Q1 2024 Rotorcraft Issues List 03/25/2024

	Product Type	Issue ID#	Category	Subject	Description
1	Rotorcraft	R-0201	Structures	Combination passenger & cargo	Rotorcraft that includes a passenger and cargo configuration. This would consist of cargo storage areas open to the main cabin area. A special condition may be required due to the lack of regulations for combi configurations. An issue paper will be required.
2	Rotorcraft	R-0202	Structures	Exterior Vinyl covering	A means of compliance issue paper will be required since policy does not exist for exterior vinyl coverings. Vinyl coverings raise several issues such as installation near rotating components, control systems, engine inlet(s), windows, and emergency exits. Substantiation that the vinyl will not prevent discovery of a crack, adverse chemical reaction, deterioration, etc.
3	Rotorcraft	R-0203	Cabin Safety Structures	Emergency Exit Lighting	The RSB has witnessed issues with Emergency Exit markings with photoluminescent designs in part 29. Issue paper is dependent upon the certification basis of the aircraft, to address 29.811. Photoluminescent material is not self illuminated; it is powered by light.
4	Rotorcraft	R-0204	Structures	Ditching Approval or Emergency Floats	If an applicant is requesting optional Ditching approval, there is general misunderstanding of the sea states, model testing and water entry that RSB guidance early in the process is required. New EASA rules may complicate validation projects in either direction. An issue paper may be required.
5	Rotorcraft	R-0205	Structures	Additive Manufacturing	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 information to AIR-621, Materials and Structural Properties Section, for awareness and to support certification projects that the FAA Policy and Innovation Division, AIR-600 requires to be involved in with respect to policy or guidance. To facilitate this determination, the FAA has developed an AM Applicant Specific Guidance Memorandum, which is available upon request. An issue paper may be required.
6	Rotorcraft	R-0206	Structures	Hoist with an Overload Protection System (Clutch)	With the introduction of an overload protection system (OPS) to most hoist designs, a possible non-compliance to the rules may be introduced. An OPS is generally a load control clutch. A special condition may be required. An issue paper will be required.
7	Rotorcraft	R-0207	Structures	Design, Manufacturing, and Performance Standard for Composite Materials Used on Aircraft Seat Structures.	For installation of seats that use composite materials in the load path, applicants will need to address the manufacturing, durability, strength and load path integrity of seats. There is a need to assure proper use of composites in seating systems. An issue paper will be required.
8	Rotorcraft	R-0208	Structures	Changing from skids to wheeled gear or wheeled gear to skids.	A change in landing gear arrangement affects many part 27 and 29 regulations, and the certification basis needs to be reviewed with the standards branch. An issue paper may be needed.
9	Rotorcraft	R-0209	Structures	Finite Element Model Validation.	May need an issue paper to establish a means of compliance when a numerical (e.g. finite element) model is used to show compliance. Documentation plan should include model assumptions, uses, methods, verification, validation.
10	Rotorcraft	R-0211	Structures	Changes to Fatigue Evaluation of Metallic Structure	Applicants requesting approval of life extensions and/or changes in flight spectrums, etc, should follow the applicable sections of the published guidance in 2X.571 , 2X.573, AC 27-1B/ AC 29-2C Applicable Sections. Applicants seeking to deviate from this guidance must submit a proposed plan to the FAA for evaluation and an issue paper may be necessary to address policy gaps.
11	Rotorcraft	R-0212	Structures	Changes to Fatigue of Composite Structure (including new structure)	Applicants seeking FAA approval to use composites in structural applications must comply with the applicable sections of 14 CFR 27.573 and 29.573. The certification basis for composite structure is considered inadequate for rotorcraft products certificated prior to part 27 at amendment 27-47 and prior to part 29 at amendment 29-54. The FAA has issued guidance in FAA advisory circulars AC 27-1B, AC 29-2C, and AC 20-107B Composite Aircraft Structure applicable to part 27 and part 29 rotorcraft. Applicants seeking to deviate from this guidance must submit a proposed plan to the FAA for evaluation and an issue paper may be necessary to address policy gaps.
12	Rotorcraft	R-0213	Structures	Changes to Certified Fatigue Methodology	Applicants seeking to change fatigue methodologies, for example, safe-life to fatigue tolerance (replacement time and inspection) or fail-safe, should be aware that this a significant change under 14 CFR 21.101 because it invalidates the assumptions used for certification. Applicants should follow the applicable guidance for establishing the certification basis for changed products under AC 21.101-1B or later revision. The FAA will review the proposals and an Issue Paper may be necessary to establish agreement on the certification basis, address policy gaps, and determine the method of compliance.
13	Rotorcraft	R-0214	Structures	Fatigue Tolerance and Damage Tolerance of Non-Metallic & Non-Composite Materials	Applicants seeking FAA approval for parts that are made from materials that are neither metallic nor composite (e.g.: elastomers, ceramics, plastics, wood), and where such parts contribute significantly to the carrying of flight or ground loads should present a failure modes and effects analysis (FMEA) to the FAA for review. For parts whose failure could prevent continued safe flight and landing, the Applicant must account for the fatigue tolerance and/or damage tolerance capability of the material and part, and set appropriate inspection intervals and replacement times. Special condition and/or method of compliance (MOC) issue papers may be necessary to establish the most appropriate certification basis and MOC.
14	Rotorcraft	R-0302	Avionics Electrical Systems	Approved Model List (AML) STC	An AML STC is a variation of a multiple STC which allows the sharing of common certification data for a product being installed. Issues may arise when installing avionics that incorporate complex integration and when installing mounts. Ensure that the RSS policy is followed in addition to the national policy. Recommend a teleconference with AIR-616 is conducted early in the project. An issue paper may be required.
15	Rotorcraft	R-0304	Avionics Electrical Systems Structures	Health Usage Monitoring Systems (HUMS) for usage and maintenance credit	A means of compliance issue paper may be required for HUMS for usage and maintenance credit.
16	Rotorcraft	R-0305	Avionics Electrical Systems	Minimum Operational Performance Standard (MOPS) for Strapdown Attitude Heading Reference (AHRS)	The guidance in AC 27-1B and AC 29-2C do not contain installed performance standards for attitude systems. AC 20-181 and RTCA/DO-334 do define a minimum operational performance standard for strapdown AHRS that do not use gimbaled sensors. However, those standards are not referenced in AC 27-1B or 29-2C. The increase in use of strapdown AHRS systems that do not use gimbaled sensors, which may include correction logarithms, transitioned from fixed wing to rotorcraft designs. The transition have created some performance challenges on rotorcraft installations. Some of these designs have utilized solid-state accelerometers (one for each flight axis) which have a difficulty distinguishing between rotorcraft movement and the normal vibration spectrum of the platform to which it is mounted. In addition, some the logarithms utilized relied on parameters, which in rotorcraft low speed environment have allowed for unacceptable errors. Similar issues are likely in other VTOL aircraft such as tiltrotor aircraft. DO-334 also does define acceptable maneuvers as it relates to conventional rotorcraft; however, this may not cover all appropriate flight test parameters for other types of VLOAL i.e.: tiltrotor conversion modes. An issue paper may be required in these cases to define additional flight test maneuvers. Acceptable performance criteria for installed attitude performance is defined by DO-334 Table 2-1, for Category A5 for dynamic conditions for the maneuvers defined in Table 3-1. Other maneuvers may be required for tiltrotor aircraft outside of the maneuvers defined in Table 2-1 The use of DO-334 Appendix A - Validation of Equipment Performance using Simulation are not acceptable for rotorcraft/tiltrotor installations.
17	Rotorcraft	R-0306	Avionics Electrical Systems Flight Test Human Factors	Glass cockpit installations	ACO will need to ensure that a systems integration evaluation and human factors assessment is performed when installing a new glass cockpit. A means of compliance issue paper may be required depending on the level of integration of the new system.
18	Rotorcraft	R-0307	Electrical Systems Flight Test Human Factors	TCAS II	Rotorcraft guidance for TCAS II installations do not exist. A means of compliance issue paper will be required. Some Rotorcraft have performance issues with the Climb Resolution Advisory. Also, issues may exist with the Azimuth tracking.
19	Rotorcraft	R-0308	Avionics Electrical Systems Flight Test Human Factors	Class II Electronic Flight Bags	A means of compliance issue paper may be needed when installing provisions on the flight deck for Class 2 EFBs, which are considered Personal Electronic Devices. Responsibilities of the applicant include the identification of any limitations on the EFB (e.g. weight, electrical load) that are necessary to ensure the safety and continued airworthiness of the provisions.
20	Rotorcraft	R-0309	Avionics Electrical Systems Flight Test Human Factors	Class III Electronic Flight Bags	NEXTGEN Technology: An issue paper may be needed for EFB projects with Class 3 hardware or Type C software applications.
21	Rotorcraft	R-0310	Avionics Electrical Systems Flight Test Human Factors	Non-TSO functions	A systems review will be required for SVS in IFR Rotorcraft. A means of compliance issue paper may be required as well. Because SV is presented on the primary flight display as an integral part of the attitude indicator, the level of design assurance for the interaction between the flight guidance cues (flight path vector, display of terrain, attitude indications of pitch/roll) should be commensurate with the criticality of a primary flight display, particularly when it comes to misleading information.
22	Rotorcraft	R-0311	Avionics Electrical Systems Flight Test Human Factors	Synthetic Vision Displays for IFR	A systems review will be required for SVS in IFR Rotorcraft. A means of compliance issue paper may be required as well. Because SV is presented on the primary flight display as an integral part of the attitude indicator, the level of design assurance for the interaction between the flight guidance cues (flight path vector, display of terrain, attitude indications of pitch/roll) should be commensurate with the criticality of a primary flight display, particularly when it comes to misleading information.
23	Rotorcraft	R-0312	Avionics Electrical Systems Flight Test Human Factors	G500H installation	For compliance to 14 CFR 27.1309, the Garmin G500H Avionics Display System does not meet the safety requirements (<1x10-7) for a Hazardous failure condition of misleading attitude information during night VMC operations. An issue paper will be required.
24	Rotorcraft	R-0313	Avionics	Radio Altimeters (NEW)	Emerging Technology/Issue. The deployment of the new 5G C-Band services prompted the FAA to address the risks posed by radio frequency interference to radio altimeters domestically. Retrofit solutions that add external filters to the radar altimeter circuit aboard rotorcraft will have an MOC issue paper. New or reworked LRUs with TSO authorizations generally do not need them. In addition to certification of the aircraft and radio (or radar) altimeter change, unrestricted flight operations in the US still require showing compliance to airworthiness directives. Policy Statement PS-AIR-600-39-01 (or later) provides guidance for operators and manufacturers to demonstrate that an aircraft is a "radio altimeter tolerant airplane" as defined in paragraph (g)(1) of Airworthiness Directive 2023-11-07 for rotorcraft using a method approved by the FAA. The applicant may use the method provided in this policy statement to support requests for an approved method of compliance in accordance with the referenced ADs when applying for design approvals that include radio altimeters. Compliance with an FAA AD does not establish compatibility with the radio frequency environment outside of the US where 5G C-Band services have been deployed because specific 5G C-band frequencies, signal characteristics, and deployments vary.
25	Rotorcraft	R-0314	Avionics Electrical Systems	Installation of Complex Avionics on Part 27 Rotorcraft	Special Conditions will be required to clarify proper assessment of malfunctions. The present 14 CFR 27.1309 (b) and (c) regulations do not adequately address the safety requirements for systems whose failures could result in "Catastrophic" or "Hazardous/Severe-Major" failure conditions, or for complex systems whose failures could result in "Major" failure conditions. A special condition issue paper will be required.
26	Rotorcraft	R-0315	Avionics Electrical Systems Flight Test Human Factors	G5000H installation	For compliance to 14 CFR 29.1303 and 27/29 IFR Appendix B, the Garmin G5000H Avionics Display System does not meet the safety requirements for information required to remain available without pilot action. Additionally depending on the depth of installation integration in the G5000H may have issue with the information required to be continuously displayed under 27/29.1303 & 27/29.1305. An issue paper may be required.
27	Rotorcraft	R-0501	Avionics Electrical Systems	Solid State Circuit Breaker Systems	These devices exhibit features not addressed by current regulation and current guidance does not provide a means of compliance appropriate for installation of these devices on rotorcraft. A means of compliance issue paper may be needed for installations to address concerns with these systems.

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28	Rotorcraft	R-0502	Avionics Electrical Systems	Laser Systems	New laser policy was published in Dec 2014. A means of compliance issue paper may be required if the AC is not followed in its entirety.
29	Rotorcraft	R-0503	Avionics Electrical Systems	Filtered Infra-Red (IR) searchlights	These systems exhibit features not addressed by current regulation or published FAA guidance. ASTM recently published F3238, “Standard Specification for Design and Installation of an Infrared (IR) Searchlight System (USA)”. The FAA plans to publish policy to reference the ASTM standard. Until FAA policy is published a means of compliance issue paper is needed to reference the ASTM standard. Draft policy does not allow certification of operable high energy infra-red searchlights systems on rotorcraft.
30	Rotorcraft	R-0504	Avionics Electrical Systems	Wireless Systems	Current guidance does not provide a means of compliance that adequately addresses unique characteristics and features for permanent installation or carry-on systems designed for in cabin wireless rf communications on rotorcraft. A means of compliance issue paper may be required for installation of a wireless RF system on Rotorcraft.
31	Rotorcraft	R-0505	Electrical Systems Flight Test Structures	External Loads	Rotorcraft external loads intended for Human External Cargo (HEC). If the project is for Non-Human External Cargo (NHEC), then this SPL is not applicable. Note the approval being sought should be stated in the CPN Project description along with appropriate limitations as defined in AC 29-2, para 29.865B or AC27-1, para 27.865B of the approved documents. Human External Cargo (HEC) requirements of XX.865 were not codified until later amendments of parts 27 & 29 in 1999. (See SAIB SW-18-15). This is a 21.101 (CPR) concern as well a potential safety issue. A special condition issue paper may be required.
32	Rotorcraft	R-0506	Avionics Electrical Systems	Lithium Batteries	Regulations (§27/29.1353) do not adequately address hazards associated with lithium batteries. If guidance in AC 20-184 for rechargeable lithium batteries is followed in total, an MOC IP will not be required. An MOC IP is required for non-rechargeable lithium batteries. Regulatory changes are in work. A special condition issue paper may be required.
33	Rotorcraft	R-0701	Flight Controls	AdFC - Control Margin Awareness	The FAA has determined that 14 CFR Part 27/29 does not contain adequate airworthiness standards for certification of FBW FCS. Implicit in the intent of §2x.143(b), (c), and (d), is to ensure that the pilot is provided with sufficient awareness of proximity to control limits. As 14 CFR 2x.143 was written to address hydro-mechanical flight control systems through which pilot awareness of control margins was provided by cyclic and pedal position relative to cockpit control stops, the rule is inadequate for certification of a FBW FCS, where there is no mechanical link between the inceptor and the receptor. Therefore, a special condition may be required to ensure that awareness of proximity to control limits at the main rotor and tail rotor is provided to pilots of the helicopter. A special condition issue paper will be required.
34	Rotorcraft	R-0702	Flight Controls	AdFC - Flight Crew Alerting	The current 14 CFR 29 standards do not provide adequate standards for the advanced CAS system of a helicopter due to the complexity of the aircraft systems and the new modes of the FBW primary flight controls which included degraded mode indication. The proposed special condition will update definitions, prioritization, color requirements, and performance for flightcrew alerting to reflect changes in technology and functionality. This special condition adds additional alerting functions, and consolidates and standardizes definitions and regulations for flightcrew warning, caution, and advisory alerting systems. A special condition issue paper will be required.
35	Rotorcraft	R-0703	Flight Controls	AdFC - Flight Envelope Protection	Flight Envelope Protection (FEP) system. FEP systems are used to prevent the pilot or an autopilot from making control commands that would force the aircraft to exceed its structural, aerodynamic, or operating limits. To accomplish this envelope limiting, a significant change (or multiple changes) occurs in the FCS control laws as the limit is approached or exceeded. When FCS failure states occur, envelope protection features can likewise either be modified or, in some cases, eliminated. The current regulations were not written with comprehensive envelope-limiting systems in mind. A special condition issue paper will be required.
36	Rotorcraft	R-0704	Flight Controls	AdFC - Control in All Attitudes	(FBW) technology as the sole means of controlled flight. Flight control systems must continue to function in conditions of unusual attitudes and in rapid maneuvers. The pilot should be able to rely on flight controls for recovery in all attitudes and at the highest pitch, roll and yaw rates that may be encountered. A special condition issue paper will be required.
37	Rotorcraft	R-0705	Flight Controls	AdFC - Command Signal Integrity	The current 14 CFR 29 regulation 29.671 was not promulgated for FBW FCS and is considered inadequate for susceptibility to external or internal interference, erroneous signals that may reduce the integrity of the data used by the AdFCS. A special condition issue paper will be required.
38	Rotorcraft	R-0706	Flight Controls	AdFC - Mode Annunciation	Fly-By-Wire (FBW) Flight Control System (FCS) incorporating a new and novel design feature, for which 14 CFR Part 29 does not provide an adequate safety standard, in the area of pilot awareness of the flight control modes while operating the helicopter. This special condition proposes that suitable mode annunciation be provided to the flight crew for events that significantly change the operating mode of the system but do not merit the traditional warnings, cautions, and advisories. A special condition issue paper will be required.
39	Rotorcraft	R-0707	Flight Controls	AdFC - PreFlight Checks	The helicopter must provide a means to allow the pilot to determine that full control authority is available prior to flight. The requirement, as stated in §29.671(c) is: “A means must be provided to allow full control movement of all primary flight controls prior to flight, or a means must be provided that will allow the pilot to determine that full control authority is available prior to flight.” The means identified in a SC includes a requirement for a comprehensive safety analysis intended to ensure the fly-by-wire (FBW) flight control system (FCS) is fully functional and free of control authority impairment prior to flight. The comprehensive safety analysis must address failures due to command logic (software), mechanical and electronic interfaces to other systems, jamming and maintenance. The safety analysis must also identify the existence of any latent faults. Therefore, the means to ensure the FBW FCS is fully functional and free of control authority impairment prior to flight will be based on the results of the comprehensive safety analysis. The resultant safety analysis may dictate that an acceptable compliance approach include design, analysis, tests, built-in-tests, and some pilot initiated pre-flight control checks. An issue paper will be required.
40	Rotorcraft	R-0708	Flight Controls	AdFC - Simulation for Certification Credit	Helicopter development and certification program will include the use of ground based modeling and simulation tools to support the developmental design and testing of the helicopter flight deck (FD), the avionics systems, the full-authority digital flight control system (FCS), and other various aircraft systems (such as the aircraft electrical system, the hydraulic system, and the display system). A special condition issue paper will be required.
41	Rotorcraft	R-0709	Avionics Electrical Systems Flight Controls Flight Test Human Factors	Search and Rescue including AFCS operations below Vmini	Special Condition will be required for SAR operations. A special condition issue paper will be required.
42	Rotorcraft	R-0801	Flight Test Human Factors	Reduced Navigation Performance (RNP) Operations	NEXTGEN Technology: An issue paper may be needed to establish an acceptable means of compliance for Vertical RNP. Specific wording will be required for the RFM and a Flight-test evaluation will be required.
43	Rotorcraft	R-0802	Flight Test Human Factors	Space-Based Augmentation System (SBAS) - Global Positioning System - Wide Area Augmentation System (GPS-WAAS)	Ensure a flight test evaluation is performed for LPV steep angle approaches. Legacy 3 axis autopilots have trouble with steep angle approaches. High Angle Intercepts Turns at the FAF should be performed to ensure adequate performance particularly in legacy based AFCS systems and equipment
44	Rotorcraft	R-0803	Flight Test Human Factors	Referencing Equipment Handbooks in RFM Limitations	Ensure Pilot's guides, Handbooks, etc. are not referenced within the limitations section of the RFM.
45	Rotorcraft	R-1001	Flight Test Human Factors	Night Vision Imaging Systems (NVIS)/NVG	Ensure a human factors evaluation is performed. Reg 21.93 is used to guide applicants to STC (Major Change)
46	Rotorcraft	R-1002	Flight Test Human Factors	Touch Screen Interface	An issue paper on the means of compliance for a touch screen as a control method is not needed. The touch screen intended function, pilot interface, and failure modes will be considered as part of the system evaluation. An issue paper may be required if there are mitigations against touchscreen functionality and failure modes.
47	Rotorcraft	R-1003	Flight Test Human Factors Propulsion	Auto-pop and Warning Track for required instruments (Part time display of required information and green-range anomaly alerting)	A means of compliance issue paper will be required for Part-time displays. Numerous issues arise when the required information is deselected thus needing warning track or other necessary mitigations.
48	Rotorcraft	R-1101	Flight Test Icing	Full Icing approvals	Due to the emerging rotorcraft fleet with full icing certification, directorate involvement will be required for full icing approvals. Full icing entails at least 2 icing tests (tunnel & aircraft level). An issue paper will be required.
49	Rotorcraft	R-1301	Noise	Rotorcraft Noise	Part 36 for Helicopters was updated in May 2014 to Amendment 30. This amendment defined stage 3 rotorcraft noise limits. There is a path for stage 2 rotorcraft to be "recertified" as a Stage 3 compliant Rotorcraft. A means of compliance issue paper may be required for Amendments 28 or earlier.
50	Rotorcraft	R-1401	Human Factors Propulsion	Integrated Power Indicators other than traditional first limit indicators	Integrated power indicators used in lieu of primary power indicators (e.g. Ng, ITT, and TQ). A means of compliance issue paper will be required for integrated power indicators. Use of a PI usually allows deselection of required primary powerplant indicators, thus, needing to establish certification criteria for acceptance of PI.
51	Rotorcraft	R-1402	Propulsion	30-minute All Engines Operating (AEO) ratings	Most applicants are seeking this AEO rating, commonly at Takeoff power, for Search & Rescue missions. Special conditions are required. A special condition issue paper will be required.
52	Rotorcraft	R-1403	Flight Test Propulsion	Inlet Barrier Filter (IBF) systems	IBF's can have negative performance issues or can adversely affect inlet distortion. However, IBF systems must not invalidate engine manufacturer installation instructions. Policy Statement PS-ASW-27/29-07 was published 5/8/2017. AD 2018-18-12 resulted from a PMA that substituted a dry paper filter element for an oil wetted one. Such a substitution is not a "minor change" per 14 CFR 21.93. An issue paper may be required.
53	Rotorcraft	R-1404	Propulsion	Fuel System Crash Resistance	Important to verify acceptable fuel tank drop test plan configuration and provide clear pass/fail criteria. No post test leakage is allowed. An issue paper may be required.
54	Rotorcraft	R-1405	Propulsion	Time Limited Dispatch	A means of compliance issue paper will be required. To date, no approvals for TLD have been done for rotorcraft.
55	Rotorcraft	R-1406	Electrical Systems Flight Test Propulsion	Above Min-Spec Engine Performance	A means of compliance issue paper may be required. In addition to installation considerations, early coordination with EPD and engine manufacture is needed. Issues arise when applicants exceed the ratings of the engine.
56	Rotorcraft	R-1407	Propulsion Structures	Non-metallic components adjacent to or near designated fire zones.	Composite materials or other non-metallic components adjacent to or near fire zones must be properly shown to be fire resistant. An issue paper may be required.
57	Rotorcraft	R-1408	Propulsion	Induction System Icing Protection	Industry and the FAA are facing challenges to certify unheated (passive) engine induction systems for icing requirements. Agreement on stabilized IWT test points, accounting for performance losses, and requirements for inadvertent icing exposure are a few key issues that will need to be addressed. Affected regulations: 27/29.1093(b)(1)(i). An issue paper may be required.
58	Rotorcraft	R-1501	Security	Aircraft Electronic System Security Isolation or Protection from Internal/External access	A means of compliance issue paper may be needed to ensure isolation or protection if new access by internal/external systems is allowed to previously isolated data networks connected to systems that perform functions required for safe operation of the rotorcraft. For example, via wired and wireless access ports such as ground support equipment, PEDs, EFBs, maintenance computers and USB.

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59	Rotorcraft	R-1601	Software/Airborne Electronic Hardware	Multi-Core Processors	A means of compliance issue paper may be required for the use of Multi-Core Processors if the applicant does not apply the guidance in draft AC 20-193. The use of these devices introduces a number of new issues that do not exist with traditional single core processors.
60	Rotorcraft	R-1602	Software/Airborne Electronic Hardware	Artificial Intelligence/Machine Learning/Artificial Neural Networks	The existing systems, software and Airborne Electronic Hardware (AEH) guidance does not provide a means of compliance for the use of ANNs. ANNs may not be functionally reliable, can have non-deterministic behavior, and have a design implementation that may not be traceable to its requirements making it difficult to demonstrate that systems with ANNs will perform their intended function under all foreseeable operating conditions. An issue paper will be required.
61	Rotorcraft	R-1603	Software/Airborne Electronic Hardware	Airborne Electronic Hardware Custom Devices using COTS Intellectual Properties	A means of compliance issue paper may be needed for aircraft systems that utilize Airborne Electronic Hardware devices programmed with COTS intellectual properties.
62	Rotorcraft	R-1604	Software/Airborne Electronic Hardware	Airborne Electronic Hardware using Complex COTS devices.	A means of compliance issue paper may be needed for aircraft systems that utilize Airborne Electronic Hardware when using Complex COTS devices.
63	Rotorcraft	R-1605	Software/Airborne Electronic Hardware	Management of Open Problem Reports	A means of compliance issue paper will likely be needed if an applicant or any of their suppliers intends to defer numerous resolution and correction of software and airborne electronic hardware problems past the date of certification.
64	Rotorcraft	R-1606	Software/Airborne Electronic Hardware	Formal Methods	New/Novel Technology: Applicant using Formal Methods will need to apply the guidance in DO-178C and DO-333. Since the technology and guidance is new and novel additional oversight may be needed to ensure consistent application. An issue paper may be needed.
65	Rotorcraft	R-1607	Software/Airborne Electronic Hardware	Software/AEH Maturity prior to TIA	An issue paper may be needed to establish minimum software and airborne electronic hardware criteria prior to TIA. This is to ensure adequate information and safety mitigations are appropriate to proceed with FAA TIA per the SRB process. An Issue paper should be used on Rotorcraft with Fly-By-Wire Flight Controls.
66	Rotorcraft	R-1801	Other	Validation Projects	Any validation item generated by a foreign authority where the FAA is the certificating authority. Also, any limitations that are part of the foreign approval (i.e. TC, STC, etc.) that are not compatible with FAA regulations. This will ensure the RSS is made aware of any harmonization issues. An issue paper may be required.
67	Rotorcraft	R-1802	Other	Restricted Category TC application	According to Oder 8110.56B, any application for a restricted category Type Certificate (TC) must involve the Rotorcraft Standards Branch when issuing the Type Certificate Data Sheet (TCDS)
68	Rotorcraft	R-1803	Other	Restricted Category IFR Certification	The Rotorcraft Standards Branch has seen multiple cases of Restricted Category Rotorcraft requesting approval for Instrument Flight Requirements (IFR) where the cockpit does not meet the requirements of 14 CFR Part 29 Appendix B. An issue paper may be required.
69	Rotorcraft	R-1901	Drive Systems	Major changes or Parts Manufacturing (PMA) for main gear box (MGB) and related drive systems	A means of compliance issue paper may be required when applicants propose endurance testing on the bench vs. the aircraft.
70	Rotorcraft	R-1902	Drive Systems	Gear Tooth Bending Testing	Fatigue Tolerance Evaluation of Metallic Structure. If 29.571 certification basis is greater than amdt 29-28, an Issue Paper may be necessary.
71	Rotorcraft	R-1903	Cabin Safety	Additive Manufacturing - Flammability of Parts	Additive Manufacturing (also known as 3D printing) may allow for variability in the production process that, while still producing the same part in accordance with the drawings, might not control flammability characteristics. Coordinate with the Policy & Standards Division, Cabin Safety Section (AIR-624) to determine if a method of compliance issue paper is needed for additive manufactured parts that must meet part 27 and 29 flammability requirements. Although compliance with the flammability requirements is required, coordination with AIR-624 and an issue paper is not needed for parts constructed with Ultem 9085. Note that this Product Issues List also contains a separate item for Additive Manufacturing Design & Construction (Materials, Fabrication Methods).

Q1 2024 Rotorcraft Release Notes

	Issue ID#	Category	Subject	Change Description
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Issue Label Definitions

Applicable to Domestic Certification Projects. Refer to the applicable bilateral agreement to determine if these items apply to your International Validation Project.

Standardization Item – Highlights existing guidance or requests contact with Policy and Standards Division (P&S).

Emerging Technology/Issue - Requests contact with P&S. No standards or guidance in place yet.

Engine-Aircraft Interface Item - May affect the engine or engine installation. Recommend engine manufacturer coordination.