
- (6) Auxiliary fuel systems that are not complete, that is, not connected to the basic aircraft fuel system, may not be considered for issuance of a special flight permit.

9.2. ENGINE OIL QUANTITY

- A. The applicant must show that the oil supply provided for each engine is sufficient to ensure satisfactory cooling and system circulation for the duration of the flight. If deemed necessary, an oil transfer system for replenishing the engine oil while the aircraft is in flight must be provided.

9.3. MAXIMUM WEIGHT AND CENTRE OF GRAVITY LIMITS

- A. ECARAS Part 5. 5.4.1.7(a) (5) limits any excess weight over the certificated maximum weight to additional fuel, fuel carrying facilities, and navigational equipment added for the intended flight. It must be determined that this part of the maximum weight complies with this requirement.
- B. When numerous modifications are performed, it may be necessary to weigh the aircraft to establish the aircraft weight and the CG limits. The computations should be evaluated for accuracy. It also may be necessary to require flight testing at the new maximum weight and CG limits to determine that the aircraft is safe for operation.
- C. Operation of rotorcraft over the certificated maximum weight presents some unique conditions over and above those encountered with fixed-wing aircraft. Special attention should be given to this type of aircraft. A careful evaluation should be made to determine what effect the overweight operation may have on the retirement times of critical parts.

9.4. OPERATING LIMITATIONS

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- A. No temporary flight manual supplement is required, however, the SFP is to contain or refer to any operational or procedural information essential to the safe conduct of the flight:
- (1) overload weight and balance data necessary for safe loading of the aircraft
 - (2) capacity of the additional fuel tank(s), together with the necessary instructions regarding fuel usage and operation of the auxiliary system;
 - (3) such other normal or emergency procedures as may be necessary for safe operation in an overweight condition;
 - (4) performance information, including any variation in stalling and maximum permissible speeds;
 - (5) manoeuvres permitted; these will normally be limited to gentle turns; and
 - (6) where applicable, a prohibition against smoking; and

B. ECAA must be notified in writing within 2 days following the departure of the aircraft of the details of the maximum weight permitted and identifying details of the modifications and SFP. This notification will be placed on the ECAA Airworthiness aircraft file.

- C. Where the MTOW of the aircraft for flights exceeds 110% of the certificated MTOW the applicant will be expected to:
- (1) in addition to the above conditions , submit an engineering evaluation of the effects of the increased weight and any variation in centre of gravity position on the loads sustained by critical elements of the structure. This may necessitate the applicant working with the aircraft manufacturer to obtain the necessary data; and
 - (2) demonstrate by flight test, or other acceptable means, that the necessary performance capability is achieved and that the handling characteristics of the aircraft are satisfactory under overload conditions.

Note: If the type certificate holder of the aircraft or the NAA of the State of design supports the overweight operation, no further engineering evaluation is required.

10. PROCEDURES

A. Pre-application

- (1) Prior to application for a special flight permit, an authorised person shall perform an inspection of the aircraft; such inspection is required to solve issues associated with the capability of safe flight for the intended purpose.
- (2) Subsequent to this inspection and after consideration of all facts presented the authorized person then will decide on the conditions, limitations and/or directions which shall be applied.

B. Submit application

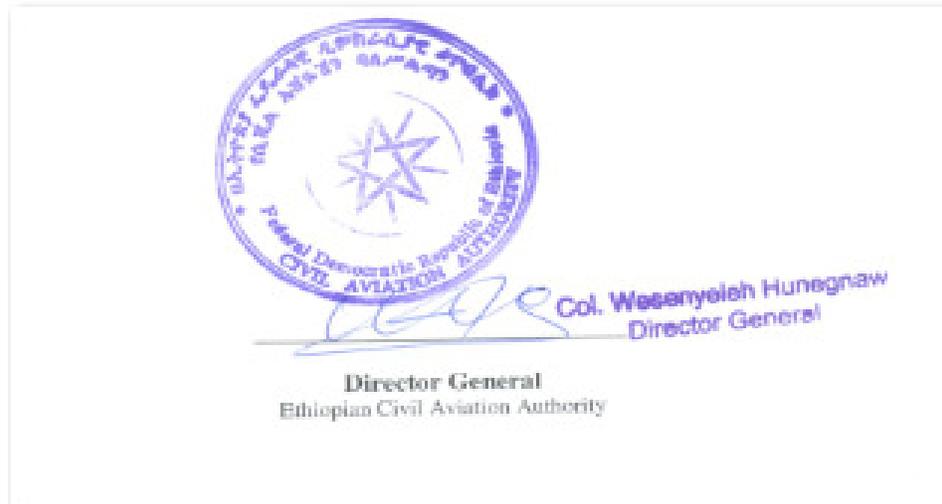
At the time of application for a special flight permit, the applicant must submit:

- (1) The application form ECAA FORM: AWS018 Application form for Test or Ferry Flight

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- (2) ECAA FORM: AWS02B Aircraft Status Report
- (3) A current copy of the Aircraft/Engine/Propeller/Applicable AD compliance status.
- (4) A copy of the last Aircraft Log Book entry, station that this aircraft has been inspected and is in a condition to fly/ferry and that applicable AD's have been complied with and or a listing of the AD's that have not been complied with, signed by an ECAA licensed Aviation Maintenance Technician (AMT) or ECAA Part 6 Approved Maintenance Organization
- (5) Any other information considered necessary for the purpose of prescribing operation limitations.
- (6) The fee provided for by law.



Approved