European Union Aviation Safety Agency

Execution of ground tests for compliance showing in a Minor Change Application

How can I perform a ground test for showing of compliance (using “not yet approved” design data) in a Minor Change Application?

Answer

Preliminary remark: This FAQ is aimed to provide guidance on how to perform a ground test for a minor change application (Example: a minor change for the installation of a radio or transponder), and how the actions between the MC applicant and the installer shall be shared. **IMPORTANT**: the following is valid only in cases where the ground test is needed to prove that the design change complies with the certification requirements. In many cases the ground tests are “post-installation tests” to check functionality and conformity for the release of the installation. In such cases the instructions below are not needed since the test would be done based on already approved data.

The following definitions and abbreviations will be used (limited to the scope of this FAQ):

- **MC**: minor change;
- **MC Applicant**: the Applicant (organisation or person) to EASA for the minor change approval and the owner of the design data that will be approved with the minor change;
- **Installer**: The organisation/person that will perform the modification of the aeroplane according to the MC design data and will release to service the aeroplane (note: According to part M.A.801 of EU regulation 1321/2014, this can be in some cases a person: certifying staff or the pilot owner). It is acknowledged that in most of the cases the MC applicant and the Installer are the same entity;
- **Certified aircraft**: the **aircraft** that is used for the ground test. Typically this is an aeroplane with its own CofA (Certificate of Airworthiness) that will be modified with the MC design data.

In cases, a certified aircraft is modified and used for the ground test to show compliance to the airworthiness requirements, the following shall be considered:

- **Test plan**: The MC applicant shall issue a test plan;
- **Design data**: the certified aircraft shall be modified using design data (drawing, specifications, procedures) provided by the MC applicant clearly identifiable as “not approved data”. **IMPORTANT:** Any instruction shall contain a statement like: *“The approval status of*

the technical content of this document is limited to demonstration of compliance purposes only. Final approval is pending the approval of EASA minor change Project Nr. XXX. The aircraft shall not be released to flight before evidence of final approval is provided";

- **Aircraft modification**: the installer modifies the aircraft using the design data provided by the MC applicant. The installer shall report all discrepancies (if any) to the MC applicant;
- **Tests Configuration**: The installer prepares the aircraft and the test equipment for test configuration. The conformity to the configuration required for tests should be checked together with the MC applicant;
- **Test execution**: The installer (or the MC applicant) performs the test and provides the test results. Tests can be also performed by a third party. Ultimately, it is the responsibility of the MC applicant to check the correctness of the test execution;
- **Approval of modification**: after test results have been received and accepted, and the rest of the compliance documents are also accepted, the approval is issued by EASA. Following issue of the approval, the MC applicant provides the installer with the final set of design data (in most cases they will be the same as the ones provided for test execution, but it could happen that the final set of design data provided for modification needs to be changed, in which case the installer shall be informed accordingly) and remove/replace the initial statement with the following statement: *"the technical content of this document is approved with EASA approval XXXX).*
- **Flight tests for development** / **compliance demonstration**: the above bullets can be considered in principle also for flight tests, with the difference that in this case, a Permit to Fly will be needed and corresponding rules of Part-21 Subpart P shall be followed.

A similar topic is treated in EASA document "GOOD PRACTICES - First Installation of a Change to a Product" for DOA installing STC.

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Link:

https://www.easa.europa.eu/en/faq/20471