



## **DANGEROUS GOODS PANEL (DGP)**

### **TWENTY-SEVENTH MEETING**

**Montréal, 16 to 20 September 2019**

**Agenda Item 8: Coordination with other panels**  
**8.1: Flight Operations Panels (FLTOSP)**

### **DANGEROUS GOODS CONSIDERATIONS FOR ANNEX 6 PART III**

(Presented by the Secretary of the Flight Operations Panel (FLTOSP))

#### **SUMMARY**

This paper is coordinated from the Flight Operations Panel (FLTOSP) and requests assistance from the Dangerous Goods Panel (DGP) in completing job card FLTOSP.025 which relates to the inclusion of dangerous goods provisions for Annex 6 — *Operation of Aircraft, Part III — International Operations — Helicopters*.

## **1. INTRODUCTION**

1.1 At the first Flight Operations Panel (FLTOSP/1, Montreal 2014) a job card was proposed to develop dangerous goods provisions for Annex 6 — *Operation of Aircraft, Part III — International Operations — Helicopters*. Following review of the proposed text resulting from this job card, the Dangerous Goods Panel (DGP) is requested to assist with the completion of this task.

## **2. DISCUSSION**

2.1 A working paper was presented to the fifth Flight Operations Panel (FLTOSP/5, Montreal 2018) (FLTOSP/5-WP/14) which proposed text for Annex 6, Part III introducing provisions for the carriage of dangerous goods by helicopters. The paper noted that equivalent provisions for aeroplanes had been adopted into Annex 6, Part I — *International Commercial Air Transport — Aeroplanes* in 2014. The proposed amendment to Annex 6, Part III is shown in Appendix A to this working paper.

2.2 At the same meeting, an information paper prepared by the Secretariat (FLTOPSP/5-IP/8) highlighted the relevant sections of the *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284) which related to helicopters. The contents of FLTOPSP/5-IP/8 are provided in Appendix B.

2.3 Following the review of FLTOPSP/5-WP/14 and FLTOPSP/5-IP/8, the panel noted that more work would be needed to align the content of the dangerous goods provisions of Annex 6, Part III with the Technical Instructions, and that additional topics such as segregation and separation required further study.

2.4 The panel proposed that additional coordination with DGP be conducted and that the expertise of the DGP be sought to complete the development of the helicopter-specific dangerous goods provisions for Annex 6. Specifically, Recommendation 4/17 from the FLTOPSP/5 report states:

***Recommendation 4/17 — Dangerous goods considerations for Annex 6 Part III***

That the panel coordinate the work for Dangerous Goods provisions in Annex 6 Part III with the DGP and ensure consistency with the Technical Instructions.

2.5 With this in mind the FLTOPSP requests assistance from the DGP on the subject raised in this working paper and looks forward to working with the panel to complete the assigned tasks.

**3. ACTION BY THE DGP/X**

3.1 The DGP/27 is invited to:

- a) note the information in this paper; and
- b) provide assistance in updating the proposed amendment to Annex 6 Part III, as presented in Appendix A, in line with the *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284).

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**APPENDIX A**

**PROPOSED AMENDMENTS TO ANNEX 6 PART III RELATED TO THE CARRIAGE OF  
DANGEROUS GOODS BY HELICOPTERS**

**Proposed Amendment to Annex 6  
Operation of Aircraft  
Part III - International Operations - Helicopters**

**ABBREVIATIONS AND SYMBOLS**

*(used in this Annex)*

*Abbreviations*

COMAT      Company owned material

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**Section I, GENERAL**

**CHAPTER 1. DEFINITIONS**

When the following terms are used in the Standards and Recommended Practices for international operations with helicopters, they have the following meanings:

COMAT. Company owned material carried on an operator's aircraft for the operator's own purposes.

**Section II. International Commercial Air Transport**  
**Chapter 1. Dangerous Goods**

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~~**1.4 DANGEROUS GOODS**~~

~~Note 1.— Provisions for carriage of dangerous goods are contained in Annex 18.~~

~~Note 2.— Article 35 of the Convention refers to certain classes of cargo restrictions.~~

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**Chapter 2. Flight Operations**

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**2.2.1 The air operator certificate**

2.2.1.3.1 The operator shall develop policies and procedures for third parties that perform work on its behalf

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**Chapter 7. Helicopter Flight Crew**

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**7.3 FLIGHT CREW MEMBER TRAINING PROGRAMMES**

7.3.1 The operator shall establish and maintain a ground and flight training programme, approved by the State of the Operator, which ensures that all flight crew members are adequately trained to perform their assigned duties. The training programme shall:

~~Note 5.— Provisions for training in the transport of dangerous goods are contained in Annex 18.~~ For more information on dangerous goods operational requirements see Chapter 12.

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**Chapter 10. Cabin Crew**

**10.3 TRAINING**

The operator shall establish and maintain a training programme, approved by the State of the Operator, to be completed by all persons before being assigned as a cabin crew member. Cabin crew members shall complete a recurrent training programme annually. These training programmes shall ensure that each person is:

Note 2.— For more information on dangerous goods operational requirements, see Chapter 12.

*Note 23.* — Guidance material to design training programmes to develop knowledge and skills in human performance can be found in the Cabin Crew Safety Training Manual (Doc 10002).

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## **CHAPTER 12. DANGEROUS GOODS**

### **12.1 General applicability**

*Note 1.* — Due to the differences in the type of operations carried out by helicopters compared with aeroplanes, some additional considerations need to be made when dangerous goods are carried by helicopter, as described in Helicopter Operations in the Technical Instruction for the Safe Transport of Dangerous Goods by Air (DOC 9284), part 7, Chapter 7, Section 1.1.

### **12.2 State Responsibilities**

*Note 1.* — Annex 18, Chapter 2, contains requirements for each Contracting State to take the necessary measures to achieve compliance with the detailed provisions contained in the Technical Instructions.

*Note 2.* — Operator responsibilities for the transport of dangerous goods are contained in Chapters 8, 9 and 10 of Annex 18. Part 7 of the Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284) (Technical Instructions) contains the operator's responsibilities and requirements for incident and accident reporting.

*Note 3.* — Annex 18, Chapter 11, contains requirements for each Contracting State to establish oversight procedures for all entities (including packers, shippers, ground handling agents and operators) performing dangerous goods functions

*Note 4.* — The requirements pertaining to crew members or passengers carrying dangerous goods on aircraft are set forth in Part 8, Chapter 1, of the Technical Instructions.

*Note 5.* — Company material (COMAT) that meets the classification criteria of the Technical Instructions for dangerous goods are considered cargo and must be transported in accordance with Part 1;2.2 of the Technical Instructions (e.g., aircraft parts such as chemical oxygen generators, fuel control units, fire extinguishers, oils, lubricants, cleaning products).

### **12.3 Provision of information to employees**

12.3.1 The operator shall ensure that all personnel, including third-party personnel, involved in the acceptance, handling, loading and unloading of cargo are informed of the operator's operational approval and limitations regarding the transport of dangerous goods.

## **12.4 Domestic commercial air transport operations**

**Recommendation.** — *The International Standards and Recommended Practices set forth in this chapter should be applied by all Contracting States also in the case of domestic commercial air transport operations.*

### **12.5 Operators with no specific approval for the transport of dangerous goods as cargo**

12.5.1 The State of the Operator shall ensure that operators with no specific approval to transport dangerous goods have:

a) established a dangerous goods training programme that meets the requirements of Annex 18, the applicable requirements of the Technical Instructions, Part 1, Chapter 4, and the requirements of the State's regulations, as appropriate. Details of the dangerous goods training programme shall be included in the operator's operations manuals;

b) established dangerous goods policies and procedures in its operations manual to meet, at a minimum, the requirements of Annex 18, the Technical Instructions and the State's regulations to allow operator personnel to:

1) identify and reject undeclared dangerous goods, including company material (COMAT) classified as dangerous goods; and

2) report to the appropriate authorities of the State of the Operator and the State in which it occurred any:

i) occasions when undeclared dangerous goods are discovered in cargo or mail; and

ii) dangerous goods accidents and incidents.

### **12.6 Operators with a specific approval for the transport of dangerous goods as cargo**

12.6.1 The State of the Operator shall ensure that the operator:

a) establishes a dangerous goods training programme that meets the requirements in the Technical Instructions, Part 1, Chapter 4, Table 1-4, and the requirements of the State regulations, as appropriate. Details of the dangerous goods training programme shall be included in the operator's operations manuals;

b) establishes dangerous goods policies and procedures in its operations manual to meet, at a minimum, the requirements of Annex 18, the Technical Instructions and the State's regulations to enable operator personnel to:

1) identify and reject undeclared or misdeclared dangerous goods in cargo or mail, including COMAT classified as dangerous goods;

2) report to the appropriate authorities of the State of the Operator and the State in which it occurred any:

i) occasions when undeclared or misdeclared dangerous goods are discovered in cargo or mail; and

- ii) dangerous goods accidents and incidents;
- 3) report to the appropriate authorities of the State of the Operator and the State of Origin any occasions when dangerous goods are discovered to have been carried:
  - i) when not loaded, segregated, separated or secured in accordance with the Technical Instructions, Part 7, Chapter 2; and
  - ii) without information having been provided to the pilot-in-command in accordance with 1.4.5;
- 4) accept, handle, store, transport, load and unload dangerous goods, including COMAT classified as dangerous goods as cargo on board an aircraft; and
- 5) provide the pilot-in-command with accurate and legible written or printed information concerning dangerous goods that are to be carried as cargo.
  - i) For helicopter operations, with the approval of the State of the Operator, the information provided to the pilot-in-command may be abbreviated or be by other means (e.g., radio communication, as part of the working flight documentation such as a journey log or operational flight plan) where circumstances make it impractical to produce written or printed information or on a dedicated form (see Part 7;4.2 of the Technical Instructions).

#### 12.6.2 Loading and securing of dangerous goods

12.6.2.1 Packages or overpacks of dangerous goods bearing the “Cargo aircraft only” label shall be loaded for carriage by a cargo aircraft in accordance with the Technical Instructions Part 7, Chapter 2, Section 4.1; or the approval of the State of the Operator, for helicopter operations, in the cabin or in cargo compartments. (see Part 7;7.1.4 of the Technical Instructions)

#### 12.6.3 Operational requirements

12.6.3.1 Each operator shall prepare and keep current a manual containing operational guidelines and handling procedures for the use and guidance of flight, maintenance, and ground personnel concerned in the dispensing or expending of dangerous goods.

12.6.3.2 No person, other than a required flight crewmember or person necessary for handling or dispensing the dangerous goods, shall be carried on the aircraft.

12.6.3.3 The operator of the aircraft shall have prior permission from the owners of any airport to be used for the dispensing or expending of dangerous goods.

#### 12.6.4 Exemptions

12.6.4.1 States may grant exemptions for carriage of dangerous goods other than as cargo, as these are addressed in Part 1, Chapter 1, of the Technical Instructions.

12.6.4.2 The exceptions for the carriage of dangerous goods that are either equipment or for use on board the aircraft during flight are detailed in Part 1, 2.2.1, of the Technical Instructions.

### **12.6.5 Unacceptable dangerous goods shipments**

12.6.5.1 A package containing dangerous goods that is not prepared for carriage in accordance with this subparagraph shall not be offered or accepted for transportation or transported aboard an aircraft.

### **12.6.6 Inspection, orientation and securing packages of dangerous goods.**

12.6.6.1 A unit load device shall not be loaded on an aircraft unless the device has been inspected and found to be free from any evidence of leakage from, or damage to, any package containing dangerous goods.

12.6.6.2 A package containing dangerous goods marked “THIS SIDE UP” or “THIS END UP,” or with arrows to indicate the proper orientation of the package, shall be stored and loaded aboard an aircraft in accordance with such markings. A package without orientation markings containing liquid dangerous goods shall be stored and loaded with top closure facing upward.

12.6.6.3 Packages containing dangerous goods shall be secured in a helicopter in a manner that will prevent any movement or any change in the orientation of the packages. Packages containing radioactive materials shall be secured in a manner that ensures that separation requirements will be maintained at all times during flight.

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## **Section III. International General Aviation Chapter 1. Dangerous Goods**

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### **1.2 DANGEROUS GOODS**

*Note 1. — Provisions for carriage of dangerous goods are contained in Annex 18.*

*Note 2. — Article 35 of the Convention refers to certain classes of cargo restrictions.*

#### **1.2.1 General applicability**

Note 1. — Provisions for carriage of dangerous goods are contained in Annex 18.

Note 2. — Due to the differences in the type of operations carried out by helicopters compared with aeroplanes, some additional considerations need to be made when dangerous goods are carried by helicopter, as described in Helicopter Operations in the Technical Instruction for the Safe Transport of Dangerous Goods by Air (DOC 9284), part 7, Chapter 7, Section 1;1.

## 1.2.2 Applicability

1.2.2.1 The provisions of the ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air [DOC: 9284] also apply to the acceptance for carriage, loading and carriage of dangerous goods in any general aviation helicopter.

1.2.2.2 Exceptions. The General Exceptions contained in Part 1;1.1.5 of the Technical Instructions and the Exceptions contained in Part 1;2.2 of the Technical Instructions also apply to any general aviation helicopter.

## **Attachments**

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## **ATTACHMENT J. DANGEROUS GOODS**

*(Supplementary to Chapter 12)*

### **1. PURPOSE AND SCOPE**

The material in this attachment provides guidance regarding the carriage of dangerous goods as cargo. Section II, Chapter 12, includes dangerous goods operational requirements that apply to all operators. Operators that are approved to transport dangerous goods as cargo need to meet additional requirements. In addition to the operational requirements contained in Annex 6, there are other requirements in Annex 18 and the Technical Instructions that also need to be complied with.

### **2. DEFINITIONS**

Where the following term is used in this attachment, it has the meaning indicated:

**Cargo.** Any property carried on an aircraft other than mail and accompanied or mishandled baggage.

Note 1.— This definition differs from the definition of “cargo” given in Annex 9 — Facilitation.

Note 2.— COMAT that meets the classification criteria of dangerous goods and which is transported in accordance with Part 1;2.2.2 or Part 1;2.2.3 or Part 1;2.2.4 of the Technical Instructions are considered as “cargo” (e.g., aircraft parts such as chemical oxygen generators, fuel control units, fire extinguishers, oils, lubricants, cleaning products).

### 3. STATES

3.1 The State of the Operator should indicate in the operations specification if the operator is approved or is not approved to transport dangerous goods as cargo. When the operator is approved to transport dangerous goods as cargo any limitations should be included.

3.2 An operational approval may be granted for the transport of specific types of dangerous goods only (e.g., dry ice; biological substance, Category B; and dangerous goods in excepted quantities) or COMAT.

3.3 The Supplement to the Technical Instructions contains guidance on a State's responsibilities with respect to operators. This includes additional information to Part 7 of the Technical Instructions on storage and loading, provision of information, inspections, enforcement and Annex 6 information relevant to the State's responsibilities for dangerous goods.

3.4 Carriage of dangerous goods other than as cargo (e.g., medical flights, search and rescue) are addressed in Part 1, Chapter 1, of the Technical Instructions. The exceptions for the carriage of dangerous goods that are either equipment or for use on board the aircraft during flight are detailed in Part 1, 2.2.1, of the Technical Instructions.

### 4. OPERATOR

4.1 The operator's training programme should cover, as a minimum, the aspects of the transport of dangerous goods listed in the Technical Instructions in Table 1-4 for operators holding an approval or Table 1-5 for operators without an approval. Recurrent training must be provided within 24 months of previous training, except as otherwise provided by the Technical Instructions.

4.2 Details of the dangerous goods training programme including the policies and procedures regarding third-party personnel involved in the acceptance, handling, loading and unloading of dangerous goods cargo should be included in the operations manual.

4.3 The Technical Instructions require that operators provide information in the operations manual and/or other appropriate manuals that will enable flight crews, other employees and ground handling agents to carry out their responsibilities with regard to the transport of dangerous goods and that initial training be conducted prior to performing a job function involving dangerous goods.

4.4 Operators should meet and maintain requirements established by the States in which operations are conducted in accordance with 2.2.2.3 of this Annex.

4.5 Operators may seek approval to transport, as cargo, specific dangerous goods only, such as dry ice, biological substance, Category B, COMAT and dangerous goods in excepted quantities.

4.6 Attachment 1 to Part S-7, Chapter 7, of the Supplement to the Technical Instructions contains additional guidance and information on requirements regarding operators not approved to transport dangerous goods as cargo and for operators that are approved to transport dangerous goods as cargo.

4.7 All operators should develop and implement a system that ensures they will remain current with regulatory changes and updates. The Technical Instructions contain detailed instructions necessary for the

safe transport of dangerous goods by air. These instructions are issued biennially, becoming effective on 1 January of an odd-numbered year.

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## APPENDIX B

### HELICOPTER RELATED TEXT EXTRACTED FROM THE TECHNICAL INSTRUCTIONS FOR THE SAFE TRANSPORT OF DANGEROUS GOODS BY AIR TECHNICAL INSTRUCTIONS (DOC 9284) AND ITS SUPPLEMENT (DOC 9284SU)

#### EXTRACTS FROM TECHNICAL INSTRUCTIONS

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## Part 1

## GENERAL

### Chapter 1

### SCOPE AND APPLICABILITY

#### 1.1 GENERAL APPLICABILITY

1.1.1 These *Technical Instructions for the Safe Transport of Dangerous Goods by Air*, referred to herein as the "Instructions", prescribe the detailed requirements applicable to the international civil transport of dangerous goods by air by any aircraft (including both internal and external carriage). Any addenda to this edition of the ICAO *Technical Instructions for the Safe Transport of Dangerous Goods by Air* issued by ICAO constitute part of these Instructions.

1.1.2 Where specifically provided for in these Instructions, the States concerned may grant an approval provided that in such instances an overall level of safety in transport which is equivalent to the level of safety provided for in these Instructions is achieved.

1.1.3 In instances:

- a) of extreme urgency; or
- b) when other forms of transport are inappropriate; or
- c) when full compliance with the prescribed requirements is contrary to public interest,

the States concerned may grant an exemption from the provisions of the Instructions provided that in such instances every effort is made to achieve an overall level of safety in transport which is at least equivalent to the level of safety provided for in these Instructions.

1.1.4 For the State of overflight, if none of the criteria for granting an exemption are relevant, an exemption may be granted based solely on whether it is believed that an equivalent level of safety in air transport has been achieved.

*Note 1.— For the purpose of approvals, "States concerned" are the States of Origin and the Operator, unless otherwise specified in these Instructions.*

*Note 2.— For the purpose of exemptions, "States concerned" are the States of Origin, Operator, Transit, Overflight and Destination.*

*Note 3.— Guidance for the processing of exemptions, including examples of extreme urgency, may be found in the Supplement to the Technical Instructions (Part S-1;1.2 and 1.3).*

*Note 4.— Refer to 1;2.1 for dangerous goods forbidden for transport by air under any circumstance.*

*Note 5.— Due to the differences in the type of operations carried out by helicopters compared with aeroplanes, some additional considerations need to be made when dangerous goods are carried by helicopter, as described in 7.7.*

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## Chapter 3

### GENERAL INFORMATION

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**External carriage.** Any load suspended from a helicopter or in equipment attached to a helicopter.

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## Part 4

### PACKING INSTRUCTIONS

#### INTRODUCTORY NOTES

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*Note 11.— Open external carriage*

When dangerous goods are prepared for open external carriage (e.g. suspended from a helicopter or in open external carrying devices), consideration should be given to the type of packaging used and protection of those packagings where necessary from the effects of airflow and weather (e.g. by damage from rain or snow).

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## Part 7

### OPERATOR'S RESPONSIBILITIES

#### Chapter 2

#### STORAGE AND LOADING

*Parts of this Chapter are affected by State Variations CA 1, CA 4, IR 2, IR 4, JP 10, JP 11, JP 12, US 15; see Table A-1*

##### 2.1 LOADING RESTRICTIONS ON THE FLIGHT DECK AND FOR PASSENGER AIRCRAFT

2.1.1 Dangerous goods must not be carried in an aircraft cabin occupied by passengers or on the flight deck of an aircraft, except as permitted by 1;2.2.1 and 8;1 and for radioactive material, excepted packages under 2;7.2.4.1.1. Dangerous goods may be carried in a main deck cargo compartment of a passenger aircraft provided that compartment meets all the certification requirements for a Class B or a Class C aircraft cargo compartment. Dangerous goods bearing the "Cargo aircraft only" label must not be carried on a passenger aircraft.

2.1.2 Under the conditions specified in S-7;2.2 of the Supplement, the State of Origin and the State of the Operator may approve the transport of dangerous goods in main deck cargo compartments of passenger aircraft that do not meet the requirements in 2.1.1.

*Note.— Cargo compartment classification is described in the ICAO document Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods (Doc 9481).*

2.1.3 For additional requirements concerning the loading of dangerous goods for carriage by helicopters, see Part 7;7.

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## 2.4 LOADING AND SECURING OF DANGEROUS GOODS

### 2.4.1 Loading of cargo aircraft

2.4.1.1 Packages or overpacks of dangerous goods bearing the “Cargo aircraft only” label must be loaded for carriage by a cargo aircraft in accordance with one of the following provisions:

- a) in a Class C aircraft cargo compartment; or
- b) in a unit load device equipped with a fire detection/suppression system equivalent to that required by the certification requirements of a Class C aircraft cargo compartment as determined by the appropriate national authority (a ULD that is determined by the appropriate national authority to meet the Class C aircraft cargo compartment standards must include “Class C compartment” on the ULD tag); or
- c) in such a manner that in the event of an emergency involving such packages or overpacks, a crew member or other authorized person can access those packages or overpacks, and can handle and, where size and mass permit, separate such packages or overpacks from other cargo; or
- d) external carriage by a helicopter; or
- e) with the approval of the State of the Operator, for helicopter operations, in the cabin (see Part S-7;2.4 of the Supplement).

*Note.— Cargo compartment classification is described in the ICAO document Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods (Doc 9481).*

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## Chapter 4

### PROVISION OF INFORMATION

*Parts of this Chapter are affected by State Variations AU 4, CA 4, CA 12, FR 5, GB 4, KP 3, MY 4, MY 5, US 12, US 13, US 15, VE 3, VU 3, VU 4; see Table A-1*

#### INTRODUCTORY NOTE

Operators’ responsibilities for the provision of information to passengers are shown in Part 8.

#### 4.1 INFORMATION TO THE PILOT-IN-COMMAND

4.1.1 As early as practicable before departure of the aircraft, but in no case later than when the aircraft moves under its own power, the operator of an aircraft in which dangerous goods are to be carried must:

- a) provide the pilot-in-command with accurate and legible written or printed information concerning dangerous goods that are to be carried as cargo; and
- b) provide personnel with responsibilities for operational control of the aircraft (e.g. the flight operations officer, flight dispatcher, or designated ground personnel responsible for flight operations) with the same information that is required to be provided to the pilot-in-command (e.g. a copy of the written information provided to the pilot-in-command). Each operator must specify the personnel (job title or function) to be provided this information in their operations manual and/or other appropriate manuals.

For helicopter operations, with the approval of the State of the Operator, the information provided to the pilot-in-command may be abbreviated or be by other means (e.g. radio communication, as part of the working flight documentation such as a journey log or operational flight plan) where circumstances make it impractical to produce written or printed information or on a dedicated form (see Part S-7;4.8 of the Supplement).

*Note 1.— This includes information about dangerous goods loaded at a previous departure point and which are to be carried on the subsequent flight.*

*Note 2.— Information required under 7;4.1.1 b) should be readily available to the operator's personnel whose responsibilities most closely align with the duties of the flight operations officer/flight dispatcher described in Annex 6, Part I — International Commercial Air Transport — Aeroplanes, Chapter 4, 4.6. These personnel are intended to provide the information required by 4.6 to facilitate emergency response.*

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## Chapter 7

### HELICOPTER OPERATIONS

*Note.— The requirements in this chapter are in addition to the other provisions of these Instructions that apply to all operators (e.g. Part 7 and Part 1;4).*

7.1.1 Due to the differences in the type of operations carried out by helicopters compared with aeroplanes, there may be circumstances when the full provisions of these Instructions are not appropriate or necessary, due to the operations involving unmanned sites, remote locations, mountainous areas or construction sites, etc. In such circumstances and when appropriate, the State of the Operator may grant an approval in order to permit the carriage of dangerous goods without all of the normal requirements of these Instructions being fulfilled. When States other than the State of the Operator have notified ICAO that they require prior approval of such operations, approval must also be obtained from the States of Origin and destination, as appropriate.

7.1.2 When loading dangerous goods for open external carriage by a helicopter, consideration should also be given to the type of packaging used and to the protection of those packagings, where necessary, from the effects of airflow and weather (e.g. by damage from rain or snow), in addition to the general loading provisions of 7;2.

7.1.3 When dangerous goods are carried suspended from a helicopter, the operator must ensure that consideration is given to the dangers of static discharge upon landing or release of the load.

7.1.4 When helicopters are carrying passengers, in accordance with Part S-7;2.2.4 of the Supplement, the State of the Operator may grant an approval to permit the carriage of dangerous goods either:

- a) in the cabin, when those dangerous goods are associated with and accompanied by the passengers; or
- b) in cargo compartments that do not meet the requirements of Part 7;2.1.1.

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**EXTRACTS FROM THE SUPPLEMENT TO THE TECHNICAL INSTRUCTIONS FOR THE  
SAFE TRANSPORT OF DANGEROUS GOODS BY AIR TECHNICAL INSTRUCTIONS  
(DOC 9284)**

The following are extracts from the *Supplement to the Technical Instructions for the Safe Transport of Dangerous Goods by Air technical instructions* (Doc 9284SU) related to helicopters:

## **Part S-7**

### **STATE'S RESPONSIBILITIES WITH RESPECT TO OPERATORS**

#### **(ADDITIONAL INFORMATION FOR PART 7 OF THE TECHNICAL INSTRUCTIONS)**

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#### **Chapter 2**

#### **STORAGE AND LOADING**

##### **2.1 TRANSPORT OF RADIOACTIVE MATERIAL**

The Competent Authority should ensure that the consignment, acceptance for transport and transport of radioactive material is subject to a Radiation Protection Programme as described in the Technical Instructions. The Competent Authority should arrange for periodic assessments of the radiation doses to persons due to the transport of radioactive material, to ensure that the system of protection and safety complies with the International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources, Safety Series No. 115, IAEA, Vienna (1996).

##### **2.2 LOADING ON PASSENGER AIRCRAFT**

2.2.1 Part 7;2.1 of the Technical Instructions provides that dangerous goods may only be carried in a main deck cargo compartment of a passenger aircraft that meet the certification requirements for a Class B or C cargo compartment. There may be occasions when there is a need to carry dangerous goods on passenger aircraft that do not have these cargo compartments, such as on those serving remote areas where there is no other transport available. In such circumstances, the State of Origin and the State of the Operator may approve the transport of dangerous goods in accordance with the following paragraphs.

*Note.— Cargo compartment classification is described in the ICAO document Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods (Doc 9481).*

2.2.2 The dangerous goods may only be in the following classes or divisions:

**Division 1.4S**

**Division 2.1** – Aerosols only

**Division 2.2** (except UN 2037, UN 2073 and UN 2857)

**Class 3** (except UN 1112, UN 2047, UN 2059, UN 2332, UN 3054, and UN 3269)

**Division 4.1** (except UN 1309, UN 1313, UN 1314, UN 1318, UN 1324, UN 1330, UN 1338, UN 1353, UN 1869, UN 2000, UN 2213, UN 2714, UN 2715, UN 2878, UN 3089, and UN 3241)

**Division 5.1** (except UN 1458, UN 1459, UN 1467, UN 1481, UN 1482, UN 1483, UN 2427, UN 2428, UN 2429, UN 2469, UN 2726, UN 2984, UN 3210, UN 3211, UN 3213, UN 3215, UN 3216, UN 3218, UN 3219)

**Division 6.1** (except UN 1549, UN 1550, UN 1551, UN 1556, UN 1557, UN 1593, UN 1599, UN 1655, UN 1686, UN 1690, UN 1710, UN 1812, UN 1887, UN 1888, UN 1897, UN 1935, UN 2024, UN 2025, UN 2026, UN 2074, UN 2077, UN 2233, UN 2501, UN 2505, UN 2515, UN 2609, UN 2655, UN 2656, UN 2674, UN 2713, UN 2747, UN 2785, UN 2788, UN 2821, UN 2831, UN 2853, UN 2854, UN 2855, UN 2856, UN 2871, UN 2874, UN 3141, UN 3144, UN 3146, UN 3283, UN 3293)

#### **Division 6.2**

**Class 7** – Excepted packages of radioactive material and packages assigned category I-White only

**Class 8** (except UN 1731, UN 1740, UN 1755, UN 1757, UN 1783, UN 1787, UN 1788, UN 1789, UN 1814, UN 1819, UN 1824, UN 1848, UN 1908, UN 2430, UN 2496, UN 2508, UN 2564, UN 2578, UN 2585, UN 2586, UN 2672, UN 2677, UN 2679, UN 2681, UN 2693, UN 2790, UN 2803, UN 2809, UN 2837, UN 2869, UN 3145, UN 3253, UN 3320)

**Class 9** (except UN 1931, UN 1941, UN 1990, UN 2211, UN 2590, UN 3268, UN 3314, UN 3316, UN 3363, UN 8000)

2.2.3 Where a packing group is assigned, the dangerous goods in 2.2.2 are restricted to those in Packing Group III only.

2.2.4 For helicopter operations, the State of the Operator may approve the carriage of dangerous goods permitted for carriage on a passenger aircraft other than those in 2.2.2 and 2.2.3. When such an approval is to be granted, States should consider the factors that may mean carriage within the cabin is required or preferable, such as:

- the size/mass of packages making it impractical to carry them as an external load;
- accessibility to the packages; and
- duration of the flight.

When States other than the State of the Operator have notified ICAO that they require prior approval of such operations, approval must also be obtained from the States of Origin and Destination, as appropriate.

2.2.5 The dangerous goods must comply fully with all other applicable requirements of the Technical Instructions and:

- a) must be in combination packagings, if the applicable packing instruction provides for such a packing method; and
- b) the quantity per package must not exceed that permitted for transport on passenger aircraft according to Table 3-1.

2.2.6 The operations manual and other appropriate manuals must contain specific procedures for dealing with any incidents that may occur during flight.

2.2.7 The operator must notify the State of Destination in advance of the intention to transport dangerous goods in accordance with these requirements.

2.2.8 A copy of the approval must be carried on the aircraft.

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### **2.4 CARRIAGE IN THE CABIN BY HELICOPTERS OF CARGO AIRCRAFT ONLY DANGEROUS GOODS**

2.4.1 Packages bearing the "Cargo aircraft only" label may be carried in the cabin of a helicopter operating as a cargo aircraft with the approval of the State of the Operator.

2.4.2 When granting such an approval, States should consider:

- a) the types and quantity of dangerous goods involved;
- b) the types of packaging used;

- c) the duration of the flight(s);
- d) the types of operation; and
- e) the ability to land quickly in the event of an emergency.

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## Chapter 4

### PROVISION OF INFORMATION

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#### 4.8 INFORMATION TO THE PILOT-IN-COMMAND FOR HELICOPTER OPERATIONS

4.8.1 Part 7;4.1.1 of the Technical Instructions provides that, with the approval of State of the Operator, where circumstances make it impractical to produce written or printed information or on a dedicated form, the notification to the pilot-in-command may be abbreviated or be by other means (e.g. radio communication, as part of the working flight documentation such as a journey log or operational flight plan, etc.). Examples of such circumstances include:

- a) when the helicopter does not land in order to pick up the dangerous goods such that it is not possible to provide written information at that location;
- b) where the helicopter is in-flight and the planned load is changed prior to being picked up without the helicopter landing;
- c) when short, repetitive flights or a series of flights from different locations are undertaken by a helicopter where it is impractical to provide separate written information for each flight;
- d) where dangerous goods are picked up from an unmanned site.

4.8.2 When granting such an approval, States should consider all of the circumstances under which the approval is being sought, the minimum information that should be provided to the pilot-in-command and the procedures that the operator would implement to ensure that the information is provided and recorded.

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## Chapter 8

### ANNEX 6 INFORMATION RELEVANT TO STATE'S DANGEROUS GOODS RESPONSIBILITIES

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#### 8.2 ADDITIONAL REQUIREMENTS FOR HELICOPTER OPERATORS

8.2.1 Annex 6 — *Operation of Aircraft, Part III — International Operations — Helicopters*, provides that operational manuals be reviewed and approved before issuing operations specifications by the appropriate authority of the State of the Operator.

8.2.2 Due to the differences in the type of operations carried out by helicopters compared with aeroplanes, supplemental guidance and documented procedures for carriage by helicopter are required by the State of the Operator, in addition to the requirements in 8.1, as compliance with full provisions of the Technical Instructions may not be practicable.

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— END —