Agenda Item 7: Other business

Destination alternate aerodrome filling exception

(Presented by IATA)

SUMMARY

This working paper presents the requirements specified on the ICAO Annex 6, Part I, which allows airlines to except fillig the destination alternate aerodrome, specified in Annex 2 and FPL format in the Doc 4444.

REFERENCE:

- ICAO Annex 6
- Doc. 4444

ICAO strategic Objectives:	*B - Air Navigation capacity and efficiency* *D - Economic development of air transport* *E - Environmental protection*

1. **Introduction**

1.1. The amendment 36 to Annex 6, Part I, "*alternate aerodrome selection and fuel planning provisions*", was part of a joint IATA and ICAO initiative to improve aeroplane fuel efficiency and reduce emissions. A realistic, modern approach was needed that would take into account operational experience, new technologies and advanced aeroplane capabilities while providing safe operations through the use of modern methods including operational data analysis and safety risk management (SRM). The task to draft the amendment was undertaken by the Operations Panel in 2008 and progressed through a series of meetings and correspondence among members.

1.2. The principal purpose of amendment 36 was to introduce globally harmonized planning criteria for the selection of alternate aerodromes and the pre-flight computation of total fuel supply.

1.3. Under the conditions mentioned on the amendment 36, the exception to avoid selecting a destination alternate aerodrome was a feasible option for the airlines while increasing the efficiency, reducing the CO2 emission and keeping a high level of safety for the operations.

2. Exception requirements

2.1. The ICAO Annex 6, Part I, under the title 4.3.4.3 "*Destination alternate aerodromes"*, paragraph 4.3.4.3.1, states that:

4.3.4.3 Destination alternate aerodromes

4.3.4.3.1 For a flight to be conducted in accordance with the instrument flight rules, at least one destination alternate aerodrome shall be selected and specified in the operational and ATS flight plans, unless:

a) the duration of the flight from the departure aerodrome, or from the point of in-flight re-planning to the destination aerodrome is such that, taking into account all meteorological conditions and operational information relevant to the flight, at the estimated time of use, a reasonable certainty exists that:

1) the approach and landing may be made under visual meteorological conditions; and
2) separate runways are usable at the estimated time of use of the destination aerodrome with at least one runway having an operational instrument approach procedure; or

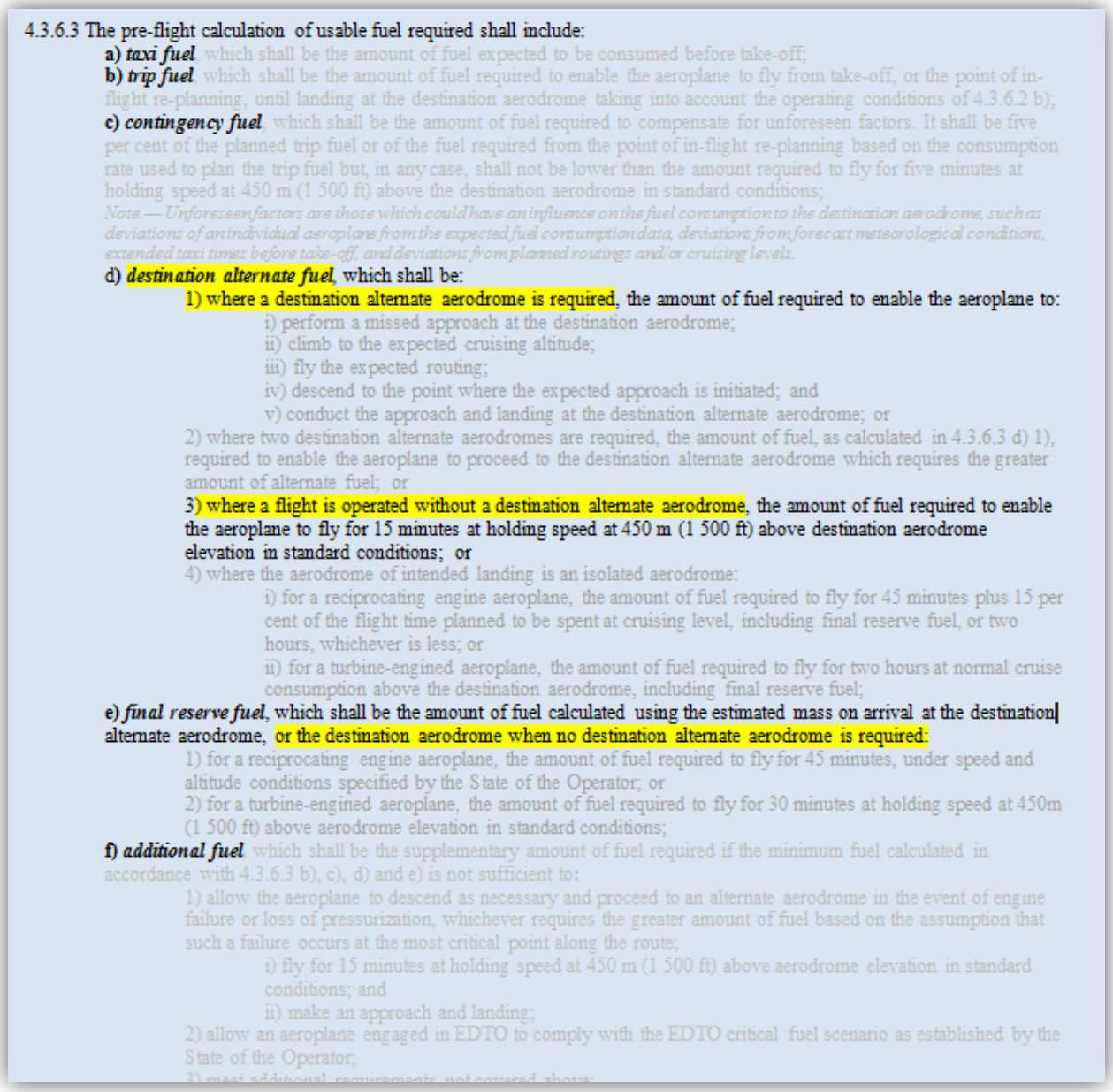
b) the aerodrome is isolated. Operations into isolated aerodromes do not require the selection of a destination alternate aerodrome(s) and shall be planned in accordance with 4.3.6.3 d) 4):

1) for each flight into an isolated aerodrome a point of no return shall be determined; and

2) a flight to be conducted to an isolated aerodrome shall not be continued past the point of no return unless a current assessment of meteorological conditions, traffic, and other operational conditions indicate that a safe landing can be made at the estimated time of use.

Note 1.— Separate runways are two or more runways at the same aerodrome configured such that if one runway is closed, operations to the other runway(s) can be conducted.

2.2. Under the same Chapter on the Paragraph 4.3.6.3, states that:



4.3.6.3 The pre-flight calculation of usable fuel required shall include:

a) ***taxi fuel***, which shall be the amount of fuel expected to be consumed before take-off;

b) ***trip fuel***, which shall be the amount of fuel required to enable the aeroplane to fly from take-off, or the point of in-flight re-planning, until landing at the destination aerodrome taking into account the operating conditions of 4.3.6.2 b);

c) ***contingency fuel***, which shall be the amount of fuel required to compensate for unforeseen factors. It shall be five per cent of the planned trip fuel or of the fuel required from the point of in-flight re-planning based on the consumption rate used to plan the trip fuel but, in any case, shall not be lower than the amount required to fly for five minutes at holding speed at 450 m (1 500 ft) above the destination aerodrome in standard conditions;

Note.— Unforeseen factors are those which could have an influence on the fuel consumption to the destination aerodrome, such as deviations of an individual aeroplane from the expected fuel consumption data, deviations from forecast meteorological conditions, extended taxi times before take-off, and deviations from planned routings and/or cruising levels.

d) ***destination alternate fuel***, which shall be:

1) where a destination alternate aerodrome is required, the amount of fuel required to enable the aeroplane to:

i) perform a missed approach at the destination aerodrome;

ii) climb to the expected cruising altitude;

iii) fly the expected routing;

iv) descend to the point where the expected approach is initiated; and

v) conduct the approach and landing at the destination alternate aerodrome; or

2) where two destination alternate aerodromes are required, the amount of fuel, as calculated in 4.3.6.3 d) 1), required to enable the aeroplane to proceed to the destination alternate aerodrome which requires the greater amount of alternate fuel; or

3) where a flight is operated without a destination alternate aerodrome, the amount of fuel required to enable the aeroplane to fly for 15 minutes at holding speed at 450 m (1 500 ft) above destination aerodrome elevation in standard conditions; or

4) where the aerodrome of intended landing is an isolated aerodrome:

i) for a reciprocating engine aeroplane, the amount of fuel required to fly for 45 minutes plus 15 per cent of the flight time planned to be spent at cruising level, including final reserve fuel, or two hours, whichever is less; or

ii) for a turbine-engined aeroplane, the amount of fuel required to fly for two hours at normal cruise consumption above the destination aerodrome, including final reserve fuel;

e) ***final reserve fuel***, which shall be the amount of fuel calculated using the estimated mass on arrival at the destination alternate aerodrome, or the destination aerodrome when no destination alternate aerodrome is required:

1) for a reciprocating engine aeroplane, the amount of fuel required to fly for 45 minutes, under speed and altitude conditions specified by the State of the Operator; or

2) for a turbine-engined aeroplane, the amount of fuel required to fly for 30 minutes at holding speed at 450m (1 500 ft) above aerodrome elevation in standard conditions;

f) ***additional fuel*** which shall be the supplementary amount of fuel required if the minimum fuel calculated in accordance with 4.3.6.3 b), c), d) and e) is not sufficient to:

1) allow the aeroplane to descend as necessary and proceed to an alternate aerodrome in the event of engine failure or loss of pressurization, whichever requires the greater amount of fuel based on the assumption that such a failure occurs at the most critical point along the route;

i) fly for 15 minutes at holding speed at 450 m (1 500 ft) above aerodrome elevation in standard conditions; and

ii) make an approach and landing;

2) allow an aeroplane engaged in EDTO to comply with the EDTO critical fuel scenario as established by the State of the Operator;

3) meet additional requirements not covered above;

3. **Suggested actions:**

3.1. The Meeting is invited to review the information provided to get a regional consensus on the interpretation of these paragraphs to unify the application criteria, used by the ANSPs under the ICAO Annex 6 statements.

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