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# **Type Acceptance Report**

**TAR 0/21B/14**

**Aerostar (MFM) S-66A**



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## Introduction

This report details the basis on which Type Acceptance Certificate No.0/21B/14 was granted in the Standard category in accordance with NZCAR Part 21 Subpart B.

Specifically the report aims to:

- (a) Record the airworthiness certification standard used for type acceptance of the applicable models in New Zealand;
- (b) Summarise any outstanding requirements which must be complied with for the issue of a NZ Airworthiness Certificate to any models covered by the Type Acceptance Certificate.

## Foreign Type Certificate Details

Type Certificate: A15CE / IM 155 / No 177

Issued by: FAA / DGAC

Manufacturer: Aerostar International Inc. / Manufacture Francais de Montgolfieres

Model: S-66A

MCTOW Up to 2500 lbs depending on gondola and equipment fitted.

The certification basis of the S-66A is FAR Part 31 dated 1 July 1964 as amended by 31-1 and 31-2.

This is an acceptable certification basis in accordance with NZCAR Part 21B Para §21.41, as FAR 31 is the basic standard for manned free balloons called up under Part 21 Appendix C. There are no non-compliances and no special conditions have been prescribed by the Director under §21.23.

Aerostar International Inc is the original designer and manufacturer of the aircraft type, and obtained the initial FAA type certificate A15CE in 1968. The S-66A model was certificated in 1979. Manufacture Francais de Montgolfieres (MFM – known as Raven Europe) obtained French type certificate No 177 in 1985 to manufacture Aerostar balloons in France under licence.

MFM went out of business in the mid-nineties and responsibility for the aircraft produced by MFM passed to Aerostar International Inc in the USA. The DGAC has confirmed that type certificate No 177 has been cancelled and replaced by imported aircraft type certificate IM 155. As Aerostar now have responsibility for the MFM series, the MFM S-66A is to be treated in all respects as an Aerostar S-66A.

There was an English translation of the MFM S-66A flight manual. The limitations in this have been checked and found to be the same as the Aerostar S-66A flight manual. The MFM manual has not been updated since initial issue, while the Aerostar S-66A manual has been subject to continual updating. Therefore the Aerostar S-66A flight manual is to be used by the MFM aircraft.

## Type Acceptance Application

The application for New Zealand type acceptance was from Max Imstepf dated 26/1/2000.

Type Acceptance Certificate No.0/21B/14 was granted on 13 November 2000.

## Type Data

The type data requirements of NZCAR Part 21B Para §21.43 have been satisfied by supply of the following documents:

(1) Type certificate: A15CE, DGAC No 177 and No IM155.

(2) Airworthiness design requirements: Already held by the CAA

(3) Certification compliance listing:

Raven Industries Report No R-0979008 – Final Report for Type Certification of Model S-66A Hot Air Balloon System by Raven, dated 10 September 1979.

(4) Flight manual: Aerostar S-66A Airplane Flight Manual  
CAA Accepted as AIR 2707.

(5) Illustrated Parts Catalogue: Components are specified in the TCDS and the ACAI.

(6) Maintenance manual and service data for aircraft, engine and propeller:

Aerostar Continuing Airworthiness Instructions (ACAI), covering all models, already held.

(7) Agreement from manufacturer to supply updates of data in (4), (5) and (6):

CAA 2171 form from Martin Harms, Aerostar Customer Support Manager dated 7-11-00.

## Additional New Zealand Certification requirements

Compliance with the following additional NZ requirements has been reviewed and were found to be covered by either the original certification requirements or the basic build standard of the aircraft, except as noted:

### Civil Aviation Rules Part 26

#### Subpart B - Additional Airworthiness Requirements

Appendix B - All Aircraft

PARA:	REQUIREMENT:	MEANS OF COMPLIANCE:
B.1	Marking of Doors and Emergency Exits	<i>Not applicable</i>
B.2	Crew Protection Requirements - CAM 8 Appdx. B # .35	Agricultural Aircraft – <i>Not Applicable</i>

## **Civil Aviation Rules Part 91**

### **Subpart F - Instrument and Equipment Requirements**

Manned free balloons are exempted from the equipment requirements of Part 91.

### **Summary**

Type Acceptance Certificate No 0/21B/14 has been granted to the Aerostar (and MFM) S-66A and all examples are now eligible for the issue of a New Zealand Airworthiness Certificate in the Standard Category in accordance with CAR §21.177, subject to any outstanding operational requirements noted above being met.

### **Sign off**

Peter Gill  
Airworthiness Engineer

Date: 13 November 2000