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ASSEMBLY — 42ND SESSION

REPORT OF THE TECHNICAL COMMISSION ON AGENDA ITEM 25

(Presented by the Chairperson of the Technical Commission)

The attached report on Agenda Item 25 has been approved by the Technical Commission. Resolution 25/1 is recommended for adoption by the Plenary.

Note.— After removal of this covering sheet, this paper should be inserted in the appropriate place in the report folder.

(9 pages)

Agenda Item 25: Other issues to be considered by the Technical Commission

Certification and oversight

25.1 The Commission discussed A42-WP/310 Revision No. 1, presented by Kazakhstan and noted the value of the application of quality management systems in aviation.

25.2 The Commission reviewed A42-WP/98, presented by Saudi Arabia, concerning the need for guidance material on the establishment of a framework for the certification of air navigation service providers (ANSPs). The Commission recalled that, during the 41st Session of the ICAO Assembly, the Technical Commission noted the ongoing applicability of Recommendation 3.5/3 – Certification of air navigation service providers (ANSPs) arising from the Thirteenth Air Navigation Conference (AN-Conf/13). Recognizing that the work in this area remains pending due to the lack of resources, the Commission invited ICAO to explore means for allocating the required resources to advance the development of guidance material on effective ANSP certification and oversight systems.

25.3 The Commission reviewed A42-WP/191, presented by Morocco, which highlighted the challenges associated with the growth of hot air balloon operations and the need to develop guidance on safety and airspace management related thereto. The Commission recalled the applicability of Annex 2 — *Rules of the Air* for balloon operations and broadly supported the development of such guidance. The Commission, noting the relevant ongoing work of ICAO, agreed to refer the content of the working paper to the relevant expert groups for further consideration.

25.4 The Commission reviewed A42-WP/168, presented by the United Arab Emirates and co-sponsored by the Interstate Aviation Committee (IAC) regarding harmonizing oversight practices for foreign air operators. While recognizing State sovereignty, the Commission broadly supported harmonized oversight practices. The Commission agreed to refer the contents of the working paper to the relevant expert groups for further consideration.

25.5 The Commission reviewed A42-WP/313, presented by Canada, the United States and the Civil Air Navigation Services Organisation (CANSO), which highlighted the need to address performance and reliability issues for communications service providers (CSPs) and satellite service providers (SSPs). The Commission recognized the updates to relevant provisions in Annex 10 — *Aeronautical Telecommunications*, Volume III — *Communication Systems*, as well as the ongoing improvements to the *Performance-based Communication and Surveillance (PBCS) Manual* (Doc 9869) and recommended that ICAO continue enhancing these provisions and guidance material. The Commission further encouraged States to incorporate these updates into their national regulatory frameworks to strengthen oversight, ensure service continuity and enhance the resilience of satellite-based communication systems essential for safe and efficient international air traffic services.

25.6 The Commission reviewed A42-WP/332, presented by the European Organisation for Civil Aviation Equipment (EUROCAE) on behalf of RTCA Inc., the Society of Automotive Engineers (SAE) and the Aeronautical Radio, Incorporated (ARINC), which underscored the importance of strengthening collaboration between ICAO and standards making organizations (SMOs) to enhance safety, innovation and sustainability. Recognizing that industry standards are an essential complement to

ICAO provisions, the Commission supported the continued practice of referencing those standards in ICAO's standardization framework, to the extent practicable and subject to validation to ensure fitness for purpose. The Commission raised concerns regarding the availability of free access to SMO documentation. The Commission encouraged a deeper engagement with SMOs to facilitate the efficient identification and integration of emerging technologies and safety critical innovations through a holistic and performance-based approach. The Commission emphasized the need to reinforce the ICAO Standards Roundtable (SRT) as the primary forum for aligning ICAO and SMO activities, to reduce the duplication and accelerate the development of high-quality standards.

25.7 Information papers presented by Bolivia (A42-WP/364), China (A42-WP/593 and A42-WP/599), the Dominican Republic (A42-WP/530), Malaysia (A42-WP/632), the Aviation Working Group (A42-WP/506) and the Aviation Services Association (A42-WP/545 and A42-WP/550) were noted.

Implementation support

25.8 The Commission reviewed A42-WP/61, presented by Qatar, regarding aviation exemption policy and guidance framework. The Commission acknowledged the distinction between exemptions and differences. The Commission supported the development of clear and centralized guidance material that would address the notification of differences and the issuance of exemptions. It was further suggested that the issues referred to in the paper could be covered in the *Manual on Notification and Publication of Differences* (Doc 10055).

25.9 The Commission reviewed A42-WP/66, presented by South Africa, which considered the consolidation of material related to flight procedure design. While the Commission did not agree to the creation of a new Annex, there was support for the intent of the paper to be considered by other means, such as cross-referencing of relevant provisions in different documents. Furthermore, the Commission agreed that this should be referred to the Council for further consideration, subject to existing priorities funded through the 2026-2028 Budget and the availability of extra budgetary contributions.

25.10 The Commission reviewed A42-WP/333 Revision No. 1, presented by the International Air Transport Association (IATA) and co-sponsored by IAC, regarding Standards and Recommended Practices (SARPs) applicability dates. The Commission supported realistic applicability dates to allow sufficient implementation time, ensuring feasibility before adoption and avoiding any unnecessary delays in the safety improvements.

25.11 The Commission reviewed A42-WP/473 Revision No. 1, presented by Bolivia, regarding temporary operations specifications. The Commission affirmed that existing SARPs, with supporting guidance, enable the use of temporary limitations within the operations specifications, and noted that regional action may be appropriate to address the issues raised.

25.12 The Commission reviewed A42-WP/177, presented by Singapore and co-sponsored by the Dominican Republic, New Zealand, the Philippines and Thailand, on enhancing the understanding of SARPs for effective implementation. The Commission recognized the potential of communication channels such as webinars and ICAO TV to complement existing State letters and guidance material, facilitate knowledge retention, strengthen institutional expertise, and better align national regulations with ICAO SARPs.

25.13 The Commission reviewed A42-WP/88, presented by Saudi Arabia and co-sponsored by the International Cospas-Sarsat Programme, which provided an overview of the Cospas-Sarsat Global Search and Rescue Day. The Commission noted the precedent where ICAO acknowledged celebratory days such as world pilots' day or the international day of the air traffic controller. The Commission also noted the potential impact on resources were that precedent amended. Considering that celebration of a Global Search and Rescue (SAR) Day was not included in the existing priorities funded through the 2026-2028 Budget, the Commission encouraged ICAO to maintain the precedent and encouraged all stakeholders to recognize the Global SAR Day.

25.14 The Commission reviewed A42-WP/478, presented by Colombia and sponsored by the Latin American Civil Aviation Commission (LACAC) Member States¹, regarding the requirement of a regulatory framework for night vision goggles. The Commission supported the proposal and agreed to refer the proposed action to the Council for further consideration, taking into account existing priorities funded through the 2026-2028 Budget and extra budgetary contributions.

25.15 Information papers presented by Argentina (A42-WP/569 and A42-WP/582), China (A42-WP/230, A42-WP/593, A42-WP/600, A42-WP/601), Bolivia (Plurinational State of) (A42-WP/394), India (A42-WP/528), Iran (Islamic Republic of) (A42-WP/292), Malaysia (A42-WP/612 Revision No. 1), the United Arab Emirates (A42-WP/91) and the United States (A42-WP/631) were noted.

Aviation licensing and training

25.16 The Commission reviewed A42-WP/81, presented by Ghana, which invited the Assembly to recognize the essential role of air traffic safety electronics personnel (ATSEP) in the aviation safety system and develop training provisions for Annex 10. The Commission also reviewed A42-WP/317, presented by Kazakhstan, which proposed to develop training and licensing provisions for ATSEP in Annex 1 — *Personnel Licensing*, and A42-WP/353, presented by the International Federation of Air Traffic Safety Electronics Associations (IFATSEA), which proposed to incorporate artificial intelligence (AI) and cybersecurity training topics into guidance related to ATSEP. The Commission acknowledged the vital role that ATSEPs serve in the aviation safety system. It also recognized the importance of considering AI and cybersecurity hazards, mentioned that these are topics that should be contemplated using a risk and performance-based approach, and that the use of AI in aviation may not be mature. The Commission further discussed the suitability of training and licensing provisions. Recalling discussions from previous sessions of the ICAO Assembly and considering the discussions of the above papers, the Commission agreed to refer the contents of the working papers to the relevant expert groups for further consideration.

25.17 The Commission reviewed A42-WP/179, presented by the United States and cosponsored by the International Federation of Air Line Pilots' Associations (IFALPA), which recommended further development of competency-based training and assessment (CBTA) provisions and guidance to support standardized pilot CBTA training implementation and oversight across Member States. The Commission noted the global momentum in CBTA implementation using the current pilot competency framework as well as the ongoing work in the Organization, supported the use of a science-based approach and agreed to refer the content of the working paper to the relevant expert groups for further consideration.

¹ Belize, Bolivia (Plurinational State of), Cuba, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela (Bolivarian Republic of).

25.18 The Commission reviewed A42-WP/296, presented by CANSO, which recommended the establishment of a progressive licensing approach for air traffic controllers. The Commission expressed support, noting that it could improve student success and address resource constraints, and agreed to refer the content of the working paper to the relevant expert groups for further consideration.

25.19 The Commission reviewed A42-WP/301, presented by Kazakhstan and co-sponsored by Airports Council International (ACI), which emphasized the need for an ICAO framework for establishing training requirements and guidance material for aerodrome and ground aids (AGA) inspectors. The Commission agreed to refer the proposal to the Council for further consideration, taking into account existing priorities funded through the 2026-2028 Budget and the availability of extra budgetary contributions.

25.20 The Commission reviewed A42-WP/316, presented by Kazakhstan, which recommended developing guidance related to the use of simulation and virtual and augmented reality for the training and licensing of aviation personnel other than flight crew members. The Commission noted that the topic is currently part of the work programme of the Organization and agreed to refer the content of the working paper to the relevant expert groups for further consideration.

25.21 The Commission reviewed A42-WP/474, presented by the Dominican Republic, which recommended including AI and professional project management in the training of aviation professionals. The Commission agreed to refer the content of the working paper to the relevant expert groups for further consideration.

25.22 Information papers presented by Japan (A42-WP/544), Türkiye (A42-WP/630), the United States (A42-WP/620), and IFATSEA (A42-WP/444), were noted by the Commission.

Airworthiness

25.23 The Commission reviewed A42-WP/280, presented by the Flight Safety Foundation (FSF) and co-sponsored by Singapore and the United Kingdom, which presented findings from an Airworthiness Needs Analysis Study. The paper highlighted safety risks related to system component failures (SCF), both non-power plant (NP) and power plant (PP), regulatory oversight gaps, and underuse of ICAO's Online Airworthiness Information Network (OAIN). The Commission acknowledged the elevated risks related to SCF-NP and SCF-PP worldwide, supported the recommendations and agreed to refer the proposed action to the Council for further consideration, taking into account existing priorities funded through the 2026-2028 Budget and the availability of extra budgetary contributions.

25.24 The Commission reviewed A42-WP/123, presented by the United States and co-sponsored by Singapore and the FSF, and acknowledged the importance of maintaining accurate contact information in ICAO repositories. The Commission agreed that the Assembly should direct the Council to ensure regular updates to *The Continuing Airworthiness of Aircraft in Service* (Circular 95) and the *Directory of National Civil Aviation Administrations* (Doc 7604) and encourage States to actively use the online airworthiness information network (OAIN) and Doc 7604 to support timely and reliable global information exchange.

25.25 The Commission reviewed A42-WP/211, presented by the African Civil Aviation Commission (AFCAC) on behalf of 54 African States², which urged ICAO, States, and stakeholders to prioritize the development of a regulatory framework, infrastructure, capacity-building and research to support sustainable aircraft end-of-life management, including dismantling, recycling, and the safe reuse of parts, in line with international standards. The Commission noted the ongoing work related to aviation part traceability and agreed to forward the content of the working paper to the relevant expert groups for further consideration. The Commission also highlighted the need to continue working with existing ICAO mechanisms.

25.26 The Commission reviewed A42-WP/74, presented by the International Coordinating Council of Aerospace Industries Associations (ICCAIA), IFALPA, the International Business Aviation Council (IBAC) and co-sponsored by the Royal Aeronautical Society (RAeS), regarding the challenge of halon replacement. The Commission supported the need to assess the availability of the global halon reserves while emphasizing further research on alternatives, deferring decisions until post-A42 based on evidence and stock assessments.

25.27 Information papers presented by China (A42-WP/588 Revision No. 1), ICCAIA (A42-WP/395) and Kazakhstan (A42-WP/493) were noted by the Commission.

25.28 In light of the discussion, the Commission agreed to submit, for adoption by the Plenary, the following resolution, to supersede Assembly Resolution A39-13:

Resolution 25/1: Halon replacement

Recognizing the importance of aircraft fire extinguishing systems to the safety of flight;

Recognizing that halogenated hydrocarbons (halon) have been the main fire extinguishing agent used in civil aircraft fire extinguishing systems for over fifty years;

Whereas halons are no longer being produced by international agreement because their release contributes to ozone depletion and climate change;

Recognizing that more needs to be done because the available halon supplies are decreasing and unsure and that the environmental community continues to be concerned that halon alternatives have not been developed for all fire extinguishing systems in civil aircraft;

Recognizing that the Minimum Performance Standard for each application of halon has been developed already by the International Aircraft Systems Fire Protection Working Group with participation by industry and regulatory authorities;

Recognizing that there are stringent aircraft-specific requirements for each application of halon that must be met before a replacement can be implemented;

² Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cabo Verde, Central African Republic, Chad, Comoros, Congo, Cote d'Ivoire, Democratic Republic of the Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Libya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Sudan, Togo, Tunisia, Uganda, United Republic of Tanzania, Zambia, Zimbabwe.

Recognizing that the aircraft manufacturing industry has established mechanisms for stakeholder engagement in the development of common solutions for halon replacement in a realistic timeframe for cargo compartment applications;

Recognizing that the production is prohibited by international agreement, halon is now exclusively obtained from recovery, reclaiming and recycling. Therefore, recycling of halon gas needs to be rigorously controlled to prevent the possibility of contaminated halon being supplied to the civil aviation industry; and

Recognizing that any strategy must depend on alternatives that do not pose an unacceptable environmental or health risk as compared to the halons they are replacing;

The Assembly:

1. *Urges* States and their aviation industries to intensify development and implementation of acceptable halon alternatives for fire extinguishing and suppression systems in aircraft cargo compartments;
2. *Urges* States to determine and monitor their halon reserve and quality of halon;
3. *Encourages* ICAO to continue collaboration with the International Aircraft Systems Fire Protection Working Group and the United Nations Environment Programme's Ozone Secretariat through its Technology and Economic Assessment Panel's Halons Technical Options Committee on the topic of halon alternatives for civil aviation;
4. *Encourages* States to collaborate with the Industry Consortium for engine/APU applications and the Cargo Compartment Halon Replacement Working Group established by the International Coordinating Council of Aerospace Industries Associations;
5. *Encourages* States to support measures to minimize unnecessary halon emissions that occur when there is an absence of any safety threatening fire event and to ensure the better management and preservation of existing halon reserves;
6. *Encourages* States, with the assistance of ICAO, to liaise with the United Nations Environment Programme (UNEP) Ozone Secretariat and the Montreal Protocol advisory body, the Technology and Economic Assessment Panel and its Fire Suppression Technical Options Committee, to assess global halon reserves and support the sustainable management of existing halon banks, including an essential use nomination for halon in aircraft cargo compartment applications under the Montreal Protocol to maintain aviation safety;
7. *Directs* the Council, in coordination with industry and considering the assessment of availability of the global halon reserves, to develop a proposal for a revised sustainable effective cut-off date for Halon replacement in Annex 8 — *Airworthiness of Aircraft* for new aircraft type certificate applications. This proposal shall be based on comprehensive data including Halon availability, progress in alternative solution development and take account of safety considerations.

68. *Directs* the Council to mandate the replacement of halon in cargo compartment fire suppression systems used in aircraft for which application for type certification will be submitted after a specified date in the 2024 timeframe; and

79. *Declares* that this resolution supersedes Resolution A38-9A39-13.

— END —