

## A320 MISCELLANEOUS REFERENCES

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[TheAirlinePilots.com](http://TheAirlinePilots.com)

### APPROACH, RESCUE AND FIRE FIGHTING CATEGORIES

| Approach Category                         |   |    |  |
|---|---|----|--|
| Straight In                               | C   | OM | 8.3.12 – Flight Preparation & Planning   |
| Circling                                  |   |    |  |
| RFF (Rescue and Fire Fighting) Categories |   |    |  |
| Departure & Destination                   | 6   | OM | 8.3.16 – Flight Preparation & Planning. For destination alternate it is 5 as per OM but according to FLT OPS / S I /13 / Fri Mar 20 2015 as per ANO-024-FSXX-6.2 minimum acceptable aerodrome RFF category requirement for an alternate aerodrome shall be downgraded by two categories of the aeroplane RFF category. |
| Destination Alternate                     | 4   |    |  |
| Aerodrome Reference Code                  |   |    |  |
| 4   | TOGW > 73,500 Kg <sup>*</sup><br>Ref Field Length ≥ 1800 m    | C  | Wing Span 24m but < 36m<br>Gear Span 6m but < 9m   |
| 3   | TOGW ≤ 73,500 Kg <sup>*</sup><br>Ref Field Length 1200-1799 m |    |  |

*\* A320 Aircraft Characteristics – Airport and Maintenance Planning (Source: Airbus.com).*

### FUEL POLICY

| Minimum Block Fuel  |             |   |
|---|-------------|---|
| 4000 Kg <sup>1</sup>  | OM          | 7.3 – Fuel Policy – Dispatch Requirements |
| Taxi Fuel   |             |   |
| Standard 200 Kg, Europe 300 Kg  | OM          | 7.3 – Fuel Policy – Dispatch Requirements |
| Middle East 400 Kg  | Ref Missing | Some Bulletin (still finding it)          |
| Contingency Fuel – 5% Trip Fuel limited by:   |             |   |
| Min 400   | OM          | 7.3 – Fuel Policy – Dispatch Requirements |
| Typical Cruise Fuel Consumption<br>ISA – M.78 – CG 33% – FL 350 – 66 T  |             |   |
| 40 Kg / min (both Engines) <sup>2</sup>   | FCOM        | Performance – Cruise – Cruise Tables      |
| Holding Fuel – Final Reserve<br>30 mins – 1500 feet – Clean Configuration – ISA – Estimated Landing Weight at Alternate |             |   |
| 1200 Kg   | OM          | 7.3 – Fuel Policy – Dispatch Requirements |

1. Remember 4000 only i.e., the min for departure, rest can be figured by magic numbers. Knock off the last digit from 4000 and you have the minimum contingency value i.e. 400. Knock off the last digit again from 400 and you have an average fuel consumption of 40. Multiply it by 30 in order to get the 30 min final reserve and you get 1200. Knock off the first digit and you get 200 which is the standard for taxi.

2. Actual fuel consumption will vary with aircraft APD, weight and winds. 40 Kg/min = 2400 Kg/hour, which is generally seen for aircraft with lower APD factors, lower weight, or when experiencing lesser head winds while fuel consumption of around 47-48 Kg/min = 2800-2900 Kg/hour is seen for aircraft with higher APD factors, higher weight, or when experiencing stronger head winds. For a quick fuel check before flight in order to cross check the CFP fuel figure for a gross error (without getting into detailed performance) a rule of thumb method that works is explained below:

*T* = Time to Destination + Alternate (in hours)

*F* = Expected fuel consumption (Kg/hour divided by 1000 e.g., 2.5 or 2.8 etc.)

*C* = Contingency Fuel Value (Contingency + Final Reserves + Taxi. A fixed value of 2 to cater of all works well.)

Rule of thumb fuel figure = (*T* x *F*) + *C*

## QUICK CHECK OF CFP FUEL

| With Explanation   |      |       |
|--|------|-------|
| PLANNED  | FUEL | TIME  |
| TRIP   | 4400 | 01.31 |
| CONTINGENCY  | 400  | 00.08 |
| XHLD DEST  | 0    | 00.00 |
| ALTN OPIS  | 1700 | 00.33 |
| $F = 2.8$ (expected consumption for this flight considering APD, weight and winds) |      |       |
| XHLD ALTN  |      |       |
| STD HOLDING  | 1200 | 00.30 |
| ETP/BU   | 0    | 00.00 |
| RECLR/BU   | 0    | 00.00 |
| MIN REQUIRED   | 7700 | 02.42 |
| EXTRA  | 1900 | 00.48 |
| TKOF FUEL  | 9600 | 03.30 |
| TAXI FUEL  | 200  |       |
| RAMP FUEL  | 9800 | 03.30 |
| $C = 2$ (2000/1000) to cater for:<br>1) Contingency<br>2) Holding<br>3) Taxi       |      |       |
| $(T \times F) + C$<br>$(2 \times 2.8) + 2 = 7.6$ (or 7600)                         |      |       |
| Pretty Close   |      |       |

| Without Explanation (See if you can get it) |      |       |
|---|------|-------|
| PLANNED                                     | FUEL | TIME  |
| TRIP  | 5300 | 01.50 |
| CONTINGENCY                                 | 400  | 00.08 |
| XHLD DEST                                   | 500  | 00.15 |
| ALTN OPLA                                   | 2300 | 00.44 |
| XHLD ALTN                                   |      |       |
| STD HOLDING                                 | 1100 | 00.30 |
| ETP/BU                                      | 0    | 00.00 |
| RECLR/BU                                    | 0    | 00.00 |
| MIN REQUIRED                                | 9600 | 03.27 |
| EXTRA                                       | 0    | 00.00 |
| TKOF FUEL                                   | 9600 | 03.27 |
| TAXI FUEL                                   | 200  |       |
| RAMP FUEL                                   | 9800 | 03.27 |
| $(2.5 \times 2.8) + 2 = 9$                  |      |       |

### Tips for Mental Math

#### 2 x 2.8

- A)  $2 \times 2 = 4$  (+000) = 4000.
- B)  $2 \times 8 = 16$  (+00) = 1600.
- C)  $4000 + 1600 = \mathbf{5600}$ .

#### 2.5 x 2.8

- A)  $2 \times 2 = 4$  (+000) = 4000.
- B)  $2 \times 8 = 16$  (+00) = 1600.
- C)  $4000 + 1600 = \mathbf{5600}$ .
- D)  $5 \times 2 = 10$  (+00) = 1000.
- E)  $5 \times 8 = 40$  (+0) = 400.
- F)  $1000 + 400 = \mathbf{1400}$ .
- G)  $5600 + 1400 = \mathbf{7000}$ .

Note: This is just a rough check, the accurate/correct procedure is through the performance software.

## OPERATIONS SPECIFICATIONS – 01 MARCH 2023

|                              |   |                                     |               |            |              |           |               |  |  |  |  |  |  |
|------------------------------|---|-------------------------------------|---------------|------------|--------------|-----------|---------------|--|--|--|--|--|--|
| <b>Low Visibility</b>        |   |                                     |               |            |              |           |               |  |  |  |  |  |  |
| <b>Approach And Landing</b>  | <input checked="" type="checkbox"/>                             | <input type="checkbox"/>            | <b>CAT I</b>  | <b>RVR</b> | <b>550 m</b> | <b>DH</b> | <b>200 ft</b> |  |  |  |  |  |  |
|                              |   |                                     | <b>CAT II</b> | <b>RVR</b> | <b>300 m</b> | <b>DH</b> | <b>100 ft</b> |  |  |  |  |  |  |
| <b>Take-Off</b>              | <input checked="" type="checkbox"/>                             | <input type="checkbox"/>            |               | <b>RVR</b> | <b>125 m</b> |           |               |  |  |  |  |  |  |
| <b>Operational Credit(s)</b> | <input type="checkbox"/>  | <input checked="" type="checkbox"/> |               |            |              |           |               |  |  |  |  |  |  |
| <b><u>A320</u></b>           |   |                                     |               |            |              |           |               |  |  |  |  |  |  |
| <b>RNAV 10 (RNP 10)</b>      | <b>GPS (MMR), ADIRU</b>   |                                     |               |            |              |           |               |  |  |  |  |  |  |
| <b>RNAV 5</b>                | <b>GPS(MMR), DME/DME, VOR/DME, ADIRU</b>                        |                                     |               |            |              |           |               |  |  |  |  |  |  |
| <b>RNAV 2</b>                | <b>ALL PERMITTED SENSORS (GPS(MMR), DME/DME, DME/DME/ADIRU)</b> |                                     |               |            |              |           |               |  |  |  |  |  |  |
| <b>RNAV 1</b>                | <b>ALL PERMITTED SENSORS (GPS(MMR), DME/DME, DME/DME/ADIRU)</b> |                                     |               |            |              |           |               |  |  |  |  |  |  |
| <b>RNP 4</b>                 | <b>GPS (MMR), ADIRU</b>   |                                     |               |            |              |           |               |  |  |  |  |  |  |
| <b>RNP 1</b>                 | <b>ALL PERMITTED SENSORS (GPS(MMR), DME/DME, DME/DME/ADIRU)</b> |                                     |               |            |              |           |               |  |  |  |  |  |  |
| <b>RNP APCH</b>              | <b>WITHOUT BARO-VNAV, WITH BARO-VNAV</b>                        |                                     |               |            |              |           |               |  |  |  |  |  |  |

## ACN TABLE

| Aircraft Type   | All-up Mass <sup>1</sup><br>(Maximum Apron Mass) (Operating Mass Empty) |       | Load on one main gear leg (%) | Standard Aircraft Tire Pressure |                    |      | ACN relative to                   |                                    |                                 |                                      |                             |                  |              |                   |
|-----------------|---|-------|-------------------------------|---------------------------------|--------------------|------|-----------------------------------|------------------------------------|---------------------------------|--------------------------------------|-----------------------------|------------------|--------------|-------------------|
|                 |   |       |                               |                                 |                    |      | Rigid Pavement Subgrades          |                                    |                                 |                                      | Flexible Pavement Subgrades |                  |              |                   |
|                 |   |       |                               |                                 |                    |      | High K = 150<br>MN/m <sup>3</sup> | Medium K = 80<br>MN/m <sup>3</sup> | Low K = 40<br>MN/m <sup>3</sup> | Ultralow K = 20<br>MN/m <sup>3</sup> | High CBR = 15%              | Medium CBR = 10% | Low CBR = 6% | Very low CBR = 3% |
|                 | lbs   | kgs   |                               | psi                             | kg/cm <sup>2</sup> | mPa  | A                                 | B                                  | C                               | D                                    | A                           | B                | C            | D                 |
| 1               | 2   | 3     | 4                             | 5                               | 6                  | 7    | 8                                 | 9                                  | 10                              | 11                                   | 12                          | 13               | 14           | 15                |
| Airbus A320-200 | 162920  | 73900 | 47.0                          | 200                             | 14.1               | 1.38 | 44                                | 46                                 | 48                              | 50                                   | 39                          | 40               | 44           | 50                |
|                 | 92593   | 42000 |                               |                                 |                    |      | 22                                | 24                                 | 25                              | 26                                   | 20                          | 20               | 22           | 26                |
| Airbus A320-200 | 167329  | 75900 | 46.8                          | 200                             | 14.1               | 1.38 | 45                                | 47                                 | 50                              | 52                                   | 40                          | 41               | 46           | 52                |
|                 | 92593   | 42000 |                               |                                 |                    |      | 22                                | 24                                 | 25                              | 26                                   | 20                          | 20               | 22           | 25                |
| Airbus A320-200 | 170636  | 77400 | 46.6                          | 209                             | 14.7               | 1.44 | 46                                | 49                                 | 51                              | 53                                   | 41                          | 42               | 47           | 53                |
|                 | 92593   | 42000 |                               |                                 |                    |      | 23                                | 24                                 | 25                              | 26                                   | 20                          | 21               | 22           | 25                |

Link: [Details on ACN / PCN](#)

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