International Civil Aviation Organization

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English only

WORKING PAPER

DANGEROUS GOODS PANEL (DGP)

THIRTIETH MEETING

Montréal, 6 to 10 October 2025

Agenda Item 2: Managing air-specific safety risks and identifying anomalies (REC-A-DGS-2027)
2.4: Development of proposals, if necessary, for amendments to the *Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods* (Doc 9481) for incorporation in the 2027-2028 Edition

TYPES AND LOCATIONS OF CARGO COMPARTMENTS

(Presented by D. Sylvestre)

SUMMARY

This working paper identifies a need to correct a misalignment between cargo compartment classification provisions in *Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods* (Doc 9481) and *Guidance for Safe Operations Involving Aeroplane Cargo Compartments* (Doc 10102). It proposes to replace outdated provisions in Doc 9481 with a reference to the up-to-date provisions in Doc 10102.

Action by the DGP: The DGP is invited to agree to the amendment to Sections 1.1 and 1.2 of Doc 9481 presented in the appendix to this working paper.

1. INTRODUCTION

1.1 Sub-Sections 1.1 (Cargo compartment classification) and 1.2 (Cargo compartment locations) of *Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods* Doc 9481) contains out of date information. More up to date information is available in *Guidance for Safe Operations Involving Aeroplane Cargo Compartments* (Doc 10102), under sub-paragraph 6.2 and 6.3. Sub-paragraph 6.2.1 includes the following note:

> *Note 2.—* Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods *(Doc 9481) contains definitions that differ slightly from the ones given in this manual. This is due to recent updates in national codes, affecting the Class B compartment and adding the Class F compartment.*

1.2 To avoid duplication, we recommend replacing the text in Doc 9481 with the following note referring to Doc 10102:

> *Note.— Cargo compartment classification and location are described in the ICAO document* Guidance for Safe Operations Involving Aeroplane Cargo Compartments *(Doc 10102)*.

2. ACTION BY THE DGP

2.1 The DGP is invited to agree to the amendment to Sections 1.1 and 1.2 of Doc 9481 presented in the appendix to this working paper.

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APPENDIX

PROPOSED CHANGES TO THE EMERGENCY RESPONSE GUIDANCE FOR AIRCRAFT INCIDENTS INVOLVING DANGEROUS GOODS

SECTION 1

GENERAL INFORMATION

1.1 CARGO COMPARTMENT CLASSIFICATION

~~Cargo compartments are classified in most national airworthiness requirements (such as FAR 25.857 and JAR 25.857) as follows:~~

~~*Class A.* A Class A cargo or baggage compartment is one in which:~~

~~a) the presence of a fire would be easily discovered by a crew member while at the crew member's station; and~~

~~b) each part of the compartment is easily accessible in flight.~~

~~*Class B.* A Class B cargo or baggage compartment is one in which:~~

~~a) there is sufficient access in flight to enable a crew member to effectively reach any part of the compartment with the contents of a hand fire extinguisher;~~

~~b) when the access provisions are being used, no hazardous quantity of smoke, flames or extinguishing agent will enter any compartment occupied by the crew or passengers; and~~

~~c) there is a separate approved smoke detector or fire detector system to give warning at the pilot or flight engineer station.~~

~~*Class C.* A Class C cargo or baggage compartment is one not meeting the requirements for either a Class A or B compartment but in which:~~

~~a) there is a separate approved smoke detector or fire detector system to give warning at the pilot or flight engineer station;~~

~~b) there is an approved built-in fire-extinguishing system controllable from the pilot or flight engineer station;~~

~~c) there are means of excluding hazardous quantities of smoke, flames, or extinguishing agent from any compartment occupied by the crew or passengers; and~~

~~d) there are means of controlling ventilation and draughts within the compartment so that the extinguishing agent used can control any fire that may start within the compartment.~~

~~*Class D.* A Class D cargo or baggage compartment is one in which:~~

a) a fire occurring in it will be completely confined without endangering the safety of the aeroplane or the occupants;

b) there are means of excluding hazardous quantities of smoke, flames, or other noxious gases from any compartment occupied by the crew or passengers;

c) ventilation and draughts are controlled within each compartment so that any fire likely to occur in the compartment will not progress beyond safe limits; and

d) consideration is given to the effect of heat within the compartment on adjacent critical parts of the aeroplane.

For compartments of 14.2 m^3 or less, an airflow of 42.5 m^3 per hour is acceptable.

Class E. A Class E cargo compartment is one on aeroplanes used only for the carriage of cargo and in which:

a) there is a separate approved smoke or fire detector system to give warning at the pilot or flight engineer station;

b) there are means of shutting off the ventilating airflow to or within the compartment, and the controls for these means are accessible to the flight crew in the crew compartment;

c) there are means of excluding hazardous quantities of smoke, flames, or noxious gases, from the flight crew compartment; and

d) the required crew emergency exits are accessible under any cargo loading conditions.

Note.— Cargo compartments classifications are described in the ICAO document Guidance for Safe Operations Involving Aeroplane Cargo Compartments *(Doc 10102).*

1.2 CARGO COMPARTMENT LOCATIONS

Typically, Class A cargo compartments are small cargo compartments that may be located between the flight deck and the passenger cabin or adjacent to the galley area or at the back of the aircraft.

A Class B cargo compartment is usually much larger than a Class A cargo compartment and can be located in an area remote from the flight deck. Class B cargo compartments are found on "combi" aircraft between the flight deck and the passenger cabin or behind the passenger cabin at the rear of the aircraft.

Note.— A "combi" aircraft is one in which both cargo and passengers are carried on the main deck.

The volume of a Class C cargo compartment is usually larger than Class A or B and such cargo compartments are generally found under the floor in wide-bodied aircraft. A Class C cargo compartment may have two fire extinguishing systems, enabling a second charge of extinguishant to be fired into the cargo compartment some time after the fire has initially been controlled by the first charge.

Instead of being equipped with fire detection and extinguishing systems, Class D cargo compartments are designed to control a fire by severely restricting the supply of oxygen. Class D cargo compartments are to be found under the passenger cabin floor on most jet transport aircraft. However, it must be appreciated that certain dangerous goods are themselves oxygen producers. Therefore, it cannot be assumed that a fire in a Class D cargo compartment will necessarily self-extinguish.

~~A Class E cargo compartment normally comprises the entire main deck compartment of a cargo aircraft.~~

~~A conventional passenger aeroplane is usually fitted with either Class C or Class D cargo compartments under the passenger cabin. A cargo aeroplane is usually fitted with a Class E main deck cargo compartment and with Class D and/or Class C underfloor cargo compartments. A "combi" aeroplane is usually fitted with a Class B main deck cargo compartment, either in front or behind the passenger cabin and with a Class C and/or Class D cargo compartment under the floor. The smaller commuter aeroplane, if not fitted as a conventional passenger aeroplane with a Class D cargo compartment, could be equipped with only a Class A cargo compartment, usually positioned in the area adjacent to the flight deck.~~

~~Helicopters are capable of carrying freight either in the main cabin (in a Class A cargo compartment) or under the cabin floor. The cargo compartment under the floor has no classification and the compartment is not capable of withstanding fire for any length of time. Some helicopters have cargo compartments which are at the rear of the aircraft and which are inaccessible from inside the helicopter. These cargo compartments are usually small and they are not fitted with any fire detection systems, extinguishing systems or liners.~~

Note.— Cargo compartments classifications are described in the ICAO document Guidance for Safe Operations Involving Aeroplane Cargo Compartments *(Doc 10102).*

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