

Rotorcraft Significant Project List

Updated 10/18/2021

Discipline	Issue Paper (Yes/No/Maybe)	Special Condition (Yes/No/Maybe)	Subject	Description	Regs. AC's, & Orders	POC	Additional Info
Electrical Sys/Avionics	Yes	Maybe	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.	AC 20-184, Guidance on Testing and Installation of Rechargeable Lithium Battery and Battery Systems on Aircraft. Policy guidance for non-rechargeable Lithium batteries policy to follow.	Shaw, Andy	TSO C-79a for rechargeable lithium batteries requires DO-311 testing. AC 20-184 calls out additional testing from DO-347.
Flight Controls	Yes	Yes	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.		Vanhoudt, John	
Flight Controls	Yes	Yes	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.		Vanhoudt, John	
Flight Controls	Yes	Yes	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.		Vanhoudt, John	
Flight Controls	Yes	Yes	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.		Vanhoudt, John	
Flight Controls	Yes	Yes	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.		Vanhoudt, John	
Flight Controls	Yes	Yes	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.		Vanhoudt, John	

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Flight Controls	Yes	No	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		Vanhoudt, John	
Flight Controls	Yes	Yes	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).		Vanhoudt, John	
Electrical Sys/Avionics	Yes	Yes	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	§27.1309	Shaw, Andy	
Electrical Sys/Avionics	Yes	No	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.	§27/29.1357	Shaw, Andy	
Electrical Sys/Avionics	Maybe	No	Non-required Equipment Safety Enhancing Equipment (NORSEE)	NORSEE is equipment, not required by any federal regulation, installed in rotorcraft with the intent to increase rotorcraft safety. An Issue paper may be required to document the system evaluated, and determined to meet the NORSEE criteria.	NORSEE Policy PS-ASW-27,29-10	Shaw, Andy Brandli, Liz	
Electrical Sys/Avionics	Maybe	No	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.	Rotorcraft AML policy ASW-100-09-001, AC 20-180	Shaw, Andy	
Electrical Sys/Avionics	Maybe	No	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.	AC 20-183	Shaw, Andy	
Electrical Sys/Avionics	Yes	No	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.	§27/29.1309; FAA policy is planned to reference ASTM Standard F3238.	Shaw, Andy	
Electrical Sys/Avionics	Maybe	No	ADS-B-In	NEXTGEN Technology: A means of compliance issue paper may be required for initial situational awareness ADS-B In applications. A human factors evaluation may be required if it includes integration with the PFD.	AC 20-172A	Shaw, Andy	
Electrical Sys/Avionics	Maybe	No	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.	AC 27, MG-15 and AC 29, MG-15	Brandli, Liz Shaw, Andy Hatfield, David Hughlett, Michael Edupuganti, Rao	

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Electrical Sys/Avionics	Maybe	No	Minimum Operational Performance Standard (MOPS) for Strapdown Attitude Heading Reference (AHRS)	<p>The guidance in AC 27-1B and AC 29-2C do not contain installed performance standards for attitude systems.</p> <p>AC 20-181 and RTCA/DO-334 do define a minimum operational performance standard for strapdown AHRS that do not use gimbale sensors. However, those standards are not referenced in AC 27-1B or 29-2C.</p> <p>The increase in use of strapdown AHRS systems that do not use gimbale 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.</p> <p>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.</p> <p>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</p> <p>The use of DO-334 Appendix A - Validation of Equipment Performance using Simulation are not acceptable for rotorcraft/tiltrotor installations.</p>	AC 20-181 RTCA/DO-334	Soth, Mitch	
Electrical Sys/Avionics	Maybe	No	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.	AC 20-168	Shaw, Andy	
Electrical Sys/Avionics Flight-test/Human Factors	Maybe	No	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.	§27/29 - 1301, 1303, 1305, 1321, 1322, 771,773 b, 1316,1317,777,1323,1329 if applicable, 1367, 1381, 1501, 1541-1555, 1585, 27.1367, AC MG-1	Jordan, Jon Soth, Mitch Andy	Shaw,
Electrical Sys/Avionics Flight-test/Human Factors	Yes	No	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.	AC 20-151B (fixed wing), PS-ASW-2729-12 in work	Jordan, Jon Davenport, Clark Shaw, Andy	
Electrical Sys/Avionics Flight-test/Human Factors	Maybe	No	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.	AC 120-76B	Shaw, Andy	
Electrical Sys/Avionics Flight-test/Human Factors	Maybe	No	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.	AC 20-173	Shaw, Andy	
Electrical Sys/Avionics Flight-test/Human Factors	Yes	No	Non-TSO functions	Non-TSO functions included in avionics not related to TSO specific aviation, navigation, or aviation related communication. For example: Telephone, texting, video, entertainment, etc. that the pilot controls because the design of the box requires the pilot to control them and they are integrated with avionics that control aviation related functions.		Davenport, Clark	

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Electrical Sys/Avionics Flight-test/Human Factors	Maybe	No	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.	MG-19, AC 20-167A	Davenport, Clark	
Electrical Sys/Avionics Flight-test/Human Factors	Yes	No	G500H installation	For compliance to 14 CFR 27.1309, the Garmin G500H Avionics Display System does not meet the safety requirements ($<1 \times 10^{-7}$) for a Hazardous failure condition of misleading attitude information during night VMC operations .	§27.1309	Shaw, Andy	
Electrical Sys/Avionics Flight-test/Human Factors	Yes	Yes	Search and Rescue including AFCS operations below Vmini	Special Condition will be required for SAR operations.		Soth, Mitch	
Flight-Test/Human Factors	Maybe	No	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.	AC 20-138C	Jordan, Jon Davenport, Clark	
Flight-Test/Human Factors	No	No	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	AC 20-138C, MG-1	Jordan, Jon Davenport, Clark	
Flight-Test/Human Factors	No	No	Referencing Equipment Handbooks in RFM Limitations	Ensure Pilot's guides, Handbooks, etc. are not referenced within the limitations section of the RFM.		Jordan, Jon	
Flight-Test/Human Factors	No	No	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)	§21.93, AC MG-16	Davenport, Clark	
Flight-Test/Human Factors	Maybe	No	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.	AC 20-175, §771(a), 1301, 1309	Davenport, Clark	
Flight-Test/Human Factors/ Propulsion	Yes	No	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.		Soth, Mitch Davenport, Clark	
Icing/Flight-Test	Yes	No	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)	SAE AC9C AC revision to 29.1419 material in work	Haight, Eric Soth, Mitch	
Propulsion	Maybe	No	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)	SAE AC9C is working to develop ARP6901 to clarify requirements.	Haight, Eric	

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Misc.	Maybe	No	Validation Projects	Any validation item generated by a foreign authority where the FAA is the certifying 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.		Soth, Mitch	
Misc.	No	No	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)	Order 8110.56B	Hemann, Michael	
Misc.	Maybe	No	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.	14 CFR Part 29 Appendix B; AC 29-2C Appendix B	Hemann, Michael	
Propulsion/Human Factors	Yes	No	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.		Haight, Eric Soth, Mitch	
Propulsion	Yes	Yes	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,	27/29.923, 29.1049, 27/29.1305, 27/29.1521	Haight, Eric	
Drive Systems	Maybe	No	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.	27/29.923	Edupuganti, Rao	
Drive Systems	Yes	Maybe	Gear Tooth Bending Testing	Fatigue Tolerance Evaluation of Metallic Structure.	AC 29-2C 29.571B-1 (29.571 amdt 29-28) gives specific guidance on gear tooth fatigue evaluation, whereas 29.571 amdt 29-55 does not. Therefore, if 29.571 certification basis is greater than amdt 29-28 an Issue Paper may be necessary.	Edupuganti, Rao	
Propulsion/Flight-Test	Maybe	No	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.	PS-ASW-27/29-07	Hughlett, Michael Jordan, Jon	
Propulsion	Maybe	No	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.	27/29.952	Blyn, James Haight, Eric	Fuel System AC clarification
Propulsion	Yes	No	Time Limited Dispatch	A means of compliance issue paper will be required. To date, no approvals for TLD have been done for rotorcraft.		Blyn, James	
Propulsion/Flight-Test	Maybe	No	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.		Edupuganti, Rao Jordan, Jon	

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Security	Maybe	Maybe	Aircraft Electronic System Security Isolation or Protection from Internal access	A special condition issue paper may be needed to ensure isolation or protection if new access by internal 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.	PS-AIR-21.16-02 Rev 2	John Vanhoudt, Brandli, Liz	
Security	Maybe	Maybe	Aircraft Electronic System Security Isolation or Protection from Unauthorized External access	A special condition issue paper may be needed if access by external sources are allowed to aircraft systems, databases or servers. For example, via wireless such as, Gatelink networks, cellular or the Internet.	PS-AIR-21.16-02 Rev 2	John Vanhoudt, Brandli, Liz	
Software/Airborne Electronic Hardware	Maybe	No	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.	AC 20-193 (draft)	Brandli, Liz	
Software/Airborne Electronic Hardware	Yes	No	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	27/29.1309	Brandli, Liz	
Software/Airborne Electronic Hardware	Yes	No	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.	AC 20-152A (draft), 8110.105	Brandli, Liz	
Software/Airborne Electronic Hardware	Yes	No	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.	AC 20-152A (draft), 8110.105	Brandli, Liz	
Software/Airborne Electronic Hardware	Maybe	No	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.	AC 20-189 in work, AC 20-115D, 8110.49	Brandli, Liz	
Software/Airborne Electronic Hardware	Maybe	No	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.	AC 20-115D	Brandli, Liz	
Software/Airborne Electronic Hardware	Maybe	No	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.	Policy Statement in work	Brandli, Liz	
Structures/Flight-Test	Maybe	Maybe	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 Carqo (HEC) requirements of XX.865 were not codified until later	27/29.865 SAIB SW-18-15 SAFO 18004	Soth, Mitch	
Structures	Yes	Maybe	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.	Draft policy in work	Crane, Martin	

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Structures	Yes	No	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.		Crane, Martin	
Structures	Maybe	No	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.	29.811	Crane, Martin	
Structures	Maybe	No	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.	27/29.563, 27/29.801, AC MG-10	Crane, Martin	
Structures	Maybe	No	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.	Applicant Specific Guidance Memorandum is necessary for 27/29.603, 27/29.605, 27/29.613. An Issue Paper may be necessary.	Grant, Robert (Metallic AM), Jahner, Linda (Non-metallic AM)	
Structures	Yes	Maybe	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.	27/29.865(a), AC27-1B, AC29-2C	Crane, Martin	
Structures	Yes	No	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	27/29.561, 27/29.562, 27/29.603, 27/29.605, 27/29.613	Crane, Martin	SAE ARP 6337 provides acceptable methods that can be applied to rotorcraft seating systems and that meet FAA expectations
Structures	Maybe	No	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.	27/29 Subpart B and C	Crane, Martin	
Structures/Powerplant	Maybe	No	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.	27/29.1194	Crane, Martin	
Structures	Maybe	No	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.	27/29.305, 27/29.307	Crane, Martin	
Structures	Maybe	No	ALS Part Life Extensions or Flight Spectrum Changes	If an applicant is requesting approval of life extensions, changes in flight spectrums, etc, the Standards Branch expects complete information and details on required 27/29.571 fatigue testing requirements and potential flight load surveys and conservative flight spectrum development. Many old TCs have parts availability issues, and applicants are attempting to find other avenues to increase part lives in the ALS.	27/29.571, MG-11, MG-15 in AC27-1B & AC29-2C.	Crane, Martin	
Noise	Maybe	No	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.	14 CFR Part 36	Soth, Mitch Blyn, James	

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Emerging Technology	Maybe	Maybe	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.		Green, Charisse (AIR-622)	