

## Departure to destination/destination to alternate

In this day of ILS approach aids at most large city airports, it is only rarely that the pilots do not visually acquire the runway at the ILS approach minima, even in poor weather. A missed approach and diversion to an alternate can NOT be ruled out though, and we must plan for this eventuality whenever the destination airport is forecast to be continuously below the ILS alternate minima (acceptable airport).

For the purpose of the ATPL exam you will assume one approach attempt only is conducted.

As the chances of having to actually proceed to an alternate are rare, the fixed reserve is reduced to reflect this reduced probability. The fixed reserve if an alternate is required drops to 2, 250 kg (not 3, 300 kg).

Points to note:

- The only weather holding that needs to be carried, is that which applies to the alternate to bring it up to a SUITABLE airport.
- Variable reserve is 10% of the total fuel from departure to destination, and destination to alternate.
- Only one lot of initial taxi, and final taxi fuel need be carried (ie: 150 kg + 100 kg).
- Fixed reserve is 2, 250 kg (ie: 30 minutes @ 4, 500 kg per hour).
- Only one lot of approach manoeuvre fuel is required, and this is included in the destination to alternate

### Example No.4:

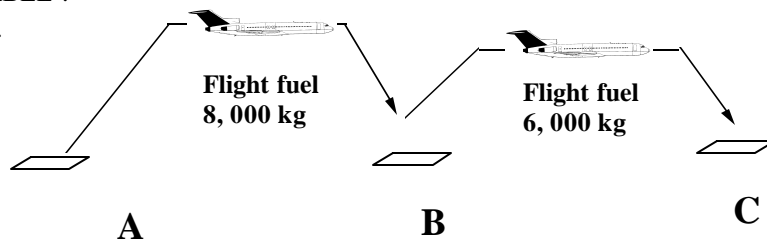
Departure airport “A” is ‘SUITABLE’.

Destination airport “B” is ‘ACCEPTABLE’.

Alternate airport “C” is ‘SUITABLE’.

Flight fuel A to B is 8, 000 kg.

Flight fuel B to C is 6, 000 kg.



What is the minimum fuel which must be on board for normal operations ?

### Fuel Summary

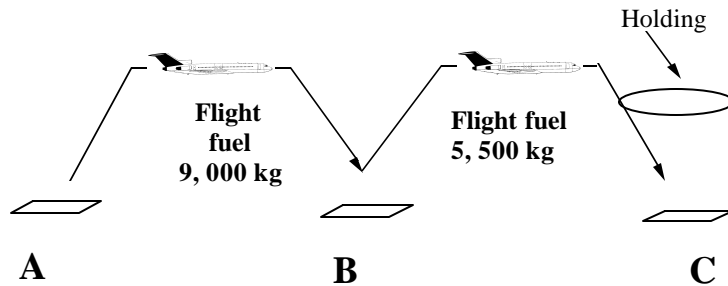
Item	Kg
Flight Fuel	14, 000
V/R 10%	1, 400
Fixed Reserve	2, 250
Wx Hold	Nil
Traffic Hold	Nil
WIP Hold	Nil
Final Taxi	100
Initial Taxi	150
<b>Min FOB @ ramp</b>	<b>17, 900</b>

**Example 5.**

Departure airport “**A**” ACCEPTABLE, becoming SUITABLE if fuel for INTER deteriorations is carried.  
 Destination airport “**B**” is “ACCEPTABLE” (ie: below alternate minima for the period of possible use).  
 Alternate airport “**C**” is ACCEPTABLE, becoming SUITABLE if TEMPO Wx holding is carried.  
 Additionally, airport “**C**” has a 15 minute traffic holding requirement.

Flight fuel **A** to **B** is 9, 000 kg.  
 Flight fuel **B** to **C** is 5, 500 kg.

What is the minimum amount of fuel that is required to be on board at the departure airport ramp to cover normal operations ?



**Fuel Summary**

Item	Kg
Flight Fuel	14, 500
V/R 10%	1, 450
Fixed Reserve	2, 250
Wx Hold at alternate	4, 000
Traffic Hold at alternate	1, 000
WIP Hold	Nil
Final Taxi	100
Initial Taxi	150
<b>Min FOB @ ramp</b>	<b>23, 450 kg</b>

**Points to note:**

- We do NOT have to carry weather holding on the departure airport.
- We do have to carry whatever holding applies to the alternate airport including weather, WIP, and traffic. In this case weather and traffic only.
- The fixed reserve is reduced from 3, 300 kg to 2, 250 kg when an alternate is required.



**Example 6.**

Departure airport “**A**” ACCEPTABLE, becoming SUITABLE if fuel for TEMPO deteriorations is carried.

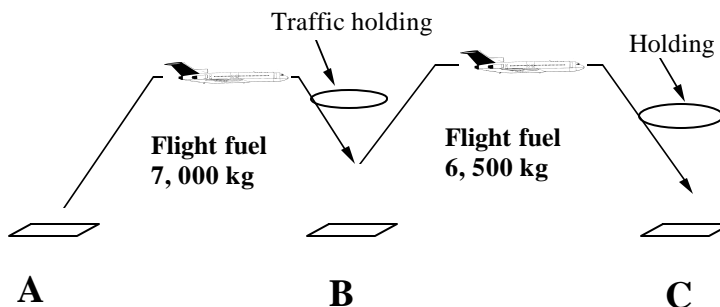
Additionally, airport “**A**” has a 15 minute traffic holding requirement.

Destination airport “**B**” is “ACCEPTABLE”. 30 min traffic holding applies.

Alternate airport “**C**” is ACCEPTABLE, becoming SUITABLE if INTER Wx holding is carried.

Flight fuel **A** to **B** is 7, 000 kg.  
 Flight fuel **B** to **C** is 6, 500 kg.

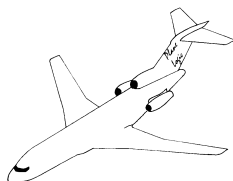
What is the minimum amount of fuel that is required to be on board at the departure airport ramp to cover normal operations ?



**Fuel Summary**

Item	Kg
Flight Fuel	13, 500
V/R 10%	1, 350
Fixed Reserve	2, 250
Wx Hold (at alternate)	2, 000
Traffic Hold at destination (30')	2, 000
WIP Hold	Nil
Final Taxi	100
Initial Taxi	150
<b>Min FOB @ ramp</b>	<b>21, 350 kg</b>

Now try Fuel policy assignments 2a, 2b, and 2c.  
 (Answers at rear of fuel assignments).



**BOEING 727**