
Type Acceptance Report

TAR 16/21B/15

SCHEMPP-HIRTH MINI NIMBUS Series

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Executive Summary

New Zealand Type Acceptance has been granted to the Schempp-Hirth Mini-Nimbus Series based on validation of EASA Type Certificate number LBA 328. There are no special requirements for import.

Applicability is currently limited to the Models and/or serial numbers detailed in Appendix 1, which are now eligible for the issue of an Airworthiness Certificate in the Standard Category in accordance with NZCAR §21.191, subject to any outstanding New Zealand operational requirements being met. (See Section 5 of this report for a review of compliance of the basic type design with the operating Rules.) Additional variants or serial numbers approved under the foreign type certificate can become type accepted after supply of the applicable documentation, in accordance with the provisions of NZCAR §21.43(c).

NOTE: The information in this report is correct as at the date of issue. The report is only updated when an application is received to revise the Type Acceptance Certificate. For details on the current type certificate holder and any specific technical data, refer to the latest applicable ICAO Type Certificate Data Sheet.

1. Introduction

This report details the basis on which Type Acceptance Certificate No. 16/21B/15 was granted in the Standard Category in accordance with NZCAR Part 21 Subpart B.

Specifically the report aims to:

- (a) Specify the foreign type certificate and associated airworthiness design standard used for type acceptance of the model(s) in New Zealand; and
- (b) Identify any special conditions for import applicable to any model(s) covered by the Type Acceptance Certificate; and
- (c) Identify any additional requirements which must be complied with prior to the issue of a NZ Airworthiness Certificate or for any subsequent operations.

2. ICAO Type Certificate Details

Manufacturer:	Schempp-Hirth Flugzeugbau GmbH & Co. KG
Type Certificate:	Musterzulassungsschein Nr. 328
Issued by:	Luftfahrt-Bundesamt, Bundesrepublik Deutschland
Model(s):	Mini Nimbus C
MCTOW	500 kg [1102 lb.]
Max. No. of Seats:	1
Noise Standard:	Not Applicable

3. Type Acceptance Details

The application for New Zealand type acceptance was from the importer Mr Peter Wooley, dated 10 October 2015. The first-of-type example was serial no. 91, registered ZK-GKS. The Mini Nimbus C is a 15m span single-seat all-composite glider with flaps and T-tail.

Type Acceptance Certificate Number 16/21B/15 was granted on 23 November 2015 to the Schempp-Hirth Mini Nimbus C based on validation of LBA Type Certificate number 328. There are no special requirements for import into New Zealand.

The Mini-Nimbus, which first flew in 1976, is a 15-meter racing class development of the Open Class Nimbus 2 with a new wing with both dive brakes and flaps. The original HS 7 version has an all-moving horizontal tail, but this was changed to a conventional tail with a fixed horizontal stabilizer for the Mini-Nimbus B. The Mini-Nimbus C model has a higher maximum all-up weight, and also introduced optional carbon fiber wings.

4. NZCAR §21.43 Data Requirements

The type data requirements of NZCAR Part 21B Para §21.43 have been satisfied by supply of the following documents, or were already held by the CAA:

(1) ICAO Type certificate:

Luftfahrt-Bundesamt Musterzulassungsschein Nr. 328 (lfd.Nr. 3)

LBA Type Certificate Data Sheet number 328 at Issue 6 dated March 18, 1999

- Model Mini-Nimbus HS 7 approved 12 May 1977
- Model Mini-Nimbus B approved 21 April 1978
- Model Mini-Nimbus C approved 7 December 1978

(2) Airworthiness design requirements:

(i) *Airworthiness Design Standards:*

The certification basis of the Mini-Nimbus C is the Airworthiness Requirements for Sailplanes and Powered Sailplanes (LFSM), issue of October 23, 1975, plus Directives for the Stress Analysis of Sailplane Structures made from Glass Fiber Reinforced Plastics, issue of March 1965. This is an acceptable certification basis in accordance with NZCAR Part 21B Para §21.41, as LFSM is the predecessor of JAR 22 which is the basic standard for sailplanes and powered sailplanes called up under Part 21 Appendix C and Advisory Circular 21-1. There are no non-compliances and no additional special conditions have been prescribed by the Director under §21.23. The Mini-Nimbus C is approved for cloud flying and for some aerobatics in accordance with the Flight Manual (See Sections 2.8 and 2.9)

(ii) *Special Conditions:*

Nil

(iii) *Equivalent Level of Safety Findings:*

Nil

(iv) *Airworthiness Limitations:*

See Service Manual for Inspection Program for Extension of Service Time

(3) Aircraft Noise and Engine Emission Standards:

Not Applicable

(4) Certification Compliance Listing:

Nachweisliste (MZ) [Compliance Checklist] Typ: Mini-Nimbus C; Geräte-Nr. 328

(5) Flight Manual: Flight and Service Manual for the sailplane Mini-Nimbus C – Issue September 1978 (Sections 2-4 LBA Approved) – CAA Accepted as AIR 3339

(6) Operating Data for Aircraft:

(i) *Maintenance Manual:*

Flight and Service Manual for the sailplane Mini-Nimbus C (Appendix includes Repair instructions for FRP-Sailplanes)

(ii) *Current service Information:*

Manual Revision List for Mini Nimbus C

(iii) *Illustrated Parts Catalogue:*

Not Applicable – None issued

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

Manual Revisions and Technical Notes available on the website at <http://www.schempp-hirth.com/>

5. Additional New Zealand Requirements

Compliance with the retrospective airworthiness requirements of NZCAR Part 26 is a prerequisite for the grant of a type acceptance certificate.

CAR 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>To be determined on an individual aircraft basis</i>
B.2	Crew Protection Requirements – CAM 8 Appdx. B # .35	Not Applicable – Agricultural Aircraft only

Compliance with the following additional NZ operating 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:

CAR Part 91 – Subpart F – Instrument and Equipment Requirements

PARA:	REQUIREMENT:	MEANS OF COMPLIANCE:
91.505	Shoulder Harness if Aerobatic; >10 pax; Flight Training	Required Equipment – See TCDS §III.11
91.507	Pax Information Signs - Smoking, safety belts fastened	Not Applicable – Single-seat glider
91.509	Minimum Instruments and Equipment	Not Applicable – Powered aircraft only
91.511	Night VFR Instruments and Equipment	Not Applicable – Certificated for Day VFR flight only
91.513	VFR Communication Equipment	<i>Operational requirement – compliance as applicable</i>
91.517	IFR Instruments and Equipment	Not Applicable – Certificated for Day VFR flight only
91.519	IFR Communication and Navigation Equipment	Not Applicable – Certificated for Day VFR flight only
91.523	Emergency Equipment	N/A – Single-seat glider [Superseded by §104.101(5)]
91.529	ELT - TSO C91a after 1/4/97 (or replacement)	<i>To be determined on an individual aircraft basis</i>
91.531	Oxygen Indicators - Volume/Pressure/Delivery	<i>Operational requirement – compliance as applicable</i>
91.533	Oxygen for Non-Pressurised Aircraft	<i>Operational requirement – compliance as applicable</i>
91.541	SSR Transponder and Altitude Reporting Equipment	<i>Operational requirement – compliance as applicable</i>
91.543	Altitude Alerting Device - Turbojet or Turbofan	Not Applicable – Not turbojet or turbofan powered
91.545	Assigned Altitude Indicator	Not Applicable – Certificated for Day VFR flight only
A.15	ELT Installation Requirements	<i>To be determined on an individual aircraft basis</i>

CAR Part 104 – Subpart C - Equipment and Maintenance Requirements

PARA:	REQUIREMENT:	MEANS OF COMPLIANCE:
104.101	(1) Airspeed Indicator (2) Altimeter (Adjustable for barometric pressure) (3) Magnetic Compass (4) Safety Harness for each seat (5) A First Aid Kit (6) For powered gliders (1) For IMC – (i) A variometer (ii) Turn & Slip/Artificial Horizon (iii) Radio transceiver	Required as Minimum Equipment – See TCDS Section #III.11 Required as Minimum Equipment – See TCDS Section #III.11 <i>Operational requirement – compliance as applicable</i> Required as Minimum Equipment – See TCDS Section #III.11 <i>Operational requirement – compliance as applicable</i> Not Applicable [Required equipment when used for cloud flying See Flight Manual Section 2.8

NOTES: 1. A Design Rule reference in the Means of Compliance column indicates the Design Rule was exactly equivalent to the CAR requirement, and compliance is achieved for the basic aircraft type design by certification against the original Design Rule.

2. The CAR Compliance Tables above were correct at the time of issue of the Type Acceptance Report. The Rules may have changed since that date and should be checked individually.

3. Some means of compliance above are specific to a particular model/configuration. Compliance with Part 91/119 operating requirements should be checked in each case, particularly oxygen system capacity and emergency equipment.

Attachments

The following documents form attachments to this report:

Three-view drawing Schempp-Hirth Model Mini Nimbus C
Translated Copy of LBA Type Certificate Data Sheet Number 328

Sign off

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David Gill
Team Leader Airworthiness

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Checked – Greg Baum
Airworthiness Engineer

Appendix 1

List of Type Accepted Variants:

<i>Model:</i>	<i>Applicant:</i>	<i>CAA Work Request:</i>	<i>Date Granted:</i>
Mini-Nimbus HS 7	AC 21-1.2/NZCAR Part 21 Appendix A(c)		
Mini-Nimbus B	AC 21-1.2/NZCAR Part 21 Appendix A(c)		
Mini-Nimbus C	P Wooley	16/21B/15	23 November 2015