

Safety Management, Sustainability & Global Outreach Directorate
Safety Intelligence & Performance Department

Quarterly Safety Recommendation Dissemination Report

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BRAZ-2026-001**ATR-72 212A (500), PS-VPB, 09/08/2024**

Work with the aircraft manufacturer to assess the possibility of revising and improving the DEGRADED PERFORMANCE procedure, requiring immediate action by the flight crew to restore the aircraft's performance (ICING BUG + 30 kt), in order to prevent the aircraft from approaching the limit condition defined by V_{MLB0}icing.

Status: Open

BRAZ-2026-002**ATR-72 212A (500), PS-VPB, 09/08/2024**

Work with the aircraft manufacturer to assess the possibility of improving procedures relating to flight in icing conditions, particularly with regard to the use of LOW BANK mode, with the aim of preventing an increase in stall speed due to the aircraft's bank angle in conditions of degraded performance.

Status: Open

BRAZ-2026-003**ATR-72 212A (500), PS-VPB, 09/08/2024**

Liaise with the aircraft manufacturer in order to assess the feasibility of including the recording in the FDR of the following parameters for all ATR aircraft in service, with the aim of preventing the potential loss of relevant data.

Parameters: Airframe De-Icing system failure; activation of the stick pusher system; position of the right elevator; position of the rudder pedals and control column for each pilot; activation of the pitch uncoupling mechanism; activated AFCS lateral modes (LOW BANK or HIGH BANK); and display of CAUTION messages triggered by the CCAS.

Status: Open

BRAZ-2026-004**ATR-72 212A (500), PS-VPB, 09/08/2024**

Work with the aircraft manufacturer to reassess the APM system's alert levels, with the aim of improving the flight crew's situational awareness regarding the severity of the condition encountered and the need to carry out the prescribed procedures promptly, whilst considering the possibility of raising the APM system's INCREASE SPEED alert level from CAUTION to WARNING

Status: Open

CZCH-2026-001

Alexander Schleicher K7 Rhönadler, OK-9132, 08/09/2024

The AAI issues a safety recommendation for the European Union Aviation Safety Agency to modify the Commission Regulation (EU) No. 1178/2011 ANNEX IV Part-MED, MED.A.030 (a) so that student pilots shall be holder of a valid medical certificate appropriate to the required licence prior to commencing flight training.

Interim reply sent on 25/08/2026

In regard to this safety recommendation, the European Union Aviation Safety Agency (EASA) has taken it into consideration within the Notice of Proposed Amendment (NPA) 2025-105 as a proposed change to MED.A.030. EASA is currently in the process of assessing the comments received from the stakeholders consulted during the focused consultation process.

Once a final decision regarding the proposed change has been reached, EASA will provide an updated reply. This can be expected by the end of 2026.

Status: Open

FRAN-2017-002

Cessna Citation 525B, F-HCIC, 22/07/2013

The BEA recommends that EASA, in cooperation with the FAA, study the in-service experience on the use of masks with separate goggles compared to the use of full-face masks, and that it draws conclusions on making it mandatory for full-face masks to be installed on HPA type aeroplanes mainly used for public transport.

Final reply sent on 25/08/2026

The European Union Aviation Safety Agency (EASA) conducted an assessment of 1,118 occurrence reports from the European Central Repository (ECR) involving the use of separate masks and goggles. This

assessment did not reveal any evidence of difficulties associated with their use. EASA also liaised with the Federal Aviation Administration (FAA) regarding this safety recommendation.

Current airworthiness and operational requirements permit the use of separate oxygen masks and goggles, rather than full-face units, for Certification Specification CS-23 (General Aviation) and CS-25 (Large Aeroplane) aircraft.

The use of separate oxygen masks and protective goggles can provide several practical advantages compared with fully integrated systems. These advantages are mainly related to greater operational flexibility, improved user comfort and ergonomics, as well as simplified maintenance and overall system reliability.

In many decompression scenarios, goggles are not required; therefore, using only the mask helps reduce workload and discomfort.

Based on its assessment, EASA has not identified safety evidence demonstrating that full-face oxygen masks provide a significant safety benefit over approved configurations employing separate oxygen masks and goggles. Therefore, the available data do not support mandating full-face oxygen masks for installation on High Performance Aircraft (HPA)-type aeroplanes.

Status: Closed – Partial Agreement

FRAN-2024-014

Piper PA46 350P (Malibu Mirage), N9190X, 14/09/2022

The BEA recommends that:

- whereas the significant development of platforms bringing together passengers, pilots and aircraft lessors;
- whereas these activities take multiple forms;
- whereas the passengers are not aware of the difference in safety levels between general aviation and commercial air transport;
- whereas the absence of European or national regulations clearly defining the roles and responsibilities of the various parties involved (platforms, pilots, aircraft lessors, instructing party/passengers);
- whereas these flights are organized in all of the European Union;
- whereas in the absence of regulations, this passenger transport for remuneration activity is considered as coming under the general aviation regulations and consequently does not offer a sufficient guarantee of the level of safety for passengers;
- whereas the American Civil Aviation Authority (FAA) has put in place regulatory requirements relating to on-demand flight for remuneration (requirements 14 CFR Part 135);

EASA establish regulatory requirements in order to guarantee the safety of passengers carried on-demand for remuneration outside commercial air transport operations (Part CAT of European regulation AIR OPS).

Interim reply sent on 25/08/2026

Following the Bureau d'enquêtes et d'analyses pour la sécurité de l'aviation civile (BEA) assessment of EASA's response of February 2025, the European Union Aviation Safety Agency (EASA) provides the following update on the actions taken.

As indicated in its previous response, Evaluation Task (EVT).0013 has now been completed. The final report was published on 19 March 2026 and is publicly available at:

<https://www.easa.europa.eu/en/document-library/general-publications/evaluation-rules-commercial-small-size-aeroplane-operators>

Separately, EASA has launched a dedicated project, in cooperation with the European Business Aviation Association (EBAA) and National Competent Authorities (NCAs), to further clarify the distinction between commercial and non-commercial operations. The emergence of business models such as fractional ownership, flying clubs, cooperatives and economic interest groups has demonstrated the need for additional guidance on the application of the existing regulatory framework.

This issue has been consistently raised by National Competent Authorities in several regulatory fora and has also been highlighted through accident investigation reports. The objective of the project is to provide greater clarity on the boundaries between commercial and non-commercial operations and to promote a harmonised understanding across the Member States.

Any national arrangements established to address specific operational models or passenger protection considerations remain the responsibility of the respective National Competent Authorities. In this context, EASA continues to work closely with the Direction générale de l'aviation civile (DGAC) and is actively taking its experience and technical input into account in the development of the aforementioned project.

EASA considers that these actions will appropriately address the issues identified by the BEA by improving the common understanding and consistent application of the existing regulatory framework. The current expected completion date for these actions is September 2027. EASA will update the BEA on project developments.

Status: Open

FRAN-2024-017

Piper PA-28RT, HB-PNP, 23/07/2020

The BEA recommends that:

- Whereas Piper's publication of service bulletin SB No 623 in November 1978 indicates that it had come to this manufacturer's attention that there had been cases of short-circuits generated by the absence or incorrect positioning of one of the insulating washers between the diode device metal cooler and the floor of the aeroplane;
- Whereas this SB was applicable to all the aeroplanes manufactured by Piper before November 1978 and equipped with this type of diode device. The Piper PA-28RT-201T manufactured from 1979 onwards was not concerned by this SB, which had not been updated since;

- Whereas Piper's maintenance documentation does not require a check of the condition of the insulation between the diode device cooler and the floor of the aeroplane;
- Whereas PA-28RT-201Ts were built between 1979 and 1992 and that some of these aeroplanes are therefore equipped with insulating washers that are more than 40 years old;
- Whereas the examination of this device on another PA-28RT-201T found the presence of wear on these washers in the form of cracks. These cracks could lead to the cooler coming into contact with the floor, thus creating a short-circuit and potentially causing a fire by igniting the ABS cover;

EASA, in coordination with the FAA, ensure that the risk of fire following a short-circuit at the diode device attaching points is controlled by aircraft manufacturers using a diode device similar to that on HB-PNP.

Final reply sent on 28/08/2026

Piper Aircraft, Inc. issued Service Bulletin (SB) No. 1428, providing instructions for dedicated recurring inspections and, depending on the inspection results, replacement of the diode cooler assembly insulators and attachment hardware, and the Federal Aviation Administration (FAA) issued the FAASTeam Notice No. NOTC4938, to highlight the importance of complying with that SB and to encourage pilots to remain familiar with Aircraft Flight Manual (AFM) procedures for handling electrical anomalies and potential in-flight fire indications.

The European Union Aviation Safety Agency (EASA) determined that similar installations may also be present on other aeroplane types within the same category, where the applicable inspections, as defined in the applicable instructions for continued airworthiness (ICA), do not necessarily include a proper review of the means of insulation.

Therefore, EASA has published the Safety Information Bulletin (SIB) 2026-08 to raise awareness of the potential degradation of diode cooler assembly insulation, which may result in electrical arcing, overheating and consequent smoke or fire in the affected electrical equipment. It provides recommendations for operators, aircraft owners, maintenance personnel and aircraft manufacturers to identify degraded insulation before failure occurs, thereby reducing the risk of in-flight electrical system malfunction and associated hazards. The SIB is available on the EASA Safety Publications Tool:

<https://ad.easa.europa.eu/ad/2026-08>

Status: Closed – Agreement

FRAN-2026-003

De Havilland DHC-6 400 “Twin Otter”, F-OMYS, 24/08/2023

The BEA recommends that:

- whereas the problem with FDR data conversion documentation highlighted by the investigation authorities is not specific to CS-25 category aircraft and also affects CS-23 category aircraft equipped with FDRs;
- whereas the modification to AMC 25.1459 as part of Amendment 26 to CS-25, the objective of which is to explain the expectations regarding instructions for the continued airworthiness of the FDR installation, could be transposed to CS-23 category aircraft equipped with FDRs;

EASA impose that FDR conversion documentation is produced by design organisations of CS-23 category aircraft equipped with FDR recorders, thus enabling operators of these aircraft to comply with requirement CAT.GEN.MPA.195.

Interim reply sent on 28/08/2026

The European Union Aviation Safety Agency (EASA) intends to amend the Certification Specifications for Normal Category Aeroplanes (CS-23) to ensure that design organisations provide flight data recorders (FDR) decoding documentation to an acceptable standard in term of content and format.

This activity will be managed under Rulemaking Task RMT.0687 (Regular Update of CS-23).

As Acceptable Means of Compliance AMC1 to CS-23 uses ASTM International's standards developed in collaboration with EASA and the Federal Aviation Administration (FAA), this topic will be brought promptly to the attention of ASTM International and the FAA to develop the necessary consensus on standards and to ensure harmonisation between EASA and FAA. Furthermore, EASA may also add specific regulatory 'remarks' to supplement the CS-23 AMC1 material if deemed required.

The response to this safety recommendation will be updated once progress has been made with the above actions.

Status: Open

ICLD-2025-001

Airbus A320-251N, TF-PPA, 13/06/2022

SIA-Iceland recommends to EASA to make the new/revised Service Bulletin listed in safety recommendation 22-042F006T01 (when issued) mandatory, by issuing an Airworthiness Directive.

[22-042F006T01: SIA-Iceland recommends to Airbus to issue new/revised Service Bulletin to allow installation of the panel protection to cover panel 123VU and panel 124VU, to all already produced A320 family aircraft.]

Interim reply sent on 25/08/2026:

The European Union Aviation Safety Agency (EASA) is reviewing the issue with the Type Design Holder (Airbus). However, preliminary discussions have determined that the criticality of the issue together with its rate of occurrence do not characterise a possible unsafe condition, precluding the potential issuance of an Airworthiness Directive (AD), as EASA issues an Airworthiness Directive when it determines an unsafe condition (ref. 21.A.3B(b) of Annex I (Part 21) to Regulation (EU) No. 748/2012).

A further update will be provided by the end of Q3 2026.

Status: Open

IRLD-2026-001**Bell 505 Jet Ranger X, N57NC, 30/07/2024**

EASA should ensure that each member state that is authorised to issue EU Flight Crew Licences, reminds each licence holder of the need to ensure the validity of their licence, and ratings, including instructor ratings, for any flights or instruction conducted on a third-country registered aircraft, and EASA should clarify the exact position, and licensing requirements, for the use of N-registered aircraft for pilot training in Europe.

Final reply sent on 28/08/2026

Following the accident, the European Union Aviation Safety Agency (EASA) informed the members of the EASA Aircrew Technical Body (TeB) of the Federal Aviation Administration (FAA)'s current interpretation of 14 CFR § 61.3(a)(1)(vii).

It was clarified that, under the current FAA interpretation, the operation of N-registered aircraft using a licence issued in accordance with Commission Regulation (EU) No 1178/2011 ('Part-FCL licence') only, is strictly permitted within the Member State that issued that licence. EASA also clarified that, from an EU pilot licensing perspective, pilots remain properly qualified and entitled to exercise the privileges of their licence, rating or certificate (e.g. instructor certificate) and that no additional Part-FCL licence endorsement is required.

Furthermore, EASA confirmed that this matter is being pursued with the FAA through the framework of the EU-US Bilateral Aviation Safety Agreement (BASA) and other bilateral discussions with the objective of addressing the current limitation concerning the use of Part-FCL licenses for the operation of N-registered aircraft in the EU.

This information was communicated to Member States through the Aircrew TeB held in December 2025, and Member States were invited to inform pilots operating N-registered aircraft of the current FAA interpretation for awareness purposes.

Status: Closed – Agreement

SPAN-2025-004**A321-253NY, EC-OOJ, 03/08/2025**

The European Union Aviation Safety Agency (EASA) is recommended to take appropriate measures to ensure that the PBE manufactured by SAFRAN Aerosystems with part number 15-40F-80 has a user manual that minimizes the risk of crew members putting it on without inadvertent tampering with critical parts of the PBE.

Interim reply sent on 25/08/2026:

The European Union Aviation Safety Agency (EASA) has completed its review of the user manual for the Protective Breathing Equipment (PBE) part number 15-40F-80 manufactured by SAFRAN Aerosystems, to

align its content with the recommendations set out in the EASA Safety Information Bulletin (SIB) 2025-04 and to include specific instructions to avoid inadvertent tampering with critical parts of the PBE as outlined in the EASA Airworthiness Directive (AD) 2025-0222. Additionally, SAFRAN Aerosystems is collecting feedback from users including operators and training organisations to further improve the user manual content. A consolidated revision will then be submitted to EASA for a final review prior to its release by SAFRAN Aerosystems.

Status: Open

SPAN-2026-001

A321-253NY, EC-OOJ, 03/08/2025

The European Union Aviation Safety Agency (EASA) is recommended to assess whether current crew procedures in the event of smoke in the cockpit are sufficient to maintain the level of operational safety in cases where the smoke comes from the activation of the LRD system in LEAP 1A engines fitted to aircraft in the AIRBUS fleet.

Interim reply sent on 28/08/2026:

The European Union Aviation Safety Agency (EASA) acknowledges this safety recommendation concerning the adequacy of current crew procedures in the event of smoke in the cockpit associated with activation of the Load Reduction Device (LRD) on LEAP 1A engines installed on aircraft in the Airbus fleet.

The recommendation is currently under consideration. EASA is assessing the issues raised, including the operational implications and the adequacy of existing procedures, in consultation with the relevant stakeholders as appropriate.

A further update on our assessment and any resulting actions will be provided by the end of 2026.

Status: Open

SWED-2023-004

UC-1 Twin Bee, N747HJ, 18/07/2022

EASA is recommended to produce and distribute safety-promoting materials for seaplane operations to relevant parties.

Final reply sent on 28/08/2026:

On 30 June 2026, the European Union Aviation Safety Agency (EASA) launched a campaign on social media to promote a greater understanding of the top safety risks in seaplane operations (EASA Facebook Link: <https://www.facebook.com/reel/2583929268739593>).

This was supported by the publication of a dedicated EASA Webpage (<https://www.easa.europa.eu/en/seaplane-operations-understanding-and-mitigating-top-risks>) on Seaplane Safety with information on Understanding and Mitigating the Top Risks, which can then be used by National Authorities, Associations and organisations to continually promote safety seaplane operations.

Status: Closed – Agreement

SWTZ-2026-613

Diamond DV 20 Katana, HB-SDI, 08/11/2024

The European Union Aviation Safety Agency (EASA) should take appropriate measures to ensure that carburettors' float chambers are protected against Foreign Objects Debris (FOD) entering the venting lines.

Interim reply sent on 28/08/2026

The European Union Aviation Safety Agency (EASA) is currently leading a working group, the Rotax Occurrence Task Force, including National Aviation Authority (NAA) representatives, which is analysing mitigation actions to the common root cause problems with Rotax 912 engine power loss cases, mainly unexplained cases of engine power loss and vibration cases. Since the acquisition of reportable occurrence data has improved, an in-depth analysis has now shown that the total number of occurrences is high, but the related Loss of Power Control (LOPC) rate is well below the expected target rate for reciprocating engines installed on level 1 and/or level 2 GA aeroplanes. Nonetheless, EASA, together with the engine Manufacturer, Rotax, has raised awareness of the Foreign Object Debris (FOD) risk in a more prominent manner (refer to Rotax SB-912-079 and SL-912-032), beside others, to the group of GA aeroplane airframers. The need for more specific advice for the particular case of insect FOD will be reviewed.

EASA has also brought the topic to the attention of the ASTM F44 Committee. This Committee addresses issues related to design and construction, systems and performance, quality acceptance tests, and safety monitoring for general aviation aircraft. Within the ASTM F44.40 (Powerplant) Subcommittee a new working task (AC868) has been created to address overall Powerplant safety, of which one element is the risk of FOD.

The response to this safety recommendation will be updated when new information is produced on the above-mentioned actions.

Status: Open

THAI-2026-001**Airbus A319, A5-RGF, 11/05/2022**

EASA should consider upgrading important service bulletins that may affect safety in flight operations to mandatory service bulletins.

Status: Open

UNKG-2016-002**AS332 L2 Super Puma, G-WNSB, 23/08/2013**

It is recommended that the European Aviation Safety Agency reviews the existing research into pilot instrument scan techniques, particularly with respect to glass cockpit displays, with a view to addressing shortcomings identified in current instrument scan training methods.

Final reply sent on 28/08/2026

The European Union Aviation Safety Agency (EASA) has considered this Safety Recommendation and reviewed available research related to pilot instrument scan techniques, particularly in modern glass cockpit helicopter operations.

The review, including the work documented in the EASA Helicopter Evidence Based Training (EBT) Concept Paper *Making the Case for Helicopters in Evidence Based Training* (published at <https://www.easa.europa.eu/en/domains/aircrew-and-medical/evidence-based-training-ebt> in 2022) and the related supporting research, confirms that helicopter pilots may use instrument scan patterns that differ from classical scan techniques and that this may create vulnerabilities, particularly in modern automated and glass cockpit environments. The review also indicates that the underlying safety concern is broader than the application of a specific scan pattern and relates to the effectiveness of pilot monitoring, automation management, flight path management, situational awareness and the timely detection of deviations.

For this reason, EASA does not consider that prescriptive regulatory requirements defining specific scan techniques for glass cockpit displays would be the most effective mitigation. These risks are better addressed through type-specific training, operator training and competency-based assessment of monitoring performance.

EASA has therefore addressed the intent of the recommendation through a system-level approach, including:

- the identification of monitoring as a key pilot competency within competency-based training, with behavioural indicators such as effective instrument scanning, prioritisation of attention, detection of deviations and timely intervention, as described in the Helicopter EBT Concept Paper;
- the continued application of requirements for type rating, operator conversion and recurrent training to be adapted to the specific aircraft type, including its avionics and automation systems, and to take account of relevant accident, incident and occurrence data, operational experience and identified safety issues;

- the existing Part-FCL and Part-ORO training and checking framework, which supports the acquisition and maintenance of instrument flying and monitoring competence.
- the introduction of Operational Suitability Data (OSD) into the certification framework through Regulation (EU) No 69/2014. OSD includes, among other elements, the minimum pilot type rating syllabus and Training Areas of Special Emphasis (TASE), providing a mechanism to identify and communicate type or variant specific training needs related to flight deck design, avionics, automation and human-machine interface aspects.

EASA also monitors these risks within its Safety Risk Management framework, including through safety issues related to inadequate training and competence transfer (SI-8015) and ineffective application of crew resource management and multi-crew cooperation (SI-8013), both of which are relevant to monitoring performance, situational awareness and crew interaction.

On this basis, EASA considers that the intent of this Safety Recommendation has been adequately addressed.

Status: Closed – Agreement

UNKG-2020-018

Airbus A320-214, OE-LOA, 01/03/2019

It is recommended that the European Union Aviation Safety Agency commission research to determine how to prevent passengers from obstructing aircraft evacuations by retrieving carry-on baggage.

Final reply sent on 28/08/2026

The topic of ensuring a smooth evacuation without passengers blocking the aisles and exits with luggage is a topic requiring continued, long-term promotion. To support that goal, the European Union Aviation Safety Agency (EASA) has partnered with the International Air Transport Association (IATA) and the Federal Aviation Administration (FAA) on the IATA Campaign “Save a life – Not a Bag”. This was launched on 8 June 2026 through the IATA Website and social media from EASA and the FAA, as well as many airlines. Now that the material has been developed, it will form the basis of continual promotional campaigns and messaging from airlines, airports and regulatory authorities for many years to come.

<https://www.iata.org/en/pressroom/2026-releases/06-08-iata-launches-save-a-life-not-a-bag-passenger-safety-campaign/>

Status: Closed – Partial Agreement

UNST-2019-007

Boeing 737-7H4, N772SW, 17/04/2018

Expand your certification requirements for transport-category airplanes and aircraft engines to mandate that airplane and engine manufacturers work collaboratively to

- (1) analyze all critical fan blade impact locations for all engine operating conditions, the resulting fan blade fragmentation, and the effects of the fan-blade-out-generated loads on the nacelle structure and
- (2) develop a method to ensure that the analysis findings are fully accounted for in the design of the nacelle structure and its components.

Interim reply sent on 25/08/2026

The European Union Aviation Safety Agency (EASA) analysed the lessons learnt from the subject accident and this safety recommendation and took several actions to improve the certification of turbine engines and large aeroplanes.

Certification of turbine engines

The review of the existing certification specifications (CS) and acceptable means of compliance (AMC) applicable to turbine engines in CS-E identified the following issues:

- (a) The potential release of uncontained debris in the engine forward and rearward directions is not sufficiently addressed. It is limited to a provision in AMC E 810 ('Compressor and Turbine Blade Failure') related to the blade containment test, expecting to report the estimated size, weight, trajectory, and velocity of any debris ejected from the intake or exhaust during the test.
- (b) CS-E 520(c)(2) requires that validated data (from analysis or test or both) be established and provided to enable the aircraft manufacturer to ascertain the forces that could be imposed on the aircraft structure and systems as a consequence of the out-of-balance running and during any continued rotation with rotor imbalance after shutdown of the Engine following the occurrence of blade failure as demonstrated in compliance with CS-E 810 ('Compressor and Turbine Blade Failure'). AMC E 520(c)(2) provides acceptable means of compliance regarding the Engine model validation. However, it appears that the displacements and loads transmitted to the engine nacelle structure (certified at aircraft level) have not been sufficiently addressed during the certification of some engines and aircraft.

In order to address the above analysis' findings, in the frame of rulemaking task RMT.0184 ('Regular update of CS-E') EASA published on 22 November 2021 Notice of Proposed Amendment (NPA) 2021-13 (<https://www.easa.europa.eu/en/document-library/notices-of-proposed-amendment/npa-2021-13>), proposing to amend CS-E.

Based on this NPA and on the comments received during the public consultation, EASA issued Executive Director Decision 2023/020/R amending CS-E ('CS-E Amendment 7'):

<https://www.easa.europa.eu/en/document-library/certification-specifications/cs-e-amendment-7>

This amendment includes the following changes:

- (a) CS-E 520 ('Strength'), paragraph (c)(1) is amended to require that compressor and turbine blades are 'radially' contained after their failure, instead of the current requirement to demonstrate no Hazardous Engine effect. This better reflects the actual design and certification practices regarding engine casing strength. The secondary effects associated with the blade failure are addressed by CS-E 810.

- (b) AMC E 520(c)(2) ('Engine model validation') is amended to:

- (1) add provisions clarifying that the engine model validated data (to be provided to the aircraft manufacturer) includes the dynamic displacement of nacelle attachment features;

(2) clarify, regarding engines designed for the failure of the rotor support structure following a blade failure, that engine manufacturers should also evaluate the effect of the most severe blade failure which would not cause the failure of the rotor structural support, and that the effect on the engine and on the loads transmitted to the aircraft should be included in this evaluation; and

(3) specify that the engine model validation should consider any differences between the test configuration and the aircraft installation.

(c) AMC E 510 ('Safety analysis'), paragraph (3)(d)(iii) on 'Hazardous Engine Effects - Non-containment of high-energy debris' is amended to specify:

(1) when debris, released after a failure, should be considered as uncontained high-energy debris causing a hazardous engine effect, i.e. when this can cause an unsafe condition;

(2) how applicants should address the threat posed by major rotating parts (which are not required to be contained);

(3) how applicants should address the threat posed by blade failure debris. A link is made with CS-E 520(c)(1) regarding the requirement for debris radial containment. In addition, the case where blade failure debris is released forward, rearward or otherwise outside the engine containment structure is addressed. The need to assess the hazard at the aircraft level is included and this assessment should be performed as far as possible in coordination with the aircraft manufacturer;

(4) how applicants should address other sources of uncontained high-energy debris, such as high-pressure casing failures.

(d) CS-E 810 ('Compressor and Turbine Blade Failure') is amended to align with CS-E 520(c)(1) regarding the 'radial' containment requirement and clarify that Hazardous Engine Effects that may be triggered by the blade failure must not occur at a rate greater than that defined as Extremely Remote. The previous wording requiring to demonstrate that no Hazardous Engine Effect can happen was not considered as adequate, as some debris may be released outside the radial containment area and this must be addressed and mitigated.

(e) AMC E 810 ('Compressor and Turbine Blade Failure'), paragraph (2)(c), related to the conditions after the containment test, is amended to:

(1) reflect the amendments made to CS-E 810 and AMC E 510;

(2) specify that applicants should assess the threats represented by blade failure conditions other than the test conditions;

(3) specify that the assessment of potential hazardous engine effect resulting from other damage before engine shutdown should consider the long-term effects (e.g. unbalanced loads) of blade failures which would not be detected by the declared instrumentation;

(4) specify that the assessment of potential hazardous engine effect resulting from the blade failure should consider debris being released from the engine, forward, rearward or otherwise outside the containment structure, thereby also referring to AMC E 510;

(5) remind the applicability of other CS-E specifications according to which some failures that could be triggered after a blade failure are not acceptable.

Certification of large aeroplanes

The review of certification specifications and acceptable means of compliance for large aeroplanes (CS-25) showed that the structural integrity of secondary structure elements (including engine nacelle elements) is not explicitly addressed within the specifications related to the protection of the aeroplane against the FBO event and the related Sustained Engine Imbalance (SEI). Although aeroplane manufacturers generally take into account these loads for the design of their nacelle components, EASA prepared a Special Condition (SC) to supplement the CS-25 provisions. This SC would be provided in case of new application for certification of a new aeroplane. It would require the following:

(a) Supplement CS 25.901(c) (on powerplant installation) to specify that the damaging effects from the SEI are excepted from compliance with CS 25.1309.

(b) Supplement CS 25.1103(b), CS 25.1123, CS 25.1193(a), CS 25.1191(b) to specify that these structural elements must resist the FBO event and the related SEI conditions and remain attached to the aeroplane.

This SC is complemented by Interpretative Material that supplement the following AMC material:

(1) AMC 25.362 ('Engine Failure Loads') and AMC 25-24 ('Sustained Engine Imbalance') to address the methods used to develop aeroplane design loads based on the FBO data provided by the engine manufacturer,

(2) AMC 20-128A ('Design Considerations for Minimizing Hazards Caused by Uncontained Turbine Engine and Auxiliary Power Unit Rotor Failure') to address the consolidation of data provided by the engine manufacturer for debris release that are not addressed by the existing rotor failure model of the AMC.

On-going certification projects

EASA cooperated with engine and aeroplane manufacturers to ensure that the above-mentioned topics are addressed as far as possible in the frame of already on-going certification projects.

In addition, for the purpose of harmonisation with the Federal Aviation Administration (FAA) and other foreign airworthiness authorities, EASA has participated in the Aviation Rulemaking Advisory Committee (ARAC) task assigned to the Engine and Powerplant Interface Working Group (EPIWG):

<https://www.faa.gov/regulationspolicies/rulemaking/committees/documents/arac-tasking-notice-engine-and-powerplant>

Please refer to the first specific task (section 2.a in the tasking notice) on rotor blade fragments. EASA promoted the CS-E amendment and the CS-25 Special Condition and Interpretative Material mentioned above in order to seek harmonisation.

The EPIWG report for this task has been drafted and is currently under the ARAC approval process. Once approved and released, EASA will review the final recommendations of this report and consider taking any action deemed necessary to be implemented.

Status: Open