

Subject: Weights and moments of control surfaces

Affected: Sailplane model "Hornet C"

Urgency: At latest on the occasion of the next annual inspection.

Reason: Masses and residual moments of control surfaces differ from permissible values as demonstrated by various checks. A fresh flutter calculation has now defined larger tolerances.

Actions: 1. Incorporation of page 47 A into the Flight and Service Manual.
2. Deletion of section 6.7 "hinge moments" including sentence relating to "contact manufacturer"
3. Determination of masses and hinge moments of control surfaces and latest on the occasion of the next annual inspection. If values determined are within revised ranges, the control surfaces may be re-installed. Should values be outside the tolerances contact:
Glasfaser-Flugzeug-Service GmbH

Material: Page 47 A may be obtained from
Hansjörg Streifeneder
Glasfaser-Flugzeug-Service GmbH
Hofener Weg
D-72582 Grabenstetten/Germany

Notes: Actions 1 and 2 may be carried out by the owner/operator. Action 3 must be conducted by a licensed inspector - the actual values are to be entered in the aircraft log book, together with the accomplishment of all actions.

Grabenstetten, 21.07.1997

.....*H. Streifeneder*.....
H. Streifeneder

LBA-approved
This Service Bulletin is originally written in German and approved by the German LBA on the 8 August 1997 and is signed by Mr. Kopp.
The translation has been accomplished to the best of our knowledge and judgement.

The following values and tolerances must not be exceeded:

Ailerons (configuration without water ballast):

mass : 1,90 - 2,60 kg (without mass ballance)
 stat.moment : 70 - 95 Ncm (" " ")
 mass : 3,20 - 4,50 kg (with " " ")
 stat.moment : 0 - 45 Ncm (" " ")

Mass ballance weights are to be installed from 0,58 to 2,32 m.

Ailerons (configuration with water ballast):

mass : 1,90 - 2,60 kg (without mass ballance)
 stat.moment : 70 - 95 Ncm (" " ")
 mass : 3,20 - 4,50 kg (with " " ")
 stat.moment : (-10) - 27 Ncm (" " ")

Mass ballance weights are to be installed from 0,58 to 2,32 m.

Elevator (both halves incl. fairing)

mass : 1,50 - 2,10 kg (without mass ballance)
 stat.moment : 20 - 60 Ncm (" " ")
 mass : 1,60 - 2,20 kg (with " " ")
 stat.moment : 18,5 - 58,5 Ncm (" " ")

The tip of each elevator must have a mass ballance of 0,05 kg installed at y/s=0,8-1,0 with a lever arm of 15 mm.

Flutter calculation take into account the additional ballancing effect of the vertical elevator actuating rod (0,26kg) and the concentrated mass ballance in the symetrical place (0,22kg), i.e. 0,48 kg with a lever arm of 72 mm.

Rudder:

mass : 1,70 - 2,10 kg (without mass ballance)
 stat.moment : 85 - 110 Ncm (" " ")
 mass : 2,70 - 3,70 kg (with " " ")
 stat.moment : 0 - 45 Ncm (" " ")

The installation of the mass ballance weight must be as follows:

Section	1	2	3	4
Lenght (cm)	300	300	300	300
mass ballance weight (kg)	-	0,65	0,65	-
Distance to hinge line (mm)	-	-50	-44	-

(Numbering of section starts at fuselage center line)