### SCHEDULE 4

Articles 12(5) and 14(2)

# AIRCRAFT EQUIPMENT

- (a) (a) Every aircraft of a description specified in the first column of the Table set forth in paragraph 4 of this Schedule and which is registered in the United Kingdom shall be provided, when flying in the circumstances specified in the second column of the said Table, with adequate equipment, and for the purpose of this paragraph the expression "adequate equipment" shall mean, subject to sub-paragraph (b), the scales of equipment respectively indicated in that Table.
- (b) If the aircraft is flying in a combination of such circumstances, the scales of equipment shall not on that account be required to be duplicated.

**2** The equipment carried in an aircraft as being necessary for the airworthiness of the aircraft shall be taken into account in determining whether this Schedule is complied with in respect of that aircraft.

**3** The following items of equipment shall not be required to be of a type approved by the Authority:

- (a) The equipment referred to in Scale A (ii).
- (b) First aid equipment and handbook, referred to in Scale A.
- (c) Time-pieces, referred to in Scale F.
- (d) Torches, referred to in Scales G, H, K and Z.
- (e) Whistles, referred to in Scale H.
- (f) Sea anchors, referred to in Scales J and K.
- (g) Rocket signals, referred to in Scale J.
- (h) Equipment for mooring, anchoring or manoeuvring aircraft on the water, referred to in Scale J.
- (i) Paddles, referred to in Scale K.
- (j) Food and water, referred to in Scales K, U and V.
- (k) First aid equipment, referred to in Scales K, U and V.
- Stoves, cooking utensils, snow shovels, ice saws, sleeping bags and Arctic suits, referred to in Scale V.
- (m) Megaphones, referred to in Scale Y.

# 4.

### Table

| Description of Aircraft          | Circumstances of Flight                   | Scale of Equipment                      |
|----------------------------------|---|---|
|                                  |   | Required                                |
| 1) Gliders                       | (a) flying for purpose                    | s A (ii)                                |
|                                  | other than public transpor                | t                                       |
| * For the purpose of this Table, | flying time shall be calculated on the as | sumption that the aircraft is flying in |

still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

\* For the purposes of this Table, flying time shall be calculated on the assumption that the helicopter or gyroplane is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

| Description of Aircraft | Circumstances of Flight  | Scale of Equipment<br>Required |
|-------------------------|--|--------------------------------|
|                         | or aerial work; and when flying by night   | 1                              |
|                         | (b) flying for the purpose<br>of public transport or aerial<br>work; and   | A, B (i) and (ii), D and F(i)  |
|                         | (i) (i) when flying<br>by night  | C and G                        |
|                         | (ii) (ii) when<br>carrying out<br>aerobatic<br>manoeuvres  | B (iii)                        |
| 2) Aeroplanes           | (a) flying for purposes other than public transport; and   | A (i) and (ii) and B (i)       |
|                         | (i) (i) when flying<br>by night  | C and D                        |
|                         | (ii) (ii) when<br>flying under<br>Instrument Flight<br>Rules   |                                |
|                         | (aa) outside controlled<br>airspace notified for<br>the purposes of this<br>sub-paragraph                            | D                              |
|                         | (bb) within controlled<br>airspace notified for<br>the purposes of this<br>sub-paragraph                             | E with E (iv) duplicated and F |
|                         | (iii) (iii) when<br>carrying out<br>aerobatic<br>manoeuvres  | B (iii)                        |
|                         | (b) flying for the purpose of public transport; and  | A, B (i) and (ii), D and F (i) |
|                         | (i) (i) when flying<br>under Instrument<br>Flight Rules<br>except flights<br>outside controlled<br>airspace notified | E with E (iv) duplicated and F |

still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

<sup>\* \*</sup>For the purposes of this Table, flying time shall be calculated on the assumption that the helicopter or gyroplane is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

| Description of Aircraft | Circumstances of Flight   | Scale of Equipment<br>Required            |
|-------------------------|---|---|
|                         | for the purposes<br>of this sub-<br>paragraph by<br>aeroplanes having<br>a maximum total<br>weight authorised<br>not exceeding<br>1150 kg   | 4   |
|                         | <ul> <li>(ii) (ii) when<br/>flying by night;<br/>and in the<br/>case of aeroplanes<br/>of which the<br/>maximum total<br/>weight authorised<br/>exceeds 1150 kg</li> </ul>  | C and G E with E (iv)<br>duplicated and F |
|                         | (iii) (iii) when<br>flying over water<br>beyond gliding<br>distance from land   | Н   |
|                         | <ul> <li>(iv) (iv) on all flights on which in the event of any emergency occurring during the take-off or during the landing at the intended destination or any likely alternate destination it is reasonably possible that the aeroplane would be forced to land onto water</li> </ul> | Η   |
|                         | (v) (v) when<br>flying over water:  |   |
|                         | (aa) in the case of an aeroplane:   |   |
|                         | (aaa) classified in its certificate of  |   |

still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

<sup>\* \*</sup>For the purposes of this Table, flying time shall be calculated on the assumption that the helicopter or gyroplane is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

| Description of Aircraft | Circumstances of Flight  | Scale of Equipment<br>Required |
|-------------------------|--|--------------------------------|
|                         | airworthiness<br>as being of<br>performance group<br>A, C or X; or   |                                |
|                         | A, C or X; or<br>(bbb) having no<br>performance group<br>classification in<br>its certificate of<br>airworthiness and<br>of such a weight<br>and performance<br>that with any one<br>of its power units<br>inoperative and<br>the remaining<br>power unit or units<br>operating within<br>the maximum<br>continuous<br>power conditions<br>specified in the<br>certificate of<br>airworthiness,<br>performance<br>schedule or<br>flight manual<br>relating to the<br>aeroplane issued<br>or rendered valid<br>by the Authority<br>it is capable of a<br>gradient of climb<br>of at least 1 in<br>200 at an altitude<br>of 5000 ft in the<br>international<br>Standard<br>Atmosphere<br>specified in or<br>ascertainable<br>by reference to |                                |
|                         | the certificate of<br>airworthiness in<br>force in respect of<br>that aircraft;  |                                |

<sup>\*</sup> For the purpose of this Table, flying time shall be calculated on the assumption that the aircraft is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

<sup>\* \*</sup>For the purposes of this Table, flying time shall be calculated on the assumption that the helicopter or gyroplane is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

| Description of Aircraft | Circumstances of Flight  | Scale of Equipment<br>Required |
|-------------------------|--|--------------------------------|
|                         | when either more than<br>400 nautical miles or<br>more than 90 minutes<br>flying time <sup>*</sup> from the<br>nearest aerodrome at<br>which an emergency<br>landing can be made | H and K                        |
|                         | (bb) in the case of all other<br>aeroplanes, when<br>more than 30 minutes<br>flying time <sup>*</sup> from such<br>an aerodrome  | H and K                        |
|                         | (vi) (vi) on<br>all flights which<br>involve<br>manoeuvres on<br>water   | H, J and K                     |
|                         | (vii) (vii) when<br>flying at a height<br>of 10,000 ft or<br>more above mean<br>sea level:   |                                |
|                         | (aa) having a certificate<br>of airworthiness first<br>issued (whether in the<br>United Kingdom or<br>elsewhere) before 1st<br>January 1989                                      | L1 or L2                       |
|                         | (bb) having a certificate<br>of airworthiness first<br>issued (whether in the<br>United Kingdom or<br>elsewhere) on or after<br>1st January 1989                                 | L2                             |
|                         | (viii) (viii) on<br>flights when the<br>weather reports or<br>forecasts<br>available at the<br>aerodrome at<br>the time of<br>departure indicate                                 | Μ                              |

<sup>\*</sup> For the purpose of this Table, flying time shall be calculated on the assumption that the aircraft is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

<sup>\* \*</sup>For the purposes of this Table, flying time shall be calculated on the assumption that the helicopter or gyroplane is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

| Description of Aircraft | Circums | tances of Flight  | Scale of Equipment<br>Required |
|-------------------------|---------|---|--------------------------------|
|                         |         | that conditions<br>favouring ice<br>formation are<br>likely to be met   | -                              |
|                         | (ix)    | (ix) when<br>carrying out<br>aerobatic<br>manoeuvres  | B (iii)                        |
|                         | (x)     | (x) on all<br>flights on which<br>the aircraft carries<br>a flight crew of<br>more than one<br>person   | Ν                              |
|                         | (xi)    | (xi) on all<br>flights for the<br>purpose of the<br>public transport of<br>passengers   | Q and Y(i), (ii) and (iii)     |
|                         | (xii)   | (xii) on<br>all flights by<br>a pressurised<br>aircraft   | R                              |
|                         | (xiii)  | (xiii) when<br>flying over<br>substantially<br>uninhabited land<br>areas where, in<br>the event of<br>an emergency<br>landing, tropical<br>conditions are<br>likely to be met | U                              |
|                         | (xiv)   | (xiv) when<br>flying over<br>substantially<br>uninhabited land<br>or other areas<br>where, in the<br>event of any<br>emergency<br>landing, polar                              | V                              |

\* For the purpose of this Table, flying time shall be calculated on the assumption that the aircraft is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

\* \*For the purposes of this Table, flying time shall be calculated on the assumption that the helicopter or gyroplane is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

Description of Aircraft Circumstances of Flight Scale of Equipment Required conditions are likely to be met (xv)(xv)when W flying at an altitude of more than 49,000 ft when flying for the purpose O 3) Turbine-jet of public transport aeroplanes having а maximum total weight authorised exceeding 5700 kg or pressurised aircraft having a maximum total weight authorised exceeding 11,400 kg 4) Turbine-engined aeroplanes having а maximum total weight authorised exceeding 5700 and piston-engined kg aeroplanes having а maximum total weight authorised exceeding 27,000 kg except for such aeroplanes falling within paragraphs (5) or (6): (a) which are operated by when flying on any flight Р an air transport undertaking under a certificate of airworthiness in the Transport Category (Passenger) or the Transport Category (Cargo); or (b) in respect of when flying on any flight Р which application has been made and not withdrawn or refused for such a certificate, and which fly under the "A Conditions" or under a certificate of airworthiness in the Special Category \* For the purpose of this Table, flying time shall be calculated on the assumption that the aircraft is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

<sup>\*</sup> For the purposes of this Table, flying time shall be calculated on the assumption that the helicopter or gyroplane is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

Description of Aircraft

Circumstances of Flight

Scale of Equipment Required

5) Aeroplanes in respect of which there is in force a certificate of airworthiness in the Transport Category (Passenger) or Transport (Cargo) Category and aeroplanes in respect of which application has been made, and not withdrawn or refused, for such a certificate of airworthiness and which fly under the "A Conditions" or in respect of which there is in force a certificate of airworthiness in the Special Category except for such aeroplanes falling within paragraph (6):

(a) which conform to when flying on any flight S(i) a type first issued with a type certificate (whether in the United Kingdom or elsewhere) on or after 1st April 1971 and which have a maximum total weight authorised exceeding 5700 kg but not exceeding 11,400 kg; or which conform to when flying on any flight (b) S(ii) a type first issued with a type certificate (whether in the United Kingdom or elsewhere) on or after 1st April 1971 and which have a maximum total weight authorised exceeding 11,400 kg but not exceeding 27,000 kg; or which conform to when flying on any flight S(iii) (c) a type first issued with a type certificate (whether in the United Kingdom

or elsewhere) on or after

<sup>\*</sup> For the purpose of this Table, flying time shall be calculated on the assumption that the aircraft is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

<sup>\* \*</sup>For the purposes of this Table, flying time shall be calculated on the assumption that the helicopter or gyroplane is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

Description of Aircraft Circumstances of Flight Scale of Equipment Required 1st April 1971 and which have a maximum total weight authorised exceeding 27,400 kg but not exceeding 230,000 kg; or (d) which conform to when flying on any flight S(iii) a type first issued with a type certificate in the United Kingdom on or after 1st January 1970 and which have a maximum total weight authorised exceeding 230,000 kg; 6) Aeroplanes in respect of which there is in force a certificate of airworthiness in the Transport Category (Passenger) or Transport (Cargo) Category and aeroplanes in respect of which application has been made, and not withdrawn or refused, for such a certificate of airworthiness and which fly under "A Conditions" or in respect of which there is in force a certificate of airworthiness in the Special Category: which when flying on any flight (a) for S(iv) an individual certificate of airworthiness was first issued (whether in the United Kingdom or elsewhere) on or after 1st June 1990 and which have a maximum total weight authorised not exceeding 5700 kg, are powered by two or more turbine engines and are certified to carry more than nine passengers; or \* For the purpose of this Table, flying time shall be calculated on the assumption that the aircraft is flying in

<sup>\*</sup> For the purpose of this Table, flying time shall be calculated on the assumption that the aircraft is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

<sup>\*</sup> For the purposes of this Table, flying time shall be calculated on the assumption that the helicopter or gyroplane is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

| Description of Aircraft   | Circumstances of Flight   | Scale of Equipment<br>Required   |
|---|---|--|
| (b) for which<br>an individual certificate<br>of airworthiness was<br>first issued (whether in<br>the United Kingdom or<br>elsewhere) on or after 1st<br>June 1990 and which have<br>a maximum total weight<br>authorised exceeding 5700<br>kg but not exceeding 27,000<br>kg; or   | when flying on any flight   | S(v)   |
| (c) for which<br>an individual certificate<br>of airworthiness was<br>first issued (whether in<br>the United Kingdom or<br>elsewhere) on or after<br>1st June 1990 and which<br>have a maximum total<br>weight authorised exceeding<br>27,000 kg.   | when flying on any flight   | S(vi)  |
| 7) Aeroplanes in respect<br>of which there is in<br>force a certificate of<br>airworthiness in the Aerial<br>Work or Private Category<br>and for which an individual<br>certificate of airworthiness<br>was first issued (whether<br>in the United Kingdom<br>or elsewhere) on or after<br>1st June 1990 and which<br>have a maximum total<br>weight authorised exceeding<br>27,000 kg. | when flying on any flight   | S(vi)  |
| 8) Aeroplanes:  |   |  |
| (a) which conform<br>to a type first issued<br>with a type certificate<br>(whether in the United<br>Kingdom or elsewhere) on<br>or after 1st April 1971 and<br>having a maximum total   | when flying on any flight   | Τ  |
| <ul> <li>For the purpose of this Table, fly<br/>still air at the speed specified in<br/>regulations governing flights ov</li> </ul>   | ying time shall be calculated on the ass<br>the relevant certificate of airworthines<br>er water. | sumption that the aircraft is flying in s as the speed for compliance with |

<sup>\* \*</sup>For the purposes of this Table, flying time shall be calculated on the assumption that the helicopter or gyroplane is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

| Description of Aircraft   | Circumstances of Flight  | Scale of Equipment<br>Reguired  |
|---|--|---|
| weight authorised exceeding<br>27,000 kg and in respect of<br>which there is in force a<br>certificate of airworthiness<br>in the Transport Category<br>(Passenger) or the Transport<br>Category (Cargo); or  |  |   |
| (b) which comform to<br>a type first issued with<br>a type certificate in the<br>United Kingdom on or<br>after 1st January 1970 and<br>which have a maximum total<br>weight authorised exceeding<br>230,000 kg and in respect of<br>which there is in force such a<br>certificate of airworthiness;<br>or   | when flying on any flight  | Τ   |
| (c) having a maximum<br>total weight authorised<br>exceeding 27,000 kg which<br>conform to a type first<br>issued with a type certificate<br>on or after 1 April 1971<br>(or 1 January 1970 in<br>the case of an aeroplane<br>having a maximum total<br>weight authorised exceeding<br>230,000 kg) in respect<br>of which an application<br>has been made, and not<br>withdrawn or refused for<br>such a certificate of<br>airworthiness and which fly<br>under the "A Conditions"<br>or in respect of which there<br>is in force a certificate of<br>airworthiness in the Special<br>Category. | when flying on any flight  | Τ   |
| 9) Aeroplanes which<br>have a maximum total<br>weight authorised exceeding<br>15,000 kg or which  | on all flights for the<br>purpose of public transport  | Х   |
| <ul> <li>in accordance with the</li> <li>* For the purpose of this Table, fly still air at the speed specified in regulations governing flights and</li> </ul>  | ving time shall be calculated on the assu<br>the relevant certificate of airworthiness<br>er water                     | umption that the aircraft is flying in s as the speed for compliance with |
| <ul> <li>* *For the purposes of this Table,<br/>gyroplane is flying in still air at<br/>for compliance with regulations</li> </ul>  | flying time shall be calculated on the a<br>the speed specified in the relevant certi<br>governing flights over water. | ssumption that the helicopter or ificate of airworthiness as the speed    |

| Description of Aircraft  | Circumstances of Flight  | Scale of Equipment<br>Required   |
|--|--|--|
| certificate of airworthiness<br>in force in respect thereof<br>may carry more than 30<br>passengers.   |  |  |
| 10) Aeroplanes:  |  |  |
| (a) which are a turbo-jet<br>and which have a maximum<br>total weight authorised<br>exceeding 22,700 kg; or  | when flying by night for<br>the purpose of the public<br>transport of passengers | Z(i) and (ii)  |
| (b) having a maximum<br>total weight authorised<br>exceeding 5700 kg and<br>which conform to a type<br>for which a certificate<br>or airworthiness was first<br>applied for (whether in<br>the United Kingdom or<br>elsewhere) after 30th April<br>1972 but not including<br>any aeroplane which in the<br>opinion of the Authority<br>is identical in all matters<br>affecting the provision<br>of emergency evacuation<br>facilities to an aeroplane<br>for which a certificate<br>of airworthiness was first<br>applied for before that date;<br>or | when flying by night for<br>the purpose of the public<br>transport of passengers | Z(i) and (ii)  |
| (c) which in accordance<br>with the certificate of<br>airworthiness in force in<br>respect thereof may carry<br>more than 19 passengers; or  | when flying by night for<br>the purpose of the public<br>transport of passengers | Z(i)   |
| <ul> <li>(d) having a maximum total weight authorised exceeding 5700 kg and which conform to a type for which a certificate of airworthiness was first applied for (whether in the United Kingdom or elsewhere) after 30th April</li> <li>* For the purpose of this Table, fly still air at the speed specified in wrighting.</li> </ul>   | when flying for the purpose<br>of the public transport of<br>passengers          | Z(iii)<br>umption that the aircraft is flying in<br>s as the speed for compliance with |
| * *For the purposes of this Table  | flying time shall be calculated on the a   | ssumption that the beliconter or   |

<sup>\* \*</sup>For the purposes of this Table, flying time shall be calculated on the assumption that the helicopter or gyroplane is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

Description of Aircraft Circumstances of Flight Scale of Equipment Required 1972 but not including any aeroplane which in the opinion of the Authority is identical in all matters affecting the provision of emergency evacuation facilities to an aeroplane for which a certificate of airworthiness was first applied for before that date; or (e) which are a turbo-jet when flying for the purpose Z(iii) and which have a maximum of the public transport of total weight authorised passengers exceeding 22,700 kg; or first issued with when flying for the purpose Z(iii) (f) a type certificate (whether of the public transport of in the United Kingdom or passengers elsewhere) on or after 1st January 1958 and which in accordance with the certificate of airworthiness in force in respect thereof may carry more than 19 passengers. 11) Aeroplanes: (a) powered by one or when flying on any flight AA more turbine jets powered by one when flying on any flight (b) AA or more turbine propeller engines and having a total maximum weight authorised exceeding 5700 kg and first issued with a certificate of airworthiness in the United Kingdom on or after 1st April 1989. 12) Aeroplanes in on all flights for the Y (iv) respect of which there purpose of the public is in force a certificate transport of passengers. of airworthiness in For the purpose of this Table, flying time shall be calculated on the assumption that the aircraft is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water. \*For the purposes of this Table, flying time shall be calculated on the assumption that the helicopter or gyroplane is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed

for compliance with regulations governing flights over water.

| Description of Aircraft               | Circumstances of Flight   | Scale of Equipment<br>Required   |
|---------------------------------------|---|--|
| the Transport Category (Passenger);   |   |  |
| <b>13)</b> Helicopters and Gyroplanes | (a) flying for purposes other than public transport; and  | A (i) and (ii) and B (i)   |
|                                       | <ul> <li>(i) (i) when flying</li> <li>by day under</li> <li>Visual Flight</li> <li>Rules with visual</li> <li>ground reference</li> </ul> | D  |
|                                       | <ul> <li>(ii) (ii) when<br/>flying by day<br/>under Instrument<br/>Flight Rules or<br/>without visual<br/>ground reference</li> </ul>     |  |
|                                       | (aa) outside controlled<br>airspace notified for<br>the purposes of this<br>sub-paragraph   | E with E (ii) duplicated   |
|                                       | (bb) within controlled<br>airspace notified for<br>the purposes of this<br>sub-paragraph  | E with E (ii) and E (iv)<br>duplicated and F with F (iv)<br>for all weights                            |
|                                       | (iii) (iii) when<br>flying at night   |  |
|                                       | (aa) with visual ground reference   | C, E, G (iii) and G (v)  |
|                                       | (bb) without visual ground reference  |  |
|                                       | (aaa) outside controlled<br>airspace notified<br>for the purposes of<br>this sub-paragraph  | C, E with E (ii) duplicated,<br>G (iii) and G (v)  |
|                                       | (bbb) within controlled<br>airspace notified<br>for the purposes of<br>this sub-paragraph   | C, E with both E (ii) and<br>E (iv) duplicated, F with F<br>(iv) for all weights, G (iii)<br>and G (v) |
|                                       |   |  |

\* For the purpose of this Table, flying time shall be calculated on the assumption that the aircraft is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

\* \*For the purposes of this Table, flying time shall be calculated on the assumption that the helicopter or gyroplane is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

| Description of Aircraft | Circumstances of Flight   | Scale of Equipment<br>Required   |
|-------------------------|---|--|
|                         | (b) flying for the purpose of public transport; and   | A, B (i) and (ii), F (i) and F<br>(iv) for all weights   |
|                         | <ul> <li>(i) (i) when flying</li> <li>by day under</li> <li>Visual Flight</li> <li>Rules with visual</li> <li>ground reference</li> </ul>   | D  |
|                         | <ul> <li>(ii) (ii) when<br/>flying by day<br/>under Instrument<br/>Flight Rules or<br/>without visual<br/>ground reference</li> </ul>   | E with both E (ii) and E (iv)<br>duplicated, F (ii), F (iii) and<br>F (v)  |
|                         | (iii) (iii) when<br>flying by night<br>with visual<br>ground reference  |  |
|                         | <ul> <li>(aa) in the case of         <ul> <li>a helicopter or</li> <li>gyroplane having</li> <li>a maximum total</li> <li>weight authorised not</li> <li>exceeding 2000 kg</li> </ul> </li> </ul> | C, E and G   |
|                         | (bb) in the case of<br>a helicopter or<br>gyroplane having<br>a maximum total<br>weight authorised<br>exceeding 2000 kg   | C, E with E (ii) duplicated<br>and either E (iv) duplicated<br>or a radio altimeter, F (ii), F<br>(iii), F (v) and G |
|                         | (iv) (iv) when<br>flying by night<br>without visual<br>ground reference   | C, E with both E (ii) and<br>E (iv] duplicated, F (ii), F<br>(iii), F (v) and G                                      |
|                         | (v) (v) when<br>flying over water   |  |
|                         | (aa) in the case of<br>a helicopter or<br>gyroplane classifed<br>in its certificate of<br>airworthiness as<br>being of performance  | E and H  |

\* For the purpose of this Table, flying time shall be calculated on the assumption that the aircraft is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

\* \*For the purposes of this Table, flying time shall be calculated on the assumption that the helicopter or gyroplane is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

| Description of Aircraft | Circumstances of Flight   | Scale of Equipment<br>Required |
|-------------------------|---|--------------------------------|
|                         | group A2 or B when<br>beyond autorotation<br>gliding distance from<br>land suitable for an<br>emergency landing   |                                |
|                         | (bb) on all flights on<br>which in the event<br>of any emergency<br>occurring during the<br>take-off or during<br>the landing at the<br>intended destination<br>or any likely alternate<br>destination it is<br>reasonably possible<br>that the helicopter or<br>gyroplane would be<br>forced to land onto<br>water | Η                              |
|                         | <ul> <li>(cc) in the case of         <ul> <li>a helicopter or</li> <li>gyroplane classified</li> <li>in its certificate of</li> <li>airworthiness as being</li> <li>of performance group</li> <li>A2 when beyond 10</li> <li>minutes flying time**</li> <li>from land</li> </ul> </li> </ul>                        | E, H, K and T                  |
|                         | (dd) for more than a total<br>of 3 minutes in any<br>flight   | EE                             |
|                         | (ee) in the case of a<br>helicopter or a<br>gyroplane classified<br>in its certificate of<br>airworthiness as being<br>of performance group<br>A2 which is intended<br>to fly beyond 10<br>minutes flying time<br>from land or which<br>actually flies beyond<br>10 minutes flying                                  | Ι                              |

\* For the purpose of this Table, flying time shall be calculated on the assumption that the aircraft is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

<sup>\* \*</sup>For the purposes of this Table, flying time shall be calculated on the assumption that the helicopter or gyroplane is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

| Description of Aircraft | Circumstances of Flight   | Scale of Equipment |
|-------------------------|---|--------------------|
|                         |   | Required           |
|                         | time from land, on a<br>flight which is either<br>in support of or in<br>connection with the<br>offshore exploitation,<br>or exploration of<br>mineral resources<br>(including gas) or<br>is on a flight under<br>and in accordance<br>with the terms of a<br>police air operator's<br>certificate, when<br>in either case the<br>weather reports or<br>forecasts available to<br>the commander of the<br>aircraft indicate that<br>the sea temperature<br>will be less than plus<br>10°C during the flight | Required           |
|                         | 10°C during the flight<br>or when any part of   |                    |
|                         | the flight is at night  |                    |
|                         | (vi) (vi) on<br>all flights which<br>involve<br>manoeuvres on<br>water  | H, J and K         |
|                         | (vii) (vii) when<br>flying at a height<br>of 10,000 ft or<br>more above mean<br>sea level:  |                    |
|                         | (aa) having a certificate<br>of airworthiness first<br>issued (whether in the<br>United Kingdom or<br>elsewhere) before 1st<br>January 1989   | L1 or L2           |
|                         | (bb) having a certificate<br>of airworthiness first<br>issued (whether in the<br>United Kingdom or  | L2                 |

\* For the purpose of this Table, flying time shall be calculated on the assumption that the aircraft is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

\* \*For the purposes of this Table, flying time shall be calculated on the assumption that the helicopter or gyroplane is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

| Description of Aircraft | Circumst    | tances of Flight   | Scale of Equipment<br>Required |
|-------------------------|-------------|--|--------------------------------|
|                         | else<br>1st | where) on or after<br>January 1989   |                                |
|                         | (viii)      | (viii) on<br>flights when the<br>weather reports or<br>forecasts<br>available at the<br>aerodrome at<br>the time of<br>departure indicate<br>that conditions<br>favouring ice<br>formation are<br>likely to be met | М                              |
|                         | (ix)        | (ix) on all<br>flights on which<br>the aircraft carries<br>a flight crew of<br>more than one<br>person   | Ν                              |
|                         | (x)         | (x) on all<br>flights for the<br>purpose of the<br>public transport of<br>passengers   | Y(i), (ii) and (iii)           |
|                         | (xi)        | (xi) when<br>flying over<br>substantially<br>uninhabited land<br>areas where, in<br>the event of<br>an emergency<br>landing, tropical<br>conditions are<br>likely to be met  | U                              |
|                         | (xii)       | (xii) when<br>flying over<br>substantially<br>uninhabited land<br>or other areas<br>where, in the<br>event of an<br>emergency  | V                              |

<sup>\*</sup> For the purpose of this Table, flying time shall be calculated on the assumption that the aircraft is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

<sup>\* \*</sup>For the purposes of this Table, flying time shall be calculated on the assumption that the helicopter or gyroplane is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

| Description of Aircraft  | Circumstances of Flight  | Scale of Equipment<br>Required         |
|--|--|--|
|  | landing, polar<br>conditions are<br>likely to be met                             | ^                                      |
| <b>14)</b> Helicopters and Gyroplanes:   |  |  |
| (a) having a maximum<br>total weight authorised<br>exceeding 5700 kg and<br>which conform to a type<br>for which a certificate<br>of airworthiness was first<br>applied for (whether in<br>the United Kingdom or<br>elsewhere) after 30th April<br>1972 but not including<br>any helicopter or gyroplane<br>which in the opinion of<br>the Authority is identical<br>in all matters affecting<br>the provision of emergency<br>evacuation facilities to a<br>helicopter or gyroplane<br>for which a certificate<br>of airworthiness was first<br>applied for before that date;<br>or | when flying by night for<br>the purpose of the public<br>transport of passengers | Z (i) and (ii)                         |
| (b) which, in accordance<br>wih the the certificate of<br>airworthiness in force in<br>respect thereof may carry<br>more than 19 passengers; or  | when flying by night for<br>the purpose of the public<br>transport of passengers | Z (i)                                  |
| (c) which have a certificate of airworthiness issued in the Transport Category (Passenger or Cargo) and helicopters and gyroplanes in respect of which application has been made and not withdrawn or refused for such a certificate of airworthiness and which fly under the "A Conditions" or which have a certificate of #  | ving time shall be calculated on the assi  | umption that the aircraft is flying in |

still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

<sup>\* \*</sup>For the purposes of this Table, flying time shall be calculated on the assumption that the helicopter or gyroplane is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

| Description of Aircraft  | Circumstances of Flight   | Scale of Equipment<br>Required |
|--|---------------------------|--------------------------------|
| airworthiness in the Special Category and  |                           |                                |
| <ul> <li>(i) (i) which have<br/>a maximum total<br/>weight authorised<br/>exceeding 2730<br/>kg but not<br/>exceeding 7000<br/>kg or which in<br/>accordance with<br/>the certificate of<br/>airworthiness in<br/>force in respect<br/>thereof may carry<br/>more than nine<br/>passengers, or<br/>both</li> </ul> | when flying on any flight | SS(i) or (iii)                 |
| <ul> <li>(ii) (ii) which have</li> <li>a maximum total</li> <li>weight authorised</li> <li>exceeding 7000</li> <li>kg</li> </ul>   | when flying on any flight | SS(ii) or (iii)                |

still air at the speed specified in the relevant certificate of airworthin regulations governing flights over water.

\* For the purposes of this Table, flying time shall be calculated on the assumption that the helicopter or gyroplane is flying in still air at the speed specified in the relevant certificate of airworthiness as the speed for compliance with regulations governing flights over water.

5. The scales of equipment indicated in the foregoing Table shall be as follows:

# Scale A

(i) Spare fuses for all electrical circuits the fuses of which can be replaced in flight, consisting of 10 per cent of the number of each rating or three of each rating, whichever is the greater.

(ii) Maps, charts, codes and other documents and navigational equipment necessary, in addition to any other equipment required under this Order, for the intended flight of the aircraft including any diversion which may reasonably be expected.

(iii) First aid equipment of good quality, sufficient in quantity, having regard to the number of persons on board the aircraft, and including the following:

Roller bandages, triangular bandages, adhesive plaster, absorbent gauze, cotton wool (or wound dressings in place of the absorbent gauze and cotton wool), burn dressings, safety pins;

Haemostatic bandages or tourniquets, scissors;

Antispetic, analgesic and stimulant drugs;

Splints, in the case of aeroplanes the maximum total weight authorised of which exceeds 5,700 kg;

A handbook on first aid.

(iv) in the case of a flying machine used for the public transport of passengers in which, while the flying machine is at rest on the ground, the sill of any external door intended for the disembarkation of passengers, whether normally or in an emergency:

- (a) is more than 1.82 metres from the ground when the undercarriage of the machine is in the normal position for taxiing; or
- (b) would be more than 1.82 metres from the ground if the undercarriage or any part thereof should collapse, break or fail to function;

apparatus readily available for use at each such door consisting of a device or devices which will enable passengers to reach the ground safely in an emergency while the flying machine is on the ground, and can be readily fixed in position for use.

## Scale AA

(i) Subject to sub-paragraph (ii), an altitude alerting system capable of alerting the pilot upon approaching a preselected altitude in either ascent or descent, by a sequence of visual and aural signals in sufficient time to establish level flight at that preselected altitude and when deviating above or below that preselected altitude, by a visual and an aural signal.

(ii) If the system becomes unserviceable, the aircraft may fly or continue to fly, until it first lands at a place which it is reasonably practicable for the system to be repaired or replaced.

### Scale B

- (a) (i) (a) If the maximum total weight authorised of the aircraft is 2730 kg or less, for every pilot's seat and for any seat situated alongside a pilot's seat, either a safety belt with one diagonal shoulder strap or a safety harness, or with the permission of the Authority, a safety belt without a diagonal shoulder strap which permission may be granted if the Authority is satisfied that it is not reasonably practicable to fit a safety belt with one diagonal shoulder strap or a safety harness.
- (b) If the maximum total weight authorised of the aircraft exceeds 2730 kg, either a safety harness for every pilot's seat and for any seat situated alongside a pilot's seat, or with the permission of the Authority, a safety belt with one diagonal shoulder strap which permission may be granted if the Authority is satisfied that it is not reasonably practicable to fit a safety harness.
- (c) For every seat in use (not being a seat referred to in sub-paragraph (a), (b), (e) and (f)) a safety belt with or without one diagonal shoulder strap or a safety harness.
- (d) In addition and to be attached to or secured by the equipment required in sub-paragraph (c) above, a child restraint device for every child under the age of two years.
- (e) On all flights for the public transport of passengers by aircraft, for each seat for use by cabin attendants who are required to be carried under this Order, a safety harness.
- (f) On all flights in aeroplanes in respect of which a certificate of airworthiness was first issued (whether in the United Kingdom or elsewhere) on or after 1st February 1989 the maximum total weight authorised of which does not exceed 5700kg which in accordance with the certificate of airworthiness in force thereof is not capable of seating more than 9 passengers (otherwise than in seats referred to under sub-paragraphs (a) and (b)), a safety belt with one diagonal shoulder strap or a safety harness for each seat intended for use by a passenger.

(ii) If the commander cannot, from his own seat, see all the passengers' seats in the aircraft, a means of indicating to the passengers that seat belts should be fastened.

(a) (iii) (a) Subject to sub-paragraph (b), a safety harness for every seat in use.

(b) In the case of an aircraft carrying out aerobatic manoeuvres consisting only of erect spinning, the Authority may permit a safety belt with one diagonal shoulder strap to be fitted if it is satisfied that such restraint is sufficient for the carrying out of erect spinning in that aircraft and that it is not reasonably practicable to fit a safety harness in that aircraft.

## Scale C

(i) Equipment for displaying the lights required by the Rules of the Air;

(ii) Electrical equipment, supplied from the main source of supply in the aircraft, to provide sufficient illumination to enable the flight crew properly to carry out their duties during flight;

(iii) Unless the aircraft is equipped with radio, devices for making visual signal specified in the Rules of the Air as indicating a request for permission to land.

### Scale D

- (a) (i) (a) In the case of a helicopter or gyroplane, a slip indicator;
- (b) In the case of any other flying machine either:

(aa) a turn indicator and a slip indicator; or

(bb) a gyroscopic bank and pitch indicator and a gyroscopic direction indicator.

(ii) A sensitive pressure altimeter adjustable for any sea level barometric pressure which the weather report or forecasts available to the commander of the aircraft indicate is likely to be encountered during the intended flight.

## Scale E

- (a) (i) (a) In the case of a helicopter or gyroplane, a slip indicator.
- (b) In the case of any other flying machine, a slip indicator and either a turn indicator or, at the option of the operator, an additional gyroscopic bank and pitch indicator.
- (ii) a gyroscopic bank and pitch indicator;
- (iii) a gyroscopic direction indicator;

(iv) a sensitive pressure altimeter adjustable for any sea level barometric pressure which the weather report or forecasts available to the commander of the aircraft indicate is likely to be encountered during the intended flight.

## Scale EE

(i) Subject to sub-paragraph (ii), a radio altimeter with an audio voice warning operating below a preset height and a visual warning capable of operating at a height selectable by the pilot.

(ii) A helicopter flying under and in accordance with the terms of a police air operator's certificate may instead be equipped with a radio altimeter with an audio warning and a visual warning each capable of operating at a height selectable by the pilot.

# Scale F

- (i) A timepiece indicating the time in hours, minutes and seconds;
- (ii) A means of indicating whether the power supply to the gyroscopic instrument is adequate;
- (iii) A rate of climb and descent indicator;

(iv) If the maximum total weight authorised of the aircraft exceeds 5700 kg a means of indicating outside air temperature;

(v) If the maximum total weight authorised of the aircraft exceeds 5700 kg two air speed indicators.

# Scale G

(i) In the case of an aircraft other than a helicopter or gyroplane landing lights consisting of 2 single filament lamps, or one dual filament lamp with separately energised filaments;

(ii) An electrical lighting system to provide illumination in every passenger compartment;

- (a) (iii) (a) One electric torch for each member of the crew of the aircraft; or
- (b) (aa) one electric torch for each member of the flight crew of the aircraft; and
  - (bb) at least one electric torch affixed adjacent to each floor level exit intended for the disembarkation of passengers whether normally or in an emergency, provided that such torches shall:
    - (aaa) be readily accessible for use by the crew of the aircraft at all times; and
    - (bbb) number in total not less than the minimum number of cabin attendants required to be carried with a full passenger complement;

(iv) In the case of an aircraft other than a helicopter or gyroplane of which the maximum total weight authorised exceeds 5700 kg, means of observing the existence and build up of ice on the aircraft;

- (a) (v) (a) In the case of a helicopter or gyroplane in respect of which there is in force a certificate of airworthiness designating the helicopter or gyroplane as being of performance group A, either:
  - (aa) 2 landing light both of which are adjustable so as to illuminate the ground in front of and below the helicopter or gyroplane and one of which is adjustable so as to illuminate the ground on either side of the helicopter or gyroplane; or
  - (bb) one landing light or, if the maximum total weight authorised of the helicopter or gyroplane exceeds 5700 kg, one dual filament landing light with separately energised filaments, or 2 single filament lights, each of which is adjustable so as to illuminate the ground in front of and below the helicopter or gyroplane, and 2 parachute flares;
- (b) In the case of a helicopter or gyroplane in respect of which there is in force a certificate of airworthiness designating the helicopter or gyroplane as being of performance group B, either:
  - (aa) one landing light and 2 parachute flares; or
  - (bb) if the maximum total weight authorised of the helicopter or gyroplane exceeds 5700 kg, either one dual filament landing light with separately energised filaments or 2 single filament landing lights, and 2 parachute flares.

### Scale H

(i) Subject to sub-paragraph (ii), for each person on board, a lifejacket equipped with a whistle and waterproof torch.

(ii) Lifejackets constructed and carried solely for use by children under three years of age need not be equipped with a whistle.

### Scale I

A survival suit for each member of the crew.

# Scale J

(i) Additional flotation equipment, capable of supporting one-fifth of the number of persons on board, and provided in a place of stowage accessible from outside the flying machine;

(ii) Parachute distress rocket signals capable of making, from the surface of the water, the pyrotechnical signal of distress specified in the Rules of the Air and complying with Part III of Schedule 15 to the Merchant Shipping (Life-Saving Appliances) Regulations 1980(1);

(iii) A sea anchor and other equipment necessary to facilitate mooring, anchoring or manoeuvring the flying machine on water, appropriate to its size, weight and handling characteristics.

## Scale K

- (a) (i) (a) In the case of a flying machine, other than a helicopter or gyroplane carrying 20 or more persons, liferafts sufficient to accommodate all persons on board;
- (b) In the case of a helicopter or gyroplane carrying 20 or more persons, a minimum of 2 liferafts sufficient together to accommodate all persons on board.

Each liferaft shall contain the following equipment:

- (a) means for maintaining buoyancy;
- (b) a sea anchor;
- (c) life-lines, and means of attaching one liferaft to another;
- (d) paddles or other means of propulsion;
- (e) means of protecting the occupants from the elements;
- (f) a waterproof torch;
- (g) marine type pyrotechnical distress signals;
- (h) means of making sea water drinkable, unless the full quantity of fresh water is carried as specified in sub-paragraph (i);
- (i) for each 4 or proportion of 4 persons the liferaft is designated to carry;

100 grammes of glucose toffee tablets;

 $\frac{1}{2}$  litre of fresh water in durable containers or in any case in which it is not reasonably practicable to carry the quantity of water above specified, as large a quantity of fresh water as is reasonably practicable in the circumstances. In no case however shall the quantity of water carried be less than is sufficient, when added to the amount of fresh water capable of being produced by means of the equipment specified in subparagraph (h) to provide  $\frac{1}{2}$  litre of water for each 4 or proportion of 4 persons the liferaft is designed to carry.

(j) first aid equipment;

Items (f) to (j) inclusive shall be contained in a pack.

(ii) The number of survival beacon radio apparatus carried when the aircraft is carrying the number of liferafts specified in column 1 of the following Table shall be not less than the number specified in, or calculated in accordance with, column 2.

<sup>(1)</sup> Cm 2073 and 2183.

| Column 1  | Column 2                                     |
|---|--|
| Not more than 8 liferafts                           | 2 survival beacon radio apparatus            |
| For every additional 4 or proportion of 4 liferafts | 1 additional survival beacon radio apparatus |

(iii) In the case of a helicopter or gyroplane, an emergency beacon which is automatically deployed and activated in the event of a crash.

## Scale L1

**Part I.**—(i) in every flying machine which is provided with means for maintaining a pressure greater than 700 millibars throughout the flight in the flight crew compartment and in the compartments in which the passengers are carried:

- (a) a supply of oxygen sufficient, in the event of failure to maintain such pressure, occurring in the circumstances specified in columns 1 and 2 of the Table set out in Part II, for continuous use, during the periods specified in column 3 of the said Table, by the persons for whom oxygen is to be provided in accordance with column 4 of that Table; and
- (b) in addition, in every case where the flying machines flies above flight level 350, a supply of oxygen in a portable container sufficient for the simultaneous first aid treatment of 2 passengers;

together with suitable and sufficient apparatus to enable such persons to use the oxygen.

- (ii) In any other flying machine:
  - (a) a supply of oxygen sufficient for continuous use by all the crew other than flight crew, and if passengers are carried, by 10% of the number of passengers, for the any period exceeding 30 minutes during which the flying machine flies above flight level 100 but not above flight level 130 and the flight crew shall be supplied with oxygen sufficient for continuous use for any period during which the flying machine flies above flight level 100; and
  - (b) a supply of oxygen sufficient for continuous use by all persons on board for the whole time during which the flying machine flies above flight level 130;

together with suitable and sufficient apparatus to enable such persons to use the oxygen.

(iii) The quantity of oxygen required for the purpose of complying with paragraphs (i) and (ii) of this Part shall be computed in accordance with the information and instructions relating thereto specified in the operations manual relating to the aircraft pursuant to Item (vi) of Part A of Schedule 10 to this Order.

# Part II

| Column 1<br>Vertical displacement<br>of the flying machine<br>in relation to flight<br>levels | Column 2<br>Capability of flying<br>machine to descend<br>(where relevant) | Column 3<br>Period of supply of<br>oxygen   | Column 4<br>Persons for whom<br>oxygen is to be<br>provided  |
|---|--|---|--|
| Above flight level 100  |  | 30 minutes or the<br>period specified at A<br>hereunder whichever<br>is the greater | In addition to any<br>passengers for whom<br>oxygen is provided as<br>specified below, all the<br>crew |

| Column 1<br>Vertical displacement<br>of the flying machine<br>in relation to flight<br>levels | Column 2<br>Capability of flying<br>machine to descend<br>(where relevant)   | Column 3<br>Period of supply of<br>oxygen   | Column 4<br>Persons for whom<br>oxygen is to be<br>provided |
|---|--|---|---|
| Above flight level 100<br>but not above flight<br>level 300                                   | { Flying machine<br>is either flying at or<br>below flight level<br>150 or is capable<br>of descending<br>and continuing<br>to destination as<br>specified at X<br>hereunder | 30 minutes or the<br>period specified at A<br>hereunder whichever<br>is the greater   | 10% of number of passengers                                 |
|   | { Flying machine is<br>flying above flight<br>level 150 and is not so<br>capable   | { 10 minutes or the<br>period specified at B<br>hereunder whichever<br>is greater     | All passengers  |
|   |  | { and in addition   |   |
|   |  | { 30 minutes or the<br>period specified at C<br>hereunder whichever<br>is the greater | 10% of number of passengers                                 |
| Above flight level 300<br>but not above flight<br>level 350                                   | { Flying machine is<br>capable of descending<br>and continuing<br>to destination as<br>specified at Y<br>hereunder   | 30 minutes or the<br>period specified at A<br>hereunder whichever<br>is the greater   | 15% of number of passengers                                 |
|   | { Flying machine is<br>not so capable  | {10 minutes or the<br>period specified at B<br>hereunder whichever<br>is the greater  | All passengers  |
|   |  | { and in addition   |   |
|   |  | { 30 minutes or the<br>period specified at C<br>hereunder whichever<br>is the greater | 15% of number of passengers                                 |
| Above flight level 350  | _  | { 10 minutes or the<br>period specified at B<br>hereunder whichever<br>is the greater | All pasengers   |
|   |  | { and in addition   |   |
|   |  | { 30 minutes or the<br>period specified at C<br>hereunder whichever<br>is the greater | 15% of number of passengers                                 |

- A The whole period during which, after a failure to maintain a pressure greater than 700 millibars in the control compartment and in the compartments in which passengers are carried has occurred, the flying machine flies above flight level 100.
  - B The whole period during which, after a failure to maintain such pressure has occurred, the flying machine flies above flight level 150.
  - C The whole period during which, after a failure to maintain such pressure has occurred, the flying machine flies above flight level 100, but not above flight level 150.
  - X The flying machine is capable, at the time when a failure to maintain such pressure occurs, of descending in accordance with the emergency descent procedure specified in the relevant flight manual and without flying below the minimum altitudes for safe flight specified in the operations manual relating to the aircraft, to flight level 150 within 6 minutes, and of continuing at or below that flight level to its place of intended destination or any other place at which a safe landing can be made.
  - Y The flying machine is capable, at the time when a failure to maintain such pressure occurs, of descending in accordance with the emergency descent procedure specified in the relevant flight manual and without flying below the minimum altitudes for safe flight specified in the operations manual relating to the aircraft, to flight level 150 within 4 minutes, and of continuing at or below that flight level to its place of intended destination or any other place at which a safe landing can be made.

# Scale L2

a

A supply of oxygen and the associated equipment to meet the requirements set out in Parts I and II. The duration for the purposes of this Scale shall be:

(i) that calculated in accordance with the operations manual prior to the commencement of the flight, being the period or periods which it is reasonably anticipated that the aircraft will be flown in the circumstances of the intended flight at a height where the said requirements apply and in calculating the said duration account shall be taken of:

- (a) in the case of pressurised aircraft, the possibility of depressurisation when flying above flight level 100;
- (b) the possibility of failure of one or more of the aircraft engines;
- (c) restrictions due to required minimum safe altitude;
- (d) fuel requirement; and
- (e) the performance of the aircraft; or

(ii) the period or periods during which the aircraft is actually flown in the circumstances specified in the said Parts;

whichever is the greater.

Part I

## Unpressurised aircraft

- (i) When flying at or below flight level 100:
- (ii) Nil.
- (ii) When flying above flight level 100 but not exceeding flight level 120:

| Supply for                                 | Duration   |
|--|--|
| (a) Members of the flight crew             | Any period during which the aircraft flies above flight level 100  |
| (b) Cabin attendants and 10% of passengers | For any continuous period exceeding 30<br>minutes during which the aircraft flies above<br>flight level 100 but not exceeding flight level<br>120, the duration shall be the period by which<br>30 minutes is exceeded |

(iii) When flying above flight level 120:

| Supply for                              | Duration  |
|---|---|
| (a) Members of the flight crew          | Any period during which the aircraft flies above flight level 120 |
| (b) Cabin attendants and all passengers | Any period during which the aircraft flies above flight level 120 |

# Part II

# Pressurised aircraft

- (i) When flying at or below flight level 100:
- (ii) Nil.
- (ii) When flying above flight level 100 but not exceeding flight level 250:

| (a) Members of the flight crew             | 30 minutes or whenever the cabin pressure<br>altitude exceeds 10,000 ft, whichever is the<br>greater  |
|--|---|
| (b) Cabin attendants and 10% of passengers | <ul> <li>(aa) When the aircraft is capable of<br/>descending and continuing to its<br/>destination as specified at A()<br/>hereunder, 30 minutes or whenever the<br/>cabin pressure altitude exceeds 10,000<br/>ft, whichever is the greater</li> </ul> |
|  | (bb) When the aircraft is not so capable,<br>whenever the cabin pressure altitute<br>is greater than 10,000 ft, but does not<br>exceed 12,000 ft  |
| (c) Cabin attendants and passengers        | <ul> <li>(aa) When the aircraft is capable of<br/>descending and continuing to its<br/>destination as specified at A()<br/>hereunder, no requirement other than<br/>that at (ii)(b)(aa) of this part of this<br/>scale</li> </ul>                       |
|  | (bb) When the aircraft is not so capable<br>and the cabin pressure altitude exceeds<br>12,000 ft the duration shall be the<br>period when the cabin pressure altitude<br>exceeds 12,000 ft or 10 minutes,<br>whichever is the greater                   |

(iii) When flying above flight level 250:

| Supply for   | Duration   |
|--|--|
| (a) Members of the flight crew   | 2 hours or whenever the cabin pressure altitude exceeds 10,000 ft, whichever is the greater  |
| (b) Cabin attendants   | Whenever the cabin pressure altitude exceeds 10,000 ft, and a portable supply for 15 minutes   |
| (c) 10% of passengers  | Whenever the cabin pressure altitude exceeds 10,000 ft but does not exceed 12,000 ft   |
| (d) 30% of passengers  | Whenever the cabin pressure altitude exceeds 12,000 ft but does not exceed 15,000 ft   |
| (e) All passengers   | If the cabin pressure altitude exceeds 15,000 ft, the duration shall be the period when the cabin pressure altitude exceeds 15,000 ft or 10 minutes, whichever is the greater  |
| (f) 2% of passengers or 2 passengers,<br>whichever is the greater, being a supply<br>of first aid oxygen which must be<br>available for simultaneous first aid<br>treatement of 2% or 2 passengers<br>wherever they are seated in the aircraft | Whenever, after decompression, the cabin pressure altitude exceeds 8000 ft   |
| a A. The flying machine is capable, at the time when a accordance with the emergency descent procedure the minimum altitudes for safe flight specified in t within 5 minutes and of continuing at or below that                                | failure to maintain cabin pressurisation occurs, of descending in<br>specified in the relevant flight manual and without flying below<br>he operations manual relating to the aircraft, to flight level 120<br>tt flight level to its place of intended destination or any other |

### Scale M

place at which a safe landing can be made.

Equipment to prevent the impairment through ice formation of the functioning of the controls, means of propulsion, lifting surfaces, windows or equipment of the aircraft so as to endanger the safety of the aircraft.

### Scale N

An intercommunications system for use by all members of the flight crew and including microphones, not of a hand-held type, for use by the pilot and flight engineer (if any).

## Scale O

(i) Subject to sub-paragraph (ii), a radar set capable of giving warning to the pilot in command of the aircraft and to the co-pilot of the presence of cumulo-nimbus clouds and other potentially hazardous weather conditions.

(ii) A flight may commence if the set is unserviceable or continue if the set becomes unserviceable thereafter:

- (a) so as to give the warning only to one pilot, so long as the aircraft is flying only to the place at which it first becomes reasonably practicable for the set to be repaired; or
- (b) when the weather report or forecasts available to the commander of the aircraft indicate that cumulo-nimbus clouds or other potentially hazardous weather conditions, which can be detected by the set when in working order, are unlikely to be encountered on the intended route or any planned diversion therefrom or the commander has satisfied himself that any such weather conditions will be encountered in daylight and can be seen and

avoided, and the aircraft is in either case operated throughout the flight in accordance with any relevant instructions given in the operations manual.

# Scale P

(i) Subject to sub-paragraphs (ii) and (v) a flight data recorder which is capable of recording, by reference to a time-scale, the following data:

- (a) indicated airspeed;
- (b) indicated altitude;
- (c) vertical acceleration;
- (d) magnetic heading;
- (e) pitch attitude, if the equipment provided in the aeroplane is of such a nature as to enable this item to be recorded;
- (f) engine power, if the equipment provided in the aeroplane is of such a nature as to enable this item to be recorded;
- (g) flap position;
- (h) roll attitude, if the equipment provided in the aeroplane is of such a nature as to enable this item to be recorded.

(ii) Subject to sub-paragraph (v), any aeroplane having a maximum total weight authorised not exceeding 11,400 kg may be provided with:

- (a) a flight data recorder capable of recording the data described in sub-paragraph (i)(a) to (i)(h); or
- (b) a 4 channel cockpit voice recorder.

(ii) Subject to sub-paragraph (v), in addition, on all flights by turbine-powered aeroplanes having a maximum total weight authorised exceeding 11,400 kg a 4 channel cockpit voice recorder.

(iv) The flight data recorder and cockpit voice recorder referred to above shall be so constructed that the record would be likely to be preserved in the event of an accident to the aeroplane.

(v) An aeroplane shall not be required to carry the said equipment, if before take-off the equipment is found to be unserviceable and the aircraft flies in accordance with arrangements approved by the Authority.

#### Scale Q

If the maximum total weight authorised of the acroplane exceeds 5700 kg and it was first registered, whether in the United Kingdom or elsewhere, on or after 1st June 1965, a door between the flight crew compartment and any adjacent compartment to which passengers have access, which door shall be fitted with a lock or bolt capable of being worked from the flight crew compartment.

### Scale R

(a) (i) (a) In respect of aeroplanes having a maximum total weight authorised exceeding 5700 kg, equipment sufficient to protect the eyes, nose and mouth of all members of the flight crew required to be carried by virtue of article 19 of this Order for a period of not less than 15 minutes and, in addition, where the minimum flight crew required as aforesaid is more than one and a cabin attendant is not required to be carried by viture of article 19 of this Order, portable equipment sufficient to protect the eyes, nose and mouth of one member of the flight crew for a period of not less than 15 minutes.

- (b) In respect of aeroplanes having a maximum total weight authorised not exceeding 5700 kg, either the equipment specified in paragraph (i)(a) or, in the case of such aeroplanes restricted by virtue of the operator's operations manual to flight at or below flight level 250 and capable of descending as specified at A hereunder such equipment sufficient to protect the eyes only.
- (a) (ii) (a) In respect of aeroplanes having a maximum total weight authorised exceeding 5700 kg, portable equipment to protect the eyes, nose and mouth of all cabin attendants required to be carried by virtue of article 20 of this Order for a period of not less than 15 minutes.
- (b) In respect of aeroplanes having a maximum total weight authorised not exceeding 5700 kg, subject to sub-paragraph (c), the equipment specified in paragraph (ii)(a).
- (c) Sub-paragraph (b) shall not apply to such aeroplanes restricted by virtue of the operator's operations manual to flight at or below flight level 250 and capable of descending as specified at A hereunder.

(A) The aeroplane is capable of descending in accordance with the emergency descent procedure specified in the relevant flight manual and without flying below the minimum altitudes for safe flight specified in the operations manual relating to the aeroplane, to flight level 100 within 4 minutes and of continuing at or below that flight level to its place of intended destination or any other place at which a safe landing can be made.

#### Scale S

Subject to sub-paragraph (vii), a flight recording system comprising:

(i) either a 4 channel cockpit voice recorder or a flight data recorder capable of recording by reference to a time scale the data required to determine the following matters accurately in respect of the aeroplane: the flight path, attitude and the basic lift, thrust and drag forces acting upon it;

(ii) a 4 channel cockpit voice recorder and a flight data recorder capable of recording by reference to a time scale the data required to determine the following matters accurately in respect of the aeroplane: the information specified in paragraph (i) together with use of VHF transmitters;

(iii) a 4 channel cockpit voice recorder and a flight data recorder capable of recording by reference to a time scale the data required to determine the following matters accurately in respect of the aeroplane: the flight path, attitude, the basic lift, thrust and drag forces acting upon it, the selection of high lift devices (if any) and airbrakes (if any), the position of primary flying control and pitch trim surfaces, outside air temperature, instrument landing deviations, use of automatic flight control systems, use of VHF transmitters, radio altitude (if any), the level or availablity of essential AC electricity supply and cockpit warnings relating to engine fire and engine shut-down, cabin pressurisation, presence of smoke and hydraulic/pneumatic power supply;

(iv) either a cockpit voice recorder and a flight data recorder or a combined cockpit voice recorder/ flight data recorder cabable in either case of recording by reference to a time scale the data required to determine the following matters accurately in respect of the aeroplane: the flight path, speed, attitude, engine power, outside air temperature, configuration of lift and drag devices, use of VHF transmitters and use of automatic flight control systems;

(v) a cockpit voice recorder and a flight data recorder capable of recording by reference to a time scale the data required to determine the following matters accurately in respect of the aeroplane: the flight path, speed, attitude, engine power, outside air temperature, configuration of lift and drag devices, use of VHF transmitters and use of automatic flight control systems;

(vi) a cockpit voice recorder and a flight data recorder capable of recording by reference to a time scale the data required to determine the following matters accurately in respect of the aeroplane: the flight path, speed, attitude, engine power, outside air temperature, instrument landing system deviations, marker beacon passage, radio altitude, configuration of the landing gear and lift and

drag devices, position of primary flying contols, pitch trim position, use of automatic flight control systems, use of VHF transmitters, ground speed/drift angle or latitude/longitude if the navigational equipment provided in the aeroplane is of such a nature as to enable this information to be recorded with reasonable practicability, cockpit warnings relating to ground proximity and the master warning system;

(vii) an aircraft shall not be required to carry the said equipment, if before take-off the equipment is found to be unservicable and the aircraft flies in accordance with arrangements approved by the Authority.

The cockpit voice recorder or flight data recorder or combined cockpit voice recorder/flight data recorder, as the case may be, shall be so constructed that the record would be likely to be preserved in the event of an accident.

## Scale SS

Subject to sub-paragraph (iv), a 4 channel cockpit voice recorder capable of recording and retaining the data recorded during at least the last 30 minutes of its operation and a flight data recorder capable of recording and retaining the data recorded during at least the last 8 hours of its operation being the data required to determine by reference to a time scale the following matters accurately in respect of the helicopter or gyroplane:

- (a) flight path;
- (b) speed;
- (c) attitude;
- (d) engine power;
- (e) main rotor speed;
- (f) outside air temperature;
- (g) position of pilot's primary flight controls;
- (h) use of VHF transmitters;
- (j) use of automatic flight controls (if any);
- (k) use of stability augmentation system (if any);
- (1) cockpit warnings relating to the master warning system; and
- (m) selection of hydraulic system and cockpit warnings of failure of essential hydraulic systems.

(ii) Subject to sub-paragraph (iv), a 4 channel cockpit voice recorder capable of recording and retaining the data recorded during at least the last 30 minutes of its operation and a flight data recorder capable of recording and retaining the data recorded during at least the last 8 hours of its operation being the data required to determine by reference to a time scale the information specified in paragraph (i) together with the following matters accurately in respect of the helicopter or gyroplane:

- (n) landing gear configuration;
- (p) indicated sling load force if an indicator is provided in the helicopter or gyroplane of such a nature as to enable this information to be recorded with reasonable practicability;
- (q) radio altitude;
- (r) instrument landing system deviations;
- (s) marker beacon passage;

- (t) ground speed/drift angle or latitude/longitude if the navigational equipment provided in the helicopter or gyroplane is of such a nature as to enable this information to be recorded with reasonable practicability; and
- (u) main gear box oil temperature and pressure.
- (iii) Subject to sub-paragraph (iv):
  - (a) A combined cockpit voice recorder/flight data recorder which meets the following requirements:
    - (aa) in the case of a helicopter or gyroplane which is otherwise required to carry a flight data recorder specified at paragraph (i) the flight data recorder shall be capable of recording the data specified therein and retaining it for the duration therein specified;
    - (bb) in the case of a helicopter or gyroplane which is otherwise required to carry a flight data recorder specified at paragraph (ii), the flight data recorder shall be capable of recording the data specified therein and retaining it for the duration therein specified;
    - (cc) the cockpit voice recorder shall be capable of recording and retaining at least the last hour of cockpit voice recording information on not less than three separate channels.
  - (b) (aa) In any case when a combined cockpit voice recorder/flight data recorder specified at paragraph (iii)(a) is required to be carried by or under this Order, the flight data recorder shall be capable, subject to sub-paragraph (bb), of retaining as protected data the data recorded during at least the last 5 hours of its operation or the maximum duration of the flight, whichever is the greater. It shall also be capable of retaining additional data as unprotected data for a period which together with the period for which protected data is required to be retained amounts to a total of 8 hours.
    - (bb) The flight data recorder need not be capable of retaining the said additional data if additional data is retained which relates to the period immediately preceding the period to which the required protected data relates or for such other period or periods as the Authority may permit pursuant to article 45 of this Order and the additional data is retained in accordance with arrangements approved by the Authority.

(iv) A helicopter or gyroplane shall not be required to carry the said equipment if, before take-off, the equipment is found to be unserviceable and the aircraft flies in accordance with arrangements approved by the Authority.

With the exception of flight data which it is expressly stated above may be unprotected, the cockpit voice recorder, flight data recorder or combined cockpit voice recorder and flight data recorder, as the case may be, shall be so constructed and installed that the record (herein referred to as "protected data") would be likely to be preserved in the event of an accident and each cockpit voice recorder, flight data recorder or combined cockpit voice recorder/flight data recorder required to be carried on the helicopter or gyroplane shall have attached an automatically activated underwater sonar location device or an emergency locator radio transmitter.

# Scale T

An underwater sonar location device except in respect of those helicopters or gyroplanes which are required to carry equipment in accordance with Scale SS.

## Scale U

- (a) 1 survival beacon radio apparatus;
- (b) marine type pyrotechnical distress signals;
- (c) for each 4 or proportion of 4 persons on board, 100 grammes of glucose toffee tablets;
- (d) for each 4 or proportion of 4 persons on board,  $\frac{1}{2}$  litre of fresh water in durable containers;

### (e) first aid equipment.

### Scale V

- (a) 1 survival beacon radio apparatus;
- (b) marine type pyrotechnical distress signals;
- (c) for each 4 or proportion of 4 persons on board, 100 grammes of glucose toffee tablets;
- (d) for each 4 or proportion of 4 persons on board,  $\frac{1}{2}$  litre of fresh water in durable containers;
- (e) first aid equipment;
- (f) for every 75 or proportion of 75 persons on board, 1 stove suitable for use with aircraft fuel;
- (g) 1 cooking utensil, in which snow or ice can be melted;
- (h) 2 snow shovels;
- (i) 2 ice saws;
- (j) single or multiple sleeping-bags, sufficient for the use of one-third of all persons on board;
- (k) 1 Arctic suit for each member of the crew of the aircraft.

## Scale W

(i) Subject to sub-paragraph (ii), cosmic radiation detection equipment calibrated in millirems per hour and capable of indicating the action and alert levels of radiation dose rate.

(ii) An aircraft shall not be required to carry the said equipment if before take-off the equipment is found to be unserviceable and it is not reasonably practicable to repair or replace it at the aerodrome of departure and the radiation forecast available to the commander of the aircraft indicates that hazardous radiation conditions are unlikely to be encountered by the aircraft on its intended route or any planned diversion therefrom.

## Scale X

(i) Subject to paragraph (ii), equipment capable of giving warning to the pilot of the potentially hazardous proximity of ground or water.

(ii) If the equipment becomes unserviceable, the aircraft may fly or continue to fly until it first lands at a place at which it is reasonably practicable for the equipment to be repaired or replaced.

## Scale Y

(i) If the aircraft may in accordance with its certificate of airworthiness carry more than 19 and less than 100 passengers, one portable battery-powered megaphone capable of conveying instructions to all persons in the passenger compartment and readily available for use by a member of the crew.

(ii) If the aircraft may in accordance with its certificate of airworthiness carry more than 99 and less than 200 passengers, 2 portable battery-powered megaphones together capable of conveying instructions to all persons in the passenger compartment and each readily available for use by a member of the crew.

(iii) If the aircraft may in accordance with its certificate of airworthiness carry more than 199 passengers, 3 portable battery-powered megaphones together capable of conveying instructions to all persons in the passenger compartment and each readily available for use by a member of the crew.

(iv) If the aircraft may in accordance with its certificate of airworthiness carry more than 19 passengers:

- (a) a public address system; and
- (b) an interphone system of communication between members of the flight crew and the cabin attendants.

## Scale Z

(i) An emergency lighting system to provide illumination in the passenger compartment sufficient to facilitate the evacuation of the aircraft notwithstanding the failure of the lighting systems specified in paragraph (ii) of Scale G.

(ii) An emergency lighting system to provide illumination outside the aircraft sufficient to facilitate the evacuation of the aircraft.

- (a) (iii) (a) Subject to sub-paragraph (b), an emergency floor path lighting system in the passenger compartment sufficient to facilitate the evacuation of the aircraft notwithstanding the failure of the lighting systems specified in paragraph (ii) of Scale G.
- (b) If the equipment specified in sub-paragraph (a) becomes unserviceable the aircraft may fly or continue to fly in accordance with arrangements approved by the Authority.