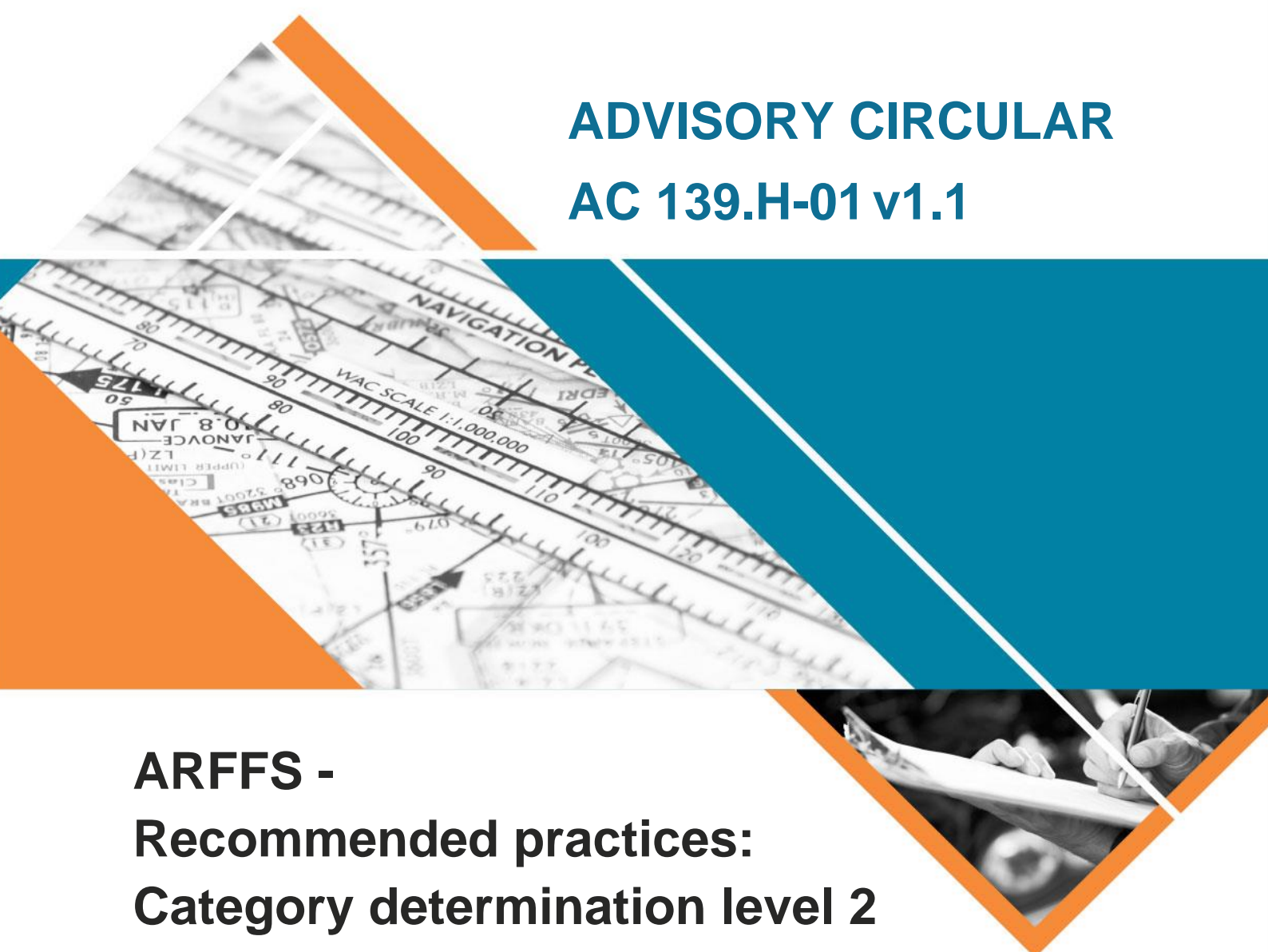




# ADVISORY CIRCULAR AC 139.H-01 v1.1



## ARFFS - Recommended practices: Category determination level 2

Date November 2022  
File ref D22/428929

Advisory circulars are intended to provide advice and guidance to illustrate a means, but not necessarily the only means, of complying with the Regulations, or to explain certain regulatory requirements by providing informative, interpretative and explanatory material.

**Advisory circulars should always be read in conjunction with the relevant regulations.**

## Purpose

This AC provides guidance and information to aerodrome operators and ARFFS providers where aerodrome rescue and fire fighting services are provided or required.

## For further information

For further information, contact CASA's Personnel Licensing, Aero and Air Nav Standards (telephone 131 757).

## Status

This version of the AC is approved by the Branch Manager, Flight Standards.

**Note:** Changes made in the current version are not annotated. The document should be read in full.

Version	Date	Details
v1.1	November 2022	Administrative review only.
(0)	April 2003	Initial AC.

Unless specified otherwise, all subregulations, regulations, Divisions, Subparts and Parts referenced in this AC are references to the *Civil Aviation Safety Regulations 1998 (CASR)*.

# Contents

<b>1</b>	<b>Reference material</b>	<b>3</b>
1.1	References	3
<b>2</b>	<b>Category determination</b>	<b>4</b>

# 1 Reference material

## 1.1 References

### Legislation

Legislation is available on the Federal Register of Legislation website <https://www.legislation.gov.au/>

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Document	Title
MOS 139, subpart H. Ref; Chapter 3	

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### International Civil Aviation Organization documents

International Civil Aviation Organization (ICAO) documents are available for purchase from <http://store1.icao.int/>

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Document	Title
ICAO, Annex 14, Vol. 1	Aerodromes
ICAO, Airport Services Manual, Part 1	Rescue and fire fighting
ICAO, Training Manual, Part E-2	Aerodrome fire service personnel

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## 2 Category determination

- 2.1.1 The level of protection to be provided at an aerodrome should be based on the dimensions of the aeroplanes using the airport adjusted for the frequency of operations.
- 2.1.2 The aerodrome category for the aerodrome rescue and fire fighting service should be based on the overall length of the longest aircraft using the aerodrome and their maximum fuselage width. The table to determine the aerodrome can be found in, Chapter 3, of the Manual of Operational Standards.
- 2.1.3 Aerodromes should be categorised for ARFFS purposes by the busiest consecutive three months of the year:
- when the number of movements of the aeroplane in the highest category normally using the airport is 700 or greater, then the category should be the aerodrome category (See example No 1);
  - when the number of movements of the aeroplane normally using the aerodrome is less than 700, then the aerodrome category should be one less than the highest aeroplane category (See example No 2); and
  - where there is a wide range of difference between the dimensions of the aeroplane which are included in reaching 700 movements, the aeroplane category may be further reduced to be no lower than one category below that of the highest aeroplane category (See example No 3).
- 2.1.4 A take-off or a landing of scheduled, non scheduled and general aviation operations should be counted in determining the aerodrome category.
- 2.1.5 The following examples illustrate the method for determining the aerodrome category.

**Table 1: Example 1**

Aeroplane	overall	Fuselage	Category	Movements
Boeing 747	70.66	6.5	9	680
Concorde	62.10	2.87	9	140
A340	59.39	5.64	8	120

- 2.1.6 The longest aircraft are categorised by determining (ref. Airport Services Manual Part 1):
- their overall length; and
  - their width, until 700 movements are reached.
- 2.1.7 Example 1 results in the aerodrome category being category 9.

**Table 2: Example 2**

Aeroplane	Overall length	Fuselage width	Category	Movements
B737	400	36.45	3.76	6
A320	37.57	3.95	6	200
F28 Mk 4000	29.61	3.30	5	300

2.1.8 The longest aircraft are categorised by determining (ref. Airport Services manual Part 1):

- a. their overall length; and
- b. their width, until 700 movements are reached.

2.1.9 It can be seen that the number of movements of the longest aeroplanes in the highest category totals only 500. The minimum category for the aerodrome in this case would be category 5 which is one category below that of the longest aeroplane.

**Table 2: Example 3**

Aeroplane	Overall length	Fuselage width	Category	Movements
B767-200	48.50	5.03	8	150
BA 146	26.16	3.56	5	600

2.1.10 The longest aircraft are categorised by determining (ref Airport Services Manual Part 1):

- a. their overall length; and
- b. their width, until 700 movements are reached.

2.1.11 It can be seen that the number of movements of the longest aeroplanes in the highest category totals only 150. In view of the relatively wide range of difference between the length of the longest aeroplane (B767) and the shorter aeroplane (BA 146), the minimum category for the airport may be reduced to category 7 for the B767 – 200 operations. The category can be further reduced to category 5 for the BA (100 series) operations.