FAA Significant Standards Differences

Amendment Pair: 14 CFR Part 25 Amdt. 25-144 and CS-25 Amdt. 20

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 which 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 <u>not</u> 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 TIP Rev. 6, Section 3.5.13.2.
 - "...the difference requires type design changes, approved manual changes, additional or different demonstrations of compliance, or the imposition of operational limitations."
- 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.

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 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
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 an 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 CS25. 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 nonprecipitation and precipitation conditions:
25.785(b)		14 CFR part 25 does not include 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(a)		14 CFR 25.809(a) has a requirement for each emergency exit to have means to permit viewing of the conditions outside the exit, including likely areas of evacuee ground contact, when closed.
25.809(h)		Specific to 14 CFR 25.809(h) (tailcone 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) are more stringent; they do not allow universal symbolic exit signs and include 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.
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 with CFR.
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, whereas fail-safe is applied by guidance in 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)		No equivalent requirement 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.
25.933(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	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
25.975(a)(7)		No corresponding requirement in CS25 at 14 CFR Amdt 25-143. Each fuel tank vent system must prevent explosions, for a minimum of 2 minutes and 30 seconds, caused by propagation of flames from outside the tank through the fuel tank vents into fuel tank vapor spaces when any fuel tank vent is continuously exposed to flame.
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.

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(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 in 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 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 25.1459 is more stringent; it requires physical separation
	of the DFDR and CVR, and improved DFDR power supply reliability.
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, if 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.
25.1535	14 CFR 25.1535 refers to ETOPs airworthiness requirements of Appendix K. 14 CFR Appendix K does not have a corresponding CS, however 14 CFR K25.1.1 and K25.1.2 are covered in CS 25.1535.
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.