Subject	Standard or AMC	Description	CRI Category
Human Factors	25.1302	Some significant differences are observed in the way demonstration to CS/FAR 25.1302 is processed. Most of the time a CRI and/or a CAI need to be issued. This SEI is only applicable for new TCs, derivatives and significant changes. For other changes this SEI will not be applicable as far as the plan for compliance with 1302 accepted by EASA in the initial project is applied.	MoC/IM
Touch Screen Interface and Control Device in Flight Deck	25.1301, 25.1302, 25.1309,	A CRI may be needed to determine an acceptable means of compliance for installing touch screens in the flight deck in lieu of physical controls (e.g., knobs, buttons, and levers). The CRI would address the effect of touch screen controls on pilot workload, the demand for pilot attention, and the potential for crew error or inadvertent control inputs.	MoC/IM
Panel 3 structures			
Interaction of Systems and Structures	25.302, 25.629(b), 25.1329(g), Appendix K	To evaluate the interaction of systems and structures for aircraft equipped with systems (such as electronic/automatic flight control systems, autopilots, stability augmentation systems, load alleviation systems, flutter control systems, and fuel management systems) that affect structural performance, either directly or as a result of a failure or malfunction.	MoC/IM
Unusual landing operations	25.235 / Appendix Q	Steep approach operations can lead to higher (static and dynamic) loads, for example due to higher descent velocities/load factors and/or re-definition of the landing configuration. In lieu of a more rational investigation, EASA applies flight test data measured at London City airport, which may be different from what the FAA is accepting. For operation on unpaved runways, CRIs have been raised in the past, but these have not been harmonized with the FAA.	MoC/IM
Fatigue & damage tolerance (Significant Changes)	25.571, 25.1529	The showing of compliance with fatigue and damage tolerance requirements is a complex task, with many issues to be considered, and with various possible compliance approaches, in particular for new TC's, amended TC's (derivative aircraft / model) or significant STC's (such as passenger to freighter conversions). Given the importance of the subject for the overall safety level of the aircraft, the means of compliance needs to be understood by the Agency. (Note: under discussion in the ARAC MCSHWG).	MoC/IM
New, novel or unusual materials or manufacturing processes	25.603, 25.605, 25.613	For relatively new, novel or unusual materials and manufacturing process, such as additive manufacturing, welding (thermoplastic composites, laser beam, friction stir welding), the use of ceramic materials or magnesium alloys, where limited experience has been gathered so far, it needs to be understood how the applicant is complying with the applicable requirements. Note: completely new, novel or unusual materials and processes would automatically lead to non-basic classification.	MoC/IM
Aeroelastic Stability Requirements	25.629	To establish the means of compliance with aeroelastic stability requirements for (i) aeroplanes equipped with feedback control systems that can affect the aeroelastic stability of the aeroplane, (ii) definition of failure conditions to be considered and (iii) addressing Limit Cycle Oscillation (LCO) and free-play.	MoC/IM
Ditching structural condition	25.563, 25.801	For planned ditching, the conditions at initial water impact are not fully defined in the subject requirements, and this has led to different interpretations by applicants in the past. EASA has developed a Generic CRI on this subject, which is not available in the FAA system.	MoC/IM

Subject	Standard or AMC	Description	CRI Category
Seat adapter plates	25.561, 25.562	When the seat tracks/rails installed on the aircraft are not compatible with the desired seat layout, applicants often install adapter plates between the seat and airframe structure. It needs to be ensured that this adapter plate installation does not degrade the level of safety compared to the original (rail/track mounted) installation. EASA applies a Generic CRI on this subject, which is different than the current FAA policy.	MoC/IM
Decompression	25.365(e)(f)(g)	Any structure, component or part, inside or outside a pressurised compartment, the failure of which could interfere with continued safe flight and landing, must be designed to withstand the effects of a sudden release of pressure through an opening in any compartment at any operating altitude. This SEI only is applicable for compliance with decompression requirements for the following two cases: loss of windshields and small compartments, both of which are generally more demanding than the corresponding FAA policies and interpretations. For each of these specific topics EASA has developed Generic CRIs.	MoC/IM
Failure of structural elements in systems	25.671(c)(1), 25.1309	To provide for acceptable means of compliance for single failure of structural elements in systems critical according to 25.671, 25.783 or 25.1309. Single mechanical (structural) failures of components within systems need to be considered. FAA PS-ANM-25-12 contains guidance on this subject, but this is not fully harmonized with EASA. Also, the PS does not address all related compliance issues (for example, definition of a single failure, and the required residual load carrying capability), and therefore the means of compliance needs to be understood by the EASA.	MoC/IM
Rudder control reversal conditions	25.351, 25.671(a)	To provide for structural requirements addressing multiple rudder inputs by the pilot(s). The FCHWG developed some recommendations to address the risk of multiple rudder inputs. Based on this material EASA has developed a Generic CRI included in CS-25 Amdt 22. The corresponding FAA IP is currently less demanding than the EASA CRI.	SC
<u>Panel 4 Hydromechanics</u>			
Side Stick Motion and Effect of Cockpit Controls and Pilot Forces for Side Stick Controls	25.397(d), 25.671, 25.672, 25.685, 25.771, 25.777, 25.779, 25.1301, 25.1309, 25.1322, 25.1523	The introduction of side stick controllers notably associated with electronic flight control systems has required the consistent application of additional requirements to CS 25. You may need a special condition to accommodate such features. To provide limit pilot forces and torques when a side stick controller is used on the flight deck. This may be based on the relevant regulatory material adopted in CS-25 Amdt. 13. For active Side Stick a specific CRI might be needed to address the associated risks.	SC
Electronic Flight Control Systems	25.173, 25.175, 25.177	A special condition & interpretative material might be needed to address electronic flight control systems which provide neutral stability in the directional, lateral & longitudinal axes. Additional mitigation relating to low energy awareness may also need to be considered.	SC&IM
	25.143, 25.333	CS 25.143 requirements assume that a conventional non fly-by-wire aeroplane can generate sufficient aerodynamic lift to provide sufficient manoeuvrability with regards to the normal load factor envelope defined by CS 25.333. This capability ensures adequate manoeuvrability to effect sudden changes to the flight path which may be required to avoid	SC

Subject	Standard or AMC	Description	CRI Category
		obstacles, terrain or the capture of level-off altitudes following climb or descent. For structural or other reasons certain electronic flight control system designs embody a normal load factor limiting system intended to restrict the achievable load factor envelope within that which would have been available taking full credit for the aerodynamic performance of the aeroplane. You may need an additional special condition to ensure that a sufficient manoeuvre capability remains.	
	25.255(a)	A CRI might be needed for Out-of-Trim Characteristics, Design Manoeuvre Requirements for Electronic Flight Control Systems Electronic Flight Control Systems (EFCS) / Fly-By-Wire.	MoC/IM
	25.143, 25.671(a), 25.1301	EASA may issue a generic CRI on Formalization of Compliance Demonstration for EFCTL. On fly-by-wire aeroplanes the flight controls are implemented according to complex control laws and logics. The handling qualities certification tests usually performed on conventional aircraft to demonstrate compliance with CS 25 SUBPART B – FLIGHT are not considered sufficient to cover the flight control laws behaviour in all foreseeable situations that may be encountered in service. To standardize handling qualities tests, the EASA believes that means of compliance with CS 25.143, 25.671, 25.1301 and 25.1309 addressing flight control law characteristics need to be explicitly proposed and formalized within certification documents to ensure and record adequate coverage and testing of control laws, logics and characteristics. Consequently you may need interpretative material requested to improve the level of formalization of the compliance demonstrations.	SC/IM
	25.671(a)	EASA may issue a generic CRI to address continued functionality of flight control systems in conditions of unusual attitudes. Special Condition results from the ARAC FCHWG recommendation (2002) addressing specific Flight Control System features.	SC
	25.671(c), 25.1309	EASA Generic CRI provides specific guidance how to consider common mode failures in electronic flight controls. There is no similar FAA Issue Paper. This is assessed for TCs and new derivatives and major changes and STCs including deviations from what is approved in the initial certification..	MoC/IM
	25.671(c), 672, 677, 697, 1301, 1309	EASA Generic CRI on Control Signal Integrity. FAA has a similar Issue Paper but not equivalent in content.	MoC/IM
	25.671(e)(f)	EASA may issue a generic CRI to address control surface position awareness and multiple modes of operations	SC
Flight Control Jams	25.671(c)	EASA Generic CRI requires Flight Control Jams during the landing/flare phase to be considered in the assessment for Continued Safe Flight and Landing. The method of compliance differ from the FAA for this particular phase of flight.	MoC/IM
Flight Control System Failure Criteria	25.671(c)	Generic CRI needed to establish an equivalent safety finding (ESF) with CS 25.671(c)(2) to use the Aviation Rulemaking Advisory Committee's (ARAC) proposed means of compliance.	ESF
Aeroplane Control Following Failure of All Engines	25.671(d)	Generic CRI required to address the flare to a landing and stopping phases should a suitable runway be available. Special Condition required to cover missed phases in the ARAC FCHWG proposal from 2002, i.e. to also consider the flare phase, and the stopping phase (should a suitable runway be available). This could lead to additional flight crew	SC

Subject	Standard or AMC	Description	CRI Category
		procedures for flying and landing with all engines inoperative that need to be covered in an AFM-supplement for EASA. There is no equivalent requirement in 14 CFR Part 25 or IP.	
Operation Tests Applicability to High Lift System	25.683(b)(c)	The FAA requirements are the same as CS 25.683(b) since Amdt. 25-139. However, the FAA considers that high lift systems do not need to be considered under §25.683(b)(c) (see Docket No.: FAA-2013-0109 Amdt. No. 25-139) which is not in line with the EASA interpretation. The EASA interpretation is clarified in a Generic CRI on 25.683(b). Before Amdt.25-139 there is no FAA equivalent for CS 25.683(b).	MoC/IM
Lift & Drag device indicator	25.699(a)	A CRI may be needed to provide the EASA interpretation and means of compliance for Lift and Drag device indications. The FAA requirement is the same as CS 25.699(a), following an accident investigation, turned out that the FAA accepts the Lift/Drag Lever position in the flight deck as means of compliance. This interpretation differ to the EASA interpretation, where receiving the actual device position feedback is required to meet the requirement. Only observing the control/selector position providing the position command is judged not to be acceptable.	MoC/IM
Landing Gear position indicator and warning device	25.729(e)	A CRI may be needed to establish a means of compliance with CS 25.729(e). The absence of direct and positive monitoring of the uplocked condition leaves the potential for dormant failures of the uplock hook.	MoC/IM
Protection against wheel and tyre failures	25.729(f)	Generic CRI to apply the JAA TGM Wheel and Tyre failure model used pre CS-25 Amdt.14. There is no equivalent model in 14 CFR Part 25.	MoC/IM
	25.734	There is no equivalent requirement in 14 CFR Part 25. Compliance showing may require installation changes, equipment relocations, shielding of essential systems / structure and particular attention for fuel tank safety.	MoC/IM
Tyre Speed Rating	25.733(c)	A CRI may be needed to establish an approach if the tyre speed rating could be exceeded in service. EASA systematically request that the tyres installed to an aircraft are providing overspeed capabilities if overspeed has not been considered within the speed rating.	MoC/IM
High Brake Temperatures	25.735(a)	Generic CRI on Respecting Brake Energy Qualification Limits. CS25 Amdt 18 onward covers content of the Generic CRI. Generic CRI and CS25 Amdt.18 AMC will lead to AFM limitation for maximum brake temperatures before dispatch. FAA differs from EASA opinion that a brake should have a maximum temperature limit before dispatch although it has been qualified with a specific max brake temperature from pre-heating.	MoC/IM
	25.735(I)	Wheel Brake Temperature effects in the wheel well. High brake temperature effect on systems and structure in the landing gear bay needs to be considered. This requirement is only partially addressed by 14 CFR 25.729(f)(3), hence it is an SSD.	MoC/IM
Electric brake	25.735	Due to the novelty, a means of compliance CRI may be needed to address electric brakes. Novel design feature requiring lot of engineering judgement for accepting a particular design. Showing compliance may lead to design changes when not initially considered.	MoC/IM
Nose-wheel steering	25.745	Specific requirements on Nose Wheel Steering and towbar/towbarless towing operations. There is no equivalent requirement in 14 CFR Part 25.	

Subject	Standard or AMC	Description	CRI Category
Ram Air Turbine Particular Risk Assessment	25.1309	Generic CRI requires to consider RAT Blade releases as a particular risk for avoidance of catastrophic consequences. FAA does not have an equivalent request.	MoC/IM
Panel 5 Electrical Systems			
Lithium Batteries-Rechargeable and Non-Rechargeable	25.601, 25.863, 25.869, 25.1301, 25.1309, 25.1353(c), 25.1529, 25.1360 (b)	Special Conditions for Lithium Batteries–Rechargeable and Non-Rechargeable are needed to deal with the particular risks associated with this technology, which are not addressed in CS-25 requirements. This SEI is not applicable to button/coin cell batteries with less than or equal to 2 watt-hours of energy that are not required for safe operation of the airplane and meet UL 1642, UL2054 (rechargeable batteries only) and IEC 62133 (rechargeable batteries only).	SC/MoC
Operation without Normal Electrical Power	25.1351(d)	A MoC CRI will be issued to deal with battery endurance during operation without normal electrical power. FAA requirement in Part 25 differs from CS 25.1351(d), FAA is raising systematically an IP to align the requirements, but the MoC differs from the one in AMC 25.1351(d).	MoC/IM
ESN - Electrical Structural Network	25.581, 25.899, 25.1309, 25.1310, 25.1316, 25.1353, 25.1360, 25.1363, 25.1529, Subpart H	Composite structure does not distribute electrical currents as a metallic structure does, therefore aircraft with composite fuselage may need a specific network to ensure the electrical continuity and the classical electrical functions provided by the structure, notably return path for functional electrical currents and fault currents. This design is unconventional and deserves a new certification approach. A MoC CRI may be needed.	MoC/IM
Electrical generation-High voltage AC sources (>230Vac), High voltage DC Sources (270Vdc)	25.899, 25.1351, 25.1353, 25.1360, 25.1431, Subpart H	A MoC CRI may need to be issued to cope with the new risks associated to these high voltages.	MoC/IM
Panel 6 Avionics			
Data Link Services	CS ACNS Subpart B Section 2, 25.1301, 25.1309, 25.1322	Installation of ATN B1 data link aircraft system. There is a specific EU Mandate. Interoperability is key element for the efficiency and safety of EU airspace. Data Link services will be used in the Single European Sky for ATC communications. With the introduction of Data Link technology, much of the information which was previously transmitted by voice communications may be replaced by Data Link messages. To maintain adequate safety levels, there is also a need to ensure appropriate interoperability of aircraft installed systems with ground communications facilities. CS ACNS subpart dedicated to datalink is a new regulatory material. ACARS Data Link is not affected by this SEI.	SC/MoC
ADS-B Out	CS ACNS Subpart D Section 4	Installation of 1090 MHz Extended Squitter (ES) ADS-B Out system.	MoC/IM

Subject	Standard or AMC	Description	CRI Category
		There are possible differences between CS ACNS and AC 20-165B interpretation. FAA authorised installation with remote GPS sensors (other the ones that are used for navigation) whereas CS ACNS.D.ADSB.090(a) require indirectly same GPS sensor. This SEI is only applicable to ADS-B out projects that use GPS sensors different than those used for navigation. For same GPS source projects the SEI is not applicable.	
Reduced Vertical Separation Minima	CS ACNS Subpart E Section 1 25.1333	RVSM Initial Approval (AC 91-85A is new and deviate from CS-ACNS on some items) or any change that could have a potential impact on RVSM, which is not reviewed by the owner of RVSM approval (for example: modification of probes, modification of nose cone, modification of autopilot, installation of winglets, installation of radomes, …).	ESF
Head-Up Display and Synthetic Vision Systems (SVS) on Head Up Display	25.773, 25.1301, 25.1302, 25.1309, 25.1329 AMC 25-11 HUD 903	New or unusual symbology in the HUD. HUD is a PFD and the possibilities of customisation is high. EASA experience is that HUD is usually a mean to introduce new flight parameter symbology. AMC 25-11 and AC 25-11B (EASA and FAA harmonized material) do not necessarily cover those new items. The SVS system provides the pilot with a synthetic view of the external scene. When SVS is displayed on a head-down PFD it is typically accepted "for situational awareness" only. However, SVS displayed on the Head-Up Display requires a special condition regarding pilot's compartment view (CS 25.773). A CRI also proposes acceptable means of compliance for the airworthiness approval of this system.	SC MoC
Take Off and Landing Data as primary source	25.1301, 25.1309	Implementation of TOLD (Take-Off and Landing Data) function: intended to provide take-off and landing data such as take-off and landing speeds, take-off and landing distances and thrust setting which can be sent directly to the Primary Flight Displays. The information computed by the TOLD function is intended to be the primary source of information, and the computed information would not need any kind of crosscheck with AFM information before being used on the flight deck.	MoC/IM
Customization of Electronic Check Lists	25.1301, 25.1302, 25.1309	Most manufacturers allow operators to freely customize contents and structure of electronic check list. EASA considers ECL to be part of the type design, at least concerning abnormal and emergency material. A CRI is used for that purpose. EASA has to be involved to ensure that the conditions of customisation are adapted to European environment.	MoC/IM
Display of Electronic chart (including display of Airport Map Displays (AMD))	25.1301, 25.1302, 25.1309	Installation of a functionality to display electronic charts with display of own ship position. This includes also Airport Map Displays (AMD).	MoC/IM
Sharing of avionics resources or A/C capability with noncertified Electronic Flight Bag systems or functions	25.1301, 25.1302, 25.1309 AMC 20-25	EFB with capability to share resources with certified avionics (display, Cursor control …). This is typically one novelty where EASA may have a different approach than FAA. Typical examples would be architectures allowing the display of EFB (i.e. non-certified) data on avionics displays units, or control of the EFB applications from certified control devices (e.g. KCCU or certified touchscreens).	MoC/IM
Enhanced Flight Vision System/Combined Vision System for ops credit	25.773, 25.1301, 25.1302, 25.1309, CS AWO	Installation of EFVS system for operational credits. A Special condition is needed for display of video from infrared or other sensor-based vision systems on head-up displays to provide a level of safety equivalent to § 25.773.	SC MoC

Subject	Standard or AMC	Description	CRI Category
		A CRI proposes some general requirements and acceptable means of compliance for the airworthiness approval of this system. Specific operational minima may be established in accordance with operational regulations. The operational credit is considered by EASA at airworthiness level. The FAA conducts this part at operational approval level, which is not compatible with EU system.	
Synthetic Vision Systems (SVS) on head down display for operational credit	25.773, 25.1301, 25.1302, 25.1309, CS AWO	Installation of SVS system for operational credit (e.g. SVGS). The operational credit is considered by EASA at airworthiness level and requires a CRI. The FAA conducts this part at operational approval level, which is not compatible with EU system.	SC/MoC
Integrated Modular Avionics	25.1301, 25.1309	Complete installation of a new IMA system or extensive/architecture change of an IMA system.	MoC/IM
Using Autopilot/Auto Throttles/Flight Director During Traffic Alert and Collision Avoidance System (TCAS) Resolution Advisory	25.1301, 25.1302, 25.1309, 25.1329 AMC 20-15	AP FD/TCAS (autopilot/autothrottle mode to automatically follow TCAS guidance in case of RA). Regulation and standards do not address specifically this autopilot mode. Past projects have shown that the EASA position is different from FAA on this topic: FAA allows by procedure pilots to ignore Resolution Advisories on some airports with parallel approaches and therefore requests an inhibition switch. EASA position regarding this switch is still to be developed. A CRI may be needed to establish an acceptable means of compliance for using the Autopilot/Auto Throttles/Flight Director during a TCAS Resolution Advisory manoeuvre such that the behaviour is predictable and unambiguous to the flight crew.	MoC/IM
ADS-B In	25.1301, 25.1302, 25.1309, 25.1322	Installation of system with ADSB-IN functions (e.g. ATSA). Numerous applications using ADS-B in technology are being developed. FAA uses IP that rely on AC 20-172B material and TSO C195b. EASA experience is limited on this topic. As an example, ATSA is a new application using ADS-B IN technology to present the flight crew with improved situational awareness with regard to surrounding airborne traffic. The improved awareness has allowed for the development of new procedures, which are likely to improve the efficiency of flight operations. The implementation of the ATSA functions affects flight deck display systems, warnings and cautions, TCAS and cockpit controls. Changes of, and additions to operational procedures and standards will be required and crew workload may be affected.	MoC/IM
RNP AR Approaches	25.1301, 25.1302, 25.1309,25.1322, 25.1329, AMC 20-26	Installation of system capable of RNP-AR approaches. Specific operational approval is required for AR Approaches, but EASA applies airworthiness criteria (AMC 20-26). FAA balance between airworthiness and operational approvals is different from EASA. It results in major differences in safety objectives (EASA is more stringent on the list of failures to consider). Here are the area where EASA is more stringent: 1) Demonstration of performance under failure condition (AMC 20-26, Item 6.1.3). 2) TAWS is not accepted as a means to mitigate inadequate design assurance of the FMS for RNP AR.	MoC/IM
Security Protection of Aircraft Systems and Networks	25.1301, 25.1309	The FAA and EASA regulatory materials (IP and CRI) differ. Cyber security is a hot topic and EASA should have full visibility on how it is addressed on validation programs.	SC

Subject	Standard or AMC	Description	CRI Category
		The Airborne Systems and Networks may introduce the potential for unauthorised electronic access to Aircraft Systems. It may contain security vulnerabilities due to the possible introduction of intentionally forged malware, intentional alteration of critical data, aircraft networks, systems or databases. CS-25 does not address Information Security and AMC 25.1309 explicitly exclude act of sabotage from the list of events to be addressed during the safety assessment. Therefore, a Special Condition (SC), in accordance with Part 21A.16B (a)1 and (a)3, is proposed to ensure that safety is not compromised by security threats. This SEI only applies to the changes classified major according to the guidance included in the chapter 3.1.9. of the EASA NPA 2019-01.	
Management of Erroneous Air Data Parameters, by Aircraft Systems, and their Effects at Aircraft Level	25.1301, 25.1302, 25.1309, 25.1322, 25.1329, 25.1323, 25.1325	Applicable only for new TC or installation of new avionics suite.	MoC/IM
Flight Recorders and Data Link Recording	25.1457, 25.1459	Installation of ATN B1 data link aircraft system. Aircraft equipped with the capability to provide DLS, are not being required to record the DLS messages. Current Certification Specifications requirements on recording of voice (CS 25.1457) and aircraft data (CS 25.1459) are not considered adequate to deal with this new technology. These requirements were never intended to also cover the recording of data link communications Therefore, in accordance with Part 21.A.16B(a)1, a Special Condition and associated interpretative material are proposed to prescribe recording requirements associated with the introduction of data link. FAR 25 has been aligned with EASA SC but the FAA apply it only for a significant major mode. EASA raises the SC for each major mode.	SC/MoC
Introduction of a display mode that alters and/or automates the visibility of the Standby Indicator	25.1301, 25.1302, 25.1309, 25.1322, 25.1333 AMC 25-11	Stand by indicator not permanently visible. CRI and IP related to that functionality differ between FAA and EASA.	MoC
Using Autopilot to conduct Emergency Descent Manoeuvre	25.1301, 25.1302, 25.1309, 25.1322, 25.1329	Implementation of EDM did not require so far the need of either a CRI or IP. New EDM implementation with higher authority (less mean to disconnect AP) may need to require guidance material to comply with 1309.	MoC/IM
Flight Crew Alerting	25.1322	Projects applying CS 25.1322 amendment 11 or later. CS 25.1322 addresses various aspects of flight crew alerting such as warning, caution, and advisory messages, lights, and other alerting methods that are installed in the flight deck. Early amendments of CS 25.1322 addressed only the visual component of annunciation displays typically installed in the flight deck. While the CS requirements are fully harmonised with the FAR at amendment 11, interpretation of several aspects may have to be co-ordinated (e.g., 25.1322(d)(2)). Avionics suites compliant with previous 25.1322 may require design change to comply with new one. This SEI is applicable in the following cases: - It is the first time an applicant elects to comply to 25.1322 amdt 11.	MoC/IM

Subject	Standard or AMC	Description	CRI Category
		- The change includes an ESF or deviation from CS-25.1322. - The change does not comply with the EASA agreed means to comply with 25.1322.	
LPV	25.1301, 25.1302, 25.1309, 25.1322, 25.1329, AMC 20-28EASA Decision 2016/018/R	Installation of system with LPV capability. When installing LPV capability EASA requests to have an alert for excessive downward deviation from the glide path (AMC 20-26 Section 7.1 Item 7). In case the alert is already installed the SEI is not applicable.	
Panel 7 Powerplant			
Fire protection of flight controls, engine mounts, and other flight structure	25.865	CS and FAR rules are identical, however difference in FAR/CS definitions and interpretations have been identified. A CRI might be required to establish an Acceptable Means of Compliance (AMC) with CS 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, to identify load conditions and recognized fireproof material. You may need a CRI to establish an Equivalent Level Of Safety (ESF) for compliance other than based on material (i.e. installation level, redundancy, alternate path).	ESF MoC
Fire protection: other components	25.867	Both rules considered equivalent even if FAR is normally more stringent (as it explicitly requires fire resistant surfaces, whereas CS refers to equivalency to aluminium), however interpretations of the rule differs. A CRI might be required to establish the EASA interpretation (IM) and an Acceptable Means of Compliance (AMC) with CS 25.867 to define the 2D nacelle zone, affected surfaces, and the acceptable mean of compliance. CRI differs from FAA IP on consideration on seals, gaps.	MoC/IM
Fire withstanding Capability of CFRP Wing Fuel Tanks	25.867	A Special Condition is needed to set the criteria for composite wing (5min or aluminium equivalency with considerations of fuel loading, environmental conditions, external airflow).	SC
Thrust Control Malfunction	25,901, 25.1309	Single failure of thrust control malfunction accommodation requires an EASA special condition.	SC
In-Flight Engine Restart	25.903(e)	A CRI IM might be required to detail the flight cases to demonstrate the in-flight restart capability. The FAA IP and associated materials (AC 25-7C, PS ANM 100-2001-116, PS ANM 25-02) does not allow Restart after Suction Feed Flameout to consider a 10Kft in opposition to EASA CRI that offers this threshold for fuel with volatility > Jet A.	MoC/IM
Propeller debris	25.905(d)	Both rules identical however, the AMC does mention release of a complete blade which is not normally addressed under the usual FAR interpretation.	
Reversing system	25.933(a)(1)	AMC has not equivalent published AC material.	
Negative g	25.943 25.1315 CS 25J943 AMC 25.1315	25.943 refers to 25.1315; corresponding AMC conditions are different from the FAA practices. Applies also to APU installation (CS 25J943 and AMC 25.1315).	MoC/IM MoC/IM

Subject	Standard or AMC	Description	CRI Category
Uncontained Engine Debris Penetration of Fuel Tank	25.903(d)(1), 25.963(e)	To ensure that impacts to fuel tank structure (metallic and CFRP), including fuel tank access covers, from uncontained engine 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. This may be based on the relevant regulatory material adopted in CS-25 Am. 14. This includes debris definition consideration.	
Fuel Tank Safety **ICA for Fuel Tank safety**	25.981	For fuel systems, AMCs differ from corresponding ACs in several aspects including acceptable figures for energy, current, temperature increase (unique to EASA), etc. A MoC CRI may be needed because installation of ground fault interrupters or other devices to protect fuel pumps may be needed to address fuel tank ignition sources. An Interpretative Material CRI is raised for ignition risk due to lightning strike on structure. Considerations for lightning and fuel tank flammability probability are given, as well as particular considerations for composite fuel tank. For ICA, Specific FRM ICA requirements are introduced in CS-25 Amdt 6.	SC MoC
Reverser Controls	25.1155	AMC has not equivalent published AC material.	
Engine cowling	25.1193	Regarding fire resistance, the rules are identical, however EASA has implemented a systematic approach on the ground and flight conditions (in CS25 Amdt 13: new rule + new AMC). As a result of adverse in service experience, EASA has issued a generic special condition for fan cowl latch.	SC
Powerplant Fire Testing	25.1181	You may need a CRI to ensure use of representative environmental conditions, and burner representative of a fuel fed fire for fire testing compliance demonstration for powerplant fire testing.	MoC/IM
Fire, Extinguishing and Suppression Agent **Halon Replacement** **Halon Simulation**	25.1195 25.1197	Halon is being phased out of airplane applications per ICAO deadlines / EU 744/2010. Halon use being restricted, instead of performing halon concentration test, alternative agent HFC125 might be used as simulant of Halon. You may need a CRI to detail the acceptable mean of compliance.	MoC/IM
ETOPS	25.1535	Several CRIs may be needed to establish a means of compliance for CS 25.1535 / AMC 20-6 versus FAR 25.1535 and Appendix K: - A CRI MoC may be needed for business Jet EDTO. - A CRI MoC may be needed to define the necessary activities for Early ETOPS compliance demonstration. - CS 25 Amdt 12 introduced new requirement fuel system alerts, which have no FAR equivalent whose closed equivalent are limited to ETOPS. - An IM CRI may be issued to show compliance to § 25.1535 to document the icing environment, icing exposure and resulting ice shapes used to demonstrate safe performance and handling during an ETOPS mission diversion.	MoC/IM
APU installation and Electronic control of Essential APU	CS Subpart J	FAR does not feature a dedicated APU installation subpart J – equivalent requirements can be however introduced in the FAA certification basis through an IP (ESF).	
	AMC 20-2	An interpretative material CRI may be needed for APU ECU qualification.	MoC/IM

Subject	Standard or AMC	Description	CRI Category
Volcanic Ash	25.1593	Introduced into CS-25 Amdt 13. A CRI might be needed for applicant electing to comply with CS 25.1593 (CS-25 Amdt13) whereas the engine is not at CS-E Amdt 4.	
<u>Panel 8 Environmental Control System and Icing</u>			
Pilot compartment view	25.773(b)(1)(ii); App.O	There is no difference between FAR25.773 and CS25.773. Nevertheless, as both refer to the appendix O (from CS-25 Amdt 16), the compliance demonstration will differ as the FAR 25 only considers the appendix O Applicability limited to models with MTOW ≤ 60k lbs. or reversible flight controls according to FAR 25.1420. Additionally the Means of Compliance are not harmonized for Appendix O.	MoC/IM
Propeller de-icing	25.929(a); App.O	CS 25 requires Appendix O (from CS-25 Amdt 16) to be fully assessed whereas FAR 25 requires propeller assessment in the portions of Appendix O for which the airplane is approved for flight. Additionally the Means of Compliance are not harmonized for Appendix O.	MoC/IM
Air intake de-icing and Freezing Fog	25.1091 25.1093 25.J1093	For certification basis before CS 25, Amdt.16: - An IM CRI may be needed to show compliance to § 25.1093(b). This CRI 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. - An IM CRI may be issued to clarify EASA policy for operation in Freezing Fog conditions regarding temperature and time duration. For certification basis after CS 25, Amdt.16: - CS 25 refers to Appendix P and FAR 25 refers to Part33 Appendix D, but those 2 appendices are equivalent, therefore this is not an SSD from that aspect. However CS 25 table 1 condition (ii) indicates TAT band between -9°C to -1°C whereas FAR 25 table 1 condition 2 indicates TAT band between -7°C to -1°C. Furthermore FAR 25 allows airplanes with a maximum take-off weight equal to or greater than 60,000 pounds not to comply with Appendix O and condition 3 specified in table 1. Subpart J is in general an SSD because Subpart J has no equivalent in FAR: FAR Subpart E requirements are made applicable despite not explicitly identified. As per previous comments on icing rule modifications, FAR 25 allows airplanes with a maximum take-off weight equal to or greater than 60,000 pounds not to comply with Appendix O and condition 3 specified in table 1. Additionally the Means of Compliance are not harmonized for Appendix O.	MoC/IM
Flight instrument external probes and proves heating systems alert	25.1309; 25.1323; 25.1324; 25.1325; 25.1326; App.O; App.P	For certification basis before CS 25 Amdt.16: A SC CRI may be issued to clarify EASA policy regarding icing conditions (liquid and ice crystals) for external probes certification for new or modified probes installation. For certification basis after CS 25 Amdt.16, FAR 25 limits the applicability of this paragraph to angle of attack system whereas CS 25.1324 includes all Flight instrument external probes. Additionally AMC 25.1324 defines for probe assessment higher ice crystal concentrations than the ones proposed in Appendix P. For 1326 CS 25 requirement address all Flight Instrument external probes, whereas FAR reduces applicability only to Pitot heat indication system. In addition CS 25.1326(b) (2) is requesting that an alert shall be provided if any probe heating system is switched 'on' and is not functioning normally.	SC

Subject	Standard or AMC	Description	CRI Category
		CS 25 requirement address all Flight Instrument external probes, whereas FAR applicability covers Pitot heat indication system. In addition, CS 25.1326(b) (2) is requesting that an alert shall be provided if any probe heating system is switched 'on' and is not functioning normally.	
Supercooled large drop icing conditions	25.1309; 25.1419; 25.1420; App.O	For certification basis before CS 25 Amdt 16: EASA may issue a Special condition CRI for any wing ice protection system modification on aircraft typically equipped with pneumatic boots and unpowered roll control, to clarify EASA policy regarding the icing environment, icing exposure and resulting ice shapes used to demonstrate safe performance and handling. For certification basis after CS 25 Adt.16: FAR 25 applicability limited to models with MTOW ≤ 60k lbs. or reversible flight controls. This generates differences (EASA more restrictive) for requirements 25.101, 25.103, 25.105, 25.111, 25.117, 25.119, 25.121, 25.123, 25.125, 25.143, 25.147, 25.161, 25.171, 25.173, 25.175, 25.177, 25.177, 25.181, 25.201, 25.203, 25.207, 25.235, 25.237, 25.251, 25.253, 25.255. EASA does not provide the allowances provided by Part 25.21(g) (1) for a/c over 60,000 lbs or not equipped with reversible flight controls. Therefore, the EASA regulation is more stringent and also may drive some SSDs where some aircrafts will be required to show compliance to Appendix O conditions not required by FAA. An IM CRI may be may be issued to clarify EASA policy regarding the icing environment, icing exposure and resulting ice shapes used to demonstrate safe performance and handling	SC/MoC
Final Take off Ice Shapes in App.C:	25.21g	In App.C, FAA may limit the FTO Ice Shapes to 1500 ft.	
Primary In flight Ice detection system	25.1419; App.C; App.O	For certification basis before CS 25 Amdt.16 An IM CRI may be issued to clarify EASA policy regarding certification approach for Primary Ice detection systems. This IM CRI is not harmonized with FAA and may impact the design and approved manuals. For certification basis after CS 25 Amdt.16 an IM CRI may be issued to clarify the detection in App.O.	MoC/IM
Airframe and Nacelle IPS Performance above 30.000ft	25.1419; App.C	A CRI SC may be issued to clarify EASA policy regarding the IPS performance to be demonstrated when flying above App.C maximum altitudes.	SC
Wing Surface Contamination caused by Cold Soaked Surfaces (CSS)	25.1309	An IM CRI may be issued (new TCs and Significant Changes) to clarify EASA policy with regard to the issues related to wing surface contamination caused by cold soaked surface accretion/contamination. This IM CRI is not harmonized with FAA and may impact the design and approved manuals.	MoC/IM
Oxygen Equipment Qualification above 40.000ft	25.1441d	An IM CRI will be issued to clarify EASA policy regarding Oxygen Equipment Qualification above 40.000ft cabin altitude. This IM CRI is not harmonized with FAA and may impact the design and approved manuals.	MoC/IM
Oxygen Fire Hazard in Gaseous Oxygen Systems	25.1441b	Before CS-25 Amdt 21 an IM / MoC CRI may be issued to clarify EASA policy regarding CS 25.869(c) and CS 25.1453 with respect to Oxygen Fire Hazard in Gaseous Oxygen Systems, centralised, decentralised or portable (for portable this SEI is applicable only for new equipment not validated before by EASA).	MoC/IM
Oxygen Distribution System (25.1445a)	25.1445	An ESF may be required for installation of a common supplemental oxygen system for flight crew and supernumeraries without means to reserve flight crew oxygen.	ESF

Subject	Standard or AMC	Description	CRI Category
Pneumatic Systems – Harmonised 25.1438	25.1309; 25.1436, 25.1438	An ESF CRI may be issued to propose a new Pneumatic and Pressurisation rule harmonised to satisfy both the EASA and the FAA; from recent certification exercise a new IM CRI is in preparation to clarify the approach for proof and burst levels. High pressure equipment (e.g. high pressure nitrogen bottles in Emergency Door Actuators) will have specific qualification / test requirements.	ESF MoC
Conditioning Systems Acceptable Low Temperature Physiological Environment During Failure Conditions	25.831; 25.1309	For new TCs and Derivatives an IM / MoC CRI may be issued to define acceptable low temperature physiological limits for occupants following an airplane system failure that could cause a drop in the environmental temperature.	MoC/IM
<u>Panel 10 Software and Airborne Electronic Hardware</u>			
Software Guidance	25.1309	Additional guidance is needed for the development of new or modified airborne systems/equipment containing Software, when harmonized FAA/EASA guidance has not been applied. Note: SEI not applicable: - when AC 20-115D has been applied - or when DO-178C has been applied - or when DO-178B has been applied with use of Software techniques for which specific guidance has been raised by the CA (MBD, OOT, FM, CM/PDI, Pseudocode) - or when DO-178B has been applied without use of specific Software techniques (MBD, OOT, FM, CM/PDI, Pseudocode).	MoC/IM
Hardware Guidance for custom devices	25.1309	Guidance is needed for the development of new or modified airborne systems/equipment containing custom devices. Note: SEI not applicable when DO-254/ED-80 associated with the FAA Order 8110.105 has been applied.	MoC/IM
Use of COTS IPs	25.1309	The use of COTS IPs requires specific guidance that is not available in current material. Note: SEI only applicable for DAL A, B, C hardware.	MoC/IM
Use of complex COTS devices	25.1309	Development assurance is needed for the usage of complex COTS devices. Note: - SEI only applies for complex COTS - SEI not applicable for COTS processor devices when FAA IP on COTS processors has been raised.	MoC/IM
Artificial Intelligence and Machine Learning	25.1309	The use of Artificial Intelligence/Machine Learning requires specific guidance that is not available in current material.	SC
MBD for Hardware Development	25.1309	The use of Model Based Development (MBD) within the development process of custom devices requires specific guidance that is not available in current material.	MoC/IM

Subject	Standard or AMC	Description	CRI Category
Panel 11 Cabin Safety			
Overhead passenger sleeping compartment	25.831, 25.812, 25.853, 25.858	This is a topic without harmonized requirements and means of compliance. In many cases EASA issues a Special condition to support the installation of overhead passenger sleeping compartments.	SC, MoC
Halon replacement hand fire extinguishers	25.851(a)(2)	Based on EU legislation, for new installations of hand fire extinguishers for which the certification application is submitted after 31 December 2014, Halon 1211, 1301 and Halon 2402 are unacceptable extinguishing agents.	MoC/IM
Halon replacement built in fire extinguishers for Cargo Compartments	25.851(b)	Halon 1301 is no longer an acceptable extinguishing agent, based on EU Legislation, for cargo compartment fire extinction systems to be installed on aircraft types, for which type certification is requested after 31 December 2018.	MoC/IM
Angled Seats	CS 25.785(d)	Generic ESF related to seat installations that are angled more than 18° with a limitation to a maximum angle of 30°.	ESF
Air Medical Services (Medical Evacuation, Ambulance conversion, Patient Transport Unit, Temporary Stretcher installation)	25.831, 25.365, CM-21.A-E-001 (AML STC) CAT.OP.MPA.155 (Special Category of Passengers)	EASA has published guidance for Air Medical Services and associated design features (e.g. Stretcher, Oxygen). There is no FAA equivalent.	SC/MoC/IM
Panel 12 Development Assurance and Safety Assessment			
System Safety Assessment	25.1309(e)	CS 25.1309(e) is an SSD introduced at CS-25 Amendment 20 with the intent to ensure a better harmonisation of the CMR development process among applicants, and to reduce the risk of inadequate task identification and follow-up. The CA and VA have limited experience with the application of this requirement and the associated revised AMC 25-19. Confidence building is required to ensure consistent application of the associated guidance. This SEI is applicable for new TCs, Derivatives and Significant Changes. For other changes this SEI will not be applicable as far as the CMR development process accepted by EASA in the initial project is applied.	
Development Assurance Process	AMC to 25.1309(b) EUROCAE ED-79A / SAE ARP4754A	Legacy methods of demonstrating compliance to CS 25.1309 using development assurance techniques at the software and airborne electronic hardware levels do not adequately support the complexity of system integration, nor do they adequately address potential errors in the development of requirements for standalone systems that may incorporate software and complex electronic hardware. Therefore, the Agency requests additional methods to reduce and mitigate requirement errors in the aircraft/system development process in line with the objectives of EUROCAE ED-79A / SAE ARP4754A, "Guidelines for Development of Civil Aircraft and Systems". A CRI IM may be needed to define the scope of application of development assurance activities in line with objectives contained in EUROCAE ED-79A / SAE ARP4754A, as a means of compliance with CS-25.1309(b).	MoC/IM

Subject	Standard or AMC	Description	CRI Category
		This SEI is applicable for new TCs, Derivatives and Significant Changes. For other changes this SEI will not be applicable as far as the development assurance plan accepted by EASA in the initial project is applied. Note: SEI only applicable for projects for which the CS 25.1309 Type Certification basis is at Amendment 11 or above.	