



Advisory Circular

AC 139H-1(0)

AUGUST 2002

ARFFS - RECOMMENDED PRACTICES CATEGORY DETERMINATION

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1. REFERENCES

- MOS 139, subpart H. Ref; Chapter 3
- There are several publications available which address the elements of rescue and fire fighting in detail. These documents are listed below;
 - ◇ ICAO, Annex 14, Aerodromes, Vol. 1

2. PURPOSE

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

3. STATUS OF THIS AC

This recommended practice remains current until re-issue, withdrawal or suspended.

Advisory Circulars are intended to provide recommendations 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 interpretative and explanatory material.

Where an AC is referred to in a 'Note' below the regulation, the AC remains as guidance material. ACs should always be read in conjunction with the referenced regulations

4. CATEGORY DETERMINATION

4.1 The level of protection to be provided at an aerodrome should be based on the dimensions of the aeroplanes using the airport as adjusted for the frequency of operations.

4.2 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.

4.3 Aerodromes should be categorised for ARFFS purposes by counting the aeroplanes movements in the busiest consecutive three months of the year as follows:

- (a) when the number of movements of the aeroplane in the highest category normally using the airport is 700 or greater in the busiest consecutive three months, then that category should be the aerodrome category (See example No 1);
- (b) when the number of movements of the aeroplane normally using the aerodrome is less than 700 in the busiest consecutive three months, then the aerodrome category may be one less than the highest aeroplane category (See example No 2);
- (c) 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).

4.4 Either a take-off or a landing constitutes a movement. Movements of scheduled, non scheduled and general aviation operations should be counted in determining the aerodrome category.

4.5 The following examples illustrates the method for the determination of the aerodrome category.

Example 1

Aeroplane	overall length	Fuselage Width	Category	Movements
Boeing 747	70.66	6.5	9	680
Concorde	62.10	2.87	9	14
A340	59.39	5.64	8	120

The longest aircraft are categorised by evaluating (from the table in, Chapter 3, page 3-11) their overall length and second, their width, until 700 movements are reached. Example 1 results in the aerodrome category being category 9.

Example 2

Aeroplane	overall length	Fuselage Width	Category	Movements
B737 -400	36.45	3.76	6	300
A320	37.57	3.95	6	200
F28 Mk4000	29.61	3.30	5	300

The longest aircraft are categorised by evaluating (from the table in Chapter 3, page 3-11) their overall length and second, their width, until 700 movements are reached. 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.

Example 3

Aeroplane	overall length	Fuselage Width	Category	Movements
B767-200	48.50	5.03	8	150
BA 146 (100 Series)	26.16	3.56	5	600

The longest aircraft are categorised by evaluating (from the table in Chapter 3, page 3-11) their overall length and second, their width, until 700 movements are reached. 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 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 146 (100 series) operations.

Bill McIntyre
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