Docket No. SA-533

Exhibit No. 2-LL

NATIONAL TRANSPORTATION SAFETY BOARD

WASHINGTON, D.C.

Empire Airlines Stabilized Approach Criteria

(4 Pages)

ATTACHMENT
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Approach Procedures

A. VFR and IFR arrival procedures shall be conducted in accordance with ATC, Part 121, and the Company's operations specifications. VFR operations, while not prohibited, must be used only in accordance with C77 of the Operations Specifications.

B. IFR approach procedures shall be conducted in accordance with ATC and the Company's operations specifications. **(121.567, .651, .659)**

(1) Stabilized Approach and Approach Standardization

(a) Empire has established procedures for ensuring that each approach to an airport, VFR or IFR, is accomplished using standardized procedures and is flown in a stabilized configuration. Specific criteria and limitations for each type of aircraft can be found in Empire's FAA approved Flight Training Manual.

(2) Initial Approach

(a) When making an initial approach to an instrument approach facility on instruments or on top of overcast or clouds, pilots will not descend below the minimum altitude for initial approach specified in the instrument letdown charts for such station until arrival over the instrument approach facility has been definitely established. The instrument approach procedures and minimums specified for an airport shall be strictly observed. **(121.659)**

(3) Controlling Weather Reports

(a) The ceiling and visibility values in the main body of the latest weather report are controlling for VFR and IFR takeoffs and landings and for instrument approach procedures for all runways.

(b) However, if the latest weather report (including an oral report from the control tower) specifies a runway visibility or a runway visual range for a particular runway, that specified value controls for VFR and IFR takeoffs and landings and straight-in approaches for that runway. **(121.655)**

(c) An approach will not be continued past the final approach fix unless the latest weather report issued for that airport reports the visibility to be equal to or greater than the visibility minimums prescribed for that procedure. **(121.651)**

E. Verify that the proper takeoff weight card is displayed for the takeoff gross weight and set the bugs as follows:

	Yellow Bug	Internal Bug	White Bug Normal	Red Bug Icing
Takeoff	V_1 / V_R	V_2	VmLB0	VmLB0

F. Engine Torque Bugs – Determine and set. Use OAT from source other than aircraft if possible.

G. Low Bank will be used until achieving White Bug plus 10 on all takeoffs and go-arounds.

H. Entering Icing Conditions At or Below Acceleration Altitude

If entering icing conditions at or below acceleration altitude ensure that the following items are briefed and completed:

(1) **Performance Data:** Determine max takeoff weight and acceleration altitude using the ICING CONDITIONS performance data.

(2) **Icing Speeds:** Determine and bug V1/VR, V2, and White Bug speeds from the ICING CONDITIONS column of the speed card.

(3) **Level 2s:** Brief for level 2s selected ON during the After Start Check. Level 2s include the PROPS, HORNS, SIDE WINDOWS, and ENG ANTI-ICING systems. Select PROP MODE SEL according to SAT.

(4) **Oil Temp:** Brief that a check of the oil temperature will be made prior to takeoff verifying that the oil temperature is greater than 45°C to ensure adequate inlet splitter anti-icing.

I. Entering Icing Conditions Above Acceleration Altitude

When icing conditions are encountered above acceleration altitude use NORMAL CONDITIONS performance data and speeds for takeoff. This will allow the maximum payload for takeoff.

J. Takeoff Brief for Engine Failure after V_1 in Icing Conditions

When the takeoff will be made in icing conditions, the briefing should include the normal "Takeoff Briefing Items" and at least the following points:

- At ACC ALT ..... "ALT HLD"
- At White Bug ..... "IAS" or PF use TCS (continue climb with flaps 15°)
- At Altitude*..... "ALT HLD" (if obstacles exist continue climb flaps 15° at white bug)
- At Red Bug ..... "FLAPS UP" (if obstacles exist continue flaps 15° at white bug)

** "At Altitude" may mean as ATC assigned, missed approach, initial approach, or en route to alternate airport.*

Stabilized Approach Criteria

A. Approaches will be stabilized by 1000' height above touchdown (HAT) in IMC and by 500' HAT in VMC. An approach is considered stabilized when all of the following criteria are met:

(1) The aircraft is on the correct track (correct track is one for which the correct localizer, radial, or other track guidance has been set, tuned, and identified, and is being followed by the flight crew);

(2) Only small changes in heading and pitch are required to maintain the correct track;

(a) Bank angle – not more than 30°

(b) Rate of descent ± 300 fpm deviation from target.

(3) The aircraft speed is not more than V_{APP} +20 knots and not less than V_{APP};

(4) The aircraft is in the proper approach configuration;

(5) Sink rate is maximum 1000 FPM. If an approach requires a sink rate greater than 1000 FPM, a special briefing should be performed;

(6) Power setting appropriate for configuration, and

(7) All briefings and checklists have been performed.

Windshear

This phenomenon may be defined as a notable change in wind direction and/or speed over a short distance.

Windshear can be encountered in the vicinity of thunderstorms, into rain showers (even without thunderstorms), during a frontal passage or on airports situated near large areas of water (sea breeze fronts).

Severe windshear encountered above 1000 feet, while unpleasant, can generally be negotiated safely. However, if it is encountered below 500 feet on take off or approach/landing, it is potentially dangerous. As far as possible, this phenomenon must be avoided.

Procedure at takeoff:

- Delay the take off. If a low level windshear is reported calculate VR, V2 at the maximum takeoff weight available for the day.
- When clear of obstacles, accelerate as much as possible and clean up the aircraft.
- Climb at the normal climb speed.

Procedure during an approach: If a windshear is encountered,

- Initiate a normal go around procedure with 10° pitch.
- When positively climbing at a safe altitude, retract the gear and complete the normal go around procedure.

Caution: The positive rate of climb must be verified on at least two instruments.

Note 1: Leaving the gear down until the climb is established will allow to absorb some energy on impact, should the microburst exceed the aircraft capability to climb.

Note 2: Ten degrees pitch attitude is the best compromise to ensure a climbing path together with an acceptable maximum AOA.