

DCA22LA126

OPERATIONAL FACTORS/HUMAN PERFORMANCE

Attachment 5: FedEx Express Flight Operations Manual [Excerpts]

6.07 ARRIVAL BRIEFING: PLANNING AND BRIEFING THE DESCENT AND APPROACH

Planning

Crewmembers must review applicable destination NOTAMs, applicable Airport Info (10-9x20-9x), FedEx Parking (10-10x/20-20x) and Airport Qualification (19-0x) pages to prepare for arrival. Obtain destination Arrival ATIS as early as possible with the goal of completing arrival planning and briefing prior to commencement of the initial descent.

When destination weather requires an Instrument Approach, the preferred order of approaches for any given runway is:

- PA (ILS)
- APV
- NPA

If the airport is conducting instrument approaches to more than one runway and it is not known which will be assigned, it is desirable to plan for and brief the most likely approach and at least one alternate.

When destination weather permits a Visual Approach, the PF should build, brief and select an instrument approach procedure as a backup (when available). Priority must be given to an instrument approach with vertical guidance to the runway in use. Reference the applicable Glideslope, VPATH or VGSI during the approach.

Refer to the QRH Approach Procedure Review to assess approach procedure requirements or limitations, and review approach procedure guidelines, techniques and callouts.

After the PF has selected an approach procedure, each crewmember must review the arrival and approach procedures prior to the briefing.

NOTES

Both crewmembers must independently verify that the FMS is programmed properly and will provide lateral, vertical, and speed commands consistent with the arrival, approach, and missed approach profiles and restrictions. For the initial part of the brief, the PF should brief items from the published procedure (page number, notes, etc.) and then continue to brief the actual arrival and approach procedure referencing the FMS while the PM confirms the arrival and approach procedure is correct using the appropriate chart.

The PM will determine landing performance data using either the Airplane Performance Software (when required or desired) or the QRH Quick Reference Landing Data table.

Briefing - General

The PF will give an Arrival Briefing to include expected descent and approach procedures. Arrival and approach briefings should be "brief and to the point" Long briefings are counterproductive to crewmember retention and understanding; however the Captain may choose to increase the detail of the briefing with consideration of the weather and crew experience.

Brief only items that are unique to the planned arrival or approach, or affect the safe/legal operation of the aircraft under the prevailing conditions.

The goals of the brief are to:

- Enhance communications, promote effective teamwork and ensure effective situational awareness of the crew.
- Identify and brief significant known threats to safety from top of descent through approach and landing, and crew strategies to reduce the potential for error.
- Brief any non-standard procedures to be used during descent and approach.

Briefing - Arrival

The PF briefs the arrival including the following, only as appropriate or applicable:

- Arrival chart title and page number.
- Arrival procedure routing with Altitude and Airspeed restrictions.
- Notes and Remarks.
- Transition level when other than FL180.
- Terrain/CFIT risks and EGPWS use.
- Airport Info, FedEx Parking and Airport Qualification pages.
- Any special procedures or crew duties (special altimetry procedures, customs, agriculture, etc.)

Briefing - Approach

The PF briefs the approach including the following, only as appropriate or applicable:

- Review applicable approach requirements, limitations, guidelines, techniques and callouts.
- IAP chart title, runway, and page number.
- Approach frequency/identifier and final approach course.
- Final approach fix crossing altitude.
- VDA Milestones (CDFA) or intermediate minimum crossing altitudes (step-down fix)

NOTE

Any deviations from the briefed descent profile must be brought to the attention of the PF by the PM. The PF must acknowledge the deviation and where required, take corrective action.

- Approach minimums (visual, AH, DH, DA, DDA or MDA) and weather required.
- 100 feet Baro-height above TDZE (**Non-Precision** or CAT I ILS)
- VDP (if depicted).
- Approach light configuration.
- VGSI aids (VASI, PAPI, etc.).
- Missed approach procedure(s) for the approach to be flown.

NOTE

For a visual approach, unless specific missed approach procedures are supplied via chart and/or ATC, expect to initially fly runway heading and climb to an altitude at or above 1,500 feet AFE. Upon executing a missed approach from a visual, the PM should contact ATC as soon as practical to clarify ATC desires.

- Any published Climb Gradient requirement.
- Notes and Remarks.
- Noise abatement requirements.
- Wind and/or gust additives.
- Flap setting (for aircraft with multiple possible settings).
- MCP / FCP / FMS: intended use of Lateral, Vertical, and Speed modes
- Intended use of autopilot and autothrottles.
- Intended use of autobrakes and autospoilers.
- Landing distance, runway length, and planned turnoff.
- Any special procedures, crew duties, or NOTAMs.

- If weather is near CAT I minimums, the Captain should brief use of the EFVS, if available and qualified, to continue a domestic CAT I approach below minimums to 100 feet above TDZE. The Captain will also brief use of OpSpec C048 to start a domestic CAT I approach if the weather conditions may require its use
- Any airplane systems malfunctions or deferrals/restrictions that may affect the approach or landing.

NOTE

During last-minute runway/approach changes or during abnormal operations, the PM may build and brief the approach. If time does not allow for re-brief and verification of proper FMC/cockpit setup, the flight crew should ask for extended vectors or holding until briefing/setup can be accomplished.

6.09 LANDING RUNWAY REQUIREMENTS

Prior to landing, flight crews must determine landing performance using the Airplane Performance Software (APS) or QRH landing data as appropriate. The following criteria must be considered:

- Runway to be used,
- Meteorological conditions,
- Runway conditions in terms of the Runway Condition Code (RwyCC); runway surface condition, e.g., dry, wet, snow type and depth, ice and slush; or the braking action reported or expected, e.g., good, medium, or poor. Unless the runway is completely dry, it should be considered wet or contaminated (RwyCC 1-5). For example, in the U.S., runway FICON NOTAMs do not include RwyCC numbers when coverage does not exceed 25% of the runway surface, but any water or frozen contaminant should be included, e.g., 10% WET. In all such cases, use of RwyCC 1-5 is at the Captain's discretion based on consideration of the available and suitable reports; refer to **"8.03 Adverse Weather Ground Conditions"**.
- Airplane weight and configuration, and
- Planned use of airplane ground deceleration devices, e.g., thrust reverser operative or inoperative.
- Published MAP Climb Gradient capability.

The Captain shall ensure an approach is not continued below 1,000 ft. above airport elevation unless he is satisfied that, with the runway surface condition information available, a safe landing can be made.

NOTE

For any abnormal or emergency condition that occurs in flight which affects the ground deceleration devices (other than thrust reverser), the landing data provided by the QRH should be used.

Runway Edge Lights

- Night landing -- Runway edge lights sufficient to define the runway edge through rollout and clearing the runway are required.
- All landings -- High intensity runway edge lights are a required component in the measuring and use of RVR. High intensity runway edge lights are required when the visibility is less than 1/2 mile.

6.10 RUNWAY OVERRUN PREVENTION

Runway overruns are a continuing area of concern for the airline industry. Hence, it is important to understand the hazards that increase the risk of a runway overrun. Hazards identified are:

- A non-stabilized approach

- If a verbal verification is not received, the pilot who set the altitude points to the Altitude Window to prompt verbal verification. If verbal verification is still not received, the pilot states: "Confirm Altitude."
- If any discrepancy exists, immediately contact ATC for clarification, or resolve the discrepancy if other than an ATC cleared altitude.

2.64 HEAD-UP DISPLAY (HUD)/ENHANCED FLIGHT VISION SYSTEM (EFVS)

The HUD/EFVS system is an advanced flight information display that provides safety enhancements and increased situational awareness across the spectrum of FedEx flight operations, but especially in the takeoff and approach-to-landing phases. In order to fully utilize all the features and benefits of the technology, it is incumbent upon Captains to develop and maintain a high-level of proficiency with both the HUD and the incorporated EFVS.

To facilitate the maintenance of proficiency and take full advantage of safety enhancements, Captains must deploy and use the HUD (when equipped and operable) as the primary reference for all phases of flight below 10,000 feet AGL when operating as the:

- PF: 50-percent of legs minimum
- PM: 100-percent of legs

The HUD (when equipped and operable) must be used at all times when conducting the following operations:

- Takeoff or approach with windshear reported in the vicinity of the airport.
- EFVS operation.
- CAT II ILS approach (EFVS use optional).
- CAT III ILS approach (EFVS use optional).
- HUD Takeoff Guidance required < RVR 500ft/150m (EFVS use optional).
- Low-visibility taxi ≤ RVR 1200 (EFVS use optional).

2.65 ATC COMMUNICATIONS

Radio discipline is very important to ensure there is no confusion as to what is being said or who has received the message.

It is important to:

- Use the full call sign, including "FEDEX" and flight number, at all times.
- Avoid "radio slang" terms. Always use standard phraseology and enunciate clearly at all times.
- When operating an aircraft designated as "Heavy", use the term "HEAVY" in the call sign as follows:
 - Internationally, include the word "HEAVY" immediately after the aircraft call sign in the initial radiotelephone contact between such aircraft and ATS units.

NOTE

The route manual may provide additional guidance in some countries.

- Domestically, include the word "HEAVY" immediately after the aircraft call sign in all communications in the terminal area.

2.67 LEG SWAPPING

It has become customary for the Captain and First Officer to fly alternate legs. The Captain should consider recent landing experience when assigning flight legs.

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