PORTABLE OXYGEN EQUIPMENT PRESSURE RELIEF

1. Applicability.

This Airworthiness Notice is applicable to all portable oxygen equipment carried in Malaysian registered aeroplanes certificated in the Transport Category (Passenger) exceeding 5700 kg MTWA and to all aeroplanes manufactured after 1 January 1991 exceeding 5700 kg MTWA, in all certification Categories.

2. Introduction

2.1 In a recent cabin fire-related accident, there were at least two instances of portable oxygen equipment exploding and forming hazardous projectiles within the cabin as a result of direct involvement in the fire. The DCA is concerned about any possible risk to the aeroplane occupants or rescue personnel from such hazards.

2.2 The explosive failure of an oxygen cylinder in a fire may be caused by high internal pressure generated by the heating of the oxygen, combined with a weakening of the cylinder material. The incorporation of an overtemperature/overpressure relief device should reduce the probability of such a dangerous explosion.

2.3 Although protection against rupture is required on the fixed and portable oxygen equipment in all newly designed aeroplanes in accordance with FAR 25.1453 or JAR 25.1453 and associated ACJ 25.1453, it was not a requirement in the 1950's and 1960's when many of the currently used portable oxygen equipment were first approved.

2.4 The purpose of this Notice is to publish a requirement for the provision of an overtemperature/overpressure relief device on portable oxygen equipment.

3. Compliance

With effect from 1 January 1991, all portable oxygen equipment carried in aeroplanes defined in paragraph 1 above, shall comply with the requirement of this Notice.

4. Requirement

Portable oxygen equipment shall be equipped with an overtemperature/overpressure relief device in accordance with the requirements of FAR 25.1453 (a) or JAR 25.1453 (b)(1).

5. Additional Information

5.1 Compliance with this requirement would normally be achieved by the provision of a dedicated overtemperature/overpressure relief device. However, such a device may not be necessary if it can be demonstrated by appropriate fire test evidence that the failure of a part of the equipment (e.g. contents gauge) performs a similar function and satisfies the requirement of this Notice.

5.2 Interpretative material for compliance with this requirement is reflected in ACJ 25.1453 of JAR 25.

DIRECTOR GENERAL
DEPARTMENT OF CIVIL AVIATION
MALAYSIA.