

NOTICE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
Air Traffic Organization Policy

N JO 7110.728

Effective Date:
December 15, 2016

Cancellation Date:
April 27, 2017

SUBJ: Same Runway Separation, Wake Turbulence Separation for Intersection Departures, Intersecting Runway/Intersecting Flight Path Operations, and Radar Separation Minima.

1. Purpose of This Notice. This notice adds a parallel runway centerline separation requirement for small aircraft departing behind B757 aircraft to Federal Aviation Administration (FAA) Order JO 7110.65, Air Traffic Control, Paragraph 3-9-6, Same Runway Separation, and Paragraph 3-9-7, Wake Turbulence Separation for Intersection Departures; relocates the separation requirement for aircraft departing parallel runways separated by 2,500 feet or more from Paragraph 3-9-8 to Paragraph 3-9-6; makes editorial corrections to Paragraphs 3-9-6, 3-9-8, 3-9-9, and 3-9-10; and modifies the notes to Paragraph 5-5-4, Minima, Subparagraph g.3.

2. Audience. This notice applies to the following Air Traffic Organization (ATO) service units: Air Traffic Services, Mission Support, and System Operations; and all associated terminal air traffic control facilities.

3. Where Can I Find This Notice? This notice is available on the MyFAA employee Web site at https://employees.faa.gov/tools_resources/orders_notices/ and on the air traffic publications Web site at http://www.faa.gov/air_traffic/publications/.

4. Procedures. Amend the following paragraphs in FAA Order JO 7110.65:

a. Paragraph 3-9-6, Same Runway Separation.

Title through d. Reference, No Change

e. The minima in Para 5-5-4, Minima, subparagraph g, may be applied in lieu of the time interval requirements in subparagraphs f, g, **and h**. When Para 5-5-4, Minima, is applied, ensure that the appropriate radar separation exists at or prior to the time an aircraft becomes airborne.

REFERENCE -

FAAO JO 7210.3, Para 2-1-15, Authorization for Separation Services By Towers.
FAAO JO 7210.3, Para 10-5-3, Functional Use of Certified Tower Radar Displays.

NOTE -

1. The pilot may request additional separation, but should make this request before taxiing on the runway.

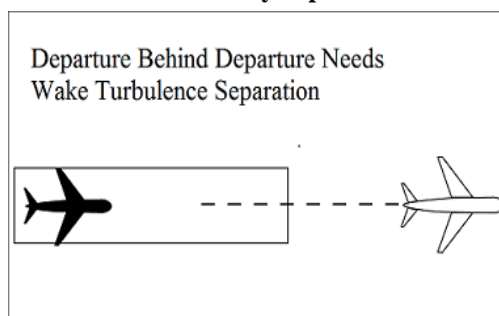
2. Takeoff clearance to the following aircraft should not be issued until the time interval has passed after the preceding aircraft begins takeoff roll.

f. Separate aircraft taking off from the same runway or a parallel runway separated by less than 2,500 feet (**See FIG 3-9-4.**):

1. Heavy, large, or small behind super – 3 minutes.

2. Heavy, large, or small behind heavy – 2 minutes.

FIG 3-9-4
Same Runway Separation



- g. Separate a small aircraft behind a B757 by *2 minutes* when departing:

1. The same runway **or a parallel runway separated by less than 700 feet.**
(See FIG 3-9-5 and FIG 3-9-6.)

FIG 3-9-5
Same Runway Separation

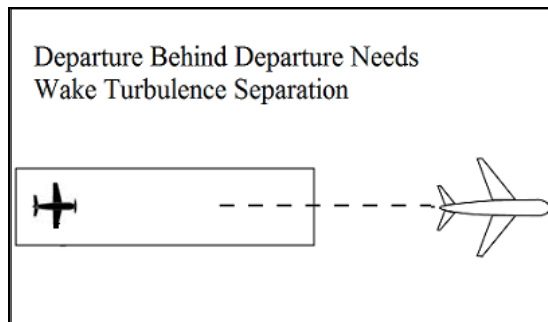
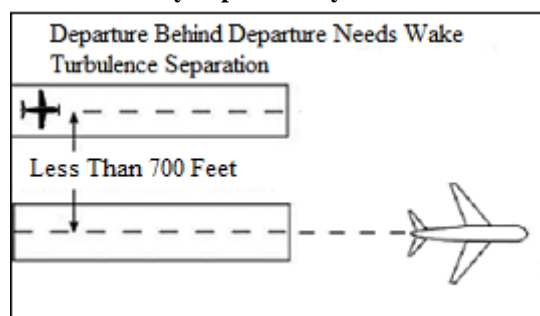


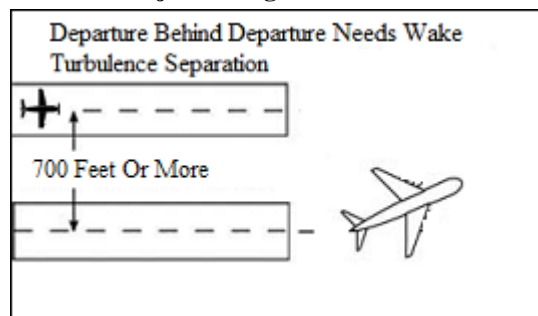
FIG 3-9-6
Parallel Runway Separated by Less than 700 Feet



2. A parallel runway separated by **700 feet or more** if projected flight paths will cross. (See Fig 3-9-7.)

FIG 3-9-7

**Parallel Runway Separated by 700 Feet or More
Projected Flight Paths Cross**

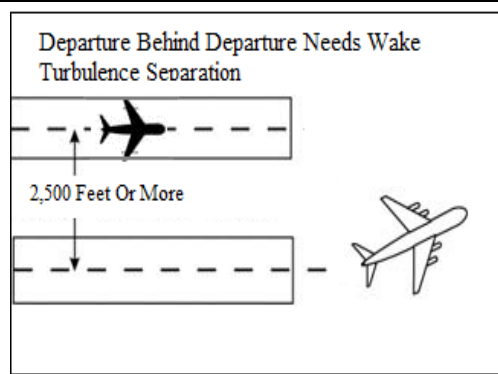


h. Separate aircraft departing from a parallel runway separated by 2,500 feet or more if projected flight paths will cross (See FIG 3-9-8.):

- 1. Heavy, large, or small behind super – 3 minutes.**
- 2. Heavy, large, or small behind heavy – 2 minutes.**

FIG 3-9-8

Parallel Runways Separated by 2,500 feet or More



Renumber Subparagraphs h through m, to i through n.

- b. Paragraph 3-9-7, Wake Turbulence Separation for Intersection Departures.**

Title through a.2, No Change

3. Separate a small aircraft taking off from an intersection (same or opposite direction takeoff) behind a preceding departing B757 aircraft by ensuring that the small aircraft does not start takeoff roll until at least *3 minutes* after the B757 has taken off from:

- (a) The same runway **or a parallel runway separated by less than 700 feet.**
- (b) Parallel runways separated by **700 feet or more**, or parallel runways separated by **700 feet or more** with the runway thresholds offset by 500 feet or more, if **projected** flight paths will cross.

No further changes to paragraph

c. Paragraph 3-9-8. Intersecting Runway/Intersecting Flight Path Operations

Title through b Reference, No Change

1. The preceding aircraft has departed and passed the intersection or is turning to avert any conflict. (See FIG 3-9-9.)

Renumber FIG 3-9-5 to FIG 3-9-9

2. A preceding arriving aircraft is clear of the landing runway, completed the landing roll and will hold short of the intersection, or has passed the intersection. (See FIG 3-9-10.)

Reference, No Change

Renumber FIG 3-9-6 to FIG 3-9-10

WAKE TURBULENCE APPLICATION, No Change

3. Separate IFR/VFR aircraft taking off behind a departing or landing aircraft on an intersecting runway if flight paths will cross (See FIG 3-9-11 and FIG 3-9-12):

Note through 3.(c), No Change

Renumber FIG 3-9-7 to FIG 3-9-11

Renumber FIG 3-9-8 to FIG 3-9-12

FIG 3-9-9, Delete

No Further Changes to paragraph

d. Paragraph 3-9-9. Nonintersecting Converging Runway Operations

Title through a. Reference, No Change

1. The preceding aircraft has departed and crossed the departure runway, or is turning to avert any conflict. (See FIG 3-9-13.)

Renumber FIG 3-9-10 to FIG 3-9-13

2. A preceding arriving aircraft has completed the landing roll and will hold short of the projected intersection, passed the projected intersection, or has crossed over the departure runway. (See FIG 3-9-14 and FIG 3-9-15.)

Renumber FIG 3-9-11 to FIG 3-9-14

Renumber FIG 3-9-12 to FIG 3-9-15

b. If the extended centerline of a runway crosses a converging runway or the extended centerline of a converging runway at a distance on 1NM or less from either departure end, apply the provisions of Paragraph 3-9-8, Intersecting Runway/Intersecting Flight Path Operations, unless the facility is using aids specified in a facility directive, (may include but are not limited to, Arrival/Departure Window (ADW), ASDE-X Virtual Runway Intersection Point (VRIP), cut-off points or automation). (See FIG 3-9-16 and FIG 3-9-17.)

WAKE TURBULENCE APPLICATION, Delete

Renumber FIG 3-9-13 to FIG 3-9-16

Renumber FIG 3-9-14 to FIG 3-9-17

WAKE TURBULENCE APPLICATION

c. Separate aircraft taking off behind a departing aircraft on a crossing runway if projected flight paths will cross (See FIG 3-9-18):

c.1., 2., 3., No Change

Renumber FIG 3-9-15 to FIG 3-9-18

Note, No Change

d. Separate aircraft departing behind a landing aircraft on a crossing runway if the departure will fly through the airborne path of the arrival (See FIG 3-9-19):

d.1., 2., 3., No Change

Renumber FIG 3-9-16 to FIG 3-9-19

No Further Changes to Paragraph

e. Paragraph 3-9-10. Takeoff Clearance

Renumber FIG 3-9-17 to FIG 3-9-20

Renumber FIG 3-9-18 to FIG 3-9-21

No Further Changes to Paragraph

f. Paragraph 5-5-4, Minima

Title through g.3., No Change

NOTE—

1. *The application of paragraph 5-8-3, Successive or Simultaneous Departures, satisfies this requirement.*

2. **Consider runways separated by less than 700 feet as a single runway because of the possible effects of wake turbulence.**

REFERENCE —

FAAO JO 7110.65, Para 3-9-6, Same Runway Separation.

No further changes to paragraph

5. Distribution. This notice is distributed to the following ATO service units: Air Traffic Services, Mission Support, System Operations, and Safety and Technical Training; the Air Traffic Safety Oversight Service; the William J. Hughes Technical Center; and the Mike Monroney Aeronautical Center.

6. Background. FAA Order JO 7110.65W contained changes to the wake turbulence separation minima behind B757 aircraft. These changes eliminated separation requirements for heavy and large aircraft behind a B757 and reduced the separation for small aircraft to four miles and less than 500 feet below when operating directly behind a B757. Also, the runway separation requirement for a small behind a B757 was changed from the same or parallel runway separated by less than 2,500 feet to the same runway. AJV-8 recently became aware that the analysis of the wake vortex dispersion which allowed for the reduction in separation for small aircraft departing a parallel runway behind a B757 aircraft was conducted to runways separated by 700 feet or more. This requires that parallel runways separated by less than 700 feet be treated as the same runway when a small aircraft departs

behind a B757. While developing this change, it created an opportunity to relocate the requirement to provide wake turbulence separation for aircraft departing a parallel runway separated by 2,500 feet or more from Paragraph 3-9-8 to Paragraph 3-9-6, which also restored the option to apply radar separation for this operation.

Paragraph 5-5-4, Minima, Subparagraph g.3., contains a note stating that the application of Paragraph 5-8-3, Successive or Simultaneous Departures, satisfies the requirements of the subparagraph when an initial heading is issued with the takeoff clearance. The requirement to issue an initial heading has been removed as the proper application of Paragraph 5-8-3 will provide for the initial course divergence. A note was added to this paragraph to consider runways separated by less than 700 feet as a single runway because of the possible effects of wake turbulence when a small aircraft departs a parallel runway behind a B757.

7. Safety Management System. This notice adds a requirement to treat runways separated by less than 700 feet as a single runway for the purpose of wake turbulence separation when a small aircraft departs a parallel runway behind a B757 aircraft. By relocating the requirement to provide wake turbulence separation to aircraft departing a parallel runway separated by 2,500 feet or more from Paragraph 3-9-8, Intersecting Runway/Intersecting Flight Path Operations, to Paragraph 3-9-6, Same Runway Separation, all wake turbulence separation requirements for aircraft departing from parallel runways are contained in the same paragraph. Also, the option to provide radar separation in lieu of time-based separation to aircraft departing from parallel runways separated by 2,500 feet or more is restored. This option appears to have been inadvertently omitted when FAA Order 7110.65D was effective, which removed Chapter 6, Wake Turbulence, from the order and distributed wake turbulence procedures and separations throughout the order to the applicable paragraphs. The changes contained in this notice have a positive effect on safety risk and are not intended as a mitigation to an existing hazard as highlighted in the Safety Management System Manual Version 4.0, Paragraph 4.2.3. No safety documentation is required.

Original signed by Heather Hemdal

Heather Hemdal
Director, Air Traffic Procedures, AJV-8

11-9-2016

Date Signed