

GOVERNMENT/INDUSTRY AERONAUTICAL CHARTING FORUM
Instrument Procedures Group
May 1, 2007
HISTORY RECORD

FAA Control # 07-01-272

Subject: Using an ODP in lieu of the Published Missed Approach Procedure

Background/Discussion: The AIM contains language that recommends that a pilot who commences a missed approach below the MDA/DA or after the MAP use the runway's ODP instead of the published missed approach. This is contrary to adherence to the air traffic clearance that authorized the instrument approach procedure. Further, it becomes more problematic when an IAP has circling-only minimums.

In any case, it is both bad advice and causes the pilot to be in violation of his air traffic clearance. In some cases a pilot can obtain a timely amendment to an air traffic clearance; in other cases, such as relay through an FSS communications outlet, he most likely cannot.

AIM 5-4-21 g: *“Missed approach obstacle clearance is predicated on beginning the missed approach procedure at the Missed Approach Point (MAP) from MDA or DA and then climbing 200 feet/NM or greater. Initiating a go-around after passing the published MAP may result in total loss of obstacle clearance. **To compensate for the possibility of reduced obstacle clearance during a go-around, a pilot should apply procedures used in takeoff planning.** Pilots should refer to airport obstacle and departure data prior to initiating an instrument approach procedure. Such information may be found in the “TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES” section of the U.S. TERMINAL PROCEDURES publication. (emphasis NBAA’s)*

AIM 5-5-5 (Pilot/Controller Responsibilities): *“Missed Approach*

a. Pilot.

1. Executes a missed approach when one of the following conditions exist:

(a) Arrival at the Missed Approach Point (MAP) or the Decision Height (DH) and visual reference to the runway environment is insufficient to complete the landing.

(b) Determines that a safe approach or landing is not possible (see subparagraph 5-4-21g).

(c) Instructed to do so by ATC.

2. Advises ATC that a missed approach will be made. Include the reason for the missed approach unless the missed approach is initiated by ATC.

3. Complies with the missed approach instructions for the IAP being executed from the MAP, unless other missed approach instructions are specified by ATC.

4. If executing a missed approach prior to reaching the MAP, fly the lateral navigation path of the instrument procedure to the MAP. Climb to the altitude specified in the missed

approach procedure, except when a maximum altitude is specified between the final approach fix (FAF) and the MAP. In that case, comply with the maximum altitude restriction. Note, this may require a continued descent on the final approach.

b. Controller.

1. Issues an approved alternate missed approach procedure if it is desired that the pilot execute a procedure other than as depicted on the instrument approach chart.

2. May vector a radar identified aircraft executing a missed approach when operationally advantageous to the pilot or the controller.

3. In response to the pilot's stated intentions, issues a clearance to an alternate airport, to a holding fix, or for reentry into the approach sequence, as traffic conditions permit. (emphasis NBAA's)."

§ 91.123 Compliance with ATC clearances and instructions.

(a) When an ATC clearance has been obtained, no pilot in command may deviate from that clearance unless an amended clearance is obtained, an emergency exists, or the deviation is in response to a traffic alert and collision avoidance system resolution advisory. However, except in Class A airspace, a pilot may cancel an IFR flight plan if the operation is being conducted in VFR weather conditions. When a pilot is uncertain of an ATC clearance, that pilot shall immediately request clarification from ATC.

The cited AIM language is attempting to deal with the issue of the phase of flight commonly called "the balked landing." To NBAA's knowledge, no where else in FAA publications to pilots or operators does the FAA attempt to recommend a course of action for balked landings under instrument flight conditions. This is similar to the engine inoperative flight path, which is solely an operator responsibility. There is regulatory support for engine inoperative flight paths; there is not for balked landing issue.

Recommendations: The AIM language should delete any reference/recommendation about "converting" authorized missed approach procedures into unauthorized ODPs. When a pilot departs an airport, authorization to use the ODP is usually implied. Not so in the case of a missed approach. AIM language should be added to discuss the hazards of missing an approach where the MDA/DA has a high HAA/HAT (or early MAP) and that landing must be assured (or at least the ability to remain visual in the airport's traffic pattern until a runway becomes available) in low-performance aircraft prior to leaving the protection of the IAP.

Comments: This recommendation affects the Aeronautical Information Manual and related directives to ATC personnel.

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Initial Discussion Meeting 07-01: New Issue presented by Rich Boll, NBAA. NBAA is concerned over the AIM language that recommends a pilot, who commences a missed approach below the MDA/DA or after the MAP, use the runway's ODP instead of the published missed approach. This is contrary to adherence to the air traffic clearance that authorized the instrument approach procedure. Further, it becomes more problematic when an IAP has circling-only minimums. In any case, NBAA believes it is both bad advice and causes the pilot to be in violation of his air traffic clearance. In some cases a pilot can obtain a timely amendment to an air traffic clearance; in other cases, such as relay through an FSS communications outlet, he most likely cannot. NBAA is recommending the AIM language delete any reference/recommendation about "converting" authorized missed approach procedures into unauthorized ODPs. Tom Schneider, AFS-420, stated that he believed that the AIM is correct. Once a pilot who has to go-around (balked landing, tower clearance cancelled, etc.) after leaving the MDA or passing the MAP and is committed for landing, the "TERPSed" missed approach is no longer any good, ergo the AIM language is correct. Chasing after the charted missed approach track could prove disastrous; however, the ODP will provide a safe extraction. Ernie Skiver, AFS-410, agreed with Tom stating that from landing to take-off mode, the ODP was a safer option. Brad Rush, AJW-321, stated this may be true for places like Eagle, CO, but do we want to endorse the practice everywhere. Frank Flood, ACPA, noted that the aircraft will fly the coded data base missed approach track. Frank added that 99% of Air Canada pilots will fly the charted missed approach instructions in this situation. James Taylor, USAF/AIS agreed that better missed approach guidance should be published in the AIM to highlight the hazards of a late missed approach. Ron Graham, Air Canada, stated that pilots must review all options prior to getting into a late missed approach situation. Lance Christian, NGA, noted that there are many airports in rugged terrain areas where chasing the published missed approach could be fatal. Tom agreed to take the issue back to AFS-410/420 for updated AIM guidance.
ACTION: AFS-410 and 420.

MEETING 07-02: Tom Schneider, AFS-420, briefed that new AIM language was developed in concert with AFS-410 and has been submitted for publication in the August, 2008 AIM. The change revises paragraph 5-4-21-g as follows (revised/added text is shown in red):

“5-4-21-g. Missed approach obstacle clearance is predicated on beginning the missed approach procedure at the Missed Approach Point (MAP) from MDA or at the DA. **Some missed approach procedures require commencement of an immediate turn and/or climb of 200 ft/nm or more at the MAP. In these instances, initiating a go-around after passing the published MAP (for example, a balked landing) may result in total loss of obstacle clearance because the aircraft flight path may not fall within missed approach procedure protected area. To compensate for the possibility of reduced obstacle clearance during a balked landing/go-around, a pilot should consider the airport operating environment, including known natural (trees/vegetation) and man-made obstacles. At some airports, pilots may wish to refer to airport obstacle and departure data prior to initiating an instrument approach procedure. Such information may be found in the "TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES" section of the U.S. TERMINAL PROCEDURES publication. Depending upon the airport operating environment, characteristics of the published missed approach procedure, overall aircraft performance capability, and other relevant considerations, pilots may wish to take one or more of the following actions after initiating a balked landing/go-around beyond the published MAP:**

1. Where practical, re-establish the aircraft laterally and vertically on the published missed approach procedure (for example, a straight-ahead climb, as rapid as possible, may be all that is necessary to re-join the missed approach segment; re-joining a turning missed approach may also be possible if the turn point has not yet been reached.).

2. Adjust aircraft climb performance as necessary for the local environment (i.e., climb as rapidly as possible to avoid obstructions that were not a factor in the design of the published missed approach procedure).

3. Maintain visual conditions and reattempt landing, if practicable.

4. Where available, fly a published obstacle departure procedure (ODP) for the relevant runway.

5. Comply with ATC instructions when Radar vectors have been issued or can be requested.

NOTE: As soon as possible, pilots should coordinate with and/or inform ATC of his or her intended actions.

Editor's Note: *Because this proposed change was not available for discussion at the meeting, the issue will remain open until published in the August 2008 AIM.*

Item Open - Pending Publication.

MEETING 08-01: Tom Schneider, AFS-420, briefed that new AIM language was developed in concert with AFS-410 and has been submitted for publication in the August, 2008 AIM. The change adds a new paragraph 5-4-21-c (remaining paragraphs are re-numbered) as follows:

c. Initiating a go-around after passing the published MAP (for example, a balked landing) may result in total loss of obstacle clearance because the aircraft flight path may not fall within missed approach procedure protected area. To compensate for the possibility of reduced obstacle clearance during a balked landing/go-around, a pilot should consider the airport operating environment, including known natural (trees/vegetation) and man-made obstacles. At some airports, pilots may wish to refer to airport obstacle and departure data prior to initiating an instrument approach procedure. Such information may be found in the "TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES" section of the U.S. TERMINAL PROCEDURES publication. Depending upon the airport operating environment, characteristics of the published missed approach procedure, overall aircraft performance capability, and other relevant considerations, pilots may wish to take one or more of the following actions after initiating a balked landing/go-around beyond the published MAP:

1. Where practical, re-establish the aircraft laterally and vertically on the published missed approach procedure (for example, a straight-ahead climb, as rapidly as possible, may be all that is necessary to re-join the missed approach segment. Re-joining a turning missed approach may also be possible if the turn point has not yet been reached.).

2. Adjust aircraft climb performance as necessary for the local environment (i.e., climb as rapidly as possible to avoid obstructions that would not have been factored in the

design of the published missed approach procedure since the climb would have started earlier).

3. Maintain visual conditions and reattempt landing, if practicable.

4. Where available, fly a published obstacle departure procedure (ODP) for the relevant runway.

5. Comply with ATC instructions when Radar vectors have been issued or can be requested.

NOTE: As soon as possible, pilots should coordinate with and/or inform ATC of their intended actions.

Tom advised that this change had been submitted for publication. If anyone has any requested changes to the above text to forward them to him NLT June 15 in order to allow time for coordination to meet the July 31 cutoff for the February AIM. Roy Maxwell, Delta Air Lines, stated that the change supports language published in AC 120-29A (***Editor's Note: see paragraphs 4.3.1.8 and 6.2.16***). Rich Boll, NBAA, suggested this change be included in the next revision to the IPH and also forwarded to AFS-600/800 for inclusion in Practical Test Standards. Kevin Comstock, ALPA, recommended that the ACF should follow up with the appropriate FAA branches (including the ATO) and other organizations (e.g., Jeppesen, LIDO, etc.) to make sure ACF recommendations have been properly implemented. There have been times in the past where ACF has closed an issue before it is fully resolved and sometimes we find out years later that the issue still exists. (***Editor's Note: The Chair would like to add for the record that this may have been true in the past; however, current practice is to leave issues open until fully resolved***). Kevin added the ACF also needs to do a better job of making sure all parties have been coordinated with before changes are made and record who from what organizations signed off on the change. This will ensure better record keeping and provide the ability to justify changes and answer questions after implementation. Kevin also recommended that the Terminal Service Unit develop controller awareness training regarding the possibility of a pilot using the ODP in lieu of the published Missed Approach Procedure (MAP); Dan Diggins, AJT-22, agreed to follow up on this. Frank Flood, ACPA, mentioned San Francisco as an airport of concern noting that most (if not all) air carrier pilots will fly the missed approach because it is what is programmed in the data base. Richard Kagehiro, AJE-31, questioned whether the Forum was considered an Advisory Committee. Bill Hammett, AFS-420 (ISI), replied no and provided a verbal history on the coordination of Order 7910.5, *Aeronautical Charting Forum*, through FAA's General Counsel that allowed exemption of the Forum from the federal Advisory Committee Act. Richard then asked whether the AIM change was coordinated through Air Traffic. Tom replied that he would have to check this process. Rich then asked what regulatory guidance allows pilots to use an ODP in lieu of a published MAP. Tom agreed to research this. The following IOUs were agreed: 1) Tom will track the AIM submission and prepare follow up memos to AFS-600/800. 2) Dan will ensure controller awareness training material is developed. **ACTION: AFS-420 and AJT-22.**

Editor's Comment: On Thursday, the last day of the Charting Group's meeting, Tom Schneider, AFS-420 and Chair of the ACF-IPG, briefed that on Wednesday, Richard Kagehiro, AJE-31, advised that he had contacted the ATO Publications Group, AJR-31, and taken action to stop the publication of the AFS-400 requested AIM change noted above. Tom had hoped that Richard would have attended the last day of the meeting to explain his rationale to the Forum;

however, Richard was not in attendance. Tom briefed that this action is setting a dangerous precedent. The AIM has an office of primary responsibility (OPR) for each paragraph and AFS-400 is OPR for paragraph 5-4-21. It is concerning that an office other than the OPR, who may not fully understand the reason for the change, could have the influence to stop changes requested by the OPR without proper justification. Tom added that he had discussed the AIM change with Dan Diggins, AJT-22, and he, as the Terminal Service Unit representative to the ACF-IPG, has no issue with the proposed change. Roy Maxwell, Delta Air Lines, again emphasized that the language in the AIM change echoes and clarifies guidance that is already published in AC 120-29A. Tom will work this development through AFS-400 and ATO channels. As of May 16, consensus on the proposed AIM change could not be reached between AFS-400, AJW-3, AJE-31, and AJT-22; therefore, the AIM change originally submitted for publication on July 31 has been withdrawn. A follow-on meeting will be scheduled with the aforementioned parties to reconcile the differences and prepare a submission for the March 12, 2009 AIM publication.
