Special Condition Head-Up Display Direction Indicator

Introductory Note:

The hereby presented Special Condition has been classified as a deviation of the applicable airworthiness codes and as such shall be subject to public consultation in accordance with EASA Management Board Decision 12/2007, dated 11 September 2007. Article 3 (2.) states:

"2. Deviations from the applicable airworthiness codes, environmental protection certification specifications and/or acceptable means for 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 three weeks, except if they have been previously agreed and published in the Official Publication of the Agency. The final decision shall be published in the Official Publication of the Agency"

Statement of Issue:

The applicant is installing a Head-Up Display (HUD) in a two-seater military trainer. The purpose of the installation of the HUD is to allow future fighter pilots to train on the use of a display that is similar to HUDs installed on fighter jets.

The HUD features a display that is depicted above the display of attitude. CS 23.1321(d)(4) requires that:

The instrument that most effectively indicates direction of flight, other than the magnetic direction indicator required by CS 23.1303(c), must be adjacent to and directly below the instrument in the top centre position.

The instrument in the top centre position is defined as the attitude indicator in CS 23.1321(d)(1). The position of the heading information above the attitude display may be considered a non-compliance with the requirement of CS 23.1321(d)(4).

EASA Position:

In assessing the request for deviation from the strict requirements of CS 25.1321(d)(4) at Amdt. 1, EASA acted in the spirit of the new CS 23 Amdt. 5 which is much less restrictive in order to facilitate a more proportionate and risk based approach towards certification of aircraft and to better account for the intended operational use of the aircraft. In that sense, EASA considered the specific intended use of the aircraft as a trainer for future fighter pilots, recognising the benefits of training future fighter pilots using a display that is similar to the displays installed on the fighter jets in limiting the transition effort from the trainer aircraft to the fighter jet.

Considering the above, the proposed Special Condition is therefore not intended to be generically applicable to all CS 23 aircraft.

Proposed Special Condition:

The proposed special condition provides relief from the CS 23.1321(d)(4) requirement, allowing the heading information to be presented above the attitude display, by altering the requirement of CS 23.1321(b)(4) as follows:

The instrument that most effectively indicates direction of flight, other than the magnetic direction indicator required by CS 23.1303(c), must be adjacent to and directly below the instrument in the top centre position.

- END -