
# Operations Manual
# Part B – General Procedures

# 0 Preface

## 0.1 Record of Amendments

| Rev. No | Date Entered | Amended By |
|---|---|---|
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## 0.2 Revision Highlights

# Contents

## 0.4 Introduction

This manual forms part of the BAVirtual Operations Manual. The Operations Manual is divided in to four sections:

**Part A:** "What we do" – general information relating to BAVirtual policies

**Part B:** "How we do it". How the operational policies outlined in Part A are executed on each particular aircraft type. This section includes General Procedures applicable to all fleets, and type-specific manuals (FCOMs etc).

**Part C:** Route Information Manual. This comprises of aerodrome and area briefings and information. Aerodrome charts also fall under this category.

**Part D:** Training Manual. This section outlines how training is organised and conducted, and details of training courses specific to each aircraft type.

Part B – this section – contains General Procedures, which are applicable to all aircraft types. It also includes all type-specific FCOMs, checklists, QRH and other manuals relating to procedures to be carried out for each specific aircraft type.

The policies within this manual – Part B (General) – are based on real British Airways procedures applicable to all fleets. These policies and procedures are used as a reference and standard for training and assessment during BAV flying training courses. Merlin SESMA events will also never be more restrictive than the policies outlined in this manual. However, outside of the training environment whilst all pilots are encouraged to follow these procedures to the best of their ability as a matter of good practice and for maximum realism, BAV does not care to engage in the active policing of its members' flying standards and no penalty is levied on members for non-compliance.

## 0.5 Warnings, Cautions and Notes

Various parts of the text contain warnings, cautions and notes. These are designed to highlight points of significance in procedures. This information is based on industry data and experience of hazards that have been identified.

### 0.5.1 Warning

A Warning indicates where failure to follow a procedure may result in significant injury or death.

**WARNING:**

### 0.5.2 Caution

A Caution indicates where failure to follow a procedure may result in damage, significant non-compliance or the removal of a barrier to risk.

***CAUTION:***

### 0.5.3 Note

A Note is provided when aspects of the text require highlighting or clarification that cannot be achieved through modification of the procedure text. A note is never used in place of a Caution or Warning.

## 0.6 Procedures

Where possible, procedures are laid out in a bulleted list designed to enable to user to follow the procedure without difficulty. Such lists describe who completes certain tasks and the order in which they should be completed.

To aid in shared cockpit flying, tasks for multiple flight crew members will be given for reference. However, as most BAV members are operating as a single pilot it follows that in this case both crew members' tasks should be completed.

In this instance, normally the P1/Pilot Flying tasks/scan should be completed first, and then the P2/Pilot Monitoring tasks/scan.

Distraction from task completion must be avoided. If it becomes apparent a task has not been fully completed or a step omitted:

- Stop the task
- Restart the task from the beginning

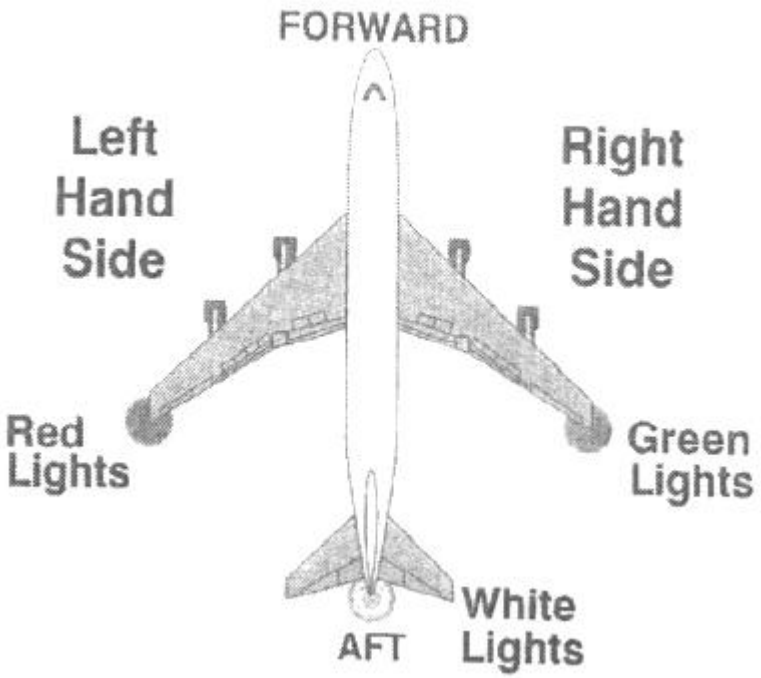
If the corrective action is small and the omission immediately obvious to the user, this action may be taken and the procedure continued.

It is common for distraction to cause procedures to be partially completed or even completely omitted.

## 0.7 Aviation Terminology

This section illustrates some of the terms used to describe the aeroplane and different roles.

### 0.7.1 Aeroplane



### 0.7.2 Flight Deck Terminology

#### 0.7.2.1 Pilot Flying (PF)

The pilot currently controlling the aircraft's flight path. This pilot is not necessarily the aircraft commander (Captain). Aircraft control may be through either:

- Manual flight
- Basic automation modes
- Advanced automation modes such as Flight Management Computers

The PF may also be referred to as the Handling Pilot (HP).

#### 0.7.2.2 Pilot Monitoring (PM)

The pilot who is not currently controlling the aircraft's flight path. Monitoring is an active role and as such responsibility for the flight path is shared between both pilots. PM is sometimes known as Pilot Not Flying (PNF) or Non-Handling Pilot (NHP). Duties may include:

- Monitoring flight instrumentation and modes
- Adjusting systems
- Reading checklists
- Handling radio communications
- Handling cabin communications

## 0.8 Theory of Flight and Flight Controls

This section describes basic general aerodynamics and systems knowledge. The following systems are used to power and control the aircraft.

### 0.8.1 Elevators

Used to pitch the nose of the aircraft up or down. Elevators are fitted to the horizontal stabiliser (tailplane) and move up and down as a pair.

### 0.8.2 Ailerons

Used to bank the aircraft to enable it to turn and fitted to the trailing edge of the aircraft wings. When the aileron on one wing moves upward, the aileron on the opposite wing moves downward. Often two ailerons will be fitted to each wing, a small inboard aileron used during both high and low speed flight and a larger aileron fitted on the outboard portion of the wing which is used only during low speed flight and locked out flush with the wing at higher speeds.

### 0.8.3 Rudder

Used to yaw the aircraft's nose left or right. The rudder is fitted to the trailing edge of the vertical stabiliser (fin) and moves left or right.

### 0.8.4 Stabiliser

Allows the pilot to 'trim' the aeroplane so as to maintain a climb, cruise or descent pitch attitude without having to maintain control pressure on the elevators. The stabiliser moves up and down.

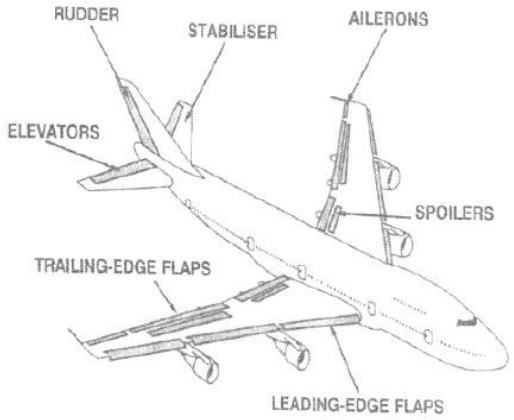
### 0.8.5 Trailing and Leading Edge Flaps

Flaps are used during take-off and landing to increase lift. This allows the aircraft to fly at lower airspeeds.

### 0.8.6 Spoilers and Speedbrakes

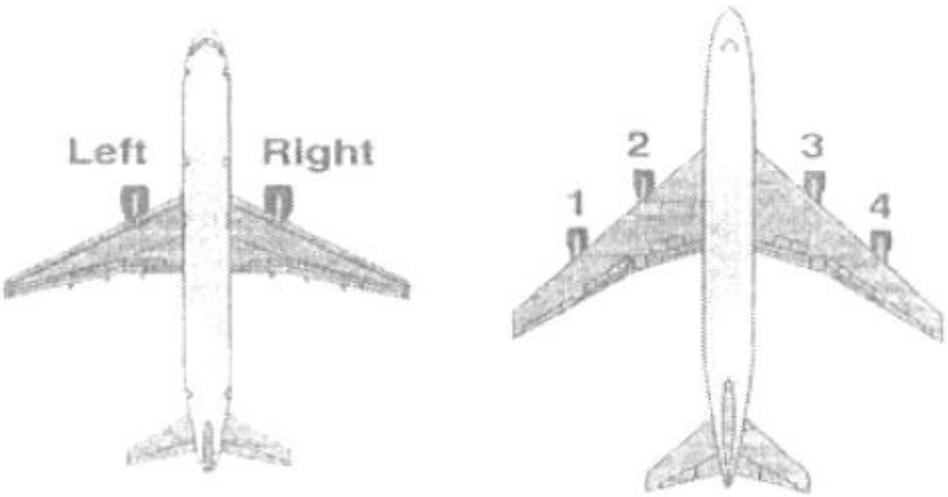
These are panels on the upper wing surface which can be deployed upwards for a variety of reasons:

- In turns, spoilers deploy in varying amounts to assist the ailerons in banking the aircraft. The amount of deployment is greater at lower airspeeds.
- In flight, spoilers may be used as speedbrakes to increase the drag of the aircraft, allowing it to descend more steeply without increasing its airspeed.
- Spoilers are used on the ground after touchdown to destroy the lift created by the winds, thus enabling the wheel brakes to stop the aircraft in a shorter distance.




### 0.8.7 Engine Configuration

Four-engined aircraft have numbered engines as per the diagram below. Most Boeing twin-engined aircraft use ‘left’ and ‘right’ terminology. Airbus twins mark the left engine ‘1’ and the right engine ‘2’.



# 1 Communications and Briefings

This section describes briefing and communications requirements used to check and enhance crew understanding and raise Situational Awareness of crew members, other operational colleagues and passengers.

Effective communications ensure that SOPs are carried out in an efficient and unambiguous manner. Briefing is a key skill in effective team behaviour. The intent of a briefing is to share the objectives of the upcoming task amongst the team and to ensure that all team members understand their respective roles and responsibilities.

## 1.1 Flight Crew Briefing

The primary aim of the briefing is the development of high crew situational awareness and the identification of potential problems, threats and the strategies required to deal with them in both routine and non-normal situations. This is best achieved through an open and interactive briefing style which allows all crew members to participate and share their experiences.

An effective briefing will:

- Identify potential problems and threats and how to deal with them;
- Be concise, relevant and conducted at a time of lower workload;
- Include open questions to share experiences and compare mental models;
- Set gates and bottom lines;
- Review automation handling and use of relevant modes including intervention techniques;
- Anticipate and plan for potential high workload situations.

### 1.1.1 Flight Planning Briefing

Complete a Flight Planning Briefing before every flight. During a series of flights the briefing may update information provided earlier in the duty.

***CAUTION:*** *Ensure that updated information is available for the briefing.*

Typically, a Simbrief briefing pack includes all necessary information. The briefing must include a check of:

- AIS, NOTAM information;
- Meteorological and SIGMET information for the route of flight and any diversion airports;
- Runway state information;
- SIG WX charts;
- Aircraft technical state;
- Check airport is capable of supporting the planned approach type;
- Any temporary information such as ‘Handout’ packs.

Every flight planning briefing must consider:

- Take-off alternate required?
- Destination alternate required?
- Extra destination alternate required? E.g. Destination below planning minima.
- En-route alternate required?

- Weather at the destination and any required alternates meet planning minima.
- Required alternates operationally and politically acceptable?
- ETOPS planning requirements met?
- State-specific planning requirements?
- Fuel sufficient for the flight?

The above list is intended as a check of the automated CIRRUS planning process.

#### 1.1.1.1 CIRRUS Briefing

The CIRRUS flight plan should be checked as part of the Flight Planning Briefing. This check should include:

- Flight number and UTC date;
- Aircraft type and Registration;
- Departure destination and alternate aerodromes;
- OFP version number (FP) and issue time;
- Flight Levels;
- Cost Index/Mach No;
- Performance penalties;
- Gross error check of Fuel Distance or Flight Time;
- Gross error check of Aircraft Weights;
- Gross error check of Fuel Quantities;
- Remarks.

Additionally, if LVOs are expected at destination:

- Check that 'Commercial' alternate is planned;
- Other alternates may be used if payload restrictions must be met;
- Consider whether additional holding fuel is necessary.

### 1.1.2 Flight Crew Departure Briefing

Before every take-off the Commander must ensure that his/her Co-pilot(s) is (are) familiar with the standard take-off briefing for the aircraft concerned. All crew members should participate in the briefing.

The Standard Take-off Briefing listed in the Checklists is intended as reminder of significant items to be discussed during Briefing. Other items may be relevant to that departure and hence should be added as required.

Because of their importance, procedures involving the shutting down of an engine should be regularly discussed during the pre take-off briefing. It is accepted that when the same crew are on a multi-sector duty, the engine shut-down procedures need not be rehearsed in detail before every take-off. Commanders should, however, ensure that such a briefing is given on a regular basis. When time permits other checklists, particularly those involving memory items, should be regularly discussed and rehearsed.

#### 1.1.2.1 Augmented Flight Crew

The relief pilots (RPs), should listen to the departure briefing and contribute as required with any salient points.

The designated P3, who will be present on the flight deck for take-off, must be briefed independently prior to departure if they were not present for the operating crew's briefing.

### 1.1.3 Crew Change Handover Briefing

A full handover briefing must be given to the crew taking over the flying duties.

The position of handover should be carefully considered (especially when it occurs over high ground) and the handover briefing should reflect these considerations.

The handover briefing should include the following (if applicable):

- Operating roles.
- Autopilot modes engaged.
- Current Position.
- MSA.
- Drift down/Escape Routes.
- Aircraft technical state.
- Any non-normals.
- Fuel State: to include time to complete balancing (if appropriate) and expected fuel at destination.
- ATC (controlling sector and position of other aircraft nearby).
- Diversion airfields and their Wx, if applicable.
- En-route alternate and Destination Wx, if applicable.
- Flight Strategy.
- Climb points.
- Expected ETA at destination.
- Other on-the-day considerations.
- Other (additional) non-operational items.
- Wake up time.
- Situations where the Operating Commander may wish to be disturbed.
- The list is not definitive and may include additional items at the discretion of the crew.

## 1.2 Passenger Address

### 1.2.1 General

Intelligent and judicious use of the PA system is important in establishing and maintaining a good customer service. The use of technical jargon and words that may cause anxiety through misunderstanding should be avoided. Reduced use of the PA is recommended on night flights to permit maximum passenger rest.

PA use should be restricted to areas where workload and error exposure is low: i.e. not in busy ATC environments or manoeuvring.

When manoeuvring on the ground, PAs should not be made by PF.

The usual announcements made by Flight Crew at BA are:

### 1.2.2 Introduction

The Commander's welcome on board (may be delegated to the First Officer). The following areas should be covered:

- Introduction of flight crew and SCCM
- Initial flight details

- Seatbelt policy. The Commander should brief the passengers to return to their seats and fasten their seatbelts securely whenever the fasten seatbelt sign is switched on
- When the aircraft is ready to go but prevented from doing so by external circumstances (e.g. airport congestion) this should be explained

### 1.2.3 Enroute

Completed by P1.

- Introduce yourself, including rank
- A/C Position
- Routing
- Flight details (height, speed)
- ETA and time change
- Weather (Enroute, Destination)

Generally when announcing the ETA do so without reference to schedule, as very often passengers are only aware of scheduled departure time but not the scheduled arrival time. If you think you will be early or on schedule it is still possible to experience any number of delays to your arrival on stand. To boast an early arrival but then arrive late can be slightly embarrassing! If you do arrive on schedule or early then this can be emphasised on the arrival announcement. However, if you are running late then just announce the ETA, without mentioning that you are landing behind schedule. Most passengers will not notice a slightly late arrival.

### 1.2.4 Pre-Descent

Completed by P1. This is a short announcement giving a basic update.

- Introduce yourself and rank;
- A few words giving the latest destination weather and arrival time.
- Long-haul give a 40 mins to landing call to allow the cabin crew to make a follow on call warning passengers that the seat belt sign will shortly be illuminated so anyone wishing to use to washrooms should do so now.

### 1.2.5 20 minutes to Landing (Long Haul)/10 minutes to Landing (Short Haul)

To alert the cabin crew to make their final preparations for landing. The seatbelt sign is normally turned on in conjunction with this call.

### 1.2.6 Doors to Manual

Completed by PM just prior to turning on to stand.

### 1.2.7 Flight Crew Farewell

A final farewell after the aircraft has arrived on stand and the shutdown/parking checklist completed. An acknowledgement of an on-time arrival should be made or acknowledgement and apology in the event of a significantly delayed arrival.

## 1.3 Safety Focus Periods

Minimising distraction during critical stages of flight maximises capacity to identify hazards. Non-pertinent tasks should not be performed during these periods.

### 1.3.1 Sterile Flight Deck

During critical phases of flight 'sterile flight deck' procedures should be observed. During these periods flight crew activities should be restricted to matters essential to the safe operation of the aeroplane and all non-essential activity or distractions avoided.

Sterile flight deck procedures should be applied:

- During critical phases of flight
- During taxiing
- Below 10,000 feet above the aerodrome of departure after takeoff or the arrival aerodrome before landing, except for cruise flight
- During any other phases of flight as determined by the Commander

## 1.4 Normal Cabin Alerting

Cabin signals are used to advise cabin crew when critical flight phases are about to begin. These are an important part of developing situation awareness amongst the crew.

### 1.4.1 Before Take-off

When the aircraft begins to enter the runway for take-off the flight crew will:

- Signal the cabin with 'multiple chimes' in accordance with type specific procedures to indicate that the take-off is about to commence.

### 1.4.2 Before Landing

There is no specific signal that the landing phase has begun. Most types initiate an automated cabin chime when the landing gear is extended.

### 1.4.3 Release to Service

If it is necessary for crew to remain seated after take-off (for example if the flight crew are anticipating weather avoidance or turbulence for an unusual period), the flight crew will:

- Brief the SCCM that a 'Release to Service' will be necessary. The SCCM will brief the remainder of the crew to remain seated.
- Signal the cabin in accordance with type-specific procedures that it is safe for the crew to resume duties. On all BA types this signal is an audio chime,

**Note:** Commanders may choose to replace the audio chimes with an interphone call to the SCCM if necessary.

## 1.5 Post Flight Review

The Post Flight Review is a tool for enhancing learning. It will normally be completed after each operating sector, however, it may be deferred to a later time at the discretion of the flight crew. Time may be required to reflect on the preceding sector but this must not unnecessarily delay the review or detract from the relevance of the events. Significant events may need addressing immediately however, on a multi-sector day, Flight Crew may consider deferring more general points until the end of the duty period.

The review should be balanced and consider actions that resulted in positive outcomes as well as areas for development in the future. The review should also consider how effectively SOPs were complied with.

Flight safety is the key focus however, events that impacted the commercial operation should also be included.

The review is an opportunity for a crew-debrief rather than a focus on individual feedback.

- What happened and why?
- Was the outcome positive or otherwise?
- How do we repeat or avoid?
- What are the learning points?
- Is any further action required?

# 2 Normal Aircraft Procedures

This section describes normal flight crew procedures for conducting a complete flight. Type specific information or detailed flight procedures and techniques are not contained in this section.

Items described in this section apply to all BAVirtual flights regardless of type. As far as possible, this section is arranged in a logical, chronological order, starting with pre-flight preparations and continuing a sequence of actions until the aircraft lands and parks.

## 2.1 Boarding

### 2.1.1 Crew Presence

One flight crew member should normally be on the flight deck. However, passengers may board before the flight crew arrive, in which instance the SCCM is responsible for the safety of the aircraft and passengers.

### 2.1.2 Emergency Lighting

Emergency lights must be armed prior to passenger boarding.

## 2.2 Fuelling

### 2.2.1 Normal Refuel Procedures

The final responsibility for the quantity and distribution of fuel rests with the Commander.

### 2.2.2 Fuel Freeze Point

The fuel freezing point for all stations except the USA can be assumed to be -47°C or colder unless otherwise advised.

All fuel uplift in the USA can be assumed to be Jet-A with a freeze point of -40°C unless otherwise advised.

### 2.2.3 Fuel Acceptance

Before accepting the aircraft for departure, the Commander must ensure:

- Departure fuel amount is sufficient for the flight and agrees with the fuel requested within type-specific tolerances
- The actual total fuel at the commencement of engine start is recorded on the CIRRUS flight plan
- The ‘calculated arrival’ figure when compared with the remaining fuel figure is within the tolerance stated for the aircraft type
- The freeze point is satisfactory for the planned flight

### 2.2.4 Fuelling with Flaps or Slats Extended

**WARNING: Fuelling must not take place during operation of the flaps/slats.**

Fuelling will not normally take place with flaps or slats extended as this poses an increased risk of damage to the aircraft. If unavoidable, however, the dispenser may be positioned

before extension of the flaps/slats and the flaps/slats must be retracted to allow the fuelling equipment to depart.

### 2.2.5 Maintenance Operations When Fuelling

The following restrictions and conditions must be observed during fuelling:

- Only checking and limited maintenance should be allowed on radio, radar and electronic equipment and use or testing of such equipment should be delayed until fuelling is completed.
- Only aircraft switches essential to the fuelling operation or aircraft servicing and turnaround procedures should be operated
- Main aircraft engines should not be operated unless type-specific procedures are published
- Landing, taxi and strobe lights should not be operated
- An APU which does not exhaust in to the fuelling zone may be restarted, but if it fails at the first attempt fuelling operations must cease prior to any subsequent starts

### 2.2.6 Fuelling with Passengers On Board

If refuelling with passengers on board:

- 'No Smoking' signs must be ON
- 'Seatbelt' signs must be OFF
- Emergency Exit lights must be ARMED

## 2.3 Loading and Weight and Balance Procedures

### 2.3.1 Loadsheet

To accept a Loadsheet the Commander shall check:

- The aircraft registration
- The flight number and date
- Issue number
- Limiting weights
- Take-off fuel and trip fuel agree with the CIRRUS plan
- Actual take-off weight, including any last-minute changes
- The payload

When Late Closeout Procedures (LCP) is in operation, small changes to fuel loaded or crew number do not require a new issue of the provisional figures by must be accounted for in the final figures.

#### 2.3.1.1 Last Minute Changes (LMC)

The Last Minute Change (LMC) process can be used to update a final loadsheet if it is not practical to obtain a new loadsheet. LMC can be used to update and weight, load, crew complement or passenger change.

LMCs are subject to a maximum change of:

- 500 kg for single-aisle aircraft
- 1,000 kg for widebody aircraft

To make a LMC:

- Annotate the final loadsheet
- Update the TOW
- The Commander must sign the change

### 2.3.2 Late Closeout Procedures

When Late Closeout Procedures (LCPs) are used, the Commander will receive provisional figures in the form of either:

- A Provisional Loadsheet, or
- An ACARS Preliminary Loadsheet

Before take-off the Commander will receive final load information as a Final Figures message.

During the pre-flight phase a provisional loadsheet will be provided with a statement identifying the loadsheet as a 'PROVISIONAL VERSION'. The Commander must check this loadsheet in accordance with 2.3.1 above.

During the Before Take-off Phase an ACARS Final Figures message will be sent to the aircraft containing:

- The registration, and
- An issue number that corresponds to the provisional loadsheet.

Currently the Final Figures message is only simulated in the FSLabs A320 and PSX BACARS.

### 2.3.3 Final Figures Message

On receipt of the Final Figures Message, the Pilot Monitoring must:

- Check that the aircraft registration is correct
- Check the issue number is the same as the issue number of the last Provisional Loadsheet on board
- Acknowledge receipt of the message by ACARS prompt

**WARNING: Do not acknowledge an incorrect or mismatched message.**

Final figures will normally fall in a range listed in the table below. Figures outside of these ranges will trigger a 'Revisions Message'.

| Type | + Weight kg | - Weight kg | %MAC or Trim |
|---|---|---|---|
| **Airbus narrowbody** | 1000 | 2000 | 2% |
| **A350** | 1000 | 5000 | -1.5% to +2% |
| **A380** | 1000 | 5000 | 1.5% |
| **B747** | 1000 | 5000 | 2% or 0.5 Units |
| **B777** | 1000 | 5000 | 2% or 0.5 Units |
| **B787** | 1000 | 4000 | 2% or 0.5 Units |

#### 2.3.3.1 Compliance Message

Receipt of a Compliance Message indicates that final aircraft weight and trim is within the ranges listed in 2.3.3. No further pilot action is required after 'acknowledging' the message until the aircraft is airborne.

#### 2.3.3.2 Revisions Message

Weights outside of the ranges listed in 2.3.3 will produce a 'Revisions Message'. Revisions must be actioned before take-off. This may include:

- Updating the ZFW
- Updating take-off performance data
- Updating stabiliser trim settings

**WARNING: Do not take off unless 'Revisions' have been accounted for.**

### 2.3.4 Climb and Cruise

For flights over 60 minutes the FMS should be updated to improve cruise performance calculations. At a time of low workload, before the aircraft reaches cruise altitude, the PM will:

- Update the FMS with the final ZFW.

## 2.4 Pushback and Engine Start

The objective of the pushback and engine start phase is to prepare the aircraft for taxi. The pushback process contains procedures which are integrated with Ground Personnel. Care must be taken to avoid distraction which may lead to omission of safety critical activities.

The engine start phase may be delayed during the pushback, especially if the pushback is a long push or push with pull forward. Flight crew should confirm with the Ground Personnel, that engine start is appropriate, considering any hazards that may be affected by the engine start. Engine stabilisation is not required to disconnect the Ground Personnel. The parking brake set on completion of the pushback process, is normally the point at which Ground Personnel can be disconnected.

***CAUTION: Do not flash aircraft lights close to stands. The meaning of this signal is ambiguous and may cause temporary blindness with considerable pain to ground crew.***

## 2.5 Before Take-off

The objective of this flight-phase is to safely and promptly prepare the cabin for take-off. This includes ensuring that the cabin is adequately prepared in case of a rejected take-off or turbulence once airborne.

### 2.5.1 Procedures for Taxiing Aircraft

In order to ensure safe operation and to enhance runway safety, the following procedures should be used by flight crew at all times while taxiing.

*See OM A Communications and Aircraft Lights.*

- Sterile flight crew compartment procedures should be applied;

- Each flight crew member should have the necessary aerodrome layout charts available;
- The pilot taxiing the aircraft should announce in advance his/her intentions to the pilot monitoring (e.g. “I’m going to take the second turn to the left onto B”);
- All taxi clearances should be monitored and should be understood by each flight crew member;
- All taxi clearances should be cross-checked against the aerodrome chart and aerodrome surface markings, signs, and lights;
- If the pilot taxiing the aircraft is unsure of his/her position, he/she should stop the aircraft and contact air traffic control;
- The pilot monitoring should monitor the taxi progress and adherence to the clearances, and should assist the pilot taxiing;
- Any action which may disturb the flight crew from the taxi activity should be avoided or done with the parking brake set (e.g. announcements by public address).

## 2.6 Climb and Cruise

### 2.6.1 Flight Continuation Procedures – 4-Engined Aircraft

Following an engine failure review the following factors:

#### 2.6.1.1 Cause of Engine Failure/Shutdown

- Assess and ensure that the aircraft is in a safe condition for extended onward flight.

#### 2.6.1.2 Second Engine Failure

Use 2 engine performance data in the FCOM/In-flight performance application:

- Extract the final 2 engine altitude;
- Drift down distance and speed.

By reference to the immediate and future MSAs on CIRRUS:

- Decide whether a turnback or re-routing is required;
- Any necessary escape routes should be considered.

#### 2.6.1.3 Diversion Airfields

Whatever course of action is chosen, suitable diversion airfields need to be selected for use in the case of a second engine failure.

Both Alternate and Emergency airfields should be considered and weather reports obtained. These should be continually updated as the flight progresses.

#### 2.6.1.4 Range and Endurance

From the 2 engine flight planning chart/In-flight performance application:

- Extract range and endurance to ascertain how far the flight can continue in the event of a second engine failure;
- From this information likely suitable diversions can be planned. The range and likely diversion airfields should be updated as the flight progresses.

- The FMS is unable to supply fuel and time predictions for 2-engine flight until the second engine has failed.

There is no FMS facility to look ahead at this data whilst flying on three engines.

### 2.6.2 Cirrus Plan Front Page

The Cirrus plan front page includes fuel planning information, alternate summary, defect information and planning assumptions. On the front page, record:

- Time – Dep. and Arr. times and Total Sector Time.
- Fuel – Fuel ordered, on board, used and remaining.
- Alternate used – “Ringed” if it differs from planned alternate.
- Clearances – Initial ATC clearance, and En-route clearances which differ from CIRRUS plan. Clearances received via ACARS do not need to be annotated on the CIRRUS flight plan.

```
CIRRUS FLT PLAN  FTD.WALSH EXT.93008 ACARS.LHRSBRH
P 1 OF 8 BA 0116/24 JFK-LHR ETD  0010/24APR19 B744 G-BYGG
C/S BAW116   M4.0 KJFK-EGLL P1.0  T/O SLOT ....

223.2   ZFW   .... 0720 ATA .... TNKS ....   ADVISORY INFORMATION
                                                CONT 99    6493
290.8   TOW   .... 0010 ATD .... USED ....      CONT 90    2869

235.2   LAW   .... 0710 TOT .... LEFT ....

 40.2   PL    .... HOLD W A .... ACH FL ....

TRIM  ..... MIN COST VAR SPD - FP  NO. 1  1857 24APR19

ROUTE DEFRTE FL350 NICSO/FL370

TIF   ......  55575  6.08  3071NM W/C P41            TOC OAT M53
CONT 95 ....   4077    26                            WIND  29065
DIVF  ......   3673    28  LTN /EGGW FL080 P28 102NM
RES   ......   4235    30  PLAN REM 12.0 TOT RES 7.9
REQ   ......  67560  7.33                    COST INDEX      53
ETOPS ......      0
EXTRA ......      0        WX ATC ......
TAXI  ......    544  (12)                      ELEV JFK R31L 13
TANKS ......  68104 KG                         ELEV LHR R27R 83
SIX EIGHT ONE ZERO FOUR KG   **FMC DRAG/FF P 0.0/ P 0.0**

ALT SUMMARY  DIST  TRK  FL  COMP  TIME   FUEL    DIV SPD SCHED
LTN/EGGW C1  102   008  080 P09   00.28  3673    COST INDEX   0
LGW/EGKK C2  110   152  080 M11   00.35  4342
STN/EGSS C3  112   046  070 P09   00.34  4125
MAN/EGCC C4  175   330  180 P32   00.40  5618

WEIGHT CHANGE P/M 1000 KG FP  159/FM  167 KG TP  0  TRIP FUEL
SPEED  CHANGE CI   0 / M0.83     FM 52 KG  TP 0  TRIP FUEL

RMK/ NONE
```

### 2.6.3 Cirrus Plan Main Body

On the Cirrus plan main body record:

- Oceanic clearances. (if applicable)
- Fuel checks.
- ATAs – The airborne time or ATA over a waypoint early in the flight should be recorded.
- Others should be filled in where sector lengths are such that they are significant

```
CIRRUS FLT PLAN
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WAYPOINT COUNT   8 CWC   8 (NOT TOC/TOD)           TOT RES   5.3
POSITION   ID/FREQ                ETA/RTA ATA TTLT GDTG REM  REQ
  MSA   AWY  /ITT/   -TRM-  DIS    TIM         FL  COMP MACH G/S

ORLANDO INTL MCOY2                .../... ... 0.00 3965     47.0
  2.1 MCOY2  /348/   -VAR-    7    01          ...  M002

ORLANDO     ORL112.20             .../... ... 0.01 3958     46.7
  2.1 MCOY2  /355/   -002-   34    06          ...  M019

GUANO                             .../... ... 0.07 3924     45.3
  2.1 DCT    /359/   -006-   63    12          ...  M036

TOC                               .../... ... 0.19 3861     42.5
  2.0 DCT    /359/   -007-   19    02          350  M035 .822/441

FEMON                             .../... ... 0.21 3842     42.2
  2.0 Q87    /357/   -004-   48    07          ...  M035 .822/441

VIYAP                             .../... ... 0.28 3794     41.6
  2.0 Q87    /024/   -032-   49    06          ...  M002 .821/474

TAALN                             .../... ... 0.34 3745     40.9
  2.0 Q87    /025/   -033-   47    06          ...  P000 .820/474

JROSS                             .../... ... 0.40 3698     40.3
  2.2 DCT    /045/   -053-  138    17          ...  P020 .819/493

BARTL                             .../... ... 0.57 3560     38.6
  2.2 J121   /039/   -049-   84    10          ...  P013 .819/485
```

### 2.6.4 CIRRUS Destination Alternate Routing Summary

Cirrus destination alternate routing includes information to enable accurate FMS programming of alternate routes.

```
CIRRUS FLT PLAN
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DESTINATION ALTERNATE SUMMARY

      ALTN         MSA    VIA
      EGLL/09L     2.3    BIG2Z BIG OCK1G
 INFO/EGSS/04      2.4    DCT DET DET1A
 INFO/EGCC/05R     3.5    LAM5P LAM N57 WELIN T420 TNT DAYNE2A
 INFO/EGBB/15      2.5    LAM5P LAM L10 BUZAD GROVE1C
```

### 2.6.5 CIRRUS ATC Flight Plan

The Cirrus ATC flight plan section is always at the back of the Cirrus plan. It includes information on the filed ATC flight plan including Com/Nav equipment, FIR times and remarks.

```
CIRRUS FLT PLAN
PAGE 9 OF 9 BA 0179/24 - PLAN  1 1408 24APR19
FF EGTTZQZX EISNZQZX EGGXZQZX CZQXZQZX CZQMZQZX KZBWZQZX KZNYZQZX
       EGLLBASB
(FPL-BAW179-IS
-B772/H-SDE1E3FGHIJ3J5J6M1M2RWXY/LB1D1
-EGLL1705
-N0486F380 CPT3F CPT UL9 KENET UN14 BAKUR DCT DOGAL/M083F380 NATG
 RIKAL/N0482F400 N436A ALLEX DCT PLYMM PARCH2
-KJFK0651 KEWR
-PBN/A1B1D1L1O1S2 NAV/RNVD1E2A1 SUR/TCAS DOF/190424 REG/GZZZA
 EET/EISN0025 EGGX0107 CZQX0211 CZQM0504 KZBW0548 KZNY0645 SEL/GJBS
 OPR/BAW RVR/075 RMK/TCAS LAHSO NOT AUTHORISED)
```

### 2.6.6 Fuel Check Procedures

Refer to *OM A Fuel Checks*

The following procedures describe methods for monitoring fuel progress against planned documentation. If a fuel discrepancy is noted:

- Investigate the discrepancy;
- Consider use of fuel leak procedures

#### 2.6.6.1 Completing a Waypoint Fuel Check

To complete a waypoint fuel check:

- Note the fuel remaining from gauges
- Subtract the applicable REQ figure from the remaining fuel
- Compare the result with the TOT RES figure
- If the result is less than the TOT RES figure see *OM A Action In the Event of a Fuel Shortfall*

#### 2.6.6.2 Completing a Mileage Fuel Check

When routing direct to an intermediate waypoint a conventional waypoint fuel check may not be possible. In this event it is acceptable to:

- Identify remaining distance to go
- Find a waypoint with equivalent GDTG
- Complete a waypoint check in accordance with 2.6.6.1 above

### 2.6.7 Equal Time Points or Critical Points

Critical Points between appropriate enroute alternates are calculated by Simbrief and displayed on the Cirrus in the following format:

```
WYPT         LAT/LONG     PREV WYPT    PLUS  EET    FOB   CRITF
ENTRY(CYYT) N4753W04146                     04.33  25284  17670
LPAZ/EINN   N4906W02501  49N030W      0.22 05.47  18402  13353
EXIT(EINN)  N4901W01856                     06.15  15826  9562
```

It may be useful to calculate Critical Points between other enroute alternates for improved situational awareness. To calculate a critical point:

(D × H)/(G (O+H))

D = Distance between two airports

O = Reduced groundspeed 'on' (e.g. 400 kt +/- wind component)

H = Reduced groundspeed 'home'

G = Actual groundspeed 'out'

### 2.6.8 Deliberate Deviation from Planned Route

The Commander must ensure that the flight planned altitude for each segment of the route complies with the relevant MSA. If any deviation from the flight planned track becomes necessary, all terrain and obstructions near the intended track must be carefully considered and adequate allowance made to avoid them, taking account of the following factors:

- The relative merits of a direct route over high ground and of an indirect route avoiding it;
- The possibility of maintaining visual contact with the ground or water as against flying IFR;
- The accuracy and reliability of navigational aids;
- The forecast met conditions, including the type and height of cloud over high ground, wind velocity, down draughts, icing layers, and any sudden and unpredictable changes in barometric pressure and temperature;
- The accuracy of maps and charts in certain parts of the World.

### 2.6.9 Route Wind Uplink

For aircraft fitted with Wind Uplink functionality crews should request updated winds at:

- 04:00 UTC
- 10:00 UTC
- 16:00 UTC
- 22:00 UTC

See type-specific procedures.

## 2.7 Turbulence

Turbulence is a part of everyday airline operations. Flight crews will take a proactive approach to the management of cabin issues at any time turbulence is anticipated.

Anticipated – Turbulence can sometimes be anticipated. In such situations the flight crew will advise the SCCM with regard to timing of cabin service, securing of galleys and cabin equipment and whether the level of turbulence is expected to require the crew to sit down and fasten their harnesses. Instructions must be clear and unambiguous.

If turbulence is imminent, use of the PA will ensure a clear, undiluted message reaches all cabin crew members in the shortest possible time. The flight crew will switch on the seat belt sign prior to entering the area of turbulence.

Unanticipated – Often turbulence is not forecast or anticipated. In such instances, flight crew will attempt to alert crew by switching on the seat belt signs as soon as practicable.

Turbulence, particularly when severe, is unpleasant for passengers. When time permits a calm and reassuring PA from the flight crew will help reduce anxiety on board.

### 2.7.1 Turbulence Definitions

| | Light Turbulence | Moderate Turbulence | Severe Turbulence |
|---|---|---|---|
| **Description** | Slight changes in altitude and/or attitude | Changes of altitude and/or attitude occur but with more intensity than light turbulence. Aircraft remains in control at all times. | Large, abrupt changes in altitude and/or attitude.<br><br>Usually causes large variations in airspeed. |

## 2.8 Descent and Approach

### 2.8.1 Instrument Approach Followed by Circling Without Prescribed Tracks

When the aeroplane is on the initial instrument approach, before visual reference is established, but not below MDA/H, the aeroplane should follow the corresponding instrument approach procedure until the appropriate instrument MAPt is reached. This may require level flight at the Circling MDH until the MAPt is reached.

At the beginning of the level-flight phase at or above the MDA/H, the instrument approach track should be maintained until the Commander:

1. Estimates that, in all probability, visual contact with the runway of intended landing or the runway environment will be maintained during the entire Circling procedure;
2. Estimates that the aeroplane is within the Circling area before commencing Circling; and
3. Is able to determine the aeroplane's position in relation to the runway of intended landing with the aid of the appropriate external references.

When reaching the published instrument MAPt, if the conditions stipulated above cannot be established, a missed approach should be carried out in accordance with the instrument approach procedure.

After the aeroplane has left the track of the initial instrument approach, the flight phase outbound from the runway should be limited to an appropriate distance, which is required to align the aeroplane onto the final approach. Such manoeuvres should be conducted to enable the aeroplane to attain a controlled and stable descent path to the intended landing runway; and to remain within the Circling area and in such way that visual contact with the runway of intended landing or runway environment is maintained at all times.

Flight manoeuvres should be carried out at an altitude/height that is not less than the Circling MDA/H. Descent below MDA/H should not be initiated until the threshold of the intended landing runway has been identified and the aeroplane is in a position to continue with a normal rate of descent to land within the touchdown zone.

### 2.8.2 Instrument Approach Followed by Circling With Prescribed Tracks

The aeroplane should remain on the initial instrument approach procedure until one of the following is reached:

1. The prescribed divergence point to commence Circling on the prescribed track; or

2. The MAPt.

The aeroplane should be established on the instrument approach track, in level flight, at or above the MDA/H, at or by the Circling manoeuvre divergence point.

If the divergence point is reached before the required visual reference is acquired, a missed approach should be initiated not later than the MAPt and completed in accordance with that published for the instrument approach procedure.

When commencing Circling at the published divergence point, the subsequent manoeuvres should be conducted to comply with the published routing and published heights/altitudes.

Once the aeroplane is established on the prescribed track(s), the published visual reference does not need to be maintained unless:

1. The instrument approach chart contains a requirement to that effect; or
2. The Circling MAPt (if published) is reached.

If the prescribed Circling manoeuvre has a published MAPt and the required visual reference has not been obtained by that point, a missed approach should be executed in accordance with the procedures in 2.8.3 below. Further descent below MDA/H may only commence when the required visual reference has been obtained.

Unless otherwise specified in the procedure, final descent should not be commenced from MDA/H until the threshold of the intended landing runway has been identified and the aeroplane is in a position to continue with a normal rate of descent to land within the touchdown zone.

### 2.8.3 Circling Approach – Missed Approach

If a missed approach procedure is required to be flown when the aeroplane is still on the instrument approach, before commencing the Circling manoeuvre, the published missed approach for the instrument approach should be followed.

If a prescribed missed approach is published for the Circling manoeuvre, it overrides the manoeuvres prescribed below.

If visual reference is lost while circling to land after the aeroplane has departed from the initial instrument approach track, the missed approach specified for that particular instrument approach should be followed. It is expected that the pilot will make an initial climbing turn towards the intended landing runway, to a position overhead the aerodrome and then fly in accordance with the missed-approach procedure.

The aeroplane should not leave the Circling area, which is obstacle protected, unless established on the appropriate missed approach procedure, or at minimum sector altitude (MSA).

During a missed approach, all turns should be made in the same direction and the aeroplane should remain within the circling protected area while climbing:

- To the altitude assigned to any published Circling missed-approach manoeuvre if applicable;
- To the altitude assigned to the missed approach of the initial instrument approach;
- To the MSA;
- To the minimum holding altitude (MHA) applicable to transition to a holding facility or fix;

- or as directed by ATC.

When the missed approach procedure is commenced on the 'downwind' leg of the circling manoeuvre, an 'S' turn may be undertaken to align the aeroplane with the initial instrument approach missed-approach path, providing that the aeroplane remains within the protected Circling area. The Commander is responsible for ensuring adequate terrain clearance during missed-approach manoeuvres, particularly during the execution of a missed approach initiated by ATC.

Since the circling manoeuvre may be accomplished in more than one direction, different flightpaths will be required to establish the aeroplane on the prescribed missed approach course, depending upon its position at the time visual reference is lost. In particular, all turns must be made in the prescribed direction if this is restricted to remain within the protected Circling area.

If a missed approach procedure is published for the runway onto which the aeroplane is conducting a Circling approach (ie the runway of intended landing) and the aeroplane has commenced the final turn to align with that runway, the missed approach for the landing runway may be flown. ATC should be informed as soon as practicable of the intention to fly the published missed approach procedure for that particular runway.

The Commander should advise ATC when any missed approach procedure has been commenced, together with the height/altitude to which the aeroplane is climbing and the position to which the aeroplane is navigating.

### 2.8.4 Allocation of Duties for Circling or Visual Approaches

Allocate duties so that the pilot flying the visual/circling manoeuvre (normally the P2) is best placed to visually assess the base to final turn. This may require a change of landing pilot.

***CAUTION: The Stable Approach Policy applies to visual approaches.***

For circling approaches flown at, or close to 1000 RA, the assessment of stable approach criteria and transfer of control will necessarily be delayed until landing configuration is achieved after departing 1000 RA in the final stages of the approach and not when the aircraft first reaches 1000 RA in an intermediate configuration.

It may be preferable to delay transfer of control until P1 has suitable visual references to be able to complete the landing.

Exceptionally, on published circling approaches, where the Commander is required to be the landing pilot and is best positioned to fly the approach he/she may assume control prior to 1000 RA with the aircraft in an intermediate configuration (e.g. at the end of the downwind leg).

### 2.8.5 Announcements

At an appropriate time, the flight crew will switch on the seatbelt signs and make appropriate announcements on the PA. Do not combine 'information' and cabin crew advisory announcements.

On some routes there is a requirement to prepare the cabin for landing earlier than at the standard times specified in OM B General Procedures . This requirement will be contained with the OM C briefing for the destination aerodrome.

### 2.8.6 40 Minutes to Landing

On longhaul Routes the flight crew will:

- Make an announcement to update arrival information and ETA;
- Make the “CABIN CREW FORTY MINUTES TO LANDING” announcement.

### 2.8.7 20 Minutes to Landing

On longhaul routes the flight crew will:

- Make the “CABIN CREW TWENTY MINUTES TO LANDING” announcement.
- Switch on the seatbelt signs.

### 2.8.8 10 Minutes to Landing

On shorthaul routes the flight crew will:

- Make the “CABIN CREW TEN MINUTES TO LANDING” announcement.
- Switch on the seatbelt signs.

## 2.9 Go-around and Rejected Take-off

### 2.9.1 Missed Approach Procedures

Missed approach performance assumptions for all British Airways types require that crews comply with the published missed approach lateral and vertical profile including any speed restrictions, and that acceleration and final flap retraction commences at or above Minimum Missed Approach Acceleration Altitude (MMAAA).

MMAAA is defined as:

- When performance is not degraded, 1000 ft AAL (higher if specified for a specific airport).
- When performance is degraded (for example when an engine is inoperative), the lower of:
    1. The Initial Published Platform Altitude.
    2. A Radar Cleared Altitude.

**Note:** In exceptional circumstances, if the Captain believes that climb and acceleration on the above profile cannot be achieved within the TOGA thrust time limit, he/she is authorised to commence acceleration and final flap retraction at a lower altitude but no lower than 1000 ft AAL, taking into account factors such as proximate terrain and Minimum Sector Altitude/TAA.

#### 2.9.1.1 Missed Approach Emergency Turn

At certain terrain-constrained airfields a Missed Approach Emergency Turn will be published. This overrides the lateral and vertical profile of any published missed approach. Only fly the Missed Approach Emergency Turn if performance is degraded.

## 2.10 After Landing and Parking

### 2.10.1 Parking and Chocking

Once the aircraft has come to a stop on or near its parking position with the parking brake set, the aircraft must remain stationary unless cleared by ground staff to proceed, as nose-wheel chocks may have been inserted.

Ground staff will not approach the aircraft until the aircraft main engines have been switched off and the anti-collision beacon is off.

## 2.11 ETOPS Procedures

The following section details specific tasks required for compliance with ETOPS requirements.

ETOPS is the generic term for operations conducted at greater than 60 minutes flight time from an ETOPS adequate airport. Although ETOPS operations are often conducted over Oceanic areas it is important that crews clearly understand the difference between ETOPS and Scheduled Navigation procedures such as Operations in the NAT region or CMNPS Operations. The most simple distinction between these types of operation is:

- ETOPS is a dispatch condition and a fight planning consideration with a few specific in-flight tasks.
- Scheduled Navigation Procedures are specific tasks and procedures which are required to ensure particular navigation standards are met during the flight.

ETOPS requirements include maintenance actions, special flight crew training and increased flight planning minima for nominated alternate airports.

Industry development of ETOPS procedures has led to improved reliability and dispatch rates in all kinds of operations. Both ETOPS and Scheduled Navigation techniques are referred to in the MEL. An aircraft that is not capable of dispatching ETOPS due to a system failure may be capable of operating in scheduled airspace and vice versa.

ETOPS operations are not confined to Oceanic regions and may be conducted on many long range flights where diversion options are limited.

### 2.11.1 Flight Planning Briefing

The following tasks are completed in addition to standard briefing items.

- Confirm that the routing is within ETOPS circles.

#### 2.11.1.1 Simbrief CIRRUS Plan

On the Cirrus Plan confirm:

- That the planned ETOPS rule is valid for the type and aircraft status;
- That ETOPS MET FC WX is higher than ETOPS WX/MIN;
- That CRIT FUEL is less than planned fuel remaining at each Critical Point.

#### 2.11.1.2 Loreto

On the Loreto (Met/NOTAM section of Simbrief plan) brief confirm:

- Enroute ETOPS alternates are provided and valid.

### 2.11.2 CIRRUS ETOPS Summary

The Cirrus ETOPS summary shows the data used when calculating ETOPS requirements. This includes:

- ETOPS rule time used.
- ETOPS alternates used.
- Assumed runway and weather time windows.
- Minima versus forecast weather.

Additionally, the summary includes geographical and fuel planning information including:

- ENTRY: The LAT/LONG at which the aircraft will enter the applicable ETOPS area.
- ETOPS Critical Point: Expressed as two ICAO airport codes. This is the most limiting of the three possible ETOPS Critical Points (Decompression, Engine Failure or Decompression plus Engine Failure)
- PREV WAYPT: the waypoint immediately prior to the Critical Point.
- PLUS: The 'time on' from the PREV WAYPOINT to the most limiting Critical Point.
- FOB and CRITF: The Fuel On Board (planned) and Critical Fuel. This is the minimum fuel required to reach the specified alternate.

```
CIRRUS FLT PLAN
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                    ETOPS 138 ERA LPAZ EINN

ETOPS INFO                            ETOPS      MET
ERA      RWY    START    FINISH     WX/MIN     FC WX        XWC
LPAZ      36     1913     2154     600/3219   3500/9999   13KTS
EINN      06     1954     2154     600/3219   9999/9999   14KTS

WYPT         LAT/LONG     PREV WYPT    PLUS  EET    FOB   CRITF
ENTRY(CYYT) N4753W04146                     04.33  25284  17670
LPAZ/EINN   N4906W02501  49N030W      0.22 05.47  18402  13353
EXIT(EINN)  N4901W01856                     06.15  15826  9562
```

### 2.11.3 ETOPS Critical Systems

Systems which have a direct effect on ETOPS operations are known as ETOPS Critical Systems. It is important that pilots have a working knowledge of which systems have such an impact. These systems may include:

- Engines and APU systems;
- Anti-ice systems;
- Air Conditioning and Pneumatic systems;
- Fire protection systems.

### 2.11.4 Delay Greater than 60 Minutes

If take-off is delayed greater than 60 minutes:

- Confirm that ETOPS enroute alternate weather remains acceptable for the flight.

### 2.11.5 In-flight

When the aircraft has dispatched, normal weather minima applies to all enroute airports. Complete ETOPS specific tasks listed in type-specific documentation.

#### 2.11.5.1 Re-route In Flight

If a re-route is accepted check that:

- New route remains within ETOPS Rule Distance;
- If new en-route alternates are selected, check weather and AIS to confirm airport remains valid for use.

#### 2.11.5.2 Fuel Shortfall at ETOPS Critical Point

No specific action is necessary other than to understand:

- The low probability of a failure occurring at the ETOPS critical point; and
- That holding capability may be reduced in the event of a diversion to the ETOPS alternate.

## 2.12 Low Visibility Operations (LVO)

### 2.12.1 Before Take-off

During taxi in LVO conditions:

- Identify positioning of CAT II/III holding points;
- Use all available taxi guidance;
- PM should monitor taxi progress – use displayed heading as a reference;
- Taxi at reduced speed – use displayed groundspeed as a reference;
- Use appropriate lighting – this may include turning some lighting OFF in certain conditions;
- Only use strobes on an active runway;
- Use ATC communications to build situational awareness of other traffic;
- Manage workload and procedures to ensure that checklist completion does not interfere with safe taxi progress.

***CAUTION:*** *Poorly lit obstacles may not be easily identified in LVO conditions.*

### 2.12.2 Take-off

During take-off in LVO conditions:

- Use all available systems to ensure aircraft is aligned with runway centreline;
- Use ILS indications if available;
- Use centreline lights to check reported RVR is consistent with observed conditions.

**WARNING: Exercise extreme caution when lining up. Runway excursion events have occurred by lining up with runway edge lights instead of centreline lights.**

### 2.12.3 Rejected Take-off

If a take-off is rejected during LVO conditions:

- Bring the aircraft to a stop as quickly as possible;
- Runway lighting and markers should be used to assess aircraft position during the deceleration and when stopped;
- Inform ATC of the rejected take-off and aircraft position as soon as practicable and when workload permits.

### 2.12.4 Approach Preparation

When preparing for a LVO Approach:

- Confirm aircraft capability and status supports the intended approach type;
- Confirm crew qualification supports the intended approach type;
- Confirm airport capability and procedures support the intended approach type;
- Adjust flight deck lighting;
- Adjust seating position for optimum viewing angle (see type-specific procedures);
- Establish downgrade options and strategy.

**Note:** If workload permits, it may be useful to monitor RVR trends and Approach Success Rate on a standby VHF transceiver.

### 2.12.5 Approach and Landing

During an LVO Approach:

- On initial contact with the approach controller state “REQUEST CAT TWO (THREE) APPROACH”;
- If RVR is below current operational minimums, DO NOT proceed below 1000 ft AAL;
- If RVR reduces below current operational minimums below 1000 ft AAL the approach may be continued to minimums;
- In all cases, RVRs transmitted below 1000 ft AAL are advisory only.

### 2.12.6 After Landing

In LVO conditions:

- After landing ensure that the aircraft tail is clear of CAT II/III holding points before calling “RUNWAY VACATED”;
- Identify positioning of CAT II/III holding points;
- Use all available taxi guidance;
- PM should monitor taxi progress – use displayed heading as a reference;
- Taxi at reduced speed – use displayed groundspeed as a reference;
- Use appropriate lighting – this may include turning some lighting OFF in certain conditions;
- Only use strobes on an active runway;
- Use ATC communications to build situational awareness of other traffic;
- Manage workload and procedures to ensure that checklist completion does not interfere with safe taxi progress.

***CAUTION:*** *Poorly lit obstacles may not be easily identified in LVO conditions.*

## 2.13 RVSM Operations

All BAVirtual aircraft are operated and maintained to meet RVSM Operational Requirements.

Normal Type-specific procedures include embedded RVSM tasks. The following items should be considered whenever RVSM operations are planned.

### 2.13.1 Pre-flight

Flight crews should be aware of:

- Operational deficiencies which may render the aircraft unable to operate in RVSM airspace;

### 2.13.2 Prior to Entering RVSM Airspace

To enter RVSM airspace the following equipment must be serviceable:

- Two primary altimeters;
- An autopilot (with altitude-keeping capability);
- One altitude alerting device;
- One operating transponder.

**WARNING: Do not enter RVSM airspace if this equipment is not functioning.**

### 2.13.3 Contingency Procedures

Advise ATC if a system failure or weather affects the ability to maintain the cleared flight level. The following are examples of failures that may cause this:

- Failure of all automatic altitude-keeping systems;
- A loss of redundancy in the altimeter systems (one remaining RVSM altimeter);
- Loss of thrust necessitating descent.

Advise ATC if severe turbulence is encountered.

At all times:

- Use standard RT phraseology.
- Follow appropriate contingency procedures.

## 2.14 MNPS Airspace

Airspace designated as MNPS is defined in OM C and/or charts. MNPS areas require crews to use specific or enhanced navigation procedures to improve navigation accuracy and meet the requirements for the design of that airspace. Such areas rely on the integrity of crew procedures and strict procedural compliance.

### 2.14.1 Navigation Equipment Initialisation

For all flights, the most accurate navigation position start point must be used for alignment (or type-specific equivalent). The preferred order of data is:

- GPS position (if available).
- Gate position (if published).
- Airport reference point.

### 2.14.2 Navigation Equipment Downgrades

Most navigation systems display warnings if:

- A significant system downgrade occurs.
- Position updating is lost.
- Alignment is attempted when significantly displaced from the last known aircraft position.

Before entering MNPS airspace, confirm the accuracy of the navigation system as specified in type-specific manuals. Once in MNPS airspace, navigation performance must be monitored using type-specific procedures. See OM C for further information regarding equipment downgrades, requirements and contingency procedures.

***CAUTION:*** *Navigation system downgrades and warnings must be investigated and resolved.*

### 2.14.3 Clearances

If the flight-planned route is loaded before receipt of the clearance, it must be considered provisional until the clearance has been received and the route checking procedure has been successfully completed.

Clearances may be received by CPDLC, ACARS or R/T. When operating on the NAT system, all waypoint coordinates should be read back in full if required by ATC. If an OTS track is specified, the Track Message Identification number should be read back.

Once a clearance has been received and acknowledged, it is essential that only a direct copy of the current active clearance is used for the subsequent route loading and checking procedure.

This may be in electronic format in the aircraft's communications system, in the form of an ACARS printout or hand-written on the master CIRRUS.

#### 2.14.3.1 New York OCA Clearances

Flights entering NAT airspace via NY OCA may not receive an explicit oceanic route clearance if the cleared route is exactly as filed in the flight plan. In this case, it is particularly important that the flight crew are using the up-to-date CIRRUS as this will be the only notification of the cleared oceanic routing. The paper CIRRUS must be checked in

accordance with *OM A Operational Flight Plan (CIRRUS)*, and additionally the version number must be cross-checked against the latest filed flight plan.

Once the CIRRUS has been verified as correct, this forms the lateral portion of the oceanic clearance.

### 2.14.4 Flight Plan

One CIRRUS plan should be used as the master document and annotated as such. If the aircraft is cleared on a different track to that flight-planned or re-routed, the master CIRRUS will be modified to reflect the cleared route.

CIRRUS should be marked to annotate when waypoints have been checked. For clearance direct to a waypoint, CIRRUS should be annotated with a direct track line.

### 2.14.5 Navigraph En-route Chart

Navigraph en-route charts are a useful tool for enhancing situational awareness. On receipt of an ATC clearance through an MNPS area

- The route in the Navigraph app should be kept up-to-date with any re-routing
- Display of current aircraft position may be used to identify proximity to the planned track if confirmation of navigation accuracy is desired.

### 2.14.6 FMS Route Loading and Checking Procedure

#### 2.14.6.1 FMS Route Loading

Load, modify and check the route working from clearance to FMS. The FMS route may be loaded via CPDLC, ACARS uplink (i.e. loaded from a saved FMS route file) or manually entered using any FMS-acceptable format. This includes named waypoints, full lat/long coordinates or unnamed FMS waypoint format as described in type-specific manuals.

The CIRRUS FMS/WINDS page contains the flight-planned route in FMS waypoint format against the full lat/long of each waypoint.

Any manually entered unnamed waypoints (e.g. 07B, 4850Nor N48W050) must be expanded in the FMS and checked in their full lat/long format in accordance with type-specific procedures.

***CAUTION:*** *Great care must be exercised in translating ATC-format waypoints (e.g. 48N050W, 48/50) into unnamed FMS-format waypoints (e.g. 4850N). Erroneous waypoint entry is a significant cause of Gross Navigational Errors (GNEs).*

#### 2.14.6.2 FMS Route Check

Check the FMS route directly against the clearance, working from FMS to clearance. The following will be checked:

- Oceanic Entry Point.
- Cleared Track, including TMI if applicable.
- Exit Point.
- Flight Level and Mach Number.
- Waypoints.

- Unnamed waypoints (e.g. 07B, 4850N or N48W050) that have been entered manually or via ACARS route uplink must be expanded in the FMS and checked in their full lat/long format in accordance with type-specific procedures. Full alphabetic named waypoints (e.g. NEDUL) need not be expanded for checking.

***CAUTION:*** *The Navigation Display must not be used for waypoint checking as it truncates waypoint names and may be misleading.*

### 2.14.7 Waypoint Crossing Procedure

When crossing waypoints in MNPS airspace the following procedures will be used:

- Check the actual position of each navigation system against the cleared route.
- Verify that the aircraft is in LNAV/NAV mode.
- Check the next waypoint on the ND (if possible) or FMS.
- Check that the aircraft turns towards the next waypoint.
- Record the ATA and FOB on CIRRUS.
- Record next waypoint ETA and revise with ATC if required.

### 2.14.8 Re-routing

Re-clearances uplinked via CPDLC may be accepted and inserted directly into the FMS. A copy of the clearance must be available to use for route checking. This may be electronic or paper as required by type-specific procedures.

***CAUTION: The uplinked route may include a waypoint that you have already passed. Careful checking is required before execution.***

If a re-clearance including a change of route is received, the route loading and checking procedure in 2.14.6 above must be carried out again in full.

Experience suggests that when ATC issues a re-route, there is a consequent increased risk of errors being made.

When a re-route is issued which changes the MNPS exit point, the FMS route must not be joined up with the original post-MNPS domestic routing until onwards clearance has been received from ATC.

***CAUTION: There is a high incidence of domestic navigation errors following an oceanic re-route and changed exit point, where the crew have incorrectly assumed the domestic routing.***

Whenever the flight management system is being re-programmed in flight, cockpit management must ensure that basic control and monitoring of the flight path and AFDS engagement status must be maintained. Whilst airborne, only one pilot should be actively engaged in modifying or checking the FMS route at any given time.

### 2.14.9 MNPS Airspace

Gross Navigational Errors (GNEs) in MNPS airspace continue to create a significant risk of Mid-Air Collision.

#### 2.14.9.1 Waypoint Terminology

Part of the problem with MNPS and oceanic procedures has been created by the abundance of different formats and naming conventions available for waypoints.

**Named waypoint:** Standard database waypoint named withpurely alphabetic letters (no numbers), which has an FMS-compatible identifier consisting of five alphabetic letters (e.g. NEDUL).

**Unnamed waypoint:** Any other type of waypoint, which includes both letters and numbers, and may be in varying formats (e.g. 5530N, N5530, N55W030, 55N030W, 07B).

**ARINC 424 format:** A particular format of unnamed waypoint identifier used by CIRRUS, which may be directly entered into the FMS and corresponds to a lat/long position (e.g. 5530N, N5530).

**ATC format:** The ICAO flight plan format for unnamed waypoints (e.g. 55N030W) or the NAT OTS track message format (55/30).

**FMS format:** Any format acceptable for direct manual entry into the FMS, includes some unnamed waypoint formats (e.g. 5530N) and full lat/long entry.

#### 2.14.9.2 Current Issues

There are a number of major potential issues with MNPS operations and waypoint entry which it is important to mitigate:

- ATC clearances and NAT OTS track messages are given in a format which is not directly compatible with any FMS system, translation into an FMS-acceptable format can lead to data entry errors.
- There are currently three possible ways of loading the FMS with the MNPS route (CPDLC uplink, ACARS (route file) route uplink and manual data entry). The likelihood and type of error differs according to the data entry method.
- Unnamed waypoints in the ARINC 424 format (e.g. 5530N) are acceptable to all FMS. They are used by Simbrief but not well explained or understood. Transposing the hemisphere character into the wrong position (e.g. N5530 vs 5530N) changes the geographical location of the waypoint significantly. The imminent introduction of half degree latitude waypoints in the NAT OTS will increase the likelihood and severity of these errors.
- Most GNEs occur during re-routes. Multiple changed waypoints in a re-route can lead to the first change being picked up but subsequent changes being missed.
- Truncation of waypoints and waypoint naming conventions lead to ineffective checking.
- A reduced lateral separation trial in the North Atlantic commenced in November 2015, with lateral separation as low as 25 nm and half-degree latitude waypoints in use.

No procedural fix will effectively reduce the threat of gross navigational error unless it is consistently and robustly applied. Strict adherence to SOPs is critical. The route entry and waypoint checking procedure is intended to be pragmatic and usable, targeted to mitigate the greatest areas of risk without unduly increasing workload. The full procedure is

promulgated in type specific manuals, the general principles are common and are outlined below.

### 2.14.9.3 MNPS/Oceanic Clearances

A clearance or reclearance may be received via CPDLC, ACARS or R/T and can therefore be displayed in the aircraft's communications system, on an ACARS printout or hand-written on the master CIRRUS. No matter which method of communication is utilised, it is essential that the FMS route is checked directly against the current active clearance during the subsequent route loading and checking procedure.

The clearance may directly specify waypoints, or it may refer to a track which is specified on the current track message for the North Atlantic Organised Track System (OTS). Except in the case of a CPDLC uplink, the clearance is unlikely to be in a format that is directly compatible with the aircraft FMS so some degree of careful translation will be required. This is particularly important when half-degree latitude waypoints are in use.

For example, unnamed waypoints in the clearance or track message will be specified in one of the following formats:

| | |
|---|---|
| Full degree latitude: | 55N040W<br>55/40 |
| Half degree latitude: | 5530N040W<br>5530/40 |

Attempting to enter this directly into the FMS without any format translation will meet with differing results dependant on your aircraft type. In most cases, the results will not be good! It is therefore essential to translate this correctly into an FMS format acceptable for your aircraft type. There are several different options available, as discussed below.

NY oceanic control do not issue specific oceanic routings. If your route is as filed, and the departure instructions included clearance to destination along flight planned route, that is considered to include the route part of your oceanic clearance. It is essential to check that your flight plan is correct. In vPilot this can be verified by:

- Opening the vPilot Flight Plan window
- Selecting 'Fetch from Server'
- Checking the Simbrief CIRRUS log against the retrieved route

Once the flight plan is verified, CIRRUS becomes the lateral portion of your oceanic clearance.

### 2.14.9.4 Loading the FMS Route

The FMS may be loaded provisionally before departure with the flight planned route, or it may be loaded/modified in flight following a change of route or reclearance. In either case, the route may be loaded via CPDLC, ACARS (FMS file) uplink or manual data entry.

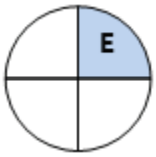
Exact format for loading your FMS will be type-specific. One option that is common to all types is the ARINC 424 format that is used by Simbrief for route uplinks and is directly enterable into the FMS as a five-character alphanumeric identifier, for example 5540N. This particular format is convenient and easy to type in, but the major drawback is that it is very easy to get it wrong! Simple transposition of the hemisphere character in to a different

place creates a totally different position in the FMS. To use our example above, 5540N is 55N 040W whereas N5540 is 5530N 040W.

As half-degree latitude tracks become commonplace, both of these waypoints will be in regular use and it is very easy to get confused between them. Therefore, great care must be taken when translating your ATC clearance into ARINC 424 identifiers to type into the FMS. If you are loading the FMS with the CIRRUS flight planned route, the CIRRUS FMS page will contain each waypoint in full lat/long against the correct 5-character FMS identifier, so that is the easiest method to use.

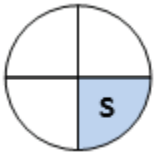
Should you need to create other FMS waypoints using the ARINC 424 format, a summary is provided below.

The five-character alphanumeric identifier will contain a single hemisphere letter, reflecting a latitude/longitude combination, along with four numeric digits to depict degrees latitude/longitude:



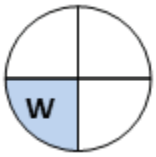

'E' for points with North latitude and East longitude

- 5020E = N50 00.0 E020 00.0
- 75E50 = N75 00.0 E150 00.0
- E5020 = N50 30.0 E020 00.0
- 7E550 = N75 30.0 E150 00.0



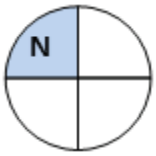

'S' for points with South latitude and East longitude

- 7550S = S75 00.0 E050 00.0
- 06S10 = S06 00.0 E110 00.0
- S5020 = S50 30.0 E020 00.0
- 7S550 = S75 30.0 E150 00.0




'W' for points with South latitude and West longitude

- 0708W = S07 00.0 W008 00.0
- 75W70 = S75 00.0 W170 00.0
- W5275 = S52 30.0 W075 00.0
- 7W570 = S75 30.0 W170 00.0



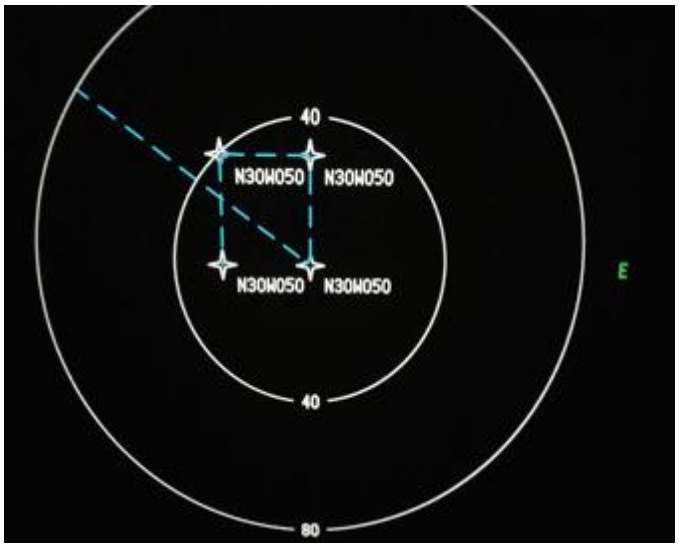

'N' for points with North latitude and West longitude

- 5474N = N54 00.0 W074 00.0
- 07N20 = N07 00.0 W120 00.0
- N5620 = N56 30.0 W020 00.0
- 7N570 = N75 30.0 W170 00.0

### 2.14.9.5 Waypoints on the Navigation Display

Waypoints entered into the FMS may be displayed on the ND in a variety of formats, but none of these formats will accurately depict the full position of the waypoint.

For example, consider the following ND:




Four FMS waypoints have been created with the same 7-character alphanumeric identifier, all with different positions! For this reason, the ND must not be used for route checking – the only totally reliable way to check the full position of FMS waypoints is by expanding them to view their full lat/long position in the FMS. There are various methods for achieving this, see type-specific manuals.

### 2.14.9.6 The Route Entry and Checking Procedure

The new procedure works on a number of fundamental principles:

Procedural rigour is essential – the SOPs won't trap errors unless we do them properly, and dedicate time to the task without distraction.

There are three different levels of data integrity when loading the FMS, and the procedures are designed to recognise this and remove unnecessary workload:

- CPDLC clearances directly uplinked and loaded into the FMS by an addon with CPDLC integration
    - The most secure form of automated data entry (sent directly from ATC) with automated checking.
- ACARS route uplink – automated data entry (from a file generated by Simbrief) with a low likelihood of data entry error, but no automated checking.
- Manual data entry – a high likelihood of data entry error. Very thorough checking is required.

There are three basic steps to the procedure:

- FMS ROUTE LOADING: One pilot enters, modifies and checks the route working from clearance to FMS. If the route has been manually entered, this includes expansion of unnamed waypoints to full lat/long for checking.

- FMS ROUTE CHECK: The other pilot then makes a completely independent check working from FMS to clearance. This step always includes expansion of unnamed waypoints to full lat/long for checking, unless the route has been directly uplinked and loaded via CPDLC.
- FMS ROUTE CROSS-CHECK: The procedure ends with a crew cross-check of FMS waypoint sequence against the clearance.
- If any errors are found, or the route is subsequently modified, the procedure is done again starting with FMS ROUTE LOADING.
- This procedure doesn't require a check of tracks and distances. They are potentially ineffective and add unnecessary workload.

#### 2.14.9.7 Post-Oceanic Domestic Routings

There is a high risk of navigation error occurring where the exit point of the oceanic track has changed from that filed, and the crew has chosen to 'join up' the exit point to the originally planned domestic routing. This is quite likely to be an incorrect route, and as eastbound transition routes are no longer published it is difficult to check. Therefore, the procedure requires that explicit onwards domestic clearance is obtained before removing the discontinuity.

## 2.15 PRM and SOIA Operations

This section describes generic procedures for Precision Radar Monitoring (PRM) approaches and Simultaneous Offset Instrument Approaches (SOIA). Refer to type-specific manuals for further information.

### 2.15.1 PRM

These types of approach facilitate independent parallel ILS approaches to runways with 3000-4300 ft separation, down to CAT 1 minima.

Alternatively, RNAV approaches may be utilised, usually to VNAV minima.

In addition to the primary ATC frequency, pilots must monitor a dedicated “Secondary” frequency (as promulgated on the approach plate) which will transmit an instruction to carry out a ‘Breakout Manoeuvre’ should there be a conflict. Specific Airport instructions must be fully reviewed.

#### 2.15.1.1 Approach Preparation

The Descent and Approach Briefing should include a discussion of the Breakout Manoeuvre:

- The requirement to disengage the A/P and F/Ds and avoid the use of go-around switches/modes;
- Action and crew coordination required to establish heading, pitch attitude to achieve the clearance;
- Discussion of automation rebuild and aircraft configuration change;
- Automation thrust mode awareness.

#### 2.15.1.2 Descent and Approach

- The primary VHF radio should be set to tower frequency and the required volume when instructed and ensure “transmit and receive” selected;
- Set the secondary VHF radio to the monitor frequency;
- The use of A/P is strongly recommended for all ILS PRM approaches;
- Accurate flying of the approach is of the utmost importance on PRM approaches.

#### 2.15.1.3 Breakout Manoeuvre

The immediate handling of a breakout manoeuvre should not require the use of go-around modes nor require immediate aircraft configuration changes. When workload permits the A/C should be re-configured appropriately.

The Breakout Manoeuvre instruction will require either:

- TURN AND CLIMB;
- TURN AND MAINTAIN ALTITUDE; or
- TURN AND DESCEND instructions.

Note: ATC will give a descending breakout only when there is no other reasonable option available, but in no case will the descent be below the Minimum Vectoring Altitude.

#### 2.15.1.4 TCAS RA

In the event of a TCAS RA, the aircraft must continue in the turn and follow the vertical guidance of the RA.

### 2.15.2 Simultaneous Offset Instrument Approach

These procedures facilitate independent offset approaches to runways with 750-2999 ft separation.

The operation combines an ILS PRM straight in approach and a 2.5° to 3.0° offset Localizer Directional Aid (LDA) approach with G/S followed by a visual segment. The offset LDA aircraft will be positioned to follow the ILS PRM aircraft and the cloud ceiling minima will be set to enable the LDA aircraft to visually acquire the ILS aircraft prior to reaching the LDA MAPt.

Alternatively, RNAV approaches may be published for both the straight-in and offset procedures. For example, RNAV (GPS) PRM approaches to Runways 28L and 28R at SFO.

Use the autopilot until offset-approach MAPt.

The aircraft flying the offset approach must continue on the offset course until reaching the offset-approach MAPt after which the aircraft must be manoeuvred to establish on the centreline of the landing runway by 500 ft AAL.

In order to continue the approach beyond the MAPt, the crew of the aircraft flying the offset-approach must:

- Have the traffic on the straight-in approach in sight;
- Report the traffic in sight to ATC; and
- Have the landing runway in sight.

If any of these cannot be achieved or are subsequently lost, a go-around must be carried out.

Breakout manoeuvre requirements are the same as ILS PRM breakout manoeuvres.

# 3 Emergency Procedures

Each emergency situation is essentially a unique incident. No procedures or instructions can include all possible types of accidents or emergency situations. Nor is it possible to dictate the exact steps to follow in such situations.

The outcome of any emergency situation will be determined by a number of factors. A good working knowledge of drills and procedures is essential, as well as a mutual crew understanding of workload priorities in both the flight deck and cabin. By their very nature emergency situations are dynamic, it is therefore important that actions and accountabilities are clearly communicated, understood and agreed.

Type-Specific Manuals contain more information on the following:

- Type of Emergency Evacuation;
- Initiation of Evacuation;
- Emergency Evacuation Procedures;
- Ditching

## 3.1 Emergency Situations

Emergencies may be either:

- UNPLANNED;
- PLANNED.

### 3.1.1 Unplanned Emergencies

Unplanned Emergencies are those that take place with little or no warning.

The following are examples of unplanned emergencies:

- A hazardous event during taxi (e.g. collision, taxiway excursion);
- An emergency on landing;
- A Rejected Take-off (RTO);
- An emergency with landing imminent.

### 3.1.2 Planned Emergencies

Planned Emergencies are those where there is ample warning to plan the landing and evacuation (if applicable). The Commander will brief the SCCM if a post landing evacuation may be required. Planned emergencies may result in either:

- A NORMAL LANDING; or
- An EMERGENCY LANDING.

The commander will initiate action and planning using the NITS Briefing.

## 3.2 Emergency Communications

The Commander is responsible for ensuring that the cabin crew are fully briefed in the event of an emergency situation. Whenever time permits, the NITS format should be used.

### 3.2.1 Hazard Call

On the ground, if a potentially hazardous event occurs that requires all cabin crew to have an increased level of alertness, the Commander shall make the announcement:

"ATTENTION CREW! AT STATIONS!"

This announcement should be made as soon as the aircraft has come to a stop with the parking brake set. It should be prioritised alongside any initial technical actions required by QRH and/or electronic checklists. The announcement can be used on the ground from when the aircraft doors are closed for departure until the aircraft doors are opened for disembarkation.

### 3.2.2 Alert Call

Once the nature of an emergency situation is established and control of the aircraft stabilised, the Commander must switch on the Seatbelt sign and use the PA to summon the SCCM to the Flight Deck using the words:

"WILL THE SENIOR CABIN CREW MEMBER REPORT TO THE FLIGHT DECK IMMEDIATELY."

### 3.2.3 NITS Briefing

The Commander will brief the SCCM using the NITS format.

- **N**ature of Emergency;
- **I**ntentions of the Commander;
- **T**ime available;
- **S**pecial Instructions, if any.

The Commander will brief the SCCM for either;

- NORMAL LANDING; or
- EMERGENCY LANDING.

The SCCM repeats the NITS briefing to the Commander.

#### 3.2.3.1 Normal Landing

A NORMAL LANDING will be briefed for situations when the Commander judges:

- There is a low risk of an evacuation, e.g. there are no significant control difficulties and that the aircraft can be brought to a halt on the runway.

#### 3.2.3.2 Emergency Landing

An EMERGENCY LANDING will be briefed when the Commander judges there is:

- Significant risk to persons on board such that the aircraft may leave the runway;
- Where a remote landing on land or water is required; or
- There are other compelling reasons for the Commander to prepare the aircraft for an evacuation.

### 3.2.4 Emergency on the Ground or a Rejected Take-off

In the case of a rejected take-off, or if an emergency occurs on the ground (after all cabin doors are closed), the flight crew will need time to first assess the situation and make a decision on how best to proceed. In most cases, before the Commander can determine whether or not the situation is severe enough to warrant an evacuation there will be certain initial technical actions to perform. Time will elapse between the event occurring and action being taken. Therefore, once the aircraft has come to a stop with the parking brake set, the flight crew shall make the following announcement without delay:

"ATTENTION CREW! AT STATIONS!"

#### 3.2.4.1 Flight Crew Actions

Following a more comprehensive assessment of the situation, which may involve communication with the cabin crew, the Commander will subsequently either:

Initiate an evacuation using the procedures defined in 3.3 below.

Or:

If the Commander believes that there is no present threat to the aircraft or its occupants, and an evacuation is unlikely to be required, he or she will make the announcement:

"PASSENGERS AND CREW REMAIN SEATED AND AWAIT FURTHER INSTRUCTIONS."

Once the situation has stabilised (information gathered, drills completed, plan of action discussed), the Commander will make an announcement as soon as practicable, explaining to passengers what has happened and what will happen next.

### 3.2.5 Unplanned Emergency Landing

#### 3.2.5.1 Flight Crew Actions

In the event of an unplanned and imminent emergency landing, the flight crew should make the announcement:

"THIS IS THE CAPTAIN. THIS IS AN EMERGENCY. BRACE. BRACE."

### 3.2.6 Planned Emergency Landing

#### 3.2.6.1 Flight Crew Actions

In the event of planned emergency, the flight crew will:

- Complete necessary flight crew procedures to secure the aircraft flight path;
- Initiate an Alert Call;
- Brief the SCCM.

If an EMERGENCY LANDING is planned (for example for cases where the aircraft may not be supported by all main gear), the flight crew will make the announcement:

"CABIN CREW TAKE YOUR SEATS FOR LANDING."

**Note:** This will be at a height specified in the type-specific FCOM but will typically be between 1 and 3 minutes to landing.

The flight crew will then make the announcement:

"BRACE, BRACE."

**Note:** This will be at a height specified in the type-specific FCOM but will typically be between 60 and 90 seconds to landing.

## 3.3 Evacuation

Various emergency situations can arise, e.g. fire or smoke warnings, which may either be false or indicate an overheat condition rather than a fire. The immediate action – to carry out the appropriate emergency checklist – does not automatically conclude with an aircraft evacuation.

Many in-flight emergency situations are resolved to the extent that a normal landing is possible. The primary objective is passengers' safety, and it may be undesirable to carry out an unnecessary emergency evacuation with the associated risks to passengers.

Following an in-flight emergency situation, the Commander should advise the cabin crew in advance if an evacuation via the slides is a possibility.

### 3.3.1 Initiation

In the event of a passenger evacuation being initiated by the Commander, and before activating the evacuation alarm, the Commander will announce on the PA:

"THIS IS AN EMERGENCY, EVACUATE, EVACUATE."

He/she should give guidance concerning hazards at doors using the phrase:

"HAZARD AT _____"

Unless there are other compelling reasons, internal or external visual information should be taken into account before initiating an evacuation. A Flight Deck warning may be due to a faulty warning system rather than representing a compelling reason to evacuate.