

FIJI AERONAUTICAL INFORMATION CIRCULAR



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OPS

This AIC replaces AIC 01/08, which is hereby cancelled.

COLLECTION OF DATA ON WAKE VORTEX ENCOUNTERS

1. Introduction

- 1.1 The purpose of this Circular is to advise air operators, pilots, and air traffic controllers of an ICAO requirement to collect data on wake vortex encounters.
- 1.2 Attention is also drawn to AIC 10/98 on aerodrome operations which discusses wake vortex in more depth and note should be taken of Reduced Vertical Separation Minimum (RVSM) within RVSM airspace found in the Fiji AIP.

2. ICAO collection of information

- 2.1 In order to provide a sound basis for any necessary amendment to procedures for air navigation services, ICAO must first collect and analyse information on wake vortex encounters of all aircraft types on a worldwide basis.
- 2.2 Pilots, aircraft operators and air navigation service providers are required to report all encounters on the relevant forms to be submitted to the regulator of the State of Occurrence or to the Civil Aviation Authority of the Fiji Islands who will forward the forms to ICAO.
- 2.3 Forms (A and B) can be found at the end of this AIC; on the Authority's website; and on the ICAO website at www.icao.int/fsix/wakevortex.

3. Wake Vortices

- 3.1 Wake vortices are shed downstream by all aircraft and can be a potential hazard in en-route flight conditions as well as in the terminal area close to the ground. There are well-established procedures, particularly in the departure and arrival phases of flight based on the wake turbulence category of aircraft.
- 3.2 Turbulence itself as a generic phenomenon is classified by ICAO as Light, Moderate and Severe. At cruise altitudes, where airspeeds are high and the air is often calm, wake vortices can decay slowly over distances of up to 20-25nm.
- 3.3 Large disturbances are more likely at shorter separation distances (5-7nm) and can occur when one of the aircraft is climbing or descending. This latter type of encounter is likely to become more common as traffic density increases, but will not be affected by the implementation of RVSM.

4. Wake Vortices in RVSM Airspace

- 4.1 The implementation of RVSM reduces the current vertical separation of 1000ft between aircraft operating from FL290 to FL410 inclusive. It was therefore important to assess whether or not this would significantly increase the risk of a hazardous encounter with wake vortices. Studies commissioned on this issue concluded that the probabilities of hazardous encounters with wake vortices are not expected to increase but that nuisance encounters would increase.
- 4.2 It is vital that pilots provide reports of wake vortex encounters both in today's environment and following the implementation of RVSM. Any pilot who encounters a wake turbulence incident when flying in RVSM Airspace or within an adjacent RVSM transition area should ensure that a detailed report is provided to the Authority using the attached report form.

5. Wake Vortex Encounters

- 5.1 Procedures when encountering wake turbulence for both pilots and air traffic controllers are published in the Fiji Islands AIP.

Note: This Circular contains two pages and one annex - Wake Vortex Report Form for pilots and another for air navigation service providers - as pages 3 to 6.



Civil Aviation Authority of the Fiji
Wake Vortex Encounter Reporting Form for Pilots

Form
OR 004

Date and Time	Date of incident	
	Time (UTC)	
Aircraft Type	Make	
	Model	
	Series	
Altitude	Height	<input type="checkbox"/> M or <input type="checkbox"/> Ft
	Altitude	<input type="checkbox"/> M or <input type="checkbox"/> Ft
	Flight level	
Geographic Position (**If inflight state lat and long or in relation to waypoint in location column)	Location	
	State	
	Airport	
	Runway	<input type="checkbox"/> L <input type="checkbox"/> C <input type="checkbox"/> R
Details	Phase of flight	<input type="checkbox"/> Take-off <input type="checkbox"/> Initial climb <input type="checkbox"/> Climb <input type="checkbox"/> Cruise <input type="checkbox"/> Descent <input type="checkbox"/> Holding <input type="checkbox"/> Approach <input type="checkbox"/> Final <input type="checkbox"/> Touch-down <input type="checkbox"/> Taxiing <input type="checkbox"/> Other
	Were you turning?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a
	Which holding pattern were you in, if any?	
	Were you:	<input type="checkbox"/> high <input type="checkbox"/> low <input type="checkbox"/> on the glide path
	Were you:	<input type="checkbox"/> left of <input type="checkbox"/> right of <input type="checkbox"/> on the centre-line
	Weight	Kg
	IAS	Kts
Heading	Degrees	
Other	What led you to suspect wake vortex as the cause of the disturbance?	

Did you experience vertical acceleration?	<input type="checkbox"/> Yes	Please describe:
What was the change in attitude? Please estimate angle.	Pitch: Roll: Yaw:	
Was there any change in altitude?	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/a
Was there buffeting?	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/a
Was there stall warning?	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/a
Was the autopilot engaged?	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/a
What control action was taken?	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/a
Could you see the aircraft suspected of generating the wake vortex?	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/a
If yes, what was it?	Make - Model - Series -	
Where was it relative to your position?	Separation distance: Clock reference:	
Were you aware of the preceding aircraft type before the encounter?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/a	

	Civil Aviation Authority of the Fiji Islands Wake Vortex Encounter Reporting Form for Air Navigation Service Providers (ANSPs)		Form OR 005
Date and Time	Date of incident		
	Time (UTC)		
Encountering Aircraft Type	Make		
	Model		
	Series		
	Phase of flight	<input type="checkbox"/> Take-off <input type="checkbox"/> Initial climb <input type="checkbox"/> Climb <input type="checkbox"/> Cruise <input type="checkbox"/> Descent <input type="checkbox"/> Holding <input type="checkbox"/> Approach <input type="checkbox"/> Final <input type="checkbox"/> Touch-down <input type="checkbox"/> Taxiing <input type="checkbox"/> Other	
	Runway	<input type="checkbox"/> L <input type="checkbox"/> C <input type="checkbox"/> R	
Generating Aircraft Type	Make		
	Model		
	Series		
	Phase of flight	<input type="checkbox"/> Take-off <input type="checkbox"/> Initial climb <input type="checkbox"/> Climb <input type="checkbox"/> Cruise <input type="checkbox"/> Descent <input type="checkbox"/> Holding <input type="checkbox"/> Approach <input type="checkbox"/> Final <input type="checkbox"/> Touch-down <input type="checkbox"/> Taxiing <input type="checkbox"/> Other	
	Runway	<input type="checkbox"/> L <input type="checkbox"/> C <input type="checkbox"/> R	
Location	Location		
	State		
	Airport		
Spacing between aircraft	Vertical		
	Horizontal		
	Any additional information related to the encounter		

Weather	Wind	
	Visibility	
	Cloud	
	Temperature	
	Dew Point	