



Are aircraft pilots required to fly runway heading for a certain distance?

Asked 3 years, 11 months ago Modified 3 years, 2 months ago Viewed 1k times

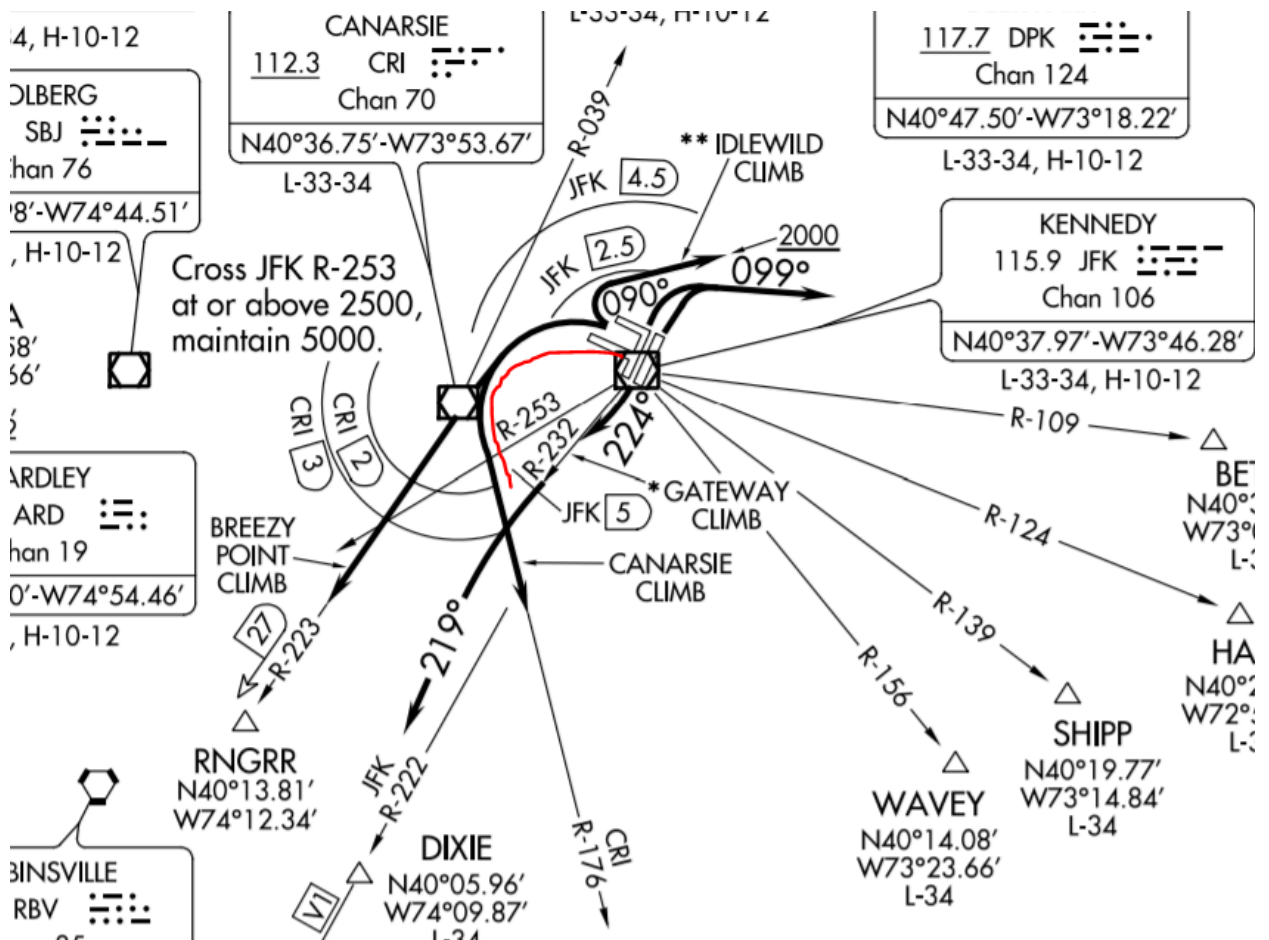


7



If an aircraft rotates off the runway relatively quickly (runway mid-point for example), do pilots need to continue on the runway heading for a minimum distance before turning based on departure procedures? For example, for the Runways 31L/R CANARSIE climb at JFK, the established departure procedure is "Climbing left turn direct CRI VOR/DM". For this same procedure, can the departing aircraft proceed direct to CRI VOR/DM like the image below, if safely possible, or do they need to maintain runway heading till the runway is cleared?

Thanks!



takeoff runways departure-sid heading

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edited Mar 22, 2021 at 22:25

asked Jun 22, 2020 at 18:58

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Vikki

28.4k

16

122

285



RayE

71

2

2 Depends on the airport. Are you asking specifically about JFK? – [60levelchange](#) Jun 22, 2020 at 19:13

1 Answer

Sorted by: Highest score (default) 



The initial turn should be made at 400 feet AGL.

11

Unless otherwise specified in the departure procedure, the initial turn should be made when reaching an altitude of 400 feet above the runway elevation as specified in the AIM:



Unless specified otherwise, required obstacle clearance for all departures, including diverse, is based on the pilot crossing the departure end of the runway at least 35 feet above the departure end of runway elevation, **climbing to 400 feet above the departure end of runway elevation before making the initial turn**, and maintaining a minimum climb gradient of 200 feet per nautical mile (FPNM), unless required to level off by a crossing restriction, until the minimum IFR altitude. A greater climb gradient maybe specified in the DP to clear obstacles or to achieve an ATC crossing restriction. **If an initial turn higher than 400 feet above the departure end of runway elevation is specified in the DP**, the turn should be commenced at the higher altitude. If a turn is specified at a fix, the turn must be made at that fix. Fixes may have minimum and/or maximum crossing altitudes that must be adhered to prior to passing the fix. In rare instances, obstacles that exist on the extended runway centerline may make an **“early turn”** more desirable than proceeding straight ahead. In these cases, the published departure instructions will include the language **“turn left (right) as soon as practicable.”** These departures will also include a ceiling and visibility minimum of at least 300 and 1. Pilots encountering one of these DPs should preplan the climb out to gain altitude and begin the turn as quickly as possible within the bounds of safe operating practices and operating limitations. This type of departure procedure is being phased out.

([AIM 5-2-6 Departure Procedures](#), emphasis mine)

The Canarsie climb at JFK does not include any special instructions for when to make the turn:

CANARSIE CLIMB: Climbing left turn direct CRI VOR/DME. Make turn east of CRI R-039 (remain within JFK 4.5 DME), then via CRI R-176. Cross CRI 2 DME or JFK R-253 at or above 2500, thence

([Kennedy Five Departure](#))

I would therefore start the turn at 400 feet. In principle, this would allow turning before reaching the far end of the runway, but only for a very good climb performance or a very long runway.

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answered Jun 22, 2020 at 19:34



Bianfable

56.2k

8

198

260

-
- 5 Had a note on the SID "do not turn before DER". Ashamed to say I spent 5 minutes looking for the DER vor on the chart :-)- [Radu094](#) Jun 23, 2020 at 6:36

Note also the recommendation/standard procedure is to **cross the DER at least 35 feet above DER elevation**, climb to 400 feet above DER before making turn, etc. To me that means that the pilot must continue to fly runway heading for at least as long as it will take them to reach the departure end of the runway, even if they reach 400 feet at midfield. Not quite sure how pilots would determine this if they immediately enter IMC... - [randomhead](#) Mar 19 at 19:22
