

FAA Safety Emphasis Item (SEI) List for Import of Brazilian State of Design Transport Airplane Products and Approvals

Revision Log:

Rev. 0 Dated July 31, 2019 Initial Issue

SEI definition (ANAC-FAA IPA Rev. 2):

- (1) New VA standards where the VA or CA has limited past experience with the application to a product, they have an important impact on the whole product or a critical feature, and engineering judgment is required to establish compliance;
- (2) Airworthiness standards where the VA's and CA's interpretive, advisory, MOC, or guidance materials differ or are insufficient, to an extent that those differences impact the level of safety required by the VA system and could result in VA required changes to the type design or approved manuals. As experience is gained, the VA may choose to reduce the application of this criterion to minimize Non-Basic applications. When interpretive, advisory, MOC, or guidance materials are well understood by both Authorities, full confidence should be given to the CA for determining compliance to those VA SEIs;
- (3) Standards identified for special emphasis by the VA in a data-driven risk assessment analysis for the product class; and
- (4) Subjects linked to known safety conditions that the VA has identified, and for which the VA either has taken, or is in the process of taking, airworthiness action.

Notes:

SEI with a "Y" included in the Part 2 column: Affected projects may be classified as Basic if no other SEI or other non-Basic criteria are applicable, and if the applicant applies the methods of compliance identified in the FAA Position column. (ref. IPA paragraph 3.5.10.4(b)(2))

No.	Standard	Subject	Description (Describe the issue, including any information that can be used to clarify the SEI applicability)	FAA Position (Potential FAA actions and references)	Safety Emphasis Item (SEI)				SEI List Part 2 (see note)
					(1)	(2)	(3)	(4)	
1	25.21(g)(3)	Proof of Compliance – Icing Conditions	Application of Appendix O supercooled large drop icing conditions. SEI applicable Amdt. 25-140 and on. Limited experience with new standard.		Y				
2	25.21(g)(4)	Proof of Compliance – Icing Conditions	Application of Appendix O supercooled large drop icing conditions. SEI applicable Amdt. 25-140 and on. Limited experience with new standard.		Y				
3	25.21(f)	15 knot Tailwind Approval for Takeoff and Landing	Harmonized compliance methods are not available for 15 knot Tailwind Approval for Takeoff and Landing	MOC issue paper		Y			
4	25.1309	Thrust Reverser Removal	SEI applicable to projects in which thrust reversers are removed from, or deactivated on, products originally certified with thrust reversers. Removal/deactivation of thrust reversers introduces system safety considerations for which mature compliance methods are not available. This may include revised operational factor considerations for wet or slippery runways.	MOC issue paper		Y			
5		Interaction of Systems and Structures	Interaction of Systems and Structures for aircraft equipped with systems (such as load alleviation systems) that affect structural performance, either directly or as a result of a failure or malfunction. Applicable to new TC programs, and design changes that involve modification to the flight control system.	Special Conditions		Y			

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					(1)	(2)	(3)	(4)	
6	25.571, 25.671, 25.1309	Certification of Structural Elements in Flight Control Systems	SEI applies only to structural elements in flight control systems. FAA issued Policy Statement PS ANM-25-12 in 2015. This policy statement provides guidance for certifying structural elements in flight control systems. Because of the unique nature of structural elements in systems, which act as both structure and as part of a system, additional guidance is needed on the appropriate application of fatigue and damage tolerance requirements and system safety requirements. The FAA policy provides examples of structural elements that are subject to these regulations and provides guidance on compliance.	MOC issue paper		Y			
7	25.601, 25.671(c)	Rudder Control Reversal Conditions	Applicable to new or modified rudder control systems, or other changes that could impact airplane dynamic response to rudder reversals. There is insufficient FAA guidance that can be used to verify that the characteristics of the rudder control system are appropriate for compliance with sections 25.601 and 25.671(a).	The FAA accepts the rudder reversal load conditions in EASA CS 25.353 with associated guidance in EASA CS 25 Book 2, for CFR compliance.		Y		Y	Y
8	25.365	(1) Small Compartments, (2) Electronic Pressure Control Systems	SEI (1) applies to small compartments for which compliance with 25.365(g) is impractical. FAA is now using an ELOS for certain small compartments, and developing an NPRM to replace that ELOS. SEI (2) applies to electronic pressure control systems: FAA has issued an ELOS, while EASA relies on CS 25.302.	ELOS		Y			
9	25.561, 25.563, 25.801	Ditching	Water impact conditions are not fully defined.	MOC issue paper		Y			
10	25.561, 25.562	Seat adapter plates	SEI applies to installations of multiple single-place seats onto adapter plates, with the adapter plate installed into the airplane seat track (or other structure).	Acceptable MoC are described in FAA policy statements PS-ANM100-2000-00123 and -00129.		Y			Y

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11	25.603, 25.605, 25.613	New, novel or unusual materials or manufacturing processes	For relatively new , novel, or unusual materials and manufacturing process, such as additive manufacturing, welding (thermoplastic composites, laser beam, friction stir welding), the use of ceramic material or magnesium alloys, where limited experience has been gathered so far, it needs to be understood how the applicant is complying with the applicable requirements. Note: Completely new, novel, or unusual materials and processes will automatically lead to non-basic classification.	MOC issue paper		Y			
12	25.571, 25.1529, Appendix H	Fatigue and Damage Tolerance	SEI Applicable only to new TC and changes classified as significant under 14 CFR 21.101. The showing of compliance with fatigue and damage tolerance requirements is a complex task, with many issues to be considered, and with various possible compliance approaches, in particular for new TCs, amended TCs (derivative airplane/model) or significant STCs (such as passenger to freighter conversions). Given the importance of the subject for the overall safety level of the airplane, the means of compliance needs to be understood.	MOC issue paper		Y			
13		Mini-Suites	Installation of mini-suites, i.e., single occupant seat installations surrounded by 4 walls. Direct view, egress and potential ramifications on security are all areas that may require specific methods of compliance, or in some cases an exemption or equivalent level of safety finding.	Special conditions, ELOS, Exemption	Y				
14		Use of Magnesium in the Cabin and Flightdeck (excludes seats designs)	Magnesium is a flammable metal that has historically not been used in the cabin and has been limited in the flightdeck. Flammable metals are not addressed by the current fire safety regulations.	Special conditions	Y				

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15	25.772, 25.795(d)	Airplane security (physical security measures)	Any project involving any airplane (design) security measure. Including, but not limited to, the following specific issues: Inflight passenger access to checked cargo. Secondary flight deck door: Doors installed between the flight deck door and the passenger cabin. The regulation most applicable to the secondary door is § 25.772. Additional requirements include, but are not limited to, regulations relating to rapid decompression, emergency access to the flight deck, emergency evacuation, structural strength, and markings and placards. Airlines may install such a door in order to gain approval to modify procedures currently in place addressing § 121.587(b). Chemical oxygen generator: 14 CFR 25.795(d) requires chemical oxygen generators be secure from deliberate manipulation. This is a new requirement for which no one has yet demonstrated compliance.	MOC issue paper	Y			Y	
16		Active side stick controllers	For active Side Stick controller applications, a means of compliance issue paper may be required to address the associated risks. There is insufficient guidance and all associated issues are evolving.	MOC issue paper		Y			
17	25.679(a)(2)	Control System Gust Locks - Limit Operation of Aircraft	FAA requires an ELOS to 25.679(a)(2) if a physical device of some kind (eg. Throttle interlock) is not used to limit operation of the airplane (e.g. taking off with gust limitation device engaged).	ELOS	Y				

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18	25.601, 25.671(a)	Flight Control in All Attitudes	A means of compliance issue paper may be needed to address continued functionality of flight control systems in conditions of unusual attitudes and rapid maneuvers. There is insufficient guidance.	MOC issue paper		Y			
19	25.601, 25.671(c)(2)	Flight Control System Failure Criteria	FAA allows an ELOS to § 25.671(c)(2) to use the Aviation Rulemaking Advisory Committee's (ARAC) proposed means of compliance. Applicable to new TC programs, and to all design change programs that involve modification of the flight control system.	ELOS		Y			
20	25.671, 25.672	Electronic Flight Control Systems (EFCS)	Applicable to EFCS changes. Mature standards and guidance are unavailable for airplanes with electronic flight control systems. The subject also covers side stick controllers, electronic flight control system failures, and mode annunciation. Special conditions may be needed.	Special conditions		Y			
21	25.671(c), 25.1301, 25.1309	Command Signal Integrity	Applicable to EFCS changes. A means of compliance issue paper may be needed to ensure fly-by-wire flight control systems are adequately evaluated. This area involves new technology with varying methods of compliance that are not completely harmonized.	MOC issue paper		Y			

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22	25.629	Aeroelastic Stability (Flutter)	Applicable to projects requiring a compliance determination to 25.629. To establish the means of compliance with aeroelastic stability requirements for (i) airplanes equipped with feedback control systems that can affect the aeroelastic stability of the airplane, (ii) definition of failure conditions to be considered and (iii) addressing Limit Cycle Oscillation (LCO) and free-play, (iv) determining significance of a modification and extent of testing and analysis required, (v) hydraulic compensator design requirements. Multiple issues, complex and evolving. Recent policy and ELOS have been applied and more rule and policy changes expected.	MOC issue paper, ELOS		Y			
23	25.683	Flight Control System – Operation Tests	Applicable to projects requiring a compliance determination to 25.683. Compliance with 25.683(a) for electronic flight control systems (EFCS): 14 CFR 25.683(a) was originally intended for mechanical control systems, and methodology for EFCS is evolving. Sections 25.683(b) and (c) were added to the CFR at Amendment 25-139 to harmonize with CS 25.683(b) and (c). The FAA has limited experience with application of these safety-critical standards. This SEI is applicable only to projects with Amendment 25-139 in the certification basis.	MOC issue paper	Y	Y			

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24	25.773	Pilot compartment view; Enhanced Vision Systems (EVS), Enhanced Flight Vision Systems (EFVS), Synthetic Vision Systems (SVS) displayed on a head-up display (HUD)	14 CFR Amdt 25-144 introduced a new requirement. A vision system with a transparent display surface located in the pilot's outside field of view, such as a head up-display, head mounted display, or other equivalent display, must meet the requirements of (e)(1) through (e)(4) in nonprecipitation and precipitation conditions. Limited experience with application of new standard to these technologies, previously addressed through special conditions. Special conditions may still be needed for a pre-Amdt. 25-144 certification basis.	MoC issue paper, SC	Y				
25	25.779(b)(1)	Reduced (Flexible) Takeoff Thrust Operations and Throttle Motion	An ELOS to § 25.779(b)(1) may be needed if there is a flight condition where there is an increasing thrust command given when the throttles are reduced (or vice versa). This can be an issue on non-moving throttles.	ELOS		Y			
26	25.803, 25.810	Emergency evacuation demonstration	Applicable to projects requiring a new compliance determination to 14 CFR 25.803 or 25.810. This includes changes to the emergency evacuation escape slides or any changes requiring emergency evacuation substantiation. Escape slide projects are rare, there is not extensive published guidance, and certification is a complex process. Emergency evacuation demonstration is also rare, and typically involves a combination of test and analysis, through a complex process with high visibility.	MoC issue paper	Y				
27	25.831(a)	Acceptable Low Temperature Physiological Environment During Failure Conditions	Applicable to projects requiring a compliance determination to 25.831(a). A method of compliance issue paper may be needed to define acceptable low temperature physiological limits for occupants following an airplane system failure that could cause a drop in the environmental temperature. Insufficient guidance exists.	MoC issue paper		Y			

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28		Cargo Container with Self-Contained Temperature Control System, e.g., Active Unit Load Device (AULD)	AULDs are typically not part of the airplane type design and are approved in accordance with FAA Order 8150.4. Areas of concern include the presence of lithium batteries and active thermal control systems that may include a fan which could adversely impact smoke detection, smoke penetration and halon fire extinguishing agent concentration. For applicants proposing to use active unit load devices for the carriage of cargo, there is no published policy.	MoC issue paper		Y			
29		Fire Extinguishing/Suppression Agent (Halon Replacement)	Halon is being phased out of airplane applications per ICAO deadlines. The use of non-Halon fire extinguishing/suppression agents for use in lavatory trash receptacle bottles, handheld fire extinguishers, engine/APU fire extinguishing and cargo compartment fire suppression should be documented by a means of compliance issue paper. There is insufficient guidance available for new fire extinguishing agents used in lieu of halon	MoC issue paper		Y			
30		Main Deck Class C Cargo Compartment Halon Fire Extinguishing Agent Penetration into Occupied Cabin Areas	An issue paper may be needed to ensure an adequate design means is included and appropriate flight test compliance shown to ensure fire extinguishing agent penetration into occupied areas of the airplane does not occur or occurs at an acceptable level. There is insufficient guidance available.	MoC issue paper		Y			
31		Smart Unit Load Devices	Smart Unit Load Devices are unit load devices that have enhanced fire protection features. Special Conditions may be needed to establish performance requirements for these devices.	Special conditions		Y			
32		Stowage/Baggage Compartment Fire Protection in Remote Areas	A special condition may be needed for fire protection measures in remote areas that contain stowage or baggage compartments.	Special conditions		Y			

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33	25.901(c)	Powerplant installation	Applicable to projects requiring a 25.901(c) compliance determination.			Y			
34	25.901(c)	Uncontrollable High Thrust (UHT)	A draft advisory circular provides a means of compliance with § 25.901(c) as it relates to failures that prevent the flightcrew from controlling thrust through the normal means when actual thrust is higher than commanded (a.k.a., uncontrollable high thrust). Applicants may use the draft advisory circular by referring to it in their project specific certification plan. When the applicant has done everything practical within the scope of the project to assure a compliant design, but still cannot demonstrate full compliance, granting an exemption may be in the public interest.	MoC issue paper, Exemption		Y			
35	25.903(d)	Uncontained Engine and Tire Failure - Debris Penetration of Fuel Tank Composite Structure	Applicable to projects requiring a compliance determination to 25.903(d). Special Conditions may be needed to ensure that impacts to fuel tank composite structure from uncontained engine or tire failures do not penetrate or otherwise induce fuel tank deformation, rupture (for example, through propagation of pressure waves), or cracking sufficient to allow leakage of hazardous quantities of fuel.	Special conditions	Y				
36		Inflight All-Engine Restart	This issue applies to all airplanes powered by high bypass engines, engines with free power turbines, or with limited restart capability.	MoC issue paper		Y			

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37	21.21(b)(2), 25.1093(b)	Potential Engine Damage from Airframe Ice Outside of Icing Conditions	Acceptable compliance methodologies are not fully harmonized to address potential ingestion of wing ice that may form during non-icing conditions (e.g., cold-soaked fuel in wing tanks), shed and cause an all engine failure. This issue is applicable to all aft fuselage mounted engine installations.	MoC issue paper		Y		Y	
38	25.975(a)(7)	Fuel tank vents	There is limited experience applying the new standard.	AC 25.975-1	Y				
39	25.867, 25.963	Composite Wing and Fuel Tank Structure Post Crash Fire Survivability	A special condition may be needed to address §§ 25.867 and 25.963 because of fuel tank ignition sources related to composites in a post-crash fire. Composite material may not be as fire resistant as aluminum and may result in hot spots that cause ignition sources in fuel tanks. Composite structure may not match the existing level of safety that aluminum structure exhibits during a post-crash fire.	Special conditions	Y				
40	25.969	Fuel Tank Expansion Space for Composite Wing	Published policy is not available to address § 25.969. Composite material thermal expansion characteristics may result in less tank volume increase with temperature increase than traditional aluminum fuel tanks. Additional fuel tank expansion space may be needed to provide equivalent margin from fuel spillage provided by conventional aluminum fuel tanks.	MoC issue paper		Y			

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41	25.981(a)(3)	Lightning Protection of Fuel Tank Structure and Systems	Applicable to projects for which CFR part 25 Amdt. 25-141 applies. Special conditions, exemptions, or exceptions under 14 CFR 21.101 may be needed to address fuel tank ignition sources from structural lightning, because compliance with current regulatory standards applicable to fuel tank lightning protection can be impractical. Refer to FAA Policy Statement PS ANM-25.981-02.	Special conditions or exemptions. FAA Policy Statement PS-ANM-25.981-02, dated June 24, 2014.	Y				
42	25.981	Electrostatic Charge During Airplane Fueling of Composite Fuel Tanks	Mature guidance is not available to address fuel tank ignition prevention from electrostatic charge in compliance with § 25.981. During airplane fueling operations, the low electrical conductivity of composite materials could result in isolated parts that can collect electrostatic charge, or may result in longer electrostatic charge relaxation time of the fuel. Additional means may be needed to keep the accumulated charge on the fuel surface at a safe level to prevent an ignition source in the fuel tank.	MoC issue paper		Y			
43	25.981	Fuel Tank Ignition Prevention and Electrical System Changes	Applicable to fuel tank and fuel tank system changes that could alter or introduce potential ignition sources. Subjectivity in determination of change significance under 21.101, and application of Amendment 25-102 or later standards.			Y		Y	
44	25.967(e)	Secondary Fuel Vapor Barrier for Composite Structure	Section 25.967(e) requires fuel tanks to be isolated from the personnel compartments by a fume proof and fuel proof enclosure. There is no published policy to ensure secondary fuel barrier coatings used on traditional aluminum tank construction are compatible for use with fuel tanks made of composites.	MoC issue paper		Y			

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45	25.1093(b)	Induction system icing protection	<p>The FAA adopted new airworthiness standards in Title 14, Code of Federal Regulations part 25 at Amendment 25-140 and part 33 at Amendment 33-34 to include additional icing environments.-The published guidance in AC 20-147A is not sufficient. The following aspects may require FAA involvement:</p> <ol style="list-style-type: none"> 1. Establishing the means of compliance to clarify the need for protection of the engine during icing conditions at all engine power settings, including in-flight idle conditions, and the regulatory need for consideration of the airframe as part of the engine inlet. 2. Means of compliance to address falling and blowing snow. 3. Means of compliance to describe that flight testing may be needed to sufficiently validate an analytical compliance demonstration to in-flight evaluating mixed phase and ice crystal icing (ICI) conditions. Means of compliance for ICI conditions is evolving and engineering judgement is required to determine if an applicant has sufficiently validated their analytical methods. 	FAA policy memorandum dated August 3, 1992 and AC 20-147A	Y	Y		Y	
46	25.863, 25.1187, 25.1189	Flammable Fluid Fire Protection	Published policy is not yet available for flammable fluid fire protection regulations §§25.863, 25.1187 and other relevant regulations.	draft FAA AC 25.863-1		Y			

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47	multiple	APU Certification Requirements	An ELOS to multiple regulations in subpart E, F and G may be needed if the applicant proposes to meet alternative certification standards for the APU. EASA APU standards in CS-25 subpart J cannot be adopted by ELOS without changes since there are significant differences with stricter FAA requirements. If an applicant chooses to use these APU certification requirements, ELOS findings for §§ 25.1103(e), 25.1105 and 25.1305 would not be separately needed since an ELOS standard for these regulations is incorporated into the draft APU installation requirements of this issue paper.	ELOS		Y			
48	25.1305	APU Instruments	An equivalent level of safety (ELOS) finding may be needed to allow certification of an APU installation without certain flight deck instruments required by § 25.1305. A separate issue paper for this ELOS finding would not be necessary if the applicant chooses to comply with draft APU installation requirements dated April 2001 in lieu of existing part 25 requirements since an equivalent level of safety standard for required APU instruments is incorporated into those draft APU installation requirements.	ELOS		Y			

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49		Auxiliary Fuel Tank Installations	Applicable to new or modified auxiliary fuel tank installations. AC 25-8 primarily addresses auxiliary fuel tank installations in cargo compartments. FAA policy is not mature for fuel system and crashworthiness requirements for auxiliary fuel tanks installed in other locations, such as a passenger compartment. Additionally, a method of compliance may need to be established for fuel tank installations in the horizontal stabilizer, to address fuel leaks or spills caused by maneuvers, malfunctions or structural damage.	AC 25-8		Y			
50	25.1305(d)(3)	AVM (Airborne Vibration Monitoring) Indication and Qualifications	Published guidance is not available on this topic, to address installation of a different engine on an existing airplane and §25.1305(d)(3) at Amendment 25-35 was not part of the airplane's pre-modified certification basis. Additionally, a means of compliance may be needed for AVM indicators, including qualification requirements.	MoC issue paper		Y			
51	25.901(c), 25.939, 25.1041 and 25.1091	Backing Using Reverse Thrust (Powerback)	Published guidance does not adequately cover this subject if an applicant requests type design approval to use reverse power or thrust from the airplanes engines to move the airplane backwards in lieu of using a tug.	MoC issue paper		Y			
52	25.1305, 25.1549	Digital Display of Engine Parameters	Published guidance does not adequately cover this subject. SEI applicable if any required engine parameter, such as those specified in § 25.1305, is nominally displayed in a digital-only format. If the marking requirements of § 25.1549 are applicable to that engine parameter, an equivalent level of safety finding will likely be needed.	ELOS		Y			

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53	25.1141(f)	Fuel Shutoff Valves position indication	An equivalent level of safety finding may be needed if the position of the fuel shutoff valve is not adequately indicated as required by § 25.1141.	ELOS		Y			
54	21.21(b)(2)	Fire Extinguishing Plumbing and Wiring Connections	Applicants must reduce the likelihood of electrical and plumbing cross-connections in fire detection, suppression and extinguishing systems. Published policy is not available.	MoC issue paper		Y			
55	25.1309	Artificial Intelligence and Machine Learning	The use of artificial intelligence/machine learning requires specific guidance that is not available in current material	MoC issue paper		Y			
56	25.1309	MBD for hardware development	The use of Model Based Development (MBD) within the development process of custom devices requires guidance that is not available in current material	MoC issue paper		Y			
57		Security Protection of Aircraft Systems and Networks	Special conditions may be needed if internal or external sources are allowed to transmit or write to aircraft systems, databases or servers connected to systems that perform functions required for the safe operation of the airplane. The evolving nature of security threats and compliance methods justifies continued identification as SEI.	Special Conditions		Y			
58		Automatic Dependent Surveillance - Broadcast (ADS-B In)	For ADS-B In. Evolving technology and compliance methods.	AC 20-172B		Y			

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59		Use of Ground-Based Augmentation System (GBAS) in CAT II/III operations	GBAS CAT II/III approach, autoland and rollout guidance not yet mature. Technologies include Global Positioning System - Local Area Augmentation System (GPS-LAAS), Global Navigation Satellite System (GNSS) Landing System (GLS). A means of compliance issue paper is needed for CAT I GLS autoland, rollout or takeoff. AC 20-138D Change 2 provides guidance for CAT I GLS approaches.	MoC issue paper		Y			
60		Integration of other GNSS Constellations with GPS or GPS/WAAS	Emerging Technology/Issue. New means of compliance may be needed for GNSS equipment to use other GNSS constellations (e.g. GLONASS, GALILEO, COMPASS).	MoC issue paper		Y			
61		Using Autopilot/Auto Throttles/Flight Director During Traffic Alert and Collision Avoidance System (TCAS) Resolution Advisory	Mature guidance is not yet available for using the Autopilot/Auto Throttles/Flight Director during a TCAS Resolution Advisory maneuver such that the behavior is predictable and unambiguous to the flightcrew.	MoC issue paper		Y			
62		Vertical Required Navigation Performance (RNP)	Mature guidance is not yet available for Vertical RNP.	MoC issue paper		Y			
63		Time of Arrival Control (TOAC) - Also Known as Required Time of Arrival (RTA)	Mature guidance is not yet available for navigation systems intended to provide time of arrival control.	MoC issue paper		Y			
64		Flight Crew Electronic Voice Checklist	Mature guidance is not yet available for flight crew electronic voice checklists, for designs not previously approved, or for any design intended for non-normal checklists.	MoC issue paper		Y			

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65		Touch Screen Interface and Control Device in Flight Deck	Mature guidance is not yet available for installing touch screens in the flight deck in lieu of physical controls (e.g., knobs, buttons, levers) to address the effect of touch screen controls on pilot workload, the demand for pilot attention, and the potential for crew error or inadvertent control inputs.	MoC issue paper		Y			
66		Display of Aeronautical Charts	Mature guidance is not yet available for approval of the display of aeronautical charts on any of the installed displays (e.g., display of departure, arrival and approach procedures). Data Driven Charts is an area of evolving technology.	MoC issue paper		Y			
67		Use of Portable Electronic Devices (PEDs) to Control Installed Airplane Systems in the Cabin	Mature methods of compliance are not available for use of PEDs to control certain aircraft systems.	MoC issue paper		Y			
68		Use of Portable Electronic Devices (PEDs) to Control Installed Airplane Systems in the Flight Deck	Mature methods of compliance are not available for use of PEDs to control certain aircraft systems.	MoC issue paper		Y			
69	25.1383	LED Landing and Taxi Light Night Performance	A mature compliance method for 14 CFR 25.1383(a)(2) and (3) is not yet available to address unique aspects of LED landing and taxi light installation, ICAs and performance at night.	MoC issue paper		Y			
70	25.1420	Supercooled large drop icing conditions	Limited experience in application of Appendix O conditions.		Y				
71	25.1441(d)	Oxygen equipment and supply	Means of compliance is affected by decompression requirements of Amdt. 25-87. There is insufficient certification guidance for oxygen systems used at cabin pressure altitude above 40,000 feet.			Y			

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					(1)	(2)	(3)	(4)	
72	25.1445(a)	Medical and Therapeutic Oxygen Distribution Systems	Applicable to Medical or therapeutic oxygen systems connected to the passenger supplemental oxygen system. For the FAA, Special conditions are required for oxygen distribution systems in addition to those addressed by part 25 for passengers and crew members (e.g., medical oxygen, therapeutic oxygen). The intent of the special conditions would be to extend the requirements of § 25.1445(a) to this oxygen distribution system to ensure that the minimum supply required by the passengers is reserved.	Special conditions		Y			
73	25.1521(c)(2)	Fuel Temperature Indication	Published policy is not available to address § 25.1521(c)(2) if fuel temperature indication is not provided.	MoC issue paper		Y			
74	25.1535	ETOPS approval	SEI applicable to changes for which a compliance determination/verification to 14 CFR 25.1535 is required. Published policy is not available for FAA ETOPS requirements, including definition of specific atmospheric icing conditions that must be considered to develop critical ice shapes for ETOPS diversions in accordance with 14 CFR 25.1535 and Appendix K25.1.3.	MOC issue paper	Y	Y			
75		Steep approach landing (SAL)	There is no CFR correspondence to CS 25 Appendix Q. The FAA addresses SAL in AC 25-7C which is more restrictive than the new CS 25 Appendix Q. ANAC's MOC FCAR for SAL differs in several details from the FAA's AC 25-7. The SAL standards continue to evolve among all major authorities.	AC 25-7C		Y			

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					(1)	(2)	(3)	(4)	
76	26.21	Limit of validity	SEI applies only to changes classified as significant under 14 CFR 21.101 for airplanes affected by § 26.21. Includes WFD maintenance actions determination (inspection start point and structural modification point), LOV and binding schedule. Changes to approved binding schedules must be processed as exemptions under 14 CFR part 11. For airplanes not affected by § 26.21 (transport category airplanes for which TC application was made after January 14, 2011) sections 25.571, 25.1529, and Appendix H apply.	AC 120-104	Y				
77	26.23	Extended limit of validity	SEI applicable only to the first LOV extension for a model. Includes WFD maintenance actions determination (inspection start point and structural modification point) and extended LOV.	AC 120-104	Y				
78		Main Deck Class E Cargo Compartment - Protection of Critical Systems	An issue paper may be needed to ensure an adequate design means is included to protect critical systems located in, or in the vicinity of, the main deck cargo compartment are adequately protected from the effects of a main deck cargo fire.	MoC issue paper		Y			
79	25.831, 25.1181, 25.1187, 25.1191	Volatile Gas Ingestion During Composite Material APU Installation Fire	A means of compliance must be established for demonstrating that an auxiliary power unit (APU) installation will not create a hazard to the airplane, crew or passengers during an APU fire when all or part of the APU, its mounting, inlet, surrounding structure or tail cone is constructed of composite materials.	MoC issue paper	Y				

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					(1)	(2)	(3)	(4)	
80		Laser-based missile defense systems	You need special conditions for laser-based missile defense system installations. Applicants may also need to request an equivalent level of safety finding to § 25.251(b) as described in TAI List item "Vibration and Buffeting Requirements for External Modifications." Policy Statement PS-AIR-25-17, "Structural Certification Criteria for Antennas, Radomes, and Other External Modifications," identifies structural requirements and guidance for certification of external modifications	Special conditions, ELOS		Y			
81		Composite Structure in Aircraft Seats	You may need an issue paper to establish means of compliance for seats fabricated using composite materials or bonded joints in the primary load path. While the applicable regulations remain unchanged, the means of compliance for composite construction may differ from those traditionally used for seats of metallic construction.	MoC issue paper	Y				
82	25.783(f)	Pressurization Doors Not Fully Closed and Locked	New or modified airplanes with § 25.783(f) at Amendment 25-114 in the certification basis require a means to prevent initiation of pressurization for doors that are not fully closed and locked, that is highly reliable. SEI also applicable when the certification basis for § 25.783(f) is prior to Amendment 25-114. The FAA considers this type of failure (i.e., inadvertent opening due to failure of the pressurization prevention system) must be extremely improbable.		Y				
83		Composite Fuselage In-Flight Fire Safety/Flammability	You may need special conditions to ensure that composite fuselage construction does not reduce the level of in-flight fire safety when compared with a conventional metallic fuselage. These special conditions include evaluation of a fire propagating along the inside surface of the fuselage and the potential for toxic by-products.	Special conditions	Y				

No.	Standard	Subject	Description (Describe the issue, including any information that can be used to clarify the SEI applicability)	FAA Position (Potential FAA actions and references)	Safety Emphasis Item (SEI)				SEI List Part 2 (see note)
					(1)	(2)	(3)	(4)	
84	25.853, 25.856(b)	Composite Fuselage Post-Crash Fire Survivability	You may need an issue paper to establish an equivalent level of safety (ELOS) with §§ 25.853 and 25.856(b) to show a composite fuselage is as safe for passengers as a similarly sized metallic fuselage during a post-crash fire. The ELOS needs to address flame penetration, smoke and toxic gas emission.	ELOS	Y				
85	25.809(a)	Fiber Optic Viewing Means	You may need an issue paper to establish a means of compliance with § 25.809(a) at Amendment 25-116 when fiber optic viewing is used in lieu of a window.	MoC issue paper	Y				
86	25.561, 25.603, 25.789	Glass in the Cabin (e.g., Glass Floor, Glass Partition)	You may need an issue paper to establish special conditions or a means of compliance with §§ 25.561, 25.603 and 25.789 depending on the extent of use of glass in the cabin.	MoC issue paper	Y				
87		Inflatable Restraints in Seats/Walls	You need special conditions for inflatable restraints in seats and walls because the regulations do not contain adequate or appropriate safety standards for inflatable restraints. The special conditions address the safety performance of the system and the system's integrity against inadvertent activation	Special conditions	Y				
88		Inflight Access to Class C Cargo Compartments	You need special conditions for in-flight access to a Class C cargo compartment because the regulations do not contain adequate or appropriate safety standards. The special conditions provide additional requirements necessary to ensure sufficient cabin isolation from fire and smoke, and for passenger safety while occupying the Class C compartment during flight. In addition, the special conditions address the security concern related to in flight access to unscreened (checked) baggage.	Special conditions	Y				

No.	Standard	Subject	Description (Describe the issue, including any information that can be used to clarify the SEI applicability)	FAA Position (Potential FAA actions and references)	Safety Emphasis Item (SEI)				SEI List Part 2 (see note)
					(1)	(2)	(3)	(4)	
89	25.813(e), SFAR 109	Interior Doors	<p>If the airplane certification basis has § 25.813(e) at Amendment 25-1 through 25-115, you need to petition for an exemption for installation of an interior door that separates passenger compartments, unless the airplane meets the applicability criteria for Special Federal Aviation Requirements (SFAR) 109. The FAA has only granted exemptions for airplanes that are privately operated. SFAR 109 can be used for airplanes that meet the applicability criteria of the SFAR.</p> <p>If the airplane certification basis has § 25.813(e) at Amendment 25-116 or higher, you need to petition for an exemption for an interior door that is installed in any egress path between any passenger seat that is occupied for takeoff and landing and any passenger emergency exit. SFAR 109 can be used for airplanes that meet the applicability criteria of the SFAR.</p>	SFAR 109, exemption	Y				
90	25.562, 25.785	Medical Stretchers	You may need to petition for an exemption for medical stretchers for an airplane certification basis that includes §§ 25.562 and 25.785 at Amendment 25-64 or later.	Exemption	Y				
91		Overhead or Under Floor Crew Rest Areas	You may need special conditions for overhead or under floor crew rest areas because the regulations may not contain adequate or appropriate safety standards.	Special Conditions	Y				
92		Side-Facing Seat	You need special conditions for single and multiple place side-facing seats on airplanes that include Amendment 25-64 in their certification basis. Seats meeting these special conditions have no operational limitations. Special Federal Aviation Requirements (SFAR 109) can be used for airplanes that meet the applicability criteria of the SFAR.	Special conditions, SFAR 109	Y				
93	25.1353(a), 25.1431(a)(c)	Cockpit Door Locking Systems (CDLS)	A means of compliance issue paper may be needed to address §§ 25.1353(a), 25.1431(a) and 25.1431(c) because of concerns with electromagnetic compatibility of CDLS	MoC issue paper	Y				

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					(1)	(2)	(3)	(4)	
94	25.997, 25.1305(c)(6), 25.1309(c)	Fuel Filter Bypass Indication	An equivalent level of safety issue paper may be needed to address §§ 25.997 and 25.1305(c)(6) if the fuel filter required by § 25.997 is not installed in the location specified in § 25.997. A means of compliance issue paper may be needed to address §§ 25.1305(c)(6) and 25.1309(c) if more than one fuel filter is used and/or if other fuel system components (e.g., fuel-oil heat exchanger) are installed upstream of the main fuel filter to ensure the flightcrew receives appropriate alerting of possible fuel contamination. Both subjects may need to be addressed.	ELOS		Y			
95		Adaptive or Smart Environmental Control System (ECS)	Emerging Technology/Issue. Applicable if an applicant proposal uses an adaptive or smart ECS to provide reduced ventilation flow while continuing to provide an acceptable environment for the flight deck and cabin. Adaptive or smart ECS systems require special conditions or other unique MOC's that require FAA involvement.	MoC issue paper, special conditions		Y			
96	25.841(b)(1), (b)(2)	Cabin Outflow Valve	ECS systems that combine multiple functions into a single cabin pressurization control valve requires an ELOS to 25.841(b)(1) or (b)(2).	ELOS		Y			
97	25.831(g)	Cabin Temperature-Humidity Limits	An equivalent safety finding may be needed for any airplane that exceeds the limits of § 25.831(g) at Amdt 25-87.	ELOS		Y			
98	25.841(a)	High Altitude Decompression	There is limited guidance for compliance with 25.841(a)(1), (2) and (3) at amendment 25-87 so applicants may require a unique MOC issue paper.	MoC issue paper		Y			

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					(1)	(2)	(3)	(4)	
99	25.1203	Engine Fire Detectors in Tailpipe	An equivalent safety finding with § 25.1203 may be needed if there are no fire detectors in the engine tailpipe.	ELOS		Y			
100	25.1182(a)	Engine Strut Fire Protection - Hydraulic Components	An equivalent safety finding to § 25.1182(a) may be needed for fire resistant flammable fluid carrying lines (hydraulic system components) in engine pod attaching structure. This also relates to the type of fire applicants are assuming.	ELOS		Y			
101	25.933	Flight Critical Thrust Reverser	An issue paper may be needed to define a means of compliance with the controllability requirements of § 25.933, or an equivalent level of safety based on reliability in lieu of the controllability requirements of § 25.933.	MoC issue paper, ELOS		Y			
102	25.1019(a), 25.1305(c)(7)	Warning Means for Engine Oil Filter Contamination	An issue paper may be necessary if the provisions of § 25.1019(a) and § 25.1305(c)(7) are not wholly met by the same single filtering device. This may require an equivalent level of safety finding.	MoC issue paper, ELOS		Y			
103		Integration of Automatic Deployable Flight Recorders (ADFR)	New means of compliance (MOC) would be required for adding a flight, voice or combi recorder that is intended to separate from an airplane during or after an accident. Additional MOC, equivalent level of safety finding and possibly exemptions may also be needed if the ADFR is intended to replace, rather than to augment, either of the two currently required fixed recorders. Requires coordination with flight standards in the country of registry as both part 25 and operating regulations are affected	MoC issue paper, ELOS, Exemption		Y			