

AIRWORTHINESS APPROVAL NOTE NO. 15912

APPLICANT: Doncaster Sailplane Services

AIRCRAFT TYPE: Scheibe SF25B

REGISTRATION: G-AYBG

CONSTRUCTOR'S NO. 4696

Modification No BHF/DSS/1/78.
To replace Stamo MS-1500 Engine with
Danum 1600/1 Engine
for aircraft certified in the Private Category.

1. Introduction

The Applicant has replaced the Stamo MS-1500 engine normally fitted to the Scheibe SF-25.B Self-Launching Motor Glider, with an engine developed from a V.W. Automotive Engine Serial No 0655018 and designated the Danum 1600/1 Engine.

2. Investigation

Although the application for approval was made direct to the CAA, a technical investigation has been undertaken by the BGA who have made recommendations to the CAA.

2.1 Basis of Approval

At the present moment a UK set of requirements does not exist for this type of engine, hence the LBA Requirements given in Information Sheet No 10.05 dated 8.1.59 have been used as a basis for approval. It is possible, in conformity with Part 4.2.8 of this document, to approve a particular aircraft/engine/propeller combination without bench testing the engine.

* This approval is, however, restricted to that combination on that Series of aircraft. It is this type of restricted approval which the applicant has sought to achieve.

In brief Part 4.2.8 of LBA Information Sheet No 10.05 requires that the particular aircraft/engine/propeller combination be successfully flight tested in a manner which includes the following:-

- Applicant
- Surveyor-in-Charge
- Radio Surveyor
- A & C Section
- Aircraft Projects Department
- Licensing Section
- Flight Manuals Section
- Helicopter Section
- US Liaison
- Power Plant Department

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For the Civil Aviation Authority

Date

TO LIST THE FRONT VIEW
1512 WORTH BENCH TESTING

100 Take-offs.

10 Flights of at least 1 hour duration.

60 Climbing flights to at least 600 metres, during which take-off power must be used continuously for at least 5 minutes.

The above flight testing must entail at least 50 hours flying.

2.2 The Danum 1600/1 Engine

This engine has been developed from a V.W. 1600 cc Automotive Engine Serial No 0655018 in a manner described in the engine Operation and Service Manual dated 30th January 1978 and given CAA Ref 15912/2/G-AYBG. This document also defines the engine.

2.3 The Propeller

The propeller fitted is to Doncaster Sailplane Services Drg No 6334-B-140-70. The approval of the design and manufacture of this propeller has been recommended by the BGA.

2.4 The Powerplant Installation

Since the Stamo MS-1500 engine is also derived from the V.W. engine, the method of mounting is unaltered. A description of the installation and associated services is given in a document CAA Ref 15912/1/G-AYBG.

The BGA have declared in their letter to CAA dated 15th February 1978 that this installation has a level of airworthiness equivalent to that of the Stamo MS-1500 installation.

3. Testing

This aircraft as modified has been successfully tested on the ground for 5 hours and flight tested for 48 hours.

During the period from 4th to 28th July 1977 a total of 42 hours were flown which resulted in:-

85 Take-offs

6 Flights of 1 hour.

53 Climbs to above 600 metres.

during which time only routine maintenance was undertaken. This test fell short of the LBA Requirement defined in Para 2.1 of this AAN but subsequent flying has provided sufficient experience to be adequate.

The flight testing is reported in the document CAA Ref 15912/1/G-AYBG, underwritten by the BGA.

4. Procedures and Limitations

The aircraft basic limitations remain unaltered by the embodiment of this modification but the revised engine limitations are as follows:-

Max Permissible RPM	-	3500
Max Continuous RPM	-	3200
Max CHT	-	250°C
Max Oil/Temp	-	115°C
Min Oil/Pressure	-	0.5 Atmosphere

5. Approval

The fitment of the Danum 1600/1 Engine Serial No 0655018 to this aircraft Reg No G-AYBG, by the embodiment of Modification No BHF/DSS/1/78 is approved subject to the following conditions:-

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9/214/1464*

- (a) ~~The~~ propeller fitted is defined by Drg No ~~6334-B-140-70~~
- (b) The engine is operated with the above limitations which must be defined on the aircraft C of A
- (c) The engine is maintained in accordance with the document given CAA Ref 15912/2/G-AYBG
- (d) The aircraft is designated as the 'Scheibe SF.25.B Danum Falke'.
- (e) The aircraft must be operated in the Private Category.

E. J. Niedermayer
 E J NIEDERMAYER
 For the Civil Aviation Authority

Date 4th April 1978



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DONCASTER AIRFIELD
DONCASTER

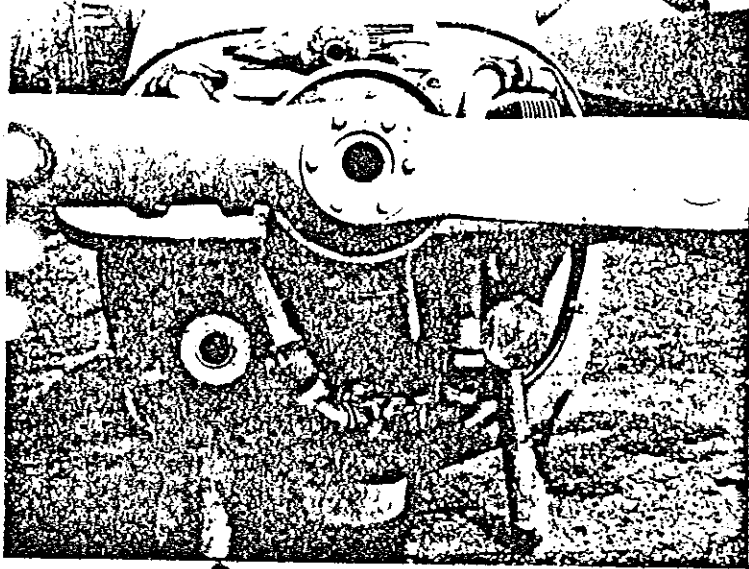
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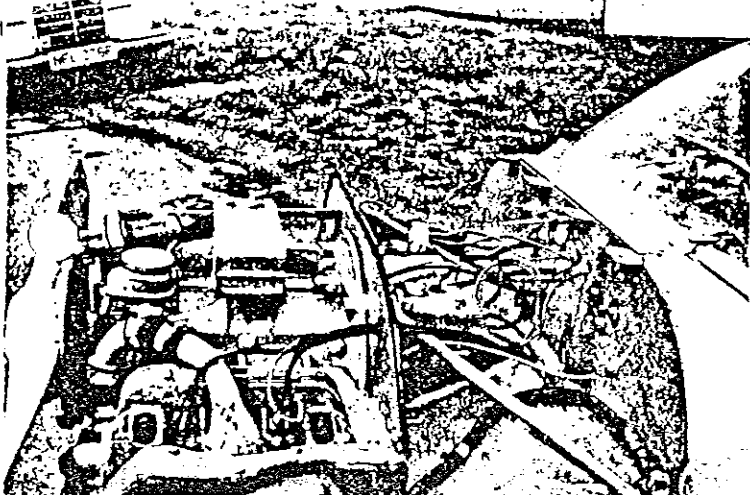
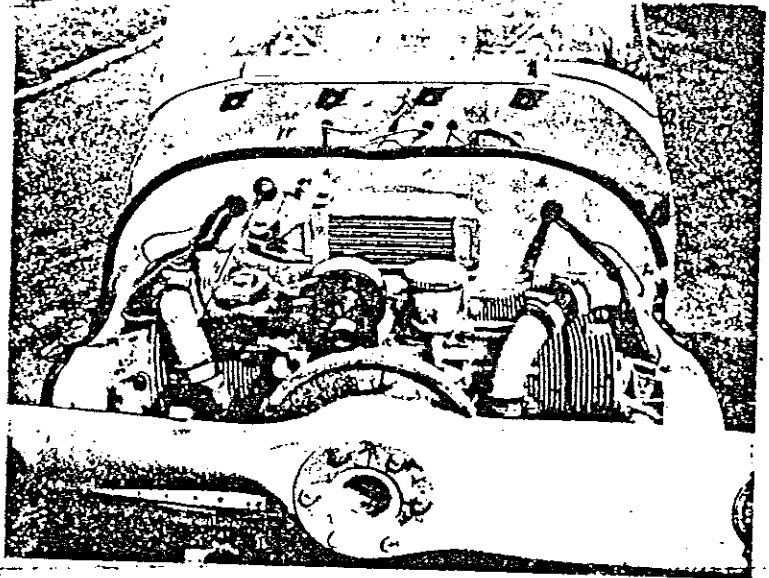
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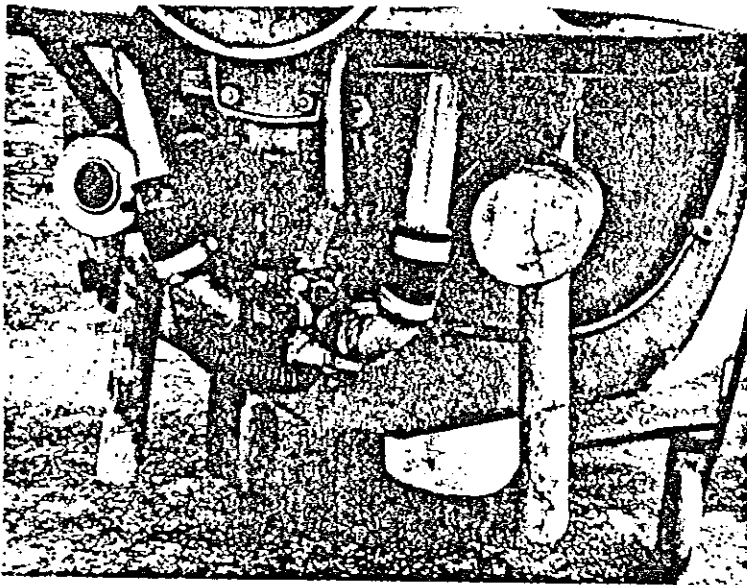
Date

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