MINIMUM SPACE FOR SEATED PASSENGERS

1. Applicability

This Airworthiness Notice is applicable to all Malaysian registered aeroplanes over 5700 Kg MTWA, certificated in the Transport Category (Passenger) and configured to carry 20 or more passengers.

2. Introduction

2.1 The DCA is required to approve the cabin interior layout of each aircraft on the Malaysian register. As part of that approval each seat type shall be approved as required by FAR 25.785, JAR 25.785 or BCAR Section D, Chapter D4-4 paragraph 2.1.2. The approval procedure for such controlled items is defined in DCA Airworthiness Notice 78 Issue 1, Modification Procedure.

2.2 At the initial evaluation of a seat, an assessment of the limiting conditions of its use is made. Included in these limitations is a minimum seat pitch at which approval for installation on an aeroplane has been granted. This minimum pitch is defined taking into account head, trunk and leg strike areas of the seat in front, the ability to occupy the seat and, if necessary, quickly egress the seat and enter the aisle in an emergency.

2.3 The DCA is reassessing the use of seats at a pitch less than has generally been approved in the past, particularly with respect to the more modern, high technology seat designs so that the various general criteria above are being satisfactorily achieved. Of particular concern is the effect that such lower seat pitches can have on the seat occupancy and the ease of egress from these seats.

2.4 To formalize minimum acceptable seating standards the normal design extremes used for certification purposes for all occupied zones, namely the anthropometrics data for the 5th percentile female to the 95th percentile male, have been taken into account. In this regard the critical dimension for the seated occupant is the buttock-knee length. Additionally, affecting the ease with which the occupant can stand up and move from the seat to the main cabin aisle, is the minimum distance and the vertically projected distance between the seats and any seat or fixed structure immediately adjacent to the occupant.

2.5 Use of these three dimensions as the criteria for the determination of the acceptability of any seating configuration is considered to provide a realistic minimum standard which can be uniformly adopted whether the seating being considered is placed adjacent to seats of the same or different types, or other typical aeroplane interior structures. These Requirements are not intended to supersede or replace existing occupant protection criteria prescribed in FAR 25.785, JAR 25.785 or BCAR D4-4.

3. Compliance

3.1 With effect from the date of issue of this Notice, all aeroplanes defined in paragraph 1 above and which are being subject to the provision of a new (not previously DCA approved) or amended seating configuration, shall comply with the requirements of this Notice.

3.2 With effect from 1 October 1992 all aeroplanes define in paragraph 1 above shall comply with the requirements of this Notice.

4. Requirements

4.1 The minimum distance between the back support cushion of a seat and the back of the seat or other fixed structure in front, shall be 26 inches. (Figure 1, Dimension A).

4.2 The minimum distance between a seat and the seat or other fixed structure in front, shall be 7 inches. (Figure 1, Dimension B).
4.3 The minimum vertically projected distance between seat rows or between a seat and any fixed structure forward of the seat, shall be 3 inches. (Figure 1, Dimension C).
5. Additional Information

5.1 The measurements required for the demonstration compliance with the requirement given in paragraph 4.1 above are as follows:

(a) From a datum point in the center of the seat back at a height of 3 inches above the mean uncompressed seat squab height to the seat or other fixed structure in front made in both vertical and horizontal arcs up to a limiting height of 25 inches above the carpeted floor level, over the full seat place width ‘X’ (See Figure 1).

(b) From any point on the seat back within the center one half ‘Y’ of the seat place width at a height of 3 inches above the mean uncompressed seat squab height to the seat or other fixed structure within the central 12 inch region in front made in vertical and horizontal arcs up to a limiting height of 25 inches above the carpeted floor level.

5.2 The full width of the forward edges of the seat squab cushion and the seat arm rests shall be used as the datum point for the measurement of the minimum distance required by paragraph 4.2 above. From these points the measurement of the distance shall be made in both horizontal and vertical unlimited arcs.

5.3 The vertically projected distance required by paragraph 4.3 above shall be measured between the forward edge of the seat squab cushion and the most forward extremity of the armrests and the most aft of the seat or fixed structure in front.

5.4 Where a magazine rack is provided for the normal stowage of the cabin safety leaflet, sick bag and in-flight reading material provided by the operator, such normally provided materials shall be in place during the measurements. Similarly any fold down or other type of meal table attached to either seat or fixed structure should be in its normal stowed (take-off and landing) position for all measurements.

5.5 All measurements shall be made with the seats in the upright (take-off and landing) position, and the armrests shall be down.

5.6 No alleviation to these requirements will be granted on the basis of deformable soft furnishings.

5.7 All modifications to seats, their installation or any modification to adjacent fixed structures, necessary to achieve compliance with the requirements of this Notice shall be the subject of DCA Airworthiness Notice 78 Issue 1, Modification Procedure.

6. Cancellations

This Notice cancels Airworthiness Notice No. 61 Issue 1, dated 1 July 1991, which should be destroyed.