MAXIMUM TOTAL WEIGHT AUTHORISED FOR AGRICULTURAL OPERATIONS AND OTHER AERIAL APPLICATIONS

1. DCA policy on certification of aeroplanes which are intended to be used for agricultural purposes has been to certificate these aeroplanes at the Maximum Total Weight Authorised (the Normal MTWA) at which compliance has been established with the national airworthiness requirements of the country of origin.

2. Certain countries, notably Australia, Canada, New Zealand, UK and USA permit agricultural aeroplanes to be operated at weights in excess of the Normal MWTA, the extent of excess being determined by the minimum value of manoeuvring load factor at which it is considered that airworthiness structural requirements can be met when account is taken of the typical pattern of loading appropriate to agricultural operations.

3. The DCA, as a result of considerable investigation by other regulatory authorities, is now satisfied that a capability for meeting all airworthiness structural requirements at a minimum positive manoeuvring load factor equal to 3.0, coupled with operational limitations appropriate to operating at weights exceeding the Normal MTWA, is acceptable for agricultural operations and will not result in a significant increase in the risk of structural failure. The DCA will require evidence to substantiate the continued validity of any fatigue life limitations (or to assess the need to specify a fatigue life) for the particular aeroplane type.

4. Applications for an increase in MTWA for agricultural operations may be made to the DCA for approval as a modification.

4.1 The MTWA for agricultural operations shall not exceed whichever is the least of (a) to (d) and shall be subject to the conditions of paragraph 4.2.

(a) The weight at which compliance with specific airworthiness structural requirements can be established at a limit positive manoeuvring load factor equal to 3.0.

NOTE: In the absence of evidence from the aeroplane constructor substantiating a greater weight, this weight will be limited to 120% of the Normal MTWA (or 130% of the Normal MTWA for aeroplanes originally certificated as utility category or semi-aerobatic aeroplanes).

(b) The weight at which a minimum gradient of climb of 4.5% in the take off configuration can be achieved at the altitude and temperature at the take off surface.

(c) The maximum weight recommended by the aeroplane constructor for agricultural operations.

(d) The weight at which compliance can be established to the satisfaction of the DCA with those flight handling requirements applicable at initial certification in the country of origin.

4.2 The conditions and further limitations associated with the MTWA for agricultural operations are as follows:

(a) Any increase in maximum landing weight shall be substantiated by the aeroplane constructor.

(b) Operation at weights in excess of the Normal MTWA shall be restricted to those flights in the course of which aerial application is to be carried out. The Normal MTWA shall not be exceeded on flights made for other purposes including ferrying or positioning the aeroplane.

(c) Provision shall be made for rapid jettisoning of the hopper contents and shall be placarded.

(d) Information on the effect of the increase of weight on the fatigue life of the aeroplane, in the form of a fatigue analysis, shall be provided by the aeroplane constructor. Failing this the applicant shall provide evidence of the operating hours achieved by high-time aeroplanes of the same type, together with the associated operating weights, from which the DCA will assess the need for the setting of a fatigue life.

(e) The use of wing flaps shall be restricted to take off and landing, unless en-route use at the increased
weight us substantiated by aeroplane constructor.

(f) The never exceed speed, VNE, at the increased weight shall be equal to the design manoeuvring speed, VA, established for the Normal MTWA, and shall be placarded.

(g) The flying qualities shall be established, to the satisfaction of the DCA, to be adequate for the role when the aeroplane is operated in accordance with these limitations.

(h) If the overload condition requires particular care to remain within the allowable centre-of-gravity limits, or if ballasting is required, then appropriate loading instructions and placards shall be provided.

(i) Appropriate amendments shall be made to the approved maintenance schedule to take account of any additional inspections and life limitations recommended by the aeroplane constructor or required by the DCA appropriate to agricultural overload.

(j) Where the aeroplane is convened from an agricultural overload role to a passenger-carrying role, such inspections, in addition to those prescribed in the approved maintenance schedule, as shall be agreed by the DCA shall be carried out before the aeroplanes is operated for the carriage of passengers.

(k) All prescribed aeroplane and engine limitations, other than those specifically varied in accordance with (a) to (h), shall remain in force.

(l) Appropriate amendments to the manual(s) associated with the Certificate of Airworthiness (e.g. Flight Manual) shall be promulgated.

5. Applications may also be made for an increase in MWTA for non-agricultural aerial application operations. Approval may be given subject to the foregoing conditions and limitations, provided that the risk to third parties is no greater than in a typical agriculture case.

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