

**Proposed Equivalent Safety Finding on CS 25.1387(b),(c), and 25.1401(b) at
Amendment 18 – “Forward position and anti-collision lights”**

Applicable to Boeing 777-9

Introductory Note:

The hereby presented Equivalent Safety Finding has been classified as an important Equivalent Safety Finding 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.) 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. The final decision shall be published in the Official Publication of the Agency."

Statement of Issue:

The forward position lights and forward anti-collision lights on Boeing model 777-9 airplane do not meet the field of coverage per CS 25.1387(b),(c) and 25.1401(b) respectively. A non-compliance with the required light distribution occurs momentarily while the slats are being extended.

The forward wing position light (red and green) illumination pattern on the Boeing model 777-9 will be partially obstructed when the leading edge slats are being extended and therefore do not satisfy the requirements of CS 25.1387 (b) and (c). The same situation also applies to the forward wingtip anti-collision lights with regard to the light intensity distribution requirements of 25.1401 (b).

**Equivalent Safety Finding F-37-9 on CS 25.1387(b),(c), and 25.1401(b) at
Amendment 18**

– Applicable to Boeing 777-9 –

Applicant Safety Equivalency Demonstration:

The compensating factors/features that provide an ESF for the regulations not complied with are as follows:

- The obstruction to the light by the leading edge slat occurs only when the leading edge slats are being extended.
- The resulting cone of obstruction is very narrow in the forward downward direction for the position lights and in the forward downward direction for the anti-collision lights resulting in only momentary (1 to 3 seconds) obstruction to other aircraft operating in the vicinity.
- The landing lights or fuselage anti-collision lights, provides similar or better visual identification of aircraft in the vicinity of each other, are not obstructed at any time.

- The reflections of landing and anti-collision lights from the airplane surfaces provide additional conspicuity to other aircraft operating in the vicinity, even while other aircraft are within the cone of blockage.
- A minimum equipment list (MEL) requirement that prohibits any landing lights that are required to provide visibility in the areas of forward position light and forward anti-collision light blanking from being inoperative in conjunction with an inoperative lower body-mounted anti-collision light.