



DANGEROUS GOODS PANEL (DGP)

TWENTY-SIXTH MEETING

Montréal, 16 to 27 October 2017

Agenda Item 6: Resolution, where possible, of the non-recurrent work items identified by the Air Navigation Commission or the panel:

6.3: Mitigating risks posed by the carriage of lithium batteries by air (*Job card DGP.003.01*)

APPROVAL FOR DAMAGED AND DEFECTIVE LITHIUM BATTERIES

(Presented by PRBA – The Rechargeable Battery Association)

SUMMARY

This information paper is intended to update the Dangerous Goods Panel (DGP) on the problems the battery and electronics industries have encountered when shipping damaged or defective lithium batteries. It also contains a recommended path forward to resolve this problem that would allow very small quantities of these batteries to be shipped by cargo aircraft under an approval authorization.

1. INTRODUCTION

1.1 The shipping of damaged and defective lithium batteries remains a significant logistical challenge for numerous industries that utilize lithium batteries in their products. Damaged and defective lithium batteries are prohibited as cargo by air unless approved under the exemption process in the Technical Instructions. This is a nearly impossible task because it requires approval from countries of origin, overflight, and destination. At the same time, cargo vessel operators will not accept damaged or defective lithium batteries for sea transport unless the shipper places the package in a single cargo transport unit with no other dangerous goods or non-dangerous goods. That is simply not a practical approach to transport small packages of lithium batteries or equipment containing lithium batteries.

1.2 The packaging industry has made significant advancements to produce materials capable of containing thermal events involving lithium batteries to meet the anticipated SAE G-27 lithium battery packaging standard as well as the new Packing Instruction 911 in the *UN Model Regulations* for damaged and defective lithium batteries. These types of packages were not readily available just two years ago.

1.3 Operators that have long-established business relationships with battery and product manufacturers have shown a willingness to consider accepting damaged or defective lithium batteries provided shippers are able to show packaging is able to contain a thermal event involving the battery and specific loading conditions are followed. We believe a competent authority approval process similar to what currently is authorized for lithium batteries under Special Provision A88 (for prototype lithium batteries) and Special Provision A99 (for lithium batteries exceeding 35 kg) can provide an appropriate path forward and an acceptable level of safety for transporting damaged or defective lithium batteries. (We would recommend that approval from the operator and country of origin be required.) In addition, a new packing instruction that contains requirements similar to those listed in DGP/26-WP/44 and limiting consignments to one lithium battery per package would provide an additional level of safety.

1.4 We would welcome the opportunity to work with the DGP to draft and submit proposed amendments to the Technical Instructions that would provide for the safe transport of damaged or defective lithium batteries by air.

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