



SAFO

Safety Alert for Operators

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Flight Standards Service
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U.S. Department
of Transportation
**Federal Aviation
Administration**

http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/safo

A SAFO contains important safety information and may include recommended action. SAFO content should be especially valuable to air carriers in meeting their statutory duty to provide service with the highest possible degree of safety in the public interest. Besides the specific action recommended in a SAFO, an alternative action may be as effective in addressing the safety issue named in the SAFO.

Subject: Re-categorization (RECAT) of FAA Wake Turbulence Separation Categories at Specific Airports

Purpose: This SAFO advises airplane operators of changes to the current FAA wake turbulence separation categories at specific airports through the optimization of wake separation categories for today’s fleet mix based on improved knowledge of wake vortex behavior.

Background: RECAT of FAA Wake Turbulence Separation Categories is currently in effect at Memphis International Airport (MEM) and will expand to the following facilities on or about:

- Louisville International-Standiford Field (SDF) – operational as of September 9, 2013
- Miami International Airport (MIA) – 0600 EST (1100Z), December 1, 2013
- Cincinnati/Northern Kentucky International Airport (CVG) – TBD
- San Francisco International (SFO) – TBD
- Atlanta International Airport (ATL) – TBD
- Philadelphia International Airport (PHL) – TBD

Discussion: The FAA currently uses six (6) wake turbulence separation categories based primarily on weight: Super (A380), Heavy, B757, Large, Small+, and Small. RECAT applies advances in knowledge of wake physics over the breadth of the current wake categories. Table 1 details the current FAA wake separation standards. The FAA recently approved a re-categorization of wake turbulence separation minima from the current standard to a new standard (RECAT Phase I). This approval was based on years of joint research and development by the FAA, Eurocontrol, scientific experts in wake, and experts in safety and risk analysis. Categories are now based on weight, certificated approach speeds, wing characteristics, along with special consideration given to aircraft with limited ability to counteract adverse rolls. RECAT places aircraft into six (6) categories (labeled A-F) for both departure and arrival separation.

Table 1: Current FAA Wake Separation Standards (at the Threshold)

| | | Follower (Nautical Mile) | | | | |
|--------|-------|--------------------------|-------|------|-------|-------|
| | | Super | Heavy | B757 | Large | Small |
| Leader | Super | 2.5 | 6 | 7 | 7 | 8 |
| | Heavy | 2.5 | 4 | 5 | 5 | 6 |
| | B757 | 2.5 | 4 | 4 | 4 | 5 |
| | Large | 2.5 | 2.5 | 2.5 | 2.5 | 4 |
| | Small | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |

Table 2 details the RECAT wake separation standards.

Table 2: RECAT Wake Separation Standards

RECAT Separation Matrix

| | | Follower | | | | | |
|--------|---|----------|-----|-----|-----|-----|-----|
| | | A | B | C | D | E | F |
| Leader | A | MRS | 5.0 | 6.0 | 7.0 | 7.0 | 8.0 |
| | B | MRS | 3.0 | 4.0 | 5.0 | 5.0 | 7.0 |
| | C | MRS | MRS | MRS | 3.5 | 3.5 | 6.0 |
| | D | MRS | MRS | MRS | MRS | MRS | 5.0 |
| | E | MRS | MRS | MRS | MRS | MRS | 4.0 |
| | F | MRS | MRS | MRS | MRS | MRS | MRS |

- Separation was increased for some or all aircraft pairs
- Separation remained the same for some or all aircraft pairs
- Separation was decreased for some or all aircraft pairs
- MRS Minimum Radar Separation (3NM, or 2.5 NM when existing requirements are met)

Table 3, illustrates the current wake separation standard and the RECAT separation standard between a B767 and B747-400.

Table 3: Example RECAT Wake Separation

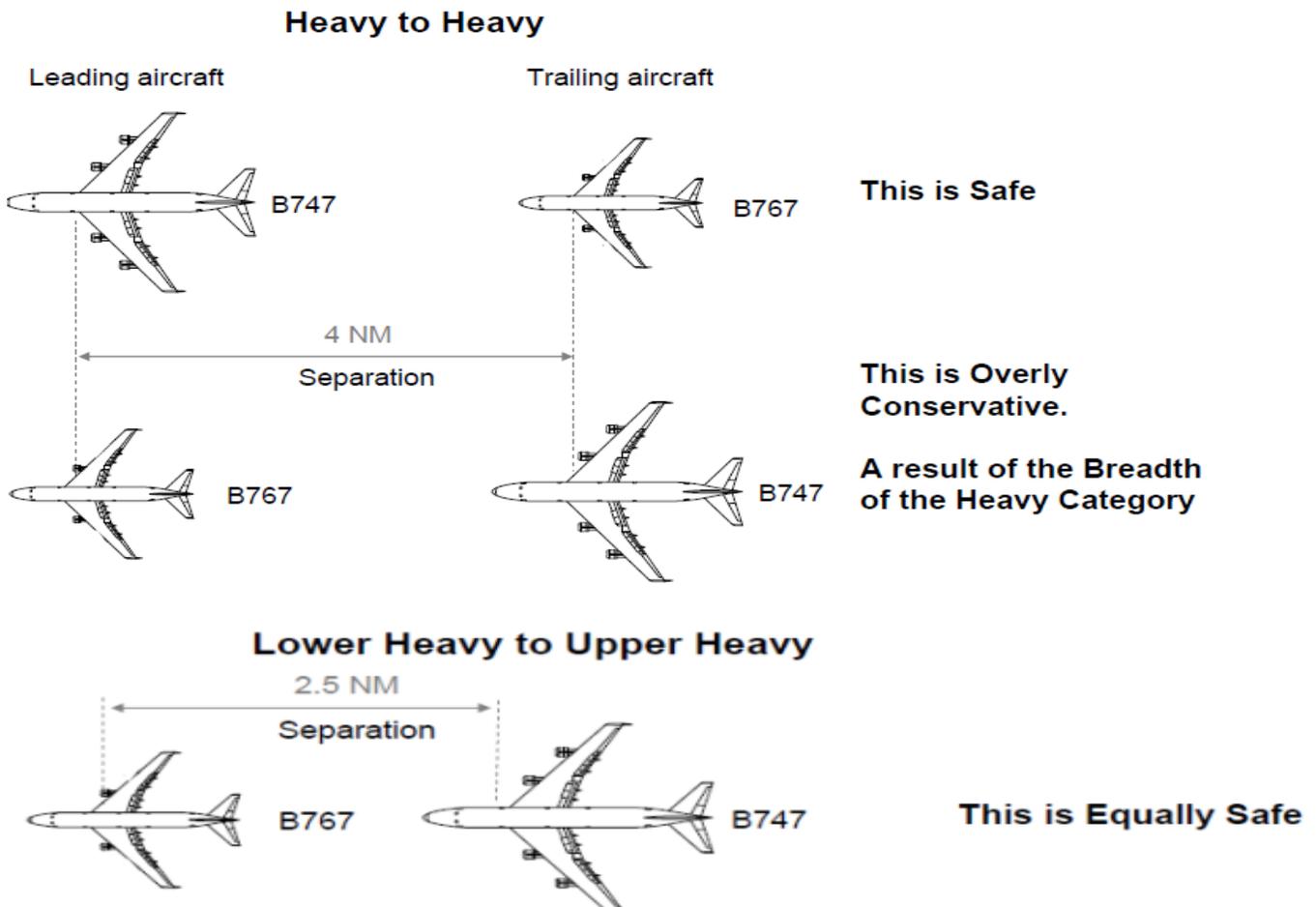


Table 4: Example Aircraft Assignment to Proposed Six Category System

| Category A | Category B | Category C | Category D | Category E | Category F |
|------------|-------------|------------|-----------------|------------|------------|
| A380 | B747 series | MD11 | B757 series | AT72 | E120 |
| AN-225 | A340 series | B763 | B737 series | RJ100 | B190 |
| | B777 series | A306 | A320 series | RJ85 | C650 |
| | A330 series | C-17 | B727 series | B463 | H25B |
| | C-5 | | MD80 series | B462 | C525 |
| | | | DC9 series | E170 | |
| | | | E190 | CRJ1/2 | |
| | | | B717 | CRJ7/9 | |
| | | | GLF5 | AT45 | |
| | | | DH8D | AT43 | |
| | | | F100 | GLF4 | |
| | | | F70 | SF34 | |
| | | | C-130 series | DH8A/B/C | |
| | | | C/KC-135 series | E135/145 | |

Recommended Action. All pilots operating at these facilities should become familiar with the new RECAT wake separations. Familiarity with RECAT wake separation standards is particularly important during visual approach operations as pilots assume responsibility for avoiding wake turbulence when cleared to visually follow preceding traffic. Additionally, pilots should note that controller phraseology will not change for participating aircraft. Operators experiencing a wake event should follow company protocols for reporting such an event. Pilots experiencing a wake event should follow company protocols for reporting such an event. Pilots without event reporting procedures should file a NASA ASRS report.

Contact: For questions or comments specific to RECAT operations at the following facilities:

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