Summary of line measure and retrim

Job number	B17946
Checked by	James Summe
Date	23/07/2020

Manufacturer	Swing
Glider	Astral 7
Size	26
Serial	As72-226-25592

Your glider

Your wing was originally flying out of the manufactures specification, therefore loops have been added and adjusted at the maillons to improve the overall trim profile of the wing and bring the glider back into the manufactures specification.

Both brakes have not been adjusted.

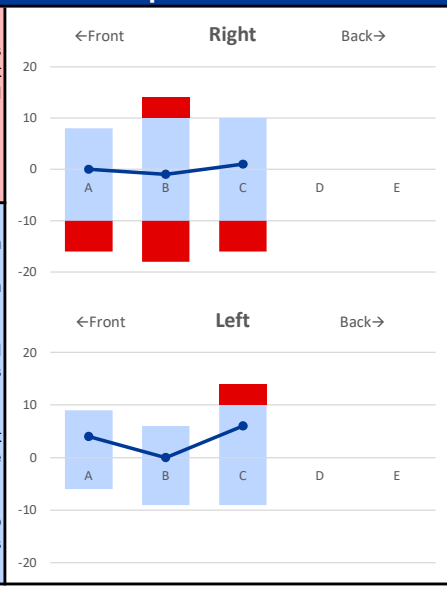
Explanation of the graphs
The bars on the graphs summarise the range of variances from specification. The top of the bar corresponds to the maximum, and the bottom to the minimum. The scale shows from 20mm long to -20mm short. Shorter bars are better.

Manufacturers stipulate a tolerance of ±10mm against specified lengths. Any variance in excess of this is shown in red in the bars on the right.

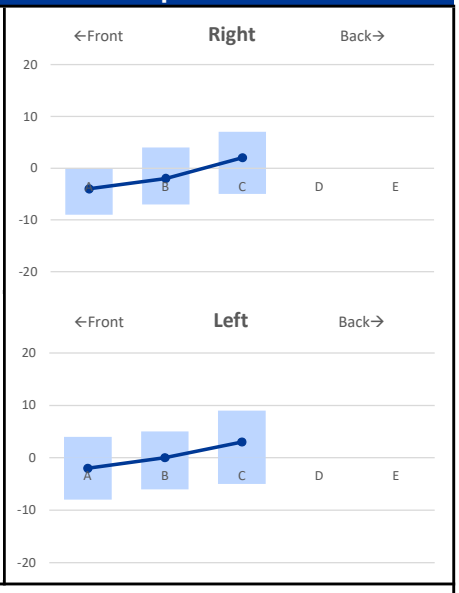
In each graph, the leftmost bar relates to the first line tab row at the front of the wing, and the last relates to the one closest to the trailing edge.

The solid line shows the average variance of all lines in that tab row, and shows how the profile of the wing from front to back has been affected by the variances. A flatter line is better.

Overall profile before retrim



Overall profile after retrim



Summary of loops on maillons before and after retrim

All lines have been measured using a laser measure and compared to the manufacturer's line length specification. Any anomalies outside tolerance (±10mm) are normally addressed by changing the loops at the maillons. Exceptionally loops in the upper cascade can be changed or lines replaced, either of which would be noted in the report above. The tables below show the maillon loops before and after retrimming, and any required trim changes made are highlighted. The pictures below the tables show the different types of loop used.

Before	Left				Right			
	4	3	2	1	1	2	3	4
A		SL	SL	SL	SL	SL	SL	
B		SL	SL	SL	SL	SL	SL	
C		SL	SL	SL	SL	SL	SL	
D								
E								
S				SL	SL			

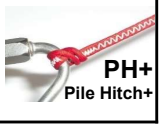
After	Left				Right			
	4	3	2	1	1	2	3	4
A		LF	LF	DL	DL	LF	LF	
B		DL	DL	SL	SL	DL	LF	
C		SL	LF	LF	LF	DL	SL	
D								
E								
S				SL	SL			

SL
Single Loop

DL
Double Loop

LF
Larks Foot

PH
Pile Hitch



PH+
Pile Hitch+

Specification and summary of variances after retrim

Lineset overall after retrim vs specification	-13mm	Brakes overall vs lineset	Left	Right	Adjusted?
			0mm	0mm	Yes

	Specified line lengths						Left variances						Right variances					
	A	B	C	D	E	Brakes	A	B	C	D	E	Brakes	A	B	C	D	E	Brakes
1	7590	7530	7660			8610	4	0	0			-7	0	-7	3			-9
2	7540	7480	7610			8205	-2	3	7			-4	-2	2	1			-2
3	7480	7425	7545			7950	1	-2	1			-10	-4	-4	-2			-1
4	7495	7440	7560			7890	-4	-1	0			-10	-4	-5	0			-4
5	7415	7365	7480			7580	-5	-3	-1			-10	-5	-5	5			0
6	7370	7320	7445			7485	-8	-2	-1			-7	-7	-2	2			-3
7	7310	7270	7370			7430	-5	0	4			-6	-4	-3	4			-3
8	7315	7280	7375			7445	-3	0	3			-7	-9	-5	4			-3
9	7200	7165	7250			7350	1	5	5			-11	-6	2	7			-6
10	7095	7070	7145			7285	-3	1	5			-8	0	4	1			-5
11	6955	6935	7000			7235	-2	2	5			-9	-2	-1	6			-5
12	6895	6875	6920			7225	1	5	6			-9	-2	-1	5			-2
13	6710	6670	6745				2	4	9				-1	-1	-2			
14	6580	6600	6665				-3	-6	-5				-4	-6	-5			
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