



WORKING PAPER

DANGEROUS GOODS PANEL (DGP)

TWENTY-SECOND MEETING

Montréal, 5 to 16 October 2009

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 2011-2012 Edition

LITHIUM BATTERY POWERED MOBILITY AIDS

(Presented by G. A. Leach)

SUMMARY

This paper seeks discussion on the extension of the passenger and crew provisions of Part 8 of the *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284) to include lithium battery powered mobility aids.

Action by the DGP: If the panel believes Part 8 of the Technical Instructions should include provisions for lithium battery mobility aids, the addition of a new “g)” to Part 8;1.1.2 as shown in the appendix is proposed.

1. INTRODUCTION

1.1 In the current biennium work has been done to improve the text in Part 8 of the *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284) relating to battery powered mobility aids (refer to paragraph 3.2.56 of DGP/22-WP/2 and paragraph 3.5.1.18 of DGP/22-WP/3), with both spillable and non-spillable lead acid batteries being treated consistently. However one area of this subject remains to be addressed, that of lithium battery powered mobility aids.

1.2 At the DGP Working Group of the Whole Meeting in Auckland (DGP-WG09, 4 to 8 May 2009), the question was asked whether “mobility aid” should be defined in the Technical Instructions as something which is essential to the user in their daily life e.g. a battery powered wheelchair, because it had been shown that many other devices e.g. bicycles, Segways, even outboard motors for boats could be interpreted as aiding mobility and it was suggested that it had never been the intention of the Technical Instructions to provide for carriage of such items by passengers or crew. However, it was felt that this could cause problems for operators who may be put in the position of

having to decide whether a passenger was of sufficiently impaired mobility to justify traveling with their equipment.

1.3 If the philosophy adopted for lead acid batteries was applied to lithium batteries, there would potentially be no Wh limit for lithium batteries in mobility aids carried by passengers and crew. Research on the internet revealed a lithium battery powered wheel chair powered by two 192 Wh batteries, thus each battery exceeds the current maximum (160 Wh) by 20%. This may be deemed appropriate for a person of reduced mobility reliant on their wheelchair, but it is queried whether the same could be said for an able bodied person who wishes to travel with their battery powered bicycle with a 370 Wh lithium battery. It is also an obvious anomaly when such a battery could be carried in baggage without the marking, labeling, documentation or packaging requirements which would apply if it was to be transported as cargo.

1.4 A possible way forward would be to not use the term “mobility aid” in the context of lithium battery powered devices but instead refer to the type of device which the Technical Instructions should provide for. For example, reference could be made to wheelchairs or *similar* mobility aids for the use by passengers whose mobility is restricted by either a disability or impairment, their health or age, or a temporary mobility problem such as a broken leg. A requirement for the battery to have been tested in accordance with the UN Manual of Tests and Criteria could also be stated. If this proposal is agreeable the panel may wish to consider the addition of a similar qualification to the spillable/non-spillable batteries.

APPENDIX

PROPOSED AMENDMENT TO THE TECHNICAL INSTRUCTIONS

Part 8

PROVISIONS CONCERNING
PASSENGERS AND CREW

Chapter 1

PROVISIONS FOR DANGEROUS GOODS
CARRIED BY PASSENGERS OR CREW

Parts of this Chapter are affected by State Variations CH 1, US 15; see Table A-1

1.1 DANGEROUS GOODS CARRIED BY PASSENGERS OR CREW

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1.1.2 Notwithstanding any additional restrictions which may be implemented by States in the interests of aviation security, except for the incident reporting provisions of 7.4.4, the provisions of these Instructions do not apply to the following when carried by passengers or crew members or in baggage that has been separated from its owner during transit (e.g. lost baggage or improperly routed baggage):

Medical necessities

...

g) with the approval of the operator(s), lithium-ion battery powered wheelchairs or other similar mobility aids for use by passengers whose mobility is restricted by either a disability or impairment, their health or age, or a temporary mobility problem (e.g. broken leg), subject to the following conditions:

1) the batteries must be of a type proven to meet the requirements of each test in the UN Manual of Tests and Criteria, Part III, section 38.3;

2) battery terminals must be protected from short circuits (e.g. by being enclosed within a battery container) and securely attached to the mobility aid;

3) the operator(s) must ensure that such mobility aids are carried in a manner so as to prevent unintentional activation and that they are protected from being damaged by the movement of baggage, mail, stores or other cargo;

4) the pilot-in-command must be informed of the location of the mobility aid; and

5) spare batteries are subject to the requirements of 1.1.2 q).

It is recommended that passengers make advance arrangements with each operator.

gh) one small medical or clinical thermometer which contains mercury, for personal use, when in its protective case;

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Note.— Text relating to advance arrangements would appear against spillable battery and lithium battery powered mobility aids but not non-spillable battery powered devices (8;1.1.2 e). It is suggested the same text is also added to 8;1.1.2 e).

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