

 European Union Aviation Safety Agency	Means of Compliance with Light-UAS.2410	Doc. No. : MOC Light-UAS.2410-01 Issue : 1 Date : 04.12.2023 Proposed <input type="checkbox"/> Final <input checked="" type="checkbox"/>
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SUBJECT : *Lift/Thrust/Power System Endurance and Durability*
REQUIREMENTS incl. Amdt. : Special condition Light-UAS Medium Risk 01,
point Light-UAS.2410
ASSOCIATED IM/MoC : Yes / No
ADVISORY MATERIAL : N/A

Introductory Note

EASA is establishing means of compliance for Special Condition Light-UAS (SC Light-UAS) Medium Risk (SAIL III and IV). The research project Shepherd analysed available standards and recommended the selection of some sections of ASTM F3298-19 to substantiate full compliance with Light UAS 2405. EASA has further reviewed this assessment and presents the results in this document as means of compliance with Light-UAS.2410.

The means of compliance herein presented are expected to be demonstrated within the frame of SAIL IV DVR. They can be utilized also for SAIL III DVR. Applicability for SAIL V and VI will be assessed separately.

EASA may publish in the future more specific design objectives to comply with the Light-UAS.2410. As the MoC is for compliance within DVR projects, the applicant and EASA have the opportunity to agree on more prescriptive criteria and / or on pass / fail conditions as considered appropriate.

List of acronyms

DVR: design verification report

SAIL: specific assurance and integrity level

1. SC Light-UAS.2410

Each Lift/Thrust/Power System must be subject to

(a) an endurance demonstration of sufficient duration with respect to cycles and power settings in accordance with Light-UAS.2415;

(b) a durability demonstration to show that each part of the system has been designed and constructed to minimize the probability of failure of the system and sub-systems between overhaul periods, or between replacement intervals of parts; and

(c) an operational demonstration to verify the performance of the system throughout its declared operating range and operational limitations.

2. Means of Compliance with Special Condition Light-UAS.2410

The following sections of ASTM standard F3298-19 “Standard Specification for Design, Construction, and Verification of Lightweight Unmanned Aircraft Systems” address lift/thrust/power system endurance and durability and related provided information. When all sections are complied with, Light UAS.2410 can be considered fully covered.

7.12.6 Powerplant and Rotor/Vertical Lift System Compatibility

14. Documentation as referenced in 16.4.1

15.1 Verification - General

15.2 Methods of Verification

15.4 Product Definition Process

15.5 Verification Process

16.3 Propulsion System

16.4 Propeller

16.9.1 Vertical Lift Propeller