

GOVERNMENT/INDUSTRY AERONAUTICAL CHARTING FORUM 04-01

April 28-29, 2004

Recommendation Document

Subject: Depiction of takeoff minimums on Standard Instrument Departures and those associated with obstacle Departure procedures

Background/Discussion: Over the past several years there has been an increase in the number of Standard Instrument Departure Procedures (SIDs) that have specific takeoff minimums associated with the specific procedure/route. These same airports also have takeoff minimums listed in the front of the NOS charts or back of the airport page (Jeppesen).

We have seen several examples where pilots have difficulty in quickly and absolutely discerning the appropriate takeoff minimums to apply. Case in point is LAS for the IDALE RNAV TWO departure. Runways 1L/R require a 1100' ceiling and four miles visibility with a climb gradient of 458' per NM to 7000' or 9000' depending on the transition. The takeoff minimums in the front of the NOS charts allow standard takeoff minimums with no climb gradient. The Jeppesen chart shows as low as ¼ mile. We have had several questions concerning if the ¼ mile could be applied to takeoffs flying the IDALE RNAV TWO departure.

Another example of the possible confusion is EWR. When reviewing the NOS takeoff minimums it states that runway 29 requires 500' ceiling and 1 mile visibility or standard with a minimum climb gradient of 410' per NM 500'. The Jeppesen page states the same information with the addition of listing the ¼ mile lower than standard takeoff minimum. In both the NOS and Jeppesen text it states for departure routing to use the NEWARK departure (in this case we must assume they meant the NEWARK 7 departure). In both the NOS and Jeppesen NEWARK 7 departures there a mention of the need to either have a 500' ceiling and 1 mile visibility or climb at 410' per NM to 500'.

Then last example is OAK where all runways are shown as standard in the NOS takeoff minimums and Jeppesen shows all runways to the lowest applicable air carrier reduction. However, several of the SIDs show climb gradients between 230' and 375' per NM. Some say for obstacle clearance others give no explanation at all. Then we have the SALAD ONE departure which states takeoff minimums of 2100' ceiling and 3 mile visibility or standard with minimum climb gradient 270' per NM to 2000'.

With these minimums and gradients being depicted in various formats as well as places, it makes it difficult for the pilot and operator to ensure the correct application. Our desire is to resolve this issue through application of new standards for format and depiction.

Recommendations: Present a standard format on the SID showing the lowest applicable takeoff authorization for each runway/route.

Example:

LAS IDALE TWO DEPARTURE

Takeoff Minimums and required Climb Gradient				
Runway	Transition	Min climb Gradient to Altitude	Minimum takeoff Ceiling and Visibility/RVR	Restriction Reason
1L/R	BOACH, HECTOR, JOTNU, TWENTYNINE PALMS	458' per NM to 7000'	1100' ceiling – 4 Mile Vis.	Obstacle
1L/R	BIKKR, COALDALE	458' per NM to 9000'	1100' ceiling – 4 Mile Vis.	Obstacle
19L/R, 25L/R	BOACH, HECTOR, JOTNU, TWENTYNINE PALMS	320' per NM to 7000'	Ceiling N/A ¼ mile Vis.	Obstacle
19L/R, 25L/R	BIKKR, COALDALE	445' per NM to 9000'	Ceiling N/A ¼ mile Vis.	Obstacle

NEWARK SEVEN DEPARTURE

Takeoff Minimums and required Climb Gradient				
Runway	Transition	Min climb Gradient to Altitude	Minimum takeoff Ceiling and Visibility/RVR	Restriction Reason
4L/R, 22L/R	N/A	200' per NM to ATC Assigned Altitude	ceiling – NA 600RVR	N/A
11	N/A	200' per NM to ATC Assigned Altitude	Ceiling N/A ¼ mile Vis.	N/A
29	N/A	410' per NM to 500'	If unable climb gradient, 500' ceiling – 1 Mile Vis. If able climb gradient ceiling N/A ¼ mile Vis.	Obstacle

OAKLAND FIVE DEPARTURE

Takeoff Minimums and required Climb Gradient				
Runway	Transition	Min climb Gradient to Altitude	Minimum takeoff Ceiling and Visibility/RVR	Restriction Reason
27L/R	NA	375' per NM to 2000'	ceiling – NA 1600RVR or ¼ Mile Vis.	ATC Crossing Restriction??
29	NA	230' per NM to 2000	ceiling – NA 600RVR	ATC Crossing Restriction??

Comments: I am sure some of the format folks can clean up the examples but hopefully the point of simplicity and completeness come through.

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MEETING 04-01: Mr. Chuck Schramek, Delta Airlines, submitted this issue. Mr. Schramek, was unable to attend the ACF. ACF members recommended holding this issue until the next ACF.

MEETING 04-02: Mr. Chuck Schramek, Delta Airlines, submitted this issue. Mr. Schramek was unable to attend the ACF. Delta representatives briefed the ACF stating that this is an internal issue between Jeppesen and Delta. Mr. Ted Thompson, Jeppesen, stated that the graphic departure includes takeoff minimums and climb gradient for route segments. These same airports also have takeoff minimums listed on the back of the airport page, which may not agree or apply to the departure procedure. These minimums and gradients are being depicted in various formats and in several places. This inconsistency makes it difficult for pilots and operators to quickly determine the appropriate takeoff minimums to apply. Mr. Thompson stated that Jeppesen is currently working to resolve this issue. **ACTION:** Jeppesen.

MEETING 05-01: Mr. Chuck Schramek, Delta Airlines, stated that the graphic departure includes takeoff minimums and climb gradient for route segments. These same airports also have takeoff minimums listed on the back of the airport page, which may not agree or apply to the departure procedure. These minimums and gradients are being depicted in various formats and in several places. This inconsistency makes it difficult for pilots and operators to quickly determine the appropriate takeoff minimums to apply. Currently the FAA only charts minimums on SIDs and ODPs as low as specified in FAR Part 97 'Standard'. For US FAR Part 121 and 135 Air Carriers, pilots must refer to the Jeppesen Airport Chart to determine their 'Lower than Standard' take-off minimums that apply. Mr. Schramek explained that from a FAA standpoint they only chart standard takeoff minimums or a climb gradient if it not standard. Mr. Schramek stated that Jeppesen has attempted to chart Air Carrier Ops Specs at the request of their airline customers, only to be challenged and chastised for occasional misinterpretations of the Ops Specs due to the ambiguity in the documentation. Mr. Schramek is requesting that the FAA publish on the 8260 SID/ODP source document and on applicable SID and ODP charts the lowest applicable takeoff minimum based on air carrier operations for that runway. Mr. Vincent Chirasello, AFS-410, expressed his concerns about the Part 91 pilots and those users without operation specifications. Col. Blum, AF, stated that this is a major issue for the military. Col. Blum recommended leaving the 'or standard' and add another column. ACF consensus is to continue this issue outside the forum. Mr. Mark Steinbicker, AFS-410, will lead this committee. **ACTION:** AFS-420, AFS-200, AVN-100, NACO, and Delta Airlines.
