

2. Pilots of aircraft that produce strong wake vortices should fly as closely as possible to the approach course centerline or to the extended centerline of the runway of intended landing as appropriate to conditions.

f. Pilots operating lighter aircraft on visual approaches in-trail to aircraft producing strong wake vortices should use the following procedures to assist in avoiding wake turbulence. These procedures apply only to those aircraft that are on visual approaches.

1. Pilots of lighter aircraft should fly on or above the glidepath. Glidepath reference may be furnished by an ILS, by a visual approach slope system, by other ground-based approach slope guidance systems, or by other means. In the absence of visible glidepath guidance, pilots may very nearly duplicate a 3-degree glideslope by adhering to the "3 to 1" glidepath principle.

**EXAMPLE-**

*Fly 3,000 feet at 10 miles from touchdown, 1,500 feet at 5 miles, 1,200 feet at 4 miles, and so on to touchdown.*

2. If the pilot of the lighter following aircraft has visual contact with the preceding heavier aircraft and also with the runway, the pilot may further adjust for possible wake vortex turbulence by the following practices:

(a) Pick a point of landing no less than 1,000 feet from the arrival end of the runway.

(b) Establish a line-of-sight to that landing point that is above and in front of the heavier preceding aircraft.

(c) When possible, note the point of landing of the heavier preceding aircraft and adjust point of intended landing as necessary.

**EXAMPLE-**

*A puff of smoke may appear at the 1,000-foot markings of the runway, showing that touchdown was that point; therefore, adjust point of intended landing to the 1,500-foot markings.*

(d) Maintain the line-of-sight to the point of intended landing above and ahead of the heavier preceding aircraft; maintain it to touchdown.

(e) Land beyond the point of landing of the preceding heavier aircraft.

3. During visual approaches pilots may ask ATC for updates on separation and groundspeed with

respect to heavier preceding aircraft, especially when there is any question of safe separation from wake turbulence.

### 7-3-9. Air Traffic Wake Turbulence Separations

a. Because of the possible effects of wake turbulence, controllers are required to apply no less than specified minimum separation to all IFR aircraft, to all VFR aircraft receiving Class B or Class C airspace services when operating behind super or heavy aircraft, and to small aircraft operating behind a B757.

1. Separation is applied to aircraft operating directly behind a super or heavy at the same altitude or less than 1,000 feet below, and to small aircraft operating directly behind a B757 at the same altitude or less than 500 feet below:

(a) **Heavy behind super** – 6 miles.

(b) **Large behind super** – 7 miles.

(c) **Small behind super** – 8 miles.

(d) **Heavy behind heavy** – 4 miles.

(e) **Small/large behind heavy** – 5 miles.

(f) **Small behind B757** – 4 miles.

2. Also, separation, measured at the time the preceding aircraft is over the landing threshold, is provided to small aircraft:

(a) **Small landing behind heavy** – 6 miles.

(b) **Small landing behind large, non-B757** – 4 miles.

**REFERENCE-**

*Pilot/Controller Glossary Term- Aircraft Classes.*

3. Additionally, appropriate time or distance intervals are provided to departing aircraft when the departure will be from the same threshold, a parallel runway separated by less than 2,500 feet with less than 500 feet threshold stagger, or on a crossing runway and projected flight paths will cross:

(a) Three minutes or the appropriate radar separation when takeoff will be behind a super aircraft;

(b) Two minutes or the appropriate radar separation when takeoff will be behind a heavy aircraft.

(c) Two minutes or the appropriate radar separation when a small aircraft will takeoff behind a B757.