External Transport All Categories Report

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	Product Type	Issue ID#	Category	Subject	Description
1	Transport	T-0101	Airframe Loads and Flutter	Interaction of Systems and Structures	Special conditions are needed to evaluate the interaction of systems and structures for aircraft with automatic flight control systems. Similar special conditions (e.g., Special Conditions Nos. 25-704-SC, 25-696-SC and 25-693-SC) applied to various airplane models address these novel or unusual design features. An applicant may request similar special conditions by submitting a letter to the Aircraft Certification Service office responsible for the certification project.
2	Transport	T-0104	Airframe Loads and Flutter	Unconventional Landing Gear Arrangements	You may need special conditions for airplanes configured with unconventional landing gear arrangements. The special conditions may be based on ARAC recommendations.
3	Transport	T-0106	Airframe Loads and Flutter	Automatic Speed Protection for Design Dive Speed	You may need special conditions (in lieu of § 25.335(b)) if you use an automatic speed protection system. In particular, you will need special conditions if an automatic speed protection system is used to reduce the airplane's design dive speed (VD/MD).
4	Transport	T-0107	Airframe Loads and Flutter	Limit Pilot Forces for Side Stick Controls	Special conditions are needed, in lieu of § 25.397(c), to define limit pilot forces and torques when a side-stick controller is used on the flight deck. Similar special conditions (e.g., Special Conditions Nos. 25-607-SC and 25-585-SC) applied to various airplane models address these novel or unusual design features. An applicant may request similar special conditions by submitting a letter to the Aircraft Certification Service office responsible for the certification project.
5	Transport	T-0108	Airframe Loads and Flutter	Winglet Failure Conditions Considered for Flutter Compliance	Draft Policy Statement PS-AIR-25.629-02 provides a means of compliance with § 25.629 (Aeroelastic Stability Requirements) for freedom from flutter for certain winglet failure conditions, including the loss of at least one winglet. Applicants may use the draft policy statement by referring to it in their project specific certification plan.
6	Transport	T-0109	Airframe Loads and Flutter	Design Roll Maneuver Requirement for Electronic Flight Controls or Other Non-linear Control Systems	Section 25.349 does not anticipate the use of electronic flight controls for design roll maneuvers. Special conditions are needed to add a roll check maneuver, define the design condition in terms of cockpit control displacement instead of aileron deflection and to address designs that use roll spoilers or other non-linear control systems. Similar special conditions (e.g., Special Conditions Nos. 25-706-SC, 25-705-SC and 25-697-SC) applied to various airplane models address these novel or unusual design features. An applicant may request similar special conditions by submitting a letter to the Aircraft Certification Service office responsible for the certification project.
7	Transport	T-0111	Airframe Loads and Flutter	Compliance Issues Associated with a High Design Dive Mach Number Very Near Mach 1.0	You may need an issue paper to establish a means of compliance with § 25.629 if the airplane has a Design Dive Mach Number very near Mach 1.0.
8	Transport	T-0112	Airframe Loads and Flutter	Failure Criteria Considered Under the Aeroelastic Stability Requirements of § 25.629	You may need an issue paper to establish an equivalent safety finding if you use the failure criteria specified in the Aviation Rulemaking Advisory Committee's (ARAC) proposal that addresses § 25.671 or § 25.1309, in lieu of the requirements found in §§ 25.671 and 25.1309 to comply with § 25.629(d)(9).
9	Transport	T-0113	Airframe Loads and Flutter	Aeroelastic Stability Envelopes For Takeoff, Approach, and/or Landing Configurations	You may need an issue paper to establish a means of compliance with § 25.629 for high lift devices, landing gear doors, and other devices susceptible to aeroelastic instabilities in the takeoff, approach, and/or landing configurations.
10	Transport	T-0114	Airframe Loads and Flutter	Aeroservoelastic Stability Requirements	You may need an issue paper to establish a means of compliance with § 25.629 for airplanes equipped with feedback control systems that can affect the aeroelastic stability of the airplane.
11	Transport	T-0115	Airframe Loads and Flutter	Load Condition for Airplanes with an Automatic Braking System	An automatic braking system may apply maximum braking at the main wheels before the nose touches down and thereby cause a high nose gear sink rate and potentially higher gear and airframe loads. An issue paper for developing proposed special conditions may be needed to address the potentially higher structural loads that could result from an automatic braking system.
12	Transport	T-0116	Airframe Loads and Flutter	Compliance Considerations Associated with Aileron Control Reversal	You may need an issue paper to establish a means of compliance with § 25.629 for airplanes equipped with ailerons that are used only at lower speeds and "locked out" at higher speeds to preclude the aeroelastic instability of aileron control reversal.
13	Transport	T-0117	Airframe Loads and Flutter	Certification and Continued Airworthiness of Unbalanced and Mass Balanced Control Surfaces	You may need an issue paper to establish a means of compliance with § 25.629 for airplanes equipped with control surfaces, including all-movable control surfaces and tabs, that rely on retention of restraint stiffness, damping, or mass balance for flutter prevention.
14	Transport	T-0118	Airframe Loads and Flutter	Ground Gust Limit Loads for Fully Mechanical Control Systems (No Hydraulic Damping)	You may need an issue paper to establish a means of compliance with § 25.415(e) for fully mechanical control systems. The maximum dynamic factor of 1.6 specified in § 25.415(e) as the default in absence of a rational analysis may be inadequate for low damped or undamped mechanical control systems. Therefore, the applicant will need to determine an appropriate dynamic factor, potentially exceeding 1.6, through testing and analysis. NEW
15	Transport	T-0203	Structures	Finite Element Model Validation	You may need an issue paper to establish a means of compliance when a finite element model is used to show compliance with § 25.305 (Strength and Deformation) and § 25.307 (Proof of structure).
16	Transport	T-0204	Fire Protection Structures	Fire Protection of Flight Structure (e.g., Titanium Engine Mounts)	You may need an issue paper to establish a means of compliance with § 25.865 (Fire protection of flight controls, engine mounts, and other flight structure) for structure composed of materials such as titanium or non-metallic materials. Engine-Aircraft Interface Item if engine/engine installation is affected. This issue appears in two technical areas, Structures and Fire Protection, for increased visibility.
17	Transport	T-0206	Structures	Pressurization Doors Not Fully Closed and Locked	Standardization Item. 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. Contact the Policy and Innovation Division if 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.
18	Transport	T-0208	Structures	Crashworthiness of Composite Structure	Special conditions are needed to ensure the survivable crashworthiness characteristics (e.g., retention of items of mass, maintenance of acceptable acceleration and loads experienced by the occupants, maintenance of a survivable volume, maintenance of occupant emergency egress paths) for a composite fuselage are equal to or better than those of a similarly sized airplane fabricated from traditionally used metallic materials. Similar special conditions (e.g., Special Conditions Nos. 25-537-SC, 25-528-SC and 25-362-SC) applied to various airplane models address these novel or unusual design features. An applicant may request similar special conditions by submitting a letter to the Aircraft Certification Service office responsible for the certification project. An issue paper is also needed to document a means of compliance with the proposed special conditions.
19	Transport	T-0209	Structures	Damage Tolerance for Bonded Joints	You may need an issue paper to establish a means of compliance with § 25.571(b) for damage tolerance of bonded joints.
20	Transport	T-0210	Structures	Composite Structure Design & Construction (Materials, Fabrication Methods)	The mechanical behavior of structure fabricated using composite materials is highly dependent not only the base materials (i.e. prepreg, dry fiber, woven fabric, sandwich core, etc.) used, but also the fabrication methods (i.e. autoclave cure, oven cured, resin injected (Resin Transfer Molded (RTM)/Vacuum Assisted Resin Transfer Molded (VARTM)), etc.) used in production. You may need an issue paper to establish a means of compliance with §§ 25.603, 25.605 and 25.613 to develop appropriate design values for composite materials that account for variability in constituent element properties, geometry and manufacturing processes.
21	Transport	T-0213	Structures	Operation Test Compliance for Fly-by-Wire Flight Control Systems	Current regulations and guidance materials may not adequately address operation test requirements for a fly-by-wire (FBW) flight control system. Specifically, the application of an 80 percent limit pilot load during operation tests, as required by § 25.683, may not be appropriate for certain FBW flight control systems. You may need an issue paper to establish a means of compliance or an equivalent level of safety with § 25.683.
22	Transport	T-0214	Structures	Additive Manufacturing Design & Construction (Materials, Fabrication Methods)	Additive Manufacturing (AM) is a relatively new manufacturing process and describes the process of joining materials to make objects from three dimensional (3D) model data using a sequential layering process. This manufacturing technique is sometimes referred to as 3D printing. AM is a generic term that spans a diverse range of techniques using a wide range of machines and technologies, such as Powder Bed Fusion (PBF), Directed Energy Deposition (DED), and Material Extrusion using energy sources such as lasers, electron beams, or thermal energy. Each of these AM process may have unique considerations. If the use of AM is proposed, then the applicant (through the appropriate validation or certification office) should provide the information defined in the AM Applicant Specific Guidance Memorandum to AIR-621, Materials and Structural Properties Section, for awareness and to support certification projects. An Issue Paper may be required based on the applicant's response to the memorandum. Applicants can request the memorandum from their certification or validation branch.
23	Transport	T-0215	Cabin Safety Structures	Cargo Related Projects	Standardization Item. Notify Policy and Innovation Division about any project related to carriage of cargo in transport category airplanes (e.g., new pallets, pallet couplers, cargo loading systems, "TSO equivalent hardware," unit load devices) to mitigate potential safety risks associated with shifting of cargo during flight. Policy No. PS-ANM-25-32, dated 08/11/2017, provides additional information and guidance on this standardization item. This issue appears in two technical areas, Structures and Cabin Safety, for increased visibility.
24	Transport	T-0216	Structures	Establishing a Limit of Validity	Fatigue and damage-tolerance engineering protocol for composite aircraft structures differ significantly from engineering practices for metallic structure. This includes the testing of metallic, hybrid, and composite structures. As a result, you may need an issue paper to establish an equivalent level of safety with § 25.571(b) for setting a limit of validity (LOV) and demonstrating by full-scale fatigue test evidence that widespread fatigue damage will not occur in the airplane structure up to LOV.
25	Transport	T-0217	Structures	Qualification of a Structural Health Monitoring (SHM) System for Detection of Damage in Structure	You may need an issue paper to establish a method of compliance with §§ 25.571 and 25.1529 for a Structural Health Monitoring (SHM) system. An SHM system evaluates the integrity of structure by acquiring and analyzing data from on-board sensors that interface with an electronic device (either on-board or off-board) that processes the data and provides an indication of the health of structure in terms of the existence of damage (e.g., fatigue damage). An SHM technology capable of reliably detecting damage of a specific nature and size over a specific line, area, or volume is a candidate alternative to conventional non-destructive inspections (NDI) such as visual, eddy current, ultrasonic, and X-ray inspections methods. This approach for detecting structural damage may supplement or eliminate the need for an inspector to physically access and assess structure. Over the past 30 plus years, industry has relied on accessing structure to assess its overall integrity and, as part of that assessment, perform NDI such as visual and eddy current inspections, to detect structural damage. The current industry practice and guidance used to validate conventional NDI techniques may not be adequate as a method of compliance.

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26	Transport	T-0301	Avionics	Enhanced Vision Systems (EVS), Enhanced Flight Vision Systems (EFVS), Combined Vision Systems (CVS), Synthetic Vision Systems (SVS), and Synthetic Vision Guidance Systems (SVGS)	A means of compliance issue paper is needed for EVS, CVS, and EFVS. Draft Advisory Circular 20-185A provides a means of compliance for the SVS and SVGS. Applicants may use the draft advisory circular by referring to it in their project specific certification plan. Amendment 25-144, effective 3/21/2017, added paragraph (e) to 14 CFR 25.773 and provides appropriate safety standards to address vision systems (i.e., EVS, EFVS, CVS and SVS) with transparent displays such as a head up display or other equivalent display (TAI List item "Head Mounted Display (HMD) System" addresses HMD installations). Therefore, the special conditions are no longer necessary. Reference the NextGen Avionics Guidance Summary for additional details
27	Transport	T-0307	Avionics	Integrated Modular Avionics (IMA) Systems	Standardization Item. AC 20-170 provides guidance for IMA installations. Notify Policy and Innovation Division if an applicant proposal uses TSO authorizations to gain installation approval or if there are issues arising from suppliers who previously used the now-canceled AC 20-145.
28	Transport	T-0311	Avionics	Vertical Required Navigation Performance (RNP)	NEXTGEN Technology: An issue paper may be needed to establish an acceptable means of compliance for Vertical RNP.
29	Transport	T-0312	Avionics	Time of Arrival Control (TOAC) - Also Known as Required Time of Arrival (RTA)	NEXTGEN Technology: An issue paper may be needed for navigation systems intended to provide time of arrival control.
30	Transport	T-0314	Avionics	Space-Based Augmentation System (SBAS) - e.g., Global Positioning System - Wide Area Augmentation System (GPS-WAAS)	Standardization Item. Notify Policy and Innovation Division about any project related to applicants requesting to use DO-178C Level C flight management system (FMS) software for hazardous operations (e.g., localizer performance with vertical guidance (LPV) capability). Reference the NextGen Avionics Guidance Summary for additional details.
31	Transport	T-0315	Avionics	Ground-Based Augmentation System (GBAS) - e.g., Global Positioning System - Local Area Augmentation System (GPS-LAAS), Global Navigation Satellite System (GNSS) Landing System (GLS)	Draft Advisory Circular 20-191 provides a means of compliance for CAT II/III GLS approaches, autoland, rollout or takeoff. Applicants may use the draft advisory circular by referring to it in their project specific certification plan. 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. Reference the NextGen Avionics Guidance Summary for additional details.
32	Transport	T-0316	Avionics	Automatic Dependent Surveillance - Broadcast (ADS-B)	Standardization Item. AC 20-165B provides a means of compliance for ADS-B Out installations. For equipment approved under TSO-C195a, AC 20-172A provides a means of compliance for initial situation awareness ADS-B In applications (i.e., EVAcq, SURF, VSA, AIRB, and ITP). For equipment approved under TSO-C195b, AC 20-172B provides a means of compliance for additional applications (i.e., ATAS and CAVS). Reference the NextGen Avionics Guidance Summary for additional details.
33	Transport	T-0320	Avionics	Air Traffic Service (ATS) Data Communication System	Standardization Item. AC 20-140C provides a means of compliance for the following interoperability (interop) designators: ACARS ATS, FANS 1/A+, ATN B1, and B2. For the SATCOM (Classic Aero & SBD) and VDL M2 sub-network designators, equipment approved under a previous TSOA (i.e., TSO-C132a or earlier revision, TSO-C159c or earlier revision, TSO-C160a (or TSO-C160 with TSO-C160a multi-frequency capabilities), as applicable) may receive the associated designator. Reference the NextGen Avionics Guidance Summary for additional details.
34	Transport	T-0321	Avionics	Unique Flight Deck Failure Modes and Effects	An issue paper may be needed for complex integrated avionics installations incorporating many airplane functions that were historically supported with federated (i.e., non-integrated) systems. Many system functions that were typically separated with limited interdependence are now very interrelated and highly integrated. Certain failure modes having a limited effect in federated systems may now have a cascading effect on other systems.
35	Transport	T-0322	Avionics	Using Autopilot/Auto Throttles/Flight Director During Traffic Alert and Collision Avoidance System (TCAS) Resolution Advisory	An issue paper may be needed to establish an acceptable means of compliance 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.
36	Transport	T-0325	Avionics	Class 2 Electronic Flight Bag (EFB) Provisions	Standardization Item. AC 20-173 provides guidance for Class 2 EFB provisions, however, Policy Statement ANM-01-111-165 provides additional guidance if the power disconnect switch is not located away from the EFB/PED or cradle.
37	Transport	T-0328	Avionics	Airport Map Displays (AMD)	NEXTGEN Technology: An issue paper may be needed for installations of AMDs with own-ship position that are not part of an Electronic Flight Bag (EFB).
38	Transport	T-0329	Avionics	Integration of Other Global Navigation Satellite System (GNSS) Constellations with Global Positioning System (GPS) or Global Positioning System/Wide Area Augmentation System (GPS/WAAS)	Emerging Technology/Issue. NEXTGEN Technology: Notify Policy and Innovation Division if an applicant proposal includes GNSS equipment using other GNSS constellations (e.g., GLONASS, GALILEO, COMPASS).
39	Transport	T-0337	Avionics	Barometric Vertical Navigation (Baro-VNAV)	Standardization Item. AC 20-138D, paragraph 11-1.b, provides guidance for newly installed Baro-VNAV systems incorporating automated temperature compensation for all segments in the approach procedure, including the missed approach holding waypoint. Reference the NextGen Avionics Guidance Summary for additional details.
40	Transport	T-0338	Avionics	Display of Aeronautical Charts	A means of compliance issue paper may be needed 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 for which an issue paper will be needed.
41	Transport	T-0340	Avionics	Using Autopilot to Conduct Emergency Descent Maneuver	An issue paper may be needed to establish an acceptable method of compliance for using the autopilot to conduct an emergency descent maneuver (either automatic or pilot selectable).
42	Transport	T-0341	Avionics	Electronic Standby Direction Indicator (Compass)	An issue paper documenting an equivalent level of safety (ELOS) finding is needed for an integrated electronic standby instrument interfaced with a remote-mounted magnetic flux detector to provide a full-time display of stabilized magnetic heading in lieu of the non-stabilized magnetic compass in § 25.1303(a)(3).
43	Transport	T-0342	Avionics	Global Navigation Satellite System (GNSS)-Aided Inertial Reference Systems (IRS) or Attitude Heading Reference Systems (AHRS)	A means of compliance issue paper may be needed for GNSS-aided IRS or AHRS used to provide navigation coasting capability in the absence of GNSS or to provide enhanced heading, velocity or attitude information. An issue paper is not necessary for loosely coupled GNSS-IRS integrations with an inertial navigation component compliant with 14 CFR 121, appendix G.
44	Transport	T-0343	Avionics	Head Mounted Display (HMD) System	A means of compliance issue paper is needed for an HMD installed as a head up display equivalent. A proposed certification basis that does not include § 25.1302 is inadequate and may need a G-1 issue paper to establish the appropriate certification basis. Refer to TAI List item "Enhanced Vision Systems (EVS), Enhanced Flight Vision Systems (EFVS), Combined Vision Systems (CVS), Synthetic Vision Systems (SVS), and Synthetic Vision Guidance Systems (SVGS)" for related guidance on vision systems.
45	Transport	T-0344	Avionics	Uploading Flight Plan Information from an Uncertified Source	Standardization Item. There is a potential for display of misleading information when flight plan information is uploaded into the Flight Management System (FMS) from an uncertified source (e.g., a Portable Electronic Device (PED)). This issue is not applicable to an FMS interfacing to datalink meeting the guidance in AC 20-140C. Uploading flight plan information into the FMS has been allowed with procedures for pilot confirmation of the flight plan route. However, pilot confirmation may be difficult to achieve when the pilot cannot verify uploaded information or if it is too difficult or cumbersome. The Aircraft Certification Office responsible for the certification project should evaluate this aspect and notify Policy and Innovation Division about any issue.
46	Transport	T-0345	Avionics Systems and Equipment	Display of EFB Information on Installed Displays	A means of compliance issue paper may be needed for approval of Portable Electronic Devices (PED) to display Electronic Flight Bag (EFB) information on installed airplane systems in the flight deck. This issue appears in two technical areas, Systems and Equipment and Avionics, for increased visibility.
47	Transport	T-0346	Avionics	Radio Altimeters	Emerging Technology/Issue. Notify Policy and Innovation Division (AIR-600) of applications for design approvals including radio altimeters. New 5G C-band spectrum use (expected as early as Dec 5, 2021 in the US and in varying stages of implementation around the world) poses a potential risk to the operation of this equipment. Because there is no clear and common understanding of what constitutes safe integration of current or newly proposed equipment in the new spectrum environment, AIR-600 needs to be aware and may be involved.
48	Transport	T-0347	Avionics	Display of Non-primary Flight and Navigation Information on PFDs	A means of compliance issue paper may be needed for the approval of the display of non-primary flight and navigation information on the Primary Flight Display (PFD) while the aircraft is on the ground. The presentation of moving maps (2D, 3D) to include color, geographically correct landmarks, and incorporation of air and ground traffic with respect to ego and exocentric views on the PFD or MFD may necessitate a means of compliance issue paper. This is to ensure displayed information is presented in a cogent manner consistent with the intent of regulations and current guidance.

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49	Transport	T-0348	Avionics	Retention of Information on PFD Declutter	A means of compliance issue paper may be needed for the approval of a display or other primary flight reference that does not retain the failure messages, flags, or comparative monitoring alerts related to the information required by § 25.1303. If the display declutters, it needs to retain all applicable information essential to the identification of erroneous or misleading primary flight information; especially if the declutter was caused by the diverging spread of value between two sources of information used to display primary flight information.
50	Transport	T-0401	Cabin Safety	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.
51	Transport	T-0402	Cabin Safety	Emergency Exit Marker & Locator Signs	You may need an issue paper to establish an equivalent level of safety with § 25.812(b) to allow text-based emergency-exit signs smaller than required by § 25.812(b) in small cabins. This equivalent safety finding cannot be used with graphical/symbolic exit signs.
52	Transport	T-0403	Cabin Safety	Cooktops	Special conditions are needed to provide safety standards for cooktops. Cooktops introduce high heat, smoke, and the possibility of fire into the passenger cabin environment. Applicants must satisfactorily address these potential hazards to the airplane and its occupants. Similar special conditions (e.g., Special Conditions Nos. 25-334-SC and 25-269-SC) applied to various airplane models address these novel or unusual design features. An applicant may request similar special conditions by submitting a letter to the Aircraft Certification Service office responsible for the certification project. Applicants may use SFAR 109 for airplanes that meet the applicability criteria of the SFAR.
53	Transport	T-0404	Cabin Safety	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. You do not need an issue paper if you are following AC 20-168 for glass video monitors. Note that for EASA validations, means of compliance (MOC) are not harmonized with respect to testing conducted to satisfy either 25.601 or special conditions (SC) that are generated. EASA has published an MOC to CS25.601 and the FAA addresses this issue via MOC/SC issue paper followed by special conditions. The EASA MOC accepts expulsion of glass particles (glass throw) resulting from necessary impact testing; the FAA does not allow any glass throw. For example, see the issue paper criteria under acceptable MOCs/fracture testing.
54	Transport	T-0406	Cabin Safety	Side-Facing Seats	Special conditions are needed for single and multiple place side-facing seats on airplanes with amendment 25-64 or later in the certification basis. Attachment 1 of Policy Statement PS-ANM-25-03-R1 provides criteria for special conditions to address fully side-facing seats (i.e., seats oriented in the aircraft with the occupant facing 90 degrees to the direction of aircraft travel). An applicant may request similar special conditions by submitting a letter to the Aircraft Certification Service office responsible for the certification project. Designs that are not completely addressed by the policy statement special condition criteria and that are not oblique seats (see Oblique Seats) require additional coordination with Policy and Innovation Division. Applicants may use Special Federal Aviation Regulation (SFAR) 109 for airplanes that meet the SFAR 109 applicability criteria. Note that the FAA currently has no injury criteria for seats oriented at greater than 45 but less than 90 degrees. Applicants proposing seats in that range should supply PMHS dynamic seat test results supporting any proposals.
55	Transport	T-0407	Cabin Safety	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.
56	Transport	T-0408	Cabin Safety	Ditching Dam	On several programs, a ditching dam has been utilized to allow a floor level exit to qualify as a ditching exit. The dam effectively raises the bottom sill of the door to a level higher than the water level outside. You will likely need an issue paper to establish an equivalent level of safety with § 25.807(i) for this installation.
57	Transport	T-0409	Cabin Safety	Child Shoulder Harnesses for Seats	You need special conditions for child shoulder harnesses for seats. The airworthiness regulations do not contain adequate or appropriate safety standards for safety restraint devices, such as a shoulder harness, specifically designed for use by small children. Note, the operating requirements prohibit the use of "vest-type child restraints, and harness-type child restraints." You will likely need to petition for an exemption from the applicable operating rules to be allowed to use these devices in the U.S.
58	Transport	T-0410	Cabin Safety	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.
59	Transport	T-0411	Cabin Safety	Interior Doors	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. 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.
60	Transport	T-0412	Cabin Safety	Large Surface Area Seat Panels	Special conditions are needed to address heat release and smoke emission requirements for seats with large surface area composite or plastic panels (such as those often installed in first class or business class sections) in airplanes with 20 or more passenger seats. Similar special conditions (e.g., Special Conditions Nos. 25-572-SC and 25-512-SC) applied to various airplane models address these novel or unusual design features. An applicant may request similar special conditions by submitting a letter to the Aircraft Certification Service office responsible for the certification project.
61	Transport	T-0413	Cabin Safety	Graphical/Symbolic Exit Signs	You may need an issue paper to establish an equivalent level of safety with §§ 25.811(g) and 25.812(b) to allow the use of specific graphics/symbols in lieu of the text-based exit signs specified in § 25.812(b).
62	Transport	T-0417	Cabin Safety	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.
63	Transport	T-0418	Cabin Safety	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.
64	Transport	T-0419	Cabin Safety	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.
65	Transport	T-0424	Cabin Safety	Mini-suites	Installation of mini-suites, i.e., single occupant seat installations surrounded by 4 walls, may require an issue paper to address several compliance concerns. 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.
66	Transport	T-0425	Cabin Safety	Emergency Evacuation Substantiation (incl. Escape Slides)	Standardization Item. Coordinate with Policy and Innovation Division about any project involving a new compliance determination to 14 CFR 25.803 or 25.810. This includes changes to the emergency evacuation escape slide installations or any changes requiring emergency evacuation substantiation. Escape slide projects are rare, there is not extensive published guidance and certification is a complex process. Escape slides have historically been part of the airplane type certificate and are seldom changed, except by the original equipment manufacturer. The Technical Standard Order for escape slides (TSO-C69c) provides much of the necessary performance standards to show compliance with the installation requirements, but is not complete. For example, the escape slide affects compliance with § 25.803, which requires evacuation of the airplane within 90 seconds. Emergency evacuation testing is also rare. These tests provide data on evacuation rates, escape system performance, and the behavior of evacuees (passengers and crewmembers who evacuate the airplane) during the tests. Evacuation substantiation is usually a combination of test and analysis and is also a complex process with very high visibility.
67	Transport	T-0426	Cabin Safety Structures	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. This issue appears in two technical areas, Structures and Cabin Safety, for increased visibility.
68	Transport	T-0427	Cabin Safety	Oblique Seats	Special conditions are needed for side-facing seats installed at angles greater than 18 degrees up to and including 45 degrees from the centerline of the airplane as measured from the forward direction (oblique seats) on airplanes with amendment 25-64 or later in the certification basis. Appendix B of Policy Statement PS-AIR-25-27 provides criteria for special conditions to address these novel or unusual design features. An applicant may request similar special conditions by submitting a letter to the Aircraft Certification Service office responsible for the certification project. Designs that are not completely addressed by the policy statement special condition criteria require additional coordination with Policy and Innovation Division.
69	Transport	T-0428	Cabin Safety	Executive Interiors	Exemptions are necessary for any executive interior projects that are beyond the scope of SFAR 109.
70	Transport	T-0502	Electrical Systems	Operation Without Normal Electrical Power	Engine-Aircraft Interface Item. Special conditions are needed to address § 25.1351(d) due to the greater use of modern electronics in safety critical applications such as displays, engine controls, flight controls, etc. Similar special conditions (e.g., Special Conditions Nos. 25-668-SC and 25-583-SC) applied to various airplane models address these novel or unusual design features. An applicant may request similar special conditions by submitting a letter to the Aircraft Certification Service office responsible for the certification project.
71	Transport	T-0504	Electrical Systems	Lithium Batteries - Rechargeable	Special conditions are needed for rechargeable lithium battery installations except for those with less than 2 watt-hours of energy that are not required for safe operation of the airplane and meet UL 1642, UL 2054 or International Electrotechnical Commission 62133. Similar special conditions (e.g., Special Conditions Nos. 25-714-SC and 25-728-SC) applied to various airplane models address these novel or unusual design features. An applicant may request similar special conditions by submitting a letter to the Aircraft Certification Service office responsible for the certification project. Draft Advisory Circular 20-184A provides a means of compliance with the proposed special conditions. Applicants may use the draft advisory circular by referring to it in their project specific certification plan.
72	Transport	T-0505	Electrical Systems	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.
73	Transport	T-0507	Electrical Systems	Exterior Lighting Chromaticity	An equivalent level of safety finding may be needed to approve the color of exterior position lights which do not meet the chromaticity coordinates specified in § 25.1397.
74	Transport	T-0508	Electrical Systems	LED Landing and Taxi Light Night Performance	An issue paper to establish a means of compliance with § 25.1383(a)(2) and (3) may be needed to address unique aspects of LED landing and taxi light installation, ICAs and performance at night.
75	Transport	T-0509	Electrical Systems	Single Flight Deck Switch Control for Left and Right Landing Lights	An issue paper documenting an equivalent level of safety with § 25.1383(b) is needed to address the use of a single switch in the flight deck for controlling both the left and right landing lights.

	Product Type	Issue ID#	Category	Subject	Description
76	Transport	T-0512	Electrical Systems	Lithium Batteries - Non-Rechargeable	Special conditions are needed for non-rechargeable lithium battery installations except for either of the following cases: - Button/coin cell batteries with less than 2 watt-hours of energy that are not required for safe operation of the airplane and meet UL 1642. - Batteries installed on an airplane which has a type certificate that covers no in-production airplane models. Similar special conditions (e.g., Special Conditions Nos. 25-713-SC, 25-707-SC, 25-687-SC and 25-683-SC) applied to various airplane models address these novel or unusual design features. An applicant may request similar special conditions by submitting a letter to the Aircraft Certification Service office responsible for the certification project. Draft Advisory Circular 20-192 provides a means of compliance with the proposed special conditions. Applicants may use the draft advisory circular by referring to it in their project specific certification plan. Transport Airplane Position Paper No. TAPP-25.1353-1 provides a means of compliance with the proposed special conditions, and certain title 14, Code of Federal Regulations (14 CFR) part 25 requirements, for installations with non-rechargeable lithium batteries in AmSafe NexGen electronic module assemblies (EMA). Applicants may use this Transport Airplane Position Paper by referring to it in their project specific certification plan.
77	Transport	T-0601	Fire Protection	Stowage/Baggage Compartment Fire Protection in Remote Areas	A special condition may be needed for fire protection measures in certain remote areas that contain combustibles and ignition sources. Special conditions may be needed.
78	Transport	T-0602	Fire Protection	Flammable Fluid Fire Protection	Transport Airplane Position Paper No. TAPP-25.863-1 provides a means of compliance with §§ 25.863, 25.1187 and other relevant regulations for flammable fluid fire protection. Applicants may use this Transport Airplane Position Paper by referring to it in their project specific certification plan. Engine-Aircraft Interface Item if engine/engine installation is affected.
79	Transport	T-0603	Fire Protection Propulsion	Fire Extinguishing Plumbing and Wiring Connections	Draft Policy Statement PS-ANM-25-38 provides a means of compliance to reduce the likelihood of electrical and plumbing cross-connections in fire detection, suppression and extinguishing systems. Applicants may use the draft policy statement by referring to it in their project specific certification plan. This issue appears in two technical areas, Fire Protection and Propulsion, for increased visibility.
80	Transport	T-0604	Fire Protection	Use of Magnesium in the Cabin and Flightdeck	You may need special conditions where a design uses magnesium in the cabin or flightdeck because 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.
81	Transport	T-0605	Fire Protection	Cargo Container with Self-Contained Temperature Control System, a.k.a. 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.
82	Transport	T-0606	Fire Protection	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.
83	Transport	T-0607	Fire Protection	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.
84	Transport	T-0608	Fire Protection	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. Engine-Aircraft Interface Item if engine/engine installation is affected.
85	Transport	T-0609	Fire Protection	Main Deck Class E Cargo Compartment - Protection of Critical Systems	Transport Airplane Position Paper No. TAPP-25.855-1 ensures that applicants include an adequate design means to protect critical systems located in, or in the vicinity of, the main deck cargo compartment from the effects of a main deck cargo fire. Applicants may use this Transport Airplane Position Paper by referring to it in their project specific certification plan. The Aircraft Certification Service office responsible for the certification project must document any design requirements or characteristics used to resolve an unsafe feature or characteristic as part of the certification basis in (as applicable) the Certification Basis section of the type certificate data sheet or in the Limitations and Conditions section of the supplemental type certificate.
86	Transport	T-0701	Flight Controls	Flight Control in All Attitudes	An issue paper may be needed to address continued functionality of flight control systems in conditions of unusual attitudes and rapid maneuvers.
87	Transport	T-0702	Flight Controls	Control System Gust Locks - Limit Operation of Aircraft	If a physical device of some kind (e.g. throttle interlock) is not used to limit operation of the airplane (e.g. taking off with gust limitation device engaged), an equivalent safety finding may be needed.
88	Transport	T-0703	Flight Controls	Electronic Flight Control Systems (EFCS)	There are certification issues related to 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.
89	Transport	T-0704	Flight Controls	Flight Control System Failure Criteria	You may need an issue paper to establish an equivalent level of safety with § 25.671(c)(2) to use the Aviation Rulemaking Advisory Committee's (ARAC) proposed means of compliance.
90	Transport	T-0705	Flight Controls	Flight Control Surface Position Awareness	Special conditions are needed for airplanes equipped with Electronic Flight Control Systems to provide a means of conveying control surface position awareness to the flightcrew to preclude inadvertently reaching a control surface limit. Similar special conditions (e.g., Special Conditions Nos. 25-743-SC, 25-639-SC and 25-587-SC) applied to various airplane models address these novel or unusual design features. An applicant may request similar special conditions by submitting a letter to the Aircraft Certification Service office responsible for the certification project.
91	Transport	T-0801	Flight Test	Vibration and Buffeting Requirements for External Modifications	Section 25.251(b) requires that 'each part of the airplane must be demonstrated in flight to be free from excessive vibration under any appropriate speed and power conditions up to Vdf/Mdf'. The FAA has determined that if it can be shown by an acceptable method that the original compliance finding for this rule remains valid (i.e., no vibration/buffet issues exist due to the change), an equivalent level of safety may be shown. However, if the original certification for this rule does not remain valid due to potential effects of the external modification, direct compliance with the rule must be re-demonstrated. Generally speaking, a new compliance finding is not required for small blade antennas or protuberance height profiles less than one inch, located in benign aerodynamic locations on the fuselage, away from control surfaces and probes.
92	Transport	T-0806	Flight Test	Thrust Reverser Removal	Contact Policy and Innovation Division to determine if a G-1 issue paper is needed to establish an adequate certification basis for the following projects: - Removal of engine thrust reversers, or - Engines with thrust reversers replaced by engines without thrust reversers.
93	Transport	T-0807	Flight Test	Foreign Validation of 15 knot Tailwind Approval for Takeoff and Landing	Standardization Item. Engine-Aircraft Interface Item. AC 25-7D provides a means of compliance with § 25.21(f) for a 15 knot tailwind approval for takeoff and landing. Note that foreign civil aviation authorities are not harmonized on the means of compliance and interpret/apply AC 25-7D differently than the FAA.
94	Transport	T-0808	Flight Test	Aircraft Operations After Unattended Ground Cold Soak	Engine-Aircraft Interface Item. An issue paper is needed to document an acceptable method of showing compliance with the requirements of Title 14, Code of Federal Regulations (14 CFR) 25.729(d), 25.773(c), 25.951(a), 25.952(a), 25.1091(a), 25.1309(a), 25.1435(c)(1), 25.1521(a), and 25.1527 which requires that the compliance will be shown for systems functions under any foreseeable operating condition. The applicant must demonstrate airplane systems operate within normal limits after prolonged unattended exposure to cold-soaked ambient conditions to show compliance with § 25.1527.
95	Transport	T-0901	Fuel System	Fuel Tank Ignition Prevention and Electrical System Changes	Standardization Item. Electrical system changes can create fuel tank ignition sources. Contact Policy and Innovation Division to determine the applicability of § 25.981 at Amendment 25-102 or later in accordance with § 21.101.
96	Transport	T-0903	Fuel System	Fuel Tank Vent Fire Protection (Flame Arresters)	Standardization Item. Fuel tank designs must prevent a fuel tank explosion caused by the propagation of flames, from external fires, through the fuel tank vents. - Applicants for new type certificates must comply with § 25.975 at the amendment level in effect on the date of application (i.e., amendment 25-143 or later). - Applicants for an amended type certificate or supplemental type certificate project, that includes a significant product-level change where the changed area and areas affected by the change affects compliance with § 25.975, must comply with the amendment level in effect on the date of application (i.e., amendment 25-143 or later), unless one of the exceptions in § 21.101 applies. If one of the exceptions in § 21.101 applies, the resulting certification basis may be deemed inadequate and require a later amendment level. AC 25.975-1 provides an acceptable means of compliance with § 25.975(a)(7).
97	Transport	T-0904	Fuel System	Fuel System/Cockpit Interface Safety Analysis	Engine-Aircraft Interface Item. A means of compliance issue paper may be needed, particularly for certification projects of airplanes with two crew cockpits, to address considerations for safety analysis of the fuel system in relation to cockpit interface issues in compliance with §§ 25.901, 25.903, 25.955, 25.1305, 25.1337, 25.1501, 25.1523.
98	Transport	T-0905	Fuel System	Fuel Filter Bypass Indication	Engine-Aircraft Interface Item. 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.
99	Transport	T-0906	Fuel System	Fuel Temperature Indication	A means of compliance issue paper may be needed to address § 25.1521(c)(2) if fuel temperature indication is not provided. Recommend a new reference rule of § 25.1501(b).
100	Transport	T-0907	Fuel System	Fuel Shutoff Valves	Engine-Aircraft Interface Item. An equivalent level of safety finding may be needed if the position of the fuel shutoff valve is not adequately indicated in compliance with § 25.1141.
101	Transport	T-0908	Fuel System	Alternative Fuel Tank Structural Lightning Protection	A means of compliance issue paper, special conditions, or exemptions may be needed to address a fuel tank ignition sources from structural lightning because of unique challenges in compliance with § 25.981(a)(3). Composite materials are not as thermally or electrically conductive as conventional aluminum wing tank structure. This novel design feature and the difficulty in detecting failures of structural elements makes compliance with § 25.981(a)(3) uniquely challenging and potentially impractical. Refer to FAA Policy Memo PS-ANM-25.981-02, dated June 24, 2014.

	Product Type	Issue ID#	Category	Subject	Description
102	Transport	T-0909	Fuel System	Composite Wing and Fuel Tank Structure Post Crash Fire Survivability	A special condition may be needed to address §§ 25.853 and 25.856 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.
103	Transport	T-0910	Fuel System	Secondary Fuel Vapor Barrier for Composite Structure	Section 25.967(e) requires fuel tanks to be isolated from the personnel compartments by a fumeproof and fuelproof enclosure. A means of compliance issue paper may be needed to assure secondary fuel barrier coatings used on traditional aluminum tank construction are compatible for use with fuel tanks made of composites.
104	Transport	T-0911	Fuel System	Fuel Tank Expansion Space for Composite Wing	A means of compliance issue paper may be needed 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.
105	Transport	T-0912	Fuel System	Electrostatic Charge During Airplane Fueling of Composite Fuel Tanks	A means of compliance issue paper may be needed 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.
106	Transport	T-1003	Human Factors	Pilot's Non-openable Window	Transport Airplane Position Paper No. TAPP-25.773-1 provides a means of compliance with §§ 25.773(b)(4) and 25.775(e) for certification projects that do not have an openable window for the first pilot. Applicants may use this Transport Airplane Position Paper by referring to it in their project specific certification plan.
107	Transport	T-1004	Human Factors	Flightcrew Electronic Voice Checklist	For flightcrew electronic voice checklists, a means of compliance issue paper may be needed for designs not previously approved, or for any design intended for non-normal checklists.
108	Transport	T-1005	Human Factors	Flight Test Requirements for Effects on Pilot Compartment Glare and Reflections	An equivalent level of safety finding issue paper is needed if an applicant intends to conduct a ground test to show compliance with the night test requirement of § 25.773(a)(2) with regard to glare and reflections on the flight deck.
109	Transport	T-1006	Human Factors	Touch Screen Interface and Control Device in Flight Deck	For projects that do not include § 25.1302 in the certification basis, Transport Airplane Position Paper No. TAPP-25.777-1 provides an acceptable means of compliance for installing touch screen controls in the flight deck in lieu of traditional physical controls (e.g., knobs, buttons and levers). The Transport Airplane Position Paper addresses the effect on pilot workload, the demand for pilot attention and the potential for flightcrew error or inadvertent control inputs. Applicants may use this Transport Airplane Position Paper by referring to it in their project specific certification plan. If the airplane certification basis includes § 25.1302, the following advisory circulars provide guidance: - AC 25.1302-1, "Installed Systems and Equipment for Use by the Flightcrew," and - AC 20-175, "Controls for Flight Deck Systems."
110	Transport	T-1007	Human Factors	Air Data Sensor Heat Activation and Alerting	There have been several in-service incidents in which the flightcrew has failed to activate the air data sensor heat. Under severe weather conditions this condition may be catastrophic. If the applicant's design does not include automatic activation of air data sensor heating, an issue paper may be needed to establish acceptable means of compliance to §§ 25.1301, 25.1309, 25.1322, and 25.1326 with regard to air data sensor heating for projects that do not include § 25.1302 in the certification basis.
111	Transport	T-1102	Icing	Engine Icing Protection	Engine-Aircraft Interface Item. A means of compliance issue paper may be needed to show compliance to § 25.1093(b). This issue paper clarifies 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.
112	Transport	T-1103	Icing	Icing Protection - Electro-impulse Deice System	A means of compliance issue paper may be needed for an electro-impulse deice system. Ref: §§ 25.571, 25.1353, 25.1419, 25.1581 and 25.1585.
113	Transport	T-1106	Icing	Powerplant Installation Ice Crystal Icing for Amendment 25-140	Engine-Aircraft Interface Item. 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. Section 25.1093(b) now includes evaluating mixed phase and ice crystal icing (ICI) effects on the powerplant installation. An issue paper may be needed to develop a means of compliance with § 25.1093(b) to describe that flight testing may be needed to sufficiently validate an analytical compliance demonstration to in-flight ICI conditions.
114	Transport	T-1201	Mechanical Systems	Cabin Pressurization - High Elevation Airports	An equivalent safety finding may be needed for cabin pressurization during high elevation takeoff and landing operations if landing fields are higher than approximately 8,000 feet (Ref. § 25.841(a)) or 10,000 feet (Ref. § 25.841(b)). An exemption may also be needed if landing fields are higher than approximately 14,000 feet (Ref. § 25.1447).
115	Transport	T-1202	Mechanical Systems	Liquid Oxygen Systems	Special condition may be needed for design and installation criteria for a liquid oxygen system, due to lack of specific regulation.
116	Transport	T-1203	Mechanical Systems	Oxygen Equipment for Airplanes Operating Above 40,000 Feet	Means of compliance is affected by decompression requirements of Amendment 25-87. An issue paper may be needed.
117	Transport	T-1204	Mechanical Systems	High Altitude Decompression	Engine-Aircraft Interface Item. An exemption from aspects of § 25.841(a) may be needed to establish cabin altitude limits affected by decompression requirements of 14 CFR part 25, Amendment 25-87. An exemption is needed for any airplane that will exceed the limits of § 25.841.
118	Transport	T-1205	Mechanical Systems	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.
119	Transport	T-1206	Mechanical Systems	Cabin Outflow Valve	An equivalent safety finding may be needed for cabin outflow valve and safety valve functions combined in a single valve. Ref: § 25.841
120	Transport	T-1208	Mechanical Systems	Potable and Waste Water Systems	Draft Policy Statement PS-ANM-25-30 provides a means of compliance for systems designed to minimize the possibility of leaks and minimize the potential for formation of ice that may result from leaks which could pose a hazard to the airplane, its occupants, and/or persons and property on the ground. Applicants may use the draft policy statement by referring to it in their project specific certification plan.
121	Transport	T-1209	Mechanical Systems	Yaw Oscillations	A means of compliance may be needed to ensure rudder control system has acceptable handling qualities and no hazardous characteristics
122	Transport	T-1210	Mechanical Systems	Command Signal Integrity	Transport Airplane Position Paper No. TAPP-25.671-1 provides a means of compliance with §§ 25.671(c)(2), 25.1301 and 25.1309 to ensure applicants adequately evaluate fly-by-wire flight control systems, and control signals are not adversely altered by internal and external interference. Applicants may use this Transport Airplane Position Paper by referring to it in their project specific certification plan.
123	Transport	T-1211	Mechanical Systems	Acceptable Low Temperature Physiological Environment During Failure Conditions	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.
124	Transport	T-1215	Mechanical Systems	Oxygen Distribution System	Special conditions may be 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.
125	Transport	T-1216	Mechanical Systems	Adaptive or Smart Environmental Control System (ECS)	Emerging Technology/Issue. Notify Policy and Innovation Division 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.
126	Transport	T-1217	Mechanical Systems	Installation of Non-required Disinfection and Air Cleaning Equipment	Emerging Technology/Issue. Notify Policy and Innovation Division if an applicant proposal includes installation of disinfection and/or air cleaning equipment. These devices may produce ozone and ionized particulates that can adversely affect systems (e.g., smoke detectors) and/or occupant safety. These devices may use UV radiation that can adversely affect interior materials and/or occupant safety.
127	Transport	T-1301	Noise	Part 36 Noise Requirements for Foreign Certified Aircraft	Engine-Aircraft Interface Item. An issue paper may be needed to address compliance with Part 36 noise requirements for new validation projects for most countries.
128	Transport	T-1302	Noise	Noise Control Act of 1972	Engine-Aircraft Interface Item. An issue paper may be needed to address compliance with Noise Control Act of 1972 and FAA Order 1050.1D, which are in addition to Part 36 noise requirements. This issue paper is generally only needed for new TC projects.
129	Transport	T-1401	Propulsion	Flight Critical Thrust Reverser	Engine-Aircraft Interface Item. 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.
130	Transport	T-1402	Propulsion	Uncontrollable High Thrust (UHT)	Engine-Aircraft Interface Item. Draft Advisory Circular 25.901-2X 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 a petition for exemption may be in the public interest.
131	Transport	T-1403	Propulsion	Reverse Thrust and Propeller Pitch Settings Below the Flight Regime	Engine-Aircraft Interface Item. The provisions of the current § 25.1155 have proven inadequate. Until that requirement is harmonized with the current EASA CS 25.1155, an issue paper may be needed to apply the EASA CS standards, thereby assuring each control for selecting propeller pitch settings below the flight regime (a.k.a."Beta" Mode Operation) or reverse thrust for turbo-jet powered airplanes, provides acceptable protections against both intentionally and unintentionally making such a selection under prohibited operating conditions.
132	Transport	T-1404	Propulsion	Inflight All-Engine Restart	Engine-Aircraft Interface Item. An issue paper may be needed to address engine restart following loss of all engine power. This issue applies to all airplanes powered by high bypass engines, engines with free power turbines, or with limited restart capability. Certification Authorities for Large Transport Aircraft (CATA) Worklist Item TCCA-003 provides acceptable alternatives to the detailed rotor lock screening test in Policy Statement No. PS-ANM-25-02, "Guidance for Screening for Engine Rotor Lock in Transport Category Airplanes During Aircraft Certification," and clarifies areas where experience shows applicants require more information from the FAA. Applicants should document proposed deviations outside these acceptable alternatives in the "Inflight All-Engine Restart" issue paper.

	Product Type	Issue ID#	Category	Subject	Description
133	Transport	T-1405	Propulsion	Backing Using Reverse Thrust (Powerback)	Engine-Aircraft Interface Item. An issue paper may be needed 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.
134	Transport	T-1406	Propulsion	Potential Engine Damage from Airframe Ice Outside of Icing Conditions	Engine-Aircraft Interface Item. An issue paper may be needed 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.
135	Transport	T-1407	Propulsion	APU Inlet Fire Protection	In lieu of showing that an APU inlet duct is fireproof for a sufficient distance upstream of the APU compartment as required by § 25.1103(e), an APU control system that detects hot gas reverse flow and automatically shuts down the APU before the hot gases can create a hazard may provide an equivalent level of safety. 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 APU inlet fire protection is incorporated into those draft APU installation requirements.
136	Transport	T-1408	Propulsion	Engine and APU Fire Protection	An issue paper may be needed to address nacelle skins that do not meet the fireproof requirement of § 25.1193(e)(3) based on compliance with § 25.1193(e)(1) which requires that burn through of nacelle skins not create any additional hazard to the airplane. Normally an Engine-Aircraft Interface Item only when the thrust reverser is part of the engine type certificate.
137	Transport	T-1409	Propulsion	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. Normally an Engine-Aircraft Interface Item only when the thrust reverser is part of the engine type certificate.
138	Transport	T-1411	Propulsion	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. Note that there is a potential for two issue papers.
139	Transport	T-1412	Propulsion	Volatile Gas Ingestion During Composite Material APU Installation Fire	Draft Policy Statement PS-ANM-25-37 provides a means of compliance with §§ 25.831, 25.1181, 25.1187 and 25.1191 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. Applicants may use the draft policy statement by referring to it in their project specific certification plan.
140	Transport	T-1413	Propulsion	Auxiliary Fuel Tank Installations	AC 25-8 primarily addresses auxiliary fuel tank installations in cargo compartments. An issue paper may be needed to establish an acceptable means of compliance with fuel system and crashworthiness requirements for auxiliary fuel tanks installed in other locations, such as a passenger compartment. Additionally, a method of compliance issue paper may be needed for fuel tank installations in the horizontal stabilizer. The issue paper would address fuel leaks or spills caused by maneuvers, malfunctions or structural damage.
141	Transport	T-1418	Propulsion	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 finding of equivalent safety may be based on the APU incorporating control features that automatically take corrective actions (e.g., shutting down the APU) when a system fault occurs, an operating limit is exceeded, or flight deck messages or other indications prompt the flightcrew to take such corrective actions. These control features duplicate actions that a flightcrew would take if the required flight deck instruments existed or provided equivalent indications to those required by the rule. 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.
142	Transport	T-1419	Propulsion	Airborne Vibration Monitoring (AVM) System	Engine-Aircraft Interface Item. An issue paper may be needed to document a means of compliance with AVM indicators. Additionally, this issue paper clarifies why § 25.1305(d)(3) at amendment 25-35 provides adequate airworthiness standards for new engine installations that include an AVM system.
143	Transport	T-1421	Propulsion	Digital Display of Engine Parameters	Engine-Aircraft Interface Item. A means of compliance issue paper may be needed 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. Both subjects are addressed in this single issue paper providing both means of compliance for § 25.1305 and guidance for showing an equivalent safety with § 25.1549.
144	Transport	T-1422	Propulsion	Warning Means for Engine Oil Filter Contamination	Engine-Aircraft Interface Item. 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.
145	Transport	T-1423	Propulsion	APU Certification Requirements	An issue paper which documents an equivalent level of safety (ELOS) finding is needed to allow compliance to be shown to APU requirements proposed in an FAA Rulemaking Team draft document dated April 2001 in lieu of existing part 25 requirements. The draft requirements will be provided as an attachment to the issue paper. 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.
146	Transport	T-1424	Propulsion	Uncontained Engine and Tire Failure - Debris Penetration of Fuel Tank Composite Structure	Engine-Aircraft Interface Item. 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.
147	Transport	T-1425	Propulsion	Engine Rotor Lock Screening Test - Acceptable Alternatives and Clarifications	Standardization Item. Engine-Aircraft Interface Item. Policy Statement No. PS-ANM-25-02, "Guidance for Screening for Engine Rotor Lock in Transport Category Airplanes During Aircraft Certification," provides rotor lock screening test guidance for new engine installation certifications or major engine installation design change programs of transport-category airplanes. Certification Authorities for Large Transport Aircraft (CATA) Worklist Item TCCA-003 provides acceptable alternatives to the detailed rotor lock screening test in the policy statement and clarifies areas where experience shows applicants require more information from the FAA. Applicants should document proposed deviations outside these acceptable alternatives in the issue paper for TAI List item "Inflight All-Engine Restart."
148	Transport	T-1502	Security	Airplane Security	Standardization Item. Coordinate with Policy and Innovation Division regarding any project involving any airplane (design) security measures. These installations typically have a lot of visibility, requiring Policy and Innovation Division awareness and involvement.
149	Transport	T-1503	Security	Aircraft Electronic System Security Protection from Unauthorized External Access	Special conditions and a means of compliance issue paper may be needed if access by external sources are allowed to transmit or write to aircraft systems, databuses or servers connected to systems that perform functions required for the safe operation of the airplane. Engine-Aircraft Interface Item if engine/engine installation is affected.
150	Transport	T-1504	Security	Aircraft Electronic System Security Isolation or Protection from Internal Access	Special conditions and a means of compliance issue paper may be needed to ensure isolation or protection if internal systems are allowed to transmit or write to previously isolated data networks connected to systems that perform functions required for the safe operation of the airplane. Engine-Aircraft Interface Item if engine/engine installation is affected.
151	Transport	T-1505	Security	Secondary Flight Deck Door (AKA Secondary Door)	You may need an issue paper to come to agreement on the part 25 regulations that must be met by a door 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).
152	Transport	T-1506	Cabin Safety Security	In-Flight Access to Class B or 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 occupant 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. You may need special conditions for passenger access in-flight to baggage in a Class B compartment to address this security concern. This issue appears in two technical areas, Cabin Safety and Security, for increased visibility.
153	Transport	T-1507	Security	Chemical Oxygen Generators	Standardization Item. Chemical Oxygen Generators (COG) installed in areas that are remote from the passenger cabin, or isolated from the passenger cabin by doors, are potential security concerns. An airworthiness directive addressed COGs in lavatories, and part 25, Amendment 25-138, amended the type certification requirements for COGs installed on transport category airplanes so the generators are secure and not subject to misuse. AC 25.795-9 provides guidance to supplement the engineering and operational judgment that must form the basis of any compliance findings relative to a COG installation.
154	Transport	T-1508	Security Systems and Equipment	Use of Portable Electronic Devices (PED) Interfacing to Installed Airplane Systems in the Flight Deck	A means of compliance issue paper may be needed when applicants propose to interface Portable Electronic Devices (PED) to installed airplane systems in the flight deck. This issue paper does not apply to receive-only portable Electronic Flight Bag (EFB) installations that do not transmit information to installed equipment on the airplane. Engine-Aircraft Interface Item if engine/engine installation is affected. This issue appears in two technical areas, Security and Systems and Equipment, for increased visibility.
155	Transport	T-1509	Security	Aircraft Electronic System Physical/Electronic Security Protection	A method of compliance issue paper may be needed to address physical and electronic security protection of network connections and components that are accessible by occupants in the cabin.
156	Transport	T-1510	Security	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.
157	Transport	T-1604	Software/Airborne Electronic Hardware	Assurance of Simple and Complex Electronic Hardware	Draft Advisory Circular 20-152A provides a means of compliance using ED-80/DO-254 for aircraft programs and modification projects with airborne systems containing electronic hardware components, including both custom devices and commercial off-the-shelf (COTS) devices. European Aviation Safety Agency (EASA) Notice of Proposed Amendment (NPA) 2018-09 is a joint proposal by EASA and the FAA to harmonize draft advisory circulars (see Section 3.1.1 for Draft Advisory Circular 20-152A). Applicants may use the draft advisory circular by referring to it in their project specific certification plan. Engine-Aircraft Interface Item if engine/engine installation is affected.
158	Transport	T-1606	Software/Airborne Electronic Hardware	Software Maturity Prior to Flight Test	Certification Position Paper No. CPP 21.33-1 provides a means of compliance for acceptance process when an applicant proposes issuance of type inspection authorization (TIA) prior to the completion of Software and Airborne Electronic Hardware (SW&AEH). This CPP also provides criteria that apply to SW&AEH when the associated development assurance activities have not been completed at the time of TIA issuance. Applicants may use the CPP by referring to it in their project specific certification plan. Engine-Aircraft Interface Item if engine/engine installation is affected.
159	Transport	T-1611	Software/Airborne Electronic Hardware	Management of Open Problem Reports	Draft Advisory Circular 20-189 provides a means of compliance for an acceptable process to manage open problem reports for the system, software and airborne electronic hardware (AEH) domains. European Aviation Safety Agency (EASA) Notice of Proposed Amendment (NPA) 2018-09 is a joint proposal by EASA and the FAA to harmonize draft advisory circulars (see Section 3.2.1 for Draft Advisory Circular 20-189). Applicants may use the draft advisory circular by referring to it in their project specific certification plan.

	Product Type	Issue ID#	Category	Subject	Description
160	Transport	T-1617	Software/Airborne Electronic Hardware	Multi-Core Processors	Draft Advisory Circular 20-193 provides an acceptable means of compliance for software-based aircraft systems that utilize multi-core processors (MCP) with two or more activated cores for which the Item Development Assurance Level (IDAL) of at least one of the software applications hosted by the MCP or of the hardware item containing the MCP is A, B, or C. Applicants may use the draft advisory circular by referring to it in their project specific certification plan. Engine-Aircraft Interface Item if engine/engine installation is affected.
161	Transport	T-1619	Software/Airborne Electronic Hardware	Artificial Intelligence or Machine Learning	Emerging Technology/Issue. Notify Policy and Innovation Division if the applicant uses artificial intelligence or machine learning in their airplane design. Engine-Aircraft Interface Item if engine/engine installation is affected.
162	Transport	T-1620	Software/Airborne Electronic Hardware	Formal Software Development Methods and Tools	Standardization Item. AC 20-115D provides a means of compliance using ED-12C/DO-178C for formal methods using RTCA/DO-333. Notify Policy and Innovation Division if the applicant does not have prior certification experience using formal methods.
163	Transport	T-1621	Software/Airborne Electronic Hardware	Model-Based Development (MBD) for Airborne Electronic Hardware (AEH)	Emerging Technology/Issue. Notify Policy and Innovation Division if the applicant uses model-based development for airborne electronic hardware.
164	Transport	T-1704	Systems and Equipment	Radio Frequency Identification Tags (RFID)	AC 20-162 provides a means of compliance for passive RFID systems installations with potential adverse effects on the airplane that are no worse than minor. Other RFID systems that have more than minor safety effects, or active RFID systems, or systems which do not plan to use AC 20-162, will require a means of compliance issue paper. Engine-Aircraft Interface Item if engine/engine installation is affected.
165	Transport	T-1706	Systems and Equipment	Hydrophobic Windshield Coating in Lieu of Wipers	Special conditions may be needed if a hydrophobic coating is used in lieu of windshield wipers.
166	Transport	T-1707	Systems and Equipment	Clarification of the Use of ARAC Recommended AC25.1309-Arsenal	You may need an issue paper to document an equivalent safety finding with §§ 25.1301 and 25.1309 to use the ARAC recommended AC 25.1309-Arsenal and to clarify certain aspects of the AC.
167	Transport	T-1710	Systems and Equipment	Airplane Mobile Telephone System	Transport Airplane Position Paper No. TAPP-25.1431-1 provides a means of compliance to address electromagnetic interference, system interface and installation of mobile phones on part 25 airplanes. Applicants may use this Transport Airplane Position Paper by referring to it in their project specific certification plan.
168	Transport	T-1711	Systems and Equipment	Use of Portable Electronic Devices (PEDs) Interfacing to Installed Airplane Systems in the Cabin	A means of compliance issue paper may be needed when applicants propose to control certain aircraft systems using Portable Electronic Devices.
169	Transport	T-1712	Systems and Equipment	Lighting System Modifications for Night Vision Goggle Compatibility	Transport Airplane Position Paper No. TAPP-25.773-1 provides a means of compliance for modifying the flight deck displays, indications, console, flood lighting, etc., so that the flight deck will maintain compliance with existing certification and guidance standards while also being compatible with night vision utilization if operational approval is granted. Applicants who wish to seek a night vision goggles (NVG) compatible lighting system installation may use this Transport Airplane Position Paper by referring to it in their project specific certification plan.
170	Transport	T-1714	Systems and Equipment	Development Assurance Process Based on SAE ARP4754A	Standardization Item. AC 20-174 provides guidance recognizing SAE Aerospace Recommended Practice ARP4754A, "Guidelines for Development of Civil Aircraft and Systems," as an acceptable method for establishing a development assurance (DA) process. Part 25 applicants increasingly implement DA processes that use ARP4754A as a guideline or show their previously established processes produce an equivalent outcome that meets the objectives of ARP4754A. Engine-Aircraft Interface Item if engine/engine installation is affected.
171	Transport	T-1715	Systems and Equipment	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.
172	Transport	T-1716	Systems and Equipment	Use of Dissimilarity in Critical System Implementations	Certification Position Paper CPP-25.1309-1 provides a means of compliance to address the use of dissimilarity when showing compliance to 25.1309(b) for flight critical systems. It describes when a dissimilarity approach should be applied, as well as acceptable development assurance practices to mitigate common-mode threats. Applicants may use this Certification Position Paper by referring to it in their project specific certification plan.
173	Transport	T-1801	Other	Class E Cargo Compartments	If supernumeraries (including animal handlers) are to be carried, at a minimum, you may need to petition for an exemption from §§ 25.812(e), 25.812(h), 25.813(b), 25.857(e), 25.1447(c)(1), and 25.1449, because supernumeraries are not considered crew members.
174	Transport	T-1803	Other	Automatic Takeoff Thrust Compensation System (ATTCS)	Engine-Aircraft Interface Item. A special condition issue paper may be needed for approach climb performance credit for ATTCS during Go-Around. Additionally, an equivalent level of safety issue paper may be needed if there is no means provided for the flightcrew to deactivate the automatic function of the ATTCS system. References: § 25.904 and Appendix I, respectively.
175	Transport	T-1804	Other	New Type Certificate, Significant Product Level Change or Inadequate Certification Basis	You generally need a G-1 issue paper to establish the certification basis for projects involving new type certificates, significant product level changes or inadequate certification bases. AC 21.101-1B provides guidance on significant product level changes and inadequate certification bases.
176	Transport	T-2001	Extended Operations (ETOPS)	Extended Operations (ETOPS) Type Design Requirements	Engine-Aircraft Interface Item. One or more issue papers may be needed to document means of compliance for the ETOPS design requirements in section K25.1 of appendix K to part 25, including, but not limited to: - Airplane System Safety Assessments for ETOPS - Human Factors for ETOPS - Airplane System Functions Required for a Maximum Length ETOPS Diversion - Icing Environmental Conditions, Icing Exposure and Ice Shapes for a Maximum Length ETOPS Diversion - Three Independent Electrical Power Source Requirement for ETOPS - ETOPS Low Fuel Alert - Auxiliary Power Unit Design - Configuration, Maintenance and Procedures (CMP) document - Airplane Flight Manual Requirements for ETOPS
177	Transport	T-2002	Extended Operations (ETOPS)	Extended Operations (ETOPS) Service Experience Method	Engine-Aircraft Interface Item. One or more issue papers may be needed to document means of compliance for the ETOPS service experience method in appendix K to part 25 (section K25.2.1 for two-engine airplanes or section K25.3.1 for airplanes with more than two engines), including, but not limited to: - Compensating Factors for Reducing the Minimum Service Experience Required - Propulsion System and Airplane Systems Assessments for ETOPS - Airplane Flight Test for ETOPS
178	Transport	T-2003	Extended Operations (ETOPS)	Early Extended Operations (ETOPS) Method	Engine-Aircraft Interface Item. One or more issue papers may be needed to document means of compliance for the Early ETOPS method in appendix K to part 25 (section K25.2.2 for two-engine airplanes or section K25.3.2 for airplanes with more than two engines), including, but not limited to: - Relevant Experience Assessment for Early ETOPS - Validation of Maintenance Procedures for ETOPS Significant Systems - Propulsion System Validation Test for Early ETOPS - New Technology Testing for Early ETOPS - Auxiliary Power Unit Validation Test for Early ETOPS - Early ETOPS Problem Tracking and Resolution System - Early ETOPS Acceptance Criteria, Design Maturity and Reliability Methods - Airplane Demonstration Flight Test for Early ETOPS
179	Transport	T-2004	Extended Operations (ETOPS)	Combined Service Experience and Early Extended Operations (ETOPS) Method (i.e., Combined Method)	Engine-Aircraft Interface Item. One or more issue papers may be needed to document means of compliance for the combined service experience and Early ETOPS methods (i.e., combined method) in appendix K to part 25 (section K25.2.3 for two-engine airplanes or section K25.3.3 for airplanes with more than two engines), including, but not limited to: - Relevant Experience Assessment for Early ETOPS - Validation of Maintenance Procedures for ETOPS Significant Systems - Propulsion System Validation Test for Early ETOPS - New Technology Testing for Early ETOPS - Auxiliary Power Unit Validation Test for Early ETOPS - Early ETOPS Problem Tracking and Resolution System - Early ETOPS Acceptance Criteria, Design Maturity and Reliability Methods - Airplane Flight Test for ETOPS - Service Experience for Combined Service Experience and Early ETOPS Method (see Note) - Extending ETOPS Capability Using the Combined Service Experience and Early ETOPS Method (see Note) Note - These two issues may be combined into a single issue paper, if applicable.

	Product Type	Issue ID#	Category	Subject	Description
180	Transport	T-2005	Human Factors Systems and Equipment	Flightcrew Human Factors Assumptions in Aircraft and System Safety Assessments	You may need an issue paper to establish a method of compliance with §25.1309. This issue paper defines the information expected within an applicant's system safety documentation, to facilitate FAA review of flightcrew human factors assumptions. The focus is human factors assumptions associated with flightcrew recognition and response, and assumed flightcrew knowledge or skills, within the context of showing compliance with title 14 Code of Federal Regulations (14 CFR) 25.1309, Equipment, systems, and installations. This issue paper is also applicable to system safety assessments conducted for §§25.629, 25.671, 25.901, 25.903, 25.933 and 25.981, where these assessments include flightcrew human factors assumptions