
Type Acceptance Report

TAR 13/21B/20

SCHLEICHER ASW 20 Series

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Executive Summary

New Zealand Type Acceptance has been granted to the Schleicher ASW 20 Series based on validation of EASA Type Certificate number LBA 314. 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 §21.177, 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).

1. Introduction

This report details the basis on which Type Acceptance Certificate No.13/21B/20 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.

The report also notes the status of all models included under the foreign type certificate which have been granted type acceptance in New Zealand. Models covered by the type acceptance certificate issued under Part 21B are listed in Section 2 of this report. Models which were accepted prior to that under NZCAR Section B.9 are listed in Appendix 1.

2. ICAO Type Certificate Details

| | |
|--------------------|---------------------------------|
| Manufacturer: | Alexander Schleicher GmbH & Co. |
| Type Certificate: | EASA – LBA 314 |
| Issued by: | European Aviation Safety Agency |
| Model: | ASW 20 BL |
| MCTOW | 525 kg. [1157 lb.] |
| Max. No. of Seats: | 1 |
| Noise Standard: | Not Applicable |

3. Type Acceptance Details

The application for New Zealand type acceptance of the Schleicher ASW 20 BL was from the importer, Mr Ross Gaddes, dated 1 March 2013. The first-of-type example was serial number 20666, registered ZK-GBL. The ASW 20 is a high performance single-seat competition sailplane of all-composite construction with mid-wing layout and T-tail.

Type Acceptance Certificate Number 13/21B/20 was granted on 4 June 2013 to the Schleicher Model ASW 20 BL based on validation of EASA Type Certificate LBA 314. Specific applicability is limited to the coverage provided by the operating documentation supplied. There are no special requirements for import into New Zealand.

The ASW 20 was a new FAI 15m class design by Gerhard Waibel using the fuselage of the ASW 19 with new wings. It first flew in 1977 and continued in production until 1995. The L version indicates optional extended wing-tips to produce a 16.6m span to operate in the open class. In that configuration no water ballast is permitted so MAUW is reduced to 380 kg. The B version has an improved aerofoil section with pneumatic turbulators and stronger wing spar with increased ballast capacity which permits a higher MAUW. The C version has only the aerodynamic improvements of the B and retains the original MAUW.

The first ASW 20 on the NZ register was ZK-GLD just months after type certification in December 1977, and since then there have been examples of the C, L and CL variants. (The CL is not covered by the transitional arrangements of Part 21 Appendix A.)

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:

LBA Musterzulassungsschein Nr.314

LBA Segelflugzeug-Kennblatt Nr.: 314 Issue 13 dated 20 February 1997

- Model ASW 20 LBA approved 12 August 1977
- Model ASW 20 L LBA approved 30 March 1979
- Model ASW 20 C LBA approved 7 February 1984
- Model ASW 20 BL LBA approved 11 December 1984

(2) Airworthiness design requirements:

(i) *Airworthiness Design Standards:*

The certification basis of the Model ASW 20 Series is the Airworthiness Requirements for Sailplanes and Powered Sailplanes – (LFSM), issue October 23, 1975, plus Standards for the Substantiation of the stress analysis of sailplane components made from fibreglass-reinforced plastics, issue March 1965. This is an acceptable certification basis in accordance with NZCAR Part 21B Para §21.41, as LFSM is the predecessor of JAR22 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.

(ii) *Special Conditions:*

Nil

(iii) *Equivalent Level of Safety Findings:*

Nil

(iv) *Airworthiness Limitations:*

See Maintenance Manual Section IV

(3) Aircraft Noise and Engine Emission Standards:

Not Applicable.

(4) Certification Compliance Listing:

Summary of Substantiation of Analyses and Tests for the Sailplane ASW 20

Summary of Substantiation of Analyses and Tests for the Gilder ASW 20 L

Compliance Listing JAR22 15m-Class Sailplane ASW20B dated 24 Nov '84

(5) Flight Manual: LBA-Approved Flight Manual for the Glider Model ASW 20 BL
October 1984 Edition – CAA Accepted as AIR 3246

(6) Operating Data for Aircraft:

(i) *Maintenance Manual:*

Maintenance Manual for the Glider Model ASW 20 BL

(ii) *Current service Information:*

Table of AD-Notes and Technical Notes – Type ASW 20 Data Sheet No. 314

(iii) *Illustrated Parts Catalogue:*

None produced

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

See letter from Alexander Schleicher reference He/ph dated 14.05.2013

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.

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>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:

Civil Aviation Rules 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 §.II.2 |
| 91.507 | Pax Information Signs - Smoking, safety belts fastened | Not Applicable – Single-seat glider |
| 91.509 | Minimum Instruments and Equipment | Not Applicable – Glider |
| 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 C126 after 1/4/2008 – Appendix A.15 | <i>Operational requirement – compliance as applicable</i> |
| 91.531 | Oxygen Indicators - Volume/Pressure/Delivery | Optional factory oxygen provisions – See MM §II.4 |
| 91.533 | Oxygen for Non-Pressurised Aircraft For flight >30 min above FL100 – Supplemental for crew | <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 – Certificated for Day VFR flight only |
| 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> |

Civil Aviation Rules 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 – (i) Fuel gauge for each main fuel tank (ii) Oil Pressure Gauge or warning device (iii) A tachometer or engine governor light (7) For IMC flight – (i) A variometer (ii) Turn & Slip/Artificial Horizon (iii) Radio transceiver | Required as Minimum Equipment – See TCDS Section #*.II.2 Required as Minimum Equipment – See TCDS Section #*.II.2 <i>To be determined on an individual aircraft basis</i> Required as Minimum Equipment – See TCDS Section #*.II.2 <i>To be determined on an individual aircraft basis</i> Not Applicable } Required for IMC (Cloud) Flight – See FM Section II.4. |

Attachments

The following documents form attachments to this report:

Three-view drawing Alexander Schleicher Model ASW 20 BL
 Copy of EASA Type Certificate Data Sheet Number LBA 314

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> |
|---------------|---------------------------------------|--------------------------|----------------------|
| ASW 20 | AC 21-1.2/NZCAR Part 21 Appendix A(c) | | |
| ASW 20 C | AC 21-1.2/NZCAR Part 21 Appendix A(c) | | |
| ASW 20 L | AC 21-1.2/NZCAR Part 21 Appendix A(c) | | |
| ASW 20 BL | R.M. Gaddes | 13/21B/20 | 4 June 2013 |