

FAA Significant Standards Differences

Amendment Pair: 14 CFR Part 25 Amendment 25-122
CS-25 Amendment 3

General Comments and Assumptions:

This following list of SSD regulations which require direct FAR compliance is based on the FAR/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. According to the “Type Validation Principles”, 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 Validation Items (VI).

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FAR Sections	Guidance	Remarks
Subpart A		
25.3		FAR requires compliance with Appendix K for ETOPS type design approval. Neither FAR 25.3 nor Appendix K have a corresponding CS.
Subpart B		
25.107(e)(1)	AC 25-7	FAR requires greater margin of VLOF over VMU than CS for airplanes that are geometry-limited or elevator power-limited
25.177(d)		FAR is more stringent. For larger rudder angles than used in normal operations, CS-25 only requires compliance at normal operating speeds and the associated all-engines-operating engine power settings, while the FAR requires consideration of a broader speed range.
Subpart C		
25.307(a)		Difference in judgment and practice. Sometimes FAA requires limit tests while JAA accepts analysis, other times JAA requires ultimate load tests while FAA accepts limit tests.
25.361(b)		The FAA does not accept the 3 sec spindown allowed by ACJ to determine limit engine torque
25.361(c)		Total propeller malfunction dynamic factor is different between FAR and CS.
25.365		FAR includes structural design considerations for operation above 45,000 feet.
25.562(b)		FAR applies to all seats; CS applies to pax seats only.
25.571(b)		FAR requires special consideration of widespread fatigue damage (WFD) and verification by full-scale fatigue test that WFD will not occur. CS includes provisions for using residual strength loads less than limit.
25.571(e)	AC 25.571-1A AC 20-128	FAR requires consideration of uncontained rotor and fan damage to structure not limited to pressurized compartments
Subpart D		
25.621		The FAR does not allow the same reduction in casting factors based on compensating factors as provided by the CS

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FAR Sections	Guidance	Remarks
25.631		FAA rule requires 8 pound bird on tail, so is more severe.
25.671(c)(1)		The more stringent FAA requirement mandates single failures regardless of probability.
25.783		FAR has multiple additional requirements throughout the section.
25.809(a)		FAR 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(i)		FAR has a requirement for each emergency exit to have a means to retain the exit in the open position, once opened in an emergency, with a positive action necessary to disengage.
25.810		FAR includes more stringent erection times for escape slides.
25.811(g)		FAR is more stringent, it does not allow universal symbolic exit signs.
25.812(g)(1)(ii)		FAR requires minimum acceptable overwing emergency exit illumination of 42 inches for a Type A overwing exit and two feet for all other overwing emergency exits.
25.812(b)(1)(i), 25.812(b)(1)(ii) and 25.812(b)(2)		FAR is more stringent, it does not allow universal symbolic exit signs and has requirements for exit marking letter size and background area.
25.813		CS 25.813 does not include the standards of FAR 25.813(c) concerning access to Type III exits in airplanes with 60 or more passengers. FAR 25.813 (a)(1) and (a)(2) include requirements for two or more aisles. FAR 25.813 (b) specifies when an assist space is needed, its size and that it be equipped with a handle whereas the CS does not. FAR 25.813(e) applies to doors between any passenger seat that is occupiable for takeoff and landing and an emergency exit and FAR 25.813(f) does not permit a door between a passenger seat and an exit.
25.831(a)	AC 25-20	FAR has different cabin ventilation requirements.

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FAR Sections	Guidance	Remarks
25.831(g)		Unique FAR requirement for temperature exposure time requirements.
25.841	AC 25-20	FAR establishes cabin pressure altitude requirements
25.853(f)		Requirement to designate the allowed smoking section is specific to the FAR
25.856		New FAR requirement. No equivalent CS
Subpart E		
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. FAR 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). JAA has clearly defined requirements in CS-25 subpart J.
25.933(a)(1)		The FAR 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)	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 FAR does not. AC defines 30 deg. tire debris zone. ACJ defines 15 deg. ACJ defines more potentially critical tire energy conditions.
25.981	AC 25.981-1B AC 25.981-2	FAR includes fuel tank ignition prevention & flammability requirements that differ from the CS.
25.1093	AC 20-73; Policy memo dated 8/3/1992	FAA requires demonstration of capability to operate the engine and essential APU under the conditions of falling and blowing snow. FAA has issued policy memorandum dated August 3, 1992 regarding conditions that must be considered.

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FAR Sections	Guidance	Remarks
Subpart F		
25.1317		FAR has additional airworthiness requirements for HIRF Protection with Appendix L containing HIRF Environments and HIRF test levels for Equipment. Neither FAR 25.1317 nor Appendix L have a corresponding CS.
25.1329	AC 25.1329-1B	FAR has multiple additional requirements throughout the section including those for quick disengagement controls, transient standards for Flight Guidance System function disconnects, transient definitions, speed protection and flightcrew override of flight controls. The FAR applies to flight director and autothrottle systems in addition to automatic pilot systems.
25.1439(a)		FAR specifically applies to both fixed and portable PBE's and specifies location and number of PBE's required.
25.1439(b)(5)		FAR includes requirements for oxygen flow, pressure and duration requirements for demand oxygen and continuous flow systems, as well as leakage requirements for continuous flow systems. Some but not all of these requirements are covered in AMC 25.1439(b)(5) which is referenced in the CS.
25.1447(c)(4)		FAR requires that portable oxygen equipment must have the oxygen dispensing unit connected to the portable oxygen supply.
Subpart G		
25.1529		FAR includes requirements in Appendix H25.4 to include in the ALS inspections and limitations for the fuel system. Also, FAR H25.4 refers back to 25.571 which is an SSD.
25.1535		FAR refers to ETOPs airworthiness requirements of Appendix K. Neither FAR 25.1535 nor Appendix K have a corresponding CS