



WORKING PAPER

**DANGEROUS GOODS PANEL (DGP)
WORKING GROUP MEETING (DGP-W/23)**

Rio de Janeiro, Brazil, 15 to 19 May 2023

- Agenda Item 2: Managing air-specific safety risks and identifying anomalies (REC-A-DGS-2025)**
- 2.1: Develop proposals, if necessary, for amendments to Annex 18 — *The Safe Transport of Dangerous Goods by Air***
 - 2.2: Develop proposals, if necessary, for amendments to the *Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284)* for incorporation in the 2025-2026 Edition**

DEFINITION OF “PASSENGER AIRCRAFT”

(Presented by D. Brennan)

SUMMARY

This working paper proposes deletion of the definitions of “cargo aircraft” and “passenger aircraft” from Annex 18, and if adopted, a change to the definition of “passenger aircraft” in the Technical Instructions once the revision to Annex 18 is adopted. This working paper also proposes a consequential amendment to Part 7;1.7 to add a specific requirement for operators of cargo aircraft to implement policies, procedures and appropriate training for the carriage of persons other than flight crew.

Action by the DGP-WG is in paragraph 2.

1. INTRODUCTION

1.1 There was further discussion at the 2022 DGP Working Group Meeting (DGP-WG/22, Montréal, 21 to 25 November 2022) (see paragraph 4.9.1.2 of the DGP-WG/22 Report), on a proposal to revise the definition of “passenger aircraft” in Annex 18, and if adopted, to then amend the definition in the Technical Instructions.

1.2 This was a follow-on from discussions at the 2019 DGP Working Group Meeting (DGP-WG/19, Montréal, 1 to 5 April 2019) (see paragraph 3.8.1.1 of the DGP-WG19-WP/30 report) and the

twenty-seventh meeting of the Dangerous Goods Panel (DGP/27, Montréal, 16 to 20 September 2019, see paragraph 8.1.1 of the DGP/27-WP/49 report). At DGP/27, while the proposed amendment was supported by the panel members, the Air Navigation Commission (ANC) did not support the amendment because of concerns expressed by flight operations experts.

1.3 One issue raised by the flight operations experts was the implication, that by allowing certain dangerous goods on a cargo aircraft that were not permitted to be carried in a passenger aircraft, or in larger net quantities per package than would be permitted on a passenger aircraft, that there was a higher level of safety required for passenger aircraft operations. In some respects, this is true, but is no different to Annex 6 — *Operation of Aircraft, Part II — International General Aviation — Aeroplanes*, where in the Foreword it is clearly stated:

“Level of safety. The Annex should ensure an acceptable level of safety to passengers and third parties (third parties meaning persons on the ground and persons in the air in other aircraft). Also, as some international general aviation operations (typically under 5 700 kg) would be performed by crews less experienced and less skilled, with less reliable equipment, to less rigorous standards and with greater freedom of action than in commercial air transport operations, it was therefore accepted that the passenger in international general aviation aircraft would not necessarily enjoy the same level of safety as the fare-paying passenger in commercial air transport. However, it was recognized that in ensuring an acceptable degree of safety for third parties, an acceptable level of safety for flight crews and passengers would be achieved.”

1.4 This recognises that fare-paying passengers in international commercial air transport are entitled to the highest level of safety and there are in effect “different” levels of safety based on the different types of operations. However, the objective of the Technical Instructions is always that there is an acceptable level of safety for flight crew for the carriage of dangerous goods, including dangerous goods carried as “cargo aircraft only”.

1.5 In the discussion at DGP-WG/22 there was a proposal that there should be a performance-based approach to the carriage of dangerous goods based on the capabilities of the aircraft. This should certainly be an objective, but this is something that based on current aircraft design will probably take decades to achieve.

1.6 The DGP-WG/22 agreed that the existing problem needed, and urgent solution and it was proposed that an ad hoc working group be tasked with removing inconsistencies between Annex 6 provisions having an impact on Annex 18 would develop a proposed solution for DGP-WG/23.

1.7 That working group has yet to be established and as such this working paper is proposing for consideration some possible ways forward.

1.8 Much of the concern expressed by the flight operations experts and the ANC on the proposal to amend the wording of the definition of “passenger aircraft” has been on the change to the definition in Annex 18 as changes to ICAO Annexes must be sent out to member States for comment and the proposed amendment may draw adverse comments.

1.9 At DGP-WG/22 during the discussion of the working paper, there was a suggestion to delete the definitions of “cargo aircraft” and “passenger aircraft” from Annex 18 and the Technical Instructions and instead to consider some performance-based provisions to address the carriage of dangerous goods, including how to address dangerous goods currently restricted to Cargo Aircraft Only.

1.10 At the time, that was seen as being much the same as developing an approach based on the capabilities of the aircraft. However, as part of the work of the DGP-WG/Annex 18 to develop more comprehensive standards and recommended practices that clarified State's responsibilities, it was identified that while "passenger aircraft" is defined in Annex 18, the term is not actually used in the body of the annex.

1.11 In general, a definition should only be included where there is a need to clearly define the meaning of the term in the context of the document, in this case Annex 18. As both "passenger aircraft" and "cargo aircraft" are not used in Annex 18, currently or as proposed in the draft under development by the DGP-WG/Annex 18, it is therefore proposed that both definitions be deleted from Annex 18.

1.12 For the Technical Instructions however, there is a need for a definition for "passenger aircraft" as the term, along with "cargo aircraft" are used extensively and the differentiation for the purposes of identifying and limiting dangerous goods that are permitted in cargo on a passenger aircraft vs. those that are only permitted on a cargo aircraft is one of the fundamental principles in the Technical Instructions.

1.13 Here it is proposed that the definition for "passenger aircraft" in the Technical Instructions be revised to provide operators with flexibility on the persons that are permitted on a cargo aircraft when carrying "Cargo Aircraft Only" dangerous goods.

1.14 Finally, as proposed at DGP/27 it is believed that there was value in bringing to the attention of the Flight Operations Panel (FLTOSP) the provisions in FAR §121.583 that addressed clear operational conditions that an operator was obliged to implement where persons other than flight crew are intended to be on a cargo aircraft. It was believed that this text could be of use if adopted into an appropriate location in *Procedures for Air Navigation Services — Aircraft Operations* (PANS-OPS), Volume III — *Aircraft Operating Procedures* (Doc 8168).

1.15 This working paper also includes draft text to be proposed to the FLTOSP for their consideration for inclusion into PANS-OPS, Vol. III that brings in the operational requirements and controls when an operator permits such persons to be carried on a cargo aircraft.

2. ACTION BY THE DGP-WG

2.1 The DGP-WG is invited to consider the proposals set out in the appendices to this working paper.

2.2 For the draft text for PANS-OPS, Vol. III as shown in Appendix C to this working paper, the DGP-WG is invited to review the text and to propose any revisions to the draft text to be submitted to the FLTOSP.

APPENDIX A

PROPOSED AMENDMENT TO ANNEX 18

**INTERNATIONAL STANDARDS
AND RECOMMENDED PRACTICES**

CHAPTER 1. DEFINITIONS

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~~*Cargo aircraft.* Any aircraft, other than a passenger aircraft, which is carrying goods or property.~~

...

~~*Passenger aircraft.* An aircraft that carries any person other than a crew member, an operator's employee in an official capacity, an authorized representative of an appropriate national authority or a person accompanying a consignment or other cargo.~~

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APPENDIX B

PROPOSED AMENDMENT TO PARTS 1 AND 7 OF THE TECHNICAL INSTRUCTIONS

Part 1

GENERAL

Chapter 3

GENERAL INFORMATION

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3.1 DEFINITIONS

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Passenger aircraft. An aircraft that carries any person other than:

a) -a crew member;

b) -an operator's employee in an official capacity;

c) -an authorized representative of an appropriate national authority;

d) -a person accompanying a consignment or other cargo, including when travelling before or after accompanying a consignment or other cargo; or

e) a person approved by the operator in accordance with conditions approved by the appropriate national authority.

...

Part 7

OPERATOR'S RESPONSIBILITIES

Chapter 1

ACCEPTANCE PROCEDURES

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1.7 CONDUCTING SAFETY RISK ASSESSMENTS

1.7.1 Operators must include the transport of dangerous goods, including lithium batteries and cells as cargo, in the scope of their:

- a) safety management system (SMS) in accordance with Annex 19; and
- b) specific safety risk assessment on the transport of items in the cargo compartment in accordance with Annex 6 — Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes.

Note 1.— Guidance on implementation of an SMS is contained in the Safety Management Manual (SMM) (Doc 9859).

Note 2.— Guidance on the conduct of a specific safety risk assessment on the transport of items in the cargo compartment is contained in the Cargo Compartment Operational Safety Manual (Doc 10102).

Note 3.— Specific guidance on safety risk assessments related to consignments containing COVID-19 pharmaceuticals is provided at www.icao.int/safety/OPS/OPS-Normal/Pages/Safety-transport-vaccines.aspx.

1.7.2 Operators that intend to carry persons permitted on a cargo aircraft in addition to the operating crew must conduct a safety risk assessment on the carriage of such persons, this includes the development and implementation of policies and procedures for the carriage of these persons [as provided for in *Procedures for Air Navigation Services — Aircraft Operations, Volume III — Aircraft Operating Procedures (Doc 8168)*].

APPENDIX C

DRAFT TEXT FOR CONSIDERATION BY THE FLTOPSP FOR PANS-OPS, VOL III

Carriage of Persons on [an All-Cargo Aircraft] [Non-Passenger Carrying Aircraft]

Background

1. The *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284) (Technical Instructions) set out the provisions by which substances and articles classified as dangerous goods can be carried as cargo on aircraft. The Technical Instructions differentiate between certain dangerous goods that are permitted as cargo on a “passenger aircraft” and those that due to the larger net quantity per package, or the inherent hazard are restricted to carriage on a “cargo aircraft”.

2. The Technical Instructions then includes definitions of “cargo aircraft” and “passenger aircraft” to identify on which aircraft the applicable dangerous goods can be carried. The definitions in the Technical Instructions are as follows:

Cargo aircraft. Any aircraft, other than a passenger aircraft, which is carrying goods or property.

Passenger aircraft. An aircraft that carries any person other than:

- a) a crew member;
- b) an operator’s employee;
- c) an authorized representative of an appropriate national authority;
- d) a person accompanying a consignment or other cargo, including when travelling before or after accompanying a consignment or other cargo; or
- e) a person approved by the operator in accordance with conditions approved by the appropriate national authority.

3. While the provisions in the Technical Instructions address the carriage of dangerous goods and limit the carriage of persons other than the operating crew, there are many operators only operate all-cargo aircraft but that still have a need to also carry persons other than the flight crew.

4. The purpose of this guidance is to set out recommendations to operators that operate aircraft used only for the carriage of cargo, i.e. freighters, on what they should evaluate as part of their safety risk assessment to permit the carriage of persons that can be on an all-cargo aircraft.

Conditions Under Which Persons [Other Than Operating Flight Crew] May be Carried on [an All-Cargo Aircraft] [Non-Passenger Carrying Aircraft]

1. When considering the carriage of persons [additional to the operating crew] on [an All-Cargo Aircraft] [Non-Passenger Carrying Aircraft] the operator [should] [must]:

- a) through the conduct of a safety risk assessment determine the potential for additional risk to be introduced into the operation due to carriage of persons other than operating crew.
- b) the safety risk assessment must consider the potential for negative effect of the presence of such personnel on the available measures in place for addressing the risks from the cargo that may be carried, such as dangerous goods. The items to be considered include fire protection and suppression systems and operational procedures that affect the occupants of the aircraft such as de-pressurization.
- c) the safety risk assessment must also consider potential risk to such personnel that may be different from the risk to the flight due to difference in training, emergency equipment, protective breathing or emergency evacuation capabilities.
- d) if the occupants of the cargo aircraft have access to the cargo hold containing dangerous goods, the risk assessment must also consider potential risk caused by such personnel.

2. Where the operator has determined that additional persons may be carried on a non-passenger carrying aircraft the operator [should] [must] ensure effective risk mitigation, to include at least the following:

- a) each person has unobstructed access from their seat to the flight deck or to a regular or emergency exit;

- b) the pilot-in-command has a means of notifying each person when smoking is prohibited and when safety belts must be fastened; and
 - c) the aircraft has an approved seat with an approved safety belt for each person. The seat must be located so that the occupant is not in any position to interfere with the flight crewmembers performing their duties.
 - d) before each take-off, the operator shall ensure that all such persons have been orally briefed by the appropriate crewmember on:
 - (i) smoking;
 - (ii) the use of seat belts;
 - (iii) the location and operation of emergency exits;
 - (iv) the use of oxygen and emergency oxygen equipment; and
 - (v) for extended overwater operations, the location of life rafts, and the location and operation of life preservers including a demonstration of the method of donning and inflating a life preserver.
3. Each operator operating an aircraft carrying these persons must describe the procedures for the safe carriage of such persons into their operations manual and/or other appropriate manuals.

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