



WORKING PAPER

DANGEROUS GOODS PANEL (DGP)

TWENTY-EIGHTH MEETING

Virtual, 15 to 19 November 2021

Agenda Item 2: Managing air-specific safety risks and identifying anomalies

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 2023-2024 Edition

PROPOSED EDITORIAL REVISIONS TO TECHNICAL INSTRUCTIONS

(Presented by P. Guo)

SUMMARY

This working paper proposes editorial revisions to references for engines and machinery in Table 3-1 and the Glossary of terms (Attachment 2) necessary as a result of them now being assigned to UN 3528, UN 3529, or UN 3530 based on the specific hazard they pose.

Action by the DGP: The DGP is invited to consider the proposed amendments as shown in the appendix to this working paper.

1. INTRODUCTION

1.1 Engines and machinery were classified as Class 9 and assigned to UN 3166 prior to the 2017-2018 Edition of the Technical Instructions. They are now assigned to UN 3528, UN 3529, and UN 3530 based on the specific hazard they pose:

| UN No. | Hazard | Proper shipping name |
|---------|--------|---|
| UN 3166 | 9 | Vehicle, flammable gas powered or Vehicle, flammable liquid powered or Vehicle, fuel cell, flammable gas powered or Vehicle, fuel cell, flammable liquid powered |
| UN 3528 | 3 | Engine, fuel cell, flammable liquid powered or Engine, internal combustion, flammable liquid powered or Machinery, fuel cell, flammable liquid powered or Machinery, internal combustion, flammable liquid powered |

| UN No. | Hazard | Proper shipping name |
|---------|--------|---|
| UN 3529 | 2.1 | Engine, fuel cell, flammable gas powered or Engine, internal combustion, flammable gas powered or Machinery, fuel cell, flammable gas powered or Machinery, internal combustion, flammable gas powered |
| UN 3530 | 9 | Engine, internal combustion or Machinery, internal combustion |

1.2 Table 3-1 includes a cross reference to the proper shipping name for gas turbines (**Engine, internal combustion**) and refers only to UN No. 3530. It is proposed that UN Nos. 3528 and 3529 should also be referred to.

1.3 UN 3166 is still referred to against the entries for aircraft, fuel cell and turbine engines in the glossary of terms in Attachment 2. However, these would now be assigned to either UN 3528, 3529 or UN 3530. It is proposed that UN 3166 be replaced with the applicable UN number(s).

2. ACTION BY THE DGP

2.1 The DGP is invited to consider the proposed amendments as shown in the appendix to this working paper.

APPENDIX

PROPOSED AMENDMENT TO PART 3 OF THE TECHNICAL INSTRUCTIONS

Part 3

**DANGEROUS GOODS LIST,
SPECIAL PROVISIONS AND
LIMITED AND EXCEPTED QUANTITIES**

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Chapter 2

**ARRANGEMENT OF THE
DANGEROUS GOODS LIST (TABLE 3-1)**

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Table 3-1. Dangerous Goods List

| Name | UN No. | Class or division | Sub-sidiary risk | Labels | State variations | Special provisions | UN packing group | Excepted quantity | Passenger aircraft | | Cargo aircraft | |
|---|--------|-------------------|------------------|--------|------------------|--------------------|------------------|-------------------|---------------------|-------------------------------|---------------------|-------------------------------|
| | | | | | | | | | Packing instruction | Max. net quantity per package | Packing instruction | Max. net quantity per package |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| Gas turbine engines †, see Engine, internal combustion (UN No. 3528 , 3529 , 3530) | | | | | | | | | | | | |

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Attachment 2

GLOSSARY OF TERMS

Glossary of terms

| <i>Term and explanation</i> | <i>UN Number(s), when relevant</i> |
|---|--|
| AIRCRAFT ENGINES. Generic term for engines powering flying craft fuelled by flammable liquid (jet-fuel, petrol, kerosene, etc.) which applies to piston designs, turbine designs and includes auxiliary power units (APU). | 3166 3528 |
| ... | |
| FUEL CELL ENGINE. See Part 1;3.1. | 3166 3528, 3529 |
| ... | |
| TURBINE ENGINES. Generic term used for turbine engines fuelled by flammable liquid, flammable gas or other combustible fuels. They may power fixed wing aircraft, rotorcraft, hover craft (cushion craft), marine vessels, land vehicles, pumps and power-generating plants. | 3166 3528, 3529, 3530 |
| ... | |

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