Certification Directorate
General Aviation and RPAS Department

Report

EU/US BASA Supporting SSD List for CS 23

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1 Executive Summary

This report provides the list of Significant Standard Difference (SSDs) between the various CS23 amendment levels and the corresponding (by applicability date) 14CFR FAR23 amendment levels

These lists are provided to support the implementation of TIP Revision 6 of the EU/US Bilateral for products certified under the JAR/CS23 or FAR 23 Airworthiness codes.

The lists identifies the differences that exist between the comparison of CS 23 and FAR 23 for each amendment pair as a list of Significant Standard Differences. These are requirement pairs where the applicant is required to provide additional information in support of the EASA validation process to ensure compliance has been demonstrated to the EASA Certification Basis as the Validating Authority, in addition to the compliance demonstration for the FAA Certification Basis, as the Certifying Authority.

This document does not currently cover the Amendment Par CS23 Amendment 4 and FAR23 Amendment 64. This document will be updated at a later date to include this comparison.

2 Significant Standard Differences

The following tables identify the list of Significant Standard Differences that need to be considered when conducting an EASA validation of a US FAA certification approval. The lists are presented for each amendment pair of CS/FAR 23.

The tables are presented in Amendment Pairs based on the chronological issue date of each Amendment. The method for use is to establish the reference application date, as per the requirements of Part 21 and the provisions in the TIP. The table below can then be used to identify the applicable amendment par.

Once the Amendment Pair is established then the tables under Section 2.1 to 2.12 can be utilised to identify the appropriate SSD lists based on the FAA Certification Basis. Please note the list are compiled based on the changes that were introduced with each Amendment revision and therefore need to be treated as a compound list to ensure full identification of the SSDs for each amendment pair.

For example with an Amendment Pair of CS23 Amendment 1 FAR23 Amendment 59 (Section 2.5) all tables in Sections 2.1 to 2.5 must be reviewed for the applicable SSD list.

Release Date	CS 23 Amendment Level	FAR 23 Amendment Level
14th November 2003	Amendment 0	Up to and Including Amendment 55
5th September 2007	Amendment 0	Amendment 57 (no Amendment 56)
4th April 2008	Amendment 0	Amendment 58
23rd December 2008	Amendment 0	Amendment 59
12th February 2009	Amendment 1	Amendment 59
9th July 2009	Amendment 1	Amendment 58 (Corrected)
28th September 2010	Amendment 2	Amendment 58 (Corrected)
8th August 2011	Amendment 2	Amendment 61 (no amendment 60)
31st January 2012	Amendment 2	Amendment 62
20th July 2012	Amendment 3	Amendment 62
15th July 2015	Amendment 4	Amendment 62
21st March 2017	Amendment 4	Amendment 63

The comparison lists does not currently include the latest Amendment pair with the redefinition of CS/FAR23 around the ASTM standards. This document will be updated at a later date to include this Amendment pair.

2.1 CS 23 Amendment 0/ FAR 23 up to Amendment 55

CS 23 Amendment 0 was issued on the 14th November 2003, this corresponds with FAR 23 Amendment 55, issued on the 1st March 2002. Before the establishment of EASA, on the 28th September 2003, member states used a variety of airworthiness standards (JAR, BACR, etc) no standard differences have been established for these codes with FAR 23.

Item	CS 23 Requirement	Detail
SUBPART A- GENERAL		
1	**23.1**	**Applicability** No SSD exists if compliance to FAR 23.3 is demonstrated except for Commuter Category aeroplanes, CS 23 limits commuter aeroplanes to twin-engine propeller driven, FAR 23 allows for multi-engine propeller driven. An SSD exists only for aeroplanes that have more than 2 propeller driven engines.
SUBPART B-FLIGHT:		**PERFORMANCE**
2	**23.49**	**Stalling Speed** CS23.49(c) SSD exists if compliance is demonstrated to FAR23.49(d), CS 23 contains no such alleviation for stalling speed V_{SO} greater than 113 km/h (61 knots) for single-engine or twin-engine below 2722 Kg (6000lb). CS23.49(c)(2) SSD exists only for aeroplanes that have more than 2 engines.
3	**23.51**	**Take-off Speeds** CS23.51(a)(1) SSD exists only for aeroplanes that have more than 2 engines. CS23.51(b)(1) SSD exists only for aeroplanes that have more than 2 engines.
4	**23.67**	**Climb: One-Engine-Inoperative** CS23.67(a)(1)&(2)no CS alleviation for aeroplanes that meet the FAR23.562(d)
SUBPART B-FLIGHT:		**CONTROLLABILITY AND MANOEUVRABILITY**
5	**23.145**	**Longitudinal Control** CS23.145(e)(1)&(2) SSD exists only for aeroplanes that have more than 2 engines.
6	**23.147**	**Directional and lateral control** CS23.147(a) SSD exists only for aeroplanes that have more than 2 engines. CS23.147(b) SSD exists only for aeroplanes that have more than 2 engines.
7	**23.157**	**Rate of roll** CS23.157(c)(2) requires a maximum 7 second hard limit
SUBPART B-FLIGHT:		**TRIM**
8	**23.161**	**Trim** CS23.161(d) SSD exists only for aeroplanes that have more than 2 engines.
SUBPART B-FLIGHT:		**SPINNING**
9	**23.221**	**Spinning** CS23.221(a) does not allow for compliance to the FAR optional spin resistant requirements of FAR23.221.(a)(2).
SUBPART C-STRUCTURE:		**VERTICAL SURFACES**
10	**23.443**	*Reserved*
SUBPART C-STRUCTURE:		**GROUND LOADS**
11	**23.473**	**Ground Load Conditions and Assumptions** CS23.473(c) SSD exists only for aeroplanes that have more than 2 engines.
SUBPART C-STRUCTURE:		**WATER LOADS**

Item	CS 23 Requirement	Detail
12	**23.527**	*Reserved*
13	**23.535**	*Reserved*
SUBPART C-STRUCTURE:		**EMERGENCY LANDING CONDITIONS**
14	**23.562**	**Emergency Landing Dynamic Conditions** CS23.562(b) applies to Commuter aeroplanes, FAR 23.562(b) is not applicable to Commuter FAR23.562(d) use of this paragraph is not permitted under CS23.562 (see item 2 above)
SUBPART D-DESIGN AND CONSTRUCTION:		**CONTROL SYSTEMS**
15	**23.677**	**Trim Systems** CS23.677 SSD exists only for aeroplanes that have more than 2 engines.
16	**23.701**	**Flap Interconnection** CS23.701(c) SSD exists only for aeroplanes that have more than 2 engines.
SUBPART D-DESIGN AND CONSTRUCTION:		**PERSONNEL AND CARGO ACCOMMODATIONS**
17	**23.777**	**Cockpit Controls** CS23.777(c)(1) SSD exists only for aeroplanes that have more than 2 engines. CS23.777(e)(1) SSD exists only for aeroplanes that have more than 2 engines.
18	**23.785**	**Seats, Berths, Litters, Safety Belts and Shoulder Harnesses** CS23.785(c) reference to the inertia loads generated for Commuter aeroplanes under CS23.562, which is not applicable for FAR23 Commuter aeroplanes
19	**23.807**	**Emergency Exits** CS23.807(e) SSD exists only for aeroplanes that have more than 2 engines.
20	**23.815**	**Width of Aisle** CS23.815(b) SSD exists only for aeroplanes with exactly 10 seats due to error in CS23.
SUBPART E-POWERPLANT		**GENERAL**
21	**23.901**	**Installation** 23.901(d)(2) CS 23 sets minimum requirements for water ingestion
22	**23.903**	**Engines and Auxiliary Power Units** CS23.903 SSD exists for installed APUs CS23.903(a)(2) SSD exists if compliance has been demonstrated to FAR23.903(a)(2)(i), (ii), (iii), no SSD if FAR23.903(a)(2)(iv) is complied with. CS23.903(c) CS23.903 does not allow a single fuel tank for twin engine installations.
23	**23.904**	**Automatic Power Reserve System** 23.904 SSD exists only for aeroplanes that have more than 2 engines.
24	**23.925**	**Propeller Clearance** 23.925 CS more prescriptive FAR allows clearance reductions with substantiation CS does not

Item	CS 23 Requirement	Detail
25	**23.929**	**Engine Installation Ice Protection** 23.929 SSD only exists for wooden propellers.
26	**23.933**	**Turbojet and Turbofan Engine Thrust Reverser System Tests** 23.933(b)(3) Commuter category requirement in CS no FAR equivalent.
27	**23.934**	**Turbojet and turbofan engine thrust reverser system tests** CS refers to CS E requirements, FAR references FAR-33.
SUBPART E-POWERPLANT		**FUEL SYSTEM**
28	**23.953**	**Fuel System Independence** 23.953(a) does not allow a single fuel tank for twin engine installations, no alleviations granted under FAR23.953(b) are accepted by CS23.953. In addition SSD exists for aeroplanes that have more than 2 engines.
29	**23.955**	**Fuel Flow** 23.955(a) CS applies to all engine types and “engine operation” FAR23.955(a) limited to “carburettor operation” only. 23.955(f)(2) SSD exists only for aeroplanes that have more than 2 engines.
30	**23.967**	**Fuel Tank Installation** 23.967(e)(3) No FAR requirement.
SUBPART E-POWERPLANT		**FUEL SYSTEM COMPONENTS**
31	**23.993**	**Fuel Systems Lines and Fittings** 23.993(e) SSD exists for installed APUs
SUBPART E-POWERPLANT		**OIL SYSTEM**
32	**23.1011**	**General** 23.1011(b) SSD exists for installed APUs
SUBPART E-POWERPLANT		**COOLING**
33	**23.1047**	**Cooling** 23.1047 SSD exists only for aeroplanes that have more than 2 engines.
SUBPART E-POWERPLANT		**INDUCTION SYSTEM**
34	**23.1091**	**Induction System Icing Protection** 23.1091(c)(1) SSD exists for installed APUs
35	**23.1093**	**Induction System Icing Protection** 23.1093(a)(5) CS requires a higher temperature rise, in addition SSD exists for aeroplanes that have more than 2 engines.
SUBPART E-POWERPLANT		**POWERPLANT FIRE PROTECTION**
36	**23.1189**	**Shut-Off Means** 23.1189(a) SSD exists only for aeroplanes that have more than 2 engines. 23.1189(a)(5) CS specifies “hazardous amount” FAR sets a limit of “one quart”
37	**23.1193**	**Cowling and Nacelle** 23.1193(f) SSD exists only for aeroplanes that have more than 2 engines.
38	**23.1195**	**Fire Extinguishing Systems** CS 23.1195(a)(1) CS requires “fire zone” FAR requires “engine compartment”

Item	CS 23 Requirement	Detail
39	**23.1203**	**Fire Detector System** 23.1203(a)(1) CS requires “fire zone” FAR requires “Engine Compartment”. 23.1303(a)(1)(i) & (ii) SSD exists only for aeroplanes that have more than 2 engines.
SUBPART F-EQUIPMENT		**GENERAL**
40	**23.1305**	**Powerplant Instruments** 23.1305(b)(4) CS requires fuel pressure indicator only FAR allows other options.
41	**23.1309**	**Equipment, Systems and Installations** 23.1309(d) SSD exists only for aeroplanes that have more than 2 engines.
SUBPART F-EQUIPMENT		**INSTRUMENTS: INSTALLATION**
42	**23.1321**	**Arrangement and Visibility** 23.1321(b) SSD exists only for aeroplanes that have more than 2 engines.
43	**23.1325**	**Static Pressure System** CS 23.1325(g) reference to CS 23.1525(b)(3) FAR reference 23.1559(b).
SUBPART F-EQUIPMENT		**ELECTRICAL SYSTEMS AND EQUIPMENT**
44	**23.1351**	**General** CS 23.1351(f) requires consideration to: “The external power connection must be located so that its use will not result in a hazard to the aeroplane or ground personnel.”
45	**23.1365**	**Electric Cables and Equipment** 23.1365(e)(1) & (2) No corresponding FAR requirement
46	**23.1389**	**Position Light Distribution and Intensities** CS 23.1389(b) additional reference to "horizontal plane minimum intensity"
SUBPART F-EQUIPMENT		**MISCELLANEOUS EQUIPMENT**
47	**23.1437**	**Accessories for Twin-Engine Aeroplanes** 23.1437 SSD exists only for aeroplanes that have more than 2 engines.
SUBPART G- OPERATING LIMITATIONS AND INFORMATION		**MARKINGS AND PLACARDS**
48	**23.1545**	**Airspeed Indicator**. 23.1545(a) SSD exists for mechanical instruments only. 23.1545(b)(5)&(6) SSD exists only for aeroplanes that have more than 2 engines.
SUBPART G- OPERATING LIMITATIONS AND INFORMATION		**AEROPLANE FLIGHT MANUAL**
49	**23.1585**	**Operating Procedures** 23.1585(e) & (g) SSD exists only for aeroplanes that have more than 2 engines.
50	**23.1587**	**Performance Information** 23.1587(c)(4)&(5) SSD exists only for aeroplanes that have more than 2 engines.

2.2 CS 23 Amendment 0/ FAR 23 Amendment 57

With the publication of FAR23 Amendment 57 (there was no Amendment 56) on the 5th September 2007 no new SSDs were identified with CS23 Amendment 0.

2.3 CS 23 Amendment 0/ FAR 23 Amendment 58

With the publication of FAR23 Amendment 58 on the 4th April 2008 the following new SSDs were identified with CS23 Amendment 0.

Item	CS 23 Requirement	Detail
SUBPART F-EQUIPMENT		**MISCELLANEOUS EQUIPMENT**
51	**23.1457**	**Cockpit Voice Recorders** SSD exists when compliance is shown to FAR23.(e)(2).

2.4 CS 23 Amendment 0/ FAR 23 Amendment 59

With the publication of FAR23 Amendment 59 on the 23rd December 2008 the following new SSDs were identified with CS23 Amendment 0.

Item	CS 23 Requirement	Detail
SUBPART E-POWERPLANT		**GENERAL**
52	**23.907**	**Propeller Vibration** 23.907(a)(1) CS23 does not allow for analysis

2.5 CS 23 Amendment 1/ FAR 23 Amendment 59

With the publication of CS23 Amendment 1 on the 12th February 2009 the following new SSDs were identified with FAR23 Amendment 59.

Item	CS 23 Requirement	Detail
SUBPART B-FLIGHT:		**PERFORMANCE**
2	**23.49**	~~**Stalling Speed**~~ ~~CS23.49(c) SSD exists if compliance is demonstrated to FAR23.49(d), CS 23 contains no such alleviation for stalling speed V_{SO} greater than 113 km/h (61 knots) for single-engine or twin-engine below 2722 Kg (6000lb).~~ SSD Deleted
53	**23.49**	**Stalling Speed** CS23.49(d) SSD exists only for aeroplanes that have more than 2 engines.
SUBPART C-STRUCTURE:		**EMERGENCY LANDING CONDITIONS**
14	**23.562**	**Emergency Landing Dynamic Conditions** CS23.562(b) applies to Commuter aeroplanes, FAR 23.562(b) is not applicable to Commuter ~~FAR23.562(d) use of this paragraph is not permitted under CS23.562 (see item 2 above)~~ SSD Deleted

2.6 CS 23 Amendment 1/ FAR 23 Amendment 58 (Corrected)

With the publication of FAR23 Amendment 58 (Corrected) on the 9th July 2009 no new SSDs were identified with CS23 Amendment 1.

2.7 CS 23 Amendment 2/ FAR 23 Amendment 58 (Corrected)

With the publication of CS23 Amendment 2 on the 28th September 2010 no new SSDs were identified with FAR23 Amendment 58 (Corrected).

2.8 CS 23 Amendment 2/ FAR 23 Amendment 61

With the publication of FAR23 Amendment 61 (there was no amendment 60) on the 8th August 2011 no new SSDs were identified with CS23 Amendment 2.

2.9 CS 23 Amendment 2/ FAR 23 Amendment 62

With the publication of FAR23 Amendment 62 on the 31st January 2012 the following new SSDs were identified with CS23 Amendment 2.

Item	CS 23 Requirement	Detail
SUBPART A- GENERAL		
54	**23.1**	**Applicability** No SSD exists if compliance to FAR 23.3 is demonstrated except for Commuter Category aeroplanes, CS 23 limits commuter aeroplanes to twin-engine propeller driven, FAR 23 @62 allows for multi-engine, propeller or turbine driven. An SSD exists only for aeroplanes that have either 2, or more, Turbojet engines or more than 2 propeller driven engines. Note: Unless notified below any SSD that has been established above for Commuter aeroplanes with more than 2 engines is applicable to Commuter aeroplanes with 2, or more, Turbojet engines.
SUBPART B-FLIGHT:		**PERFORMANCE**
55	**23.45**	**General** CS23.45(h) SSD exists for other than Commuter aeroplanes.
56	**23.51**	**Take-off Speeds** CS23.51(c) SSD exists for other than Commuter aeroplanes.
57	**23.53**	**Take-off Performance** CS23.53(c) SSD exists for other than Commuter aeroplanes.
58	**23.55**	**Accelerate-Stop Distance** CS23.55 SSD exists for other than Commuter aeroplanes.
59	**23.57**	**Take-off Path** CS23.57 SSD exists for other than Commuter aeroplanes.

Item	CS 23 Requirement	Detail
60	**23.59**	**Take-off Distance and Take-off Run** CS23.59 SSD exists for other than Commuter aeroplanes.
61	**23.61**	**Take-off flight Path** CS23.61 SSD exists for other than Commuter aeroplanes.
62	**23.63**	**Climb: General** CS23.63(c) SSD exists for single-engine turbines, and multiengine turbine airplanes of 6,000 pounds or less maximum weight in the normal, utility, and acrobatic category. CS23.63(d) SSD exists for other than Commuter aeroplanes.
63	**23.67**	**Climb: One-Engine-Inoperative** CS23.67 SSD exists for all aeroplane types due to the changes in aeroplane categorisation.
64	**23.73**	**Reference Landing Approach Speed** 23.73(b) SSD exists for normal, utility, and acrobatic category turbine powered airplanes of 6,000 pounds or less maximum weight, turboprops of more than 6,000 pounds maximum weight 23.73(c) SSD exists for other than Commuter aeroplanes.
65	**23.77**	**Balked Landing** 23.77(b) SSD exists for normal, utility, and acrobatic category turbine powered airplanes of 6,000 pounds or less maximum weight, turboprops of more than 6,000 pounds maximum weight. 23.73(c) SSD exists for other than Commuter aeroplanes.
SUBPART B-FLIGHT:		**STABILITY**
66	**23.181**	**Dynamic Stability** CS23.181(b) does not allow for great than 7 cycles to damp.
SUBPART B-FLIGHT:		**STALLS**
66	**23.201**	**Wings Level Stall** CS23.201(d) & (e) does not allow for the alleviation above 25,000ft
67	**23.203**	**Turning Flight and Accelerated Turning Stalls** CS23.203(c) SSD for Turbine powered aeroplanes
SUBPART D-DESIGN AND CONSTRUCTION:		**PERSONNEL AND CARGO ACCOMMODATIONS**
68	**23.777**	**Cockpit Controls** CS23.777(c)(4) requires additional prescriptive dimensions
69	**23.807**	**Emergency Exits** CS23.807(e) does not allow the alleviation presented by FAR23.807(e)(3).
SUBPART D-DESIGN AND CONSTRUCTION:		**PRESSURATION**
70	**23.841**	**Cockpit Controls** CS23 limits cabin altitude to not more than 15,000ft in the event of any probable failure or malfunction.
SUBPART D-DESIGN AND CONSTRUCTION:		**FIRE PROTECTION**
70	**23.853**	**Passenger and Crew Compartment Interiors** CS23.853(d)(2) has additional requirements not present in FAR23.853(d)(2).

Item	CS 23 Requirement	Detail
SUBPART E-POWERPLANT		**POWERPLANT CONTROLS AND ACCESSORIES**
71	**23.1165**	**Engine Ignition Systems** 23.1165(f) SSD for Turbine powered aeroplanes
SUBPART E-POWERPLANT		**POWERPLANT FIRE PROTECTION**
71	**23.1189**	**Shut-Off Means** 23.1189(a) SSD exists only for aeroplanes that have more than 2 engines. 23.1189(a)(5) CS specifies “hazardous amount” FAR sets a limit of “one quart”
SUBPART E-POWERPLANT		**POWERPLANT FIRE PROTECTION**
72	**23.1193**	**Cowling and Nacelle** CS23.1193(g) SSD exists for Commuter aeroplanes as not limited by aeroplane/engine configuration.
73	**23.1195**	**Fire Extinguishing Systems** CS23.1195(a) SSD exists for Commuter aeroplanes as not limited by aeroplane/engine configuration.
74	**23.1197**	**Fire Extinguishing Agents** CS23.1197 SSD exists for Commuter aeroplanes as not limited by aeroplane/engine configuration.
75	**23.1199**	**Extinguishing Agent Containers** CS23.1199 SSD exists for Commuter aeroplanes as not limited by aeroplane/engine configuration.
76	**23.1201**	**Fire Extinguishing System Materials** CS23.1201 SSD exists for Commuter aeroplanes as not limited by aeroplane/engine configuration.
SUBPART F - EQUIPMENT		**GENERAL**
76	**23.1303**	**Function and Installation** CS23.1303(c) SSD exists when not using a non-stabilised magnetic direction indicator. CS23.1303(e) SSD exists for Turbine engine-powered aeroplanes
77	**23.1309**	**Equipment, Systems and Installations** SSD exists as CS is more prescriptive.
SUBPART F - EQUIPMENT		**INSTRUMENTS: INSTALLATION**
78	**23.1331**	**Instruments Using a Power Source** CS23.1331(c) SSD exists for aeroplanes not certified to IFR.
SUBPART G- OPERATING LIMITATIONS AND INFORMATION		**MARKINGS AND PLACARDS**
48	**23.1545**	**Airspeed Indicator** ~~23.1545(a) SSD exists for mechanical instruments only.~~ SSD Deleted 23.1545(b)(5)&(6) SSD exists only for aeroplanes that have more than 2 engines.
79	**23.1555**	**Control Markings** CS23.1551(d) SSD exists when complying with FAR23.1555(d)(3) as no alleviation allowed.

2.10 CS 23 Amendment 3/ FAR 23 Amendment 62

With the publication of CS23 Amendment 3 on the 20th July 2012 no new SSDs were identified with FAR23 Amendment 62.

2.11 CS 23 Amendment 4/ FAR 23 Amendment 62

With the publication of CS23 Amendment 4 on the 15th July 2015 no new SSDs were identified with FAR23 Amendment 62.

2.12 CS 23 Amendment 4/ FAR 23 Amendment 63

With the publication of FAR23 Amendment 63 on the 21st March 2017 no new SSDs were identified with CS23 Amendment 4.

2.13 Other CS Requirements that may be required at a product level.

The following lists other CS requirements that have no direct equivalent FAR requirements therefore if required at a product level compliance demonstration by the applicant.
No standard differences have been established for these codes with 14 CFR FAR. If an applicant requires these comparisons they must contact EASA for guidance.

	CS Requirement	Detail
1	CS-ACNS	No FAR Requirement to compile SSD list
2	CS-FCD	No FAR Requirement to compile SSD list
3	CS-MCSD	No FAR Requirement to compile SSD list
4	CS-MMEL	No FAR Requirement to compile SSD list
5	CS-GEN-MMEL	No FAR Requirement to compile SSD list
6	CS-SIMD	No FAR Requirement to compile SSD list
7	CS-APU	No FAR Requirement to compile SSD list
8	CS-AWO	No FAR Requirement to compile SSD list
9	CS-CO2	No FAR Requirement to compile SSD list