FAA VALIDATION OF EASA COUNTRY
SMALL AIRPLANES
TYPE VALIDATION PRINCIPLES AGREEMENT
POTENTIAL VALIDATION ITEMS

Significant Standard Differences (SSD) and Other Potential Validation Items (PVI)

14 CFR Part 23 AMENDMENT 62 ***compared to*** CS-23, AMENDMENT. 3
Revised March 14, 2018

SSD Item	Title	14 CFR Part 23 Section	Remarks
1	Performance, General	23.45(h)	Applies to all Part 23 airplanes that are multiengine jets over 6,000 pounds and commuter category. CS applies only to commuter category.
2	Takeoff speeds	23.51(c)	Applies to all Part 23 airplanes that are multiengine jets over 6,000 pounds and commuter category. CS applies only to commuter category.
3	Takeoff performance	23.53(c)	Applies to all Part 23 airplanes that are multiengine jets over 6,000 pound and commuter category s. CS applies only to commuter category.

4	Accelerate-stop performance	23.55	Applies to all Part 23 airplanes that are multiengine jets over 6,000 pounds and commuter category. CS applies only to commuter category. Means other than wheel brakes may be used for accelerate-stop distance determination if it is safe and reliable; is used so that consistent results can be expected under normal operating conditions; and is such that exceptional skill is not required to control the airplane. EASA CS-23 has no corresponding requirement.
5	Takeoff path	23.57	Applies to all Part 23 airplanes that are multiengine jets over 6,000 pounds and commuter category. CS applies only to commuter category.
6	Takeoff distance and takeoff run	23.59	Applies to all Part 23 airplanes that are multiengine jets over 6,000 pounds and commuter category. CS applies only to commuter category.
7	Takeoff flight path	23.61	Applies to all Part 23 airplanes that are multiengine jets over 6,000 pounds and commuter category. CS applies only to commuter category.

8	Climb, General	23.63(c)	Part 23 has requirements for reciprocating engine-powered airplanes over 6,000 lbs., single engine turbines, and multiengine turbines 6,000 pounds or less while CS has requirements for reciprocating engine-powered airplanes over 6,000 lbs. and all turbine airplanes.
9	Climb, General	23.63(d)	Applies to all Part 23 airplanes that are multiengine turbine over 6,000 pounds and commuter category. CS applies only to commuter category.
10	Climb: all engines operating	23.65(b)	Part 23 has requirements for reciprocating engine-powered airplanes over 6,000 lbs., single engine turbines and multiengine turbine 6,000 pounds or less while CS has requirements for reciprocating engine-powered airplanes over 6,000 lbs. and all turbine airplanes.
11	Takeoff climb, one engine inoperative	23.67(a)	Part 23 has exceptions for planes that comply with Section 23.562(d).
12	Climb: one engine inoperative	23.67(c)	Part 23 has requirements for jets of 6,000 pounds or less that are not in CS-23.
13	Climb: one engine inoperative	23.67(d)	Applies to all Part 23 airplanes that are jets over 6,000 pounds and commuter category. CS applies only to commuter category.
14	Reference landing approach speed	23.73(a)	VREF is calculated using $1.3V_{S1}$ in Part 23, CS 23 uses $1.3V_{So}$.

15	Reference landing approach speed	23.73(b)	VREF is calculated using $1.3V_{S1}$ in Part 23, CS 23 uses $1.3V_{So}$. Jets more than 6000lbs are not covered in Part 23; they are covered in CS 23.
16	Reference landing approach speed	23.73(c)	VREF is calculated using $1.3V_{S1}$ in Part 23, CS 23 uses $1.3V_{So}$. Applies to all Part 23 jets over 6000lbs and commuter category airplanes. CS 23 only covers commuter category.
17	Balked landing	23.77(b)	Part 23 has requirements for recips and single engine turbine powered airplanes of more than 6,000 pounds and multiengine turbines of 6,000 pounds or less in the normal, utility and acrobatic categories; while CS applies the same requirements to all turbine engine airplanes in the normal, utility and acrobatic categories.
18	Balked landing	23.77(c)	Applies to all Part 23 airplanes that are jets over 6,000 pounds and commuter category. CS applies only to commuter category.
19	Wings level stall	23.201(e)	Part 23 has roll and yaw limits of 25 degrees or less for airplanes that have a stalls performed at or above 25,000 feet. EASA CS-23 has no corresponding requirement.
20	Wings level stall	23.201(f)	Part 23 requires Spoilers/speedbrakes: Retracted and extended unless they have no measureable effect at low speeds. CS 23 does not.

21	Turning flight and accelerated turning stalls	23.203(c)(4)	Part 23 requires Spoilers/speedbrakes: Retracted and extended unless they have no measureable effect at low speeds. CS 23 does not.
22	Turning flight and accelerated turning stalls	23.203(c)(5)	Part 23 requires maximum engine thrust except that it need not exceed the thrust necessary to maintain level flight at 1.5 VS1 (where VS1 corresponds to the stalling speed with flaps in the approach position, the landing gear retracted, and maximum landing weight) for turbine engine powered airplanes. CS 23 does not.
23	Spinning	23.221	Spin resistant airplanes are permitted under Paragraph 23.221(a)(2). EASA has no rules for Spin resistant airplanes
24	Vibration and buffeting	23.251(b)	Part 23 requires no perceptible buffeting condition in cruise in straight flight except stall buffeting.
25	Vibration and buffeting	23.251(c)	Part 23 requires the load factor at onset of perceptible buffeting be determined for airplanes with M_D more than M 0.6 or an operating altitude above 25,000 feet.
26	High speed characteristics	23.253(b)	Part 23 requires recovery without exceptional piloting strength or skill. CS 23 does not.

27	High speed characteristics	23.253(d)	Under Part 23, Maximum speed for stability characteristics, VFC/MFC. VFC/MFC may not be less than a speed midway between VMO/MMO and VDF/MDF except that, for altitudes where Mach number is the limiting factor, MFC need not exceed the Mach number at which effective speed warning occurs. CS 23 has not corresponding requirement.
28	Out of trim characteristics	23.255	No corresponding section in CS-23.
29	Emergency Landings	23.561(e)	Engines in fuselage aft of the cabin must meet 18g forward and to ensure U.S. compliance methods, appropriate approved facilities utilized.
30	Dynamic seats	23.562	Applies to all Part 23 airplanes except commuter category turboprops..
31	Metallic pressurized cabin structures	23.571(d)	For flight above 41,000 feet MSL, requires a damage tolerance evaluation of the fuselage pressure boundary per § 23.573(b) must be conducted for cabin rupture as a discrete case.
32	Artificial stall barrier system	23.691	All airplanes that use 23.691 for 23.201, Wings level stall, compliance. EASA CS-23 has no corresponding requirement.
33	Takeoff warning system	23.703	Part 23 applies to all jets and all other airplanes with a maximum weight above 6,000 pounds; while CS-23 is applicable to commuter category only.

34	Brakes	23.735(e)	Part 23 requires rejected takeoff kinetic energy absorption to be determined for airplanes required to meet 23.55; while CS-23 is applicable to commuter category only.
35	Emergency exits	23.807(e)(3)	Part 23 permits a side exit below the waterline if there is a barrier to keep water out for a sufficient time in a ditching.
36	Ventilation	23.831(c) and (d)	Part 23 has requirements for operations above 41,000 feet MSL that are not in CS-23.
37	Pressurized cabins	23.841(a)	Part 23 has limits in cabin altitude during decompressions that are not in CS-23.
38	Pressurized cabins	23.841(b)(6)	Part 23 allows resetting the warning of cabin altitude above 10,000 feet MSL when taking off or landing at high altitude airports.
39	Pressurized cabins	23.841(c)	Part 23 has requirements for operations above 41,000 feet and up to 45,000 feet MSL that are not in CS-23.
40	Pressurized cabins	23.841(d)	Part 23 has requirements for operations above 45,000 feet and not more than 51,000 feet MSL that are not in CS-23.
41	Cargo and baggage compartment fire protection	23.855	CS-23 allows flame resistant flammability for normal, utility and acrobatic airplanes while Part 23 requires self-extinguishing.
42	Thermal/Acoustic insulation materials	23.856	There is no corresponding section in CS-23.

43	Installation	23.901	Turbine engine inlet capability to withstand rain, hail, ice, and bird ingestion not less than part 33 in 14 CFR, but CS-23 has specific requirements for rain into inlets of 4% by weight but no corresponding requirements for birds, hail or ice.
44	Engines	23.903	Part 23 has requirements for embedded jet engines. Also, engine must have part 34 certification: Turbine engine powered airplanes.
44-100	Propellers	23.905(d)	CS-23.905(d) does not capture the requirements of 35.23, 35.42 and 35.43 for installed propeller control systems as required by 23.905(d).
45	Reversing systems	23.933	EASA is more stringent in that CS-23 has turbopropeller, commuter category rule not in 14 CFR, part 23.
46	Fuel System, General	23.951(d)	Each fuel system for a turbine engine powered airplane must meet the applicable fuel venting requirements of Part 34.
47	Fuel system independence	23.953	14 CFR, part 23, Section 23.953, Fuel system independence: permits one fuel tank in multiengine airplanes in Paragraph 23.953(a) and gives requirements for a single fuel tank in multiengine airplanes in Paragraph 23.953(b). CS-23 has no rule for single fuel tanks or series of interconnected fuel tanks used in a multiengine airplane as in Paragraph (b).

48	Engine ignition systems	23.1165(f)	CS 23 is applicable to ignition systems in turbopropeller, commuter category airplanes while Part 23 is applicable to ignition systems in turbine engine, commuter category airplanes.
49	Cowling and nacelle	23.1193(g)	Part 23 applies to all airplanes with embedded engines or those engines in pylons on the aft fuselage; while CS-23 is applicable only to commuter category.
50	Fire extinguishing systems	23.1195(a)	Part 23 applies to all airplanes with embedded engines or those engines in pylons on the aft fuselage; while CS-23 is applicable only to commuter category.
51	Fire extinguishing systems	23.1195(a)(2)	Part 23 requires a two-shot system for embedded engines.
52	Fire extinguishing agents	23.1197	Part 23 applies to all airplanes with embedded engines or those engines in pylons on the aft fuselage; while CS-23 is applicable only to commuter category.
53	Extinguishing agent containers	23.1199	Part 23 applies to all airplanes with embedded engines or those engines in pylons on the aft fuselage; while CS-23 is applicable only to commuter category.
54	Fire extinguishing system materials	23.1201	Part 23 applies to all airplanes with embedded engines or those engines in pylons on the aft fuselage; while CS-23 is applicable only to commuter category.

55	Electrical and electronic system lightning protection	23.1306(b)	IFR approval requires function recovers in a timely manner. This also applies to aircraft level for Full Authority Digital Engine Control (FADEC) equipped airplanes.
56	High-intensity radiated fields (HIRF) protection	23.1308	Part 23 has a HIRF rule that is not in CS-23. This also applies to aircraft level for Full Authority Digital Engine Control (FADEC) equipped airplanes.
57	Electronic display instrument systems	23.1311	Part 23 requires secondary displays for IFR operations, while CS-23 applies to all airplanes. Also if non-electronic standby displays are installed, CS 23.1311 requires an independent magnetic direction indicator and an independent secondary mechanical magnetic direction indicator.
58	Airspeed indicating system	23.1323(e)	Part 23 requires rejected takeoff calibration for commuter category and multiengine jets of more than 6,000 pounds; while CS-23 applies only to commuter category.
59	Instruments using a power source	23.1331(c)	Part 23 exempts VFR airplanes and applies only to heading, altitude, airspeed, and attitude. Also to ensure all flight instruments using electrical or vacuum power sources have two sources of power. EASA CS 23.1331 is only applicable to gyroscopic instruments.

60	Storage battery design and installation	23.1353	Part 23 requires 60 minutes battery capacity for all airplanes with a service ceiling above 25,000 feet.
61	Ice protection	23.1419	Paragraph 23.1419(a) defines "Capable of operating safely" and Paragraph 23.1419(b) requires natural icing flight tests unless similarity per 23.1419(c) is appropriate. EASA CS-23 does not define "Capable of operating safely" in CS 23.1419 and has no corresponding requirement to 14 CFR, Part 23, Paragraph 23.1419(b). To ensure use of most recent US compliance methods. Also to ensure use of specific US compliance methods (memoranda) that requires evaluation of roll control in large supercooled droplets.
62	Minimum mass flow of supplemental oxygen	23.1443	Part 23 has requirements for continuous flow oxygen systems for passengers in airplanes with operations above 41,000 feet MSL that are not in CS-23.
63	Oxygen distributing system	23.1445	Part 23 requires crewmembers be able to reserve a minimum supply for themselves when they share a common source of O_2 with passengers.
64	Equipment standards for oxygen dispensing units	23.1447(g)	Part 23 has requirements for crew oxygen equipment in airplanes with operations above 41,000 feet MSL that are not in CS-23.
65	Cockpit voice recorders	23.1457(d)(4)	Part 23 prohibits a single failure that fails both the CVR and FDR.

66	Cockpit voice recorders	23.1457(d)(5)	Part 23 requires the CVR and cockpit area microphone have an independent power source good for 10 +/- 1 minutes.
67	Flight data recorders	23.1459(a)(6)	Part 23 prohibits a single failure that fails both the CVR and FDR.
68	Minimum control speed	23.1513	Part 23 references all of 23.149. CS 23 references CS 23.149(b).
69	Airworthiness Limitations	23.1529	Per Order 8110.52, approved manual changes are SSDs. Also to ensure ICA meets US standards of use and content. AEG review involved.
70	Airspeed Indicator	23.1545(b)(5), (6)	Part 23 applies to multiengine reciprocating airplanes. CS 23 applies to twin-engine reciprocating airplanes.
71	AFM	23.1581	Per Order 8110.52, approved manual changes are SSDs. Differences in normal, abnormal and emergency information procedures and additional rules for engine restart procedures in 14 CFR, part 23
72	Operating limitations	23.1583(c)(3)	Part 23 has requirements for single engine turbines and multiengine jets 6,000 pounds or less while CS has requirements for all turbine airplanes. Differences in normal, abnormal and emergency information procedures and additional rules for engine restart procedures in 14 CFR, part 23.

73	Operating limitations	23.1583(c)(4)	Applies to all Part 23 airplanes that are multiengine jets over 6,000 pounds and commuter category. CS applies only to commuter category. Differences in normal, abnormal and emergency information procedures and additional rules for engine restart procedures in 14 CFR, part 23.
74	Operating limitations	23.1583(c)(5)	Applies to all Part 23 airplanes that are multiengine jets over 6,000 pounds and commuter category. CS applies only to commuter category. Differences in normal, abnormal and emergency information procedures and additional rules for engine restart procedures in 14 CFR, part 23.
75	Operating procedures	23.1585(a)(6)	In Part 23, for seaplanes and amphibians, water handling procedures and the demonstrated wave height. CS 23 has no similar requirement.
76	Operating procedures	23.1585(c)	In Part 23, the requirement is for all multiengine airplanes. For CS 23, the requirement is for twin engine airplanes.
77	Operating procedures	23.1585(c)(4)	Part 23 requires procedures for restarting any engine in flight including the effects of altitude. CS 23 has no similar requirement.
78	Operating procedures	23.1585(e)	In Part 23, the requirement is for all multiengine airplanes. For CS 23, the requirement is for twin engine airplanes.

79	Operating procedures	23.1585(f)	Applies to all Part 23 airplanes that are multiengine jets over 6,000 pounds and commuter category. CS applies only to commuter category. Differences in normal, abnormal and emergency information procedures and additional rules for engine restart procedures in 14 CFR, part 23.
80	Operating procedures	23.1585(g)	In Part 23, the requirement is for all multiengine airplanes. For CS 23, the requirement is for twin engine airplanes.
81	Performance information	23.1587(c)(4), (5)	In Part 23, the requirement is for all multiengine airplanes. For CS 23, the requirement is for twin engine airplanes.
82	Performance information	23.1587(d)	Applies to all Part 23 airplanes that are multiengine jets over 6,000 pounds and commuter category. CS applies only to commuter category. Differences in normal, abnormal and emergency information procedures and additional rules for engine restart procedures in 14 CFR, part 23.

Note: 14 CFR, part 23, has rules in Sections 23.57, 23.61, 23.1309 and 23.1310 for more than two engines airplanes that are not in EASA CS-23. These are standards differences but are not considered significant unless more than two engines are installed.

Other Potential Validation Items

1	Special retroactive requirements	23.2	Some amended type models are older designs that must be upgraded.
2	Damage tolerance and fatigue evaluation of structure	23.573	Different national approaches to the applicability of fatigue rule to derivative model airplanes that may not have been subject to fatigue requirements when initially certificated.
3	Metallic damage tolerance and fatigue evaluation of commuter category airplanes	23.574	Differing national approaches to the applicability of fatigue rule to derivative model airplanes that may not have been subject to fatigue requirements when initially certificated
4	Landing gear extension and retraction system	23.729(g)	Different requirements of protection considered appropriate for landing gear bay mounted components in retractable gear airplanes.
5	Fire protection of flight controls, engine mounts, and other flight structure	23.865	Specific means of compliance for composites airplanes, testing usually required. Compliance particular to design, specific compliance required for composite firewalls and structure.
6	Engines	23.903(a)(2)	Differences in applicability of ice crystal conditions provide means of compliance if FADEC logic is used for a TTO probe blocked by ice crystals.
7	Fuel system lightning protection	23.954	To ensure U.S. compliance methods are used.
8	Fuel system hot weather operation	23.961	VI if EASA allows methods other than AMC 23.961.

9	Induction system icing protection	23.1093	Engine installation ice protection: For icing approvals to ensure compliance to US methods, especially for icing protection and Foreign Object Damage (FOD) resistance.
10	Nacelle area behind firewalls	23.1182	Specific means of compliance for composites airplanes, testing usually required. Compliance particular to design: specific compliance required for composite firewalls and components aft of the firewall.
11	Miscellaneous equipment	23.1307	Maximum altitude and kinds of operation
12	Equipment, systems and installations	23.1309	Functional hazard analysis is a validation item.
13	Airspeed indicating system	23.1323(d)	Differences in applicability of ice crystal requirements and means of compliance for rain.
14	Cockpit voice recorders	23.1457(a)(6)	VI if datalink is installed.
15	Cockpit voice recorders	23.1457(d)(6)	VI if both CVR and FDR are required installations: they must be in separate containers.
16	Airplane Flight Manual: Loading Information	23.1589	Differences in normal, abnormal and emergency information procedures and additional rules for engine restart procedures in 14 CFR, part 23.
17	Validation Flight	21.29	To evaluate aircraft handling, human factors (cockpit) and to qualitatively evaluate.

18	Standard for fuel venting emissions	34.11	Fuel system must comply with 34.11 by design; Foreign Civil Aviation Authority (FCAA) test witnessing is not delegated unless specific bilateral agreement provisions have been implemented regarding environmental approvals.
19	Noise Standards: Aircraft Type and Airworthiness Certification	Part 36	FCAA test witnessing is not delegated unless specific bilateral agreement provisions have been implemented regarding noise approvals.

Revision History	
March 14, 2018	Added SSD Number 44-100 for 23.905(d).