Acceptable Means of Compliance and Guidance Material to Certification Specifications for Normal-Category Aeroplanes

(CS-23)

Issue 2

7 October 2019[1][2]

[1] For the date of entry into force of this issue, kindly refer to Decision 2019/020/R in the Official Publication of the Agency.

[2] This Annex has been re-published on 6.11.2019 in order to remove tracked change formatting in AMC1 CS-23 Subpart F — Systems and Equipment

Summary of amendments

Chapter	Action	Issue no	Amended by ED Decision
AMC1 CS-23 Subpart A	New	Issue 1	
AMC1 CS-23 Subpart B through G. (ASTM F3264-17 Standard Specification for Normal Category Aeroplanes Certification)	New	Issue 1	
AMC2 CS-23 Subpart B through G. (CS-23 Amendment 4)	New	Issue 1	
AMC3 CS-23 Subpart B through G. (CS-VLA Amendment 1)	New	Issue 1	
GM1 CS-23.2010	New	Issue 2	Decision 2019/020/R
GM2 CS-23.2010	Amended	Issue 2	Decision 2019/020/R
AMC1 CS-23 Subpart B through G. (ASTM F3264-18b Standard Specification for Normal Category Aeroplanes Certification)	Amended	Issue 2	Decision 2019/020/R
AMC2 CS-23 Subpart B through G. (CS-23 Amendment 4)	Amended	Issue 2	Decision 2019/020/R
AMC3 CS-23 Subpart B through G. (CS-VLA Amendment 1)	Amended	Issue 2	Decision 2019/020/R

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CHAPTER A — GENERAL

AMC1 CS 23.2000 Applicability

The applicability of the acceptable means of compliance (AMC) is limited to the scope of CS-23 (Amendment 5 and later). The applicability of the individual AMC that are provided in Subpart B through G can be restricted to a specific type of design, type of operation or any other criterion. The applicability of each AMC is therefore specified within that AMC. Demonstration of compliance using a published AMC outside of that applicability does not provide for presumption of compliance with the related requirement.

GM1 CS-23.2010 Accepted means of compliance

For compliance demonstration, applicants will use the issue of the AMC & GM which is current on the date of application, as reflected in the certification programme for the certification basis determined by EASA.

This current issue, however, does not automatically invalidate the previous issues of the AMC & GM to CS 23 Amendment 5, unless this is specifically identified as such in the AMC/GM. Applicants can, therefore, agree with EASA in the certification programme to use such previous issues of the AMC & GM to demonstrate compliance with the certification basis.

Whenever an earlier AMC is no longer considered to be acceptable for the demonstration of compliance, the restrictions on its use will be stated in the remarks column of the specific line for that CS and the related AMC. In particular, AMC2&3 to CS-23/CS-VLA Subpart B to Subpart G (which reflect respectively CS-23 Amendment 4 and CS-VLA Amendment 1) will not be updated to cover new technologies or methods. However, they are still accepted as means of compliance. EASA will restrict their use in the AMC only when they no longer appropriately address new safety concerns or the associated safety levels.

GM2 CS 23.2010 Accepted means of compliance

The AMC to certification specifications (CS) for Normal-Category Aeroplanes (CS-23 Amendment 5 and later) illustrate means, but not the only means, by which a requirement contained in CS-23 can be met. Satisfactory demonstration of compliance using the AMC shall provide for presumption of compliance with the related requirement. The AMC are a way to facilitate certification tasks for the applicant and the competent authority. Due to changes in technology or application of technology in a way that has not been considered or not (yet) included in the AMC, the appropriate application of this AMC in the certification of a design requires a review by the authority.

CS-23 Amendment 5 maintains the existing level of safety of CS-23 Amendment 4 and CS-VLA Amendment 1, except for areas addressing loss of control and icing, for which the safety level was increased. Achieving this level of safety through compliance with CS-23 Amendment 5 for a given certification project may require the use of additional means of compliance beyond those provided in this AMC, depending on the details of the specific design.

For example, the ASTM standard accepted by this AMC does not contain provisions that address powered trim system runaways. Therefore, in order to maintain the level of safety that was in CS-23

Amendment 4, applicants proposing the use of F3264-18b as a means of complying with CS 23.2300 for an aeroplane with a powered trim system would need to supplement the standards of F3264-18b with additional means of compliance to demonstrate safe controllability after a probable trim system runaway. To do this, applicants could use CS 23.677(d) from Amendment 4, or other means accepted under CS 23.2010 of Amendment 5.

Similarly, applicants may propose designs with novel or unusual features for which neither F3264-18b nor the EASA Certification Specifications (CS-23 Amendment 4 and CS-VLA Amendment 1) contains appropriate AMC for showing compliance with CS-23 Amendment 5. Therefore, applicants proposing the use of the AMC to CS-23 as a means of complying with CS-23 Amendment 5 for aeroplanes with novel or unusual design features may need to gain acceptance of additional means of compliance under CS 23.2010.

AMC1 CS-23 Subpart B through Subpart G contain a means of compliance that consists of a listing of consensus standards at their specific revisions that have been reviewed by EASA and accepted as AMC to CS-23. The table provided in Sections B through G identifies which consensus standard contains an accepted demonstration of compliance with the requirement. The scope and content of the referenced consensus standard can, however, differ from the overall scope of CS-23 or the objectives of the requirement. Therefore using such a referenced consensus standard requires the applicant to identify what is applicable within that consensus standard and to seek agreement with the authority for agreement of the selected consensus standard and applied paragraphs. This is the so-called 'building-block' flexibility that is built into the CS-23 Certification Specifications.

The listing in AMC1 Subpart B through G is consistent with the administrative ASTM standard F3264 at the revision as specified in the header of the table. The AMC1 is therefore basically a copy of ASTM F3264, except when it is considered necessary to include or exclude specific standards. This is identified in the remarks column of the table.

When EASA has established that there is the need to deviate from some of the content of a specific referenced consensus standards in order to meet the level of safety of CS-23 Amendment 5, this is stated in the remarks column in this AMC to CS-23.

AMC2 CS-23 Subpart B through Subpart G contains a means of compliance that refers to the previous Amendment 4 of CS-23. These AMC are included for the (administrative) convenience of both the applicant and EASA when using an existing certification basis. A table is provided in Sections B to G that identifies which CS-23 Amendment 4 requirements contains an accepted demonstration of compliance with the requirement. This AMC2 CS-23 Subpart B through Subpart G is applicable for fixed wing aeroplanes with a passenger-seating configuration of 19 or less and a maximum certificated take-off mass of 8 618 kg (19 000 pounds) or less.

Before the entry into force of Amendment 5 of CS-23, CS-23 was included in the certification basis that often required complementing special conditions (refer to point 21.A.16B of Part-21[1]) when the certification specification did not contain adequate or appropriate safety standards for the product. These special conditions can be applied to complement AMC2 when required.

AMC3 CS-23 Subpart B through Subpart G contains a means of compliance that refers to the previous Amendment 1 of CS-VLA. These AMC are included for the (administrative) convenience of both the applicant and EASA when using an existing certification basis. A table is provided in Sections B to G that identifies which CS-VLA Amendment 1 requirements contain an accepted demonstration of compliance with the requirement. This AMC3 CS-23 Subpart B through Subpart G is applicable to aeroplanes with a single engine (spark- or compression-ignition) having not more than two seats, with

[1] Regulation (EU) No 748/2012 of 3 August 2012 laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations (OJ L 224, 21.8.2012, p. 1).

a maximum certificated take-off weight of not more than 750 kg and a stalling speed in the landing configuration of not more than 83 km/h (45 knots)(CAS), to be approved for day VFR only. This AMC3 is applicable for non-aerobatic operations including:

— Any manoeuvre incident to normal flying;
— Stalls (except whip stalls); and
— Lazy eights, chandelles, and steep turns, in which the angle of bank is not more than 60°.

Before the entry into force of Amendment 5 of CS-23, CS-VLA was included in the certification basis that often required complementing special conditions (refer to point 21.A.16B in Part-21) when the certification specification did not contain adequate or appropriate safety standards for the product. These special conditions can be applied to complement AMC3 when required.

Availability of referenced consensus standards

The referenced consensus standard documents are available from their issuing standards body.

— ASTM documents may be purchased from:
ASTM International,
100 Barr Harbor Drive, PO Box C700, West Conshohocken, Pennsylvania 19428-2959, USA
(Website: www.astm.org)

AMC1 CS-23 Subpart B — Flight

AMC1 CS-23 Subpart B available for the listed requirements of CS-23 are provided in the following table.

CS-23 Amendment 5 SUBPART B - Flight	(Ref ASTM F44 F3264-18b Standard Specification for Normal Category Aeroplanes Certification)	Remarks
23.2100 Mass and centre of gravity	5.1 *Weight/Mass and Centre of Gravity:* F3082/F3082M-17 Standard Specification for Weights and Centers of Gravity of Aircraft F3114-15 Standard Specification for Structures	
23.2105 Performance data	5.2 *Performance Data:* F3179/F3179M-18 Standard Specification for Performance of Aircraft	F3179 revised from -16 to -18
23.2110 Stall speed	5.3 *Stall Speed:* F3179/F3179M-18 Standard Specification for Performance of Aircraft	F3179 revised from -16 to -18
23.2115 Take-off performance	5.4 *Takeoff Performance:* F3179/F3179M-18 Standard Specification for Performance of Aircraft	F3179 revised from -16 to -18
23.2120 Climb requirements	5.5 *Climb Requirements:* F3179/F3179M-18 Standard Specification for Performance of Aircraft	F3179 revised from -16 to -18
23.2125 Climb information	5.6 *Climb Information:* F3179/F3179M-18 Standard Specification for Performance of Aircraft	F3179 revised from -16 to -18
23.2130 Landing	5.7 *Landing:* F3179/F3179M-18 Standard Specification for Performance of Aircraft	F3179 revised from -16 to -18
23.2135 Controllability	5.8 *Controllability:* F3173/F3173M-17 Standard Specification for Aircraft Handling Characteristics	F3173 revised from -15 to -17
23.2140 Trim	5.9 *Trim:* F3173/F3173M-17 Standard Specification for Aircraft Handling Characteristics	F3173 revised from -15 to -17

CS-23 Amendment 5 SUBPART B - Flight	(Ref ASTM F44 F3264-18b Standard Specification for Normal Category Aeroplanes Certification)	Remarks
23.2145 Stability	5.10 *Stability:* F3173/F3173M-17 Standard Specification for Aircraft Handling Characteristics	F3173 revised from -15 to -17
23.2150 Stall characteristics, stall warning, and spins	5.11 *Stall Characteristics, Stall Warning, and Spins:* F3180/F3180M-18 Standard Specification for Low-Speed Flight Characteristics of Aircraft	F3180 revised from -16 to -18
23.2155 Ground and water handling characteristics	5.12 *Ground and Water Handling Characteristics:* F3173/F3173M-17 Standard Specification for Aircraft Handling Characteristics	F3173 revised from -15 to -17
23.2160 Vibration, buffeting, and high-speed characteristics	5.13 *Vibration, Buffeting, and High-Speed Characteristics:* F3173/F3173M-17 Standard Specification for Aircraft Handling Characteristics	F3173 revised from -15 to -17
23.2165 Performance and flight characteristics requirements for flight in icing conditions	5.14 *Performance and Flight Characteristics Requirements for Flight in Icing Conditions:* F3120/F3120M-15 Standard Specification for Ice Protection for General Aviation Aircraft	
23.2170 Operating limitations	5.15 *Operating Limitations:* F3174/F3174M-18 Standard Specification for Establishing Operating Limitations and Information for Aeroplanes	F3174 revised from -15 to -18

AMC1 CS-23 Subpart C — Structures

AMC1 CS-23 Subpart C available for the listed requirements of CS-23 are provided in the following table.

CS-23 Amendment 5 SUBPART C - Structure	(Ref ASTM F44 F3264-18b Standard Specification for Normal Category Aeroplanes Certification)	Remarks
23.2200 Structural design envelope	6.1 *Structural Design Envelope:* F3116/F3116M-18 Standard Specification for Design Loads and Conditions	F3116 revised from -15 to -18
23.2205 Interaction of systems and structures	TBD	Consensus Standard in development
23.2210 Structural-design loads	6.3 *Structural Design Loads:* F3116/F3116M-18 Standard Specification for Design Loads and Conditions	F3116 revised from -15 to -18
23.2215 Flight load conditions	6.4 *Flight Load Conditions:* F3116/F3116M-18 Standard Specification for Design Loads and Conditions	F3116 revised from -15 to -18
23.2220 Ground and water load conditions	6.5 *Ground and Water Load Conditions:* F3116/F3116M-18 Standard Specification for Design Loads and Conditions F3331-18 Standard Practice for Aircraft Water Loads	F3116 revised from -15 to -18 F3331 New
23.2225 Component loading conditions	6.6 *Component Loading Conditions:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft F3232/F3232M-17 Standard Specification for Flight Controls in Small Aircraft F3116/F3116M-18 Standard Specification for Design Loads and Conditions	F3116 revised from -15 to -18
23.2230 Limit and ultimate loads	6.7 *Limit and Ultimate Loads:* F3114-15 Standard Specification for Structures	
23.2235 Structural strength	6.8 *Structural Strength:* F3114-15 Standard Specification for Structures	

CS-23 Amendment 5 SUBPART C - Structure	(Ref ASTM F44 F3264-18b Standard Specification for Normal Category Aeroplanes Certification)	Remarks
23.2240 Structural durability	6.9 *Structural Durability:* F3115/F3115M-15 Standard Specification for Structural Durability for Small Airplanes F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft	
23.2245 Aeroelasticity	6.10 *Aeroelasticity:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft F3093/F3093M-15 Standard Specification for Aeroelasticity Requirements	
23.2250 Design and construction principles	6.11 *Design and Construction Principles:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft F3232/F3232M-17 Standard Specification for Flight Controls in Small Aircraft F3114-15 Standard Specification for Structures	
23.2255 Protection of structure	6.12 *Protection of Structure:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft F3232/F3232M-17 Standard Specification for Flight Controls in Small Aircraft F3114-15 Standard Specification for Structures F3066/F3066M-18 Standard Specification for Aircraft Powerplant Installation Hazard Mitigation	F3066 revised from -15 to -18
23.2260 Materials and processes	6.13 *Materials and Processes:* F3114-15 Standard Specification for Structures	
23.2265 Special factors of safety	6.14 *Special Factors of Safety:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft F3114-15 Standard Specification for Structures	
23.2270 Emergency Conditions	6.15 *Emergency Conditions:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft F3232/F3232M-17 Standard Specification for Flight Controls in Small Aircraft F3083/F3083M-16 Standard Specification for Emergency Conditions, Occupant Safety and Accommodations	

AMC1 CS-23 Subpart D — Design and Construction

AMC1 CS-23 Subpart D available for the listed requirements of CS-23 are provided in the following table.

CS-23 Amendment 5 SUBPART D – Design and Construction	(Ref ASTM F44 F3264-18b Standard Specification for Normal Category Aeroplanes Certification)	Remarks
23.2300 Flight control systems	7.1 *Flight Control Systems:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft F3232/F3232M-17 Standard Specification for Flight Controls in Small Aircraft F3066/F3066M-18 Standard Specification for Aircraft Powerplant Installation Hazard Mitigation	Except as follows: For Level 1 single-engine airplanes with a stall speed in the landing configuration (V_{S0}) of more than 45 knots, ASTM F3264-18b, paragraph 7.1 does not include means for showing that the airplane is protected from loss of control when any one connecting or transmitting element in the primary flight control system fails. If applying for certification of a Level 1 single-engine airplane with a V_{S0} greater than 45 knots, applicants may use the requirements of CS 23.677(b)(1) at Amendment 4 as a means of complying with this aspect of CS 23.2300, or may propose a different means of compliance in accordance with CS 23.2010. For powered trim, applicants may use the provisions of CS 23.677(d) at Amendment 4 as a means of complying with CS 23.2010. F3066 revised from -15 to -18
23.2305 Landing gear systems	7.2 *Landing Gear Systems:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft	
23.2310 Buoyancy for seaplanes and amphibians	7.3 *Buoyancy for Seaplanes and Amphibians:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft	

CS-23 Amendment 5 SUBPART D – Design and Construction	(Ref ASTM F44 F3264-18b Standard Specification for Normal Category Aeroplanes Certification)	Remarks
23.2315 Means of egress and emergency exits	7.4 *Means of Egress and Emergency Exits:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft F3083/F3083M-16 Standard Specification for Emergency Conditions, Occupant Safety and Accommodations	
23.2320 Occupant physical environment	7.5 *Occupant Physical Environment:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft F3227/F3227M-17 Standard Specification for Environmental Systems in Small Aircraft F3083/F3083M-16 Standard Specification for Emergency Conditions, Occupant Safety and Accommodations F3114-15 Standard Specification for Structures F3117-18b Standard Specification for Crew Interface in Aircraft	F3117 revised from -15 to -18b
23.2325 Fire protection	7.6 *Fire Protection:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft F3231/F3231M-17 Standard Specification for Electrical Systems in Small Aircraft F3234/F3234M-17 Standard Specification for Exterior Lighting in Small Aircraft F3066/F3066M-18 Standard Specification for Aircraft Powerplant Installation Hazard Mitigation F3083/F3083M-16 Standard Specification for Emergency Conditions, Occupant Safety and Accommodations	F3066 revised from -15 to -18
23.2330 Fire protection in designated fire zones	7.7 *Fire Protection in Designated Fire Zones and Adjacent Areas:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft F3231/F3231M-17 Standard Specification for Electrical Systems in Small Aircraft F3114-15 Standard Specification for Structures F3066/F3066M-18 Standard Specification for Aircraft Powerplant Installation Hazard Mitigation F3083/F3083M-16 Standard Specification for Emergency Conditions, Occupant Safety and Accommodations	F3066 revised from -15 to -18 Different from ASTM F3264-18b paragraph 7.7, ASTM F3083-16 has been added as means of complying with CS 23.2325.

CS-23 Amendment 5 SUBPART D – Design and Construction	(Ref ASTM F44 F3264-18b Standard Specification for Normal Category Aeroplanes Certification)	Remarks
23.2335 Lightning protection	7.8 *Lightning Protection:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft	
23.2340 Design and construction information	none	No AMC expected

AMC1 CS-23 Subpart E — Powerplant

AMC1 CS-23 Subpart E available for the listed requirements of CS-23 are provided in the following table.

CS-23 Amendment 5 SUBPART E – Powerplant	(Ref ASTM F44 F3264-18b Standard Specification for Normal Category Aeroplanes Certification)	Remarks
23.2400 Powerplant installation	8.1 *Powerplant Installation:* F3062/F3062M-18 Standard Specification for Aircraft Powerplant Installation F3063/F3063M-18a Standard Specification for Aircraft Fuel and Energy Storage and Delivery F3064/F3064M-18a Standard Specification for Aircraft Powerplant Control, Operation, and Indication F3065/F3065M-18 Standard Specification for Aircraft Propeller System Installation F3066/F3066M-18 Standard Specification for Aircraft Powerplant Installation Hazard Mitigation	F3062 revised from -16 to -18 F3063 revised from -16a to -18a F3064 revised from -15 to -18a F3065 revised from -15 to -18 F3066 revised from -15 to -18
23.2405 Power or thrust control systems	8.2 *Power or Thrust Control Systems & 8.5 Reversing Systems:* F3062/F3062M-18 Standard Specification for Aircraft Powerplant Installation F3064/F3064M-18a Standard Specification for Aircraft Powerplant Control, Operation, and Indication F3065/F3065M-18 Standard Specification for Aircraft Propeller System Installation	F3062 revised from -16 to -18 F3064 revised from -15 to -18a F3065 revised from -15 to -18
23.2410 Powerplant installation hazard assessment	8.3 *Powerplant Installation Hazard Assessment:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft F3062/F3062M-18 Standard Specification for Aircraft Powerplant Installation F3063/F3063M-18a Standard Specification for Aircraft Fuel and Energy Storage and Delivery F3064/F3064M-18a Standard Specification for Aircraft Powerplant Control, Operation, and Indication F3065/F3065M-18 Standard Specification for Aircraft Propeller System Installation F3066/F3066M-18 Standard Specification for Aircraft Powerplant Installation Hazard Mitigation F3117-18b Standard Specification for Crew Interface in Aircraft	F3062 revised from -16 to -18 F3063 revised from -16a to -18a F3064 revised from -15 to -18a F3065 revised from -15 to -18 F3066-15 revised from -15 to -18 F3117 revised from -15 to -18b

CS-23 Amendment 5 SUBPART E – Powerplant	(Ref ASTM F44 F3264-18b Standard Specification for Normal Category Aeroplanes Certification)	Remarks
23.2415 Powerplant installation ice protection	8.4 *Powerplant Installation Ice Protection:* F3062/F3062M-18 Standard Specification for Aircraft Powerplant Installation F3063/F3063M-18a Standard Specification for Aircraft Fuel and Energy Storage and Delivery F3066/F3066M-18 Standard Specification for Aircraft Powerplant Installation Hazard Mitigation	Different from ASTM F3264-18b paragraph 8.4, ASTM F3063-18a has been added as a means of complying with CS 23.2415. F3062 revised from -16 to -18 F3063 revised from -16a to -18a F3066 revised from -15 to -18
23.2420 reserved	---	
23.2425 Powerplant operational characteristics	8.6 *Powerplant Operational Characteristics:* F3062/F3062M-18 Standard Specification for Aircraft Powerplant Installation F3064/F3064M-18a Standard Specification for Aircraft Powerplant Control, Operation, and Indication F3065/F3065M-18 Standard Specification for Aircraft Propeller System Installation F3066/F3066M-18 Standard Specification for Aircraft Powerplant Installation Hazard Mitigation F3117-18b Standard Specification for Crew Interface in Aircraft	F3062 revised from -16 to -18 F3064 revised from -15 to -18a F3065 revised from -15 to -18 F3066 revised from -15 to -18 F3117 revised from -15 to -18b
23.2430 Powerplant installation, energy storage and distribution systems	8.7 *Fuel and Energy Storage and Distribution Systems:* F3062/F3062M-18 Standard Specification for Aircraft Powerplant Installation F3063/F3063M-18a Standard Specification for Aircraft Fuel and Energy Storage and Delivery F3064/F3064M-18a Standard Specification for Aircraft Powerplant Control, Operation, and Indication F3066/F3066M-18 Standard Specification for Aircraft Powerplant Installation Hazard Mitigation F3114-15 Standard Specification for Structures	Different from ASTM F3264-18b paragraph 8.7, ASTM F3061-17 has been considered not relevant as a means of complying with CS 23.2430 and therefore not included. F3062 revised from -16 to -18 F3063 revised from -16a to -18a F3064 revised from -15 to -18a F3066 revised from -15 to -18 F3114-15 New
23.2435 Powerplant installation support systems	8.8 *Powerplant Induction, Exhaust, and Support Systems:* F3062/F3062M-18 Standard Specification for Aircraft Powerplant Installation	Different from ASTM F3264-18b paragraph 8.8, ASTM F3066-18 has been considered not relevant as a means of complying with CS 23.2435 and therefore not included. F3062 revised from -16 to -18

CS-23 Amendment 5 SUBPART E – Powerplant	(Ref ASTM F44 F3264-18b Standard Specification for Normal Category Aeroplanes Certification)	Remarks
23.2440 Powerplant installation fire protection	8.9 *Powerplant Installation Fire Protection:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft F3062/F3062M-18 Standard Specification for Aircraft Powerplant Installation F3063/F3063M-18 Standard Specification for Aircraft Fuel and Energy Storage and Delivery F3064/F3064M-18a Standard Specification for Aircraft Powerplant Control, Operation, and Indication F3066/F3066M-18 Standard Specification for Aircraft Powerplant Installation Hazard Mitigation	With reference to ASTM F3264-18b paragraph 8.9, ASTM F3063-18–has been added as a means of complying with CS 23.2440. F3062 revised from -16 to -18 F3063 revised from -16a to -18 F3064 revised from -15 to -18a F3066 revised from -15 to -18
23.2445 Powerplant installation information	*none*	No AMC expected

AMC1 CS-23 Subpart F — Systems and Equipment

AMC1 CS-23 Subpart F available for the listed requirements of CS-23 are provided in the following table.

CS-23 Amendment 5 **SUBPART F – Systems and Equipment**	**(Ref ASTM F44 F3264-18b Standard Specification for Normal Category Aeroplanes Certification)**	**Remarks**
23.2500 *General requirements on systems and equipment function*	9.1 *Systems and Equipment Function and Safety Requirements:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft F3230-17 Standard Practice for Safety Assessment of Systems and Equipment in Small Aircraft F3231/F3231M-17 Standard Specification for Electrical Systems in Small Aircraft F3235-17a Standard Specification for Aircraft Storage Batteries F3232/F3232M-17 Standard Specification for Flight Controls in Small Aircraft F3233/F3233M-17 Standard Specification for Instrumentation in Small Aircraft F3229/F3229M-17 Standard Practice for Static Pressure System Tests in Small Aircraft F3309/F3309M-18 Standard practice for Simplified Safety Assessment of Systems and Equipment in Small Aircraft F3064/F3064M-18a Standard Specification for Aircraft Powerplant Control, Operation, and Indication F3066/F3066M-18 Standard Specification for Aircraft Powerplant Installation Hazard Mitigation F3117-18b Standard Specification for Crew Interface in Aircraft F3120-15 Standard Specification for Ice Protection for General Aviation Aircraft	F3309 New F3064 revised from -15* to -18a * F3064-15 § 6.2.1 must be complemented. F3064-18 § 6.2.1.6 provides this AMC. F3066 revised from -15 to -18 F3117 revised from -15 to -18b F3120-15 added as AMC

CS-23 Amendment 5 SUBPART F – Systems and Equipment		(Ref ASTM F44 F3264-18b Standard Specification for Normal Category Aeroplanes Certification)	Remarks
23.2505	*General requirements on equipment installation*	9.2 *Equipment Function and Installation Requirements:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft F3230-17 Standard Practice for Safety Assessment of Systems and Equipment in Small Aircraft F3231/F3231M-17 Standard Specification for Electrical Systems in Small Aircraft F3235-17a Standard Specification for Aircraft Storage Batteries F3232/F3232M-17 Standard Specification for Flight Controls in Small Aircraft F3233/F3233M-17 Standard Specification for Instrumentation in Small Aircraft F3117-18b Standard Specification for Crew Interface in Aircraft	Different from ASTM F3264-18b paragraph 9.2, ASTM F3230-17 is included as a means of complying with CS 23.2505 F3117 revised from -15 to -18b
23.2510	*Equipment, systems, and installations*	9.3 *Equipment, Systems, and Installation:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft F3230-17 Standard Practice for Safety Assessment of Systems and Equipment in Small Aircraft F3231/F3231M-17 Standard Specification for Electrical Systems in Small Aircraft F3235-17a Standard Specification for Aircraft Storage Batteries F3232/F3232M-17 Standard Specification for Flight Controls in Small Aircraft F3233/F3233M-17 Standard Specification for Instrumentation in Small Aircraft F3229/F3229M-17 Standard Practice for Static Pressure System Tests in Small Aircraft F3227/F3227M-17 Standard Specification for Environmental Systems in Small Aircraft	Different from ASTM F3264-18b paragraph 9.3, ASTM F3231-17 and F3229-17 are included as a means of complying with CS 23.2510
23.2515	*Electrical and electronic system lightning protection*	9.4 *Electrical and Electronic System Lightning Protection:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft	
23.2520	*High-intensity radiated fields (HIRF) protection*	9.5 *High Intensity Radiated Fields (HIRF) Protection:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft F3236-17 Standard Specification for High Intensity Radiated Field (HIRF) Protection in Small Aircraft	

CS-23 Amendment 5 SUBPART F – Systems and Equipment		(Ref ASTM F44 F3264-18b Standard Specification for Normal Category Aeroplanes Certification)	Remarks
23.2525	*System power generation, storage, and distribution*	9.6 *System Power Generation, Storage, and Distribution:* F2490-05 Standard Guide for Aircraft Electrical Load and Power Source Capacity F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft F3231/F3231M-17 Standard Specification for Electrical Systems in Small Aircraft F3235-17a Standard Specification for Aircraft Storage Batteries F3233/F3233M-17 Standard Specification for Instrumentation in Small Aircraft F3117-18b Standard Specification for Crew Interface in Aircraft F3120-15 Standard Specification for Ice Protection for General Aviation Aircraft	Different from ASTM F3264-18b paragraph 9.6, ASTM F3235-17a is included as a means of complying with CS 23.2525 F3120-15 added as AMC
23.2530	*External and cockpit lighting*	9.7 *External and Cockpit Lighting:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft F3233/F3233M-17 Standard Specification for Instrumentation in Small Aircraft F3234/F3234M-17 Standard Specification for Exterior Lighting in Small Aircraft F3117-18b Standard Specification for Crew Interface in Aircraft F3120-15 Standard Specification for Ice Protection for General Aviation Aircraft	F3117 revised from -15 to -18b F3120-15 added as AMC
23.2535	*Safety equipment*	9.8 *Safety Equipment:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft	
23.2540	*Flight in icing conditions*	9.9 *Flight in Icing Conditions:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft F3233/F3233M-17 Standard Specification for Instrumentation in Small Aircraft F3120/F3120M-15 Standard Specification for Ice Protection for General Aviation Aircraft	
23.2545	*Pressurised systems elements*	9.10 *Pressurized System Elements:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft F3229/F3229M-17 Standard Practice for Static Pressure System Tests in Small Aircraft	F3229-17 added as AMC
23.2550	*reserved*		

CS-23 Amendment 5 SUBPART F – Systems and Equipment		(Ref ASTM F44 F3264-18b Standard Specification for Normal Category Aeroplanes Certification)	Remarks
23.2555	*Installation of recorders (e.g. cockpit voice recorders and flight data recorders)*	9.12 *Installation of Cockpit recorders:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft F3228-17 Standard Specification for Flight Data and Voice Recording in Small Aircraft 9.13 *Installation of Flight Data Recorders:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft F3228-17 Standard Specification for Flight Data and Voice Recording in Small Aircraft	

AMC1 CS-23 Subpart G — Flight Crew Interface and other Information

AMC1 CS-23 Subpart G available for the listed requirements of CS-23 are provided in the following table.

CS-23 Amendment 5 **SUBPART G – Flight Crew Interface and other Information**	**(Ref ASTM F44 F3264-18b Standard Specification for Normal Category Aeroplanes Certification)**	**Remarks**
23.2600 *Flight crew compartment*	10.1 *Flightcrew Compartment Interface:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft F3232/F3232M-17 Standard Specification for Flight Controls in Small Aircraft F3062/F3062M-18 Standard Specification for Aircraft Powerplant Installation F3063/F3063M-18a Standard Specification for Aircraft Fuel and Energy Storage and Delivery F3064/F3064M-18a Standard Specification for Aircraft Powerplant Control, Operation, and Indication F3117-18b Standard Specification for Crew Interface in Aircraft	F3062 revised from -16 to -18 F3063 revised from -16a to -18a F3064 revised from -15 to -18a F3117 revised from -15 to -18b Except as follows: ASTM F3264-17 does not contain standards for windshield luminous transmittance. Windshield luminous transmittance must be addressed in showing compliance with CS 23.2600(a). Applicants may use the provisions of CS 23.775(e) at amendment as a means of complying with CS 23.2600(a), or may propose a different means of compliance in accordance with CS 23.2010. ASTM F3264-17 does not contain standards that ensure the required pilot compartment view is provided in conditions of fog or frost formation on the internal portion of the windshield and side windows. Pilot compartment view with formation of fog or frost must be addressed in showing compliance with CS 23.2600(a). Applicants may use the provisions of CS 23.773(b) at Amendment 4 as a means of complying with this aspect of CS 23.2600(a), or may propose a different

CS-23 Amendment 5 SUBPART G – Flight Crew Interface and other Information	(Ref ASTM F44 F3264-18b Standard Specification for Normal Category Aeroplanes Certification)	Remarks
		means of compliance in accordance with CS 23.2010.
23.2605 *Installation and operation information*	10.2 *Installation and Operation Information:* F3061/F3061M-17Standard Specification for Systems and Equipment in Small Aircraft F3232/F3232M-17 Standard Specification for Flight Controls in Small Aircraft F3233/F3233M-17 Standard Specification for Instrumentation in Small Aircraft F3231/F3231M-17 Standard Specification for Electrical Systems in Small Aircraft F3227/F3227M-17 Standard Specification for Environmental Systems in Small Aircraft F3062/F3062M-18 Standard Specification for Aircraft Powerplant Installation F3063/F3063M-18a Standard Specification for Aircraft Fuel and Energy Storage and Delivery F3064/F3064M-18a Standard Specification for Aircraft Powerplant Control, Operation, and Indication F3117-18b Standard Specification for Crew Interface in Aircraft F3120/F3120M-15 Standard Specification for Ice Protection for General Aviation Aircraft	F3062 revised from -16 to -18 F3063 revised from -16a to -18a F3064 revised from -15* to -18a * F3064-15 § 6.2.1 must be complemented. F3064-18 § 6.2.1.6 provides this AMC F3117 revised from -15 to -18b
23.2610 *Instrument markings, control markings and placards*	10.3 *Instrument Markings, Control Markings, and Placards:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft F3063/F3063M-18a Standard Specification for Aircraft Fuel and Energy Storage and Delivery F3117-18b Standard Specification for Crew Interface in Aircraft F3120—15 Standard Specification for Ice Protection for General Aviation Aircraft	F3063 revised from -16a to -18a F3117 revised from -15 to -18b F3120-15 added as AMC
23.2615 *Flight, navigation, and powerplant instruments*	10.4 *Flight, Navigation, and Powerplant Instruments:* F3061/F3061M-17 Standard Specification for Systems and Equipment in Small Aircraft F3062/F3062M-18 Standard Specification for Aircraft Powerplant Installation F3064/F3064M-18a Standard Specification for Aircraft Powerplant Control, Operation, and Indication	F3062 revised from -16 to -18 F3064 revised from -15* to -18a * F3064-15 § 6.2.1 must be complemented. F3064-18 § 6.2.1.6 provides this AMC
23.2620 *Aeroplane Flight Manual*	10.5 *Airplane Flight Manual:* F3117-18b Standard Specification for Crew Interface in Aircraft	F3117 revised from -15 to -18b F3174 revised from -15 to -18

CS-23 Amendment 5 SUBPART G – Flight Crew Interface and other Information	(Ref ASTM F44 F3264-18b Standard Specification for Normal Category Aeroplanes Certification)	Remarks
	F3174/F3174M-18 Standard Specification for Establishing Operating Limitations and Information for Aeroplanes F3120—15 Standard Specification for Ice Protection for General Aviation Aircraft	F3120-15 added as AMC
23.2625 *Instructions for Continued Airworthiness*	10.6 *Instructions for Continued Airworthiness:* F3120/F3120M-15 Standard Specification for Ice Protection for General Aviation Aircraft F3117-18b Standard Specification for Crew Interface in Aircraft	F3117 revised from -15 to -18b

AMC2&3 CS-23/CS-VLA Subpart B — Flight

AMC2&3 CS-23 Subpart B available for the requirements of CS-23 are provided in the following table.

CS-23 Amendment 5 SUBPART B - Flight	AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
23.2100 *Mass and centre of gravity*	23.21 Proof of compliance 23.23 Load distribution limits 23.25 Weight limits 23.29 Empty weight and corresponding centre of gravity 23.31 Removable ballast 23.871 Levelling means		VLA.21 Proof of compliance VLA.23 Load distribution limits VLA.25 Weight limits VLA.29 Empty weight and corresponding centre of gravity VLA.871 Levelling means	
23.2105 *Performance data*	23.45 Performance - General		VLA.45 Performance - General	
23.2110 *Stall speed*	23.49 Stalling speed		VLA.49 Stalling speed	
23.2115 *Take-off performance*	23.51 Take-off speeds 23.53 Take-off performance 23.55 Accelerate-stop distance 23.57 Take-off path 23.59 Take-off distance and take-off run 23.61 Take-off flight path		VLA.51 Take-off speeds	
23.2120 *Climb requirements*	23.63 Climb: General 23.65 Climb: All engines operating		VLA.65 Climb: All engines operating	
23.2125 *Climb information*	23.66 Take-off climb: one engine inoperative 23.67 Climb: One engine inoperative 23.69 En route climb/descent 23.71 Glide: single engine aeroplanes		None	

CS-23 Amendment 5 SUBPART B - Flight	AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
23.2130 *Landing*	23.73 Reference landing approach speed 23.75 Landing distance 23.77 Balked landing		VLA.75 Landing distance VLA.77 Balked landing	
23.2135 *Controllability*	23.141 Flight Characteristics -General 23.143 Controllability and Manoeuvrability - General 23.145 Longitudinal control 23.147 Directional and lateral control 23.149 Minimum control speed 23.151 Acrobatic manoeuvres 23.153 Control during landings 23.155 Elevator control force in manoeuvres 23.157 Rate of roll		VLA.141 Flight Characteristics -General VLA.143 Controllability and Manoeuvrability - General VLA.145 Longitudinal control VLA.153 Control during landings VLA.155 Elevator control force in manoeuvres VLA.157 Rate of roll	
23.2140 *Trim*	23.161 Trim		VLA.161 Trim	
23.2145 *Stability*	23.171 Stability – General 23.173 Static longitudinal stability 23.175 Demonstration of static longitudinal stability 23.177 Static directional and lateral stability 23.181 Dynamic stability		VLA.171 Stability – General VLA.173 Static longitudinal stability VLA.175 Demonstration of static longitudinal stability VLA.177 Static directional and lateral stability VLA.181 Dynamic stability	
23.2150 *Stall characteristics, stall warning, and spins*	23.201 Wings level stall 23.203 Turning Flight and accelerated turning stalls 23.207 Stall Warning 23.221 Spinning	CS 23.2150 (b) and (c) are not covered by AMC2. Applicants may use the provision in ASTM F3180-18 to show compliance with CS 23.2150	VLA.201 Wings level stall VLA.203 Turning Flight and accelerated turning stalls VLA.207 Stall Warning VLA.221 Spinning	VLA.221(a) is not accepted as AMC to 23.2150, only VLA.221(b) can be used.

CS-23 Amendment 5 SUBPART B - Flight	AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
23.2155 *Ground and water handling characteristics*	23.231 Longitudinal stability and control 23.233 Directional stability and control 23.235 Operation on unpaved surfaces 23.237 Operation on water 23.239 Spray characteristics		VLA.231 Longitudinal stability and control VLA.233 Directional stability and control VLA.235 Operation on unpaved surfaces VLA.239 Spray characteristics	
23.2160 *Vibration, buffeting, and high-speed characteristics*	23.251 Vibration and buffeting 23.253 High-speed characteristics		VLA.251 Vibration and buffeting	
23.2165 *Performance and flight characteristics requirements for flight in icing conditions*	23.1419 Ice Protection		None	
23.2170 *Operating limitations*	23.1501 General 23.1505 Airspeed limitations 23.1507 Manoeuvring speed 23.1511 Flap extended speed 23.1513 Minimum control speed 23.1519 Weight and centre of gravity 23.1527 Maximum operating altitude		VLA.1501 General VLA.1505 Airspeed limitations VLA.1507 Manoeuvring speed VLA.1511 Flap extended speed VLA.1519 Weight and centre of gravity	

AMC2&3 CS-23/CS-VLA Subpart C — Structures

AMC2&3 CS-23 Subpart C available for the requirements of CS-23 are provided in the following table.

CS-23 Amendment 5 SUBPART C - Structure	AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
23.2200 *Structural design envelope*	23.321 (b), (c) Flight Loads - General 23.333 (a), (b), (d) Flight envelope 23.335 Design airspeeds 23.337 Limit manoeuvring load factors 23.341 Gust load factors		VLA.321 Flight Loads - General VLA.333 Flight envelope VLA.335 Design airspeeds VLA.337 Limit manoeuvring load factors VLA.341 Gust load factors	
23.2205 *Interaction of systems and structures*	None	Provision not included in CS-23 Amdt 4	None	Provision not included in CS-VLA Amdt 1
23.2210 *Structural-design loads*	23.301 (b), (c), (d) Loads 23.321 (a) Flight Loads - General 23.343 Design fuel loads 23.345 High lift devices 23.471 Ground Loads - General 23.473 Ground load conditions and assumptions 23.507 Jacking loads 23.509 Towing loads 23.511 Ground load: unsymmetrical loads on multiple-wheel units 23.521 Water load conditions	With Appendix A	VLA.301 Loads VLA.321 Flight Loads - General VLA.345 High lift devices VLA.471 Ground Loads - General VLA.473 Ground load conditions and assumptions VLA.521 Water load conditions	With Appendix A

CS-23 Amendment 5 SUBPART C - Structure	AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
	23.523 Design weights and centre of gravity positions 23.525 Application of loads 23.527 Hull and main float load factors 23.537 Seawing loads 23.753 Main float Design	With Appendix I		
23.2215 *Flight load conditions*	23.331 Symmetrical flight conditions 23.333 (c) Flight envelope 23.347 Unsymmetrical flight loads 23.349 Rolling conditions 23.351 Yawing conditions 23.367 Unsymmetrical loads due to engine failure		VLA.331 Symmetrical flight conditions VLA.333 Flight envelope VLA.347 Unsymmetrical flight loads VLA.349 Rolling conditions VLA.351 Yawing conditions	
23.2220 *Ground and water load conditions*	23.477 Landing gear arrangement 23.479 level landing conditions 23.481 Tail down landing conditions 23.483 One-wheel landing conditions 23.485 Side load conditions 23.493 Braked roll conditions 23.505 Supplementary conditions for ski-planes 23.529 Hull and main float landing conditions 23.531 Hull and main float take-off conditions 23.731 Wheels	With Appendix C With Appendix C, D	VLA.477 Landing gear arrangement VLA.479 level landing conditions VLA.481 Tail down landing conditions VLA.483 One-wheel landing conditions VLA.485 Side load conditions VLA.493 Braked roll conditions VLA.505 Supplementary conditions for skiplanes VLA.731 Wheels	With Appendix C

CS-23 Amendment 5 SUBPART C - Structure	AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
23.2225 *Component loading conditions*	23.302 Canard or tandem wing configurations 23.361 Engine torque 23.363 Side load on engine mount 23.365 Pressurized cabin loads 23.369 Rear lift truss 23.371 Gyroscopic and aerodynamic loads 23.373 Speed control devices 23.391 Control surface loads 23.393 Loads parallel to hinge line 23.395 Control system loads 23.397 Limit control forces and torques 23.399 Dual control system 23.405 Secondary control system 23.407 Trim tab effects 23.409 Tabs 23.415 Ground gust conditions 23.421 Balancing loads 23.423 Manoeuvring loads 23.425 Gust loads 23.427 Unsymmetrical loads 23.441 Manoeuvring loads 23.443 Gust loads 23.445 Outboard fins or winglets 23.455 Ailerons		VLA.361 Engine torque VLA.363 Side load on engine mount VLA.369 Rear lift truss VLA.373 Speed control devices VLA.391 Control surface loads VLA.395 Control system loads VLA.397 Limit control forces and torques VLA.399 Dual control system VLA.405 Secondary control system VLA.407 Trim tab effects VLA.409 Tabs VLA.415 Ground gust conditions VLA.421 Balancing loads VLA.423 Manoeuvring loads VLA.425 Gust loads VLA.427 Unsymmetrical loads VLA.441 Manoeuvring loads VLA.443 Gust loads VLA.445 Outboard fins or winglets VLA.447 Combined loads on tail surfaces VLA.449 Additional loads applicable to V-tails VLA.455 Ailerons VLA.457 Wing flaps VLA.459 Special devices VLA.497 Supplementary conditions for tail wheels	With Appendix B With Appendix B With Appendix B With Appendix B With Appendix B

CS-23 Amendment 5 SUBPART C - Structure	AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
	23.459 Special devices 23.497 Supplementary conditions for tail wheels 23.499 Supplementary conditions for nose wheels 23.533 Hull and main float bottom pressures 23.535 Auxiliary float loads 23.659 Mass Balance	With Appendix I	VLA.499 Supplementary conditions for nose wheels VLA.659 Mass Balance	
23.2230 *Limit and ultimate loads*	23.301 (a) Loads 23.303 Factors of safety		VLA.301 Loads VLA.303 Factors of safety	
23.2235 *Structural strength*	23.305 Strength and deformation 23.307 Proof of structure 23.641 Proof of strength - Wings 23.651 Proof of strength - Control surfaces 23.659 Mass Balance 23.681 (a) Limit load static tests - Control System 23.723 Shock absorption tests 23.725 Limit drop tests 23.726 Ground load dynamic tests 23.727 Reserve energy absorption drop tests 23.729 (a) Landing gear extension and retraction system		VLA.305 Strength and deformation VLA.307 Proof of structure VLA.641 Proof of strength - Wings VLA.651 Proof of strength - Control surfaces VLA.659 Mass Balance VLA.681 Limit load static tests - Control System VLA.723 Shock absorption tests VLA.725 Limit drop tests VLA.726 Ground load dynamic tests VLA.727 Reserve energy absorption drop tests VLA.729 Landing gear extension and retraction system VLA.737 Skis VLA.1436 Hydraulic manually-powered brake systems	

CS-23 Amendment 5 SUBPART C - Structure	AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
	23.737 Skis 23.843 (a) Pressurization tests 23.1435 (a)(1) Hydraulic Systems			
23.2240 *Structural durability*	23.571 Metallic pressurized cabin structures 23.572 Metallic wing, empennage, and associated structures 23.573 Damage tolerance and fatigue evaluation of structure 23.574 Metallic damage tolerance and fatigue evaluation of commuter category aeroplanes 23.575 Inspections and other procedures 23.627 Fatigue strength 23.1461 Equipment containing high-energy rotors		VLA.572 Metallic wing, empennage, and associated structures VLA.627 Fatigue strength	
23.2245 *Aeroelasticity*	23.629 Flutter 23.687 Spring devices 23.677 (c) Trim systems		VLA.629 Flutter VLA.687 Spring devices VLA.677 Trim systems	
23.2250 *Design and construction principles*	23.601 General 23.603 Materials and workmanship 23.683 Operation tests 23.687 Spring devices 23.689 Cable systems 23.731 Wheels 23.733 (a), (c) Tires		VLA.601 General VLA.603 Materials and workmanship VLA.683 Operation tests VLA.687 Spring devices VLA.689 Cable systems VLA.731 Wheels VLA.733 Tires	

CS-23 Amendment 5 SUBPART C - Structure	AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
	23.735 (b) Brakes 23.775 (b), (c), (d) Windshields and windows 23.783 (b), (c)(1), (e) Doors 23.807 (d)(2) Emergency Exits 23.859 (b) through (i) Combustion heater fire protection 23.1323 Airspeed indicating system 23.1325 (a) through (e) Static Pressure System 23.1435 (a)(3), (c) Hydraulic Systems 23.1445 (a), (b) Oxygen distribution system		VLA.735 Brakes VLA.775 Windshields and windows VLA.783 Exits VLA.807 Emergency Exits VLA.1323 Airspeed indicating system VLA.1325 Static Pressure System VLA.1436 Hydraulic manually-powered brake systems	
23.2255 *Protection of structure*	23.607 Fasteners 23.609 Protection of Structure 23.611 Accessibility 23.689 (a)(3) Cable systems		VLA.607 Self-locking nuts VLA.609 Protection of Structure VLA.611 Accessibility VLA.689 Cable systems	
23.2260 *Materials and processes*	23.603 Materials and workmanship 23.605 Fabrication methods 23.613 Material strength properties and design values		VLA.603 Materials and workmanship VLA.605 Fabrication methods VLA.613 Material strength properties and design values	
23.2265 *Special factors of safety*	23.619 Special factors 23.621 Casting factors 23.623 Bearing factors 23.625 Fitting factors 23.657 Hinges		VLA.619 Special factors VLA.621 Casting factors VLA.623 Bearing factors VLA.625 Fitting factors VLA.657 Hinges	

CS-23 Amendment 5 SUBPART C - Structure	AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
	23.681 (b) Limit load static tests - Control System 23.693 Joints 23.785 Seats, berths, litters, safety belts, and shoulder harnesses		VLA.681 Limit load static tests - Control System VLA.693 Joints VLA.785 Seats, safety belts, and harnesses	
23.2270 *Emergency Conditions*	23.561 Emergency Landing Conditions - General 23.562 Emergency landing dynamic conditions 23.785 Seats, berths, litters, safety belts, and shoulder harnesses 23.787 Baggage and cargo compartments 23.1411 (b) Safety equipment - General	With Appendix J	VLA.561 Emergency Landing Conditions - General VLA.785 Seats, safety belts, and harnesses VLA.787 Baggage compartments VLA.1411 Safety equipment - General	

AMC2&3 CS-23/CS-VLA Subpart D — Design and Construction

AMC2&3 CS-23 Subpart D available for the requirements of CS-23 are provided in the following table.

CS-23 Amendment 5 SUBPART D – Design and Construction	AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
23.2300 Flight control systems	23.655 Installation 23.671 (a) Control systems - General 23.672 (b), (c) Stability augmentation and automatic and power-operated systems 23.673 Primary flight controls 23.675 Stops 23.677 (a), (b) Trim systems 23.679 (c) Control system locks 23.683 Operation tests 23.685 Control system details 23.687 Spring devices 23.697 Wing flap controls 23.701 Flap interconnection 23.1329 (b) Automatic Pilot System		VLA.655 Installation VLA.671 Control systems - General VLA.673 Primary flight controls VLA.675 Stops VLA.677 Trim systems VLA.679 Control system locks VLA.683 Operation tests VLA.685 Control system details VLA.687 Spring devices VLA.697 Wing flap controls VLA.701 Flap interconnection	
23.2305 Landing gear systems	23.721 General 23.729 (b), (c), (g) Landing gear extension and retraction system 23.735 (a), (b), (c), (e) Brakes 23.745 Nose/Tail wheel steering		VLA.729 Landing gear extension and retraction system VLA.735 Brakes	
23.2310 Buoyancy for seaplanes and amphibians	23.751 Main float buoyancy 23.755 Hulls 23.757 Auxiliary floats		VLA.751 Main float buoyancy VLA.757 Auxiliary floats	
23.2315 Means of egress and	23.783 (a), (b), (c)(2), (c)(3), (c)(4), (c)(5), (c)(6), (d), (f), (g) Doors		VLA.783 Exits VLA.787 Baggage compartments	

CS-23 Amendment 5 SUBPART D – Design and Construction		AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
	emergency exits	23.787 Baggage and cargo compartments 23.803 Emergency evacuation 23.805 Flight crew emergency exits 23.807 (a), (b)(1), (b)(2), (b)(3), (b)(4), (b)(5), (b)(6) (d)(1), (d)(3), (d)(4), (c), (e) Emergency exits 23.811 Emergency exit marking 23.812 Emergency lighting 23.813 Emergency exit access 23.815 Width of aisle		VLA.807 Emergency exits	
23.2320	*Occupant physical environment*	23.831 (a), (b), (c) Ventilation 23.841 (a), (b)(1), (b)(2), (b)(3), (b)(4), (b)(8), (c), (d)(1), (d)(2),(d)(3) Pressurized cabins 23.843 Pressurization tests 23.771 (b), (c) Pilot compartment 23.775 (a), (h)(1) Windshields and windows 23.791 Passenger information signs 23.1441 Oxygen Equipment and supply 23.1443 Minimum mass flow of supplemental oxygen 23.1445 Oxygen distribution system 23.1447 Equipment standards for oxygen dispensing units 23.1449 Means for determining use of oxygen 23.1450 (a), (b) Chemical oxygen generators 23.1451 Fire protection for oxygen equipment 23.1461 Equipment containing high-energy rotors		VLA.831 Ventilation VLA.771 Pilot compartment VLA.775 Windshields and windows	

CS-23 Amendment 5 SUBPART D – Design and Construction	AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
23.2325 Fire protection	23.1453 Protection of oxygen equipment from rupture 23.851 Fire extinguishers 23.853 Passenger and crew compartment interiors 23.855 Cargo and baggage compartment fire protection 23.859 (a) Combustion heater fire protection 23.863 Flammable Fluid Fire Protection 23.1337 (a) Powerplant instruments installation 23.1351 Electrical system: General 23.1359 (a), (c) Electrical System fire protection 23.1383 (d) Taxi and landing lights 23.1385 (d) Position light system installation	With Appendix F With Appendix F With Appendix F	VLA.853 Passenger and crew compartment interiors VLA.857 Electrical bonding VLA.863 Flammable Fluid Fire Protection VLA.1337 Powerplant instruments installation VLA.1351 Electrical system: General VLA.1384 External lights	With Appendix F
23.2330 Fire protection in designated fire zones	23.865 Fire protection of flight controls, engine mounts, and other flight structure 23.1359 (a), (b) Electrical System fire protection 23.1365 (b) Electrical Cables and equipment	With Appendix F	VLA.865 Fire protection of flight controls and other flight structure VLA.1365 Electrical Cables and equipment	
23.2335 Lightning protection	23.867 Electrical bonding and protection against lightning and static electricity 23.1365 Electrical Cables and equipment		VLA.857 Electrical bonding VLA.1365 Electrical Cables and equipment	
23.2340 Design and construction information	23.1523 Minimum Flight Crew 23.1524 Maximum passenger seating configuration 23.1529 Instructions for continued airworthiness 23.1541 Markings and placards: General	With Appendix G	VLA.1529 Instructions for continued airworthiness VLA.1541 Markings and placards: General	

AMC2&3 CS-23/CS-VLA Subpart E — Powerplant

AMC2&3 CS-23 Subpart E available for the requirements of CS-23 are provided in the following table.

CS-23 Amendment 5 SUBPART E –	AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
23.2400 *Powerplant installation*	23.33 Propeller speed and pitch limits 23.901 Installation 23.903 (a), (b), (d) through (g) Engines and auxiliary power units 23.905 (a), (b), (d) through (h) Propellers 23.907 Propeller vibration 23.909 (a), (c), (d), (e) Turbocharger systems 23.925 Propeller clearance 23.934 Turbojet and turbofan engine thrust reverser systems tests 23.943 Negative acceleration 23.951 Fuel System - General 23.955 Fuel Flow 23.957 (b) Flow between interconnected tanks 23.963 (b), (c) Fuel tanks: general 23.967 (a), (b) Fuel tank installation 23.975 Fuel tank vents and carburettor vapour vents 23.979 Pressure fuelling systems 23.997 (a), (c), (d) Fuel strainer or filter 23.999 Fuel system drains 23.1001 (a) through (f) Fuel jettisoning system 23.1011 Oil system General 23.1013 Oil tanks		VLA.33 Propeller speed and pitch limits VLA.901 Installation VLA.903 Engine VLA.905 Propeller VLA.907 Propeller vibration VLA.909 Supercharger VLA.925 Propeller clearance VLA.943 Negative acceleration VLA.951 Fuel System - General VLA.955 Fuel Flow VLA.957 Flow between interconnected tanks VLA.963 Fuel tanks: general VLA.967 Fuel tank installation VLA.975 Fuel tank vents and carburettor vapour vents VLA.999 Fuel system drains VLA.1011 Oil system General VLA.1013 Oil tanks VLA.1015 Oil tank tests VLA.1017 Oil lines and fittings VLA.1019 Oil strainer or filter VLA.1021 Oil system drains VLA.1023 Oil radiators VLA.1041 Cooling – General	

CS-23 Amendment 5 SUBPART E –	AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
	23.1015 Oil tank tests 23.1017 Oil lines and fittings 23.1019 Oil strainer or filter 23.1021 Oil system drains 23.1023 Oil radiators 23.1027 Propeller feathering system 23.1041 Cooling – General 23.1043 Cooling tests 23.1045 Cooling test procedures for turbine engine powered aeroplanes 23.1047 Cooling test procedures for reciprocating engine powered aeroplanes 23.1061 Installation 23.1063 Coolant tank tests 23.1097 Carburettor de-icing fluid system capacity 23.1099 Carburettor de-icing fluid system detail design 23.1101 Induction air preheater design 23.1103 Induction system ducts 23.1105 Induction system screens 23.1107 Induction system filters 23.1109 Turbocharger bleed air system 23.1111 Turbine engine bleed air system 23.1121 Exhaust System - General 23.1125 Exhaust heat exchangers 23.1141 (b), (c), (d) Powerplant controls: general 23.1163 Powerplant accessories 23.1165 Engine ignition systems		VLA.1047 Cooling test procedures for reciprocating engine aeroplanes VLA.1061 Installation VLA.1063 Coolant tank tests VLA.1101 Carburettor air preheater design VLA.1103 Induction system ducts VLA.1105 Induction system screens VLA.1121 Exhaust System - General VLA.1125 Exhaust heat exchangers VLA.1141 Powerplant controls: general VLA.1163 Powerplant accessories VLA.1165 Engine ignition systems VLA.1193 Cowling and nacelle	

CS-23 Amendment 5 SUBPART E –	AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
	23.1193 Cowling and nacelle 23.1197 Fire extinguishing agents 23.1199 Extinguishing agent containers 23.1201 Fire extinguishing system materials 23.1203 (b), (c) Fire detector system			
23.2405 *Power or thrust control systems*	23.904 Automatic power reserve system 23.933 Reversing systems	With Appendix H	None	
23.2410 *Powerplant installation hazard assessment*	23.903(b) through (g) Engines and auxiliary power units 23.909(b), (c) Turbocharger systems 23.937 Powerplant operating characteristics 23.953 Fuel system independence 23.955 Fuel flow 23.959 Unusable fuel supply 23.991 Fuel pumps 23.1001(h) Fuel jettisoning system 23.1011 General 23.1027 Propeller feathering system 23.1109 Turbocharger bleed air system 23.1141(e) Powerplant controls: general 23.1143(g) Engine controls 23.1147 Mixture controls 23.1163 Powerplant accessories 23.1437 Accessories for twin-engine aeroplanes		VLA.903 Engine VLA.909 Supercharger VLA.955 Fuel flow VLA.959 Unusable fuel supply VLA.991 Fuel pumps VLA.1011 General VLA.1141 Powerplant controls: general VLA.1143 Engine controls VLA.1147 Mixture controls VLA.1163 Powerplant accessories	
23.2415 *Powerplant installation*	23.929 Engine installation ice protection 23.1093 Induction system icing protection		VLA.1093 Induction system icing protection VLA.975 Fuel tank vents and carburettor vapour vents	

CS-23 Amendment 5 SUBPART E –		AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
	ice protection	23.975 Fuel tank vents and carburettor vapour vents 23.997 Fuel strainer or filter 23.1105 Induction system screens		VLA.1105 Induction system screens	
23.2420	*reserved*				
23.2425	*Powerplant operational characteris-tics*	23.903(b), (d) through (g) Engines 23.905(c) Propellers 23.909(a) Turbocharger systems 23.934 Turbojet and turbofan engine thrust reverser systems tests 23.939 Turbopropeller-drag limiting systems 23.943 Negative acceleration 23.1142 Auxiliary power unit controls 23.1145 Ignition switches 23.1165 Engine ignition systems		VLA.903 Engine VLA.905 Propeller VLA.909 Supercharger VLA.943 Negative acceleration VLA.1145 Ignition switches VLA.1165 Engine ignition systems	
23.2430	*Powerplant installation, energy storage and distribution systems*	23.951 Fuel System - General 23.953 Fuel system independence 23.954 Fuel system lightning protection 23.955 Fuel flow 23.957 Flow between interconnected tanks 23.959 Unusable fuel supply 23.961 Fuel system hot weather operation 23.963(a), (d), (e) Fuel tank: general 23.965 Fuel tank tests 23.967(a), (c), (d), (e) Fuel tank installation 23.969 Fuel tank expansion space 23.971 Fuel tank sump 23.973 Fuel tank filler connection	Provisions of AMC2 cover only fuel systems	VLA.951 Fuel System - General VLA.955 Fuel flow VLA.957 Flow between interconnected tanks VLA.959 Unusable fuel supply VLA.961 Fuel system hot weather operation VLA.963 Fuel tank: general VLA.965 Fuel tank tests VLA.967 Fuel tank installation VLA.969 Fuel tank expansion space VLA.971 Fuel tank sump VLA.973 Fuel tank filler connection VLA.975 Fuel tank vents and carburettor vapour vents VLA.977 Fuel strainer or filter	Provisions of AMC3 cover only fuel systems

CS-23 Amendment 5 SUBPART E –	AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
	23.975 Fuel tank vents and carburettor vapour vents 23.977 Fuel tank outlet 23.979 Pressure fuelling systems 23.991 Fuel pumps 23.993 Fuel system lines and fittings 23.994 Fuel system components 23.997(b), (d), (e) Fuel strainer or filter 23.999 Fuel system drains 23.1001(a) through (f) Fuel jettisoning system 23.1337(a) Powerplant instruments installation 23.721 Landing gear systems - General		VLA.991 Fuel pumps VLA.993 Fuel system lines and fittings VLA.999 Fuel system drains VLA.1337 Powerplant instruments	
23.2435 *Powerplant installation support systems*	23.1091 Air induction system 23.1101(a) Induction air preheater design 23.1103(a) through (d) Induction system ducts 23.1111(b) Turbine engine bleed air system 23.1121 Exhaust System - General 23.1123 Exhaust system 23.1125 Exhaust heat exchangers	Provisions of AMC2 cover only induction and exhaust systems	VLA.1091 Air induction VLA.1101 Carburettor air preheater design VLA.1103 Induction system ducts VLA.1121 Exhaust System - General VLA.1123 Exhaust manifold VLA.1125 Exhaust heat exchangers	Provisions of AMC3 cover only induction and exhaust systems
23.2440 *Powerplant installation fire protection*	23.995 Fuel valves and controls 23.1103(e), (f) Induction system ducts 23.1141(f) Powerplant controls: general 23.1181 Designated fire zones: regions included 23.1182 Nacelle areas behind firewalls 23.1183 Lines, fittings, and components 23.1189 Shutoff means 23.1191 Firewalls		VLA.995 Fuel valves and controls VLA.1103 Induction system ducts VLA.1141 Powerplant controls and accessories: general VLA.1182 Nacelle areas behind firewalls VLA.1183 Lines, fittings, and components VLA.1191 Firewalls VLA.1193 Cowling and nacelle	

CS-23 Amendment 5 SUBPART E –	AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
	23.1192 Engine accessory compartment diaphragm 23.1193 Cowling and nacelle 23.1195 Fire extinguishing systems 23.1197 Fire extinguishing agents 23.1201 Fire extinguishing system materials 23.1203(a), (e) Fire detector system 23.1435(c) Hydraulic Systems			
23.2445 *Powerplant installation information*	23.1521 Powerplant limitations 23.1522 Auxiliary power unit limitations 23.1529 Instructions for continued airworthiness	With Appendix G	VLA.1521 Powerplant limitations VLA.1529 Instructions for continued airworthiness	

AMC2&3 CS-23/CS-VLA Subpart F — Systems and Equipment

AMC2&3 CS-23 Subpart F available for the requirements of CS-23 are provided in the following table.

CS-23 Amendment 5 SUBPART F – Systems and Equipment	AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
23.2500 General requirements on systems and equipment function	23.1301 Function and installation 23.1303 Flight and navigation instruments 23.1305 Powerplant instruments 23.1309(a) Equipment, systems, and installations 23.1311 Electronic display instrument systems 23.1321 Arrangement and visibility 23.1323 Airspeed indicating system 23.1325 Static pressure system 23.1327 Magnetic direction indicator 23.1329 Automatic pilot system 23.1335 Flight director systems 23.1351(b), (e), (f), (g) Electrical Systems - General 23.1357 Circuit protective devices 23.1361 Master switch arrangement 23.1367 Switches 23.1381 (c) Instrument lights 23.1416 Pneumatic de-icer boot system 23.729(d) Landing gear extension and retraction system 23.843(b) Pressurization tests	23.1305 must be complemented. F3064-18 § 6.2.1.6 provides this AMC	VLA.1301 Function and installation VLA.1303 Flight and navigation instruments VLA.1305 Powerplant instruments VLA.1307 Miscellaneous equipment VLA.1309 Equipment, systems, and installations VLA.1321 Arrangement and visibility VLA.1323 Airspeed indicating system VLA.1325 Static pressure system VLA.1327 Magnetic direction indicator VLA.1351 Electrical Systems - General VLA.1357 Circuit protective devices VLA.1361 Master switch arrangement VLA.1367 Switches VLA.729 Landing gear extension and retraction system VLA.1141 Powerplant controls and accessories: general	VLA.1305 must be complemented. F3064-18 § 6.2.1.6 provides this AMC

CS-23 Amendment 5 SUBPART F – Systems and Equipment	AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
	23.1141(b), (c), (d) Powerplant controls: general 23.1201 Fire extinguishing system materials 23.1203(e) Fire detector system			
23.2505 General requirements on equipment installation	23.1301 Function and installation 23.1437 Accessories for twin-engine aeroplanes		VLA.1301 Function and installation	

CS-23 Amendment 5 SUBPART F – Systems and Equipment	AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
23.2510 Equipment, systems, and installations	23.1309 Equipment, systems, and installations 23.1323 Airspeed indicating system 23.1325 Static pressure system 23.1329 Automatic pilot system 23.1331(b), (c) Instruments using a power source 23.1335 Flight director systems 23.1337(b), (c) Powerplant instruments installation 23.1357 Circuit protective devices 23.1431 Electronic equipment 23.1437 Accessories for twin-engine aeroplanes 23.672(c) Stability augmentation and automatic and power-operated systems 23.677 (d) Trim systems 23.701 Flap interconnection 23.735(d) Brakes 23.775(g) Windshields and windows 23.831(d) Ventilation 23.841(b)(8), (c), (d)(2), (d)(3) Pressurised cabins		VLA.1309 Equipment, systems, and installations VLA.1323 Airspeed indicating system VLA.1325 Static pressure system VLA.1331 Instruments using a power supply VLA.1337 Powerplant instruments VLA.1357 Circuit protective devices VLA.1431 Electronic equipment VLA.677 Trim systems VLA.701 Flap interconnection VLA.735 Brakes VLA.775 Windshields and windows VLA.831 Ventilation	
23.2515 Electrical and electronic system lightning protection	23.1306 Electrical and electronic system lightning protection		None	

CS-23 Amendment 5 SUBPART F – Systems and Equipment	AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
23.2520 High-intensity radiated fields (HIRF) protection	23.1308 High-Intensity Radiated Fields (HIRF) protection		None	
23.2525 System power generation, storage, and distribution	23.1303 Flight and navigation instruments 23.1331(b), (c) Instruments using a power source 23.1351(a), (b), (c) Electrical Systems - General 23.1353 Storage battery design and installation 23.1357 Circuit protective devices		VLA.1303 Flight and navigation instruments VLA.1331 Instruments using a power supply VLA.1351 Electrical Systems - General VLA.1353 Storage battery design and installation VLA.1357 Circuit protective devices	
23.2530 External and cockpit lighting	23.1381 Instrument lights 23.1383(a), (b), (c) Taxi and landing lights 23.1385(a), (b), (c) Position light system installation 23.1387 Position light system dihedral angles 23.1391 Minimum intensities in the horizontal plane of position lights 23.1393 Minimum intensities in any vertical plane of position lights 23.1395 Maximum intensities in overlapping beams of position lights 23.1397 Colour specifications 23.1399 Riding light 23.1401 Anti-collision light system		VLA.1384 External lights	
23.2535 Safety equipment	23.1411 Safety Equipment-General 23.1415 Ditching equipment		VLA.1411 Safety Equipment-General	

CS-23 Amendment 5 SUBPART F – Systems and Equipment	AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
23.2540 Flight in icing conditions	23.1323 Airspeed indicating system 23.1325(b), (g) Static pressure system 23.1419 Ice protection 23.775(f) Windshields and windows		None	
23.2545 Pressurised systems elements	23.1438 Pressurization and pneumatic systems 23.1435(a)(4), (b) Hydraulic Systems 23.1453 Protection of oxygen equipment from rupture		None	
23.2550 reserved				
23.2555 Installation of recorders (e.g. cockpit voice recorders and flight data recorders)	23.1457 Cockpit voice recorders 23.1459 Flight recorders		None	

AMC2&3 CS-23/CS-VLA Subpart G — Flight Crew Interface and other Information

AMC2&3 CS-23 Subpart G available for the requirements of CS-23 are provided in the following table.

CS-23 Amendment 5 SUBPART G – Flight Crew Interface and other Information	AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
23.2600 Flight crew compartment	23.671 Control systems - General 23.677 (a) Trim systems 23.699 Wing flap position indicator 23.729 (e) Landing gear extension and retraction system 23.745 Nose/Tail wheel steering 23.771 (a) Pilot compartment 23.773 Pilot compartment view 23.775 (e), (h)(2) Windshields and windows 23.777 Cockpit controls 23.779 Motion and effect of cockpit controls 23.781 Cockpit control knob shape 23.831 (c) Ventilation 23.1141 (g) Powerplant controls: general 23.1142 Auxiliary power unit controls 23.1143 (a) through (f) Engine controls 23.1145 Ignition switches 23.1147 Mixture controls 23.1149 Propeller speed and pitch controls 23.1153 Propeller feathering controls 23.1155 Turbine engine reverse thrust and propeller pitch settings below the flight regime		VLA.671 Control systems - General VLA.677 Trim systems VLA.699 Wing flap position indicator VLA.729 Landing gear extension and retraction system VLA.745 Nose/Tail wheel steering VLA.771 Pilot compartment VLA.773 Pilot compartment view VLA.775 Windshields and windows VLA.777 Cockpit controls VLA.779 Motion and effect of cockpit controls VLA.781 Cockpit control knob shape VLA.831 Ventilation VLA.1141 Powerplant controls: general VLA.1143 Engine controls VLA.1145 Ignition switches VLA.1147 Mixture controls VLA.1367 Switches	

CS-23 Amendment 5 SUBPART G – Flight Crew Interface and other Information	AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
	23.1157 Carburettor air temperature controls 23.1203 (d) Fire detector system 23.1329 (d) Automatic pilot system 23.1335 Flight director systems 23.1367 Switches 23.1381 (a), (b) Instrument lights 23.1419 (d) Ice protection 23.1435 (a)(2) Hydraulic Systems 23.1523 Minimum Flight Crew			
23.2605 Installation and operation information	23.671 (b) Control systems - General 23.672 (a) Stability augmentation and automatic and power-operated systems 23.679 (a), (b) Control system locks 23.703 Take-off warning system 23.729 (f) Landing gear extension and retraction system 23.783 (e)(3) Doors 23.841 (b)(5), (b)(6), (d)(4), (d)(5) Pressurised cabins 23.991 (c) Fuel pumps 23.1142 Auxiliary power unit controls 23.1301 (b) Function and installation 23.1305 Powerplant instruments 23.1309 (d) Equipment, systems, and installations 23.1322 Warning, caution and advisory lights 23.1326 Pitot heat indication systems 23.1329 (h) Automatic pilot system	23.1305 must be complemented. F3064-18 § 6.2.1.6 provides this AMC	VLA.671 Control systems - General VLA.679 Control system locks VLA.729 Landing gear extension and retraction system VLA.783 Doors VLA.991 Fuel pumps VLA.1301 Function and installation VLA.1305 Powerplant instruments VLA.1309 Equipment, systems, and installations VLA.1322 Warning, caution and advisory lights VLA.1331 Instruments using a power supply VLA.1337 Powerplant instruments VLA.1351 Electrical Systems - General VLA.1561 Safety equipment	VLA.1305 must be complemented. F3064-18 § 6.2.1.6 provides this AMC

CS-23 Amendment 5 SUBPART G – Flight Crew Interface and other Information	AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
	23.1331 (a) Instruments using a power source 23.1335 Flight director systems 23.1337 (b), (d) Powerplant instruments installation 23.1351 (c), (d) Electrical Systems - General 23.1416 (c) Pneumatic de-icer boot system 23.1441 (c) Oxygen Equipment and supply 23.1561 Safety equipment			
23.2610 Instrument markings, control markings and placards	23.733 Tires 23.777 Cockpit controls 23.841 (b)(7) Pressurised cabins 23.1001 (g) Fuel jettisoning system 23.1321 Arrangement and visibility 23.1337 (d) Powerplant instruments installation 23.1450 (c) Chemical oxygen generators 23.1501 General 23.1505 Airspeed limitations 23.1507 Operating manoeuvring speed 23.1511 Flap extended speed 23.1513 Minimum control speed 23.1519 Weight and centre of gravity 23.1521 Powerplant limitations 23.1522 Auxiliary power unit limitations 23.1523 Minimum flight crew 23.1524 Maximum passenger seating configuration 23.1525 Kinds of operation		VLA.777 Cockpit controls VLA.1321 Arrangement and visibility VLA.1337 Powerplant instruments VLA.1501 General VLA.1505 Airspeed limitations VLA.1507 Manoeuvring speed VLA.1511 Flap extended speed VLA.1519 Weight and centre of gravity VLA.1521 Powerplant limitations VLA.1525 Kinds of operation VLA.1541 Marking and Placards - General VLA.1543 Instrument marking: general VLA.1545 Airspeed indicator VLA.1547 Magnetic direction indicator VLA.1549 Powerplant instruments VLA.1551 Oil quantity indicator VLA.1555 Control markings VLA.1557 Miscellaneous marking and placards VLA.1559 Operating limitations placard	

CS-23 Amendment 5 SUBPART G – Flight Crew Interface and other Information	AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
	23.1527 Maximum operating altitude 23.1541 Marking and Placards - General 23.1543 Instrument marking: general 23.1545 Airspeed indicator 23.1547 Magnetic direction indicator 23.1549 Powerplant and auxiliary power unit instruments 23.1551 Oil quantity indicator 23.1553 Fuel quantity indicator 23.1555 Control markings 23.1557 Miscellaneous marking and placards 23.1559 Operating limitations placard 23.1561 Safety equipment 23.1563 Airspeed placards 23.1567 Flight manoeuvre placard		VLA.1561 Safety equipment	
23.2615 Flight, navigation, and powerplant instruments	23.1141 (g) Powerplant controls: general 23.1142 Auxiliary power unit controls 23.1303 Flight and navigation instruments 23.1305 Powerplant instruments 23.1311 Electronic display instrument systems 23.1323 Airspeed indicating system 23.1325 Static pressure system 23.1327 Magnetic direction indicator 23.1337 Powerplant instruments installation	23.1305 must be complemented. F3064-18 § 6.2.1.6 provides this AMC	VLA.1141 Powerplant controls: general VLA.1303 Flight and navigation instruments VLA.1305 Powerplant instruments VLA.1323 Airspeed indicating system VLA.1325 Static pressure system VLA.1327 Magnetic direction indicator VLA.1337 Powerplant instruments	VLA.1305 must be complemented. F3064-18 § 6.2.1.6 provides this AMC
23.2620 Aeroplane Flight Manual	23.1581 Aeroplane Flight Manual and Approved Manual Material - General 23.1583 Operating limitations		VLA.1581 Aeroplane Flight Manual and Approved Manual Material - General VLA.1583 Operating limitations	

CS-23 Amendment 5 SUBPART G – Flight Crew Interface and other Information	AMC2 (CS-23 Amendment 4)	Remarks	AMC3 (CS-VLA Amendment 1)	Remarks
	23.1585 Operating procedures 23.1587 Performance information 23.1589 Loading information		VLA.1585 Operating procedures VLA.1587 Performance information VLA.1589 Loading information	
23.2625 Instructions for Continued Airworthiness	23.1529 Instructions for Continued Airworthiness	With Appendix G	VLA.1529 Instructions for Continued Airworthiness	