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CHAPTER 5 DEMONSTRATION (PROVING) FLIGHTS



DSA.AOC.CHKL.088, DSA.AOC.CHKL.130, DSA.AOC.CHKL.137

5.1 BACKGROUND AND OBJECTIVES

- **5.1.1** Refer to Volume I, 6.3.10 for how to determine whether or not demonstration flights will be required, and if such flights are required, their number and type. The plan for demonstration flights will have been prepared and approved by the CCAA during the document review phase of the certification process and is based on the CCAA assessment of the capabilities of the operational and maintenance systems established by the applicant. The following procedures outline how CCAA will implement the plan if demonstration flights are required.
- **5.1.2** A team leader will be assigned to lead the demonstration flight and shall be one of the inspectors from the review team. He shall be responsible for the conduct, coordination and evaluation of the test. The team shall as a minimum include flight operation(s) and airworthiness inspector(s).
- **5.1.3** The demonstration flights are designed to determine prior to the issuance of the AOC that the applicant is capable of operating and maintaining each aircraft type which he proposes to use in accordance with CCAA requirements. During these inspections, CCAA staff will observe and evaluate the in flight operations within the total operational environment of the air transportation system.

In the course of demonstration flights, paying passengers will not be carried. However, it is desirable for the applicant to have on board company officials who can make decisions and commitments on behalf of the applicant concerning actions to correct deficiencies.

5.1.4 The applicant and the CCAA inspectors shall plan well in advance for the conduct of the demonstration flights. All concerned must have a clear understanding and agreement as to what must be accomplished by the applicant to show compliance with the applicable operating regulations. General objectives for pre certification demonstration flights shall include the determination of the adequacy of:



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- a) in flight procedures laid down in the operations manual and compliance with those procedures;
- b) the facilities and equipment provided to the flight crew to conduct the flight safely and in accordance with regulations;
- c) the support provided by the operational control system to the flight crew;
- d) the general provision made for ground handling of the aircraft and assisting the flight crew to carry out their duties at all aerodromes utilized by the applicant along the routes; and
- e) en-route facilities.
- **5.1.5** Demonstration flights are operated exactly as though the applicant is conducting revenue operations. However, during the course of the flights the CCAA staff may introduce simulated situations which will require appropriate responses by crew members and ground personnel.
- **5.1.6** Provided that flights are conducted in accordance with the applicable commercial air transport regulations and air operator procedures, the types of flights that can be credited towards demonstration flight requirements are described in the following subparagraphs:
 - a) Representative en-route flights. Before an applicant may conduct these flights, the test team must be satisfied that the document review phase has been completed.
 - b) Positioning or delivery flights. Positioning or delivery flights approved by the CCAA may be credited towards demonstration flight requirements.
 - c) Training flights. With the approval of the CCAA training flights may be credited towards demonstration test requirements, provided that a CCAA inspector observes each flight.

5.2 SPECIFIC PROCEDURES

- **5.2.1** Well before the demonstration flights (during the pre-application phase of the certification process) the CCAA will have briefed the operator regarding the necessity for demonstration flights (if such flights are required), what must be accomplished and the areas which will be evaluated. Subsequently, during the document review phase the aircraft demonstration plan and schedule will have been submitted to the CCAA for approval.
- **5.2.2** Unsatisfactory conditions noted by the CCAA inspectors during any part of the demonstration inspection shall be brought to the attention of the applicant in writing for corrective action. The opportunity shall be provided for the applicant to remedy any



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deficiencies affecting the safety of the operation before any further flights are undertaken. All discrepancies and items of non-compliance need to be corrected or resolved, with acceptable records of the corrective actions taken being kept, to the satisfaction of the CCAA certification team prior to the inauguration of commercial service. Some examples of deficiencies requiring corrective action are:

- a) flight crew member not properly trained, e.g. Assistance from applicant supervisors or a CCAA inspector required;
- b) flight crew member not familiar with aircraft, systems, procedures or performance;
- c) cabin crew member not properly trained in emergency evacuation procedures or in the use of emergency equipment or not familiar with the location of that equipment;
- d) numerous aircraft deficiencies and/or system malfunctions;
- e) inadequate mass and balance or load control;
- f) unsatisfactory operational control, e.g. improper flight planning and maintenance release procedures;
- g) unacceptable maintenance procedures or practices; and/or
- h) improper aircraft servicing and ground handling procedures.

5.2.3 After the demonstration flights are completed, the operator will be provided with a detailed de-briefing and will be informed whether or not his overall performance was satisfactory or unsatisfactory. This will be followed with a letter detailing the same information.

5.3 EVALUATION AND REPORTING

The routine portion of the applicant's operational performance during the demonstration flights will be evaluated using the Inflight Cockpit Inspection Checklist form DSA.AOC.CHKL.088 along with the criteria contained in Volume II, Chapter 13 of this manual; the Inflight Cabin Inspection Checklist form DSA.AOC.CHKL.137 along with criteria contained in Volume II, Chapter 14; and the Station Facility Inspection Checklist form DSA.AOC.CHKL.130 along with the criteria contained in Volume II, Chapter 12 (as applicable).



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CHAPTER 6 CONTINUING SAFETY OVERSIGHT — SURVEILLANCE

DSA.AOC.CHKL.000, DSA.AOC.CHKL.001, DSA.AOC.CHKL.002, DSA.AOC.CHKL.003, DSA.AOC.CHKL.004, DSA.AOC.CHKL.005, DSA.AOC.CHKL.006, DSA.AOC.CHKL.007

6.1 GENERAL

- **6.1.1** Continuing safety oversight of the air operator by CCAA is an on-going component of the certification system. It is essential to ensure that the required standard of operation is maintained in order to provide a safe and reliable commercial air transport service to the public.
- **6.1.2** Under "Arrêté N°0001541/MINT du 15 novembre 2006 relatif aux missions et prérogatives des inspecteurs et contrôleurs de la sécurité aéronautique", CCAA inspectors have the authority and responsibility for exercising continuing safety oversight of commercial air transport operations to ensure that accepted safety practices and approved procedures for the promotion of safety in operations are maintained. To achieve this objective, the CCAA establishes an annual risk-based surveillance plan for continuously monitoring operations conducted by each operator. Such surveillance may result in the revision of operations specifications, the temporary suspension of an AOC or the revocation of an AOC.
- **6.1.3** Required surveillance and the related inspections are planned by Heads of Offices, validated by the director of Aviation Safety and submitted to the General Manager for approval. The surveillance is conducted by inspectors responsible for the standard of conduct of a specific operator's operation. All inspectors authorized to conduct safety oversight will be in possession of credentials identifying them as inspectors appointed by the CCAA. The credentials identify the legislation under which they are empowered to inspect. In addition, each credential has an expiry date and a current photo of the inspector.

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6.1.4 Surveillance is conducted on a continuous basis, and includes regular and random inspections of all aspects of the operation. The areas covered in the surveillance activities over a period of time are the same as those examined during the original certification process. The areas examined include at least a re-evaluation of the operator's organization, management effectiveness and control, facilities, equipment, ground handling, aircraft maintenance, operational control and supervision, flight and duty time records, maintenance of flight and cabin crew standards, passenger and cargo safety procedures, dangerous goods procedures, operational and personnel records, training, company manuals, financial viability and record of compliance with the provisions of the AOC, the associated operations specifications and pertinent operating regulations.

6.1.5 All safety oversight activity with respect to a particular operator are risk-based and carefully planned as it is not possible to cover all aspects of an operation during every inspection. Inspections are also planned on the basis of a risk assessment exercise so that aspects of the operation that involve the greatest risk receive more frequent attention. Where an air operator has established a Safety Management System (SMS) that has been assessed as effective and is achieving the agreed to performance measures, then safety oversight activities for that air operator may be reduced in some areas, while refocusing on verification of the assumptions made with respect to the performance of the SMS.

6.2 SURVEILLANCE PROGRAMME

6.2.1 In the first few months of a new operation, CCAA inspectors shall be particularly alert to any irregular procedures, evidence of inadequate facilities or equipment, or indications that management control of the operation may be ineffective. They shall also carefully examine any information that may indicate a significant deterioration in the operator's financial condition. Examples of trends which may indicate problems in an operator's financial condition are:

- a) significant lay-offs or turnover of personnel;
- b) delays in paying salaries;
- c) increase in the incident/accident rate;
- d) decreasing standards of training;
- e) withdrawal of credit by suppliers;



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- f) inadequate maintenance of aircraft, as indicated by inspectors' maintenance findings, increases in the number of grounded aircraft events, uses of MEL/CDL, maintenance related flight delays, etc.;
- g) shortage of supplies and spare parts;
- h) curtailment or reduced frequency of revenue flights; and
- i) sale or repossession of aircraft or other major equipment items.
- **6.2.2** During the certification process, the CCAA inspector will have determined the methods, systems or procedures that the operator intended to use to ensure compliance with the applicable regulations, the AOC and its associated operations specifications and the operator's operations manual. A prime objective of the surveillance programme is to confirm that such methods, systems or procedures are being followed and are effective in the demonstration of operator compliance and achievement of safety objectives.
- **6.2.3** Aircraft leases and contractual arrangements entered into by the operator for training, etc. need to be thoroughly reviewed and a determination made of whether these arrangements are producing satisfactory results as far as the maintenance of safety standards and regulatory compliance are concerned.
- **6.2.4** The operator's training programme must be closely monitored during oversight to ensure that the training standards, which were demonstrated when the programme was initially approved, are being maintained. If there are indications that the training provided is not achieving the desired training objectives, or has resulted in a high failure rate on various tests or examinations, [State CAA inspectors] need to make certain that the operator revises the training programme to ensure that trainees will reach the required level of competence.
- **6.2.5** The performance of flight crew authorized as designated examiners needs to be observed and evaluated during the course of the surveillance programme. This evaluation should be conducted, where possible, by an inspector familiar with the specific type of aircraft utilized by the operator. The procedures for the approval and surveillance of designated examiners are contained in Chapter 18 of Volume II.
- **6.2.6** The oversight function will be accomplished on a continuing basis, planned and performed at specified times or intervals. Evaluate all significant aspects of the operator's procedures and practices and ensure that the inspections are commensurate with the scale and scope of the operator's activities.



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6.3 PLANNING AND EXECUTING THE SURVEILLANCE PROGRAMME

6.3.1 For surveillance plans to be effective, they must be carefully planned and executed. Four phases are utilized for planning and executing a surveillance plan:

- Phase One. Developing a risk-based surveillance plan by determining the types of inspections necessary and the frequency of those inspections;
- Phase Two. Accomplishing the surveillance plan by conducting the inspections;
 Phase Three. Analyzing surveillance data gathered from inspection reports and related information from other sources; and
- Phase Four. Resolution of safety deficiencies.

6.3.1.1 Phase One – Developing a risk-based surveillance plan. Responsibility for the development of the annual operations surveillance plan rests with the Heads of Service under the supervision of the Director of Aviation Safety. The surveillance plan shall recognize the need to conduct routine and ongoing surveillance and shall anticipate the possibility of special emphasis surveillance as a result of newly promulgated requirements, results of previous oversight activities or certain risk indicators such as accidents, incidents, repeated violations of regulations and evidence of financial problems. When planning a surveillance plan, the the Heads of Service under the supervision of the Director of Aviation Safety must identify the plan objectives, evaluate the resources available and determine the specific types and numbers of inspections to be conducted in support of that plan. The numbers of inspections will be established taking into consideration the current operating environment which the CCAA oversees, such as number of aircraft and variety of aircraft types, number of crew members, routes, number and geographic location of transit stations, the volume of training being conducted an the assessment of risk as mentioned above .An operator's history of compliance with regulations and cooperation with the inspectorate may also be considered when developing a surveillance plan. In summary, the aspects of the operation or operator that involve the greatest risk will receive more frequent attention.



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6.3.1.2 Phase Two — Conducting surveillance plan inspections. During the conduct of the surveillance plan inspections, accurate and qualitative inspection reporting is essential. The quality and standardization of inspection reporting requires the use of the inspection checklists and report forms contained in this manual. These checklists and forms are not the only options that can be used and they may also be tailored to the particular inspection being conducted.

6.3.1.3 Phase Three – Analyzing surveillance data. When deficiencies are observed in the course of the safety oversight plan for a particular operator, the cause shall be determined, a corrective action plan developed by the operator, prompt action taken to rectify the deficiency and appropriate follow-up initiated to determine the effectiveness of the corrective action. Additional inspections shall be planned and conducted whenever problems in particular areas are repeated. Evaluation of inspection results is a key phase of any surveillance plan. The primary purpose of evaluating surveillance data is to identify trends as well as deficiencies which are not associated with an apparent trend. This evaluation of inspection results is also important in terms of redefining and implementing subsequent surveillance objectives and inspection activity. Additionally, other related information from incidents, accidents, enforcement actions and other sources may provide valuable trend information which may relate to the operator's safety and compliance status. For each air operator, summary information collected under the surveillance plan will be gathered and maintained current. In coordination with other departments such as airworthiness and personnel licensing departments, the [Flight Standards manager or as applicable] will evaluate the surveillance data on a quarterly basis and amend the surveillance plan as required.

6.3.1.4 Phase Four — Resolution of safety deficiencies. The Heads of Service under the supervision of the Director of Aviation Safety must use good judgment when determining the most effective course of action to be taken as a result of unsatisfactory inspection findings. The appropriate course of action often depends on many factors. Various options which may be considered are: informal discussion with the operator; formal written request for corrective action; withdrawal of CCAA approval for a programme, manual or document; and initiation of an investigation leading to formal enforcement action. The corrective actions which an operator takes independently of the CCAA should be taken into account. The process for resolving safety deficiencies should be defined and documented, including timelines for the response by the operator.



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6.3.2 Should the safety oversight programme and related inspection reports reveal that an operator has failed to meet or is unable to meet or maintain the required standards for certification or the conditions specified in the AOC and its associated operations specifications, the CCAA inspector responsible for that air operator is to advise the operator of the deficiency observed and the air operator will be responsible to develop a corrective action plan which will normally be required within 30 days. If an operator does not correct a deficiency as required, the [Flight Standards manager or as applicable] shall inform the DGCA and, if necessary, make a recommendation that the AOC and its associated operations specifications be restricted, temporarily suspended or permanently revoked. When an AOC is suspended or revoked for any reason, the operator is required to promptly return the AOC to the CCAA.

6.3.3 While the surveillance programme will be adjusted based on an assessment of risk as outlined above, the minimum numbers of the various types of inspections contained in this Manual which should be accomplished are outlined below. Taking into account inspector resources and the demand for certification activities, additional inspections will be completed in areas of higher risk.

- **6.3.3.1** Manual inspections. A complete review of the operations manual, training manual, MEL, cabin crew manual, flight dispatch manual and other related manuals shall be accomplished once every two years.
- **6.3.3.2** Main base audit to include inspections of operations control, trip records, flight and duty time records, qualification and training records to be conducted at least every year.
- **6.3.3.3** An assessment of an air operators SMS shall be conducted every year.
- **6.3.3.4** For each air operator each training course will be observed over a period of two years and will be combined with an inspection of the training facility and training devices (as applicable).

Note.— Sampling of a portion of the course is satisfactory.

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