Proposed Temporary Deviation to CS 25.1302(b) on "Presentation of Engine Parameters on Universal 5 Panel EFIS"

Applicable to BAE Systems ATP

Introductory Note:

The hereby presented Deviation to the EASA Certification Basis shall be subject to public consultation, in accordance with EASA Management Board decision 12/2007 dated 11 September 2007, Article 3 (2.) of which states:

"2. Deviations from the applicable airworthiness codes, environmental protection certification specifications and/or acceptable means of compliance with Part 21, as well as important special conditions and equivalent safety findings, shall be submitted to the panel of experts and be subject to a public consultation of at least 3 weeks, except if they have been previously agreed and published in the Official Publication of the Agency."

Statement of Issue:

The STC project under consideration includes the replacement of the original analogue engine instruments with an EFIS presentation for BAE Systems ATP aircraft fitted with the PW126 engine. EASA has previously approved an STC from this Applicant to install a similar EFIS installation into the BAE Systems ATP aircraft fitted with the PW126A engine. The PW126 engine has a more complicated rating structure than the PW126A engine and this has required the Applicant to change the philosophy used to present the engine instruments.

The presentation of the engine instrumentation on the EFIS for the PW126 engine has been reviewed during flight testing by EASA and two inappropriate engine indications have been identified.

- 1. During transition from take-off to climb power, the torque indication is amber even though it is a normal procedure.
- 2. Intermediate Contingency torque is displayed in amber although there is no time limitation on it.

These aspects of the engine parameter presentation do not meet the requirements of CS 25.1302(b) which requires that the flight deck information must be presented in a clear and unambiguous form.

The Applicant accepts that the software for the engine instrumentation must be corrected for a permanent solution but has requested that an interim solution be accepted for one aircraft for a defined period of time.

EASA considers that an interim solution could be accepted on the basis of a temporary deviation to CS 25.1302(b).

BAE Systems ATP – Temporary Deviation to CS 25.1302(b)

- STC Project Presentation of Engine Parameters on Universal 5 Panel EFIS -

Proposed Deviation:

The STC is approved for a fixed period of time that will allow the Applicant to update the STC with an improved definition implementing a new software which will upgrade the Engine torque indication, in agreement with EASA. The target period for implementing the software change is 12 months.

For the interim STC, an AFM supplement will provide the specific engine torque display characteristics and the associated warnings.

As a compensating factor, it is imperative that the operator conduct training and control of the crew that will operate the unique modified aircraft (S/N 2033) during the interim STC.

The operator will develop the documentation for crew training and operational control, based on the AFM supplement (which should contain appropriate limitations/warnings).

A limitation in section II is added through the AFM supplement to ensure that this requirement is fulfilled :

"The operator shall ensure that a suitable training & approval control program for crews is developed and appropriately approved by the responsible operational authority, prior to them operating (MSN 2033) modified iaw [STC references]"