Transport Canada Transports Canada

Advisory Circular

Subject: **Aircraft Eye Wheel Height Information**

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1.0 INTRODUCTION

(1) This Advisory Circular (AC) is provided for information and guidance purposes. It describes 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 document is to inform operators and pilots on updated information with respect to approach slope indicator systems and aircraft Eye Wheel Height (EWH) in the landing configuration that was published in the October 2011 issue of the Transport Canada *Aeronautical Information Manual* (TC AIM).

1.2 Applicability

(1) This document applies to all operators and pilots.

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 these documents:

(a) Transport Canada Publication, TP 14371E — *Aeronautical Information Manual (AIM)*;

(b) Transport Canada Publication TP 312 — *Aerodrome Standards and Recommended Practices.*

2.2 Cancelled Documents

(1) Not applicable.

(2) By default, it is understood that the publication of a new issue of a document automatically renders any earlier issues of the same document null and void.

2.3 Definitions and Abbreviations

(1) The following **definition** is used in this document:

(a) **Eye Wheel Height**: The highest expected vertical distance from the pilot's eyes to the lowest portion of the aircraft at threshold crossing with maximum certificated landing weight in the normal landing configuration for the aircraft type and given glideslope.

***Note**:*
It is of importance to realise that this is not the physical dimension of the aircraft when at rest on the apron. It is the vertical distance in the landing configuration when the aircraft is rotated about the pitch angle and to the wheel path which follows the glideslope angle. The EWH is normally reported for a 3 degree glideslope, but may differ for other glideslopes.

(2) The following **abbreviations** are used in this document:

(a) **AIM**: Aeronautical Information Manual;

(b) **APAPI**: Abbreviated Precision Approach Path Indicator;

(c) **EWH:** Eye Wheel Height in the landing configuration;

(d) **FCOM**: Flight Crew Operating Manual;

(e) **PAPI:** Precision Approach Path Indicator; and

(f) **VASI**: Visual Approach Slope Indicator.

3.0 BACKGROUND

(1) Approach slope indicator systems are of two types: the Precision Approach Path Indicator (PAPI), Abbreviated Precision Approach Path Indicator (APAPI) and the Visual Approach Slope Indicator (VASI). The former is the present standard in TP312. The latter is no longer the standard system, but continues in operation at some airports.

(2) Using guidance from an approach slope indicator system incompatible with an aircraft's Eye Wheel Height (EWH) in the landing configuration has been identified as a contributing factor in aircraft accidents.

(3) The EWH in the landing configuration is an important parameter to consider when determining which VASI or PAPI/APAPI is operationally acceptable for use by a given aircraft type.

(4) Updated information on approach slope indicator systems and their relationship to aircraft EWH was published in the October 2011 issue of Transport Canada Publication (TP) 14371E — *Aeronautical Information Manual* (TC-AIM).

4.0 GUIDANCE

(1) Operators and pilots should ensure that the approach slope indicator system to be used is appropriate for the given aircraft type, based on the EWH for that aircraft type.

(2) If the EWH is not readily available in the Aircraft Flight Manual or other authoritative aircraft manuals (e.g.: *Flight Crew Operating Manual* (FCOM)), the aircraft manufacturer should be contacted to determine the EWH in the landing configuration for the given aircraft type.

(3) Contact information for most manufacturers can be determined by searching the Transport Canada NAPA issued Certificates Online at: NAPA Issued Certificates Online (NICO) (Type Certificates).

(4) The EWH in the landing configuration should be related to the latest material in the AIM on VASI or PAPI/APAPI.

Note:
Failure to assess the EWH in the landing configuration and approach slope indicator system compatibility could result in decreased terrain clearance margins and in some cases, even premature contact with terrain.

5.0 INFORMATION MANAGEMENT

(1) Not applicable.

6.0 DOCUMENT HISTORY

(1) Not applicable.

7.0 CONTACT OFFICE

Suggestions for amendment to this document are invited, and should be submitted via:
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Transport Canada documents or intranet pages mentioned in this document are available upon request through the Contact Office.