



WORKING PAPER

DANGEROUS GOODS PANEL (DGP)

TWENTY-FOURTH MEETING

Montréal, 28 October to 8 November 2013

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 2015-2016 Edition

PACKING REQUIREMENTS FOR FUEL SYSTEM COMPONENTS

(Presented by D. Brennan)

SUMMARY

This working paper proposes an editorial amendment to Packing Instruction 962 to clarify the packing provisions applicable to fuel system components.

Action by the DGP: The DGP is invited to revise Packing Instruction 962 as shown in the appendix to this working paper.

1. INTRODUCTION

1.1 Packing Instruction 962 applies to UN 3363, **Dangerous goods in apparatus** or **Dangerous goods in equipment**. Included within the packing instruction are specific provisions that address fuel system components.

1.2 These provisions were developed to address articles such as aircraft fuel control units, which, when removed from the aircraft engine for repair will contain a quantity of fuel. For transport, all of the openings on the fuel control are blanked off; the unit is then packed in a strong outer packaging with absorbent material.

1.3 The placement of the last paragraph in Packing Instruction 962 which allows for apparatus or machinery to be shipped unpackaged and the consideration for fuel control units, which would appear to have to be shipped packaged, has caused some discussion.

1.4 It is therefore proposed to move the text making allowance for machinery or apparatus to be shipped unpackaged up under the “Additional packing requirements”. In addition as the packing instruction applies to articles that do not require an inner packaging it is proposed to delete the text “Outer packagings of combination packagings (see 6;3.1)”.

APPENDIX

PROPOSED AMENDMENT TO PART 4 OF THE TECHNICAL INSTRUCTIONS

Part 4

PACKING INSTRUCTIONS

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Chapter 11

CLASS 9 — MISCELLANEOUS DANGEROUS GOODS

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Packing Instruction 962

Passenger and cargo aircraft for UN 3363 only

General requirements

Part 4, Chapter 1 requirements must be met (except that the requirements of 4;1.1.2, 1.1.9, 1.1.13 and 1.1.16 do not apply), including:

1) **Compatibility requirements**

— Substances must be compatible with their packagings as required by 4;1.1.3.

2) **Closure requirements**

— Closures must meet the requirements of 4;1.1.4.

This entry only applies to apparatus or machinery containing dangerous goods as a residue or as an integral element of the machinery or apparatus. It must not be used for apparatus or machinery for which a proper shipping name exists in Table 3-1. For other than fuel system components, apparatus or machinery may only contain one or more of the following: dangerous goods permitted under 3;4.1.2 or UN 2807 or gases of Division 2.2 without subsidiary risk but excluding refrigerated liquefied gases.

<i>UN number and proper shipping name</i>	<i>State</i>	<i>Total net quantity of dangerous goods in one package (excluding magnetic material)</i>
UN 3363 Dangerous goods in apparatus or Dangerous goods in machinery	Liquid	0.5 L
	Solid	1 kg
	Gas (Division 2.2 only)	0.5 kg

ADDITIONAL PACKING REQUIREMENTS

- Receptacles containing dangerous goods must be so secured or cushioned so as to prevent their breakage or leakage and so as to control their movement within the machinery or apparatus during normal conditions of transport. Cushioning material must not react dangerously with the contents of the receptacles. Any leakage of the contents must not substantially impair the protective properties of the cushioning material.
- "Package orientation" labels (Figure 5-26), or preprinted orientation labels meeting the same specification as either Figure 5-26 or ISO Standard 780-1997 must be affixed on at least two opposite vertical sides with the arrows pointing in the correct direction only when required to ensure liquid dangerous goods remain in their

intended orientation.

- Irrespective of 5;3.2.10, machinery or apparatus containing magnetized material meeting the requirements of Packing Instruction 953 must also bear the "Magnetized material" label (Figure 5-24).
- For Division 2.2 gases, cylinders for gases, their contents and filling ratios must conform to the requirements of Packing Instruction 200.
- Dangerous goods in apparatus or machinery must be packed in strong outer packagings unless the receptacles containing the dangerous goods are afforded adequate protection by the construction of the apparatus or machinery.

Fuel system components

- Fuel system components must be emptied of fuel as far as practicable and all openings must be sealed securely. They must be packed:
 - 1) in sufficient absorbent material to absorb the maximum amount of liquid which may possibly remain after emptying. Where the outer packaging is not liquid tight, a means of containing the liquid in the event of leakage must be provided in the form of a leakproof liner, plastic bag or other equally efficient means of containment; and
 - 2) in strong outer packagings.

~~OUTER PACKAGINGS OF COMBINATION PACKAGINGS (see 6;3.1)~~

~~Dangerous goods in apparatus or machinery must be packed in strong outer packagings unless the receptacles containing the dangerous goods are afforded adequate protection by the construction of the apparatus or machinery.~~

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