

Doc 9375-AN/913
Book 3



INTERNATIONAL CIVIL AVIATION ORGANIZATION

**DANGEROUS GOODS
TRAINING PROGRAMME**

**BOOK 3
PASSENGER HANDLING STAFF
AND FLIGHT ATTENDANTS**

*Approved by the Secretary General
and published under his authority*

THIRD EDITION — JANUARY 1993

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DANGEROUS GOODS TRAINING PROGRAMME

(Doc 9375-AN/913)

BOOK 3 PASSENGER HANDLING STAFF AND FLIGHT ATTENDANTS



THIRD EDITION — JANUARY 1993

FOREWORD

Annex 18 to the Convention on International Civil Aviation, entitled "The Safe Transport of Dangerous Goods by Air", requires in Chapter 10 that dangerous goods training programmes be established and updated as provided for in the ICAO document *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284).

The Technical Instructions (Part 6) require that initial and recurrent dangerous goods training programmes be established and maintained for or on behalf of the following:

- regular shippers of dangerous goods and shippers' agents;
- operators;
- agencies located at an aerodrome which perform, on behalf of the operator, the act of receiving, loading, unloading, transferring or other processing of passengers or cargo;
- agencies other than operators involved in processing or transporting either passengers or cargo; and
- agencies engaged in the security screening of passengers and their baggage.

It also recommends that these training programmes be subjected to review and approval as determined by the appropriate national authority, with the exception of the operators' training programmes which must be subject to review and approval by the appropriate authority of the State of the operator.

A series of four books, of which this is Book 3, has been produced for the training of particular categories of personnel involved in the transport of dangerous goods by air. The four books are:

- Book 1: Shippers, cargo agents and operators' cargo acceptance staff
- Book 2: Load planners and flight crew
- Book 3: Passenger handling staff and flight attendants
- Book 4: Loading and warehouse personnel

This programme of books has been developed to help achieve a uniform world-wide level of training in all aspects of handling and transporting dangerous goods by air and particularly to assist those who are responsible for the establishment of training programmes. The material contained in these books was developed jointly by ICAO and IATA in support of the provision contained in Annex 18 to the Convention on International Civil Aviation. It is believed that the use of an internationally developed training programme will facilitate approval by national authorities.

It is intended that revised editions of these books will be published from time to time to maintain alignment with changes to the provisions on which they are based.

This third edition of the training programme series is based on the *1993-1994 Edition* of the Technical Instructions.

ICAO publishes a document entitled *Emergency Response Guidance for Aircraft Incidents involving Dangerous Goods* (Doc 9481). This is only intended for incidents which take place in the air. Part of the document is addressed to flight attendants who may have to deal with dangerous goods incidents in the passenger cabin.

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INTRODUCTION

This is a self-study training book intended to familiarize passenger handling personnel, including flight attendants, with the provisions of the International Civil Aviation Organization (ICAO) *Technical Instructions for the Safe Transport of Dangerous Goods by Air*. The ICAO Technical Instructions contain the internationally agreed rules which will ensure dangerous goods are carried safely. You need to be aware of the content of these provisions so that you may monitor the system where possible and properly carry out your own responsibilities. Do not attempt to memorize any part of this book or the Technical Instructions.

Dangerous goods are commodities with a potential for danger but, if the regulations are followed, transporting such goods by air is not dangerous.

Within the definition of dangerous goods are not only obvious substances such as acids, radioactive material, poisons and explosives but also some unlikely items such as magnets, wheelchairs with wet-cell batteries, breathing apparatus with compressed gas cylinders, perishables packed in dry ice, pesticides, etc.

The Technical Instructions cover the procedures to be followed by everyone involved in preparing a consignment of dangerous goods and transporting it on an aircraft.

The pages that follow will help you to understand the relevant parts of the Technical Instructions more fully.

Throughout this book, cross-references to the relevant parts of the Technical Instructions are given. Extracts from some parts are also shown as examples. The cross-references (which appear in parentheses) always begin with a figure indicating the Part of the Technical Instructions, followed by a semicolon and then followed by a group of figures representing the paragraph. For example:

4;2.3 refers to Part 4, paragraph 2.3.

A single figure following the semicolon refers to a whole chapter. For example:

2;9 refers to Part 2, Chapter 9.

It is worth noting that a detailed Index appears at the back of the Technical Instructions (Attachment 4) and this will help you find any other references you may need.

It is intended that you read the relevant paragraphs of the Instructions in conjunction with the notes contained in this book to obtain a fuller understanding of the procedures involved in the transport of dangerous goods by air. To test your understanding, it is suggested that you attempt to answer the review questions given at the end of the book, using the Instructions for reference as necessary. The answers to the review questions are also given to enable you to check your own responses and to indicate areas where further study might be required.

The Technical Instructions are updated and reissued every two years. Only the current edition should be used.

DANGEROUS GOODS

General

Dangerous goods may be divided into three categories:

- a) those which are acceptable for transport by air provided all the provisions of the Instructions are complied with;
- b) those which are forbidden for transport by air; and
- c) those which are excepted from the provisions of the Instructions.

Provided that the requirements of the Technical Instructions are followed, the desired level of safety will be maintained.

Dangerous goods acceptable — 1;1.2

A great many dangerous goods may be carried safely on aircraft as cargo provided they are properly prepared for transport in accordance with the Instructions. Generally, however, they are not permitted in passengers' or crews' checked baggage or as carry-on articles (but see "Dangerous goods excepted or limited" below).

A major aspect of the requirements is the use of secure packaging when transporting limited quantities of dangerous goods. The Instructions, in general, restrict the quantity per package rather than the number of packages.

Dangerous goods forbidden for transport — 1;2.1

Certain dangerous goods are considered to be too dangerous for transport by air under any circumstances. Special care is taken to ensure that such goods are not accepted for transport.

Dangerous goods excepted or limited

The provisions contained in the Instructions do not apply to the following:

A. Exceptions for dangerous goods of the operator (1;2.3)

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- a) articles and substances which would otherwise be classed as dangerous goods but which are required to be aboard the aircraft in accordance with the pertinent airworthiness requirements and operating regulations or that are authorized by the State of the operator to meet special requirements;
 - b) aerosols, alcoholic beverages, perfumes, colognes, safety matches and liquefied gas lighters carried aboard a passenger aircraft by the operator for use or sale on the aircraft during the flight or series of flights, but excluding disposable gas lighters and those lighters liable to leak when exposed to reduced pressure;
 - c) dry ice intended for use in food and beverage service aboard the aircraft.
-

Replacement parts and spares must meet the normal requirements of these Instructions except that, when consigned by operators, they can be carried in specially designed containers.

B. Dangerous goods in excepted quantities (1;2.5)

Certain types of dangerous goods may be carried in small quantities without complying with all the requirements of the Instructions. Special provisions have been made which exempt them from the usual provisions for dangerous goods including documentation, hazard labels and segregation loading. However, such packages must be marked "Dangerous goods in excepted quantities" (1;2.5.6.1).

Packages containing excepted quantities of dangerous goods do not require any special handling or loading except that they must not be carried in a passenger cabin or on the flight deck.

An incident involving leakage or spillage of a package containing excepted quantities of dangerous goods or any other occurrences must be reported in accordance with Part 5;4.4 and 4.5 of the Instructions.

C. Dangerous goods in limited quantities (1;2.6)

The Instructions contain provisions for limited quantities of dangerous goods. These recognize that many dangerous goods when in reasonably limited quantities present a reduced hazard during transport and can safely be carried in good quality packagings of the types specified in the Instructions but which have not been tested and marked accordingly. The provisions applicable for dangerous goods in limited quantities appear in Part 1;2.6 of the Instructions. The packing instructions are indicated in Column 9 of Table 2-14 where they are prefixed by the letter "Y"; the associated quantity limitation is shown in Column 10. These packages must be marked, labelled and stowed in the same way as other dangerous goods.

D. Dangerous goods carried by passengers or crew (9;1.2)

Dangerous goods must not be carried by passengers or crew members as or in carry-on baggage, or as checked baggage, or on their person, except for the following:

-
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- a) alcoholic beverages not exceeding 70 per cent alcohol by volume when packed in receptacles of less than 5 L;
 - b) non-radioactive medicinal or toilet articles (including aerosols). Also aerosols in Division 2.2, with no subsidiary risk, for sporting or home use in checked baggage only. The total net quantity of all such articles carried by each person must not exceed 2 kg or 2 L and the net quantity of each single article must not exceed 0.5 kg or 0.5 L. The term 'medicinal or toilet articles (including aerosols)' is intended to include such items as hair sprays, perfumes, colognes and medicines containing alcohols;
 - c) with the approval of the operator(s), small gaseous oxygen or air cylinders required for medical use;
 - d) small carbon dioxide gas cylinders worn for the operation of mechanical limbs, also spare cylinders of a similar size if required to ensure an adequate supply for the duration of the journey;
 - e) with the approval of the operator(s), as checked baggage only, securely boxed cartridges for sporting purposes, in Division 1.4S, in quantities not exceeding 5 kg gross mass per person for that person's own use, excluding ammunition with explosive or incendiary projectiles. Allowances for more than one person must not be combined into one or more packages;
 - f) dry ice in quantities not exceeding 2 kg per person, when used to pack non-dangerous perishables, provided the package permits the release of carbon dioxide gas:
 - in carry-on baggage; or
 - with the approval of the operator(s), in checked baggage;
 - g) safety matches or a lighter intended for use by an individual when carried on the person. However, lighters containing unabsorbed liquid fuel (other than liquefied gas), lighter fuel and lighter refills are not permitted on one's person or in checked or carry-on baggage;
 - h) radioisotopic cardiac pacemakers or other devices, including those powered by lithium batteries, implanted into a person or radio-pharmaceuticals contained within the body of a person as the result of medical treatment;