



WORKING PAPER

**DANGEROUS GOODS PANEL (DGP)
WORKING GROUP MEETING (DGP-WG/17)**

Montreal, 24 to 28 April 2017

Agenda Item 2: Development of recommendations for amendments to the *Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284)* for incorporation in the 2019-2020 Edition

2.7: Part 7 — Operator's Responsibilities

EXCEPTION FROM SEGREGATION REQUIREMENTS FOR UN 3528

(Presented by D. Brennan)

SUMMARY

This working paper proposes a revision to Table 7-1 to except UN 3528, engines from the requirement to segregate dangerous goods in Class 3 from those in Division 5.1.

Action by the DGP-WG: The DGP-WG is invited to revise Table 7-1 as shown in the appendix to this working paper.

1. INTRODUCTION

1.1 Until 1 January 2017 engines powered by a flammable liquid fuel were assigned to UN 3166 and classified in Class 9. As such when loaded into an aircraft cargo compartment these engines were not subject to any specific segregations for other dangerous goods, or other cargo.

1.2 However, as of 1 January 2017 engines powered by a flammable liquid fuel have been assigned to UN 3528 and are now classified in Class 3, which is based on the classification of the fuel that powers the engine.

1.3 By classifying engines in Class 3 they are now subject to the requirements set out in Table 7-1, which requires that dangerous goods in Class 3 be segregated from dangerous goods in Division 5.1, including those with a subsidiary hazard of Division 5.1 when loaded into a package, overpack, a unit load device (ULD) and aircraft cargo compartment.

1.4 Since 2001 when Table 7-1 was last revised there is no evidence of any incidents resulting from engines being loaded in close proximity to dangerous goods classified with a hazard of Division 5.1. Requiring segregation for engines will only add to the complexity of loading dangerous goods into aircraft ULD and cargo compartments without any justified safety benefit.

1.5 It is therefore proposed to include a specific exception into Table 7-1 to not require that engines and machinery assigned to UN 3528 and classified in Class 3 be segregated from dangerous goods in Division 5.1.

2. **ACTION BY THE DGP-WG**

2.1 The DGP-WG is invited to revise Table 7-1 as shown in the appendix to this working paper.

APPENDIX

PROPOSED AMENDMENT TO PART 7 OF THE TECHNICAL INSTRUCTIONS

Part 7

OPERATOR'S RESPONSIBILITIES

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Chapter 2

STORAGE AND LOADING

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2.2 INCOMPATIBLE DANGEROUS GOODS

2.2.1 Segregation

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Table 7-1. Segregation between packages

Hazard label	Class or division							
	1	2	3	4.2	4.3	5.1	5.2	8
1	Note 1	Note 2						
2	Note 2	—	—	—	—	—	—	—
3	Note 2	—	—	—	—	X	—	—
4.2	Note 2	—	—	—	—	X	—	—
4.3	Note 2	—	—	—	—	—	—	x
5.1	Note 2	—	x	x	—	—	—	—
5.2	Note 2	—	—	—	—	—	—	—
8	Note 2	—	—	—	x	—	—	—

An "x" at the intersection of a row and column indicates that packages containing these classes of dangerous goods may not be stowed next to or in contact with each other, or in a position which would allow interaction in the event of leakage of the contents. Thus, a package containing Class 3 dangerous goods may not be stowed next to or in contact with a package containing Division 5.1 dangerous goods.

Note 1.— See 2.2.2.2 through 2.2.2.5.

Note 2.— This class or division must not be stowed together with explosives other than those in Division 1.4, Compatibility Group S.

Note 3. — Packages containing dangerous goods with multiple hazards in the class or divisions which require segregation in accordance with Table 7-1 need not be segregated from other packages bearing the same UN number.

Note 4. — UN 3528, Engines, internal combustion, flammable liquid powered, Engines, fuel cell, flammable liquid powered, Machinery internal combustion, flammable liquid powered and Machinery, fuel cell, flammable liquid powered need not be segregated from packages containing dangerous goods in Division 5.1.

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