

ENG 1.4.006	 <b>CAAI</b>	<b>ENG Handbook</b>
<b>Procedure Name:</b>		Revision 1
<b>Ground Tests Approval</b>		29 MAY 2017

## 1. OBJECTIVE

The objectives of this procedure are to specify CAAI procedures for the following:

- 1.1. Approval of certification ground test plans and test reports,
- 1.2. Witnessing of certification ground tests.

## 2. GENERAL

- 2.1. According to Regulation 15 of the Air Navigation Regulations (Procedures for Documentation of Aircraft and Aircraft Parts), 1977, an applicant for Type Certificate must allow the CAAI access to ground tests planned, either for the purpose of proving compliance with the required regulations or conformity of manufactured articles to their approved design. Regulation 40 of the same imposes the same requirement for the applicant of a supplemental Type Certificate (STC).
- 2.2. For the purpose of this procedure, "ground tests" include the following:
  - 2.2.1. Static ground tests;
  - 2.2.2. Dynamic ground tests;
  - 2.2.3. Damage tolerance tests;
  - 2.2.4. Qualification procedure approval - system/components;
  - 2.2.5. Full scale tests;
  - 2.2.6. Aircraft system tests.
- 2.3. CAAI approval of ground tests includes the following:
  - 2.3.1. Approval of the proposed Master Test Plan and each individual test program;
  - 2.3.2. Witnessing of each ground test; and
  - 2.3.3. Approval of the final test report documents.
- 2.4. **Notes:**
  - 2.4.1. As a rule, tests shall be witnessed by CAAI Engineering Department Employees. However, at its discretion, CAAI may delegate "designees" for the purpose of ground test witnessing.
  - 2.4.2. Each applicant must submit a Statement of Conformity or a CAAI approved equivalent form (CAAI Form 8130-9) for each tested aircraft, part, assembly or system.
  - 2.4.3. Each test article must be approved by CAAI, and each test article must be inspected for conformity in

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accordance with the relevant procedures of the Manufacturing Department.

- 2.4.4. All test articles having been subjected to testing beyond "limit loads" or any other excess loads shall not be used as structural members in an aircraft, and must be marked accordingly.

### **3. Reference Materials & Forms**

3.1. Reference Materials:

- 3.1.1. Regulation 15 of the Air Navigation Regulations (Procedures for Documentation of Aircraft and Aircraft Parts), 1977;

3.2. Forms:

- 3.2.1. CAAI Form 8120-10 - Request for witnessing a test;  
3.2.2. CAAI Form 8130-9 - Statement of Conformity;  
3.2.3. CAAI Form 8100-1 - Conformity Inspection Record.

### **4. METHOD**

4.1. **Approval of the Applicant's Proposed Test Plan**

- 4.1.1. The certification applicant must submit a proposed "Master Test Plan" for CAAI approval.
- 4.1.2. As a minimum, the following items should be included in the test plan:
- 4.1.2.1 A description of the item(s) to be tested;
  - 4.1.2.2 A list of all test equipment necessary to conduct the test;
  - 4.1.2.3 A description of the equipment calibration procedures performed prior to executing the test;
  - 4.1.2.4 A description of how the test setup's conformity with the approved test plan will be demonstrated prior to the test; and
  - 4.1.2.5 A test procedure written in a step-by-step format.
- 4.1.3. Upon receipt of the Proposed Master Test Plan, the CAAI Engineering Department will review the plan and determine which of the tests will be witnessed by CAAI employees, and which may be witnessed by CAAI designees. Major components and critical article sections will be witnessed by CAAI employees only. Such tests may not be delegated.
- 4.1.4. The applicant will be informed accordingly.

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#### 4.2. Coordination of Witnessing Ground Tests

- 4.2.1. A request for test witnessing (CAAI Form 8120-10), along with its relevant test program, must be submitted to the CAAI Engineering Department at least 60 days prior to the planned test date.
- 4.2.2. CAAI will strive to approve the test program at least 14 days prior to the planned test date.
- 4.2.3. CAAI will coordinate a timetable with the applicant for witnessing each test.
- 4.2.4. As aforementioned, CAAI will notify the applicant of which tests will be witnessed by CAAI employees, and which will be delegated for witnessing by designees.
- 4.2.1. At locations outside of Israel where CAAI inspectors cannot be available for the required witnessing of a test, CAAI will approach the local relevant foreign authority and request assistance witnessing such tests. Such witnessing will be performed when covered by a documented agreement between the two authorities.
- 4.2.2. CAAI will review and approve each individual test program.
- 4.2.3. Any change in a test program, test specimen or any test equipment must be approved by CAAI prior to performing the test.

#### 4.3. Approval of the Ground Test and Test Report

**Note:** CAAI inspectors or designees witnessing a test should be familiar with the approved test program prior to inspection of the test setup.

- 4.3.1. Any CAAI inspector or designee, having witnessed a test, will issue a Conformity Inspection Record (CAAI Form 8100-1) that includes at least the following information:
  - 4.3.1.1 A description of the test;
  - 4.3.1.2 A description of the results obtained;
  - 4.3.1.3 Any pertinent decisions reached; and
  - 4.3.1.4 Any recommendations made to the applicant (if applicable).
- 4.3.2. Questionable items must be recorded and immediately made known to the representative of the applicant.

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## 5. Outcome

- 5.1. Test result reports submitted by the applicant will be approved by CAAI, on a CAAI Document Approval Status Report (DASR).
- 5.2. A signed DASR will be forwarded to the applicant and a copy retained by the CAAI.