

## FAA Significant Standards Differences (SSD)

Amendment Pair: 14 CFR Part 25 Amendment 25-145 and CS-25 Amendment 21

*Note: List updated 11/27/2023 – reference 25.1093, 25.1093 (b)(1), 25.1103 (a), 25.1333 (b), and 25.1529.*

### **General Comments and Assumptions:**

This following list of SSD regulations that require direct 14 CFR Part 25 compliance is based on the 14 CFR Part 25/CS 25 Amendment pair noted in the header.

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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<b>Subpart A</b>		
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.
<b>Subpart B</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.
<b>Subpart C</b>		
25.365		14 CFR 25.365 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. The FAA has written case-by-case exemptions; however these have not applied to airplanes with less than 40 inches of under floor height.
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
<b>Subpart D</b>		
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.
25.671(c)(1)		The more stringent FAA requirement mandates single failures regardless of probability.
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.

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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(a)	AC 25-20	14 CFR 25.831(a) has different cabin ventilation requirements
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.
<b>Subpart E</b>		
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 at Amendment 15.

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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	Policy ANM-112-08-002, dated 5/26/09 AC 25.981-1C	14 CFR 25.981(a)(3) requires that an ignition source cannot result from each single failure, from each single failure in combination with each latent failure condition not shown to be extremely remote, and from all combinations of failures not shown to be extremely improbable. These ignition source requirements must be met with consideration of the effects of manufacturing variability, aging, wear, corrosion, and likely damage. CS 25.981(a)(3) only requires demonstrating that an ignition source does not result from each single failure and from all combinations of failures not shown to be extremely improbable using CS 25.1309. 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.

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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.
<b>Subpart F</b>		
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.
25.1415(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."

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25.1457		The 14 CFR 25.1457 is more stringent, it requires in (d)(6) physical separation of the DFDR and CVR, improved CVR power supply reliability and recording of certain data link communications in (a)(6).
25.1459		The 14 CFR 25.1419 is more stringent, it requires physical separation of the DFDR and CVR, and improved DFDR power supply reliability.
<b>Subpart G</b>		
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. CS does not include Fuel System Limitation requirements in Appendix H25.4. 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.
25.1583(a)(3)		The 14 CFR 25.1583(a)(3) is more stringent, paragraph (a)(3) requires statements for compliance that rapid and large alternating control inputs, especially in combination, could result in structural failures even below the maneuvering speed.