

	Standard Modification Issue 1	Mod No. SM11625
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		Compiled: A. Draper
		Approved: F. Donaldson

TITLE : Addition of Wheel Brakes.

APPLICABILITY : **Staaken Flitzer Z21 / Z21A**

Mod Type : **New build or Retro-fit**

1. Introduction

The build plans for the Staaken Flitzer do not include any details for wheel brakes. Operational experience of the aircraft at airfields with hard runways and taxiways has shown that wheel brakes for controlling aircraft speed and to aid steering whilst taxiing is a desirable safety feature. A system of heel operated drum brakes, that is in keeping with the design of the Flitzer, has been designed and developed by Wasey Aeroplanes. A full set of engineering drawings and fitting instructions has been produced detailing all the parts necessary, including a list of what proprietary components are required to complete the installation. Technical support for component manufacture, installation and operation is available as detailed in the Fitting Instructions.

This modification involves alteration to the wheel axle, installation of brake drums into the spoked wheels, brake pedals in the cockpit and their operating cables and a discreet non-steerable tailwheel. Expect a weight increase of approximately 8.5lb but negligible change to CG (less than 0.1" aft) after completion of this modification. Before embarking on this mod, carry out a weight and balance check to ensure that there is sufficient margin.

2. Parts List

2.1 The parts required are detailed in the drawings listed below. The part numbers of non-standard parts and their drawing numbers are identical. Hardware required is detailed within the drawings. All drawings and fitting instructions are available from Ian Wasey of Wasey Aeroplanes ianwasey@btinternet.com

2.2 Documents required:

2.2.1 Drawings

W100-1

W100-2

W101, W10101 to W10105 inclusive

W102, W10201 to W10205 inclusive

W103, W10301 to W10303 inclusive & W103011 to W103014 inclusive

W104, W10401 & W10402

W105, W10501 & W10502

W106, W10601 to W10606 inclusive

W107 to W116 inclusive

W200 to W209 inclusive

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W300
W400

2.2.2 Other documents

Fitting Instructions

3. Action

- 3.1 Ensuring that the current drawing issue is used, manufacture or procure the parts according to the drawings.
- 3.2 Assemble, install and set up the wheel braking system is described in the Fitting Instructions.
- 3.3 For aircraft already issued with a Permit to Fly, prepare worksheets for the work carried out. Otherwise, include reference to the modification in the build record book.
- 3.4 All modification work requires checking and certification by a LAA inspector.
- 3.5 Submit completed worksheets to LAA Engineering.

4. Weight and Balance

- 4.1 Re-weigh the aircraft or recalculate the weight and balance and raise a new weight and balance record.
- 4.2 Submit a copy to LAA Engineering along with a statement that this Standard Mod is fitted. If fitted in the build phase, include reference to this Standard Mod on the appropriate page of the Declaration of Design section of the Inspection Schedule and Record book.

5. Flight Test and Special Inspections

- 5.1 Taxiing trials are necessary to verify satisfactory set up and performance of the braking system. When conducting taxiing trials, ensure first that the aircraft and the pilot are prepared for flight. The aircraft could take-off inadvertently if high speed taxiing is carried out. Before the modified aircraft may fly, a Permit Maintenance Release (PMR) must be signed by a LAA inspector.

6. Certification

- 6.1 Make appropriate logbook entry certified by LAA inspector.