

ENG 1.4.013	 CAAI	ENG Handbook
Engineering Evaluation of Data and Tests		Revision 0
		15 JAN 2014

1. OBJECTIVE

The objectives of this procedure are to outline:

- 1.1. The engineering data that requires approval by CAAI.
- 1.2. The extent of the data evaluation required for compliance finding.
- 1.3. Designees' participation in the certification project - principles of performance and supervision.

2. GENERAL

- 2.1. CAAI assumes complete responsibility for compliance findings and conformity approval of parts and assemblies.
- 2.2. This procedure refers to compliance finding of engineering data and reports, and analysis of engineering drawings.
- 2.3. Design engineering data requiring CAAI approval is all information, including dimensions, tolerances, materials, processes and procedures, necessary to define all characteristics of an airworthy part.

2.4.

It specifically includes:

- 2.4.1. Drawings and specifications, and listings of those drawings and specifications, necessary to define the configuration and design features of the product shown to comply with the requirements of the regulations applicable to that product.
- 2.4.2. Information on dimensions, materials and processes necessary to define the structural strength of the product.
- 2.4.3. The Airworthiness Limitations Section of the Instructions for Continued Airworthiness as required by CAAI Procedure ENG 1.4.012.
- 2.4.4. Data which the CAAI has found to meet the applicable requirements of the Air Navigation Regulations.
- 2.5. The data may include tooling requirements, process sheets, material handling/storage requirements and inspection criteria.
- 2.6. Manufacturing processes can be included in the CAAI's approved design data.
- 2.7. CAAI approved design data also includes other design data included as part of a CAAI-approved Type Certificate Supplemental Type Certificate (STC), PMA, Technical Standard

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Order Authorization (ITSOA), major repairs or major alterations that are approved by the CAAI.

- 2.8. CAAI appointed designees (DERs) participating in compliance finding of engineering data, will act under the supervision, and in coordination with CAAI project engineers, and in accordance with their delegated functions, as noted in their certificate of authority.

NOTE: Data must be presented for CAAI approval in the Hebrew or the English languages, as determined by the CAAI.

3. Reference Material & Forms

3.1. Reference:

- 3.1.1. Chapters 2 to 5 of the Israeli Air Navigation Regulations (Procedures for Documentation of Aircraft and Aircraft Parts), 1977.
- 3.1.2. Israeli Air Navigation Regulations (CAA Representatives), 1981.
- 3.1.3. CAAI Procedure ENG 1.4.011 – CAA Representatives (Designees).
- 3.1.4. CAAI Procedure ENG 1.4.012 – Continued Airworthiness.
- 3.1.5. CAAI Procedure ENG 1.4.020 – Designated Engineering Representative Authority, Duties and Responsibilities.
- 3.1.6. CAAI Procedure ENG 1.4.029 – Type Certification.

3.2. Forms:

- 3.1.1 CAAI Form 8110-3 – Statement of Compliance.

4. Process

- 4.1. CAAI Engineering Department is responsible for approval of detailed design data and characteristics of completed aircraft and systems.
- 4.2. CAAI's evaluation and compliance finding will be performed to drawings and technical documents presented for approval.
- 4.3. Evaluation of Data.
 - 4.3.1. The data to be evaluated is the data listed in the approved Compliance Checklist (CCL) and includes all substantiation documents pertinent to all applicable regulations, as stated in the certification basis, paragraph by paragraph, and system by system where the paragraph relates to more than one system, and their

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means of compliance (See CAAI Procedure ENG 1.4.029).

- 4.3.2. CAAI Engineering Department will review and approve the documents, or will delegate their approval to Designated Engineering Representatives. The emphasis in the substantiation documents approval should be on compliance with the applicable regulations.
- 4.3.3. The substantiation documents include but are not limited to:
 - 4.3.3.1 Drawings;
 - 4.3.3.2 Materials and process specifications;
 - 4.3.3.3 Analyses (e.g. stress, safety, damage tolerance);
 - 4.3.3.4 Test plans (including test setup schematics, test instrumentation, etc.) and test result reports;
 - 4.3.3.5 Instructions for continuous airworthiness;
 - 4.3.3.6 Manuals (e.g. flight manual, weight and balance manual).

4.4. CAAI Appointed Designees

- 4.4.1. CAAI appointed designees participating in evaluation of data and tests may perform their tasks only in accordance with their delegated authorities and in coordination with the CAAI's project engineers (refer to CAAI Procedures ENG 1.4.011, 1.4.019 and 1.4.020).

5. Task Outcome – Data Approval

5.1. Technical Substantiation Reports

- 5.1.1. Approval of technical substantiation reports, reviewed by CAAI engineers, shall be accomplished by executing a CAAI Document Approval Status Report (DASR).
- 5.1.2. CAAI DER reviewing and approving a technical substantiation report shall execute a CAAI Form 8110-3 - Statement of Compliance, and forward that form to the CAAI project manager for review and evaluation. The CAAI Project Manager, upon satisfactory review of the DER's completed 8110-3 Form, will execute a CAAI DASR.

5.2. Drawings and Engineering Orders

- 5.2.1. Approval of engineering design drawings \ engineering orders which have been reviewed for compliance by CAAI engineers are evidenced by the approval of the final drawing list.

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- 5.2.2. CAAI DERs reviewing and approving engineering design drawings \ engineering orders shall execute CAAI Form 8110-3 - Statement of Compliance, and forward them to the CAAI Project Manager for review and record keeping.