



# Advisory Circular

**Subject: Missed Approach Climb Gradient**

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## 1.0 INTRODUCTION

- (1) This Advisory Circular (AC) is provided for information and guidance purposes. It may describe an example of an acceptable means, but not the only means of demonstrating compliance with regulations and standards. This AC on its own does not change, create, amend or permit deviations from regulatory requirements nor does it establish minimum standards.

### 1.1 Purpose

- (1) The purpose of this AC is to provide guidance on how to publish or submit for publishing an Instrument Approach Procedure (IAP) minima that requires a missed approach climb gradient.

### 1.2 Applicability

- (1) This document is applicable to all Transport Canada Civil Aviation (TCCA) employees and to individuals or organizations when they are exercising privileges granted to them under an External Ministerial Delegation of Authority. This information is also available to the aviation industry for informational purposes.

### 1.3 Description of Changes

- (1) Not applicable.

## 2.0 REFERENCES AND REQUIREMENTS

### 2.1 Reference Documents

- (1) It is intended that the following reference materials be used in conjunction with this document:
- (a) *Aeronautics Act* (R.S., 1985, c. A-2);
  - (b) *Civil Air Navigation Services Commercialization Act* (1996, c. 20);
  - (c) Part VIII, Subpart 03 of the Canadian Aviation Regulations (CARs) — *Aeronautical Information Services*;
  - (d) Transport Canada Publication (TP) 308/GPH 209 — *Criteria for the Development of Instrument Procedures*, Change 7, 2017 -01 -05:

### 2.2 Cancelled Documents

- (1) Not applicable.

### 2.3 Definitions and Acronyms

- (1) The following **definitions** and **acronyms** are used in this document:
- (a) **CAP:** Canada Air Pilot.
  - (b) **CG:** Climb Gradient.
  - (c) **IAP:** Instrument Approach Procedure.
  - (d) **NM:** Nautical Mile.
  - (e) **Restricted Instrument Procedure:** an instrument approach, departure, arrival or transition procedure that has been approved by TCCA for restricted use by one or more operators and/or the military.

### **3.0 BACKGROUND**

- (1) The obstacle clearance surface used to evaluate the missed approach segment is predicated on the premise that an aircraft will maintain a climb gradient of a least 200 feet per nautical mile (NM) (or 400 feet/NM for helicopter-only procedures). This minimum climb gradient (CG) requirement is standard and not specified on the IAP chart.
- (2) To provide the lowest minima, a missed approach CG greater than the standard 200 feet/NM (or 400 feet/NM for helicopter) may be specified on the IAP chart.
- (3) Pilots must preplan to determine if the aircraft can meet the climb gradient. Other minima or procedures should be considered if the CG cannot be used.

### **4.0 REQUIREMENTS**

#### **4.1 General**

- (1) When a missed approach CG is specified, a minima with the standard climb gradient must be available for aircraft that cannot meet the higher climb gradient.
- (2) For circling minima, CG greater than standard may only be authorized for circling only procedures.
- (3) The publication of a minima that requires a missed approach climb gradient up to 425 feet/NM (600 feet/NM for helicopter-only procedures), does not require a specific approval and may be published in the Canada Air Pilot (CAP).
- (4) The publication of a minima that requires a missed approach climb gradient in excess of 425 feet/NM (600 feet/NM for helicopter-only procedures), requires Flight Standards approval and must be published as a Restricted Instrument Procedure.

Note: Operations with a minima that requires a climb gradient in excess of 425 feet/NM (600 feet/NM for helicopter-only procedures) requires a specific approval.

#### **4.2 Charting**

- (1) When a missed approach CG in excess of standard has been established, the following requirements must be met:
  - (a) The (lower) minima associated with the greater than standard CG shall be published along with (higher) minima associated with the standard CG. Where it is not feasible to publish both on the same chart, an alternative is to publish a second chart containing the same type of minima as the first chart that will permit the use of a standard missed approach CG. Should this method be used, the greater than standard CG chart shall make reference to the standard CG chart (e.g. if unable to meet climb gradient see RNAV (GNSS) Z RWY 05).
  - (b) The CG shall be clearly published and be specified to an altitude at which the gradient is no longer required.

### **5.0 CONCLUSIONS**

- (1) Compliance to this AC is required as follow:

- (a) New Instrument Approach Procedures (IAP) – Effective immediately; and
- (b) Existing IAP – Next periodic review.

**6.0 INFORMATION MANAGEMENT**

- (1) Not applicable.

**7.0 DOCUMENT HISTORY**

- (1) Not applicable.

**8.0 CONTACT OFFICE**

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