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DANGEROUS GOODS PANEL (DGP)

MEETING OF THE WORKING GROUP OF THE WHOLE

Abu Dhabi, 4 to 8 October 2004

Agenda Item 2: Development of recommendations for amendments to the *Technical Instructions* for incorporation in the 2007/2008 edition
2.4: Part 4 — Packing Instructions

AMENDMENT TO PACKING INSTRUCTION 900

(Presented by M. Evans)

1. INTRODUCTION

1.1 Packing Instruction 900 was amended in the 2001/2002 Edition of the Technical Instructions to incorporate the shipment of an internal combustion engine when being shipped as a separate item.

1.2 When the packing instruction was amended, the requirements for the carriage of an internal combustion engine that is not contained within a vehicle, machine or equipment was added to the bottom of the packaging instruction as item g). It therefore became part of the list of requirements that govern the shipment of vehicles, machines or equipment containing and internal combustion engine.

1.3 The note at the bottom of the Packing Instruction regarding the carriage of replacements for those dangerous goods referred to in the list will also require amendment to reflect this change.

2. PROPOSAL

2.1 Amend Packing Instruction 900 as follows:

a) move item g) to the end of the Packing Instruction as a separate item;

b) renumber the list from a) to i); and

c) Amend the wording regarding the carriage of replacement dangerous goods to reflect the change in the list numbering.

900	PACKING INSTRUCTION 900	900

Vehicles, machines or equipment containing internal combustion engines or batteries must meet the following requirements:

a) except as otherwise provided for in this Packing Instruction, fuel tanks must be drained of fuel and tank caps fitted securely. Special precautions are necessary to ensure complete drainage of the fuel system of vehicles, machines or equipment incorporating internal combustion engines, such as lawn mowers and outboard motors, where such machines or equipment could possibly be handled in other than an upright position. When it is not possible to handle in other than an upright position, vehicles, except those with diesel engines, must be drained of fuel as far as practicable, and if any fuel remains, it must not exceed one-quarter of the tank capacity. Vehicles equipped with diesel engines are excepted from the requirement to drain the fuel tanks, provided that a sufficient ullage space has been left inside the tank to allow fuel expansion without leakage, and the tank caps are tightly closed. A careful check must be made to ensure there are no fuel leakages;

b) 1) for flammable gas-powered vehicles, machines or equipment, pressurized vessels containing the flammable gas must be completely emptied of flammable gas. Lines from vessels to gas regulators, and gas regulators themselves, must also be drained of all trace of flammable gas. To ensure that these conditions are met, gas shut-off valves must be left open and connections of lines to gas regulators must be left disconnected upon delivery of the vehicle to the operator. Shut-off valves must be closed and lines reconnected at gas regulators before loading the vehicle aboard the aircraft;

\+ or alternatively,

2) flammable gas-powered vehicles, machines or equipment that have pressure receptacles (fuel tanks) equipped with electrically operated valves that close automatically in case the power is disconnected, or with manual shut-off valves, may be transported under the following conditions:

i) the valves must be in the closed position and in the case of electrically operated valves, power to those valves must be disconnected;

ii) after closing the valves, the vehicle, equipment or machinery must be operated until it stops from lack of fuel before being loaded aboard the aircraft;

iii) in no part of the system between the pressure receptacle and the shut-off valve shall the pressure exceed more than 5% of the maximum allowable working pressure of the system;

iv) there must not be any residual liquefied gas in the system, including the fuel tank;

. . .

f) in the event that vehicles, machines or equipment containing internal combustion engines are being shipped in a dismantled state such that fuel lines have been disconnected, those fuel lines must be sealed securely;

~~g) when internal combustion engines are being shipped separately, all fuel, coolant or hydraulic systems remaining in or on the engine must be drained as far as practicable and all disconnected fluid pipes must be sealed with leak-proof caps, which are positively retained;~~

~~h~~ g) vehicles equipped with theft-protection devices, installed radio communications equipment or navigational system must have such devices, equipment or system disabled;

~~i~~ h) if lithium batteries are installed, they must be of a type that has successfully passed the tests specified in the *UN Manual of Tests and Criteria*, Part III, subsection 38.3, must be securely fastened in the vehicle, machinery or equipment and must be protected in such a manner so as to prevent damage and short circuits; and

~~j~~ i) if sodium batteries are installed they must conform to the requirements of special provision A94, must be securely fastened in the vehicle, machinery or equipment and must be protected in such a manner so as to prevent damage and short circuits.

When internal combustion engines are being shipped separately, all fuel, coolant or hydraulic systems remaining in or on the engine must be drained as far as practicable and all disconnected fluid pipes must be sealed with leak-proof caps, which are positively retained.

Replacements for the dangerous goods permitted in paragraphs a) to j) must not be carried under this packing instruction.

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