EASA European Union Aviation Safety Agency	**Equivalent Safety Finding**	Doc. No.: M-TS-0000679 Issue : 1 Date : 21 OCT 2026 Proposed ☐ Final ☒

SUBJECT	:	Alternative Loading Conditions for CS 27.923 Compliance Demonstration During Flight Tests
REQUIREMENTS incl. Amdt.	:	CS 27.923(c), (d), (e), (f), (h), initial issue and later
ASSOCIATED IM/MoC	:	Yes☐ / No ☒
ADVISORY MATERIAL	:	

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Equivalent Safety Finding

Alternative Loading Conditions for CS 27.923 Compliance Demonstration During Flight Tests

1. APPLICABILITY

This ESF is applicable to Small Rotorcraft in case a limited number of parts experience an issue during the CS 27.923 endruance test that prevents their adequate demonstration of serviceability.

For an issue observed during the CS 27.923 endurance test to be considered a test-related issue rather than a test failure, the applicant shall demonstrate that it is not a consequence of the reliability of the parts under test, but a result of an external event or unexpected condition that is not representative of the testing conditions prescribed in CS 27.923. To confirm applicability of this ESF, the applicant shall demonstrate that the lack of representativeness of the test conditions with respect to the intended test objectives is the most likely cause of the condition of the affected parts.

1.1 AFFECTED CS

CS 27.923(c), (d), (e), (f), (h), initial issue and later.

2. STATEMENT OF EQUIVALENT SAFETY FINDING

In lieu of direct compliance with the CS identified in Chapter 1.1, and provided that the compensating factors specified below are satisfied, an alternative approach may be used to demonstrate the reliability of the rotor drive system and control mechanism components. This approach may consit in endurance evaluations conducted during prototype flight testing, supported by representative flight-test data and post-test inspections of the relevant components.

3. COMPENSATING FACTORS

a) The applicant shall identify the loads of the affected components and determine the load types that contribute to their degradation. The applicant shall demonstrate that the alternative approach adequately addresses the failure modes and degradation mechanisms meet the intent of the CS 27.923 endurance test.

b) The applicant shall define and justify the equivalence of the proposed flight test conditions with respect to the endurance test conditions prescribed by CS 27.923(c), (d), (e), (f), (h). The justification shall be based on representative flight test data and shall demonstrate that the loading of the affected components during the accumulated flight endurance is representative of, or conservative with respect to, the applicable CS 27.923 endurance test conditions. This includes, as applicable, rotor speed, transmission torque, control positions, control cycling and duration of exposure.

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