

DCA24LA330

OPERATIONAL FACTORS

Attachment 5

Southwest Airlines B737 Flight Operations Manual - Postincident [Excerpts]

April 24, 2025

FLIGHT OPERATIONS MANUAL

Flight Operations General

P Material other than that which is pertinent to flight operations must not be read on the flight deck and must be kept out of public view at all times. Pilots must ensure that their primary attention is not diverted from Flight Deck Crew duties during conduct of the flight.

P Use of MP3 players, iPods, or any other audio-type devices is not authorized on Southwest Airlines flight decks.

These restrictions include any personal discretionary activities that divert a Pilot's attention (e.g., reading newspapers, magazines, or other recreational materials; viewing personal laptops or media players).

3.4 Briefings

Revised: 09/22/2022

Briefings are essential in order to meet Southwest Airlines' Operational Priorities. Briefings provide an opportunity to anticipate and manage risk by planning and are represented by a resource block and the Communication element of the ABCD process in the RRM model. The Captain is responsible for ensuring that briefings provide an opportunity for Crew Members to discuss operational conditions and risk factors associated with the applicable phase(s) of flight. Briefings should be completed within the appropriate window of opportunity and are ideally conducted during a period of low task load.

Briefings should be conducted in a manner that encourages interactive participation and two-way communication among Crew Members to ensure all perspectives are considered. Briefings allow Crew Members to establish a shared mental model, which is a plan of action based on the use of Southwest Airlines policies and procedures for risk mitigation. A shared mental model is achieved when required briefing items and any other relevant risks factors are discussed and mitigation strategies are agreed upon. Relevancy of additional risk factors is assessed by individual Crew Members and discussed as they deem necessary during briefings. Crew Members must maintain vigilance to identify, discuss, and manage relevant risk factors as they arise to maintain a shared mental model.

3.4.1 Crew Briefing

Revised: 05/10/2024

The purpose of the Crew Briefing is to provide an opportunity for a face-to-face meeting between the Flight Deck Crew and Cabin Crew to encourage a team environment and establishment of a shared mental model. Preferably, this briefing is conducted prior to Passenger boarding to allow time for introductions and the discussion of relevant operational conditions (e.g., task loading, additive conditions, Crew factors). If only a partial Crew Briefing is possible, the Captain should delegate the "A" Flight Attendant to brief the other Flight Attendants (i.e., "B," "C," "D").

(CA) Brief the following, as relevant:

- **Crew verification**—Refer to [6.4 Crew Verification Process](#) for additional information.
- **Flight segments**—Number of segments the Captain and First Officer are flying with the Flight Attendants.
- **Weather/turbulence**—Any anticipated weather or predicted turbulence. Show the SkyPath display or WSI SIGMET chart to the Flight Attendants if a hazard area affects the route of flight. Discuss any turbulence or mountain wave activity received from Dispatch with emphasis on times when Flight Attendants should be seated. Refer to [15.3 Turbulence](#) for additional information.
- **Delays**—Any anticipated delays (e.g., weather, operational).
- **Maintenance-related issues** (e.g., applicable *MELs*, Mx Notes, Passenger convenience items).
- **Security considerations**—Authorized armed individuals (e.g., LEOs, FFDOs, Secret Service Agents, FAMs) and any other security considerations (e.g., deportees/inadmissible Passengers).
- **International considerations**—Applicable considerations for flights that operate outside CONUS (e.g., ETOPS, rafts, lavatory/potable water, documents, Language of Destination Origin [LODO] Flight Attendants).

Note: LODO Flight Attendants complete the safety announcements in English and Spanish. The time required to brief Passengers during taxi may be longer than domestic flights.

3.4.2 Captain Briefing

Revised: 05/10/2024

The purpose of the Captain Briefing is to review and plan for all phases of flight by developing and establishing an appropriate shared mental model between both Pilots. The Captain should review the information pertinent to the flight and other resources for issues that might affect the flight. The Captain should discuss task loading, additive conditions, Crew factors, and the plan to use available resources to manage risk and increase performance.

When necessary, manage the risks of task loading by assigning specific PF and/or PM duties and responsibilities.

The Captain Briefing must be completed prior to beginning the Before Start—Originating/Before Start checklist.

(CA) Brief the following required items:

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- **Assign PF/PM Duties**—Who will fly. Consider restrictions (e.g., HGS requirements, New Hire restrictions).

(CA) Brief the following, as relevant:

- **Station Information Page (SIP)**—Applicable operational considerations for departure and destination airports.
- **Alternates**—Departure and destination.
- **Special airports (e.g., CFIT avoidance, special procedures).**
- **MEL items**—Applicable operational considerations.
- **NOTAMs.**
- **Adverse weather**—Discuss appropriate course of action (e.g., avoidance, Precautionary Takeoff Profile).
- **Taxi routing/hotspots/Surface Movement Guidance and Control System (SMGCS)**—Brief the expected taxi routing, applicable hotspots, SMGCS, and any additional considerations depicted on the *Jeppesen* -6/-9 page (10-6/10-9 or equivalent).
- **Runway conditions (e.g., RCC, clutter/contamination).**
- **Rejected takeoff considerations**—Any conditions that adversely affect the aircraft during a rejected takeoff (e.g., adverse weather, runway conditions, *MEL* items).

3.4.3 Pilot Flying Briefing

Revised: 05/10/2024

The purpose of the Pilot Flying Briefing is to review and plan for the takeoff and departure, with specifics, unique to that leg. Both Pilots actively participate and review any new or previously briefed risk factors.

Brief required and any relevant items by referencing the resources available to the Flight Deck Crew (e.g., *Jeppesen* charts, SIPs, *MEL*, weather information).

To verify proper programming, the Pilot Flying briefs the SID waypoint sequence and restrictions from the FMC, and the Pilot Monitoring verifies against the appropriate chart.

The Pilot Flying Briefing must be completed prior to beginning the Before Start—Originating/Before Start checklist.

(PF) Brief the following required items:

- **Clearance**—Review the assigned ATC clearance and resolve any discrepancies.
- **MCP and VHF NAV radio**—
 - Verify MCP and NAV radios are set for the departure.
 - For runways with an engine failure procedure, ensure the appropriate VOR/ILS frequency and course are set (HGS-required takeoffs: N/A).
- **FMC route**—
 - Brief the planned runway, assigned departure, transition, and initial en route waypoint by referencing the resources available to the Flight Deck Crew (e.g., *Jeppesen* charts, SIPs).
 - To verify proper programming, the Pilot Flying reads the waypoint sequence and restrictions from the FMC, while the Pilot Monitoring crosschecks the appropriate chart.
 - When an ATC clearance does not contain an en route portion (e.g., SID to a STAR), brief the assigned arrival and transition from the FMC by reviewing each waypoint on the LEGS page before departure.
 - For non-charted departures, review the initial heading or course, applicable restrictions to altitudes and turns, NAV setup, and DME restrictions.
 - Manage discontinuities. Refer to *B737 AOM* 4.9.2 Managing Discontinuities.
- **Engine failure procedure**—
 - PWB engine failure procedures take precedence over the *Jeppesen* -7 series pages.
 - For an engine failure after V_1 , discuss the planned airport or runway for the return. Refer to *B737 AOM* 17.4 PWB Engine Failure Procedures for more information.

(PF) Brief the following, as relevant:

- **Automation and navigation**—Whenever there are multiple options, brief planned engagement of LNAV, VNAV, or other navigation modes. If the plan is not clearly covered by *FOM* normal procedures, the Pilot Monitoring should be made aware of how the Pilot Flying intends to fly the aircraft.
- **HGS takeoff**—
 - Discuss whether HGS takeoff is required (i.e., RVR below 500).

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- Review HGS takeoff set-up requirements. Refer to *B737 AOM* 9.2.6 HGS Takeoff and Departure for procedures and specific information.
- **Required minimum climb gradient**—If applicable, brief the required minimum climb gradient for the planned and alternate runways and/or departure procedures. This information may be included in the SID and/or *Jeppesen -9A* page.
 - Note:** If a runway or departure other than the planned runway or departure is assigned and not previously briefed, reassess any required minimum climb gradient.
- **Transition altitude (if other than 18,000 ft).**

Note: The Captain may wish to amend or revise some of these briefing items before takeoff.

Note: Re-accomplish the Pilot Flying Briefing if an amended clearance is received, or if changes are made to FMC programming or takeoff performance prior to completion of the Before Push checklist.

3.4.4 Arrival Briefing

Revised: 05/10/2024

The purpose of the Arrival Briefing is for the Pilot Flying to review and plan the descent, approach, landing, and taxi-in phases, with specifics unique to that leg.

Brief required and any relevant items by referencing the resources available to the Flight Deck Crew (e.g., *Jeppesen* charts, SIPs, *MEL*, weather information).

To verify proper programming, the Pilot Flying briefs the arrival and approach waypoint sequence and restrictions from the FMC, and the Pilot Monitoring verifies against the appropriate chart.

The Arrival Briefing should be completed prior to the top of descent during a period of low task load, or on the ground for short flights that contain routing from a SID to a STAR.

(PF) Brief the following required items:

CAUTION: The FMC could provide an incorrect presentation of the lateral and/or vertical profiles if waypoints are incorrectly entered, or if a route discontinuity exists that is not corrected before conducting the STAR or an approach. Refer to *B737 AOM* 4.9.2 Managing Discontinuities for additional guidance.

- **STAR/transition**—
 - Brief the assigned arrival, transition, and expected runway referencing the resources available to the Flight Deck Crew (e.g., *Jeppesen* charts, SIPs).
 - FMC route—To verify proper programming, the Pilot Flying reads the waypoint sequence and restrictions from the FMC, while the Pilot Monitoring crosschecks the appropriate chart.
 - Review any additional considerations, including complex arrival restrictions, or any other situations where it is necessary to review or define Flight Deck Crew responsibilities.
- **Altitude/speed restrictions**—Verify altitude and speed restrictions. If flying a low Cost Index, brief any necessary speed inputs to the VNAV DES page in order to comply with speed restrictions on the STAR. If no speed is associated with the STAR, set XX/280.
- **Approach (type)**—For more information, refer to [3.4.4.1 Approaches](#), which includes visual and instrument approaches.
- **Flaps.**
- **Braking**—Discuss autobrake setting/disengagement/cooling.
- **Touchdown point/exit plan**—The touchdown point includes a discussion of the latest touchdown point (LTP). Refer to *B737 AOM* 12.1.1 Normal Landing. The exit plan includes a discussion regarding the point of exit from the runway and other pertinent information regarding the exit.

(PF) Brief the following, as relevant:

- **Transition level**—Brief non-standard transition levels (e.g., MMUN/CUN, TNCA/AUA).
- **Adverse weather**—Discuss appropriate course of action (e.g., avoidance, windshear).
- **NOTAMs.**
- **SIP**—
 - Brief any applicable operational considerations for the destination airport.
 - Review noise abatement.
- **Special airports (e.g., CFIT avoidance, special procedures).**

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- **MEL items**—Discuss any *MELs* that affect aircraft operations.
- **LAHSO procedures.**
- **Transfer of aircraft control.**
- **Taxi routing/hotspots/SMGCS**—Brief the expected taxi routing, applicable hotspots, SMGCS, and any additional considerations depicted on the *Jeppesen* -6/-9 page (10-6/10-9 or equivalent).

3.4.4.1 Approaches

Revised: 12/14/2023

The Pilot who will fly the procedure briefs the following approach information:

- Brief the published approach type that satisfies expected conditions (i.e., visual or instrument).
- Brief the portions of the instrument approach expected to be used to achieve visual landing conditions.

Visual Approaches

Under VMC, or anytime ATIS indicates “Visual Approaches,” reference a charted procedure to back up the visual approach. This helps prevent wrong runway and airport errors. Refer to *B737 AOM* 11.2.1 Visual Approach Policies.

Brief the components of the approach which may provide assistance in identifying the correct landing runway. These components may include items such as:

- NAVAID frequency and course
- Runway lighting
- TDZE
- Airport runway configuration

For setting the missed approach on a planned visual approach, brief the altitude to be set. It is recommended to use the altitude of the charted procedure referenced as a backup. For approaches with no instrument approach available or no missed approach altitude provided, set an appropriate altitude for the airport environment (recommended 1,500 ft AAE). This altitude should be set approaching 1,000 ft above TDZE. When setting the MAA, ensure the aircraft is at least 300 ft below the altitude to prevent the aircraft from leveling off.

Note: The missed approach altitude is a plan by the Flight Deck Crew and does not constitute a clearance. ATC will issue a clearance when a go-around/missed approach is initiated.

If conditions require flying some portion of a charted instrument approach procedure due to weather, or the ATIS indicates instrument approaches in use, complete the following:

- Brief those portions of the instrument approach procedure that will achieve visual landing criteria. For example, if an undercast cloud deck prevents a visual approach flown directly from the arrival, brief and fly the portions of the published instrument approach that will take the aircraft to visual approach conditions.
- Upon receiving ATC clearance for a visual approach, use visual approach rules through landing or go-around. Some airports mandate instrument arrivals to visual approaches regardless of weather conditions. For example, LAX ATIS typically directs, ‘expect ILS to 24R and 25L, visual approaches to all runways.’ For these airports, expect to fly the charted instrument approach and missed approach unless cleared by ATC for a visual. Then, visual approach rules apply.

Instrument Approaches

A full instrument approach briefing is required when any of the following criteria apply:

- The runway is not expected to be in sight by the FAF/GSIA.
- Rain is reported or visible in the airport vicinity.
- Significant weather is reported or apparent in the airport vicinity (e.g., thunderstorms, fog, blowing dust, snow).
- Restricted visibility is reported or apparent in the airport vicinity (e.g., haze, mist, low sun angles).

Refer to *B737 AOM* 11.1.4.1 Instrument Approach Briefing and 11.1.4.2 General Approach Policies.

Brief the following items in the instrument approach briefing, as relevant:

- Approach Chart—
 - Identification (i.e., page number, chart name, runway, effective date).
 - Waypoint sequence and restrictions—Verify proper FMC programming.
 - FAF or GSIA (e.g., altitude check).
 - DA, DDA, or MDA.

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- Runway and approach lighting—Brief the names of the lighting and what the lighting will look like on final approach. Emphasize the following:
 - Type of lead-in lighting (i.e., steady, flashing)
 - Centerline lighting (e.g., none, centerline lights, full touchdown zone lights)
 - VASI/PAPI location and type

Note: For non-precision approaches, brief where the runway is expected to be when breaking out of the weather.

- CFIT avoidance—Review minimum safe altitudes, terrain, and obstacles.
- NAV radio set up—Set the navaid frequency, final approach course.
- EFIS Control Panel MINS Selector-BARO or RADIO (Special Authorization CAT I, CAT II, or CAT III).
- Applicable NOTAMs, FDC NOTAMs, field conditions, and special notes.
- RNP Availability Forecast (RAF), for RNAV approaches.
- Current airport temperature is within charted maximum and minimum temperature limitations for uncompensated Baro-VNAV procedure.

If planning an RNAV (RNP) or RNAV (GPS) approach, program the FMC and brief additional RNAV approach procedures. Refer to B737 AOM 4.9.4 Arrival Programming.

(CA) If planning an HGS approach, program the HGS Control Panel (HCP) or MCDU HGS menu and brief HGS procedures.

The appropriate Reference Card may be used to assist meeting the programming and briefing requirements.

For a go-around/missed approach, review the following:

- Missed approach point and procedure.
- Planned use of automation.
- Non-standard items (e.g., full go-around thrust needed to meet non-standard missed approach climb gradient).
- When setting the altitude for visual approaches, it is important to assess the airport environment (e.g., weather, terrain, traffic, Jepp Attention All Users Page).

3.4.5 Communicate and Collaborate

Revised: 04/23/2020

When able, a brief conversation between Captains and Operations Agents prior to the start of boarding can also benefit from the inclusion of a quick discussion of other factors that, if relevant to a specific flight, may affect its targeted departure. This may be accomplished at anytime when appropriate. Examples of such items include, but are not limited to, the following:

- Anticipated Customer Count
- Planned Delays for Inbound Connecting Customers
- Potential Weight Issues
- MEL or Maintenance Issues
- Jumpseat Riders (Cabin or Flight Deck)
- Federal Air Marshals, LEOs, or Federal Flight Deck Officers (FFDOs)
- Weather Challenges/Deicing
- Ticket Counter or TSA Checkpoint Issues
- Batteries for power-assisted devices that will be loaded in cargo bins
- Aircraft Servicing

3.4.6 Debriefing

Revised: 10/14/2024

The primary purpose of debriefing is for Flight Deck Crew Members to improve their future performance. Debriefings are integral to the continuous ABCD process because they allow Flight Deck Crew members to reflect on past performance to understand what went well and what did not. Debriefings provide leadership and mentorship opportunities by reinforcing positive outcomes, correcting mistakes, and considering any important post-flight activities. For Pilots, post-flight activities can include maintenance entries and any required or voluntary safety reporting.

Debriefings should be conducted during a period of low task load to support interactive participation and two-way communication and to ensure all perspectives are considered. Debriefings are opportunities for self-improvement and are most effective when Flight Deck Crew Members are objective and honest about their performance and participate with humility and accountability.