SUBJECT	**:**	**Pilot Compartment - Protection of Pilot and Controls from Propeller Blade Release**
CERTIFICATION SPECIFICATION	**:**	VLA.771 (b)
PRIMARY GROUP / PANEL	**:**	Panel 08 (Cabin Safety)
SECONDARY GROUPE / PANEL	**:**	Panel 03 (Structure)

EQUIVALENT LEVEL OF SAFETY

Pilot Compartment - Protection of Pilot and Controls from Propeller Blade Release

ELOS CS VLA.771 (b), Pilot Compartment - Protection of Pilot and Controls from Propeller Blade Release

VLA.771 (b) requires the aerodynamic controls listed in VLA.779, excluding cables and control rods, to be located with respect to the propeller so that no part of the pilot or the controls lies in the region between the plane of rotation of propeller and the surface generated by a line passing through the centre of the propeller hub making an angle of 5° forward or aft of the plane of rotation of the propeller.

The intention of this requirement is to ensure the loss of a propeller blade or parts of it does not endanger the pilot directly nor indirectly through the cockpit controls hit by the propeller blade or parts of it.

This intention might also be satisfied by strengthening the structure in the critical area and/or by providing impact resistance features, to protect pilots and controls from propeller blade release.

If this approach of strengthening the structure and/or providing impact resistance features is intended to be used, then:

(b)(1) The most critical impact condition (mass, size and speed of propeller blade fragment, impact angle, etc.) with respect to the structure around the pilot / co-pilotsubject to possible penetration by a propeller blade or parts of it must be determined.

(b)(2) It must be shown by simulation tests or analysis supported by tests that the propeller fragment of (b)(1) is not able to endanger the pilot directly or indirectly by hitting the aerodynamic cockpit controls listed in VLA.779.