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InFO

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An InFO contains valuable information for operators that should help them meet certain administrative, regulatory, or operational requirements, with relatively low urgency or impact on safety. The contents of this document do not have the force and effect of law and are not meant to bind the public in any way. This document is intended only to provide clarity to the public regarding existing requirements under the law or agency policies.

Subject: Use of Aircraft Approach Category During Instrument Approach Operations.

Purpose: This InFO cancels SAFO 12005, highlights Aeronautical Information Manual (AIM) guidance (Para 5-4-7), and serves to provide expanded information about the aircraft approach category to be used during instrument approach operations, as determined by the aircraft's certification authority.

Background: Aircraft approach category is a grouping of aircraft based on a V_{ref} (reference landing speed), if specified, or if V_{ref} is not specified, 1.3 V_{so} (*stalling speed or minimum steady flight speed in the landing configuration*), both at the maximum certificated landing weight. V_{ref} , V_{so} , and the maximum certificated landing weight are those values as established by the certification authority. In 2002, Title 14 of the Code of Federal Regulations (14 CFR), Part 97, § 97.3 was changed to include V_{ref} as well as 1.3 V_{so} to establish approach category. This speed, determined at the maximum certificated landing weight, establishes the lowest applicable approach category for all instrument approaches regardless of actual landing weight.

Discussion: An aircraft's approach category does not change if the actual landing weight is less than the maximum certificated landing weight. This certificated approach category is permanent and independent of the changing conditions of day-to-day operations. Aircraft may not be flown to the instrument approach minima of a slower approach category (e.g., a category C aircraft may not utilize category B minimums).

If it becomes necessary to operate at a speed in excess of the upper limit of the speed range of an approach category, the minimums for the higher category should be used if available. This may occur with certain aircraft types when operating in heavy/gusty wind, icing, or non-normal conditions. For example, an airplane that is certified as category C, but is circling to land at a speed of 145 knots, should use the approach category D minima. Pilots are responsible for determining when a higher approach category applies. Regardless of approach category, when circling to land, the pilot must, in accordance with § 97.20, maneuver the aircraft within the circling approach protected area for that category to achieve the obstacle and terrain clearances provided by procedure design criteria.

A pilot who chooses an alternative method when it is necessary to maneuver at a speed that exceeds the category speed limit (for example, where higher category minimums are not published) should consider the following factors that can significantly affect the actual ground track flown:

- Bank Angle - The angle of bank used during circling approaches may significantly impact the turn radius. Conversely, pilots should be aware that using an excessive bank angle when executing a circling approach can lead to an unstabilized approach or possibly loss of aircraft control.
- Indicated Airspeed - If a pilot chooses to operate at a higher speed, other factors should be modified to ensure that the aircraft remains within the circling approach protected area.
- Wind Speed/Direction – Downwind turns may significantly impact the turn radius. Therefore, pilots should carefully plan the initiation of all turns to ensure that the aircraft remains within the circling approach protected area when adjusting for winds.
- Pilot Technique – Pilots should take all of these factors into account when planning and executing instrument approaches to ensure a safe, stabilized approach is performed within the protected area.

Information provided in this InFO does not supersede, but augments circling guidance published in the Instrument Procedures Handbook (FAA-H-8261-16B), Chapter 4, the Instrument Flying Handbook (FAA-H-8083-15B) Chapter 10, and the Aeronautical Information Manual (AIM), Section 5-4-7.

Operators should also consider if and when it is appropriate for pilots to conduct a circling approach at a speed in excess of published limits and provide specific guidance (i.e., Standard Operating Procedures (SOPs), Safety Management System (SMS), etc.).

Recommended Action: Directors of Safety, Directors of Operations, Directors of Training, Training Center Managers, Check Pilots, Training Pilots, flightcrews and pilot(s) in command (PIC) must ensure that an approach speed category that is less than the aircraft's published approach speed category (as determined by the aircraft's maximum certificated landing weight, per § 97.3) is never used. Additionally, when an approach speed is used that is above the aircraft's published approach speed category, pilots/operators should exercise care and must remain within the instrument approach protected area, per § 97.20 to achieve the obstacle and terrain clearances provided by procedure design criteria. Operators are also reminded to conduct a safety risk analysis on any change as part of their SMS process.

Contact: Questions or comments regarding this InFO should be directed to the Flight Technologies and Procedures Division at 202-267-8790.