FAA Significant Standards Differences (SSD)

General Comments and Assumptions:

This following list of SSD regulations that require direct title 14, Code of Federal Regulations (14 CFR) part 25 compliance is based on the 14 CFR Part 25/Certification Specifications (CS) 25 Amendment pair noted here:

Amendment Pair:
14 CFR Part 25 Amdt. 25-146, effective 11/19/2018
CS 25 Amdt. 27, effective 11/24/2021.

1. This SSD list includes only regulations where compliance with the CS minimum standard would not be accepted by the FAA. (NOTE: The SSD list is identified as the "FAA-SSD" list to clarify that it is only intended for FAA validations of EASA products).

2. Only regulations that have a regulatory difference will be included in the SSD list. Identical regulations that have differences in guidance/interpretive material will be addressed, if required, as separate Safety Emphasis Items (SEI).

3. The SSD definition is taken from the Technical Implementation Procedures (TIP) Revision 6, Section 3.5.13.2:

   > An SSD must be identified when in order to meet the minimum standard of the VA relative to that of the CA, the difference requires type design changes, approved manual changes, additional of different demonstrations of compliance, or the imposition of operational limitations.
   >
   > (a) This impact determination is accomplished by the VA for each VA standard, by comparison to the corresponding CA standards.
   >
   > (b) Multiple CA standards, taken together may satisfy the objective of a single VA standard; in such cases, an SSD need not be identified.

4. CS 25 does not provide standards for reciprocating-powered airplanes, skiplanes, amphibians, flying boats, or airplanes with standby rocket engines. Differences concerning standards for those airplanes are not reflected in this list.

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Subpart A		
25.2		CS does not specify any retroactive requirements
25.3		14 CFR 25.3 requires compliance with Appendix K for ETOPS type design approval. Neither 14 CFR 25.3 nor Appendix K have a corresponding CS.
Subpart B		
25.21(g)(3)		EASA permits use of comparative analysis; CFR does not.
25.21(g)(4)		EASA permits use of comparative analysis; CFR does not.
Subpart C		
25.365		14 CFR25.365 includes structural design considerations for operation above 45,000 feet.
25.562(b)		14 CFR 25.562(b) applies to all seats; CS excludes flight deck crew seats mounted in the forward conical area of the fuselage from floor warpage test requirements, while 14 CFR 25.562 has no such exclusion.
25.571(e)	AC 25.571-1D, AC 20-128, and Policy PS-ANM100-1993-00041	14 CFR 25.571(e) requires consideration of uncontained rotor and fan damage to structure not limited to pressurized compartments
Subpart D		
25.619		Additional CS reservation to seek "other appropriate measures" may result in 14 CFR 25.619 non-compliance.
25.629(d)(8)		The FAA includes requirements to show airplanes to be free of aeroelastic instabilities within the envelope specified in 14 CFR 25.629(b)(2) for failures, malfunctions, and adverse conditions of 14 CFR 25.629(d). This includes the uncontained rotor and fan damage conditions of 14 CFR 25.571(e).
25.631		FAA rule is specific to empennage structure and requires consideration of 8 pound bird impact, while the CS requires consideration of 4 pound bird for all structure, including empennage.
25.773(e)		14 CFR Amdt 25-144 introduced a new requirement not in CS-25. A vision system with a transparent display surface located in the pilot's outside field of view, such as a head up-display, head mounted display, or other equivalent display, must meet the requirements of 25.773(e) (1) through (e)(4) in non-precipitation and precipitation conditions.
25.785(b)		14 CFR part 25 does not include this CS provision regarding berths intended only for the carriage of medical patients, in which they need not comply with the requirements of 25.562. Applicants must petition for exemption from 14 CFR 25.562 to apply the EASA version of the rule.

25.785(g)		14 CFR 25.785(g) includes requirement for single point release, and accessibility of controls when seated and strapped in. 14 CFR 25.785(g) also requires means to secure restraint system when not in use.
25.809(h)		Specific to 14 CFR 25.809(h) (tail cone exit).
25.811(g)		14 CFR 25.811(g) is more stringent; it does not allow universal symbolic exit signs.
25.812(b)(1)(i), 25.812(b)(1)(ii), and 25.812(b)(2)		14 CFR 25.812(b)(1)(i), 25.812(b)(1)(ii) and 25.812(b)(2) is more stringent; it does not allow universal symbolic exit signs and has requirements for exit marking letter size and background area.
25.831(g)	Policy 00-113-1034, dated 1/4/01	Unique 14 CFR 25.831(g) requirement for temperature exposure time requirements.
25.841	AC 25-20, Policy ANM-03-112-16, dated 3/24/06	14 CFR 25.841 establishes cabin pressure altitude requirements for failure scenarios not shown to be extremely improbable.
Subpart E		
25.901(b)		CS references only CS E20 (d) and (e) for engine installation instructions vs. 14 CFR 25.901(b) reference to 14 CFR part 33 for engines and part 35 for propellers. Compliance with CS 25 does not ensure that the powerplant installation complies
25.901(c)		The FAA requires the fail-safe concept - no failure(s) will jeopardize the safe operation of the airplane. CS requires compliance with CS 25.1309. 14 CFR 25.901(c) includes the “fail-safe” requirements as part of the rule in 25.901. Fail-safe is applied by guidance in 25.1309 and is therefore not mandatory by 25.1309.
25.901(d)		The FAA requires that the APU installation meet the applicable provisions of subpart E (application of engine installation requirements). EASA has clearly defined requirements in CS-25 subpart J.
25.903(a)(3)		New requirement with no equivalent in CS 25.
25.904		14 CFR part 25, Appendix I restricts ATTCS thrust to maximum takeoff thrust or power approved for the airplane. CS25 Appendix I permits the ATTCS to increase thrust up to a maximum thrust or power approved for use following engine failure.
25.905(c)		14 CFR 25.905(c) refers to additional requirements for the propeller blade pitch control system compared to CS 25.905(c). The CS references only CS-P 420 vs. 14 CFR reference to 14 CFR sections 35.21, 35.23, 35.42 and 35.43.
25.907		The CS-P contains the airplane requirements vs. 14 CFR 25.907 containing the airplane requirements.

25.929(a)		New requirement added for appendix O to part 25 icing conditions without equivalent in CS 25 at Amendment 15. FAA requires evaluation for appendix O to part 25.
25.933(a)(1)		The 14 CFR 25.933(a)(1) does not allow demonstration that in-flight thrust reversal is extremely improbable as a compliance method, however the FAA routinely accepts it as an equivalent safety finding.
25.963(e)(2)	AC 25.963-1	The CS includes an exception that fuel tank access panels need not be more fire resistant than the surrounding fuel tank structural material. The 14 CFR 25.963(e) does not.
25.981(b)	AC 25.981-1C	14 CFR 25.981(b) requires the flammability exposure of tanks other than a main tank meet the requirements of Appendix M if any portion is located within the fuselage contour, which may require the installation of a Flammability Reduction Means (FRM). CS 25.981(b) only requires an active FRM meet the requirements of App. M to CS 25 if an FRM is needed to meet the 3% fleet average flammability requirement.
25.1193 (e)(3)		14 CFR 25.1193(e)(3) is applicable to an APU and is more restrictive than CS 25J1193(e)(3). 14 CFR 25.1193 requires a fireproof nacelle skin / cowling for both ground and flight conditions.
Subpart F		
25.1301 (a)(4)		14 CFR 25.1301(a)(4) requires each item of installed equipment to function properly when installed, not just those whose improper functioning would reduce safety per CS 25.1309(a)(1)
25.1303 (a)(3)		The CFR specifically requires a “non-stabilized magnetic compass,” while the CS has a general requirement for a magnetic direction indicator. The FAA has approved alternative standby magnetic direction indicators, through an equivalent level of safety determination.
25.1303(b)		In (b)(4), by reference to section 14 CFR 121.305(k), requires third attitude indicating system, when installed, to be independent of other attitude indicators, and operative without selection after total failure of electrical generating system.
25.1305(d) (3)		This amendment removes CS 25.1305(d)(3) for engine rotor system unbalance indication and incorporates this requirement into a new CS 25.1305(c)(9) that will also require indication of unbalance for a propeller rotating system. This is to address propeller unbalance following a number of accidents related to propeller vibrations during descent. Vibration indication on turbopropeller airplanes was not required prior to this amendment and the propeller vibration seen in these events was not investigated during certification. There is no equivalent CFR requirement to CS 25.1309(c)(9).
25.1319		14 CFR part 25-146 does not adequately address cybersecurity. Until such a rule is published, the FAA applies previously harmonized special conditions for internal and external network access protections.

25.1415(c)		14 CFR 25.1415(c) requires survival equipment to be attached to the life raft.
25.1420		CS-25 includes 25.1420(d) provisions for use of comparative analysis for demonstration of compliance to provisions of 25.1420(a)(b)(c). The CFR does not include this provision.
25.1447 (c)(3)		The 14 CFR 25.1447(c)(3) is more stringent requiring installation of flight crew member oxygen dispensing equipment equipped with certain design features depending on the flight level operation or exposure to cabin pressure altitudes exceeding 34,000 feet during a decompression which is not extremely improbable.
25.1457		The 14 CFR 25.1457 differs significantly in some respects. It is more stringent in disabling automatic erasure functions, regardless of recording duration, within 10 minutes of impact (d)(2). It requires (d)(6) that the DFDR and CVR be in separate containers when both are required, except for provisions for combination recorders. It requires (d)(5)(i) 10 ± 1 minutes of backup electrical power, while CS-25 requires at least 10 minutes (no ceiling). The 14 CFR also requires (a)(6) recording of datalink communications on (at least) the CVR when datalink equipment is installed. Though CS 25.1460 satisfies the datalink recording requirement, it and CS 25.1457 do not require it to be on the CVR. The FAA would consider an ELOS request for DFDR datalink recording. Lastly, the CVR must generally be located as far aft as is practicable (e)(1), except for combination recorders.
25.1459		The 14 CFR 25.1459 is more stringent in some respects. In (a)(5) it requires that the automatic means of stopping the recorder disable each erasure feature and do so simultaneously with stopping the recording, regardless of recording duration. It requires in (a)(8) that the DFDR and CVR be in separate containers when both are required, except for provisions for combination recorders. Each DFDR must generally be located as far aft as practicable (b), except for ejectable recorders.
25.1460		14 CFR 25.1457 requires that datalink recording functions, if datalink equipment is installed, be located on (at least) the CVR. The FAA would consider an ELOS request for DFDR datalink recording. Any recorder performing the CVR or DFDR function must meet either 14 CFR 25.1457 or 25.1459 and associated SSDs.
Subpart G		
25.1529		CS does not include ICA availability requirements contained in the 14 CFR 25.1529. EASA IR 21A.61 allows deferred availability of certain ICA "dealing with overhaul or other forms of heavy maintenance" until after delivery, as long as they are made available prior to the scheduled task threshold. The 14 CFR 25.1529 requires complete ICA prior to delivery of the first airplane or issuance of a standard certificate of airworthiness, whichever occurs later. Also, 14 CFR H25.4 refers back to 25.571 which is an SSD.

25.1535		14 CFR 25.1535 refers to ETOPs airworthiness requirements of Appendix K. 14 CFR K25.1.1 and K25.1.2 are covered in CS 25.1535. Other requirements of Appendix K are not addressed in CS25.
25.1581		CS 25.1591 is a specific EASA requirement that if complied with will result in a 14 CFR 25.1581 non-compliance. Such information, if provided in the FAA AFM, must be in an unapproved section.
Appendix H		
H25.6		14 CFR part 25-146 does not adequately address cybersecurity. Until such a rule is published, the FAA applies previously harmonized special conditions for internal and external network access protections.