

B777 MEMORY ITEMS AND LIMITATIONS

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1. CABIN ALTITUDE:

- Don the **oxygen** masks.
- Establish crew **communications**.
- Check the **cabin altitude** and rate.
- If the cabin altitude is uncontrollable:
 - **PASS OXYGEN** switch Push to ON and hold for 1 second
 - Without delay, **descend** to the lowest safe altitude or 10,000 feet, whichever is higher.

To Descend

- ❖ Move the **thrust levers** to idle
- ❖ Extend the **speedbrakes**
- ❖ If structural integrity is in doubt, limit **airspeed** and avoid high maneuvering loads.
- ❖ Descend at Vmo/Mmo

Note: For LRC Enroute Fuel & Time at FL 100/140 see FCOM Vol.1. PI. "All Engine".

2. STABILIZER

One of these occurs:

- Stabilizer movement without a signal to trim
- The stabilizer is failed

- STAB cutout switches (both) CUTOUT
- Do not exceed the current airspeed

3. ABORTED ENGINE START

On the ground, an aborted engine start is needed.

- FUEL CONTROL switch (affected side) CUTOFF

4. DUAL ENGINE FAIL / STALL

- FUEL CONTROL switches (both) CUTOFF, then RUN
- RAM AIR TURBINE switch Push and hold for 1 second

5. ENGINE AUTOSTART

During a ground start, one of these occurs:

- Autostart did not start the engine
- Fuel control switch is in RUN at low engine RPM with the autostart switch OFF

- FUEL CONTROL switch (affected side) CUTOFF

6. ENGINE LIMIT / SURGE / STALL

One or more of these occur:

- Engine indications are abnormal
- Engine indications are quickly nearing or show an exceedance
- Abnormal engine noises are heard, possibly with airframe vibration
- There is no response to thrust lever movement or the response is abnormal
- Flames in the engine inlet or exhaust are reported

- A/T ARM switch (affected side) . . . Confirm OFF
- Thrust lever (affected side) Confirm Retard

Until engine indications stay within limits or the thrust lever is at idle

7. ENGINE SEVERE DAMAGE / SEPARATION

One or more of these occur:

- Airframe vibrations with abnormal engine indications
- Engine separation

- A/T ARM switch (affected side) Confirm. OFF
- Thrust lever (affected side) Confirm Idle
- FUEL CONTROL switch (affected side) . . . Confirm. CUTOFF
- Engine fire switch (affected side) Confirm Pull

8. ENGINE FIRE

- A/T ARM switch (affected side) Confirm. OFF
- Thrust lever (affected side) Confirm Idle
- FUEL CONTROL switch (affected side) . . . Confirm. CUTOFF
- Engine fire switch (affected side) Confirm Pull

❖ **If** the FIRE ENG message stays shown:

Engine fire switch (affected side):

- Rotate to the stop
- And hold for 1 second

❖ **If** after 30 seconds, the FIRE ENG message stays shown:

Engine fire switch (affected side):

- Rotate to the other stop
- And hold for 1 second

9. AIRSPEED UNRELIABLE

The airspeed or Mach indications are suspected to be unreliable. (Items which may indicate unreliable airspeed are listed in the Additional Information section.)

- **Autopilot** disengage switch Push
- **A/T** ARM switches (both) OFF
- **F/D** switches (both) OFF
- Set the following gear up pitch attitude and thrust:
 - Flaps Extended . . . 10 degrees and 85% N1
 - Flaps Up 4 degrees and 70% N1

LIMITATIONS

Operational

Runway slope +/- 2%

Maximum Takeoff and Landing Tailwind Component 10 knots

Maximum Operating Altitude 43,100 feet pressure altitude

Maximum Takeoff and Landing Altitude 8,400 feet pressure altitude

Turbulent Air Penetration Speed: (in severe turbulence) is defined as:

270 knots below 25,000 feet

280 knots or 0.82 Mach whichever is lower at 25,000 feet and above

Maintain a minimum speed of 15 knots above the minimum maneuvering speed at all altitudes when airspeed is below 0.82 Mach

The maximum demonstrated takeoff and landing crosswind is 38 knots.

Do not operate HF radios during refueling operations.

Do not operate the weather radar in a hangar or within 50 feet of any fuel spill.

Altimeters - RVSM

Prior to takeoff the maximum allowable difference between Captain's or First Officer's altitude display and field elevation is 75 feet.

The standby altimeter does not meet altimeter accuracy requirements of RVSM airspace.

Max Weight Limits:

Aircraft	Taxi	Takeoff	Zero Fuel	Landing
777-200 ER	274,876 Kg	273,969 Kg	199,580 Kg	213,188 Kg
777-200 LR	341,101 Kg	340,194 Kg	209,106 Kg	223,167 Kg
777-300 ER	341,101 Kg	340,194 Kg	237,682 Kg	251,290 Kg

Autopilot

Minimum engage altitude is 200 feet AGL after takeoff.

Without LAND 2 or LAND 3 annunciated, the autopilot must be disengaged below 200 feet AGL.

Non-AFM Operational Information: Don't use FLCH on final approach below 1,000 ft AFE

Auto Land Limits

Headwind 25 knots

Tailwind 10 knots

Crosswind 25 knots

Maximum glideslope angle is 3.25 degrees.

Minimum glideslope angle is 2.5 degrees.

Automatic landings can be made using flaps 20 or 30, with both engines operative or one engine inoperative.

The autopilot flight director system (AFDS) autoland status annunciation must display LAND 2 or LAND 3.

Engine Fuel System

Maximum tank fuel temperature is 49 degrees C.

Tank fuel temperature prior to takeoff must not be less than -40 degrees C or 3 degrees C above the fuel freezing point, whichever is higher.

In-flight tank fuel temperature must be maintained at least 3 degrees C above the freezing point of the fuel being used.

The use of Fuel System Icing Inhibitor additives does not change the minimum fuel tank temperature limit.

The Jet A fuel specification limits the freezing point to -40°C maximum, while the Jet A-1 limit is -47°C maximum.

Reverse Thrust

Non AFM Operational Information AP-BGY - AP-BHW, AP-BID

For ground operation (exclusive of takeoff) in tailwinds and crosswinds between 30 and 45 knots, engine power should be limited to a maximum of 70% N1.

Avoid thrust levels above that required for normal taxi operation in all tailwinds and crosswinds greater than 45 knots.

Intentional selection of reverse thrust in flight is prohibited.

Backing the airplane with use of reverse thrust is prohibited.

APU

The APU's starter motors duty cycle for the electric starter motor and air turbine starter is 3 starts attempts in a 60 minute period each. APU start cycle restrictions are:

Between Starts	Electric Starter Motor Wait	Air Turbine Starter Wait
1 and 2	1 minute	1 minute
2 and 3	1 minute	1 minute



ADIRU

ADIRU alignment must not be attempted at latitudes greater than 78 degrees, 14.75 minutes.

QFE Selection

A QFE altitude reference for the primary flight displays must be selected in the flight management system whenever QFE is used instead of QNH.

Fuel System

Main tanks must be scheduled to be full if center tank fuel is loaded.

The center tank may contain up to 1360 kilograms of fuel with less than full main tanks provided center tank fuel weight plus actual zero fuel weight does not exceed the maximum zero fuel weight, and center of gravity limits are observed.

GPWS - Look-Ahead Terrain Alerting and Display

Prohibited within 15 NM of takeoff, approach or landing at an airport or runway not contained in the GPWS terrain database.

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