



WORKING PAPER

**DANGEROUS GOODS PANEL (DGP)
MEETING OF THE WORKING GROUP OF THE WHOLE**

Atlantic City, United States, 4 to 8 April 2011

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 2013-2014 Edition

2.3: Part 3 — Dangerous Goods List, Special Provisions and Limited and Excepted Quantities

SPECIAL PROVISION A70

(Presented by D. Brennan)

SUMMARY

This working paper proposes some clarification of the text in Special provisions A70 with respect to residual fuel in engines.

Action by the DGP-WG is in paragraph 2.

1. INTRODUCTION

1.1 At DGP-WG/10 a working paper (DGP-WG/10-WP/33) was submitted that sought some clarification on the intent and application of Special Provision A70 for engines or equipment containing engines where the engine had been bench-tested and therefore fuel had been run through the fuel system.

1.2 In the discussion of this working paper in Abu Dhabi there was agreement that the current wording of A70 did not adequately address where engines have been bench-tested for quality purposes during production and that some text should be developed that specifies a clear requirement that can be demonstrated has been complied with.

1.3 Also in the discussion the working it was suggested that the text that applies to flammable gas powered engines should be used as a basis for text applicable to the flammable liquid powered engines. In reviewing the text for flammable gas powered engines, this text does not lend itself as being appropriate for flammable liquid powered engines where the fuel can only have been in the fuel system (carburettor, fuel injection system) and the fuel lines.

1.4 It is therefore proposed for the flammable liquid fuelled engines that the condition for meeting A70 is that there be “no free liquid visible” and that all fuel lines must be sealed or securely connected to prevent any leakage. This language is consistent with the condition that is contained within Special Provision A50. It is also proposed to restructure A70 to more clearly specify the requirements by which an engine or vehicle, machine or other apparatus containing an engine may be considered as not subject to the Technical Instructions.

2. ACTION BY THE DGP-WG

2.1 The DGP-WG is invited to revise Special Provision A70 as follows:

A70 Internal combustion or fuel cell engines being shipped either separately or incorporated into a vehicle, machine or other apparatus, ~~the fuel tank of which has never contained any fuel and the fuel system of which is completely empty of fuel, or that are powered by a fuel that does not meet the classification criteria for any class or division, and~~ without batteries or other dangerous goods, are not subject to these Instructions: provided that:

a) for flammable liquid powered engines:

1) the engine is powered by a fuel that does not meet the classification criteria for any class or division; or

2) the fuel tank of the vehicle, machine or other apparatus has never contained any fuel; and

3) the entire fuel system of the engine has no free liquid and all fuel lines are sealed or capped or securely connected to the engine and vehicle, machinery or apparatus.

b) for Flammable gas powered internal combustion or fuel cell engines being shipped without batteries or other dangerous goods either separately or incorporated into a vehicle, machine or other apparatus that have contained fuel but:

1) the entire fuel system must have been flushed, purged and filled with a non-flammable gas or fluid to nullify the hazard are not subject to these Instructions provided that:

2) the final pressure of the non-flammable gas used to fill the system does not exceed 200 kPa at 20°C

a3) the shipper has made prior arrangements with the operator; and

b4) the shipper has provided the operator with written or electronic documentation stating that the flushing, purging and filling procedure has been followed and that the final contents of the engine(s) have been tested and verified to be non-flammable; and

~~c) the final pressure of the non-flammable gas used to fill the system does not exceed 200 kPa at 20°C.~~

Multiple engines may be shipped in a unit load device or other type of pallet provided that the shipper has made prior arrangements with the operator(s) for each shipment.

When this special provision is used, the words “not restricted” and the special provision number A70 must be provided on the air waybill when an air waybill is issued.

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