



ASSEMBLY — 41ST SESSION

TECHNICAL COMMISSION

Agenda Item 31: Aviation Safety and Air Navigation Standardization

OPTIMIZATION OF LICENSING SYSTEM FOR AIRCRAFT MAINTENANCE PERSONNEL

(Presented by China)

EXECUTIVE SUMMARY

This working paper, based on years of practice of Member States in licensing and training management of aircraft maintenance personnel, and in conjunction with Annex 1, *Procedures for Air Navigation Services: Training* (Doc 9868) and *Manual on Competency-based Training and Assessment for Aircraft Maintenance Personnel* (Doc 10098), proposes to optimize the licensing system for aircraft maintenance personnel, so as to facilitate the sharing of training resources and mutual recognition of personal qualifications.

Member States may establish universally similar licensing systems to truly implement the competency-based training as required by Doc 10098.

Action: The Assembly is invited to:

- a) instruct the Air Navigation Commission to revise the SARPs in Annex 1 to optimize the licensing system to make it suitable for aircraft maintenance; and
- b) instruct the Air Navigation Commission to assign the Airworthiness Panel to discuss the licenses and training sections of maintenance personnel in Annex 1 and Doc 10098, and to make the licensing and training system for maintenance personnel more pragmatic.

<i>Strategic Objectives:</i>	This paper relates to the Strategic Objective of Aviation Safety.
<i>Financial implications:</i>	The activities referred to in this paper will be undertaken with resources available in the 2023-2025 Regular Programme Budget.
<i>References:</i>	Annex 1, <i>Personnel Licensing</i> ; Doc 9868, <i>Procedures for Air Navigation Services: Training</i> ; Doc 10098, <i>Manual on Competency-based Training and Assessment for Aircraft Maintenance Personnel</i> .

¹ English and Chinese versions provided by China.

1. INTRODUCTION

1.1 The licensing requirements for maintenance personnel has been defined since the first edition of Annex 1 issued in 1948. However, unlike the licensing of the personnel other than those of the maintenance (such as flight crew), a universally similar licensing system for maintenance personnel has not been formed worldwide over the years. Even the categories and objectives of licenses for maintenance personnel vary among Member States. At the same time, Annex 6 — *Operation of Aircraft* and Annex 8 — *Airworthiness of Aircraft* require that the person signing the maintenance release to service must hold a license in accordance with Annex 1, which appears to be a uniform standard, but in fact it is with a lot of differences.

1.2 The above situation is due to the complexity of aircraft maintenance which are as follows:

1.2.1 The maintenance may be tasked to airframes or engines, or specific systems and equipment. It may also be tasked to just basic line inspection and troubleshooting, or complex shop maintenance.

1.2.2 Basic line inspection and troubleshooting may be completed by maintenance personnel individually, and maintenance release is mainly a technical release. However, for complex shop maintenance, it needs to be organized by a maintenance organization, which involves cooperation among multi-field and multi-role of maintenance personnel, and maintenance release is more like a responsibility check rather than a simple technical release due to heavy workload, long turnaround time and complexity of the processes.

1.2.3 The maintenance personnel need to have a certain level of knowledge about the specific type of aircraft, engine, system or equipment, refer to appropriate instructions of continuous airworthiness, and with basic knowledge and skills for aviation maintenance beforehand.

1.2.4 For maintenance of specific aircraft, engine, system or equipment, no training could take the place of actual practice. For anyone with no maintenance experience, even if he/she has obtained the appropriate license through training, he/she should not be authorized to execute the license right directly by the maintenance organization.

1.2.5 The work of the personnel other than those of the maintenance may have some of the above-mentioned aspects, but it is the maintenance personnel who has all of them. As a result, it is difficult to form unified categories for maintenance personnel licenses similar to the other ones.

1.3 Without unified categories of maintenance personnel licenses further makes it impossible to facilitate sharing training resources for licensing and the mutual recognition of personal qualifications as that of the flight crew. It is understood that there are hardly any bilateral or multilateral agreements on mutual recognition of maintenance personnel licenses among Member States, which hinders the global recognition of approvals by maintenance organizations.

2. DISCUSSION

2.1 The key to solving the above problems lies in the optimization of the licensing system appropriate to the features of aircraft maintenance.

2.2 *Procedures for Air Navigation Services - Training* (Doc 9868) and *Manual on Competency-based Training and Assessment for Aircraft Maintenance Personnel* (Doc 10098), actually based on the basic license and the endorsement of aircraft type (see Appendix A of this WP for details),

have already outlined the basic framework of maintenance personnel license categories. Annex 1, however, has not been amended accordingly.

2.3 In addition, Annex 1 stipulates that as of November 3, 2022, aircraft maintenance personnel must receive competency-based training by authorized training organizations, and indicates that the guidance document is Doc 10098. However, the competency-based training described in Doc 10098 covers training for personnel with or without license, and makes clear that it should be carried out by maintenance organizations (see Appendix B of this WP for details), it is more appropriate to be identified through annexes 6 and 8.

2.4 The above-mentioned basic license and the endorsement of aircraft type are mainly for the qualification requirements of maintenance personnel for sign-off aircraft maintenance release, and can be used as a universally common licensing system in all Member States. With respect to maintenance of components other than the whole aircraft, the maintenance personnel for sign-off maintenance release may only hold a basic license, or even by competency-based training.

2.5 Civil Aviation Administration of China (CAAC) has defined the above licensing system in CCAR Part 66, which divides the basic licenses into four categories: turbine aircraft (TA), piston aircraft (PA), turbine rotorcraft (TR), and piston rotorcraft (PR), and requires the aircraft type to be endorsed for the personnel signing the maintenance release of complex aircraft. The maintenance personnel for signing maintenance release of engine and other components may just hold any kind of the basic license. Maintenance Personnel who wish to be qualified for the basic licenses and aircraft type endorsement shall be trained by the training organizations approved under the CCAR Part 147.

2.6 On the basis of the above licensing system, CCAR Part 145 requires maintenance organizations providing competency-based training to all maintenance personnel for their jobs and establishing an authorization system.

3. CONCLUSION

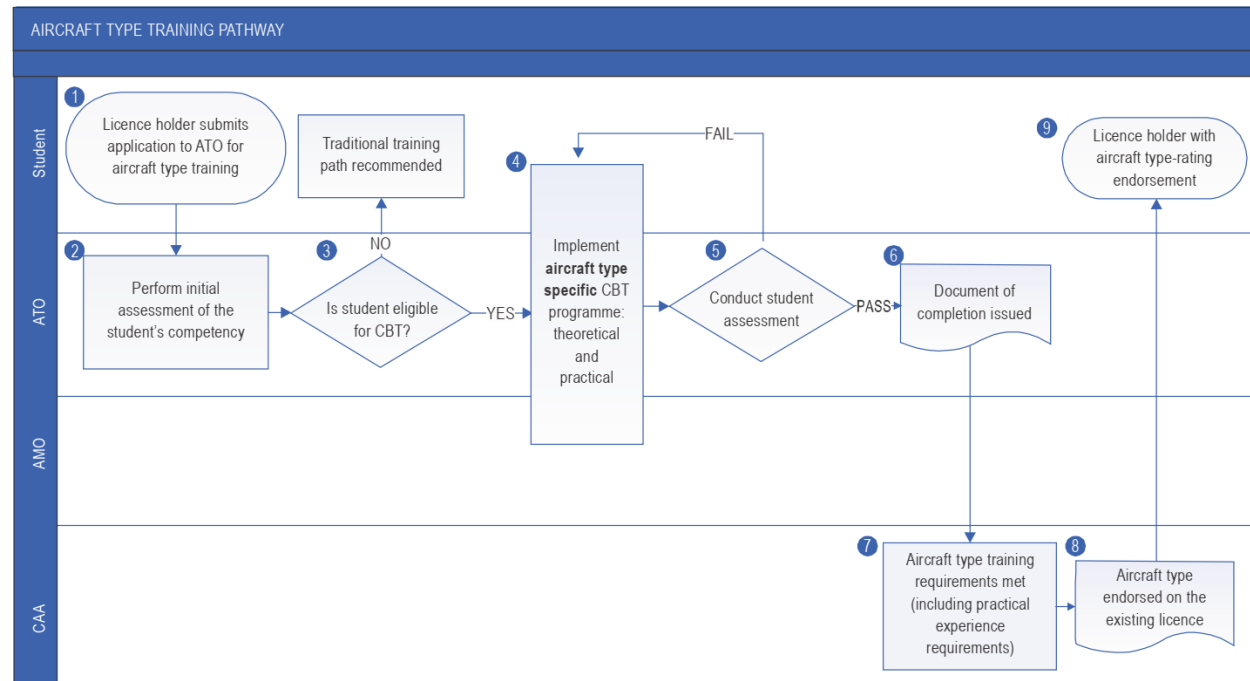
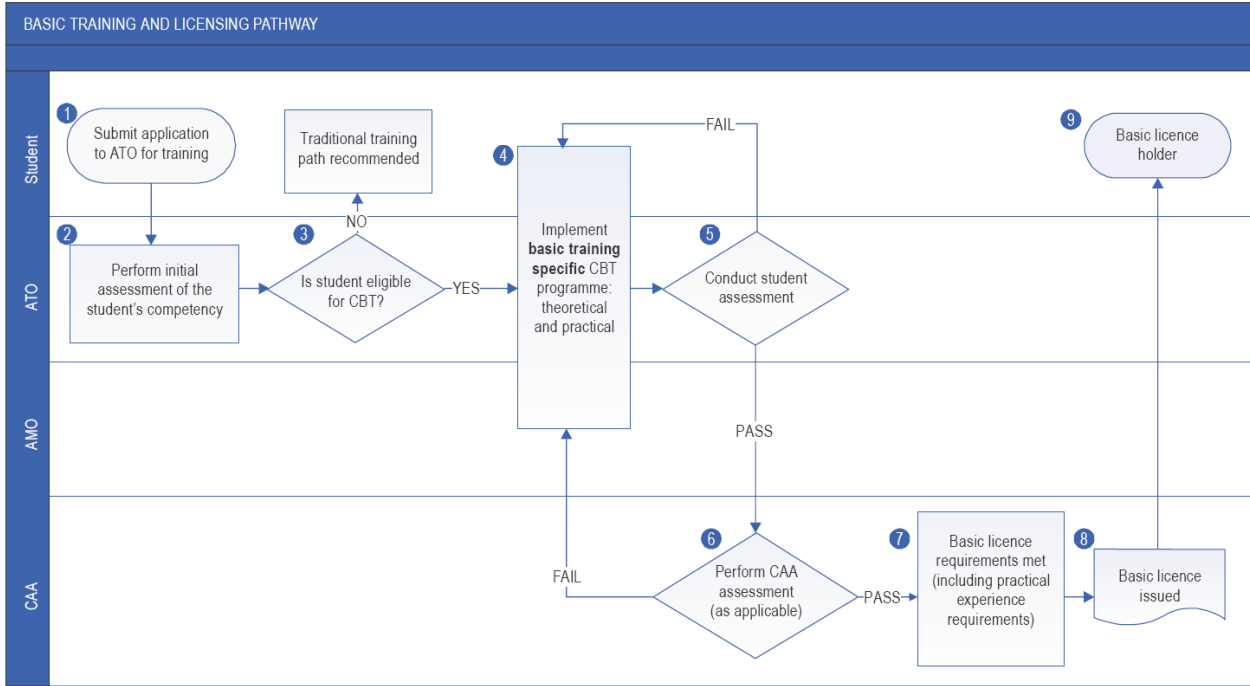
3.1 Only if all Member States establish a universally similar licensing system, can we truly implement the competency-based training required by Doc 10098, and facilitate the sharing of training resources for licensing and mutual recognition of qualifications for maintenance personnel.

4. ACTION

4.1 The Assembly is invited to:

- a) instruct the Air Navigation Commission to revise the SARPs in Annex 1 to optimize the licensing system to make it suitable for aircraft maintenance; and
- b) instruct the Air Navigation Commission to assign the Airworthiness Panel to discuss the licenses and training sections of maintenance personnel in Annex 1 and Doc 10098, and to make the licensing and training system for maintenance personnel more pragmatic.

APPENDIX A



APPENDIX B

