

Deutscher Hängegleiterverband e.V. im DAeC DHV-Musterprüfstelle, Miesbacher Str. 2, 83703 Gmund a.T.

GS TESTFLUG LTF 2009 GRADIENT BRIGHT 5 22

Trim speed more than 30 km/h Yes

Test No 026986-GSTF09-712-Harry

Test date 24.04.2014

Location Gardasee / Mt Baldo

Type Gradient Bright 5 22

Test type GS Testflug LTF 2009

Test order Auftrag GS Musterprüfung Gradient Bright 5 22 (Gradient s.r.o.)

Customer Gradient s.r.o.

Test standard LTF NFL II-91/09

Test standard 2 EN 926-2:2005

Expert Buntz

Result positive

Billing to: 100%

Technical peculiarities Tizziana Tozzo 55 Kg Take off weight - tested deep stall

behaviours too

H. B.

Datum / Unterschrift (Harald Buntz)

RESULTS

PG test flight (general)	
Take off weight [kg]	55
Weight limit for certification [kg]	55
Number of pilots	1
test pilot	Gudrun Öchsl
Harness type	Exense T-LOCK
Harness category	GH
Minimum speed [km/h]	20
Trim speed [km/h]	31
Accelerated speed [km/h]	41
Accelerator used?	Yes
Trimms	-
en : Klassifizierung	
en : Klassifizierung	Α
EN: ERGEBNISDETAILS NACH LTF 2	009
1 Inflation/take-off	Α
Rising behaviour	Smooth, easy and constant rising
Special take off technique required	No
2 Landing	Α
Special landing technique required	

Speed range using the controls larger Yes than 10 km/h

Minimum speed Less than 25 km/h

4 Control movement		А
Symmetric control pressure		
Symmetric control travel	_	
5 Pitch stability exiting accelerated f		Α
Dive forward angle on exit	Dive forward less than 30°	
Collapse occurs	No	
6 Pitch stability operating controls d	uring accolorated flight	Δ.
Collapse occurs		
conapse occurs		
7 Roll stability and damping		А
Oscillations		
	-	
8 Stability in gentle spirals		A
Tendency to return to straight flight		
9 Behaviour in a steeply banked turn		Α
Sink rate after two turns		
:		
10.1 Symmetric front collapse		ΑΑ
	Rocking back less than 45°	
-	Spontaneous in less than 3 s	
Dive forward angle on exit		
Change of course		
Cascade occurs	No	
10.2 Symmetric front collapse in acco	elerated flight	A
*	Rocking back less than 45°	
-	Spontaneous in less than 3 s	
Dive forward angle on exit		
Change of course		
Cascade occurs		
11 Exiting deep stall (parachutal sta	I)	Α
Deep stall achieved	Yes	
	Spontaneous in less than 3 s	
Dive forward angle on exit	Dive forward 0° to 30°	
Change of course	Changing course less than 45°	
Cascade occurs	No	
ian maka arat arat arat arat arat arat arat a		
12 High angle of attack recovery	Construction of the contract o	А
Cascade occurs	Spontaneous in less than 3 s	
Cascade occurs	NO	
13 Recovery from a developed full st	all	A
Dive forward angle on exit		
_	No collapse	
Cascade occurs (other than collapses)	•	
Rocking back		
_	Most lines tight	

Maximum dive forward or roll angle Dive or roll angle 0° to 15°	
Re-inflation behaviour Spontaneous re-inflation	
Total change of course Less than 360°	
Collapse on the opposite side occurs No	
Twist occurs No	
Cascade occurs No	
added decard no	
14.2 Asymmetric collapse 70-75%	A
Change of course until re-inflation Less than 90°	
Maximum dive forward or roll angle Dive or roll angle 15° to 45°	
Re-inflation behaviour Spontaneous re-inflation	
Total change of course Less than 360°	
Collapse on the opposite side occurs No	
Twist occurs No	
Cascade occurs No	
14.3 Asymmetric collapse 45-50% in accelerated flight Change of course until re-inflation Less than 90°	Α
Maximum dive forward or roll angle Dive or roll angle 15° to 45°	
Re-inflation behaviour Spontaneous re-inflation	
Total change of course Less than 360°	
Collapse on the opposite side occurs No	
Twist occurs No	
Cascade occurs No	
14.4 Asymmetric collapse 70-75% in accelerated flight	А
Change of course until re-inflation Less than 90°	
Maximum dive forward or roll angle Dive or roll angle 15° to 45°	
Re-inflation behaviour Spontaneous re-inflation	
Total change of course Less than 360°	
Collapse on the opposite side occurs No	
Twist occurs No	
Cascade occurs No	
15 Directional control with a maintained asymmetric collapse	Α
Able to keep course Yes	
180° turn away from the collapsed side Yes possible in 10 s	
Amount of control range between turn More than 50 % of the symmetric control travel	
and stall or spin	
16 Trim speed spin tendency	А
Spin occurs No	^
Spin decars No	
17 Low speed spin tendency	A
Spin occurs No	
18 Recovery from a developed spin	Α
Spin rotation angle after release Stops spinning in less than 90°	
Cascade occurs No	
19 B-line stall	A
Change of course before release Changing course less than 45°	
Behaviour before release Remains stable with straight span	
Recovery Spontaneous in less than 3 s	

Change of course until re-inflation Less than 90°

Dive forward angle on exit Dive forward 0° to 30° Cascade occurs No

20 Big ears		Α
Entry procedure	Dedicated controls	
Behaviour during big ears	Stable flight	
Recovery	Spontaneous in less than 3 s	
Dive forward angle on exit	Dive forward 0° to 30°	
21 Big ears in accelerated flight		Α
Entry procedure	Dedicated controls	
Behaviour during big ears	Stable flight	
Recovery	Spontaneous in less than 3 s	
Dive forward angle on exit	Dive forward 0° to 30°	
Behaviour immediately after releasing the accelerator while maintaining big ears	-	
22 Behaviour exiting a steep spiral		Α_
Tendency to return to straight flight	•	
Turn angle to recover normal flight	·	
Sink rate when evaluating spiral stability [m/s]	14	
23 Alternative means of directional c		Α_
Stall or spin occurs	No	
24 Any other flight procedure and/or the user's manual	configuration described in	
·	No other flight procedure or configuration described in the user's manual	-



DHV-Musterprüfstelle, Miesbacher Str. 2, 83703 Gmund a.T.

GS TESTFLUG LTF 2009 GRADIENT BRIGHT 5 22

Test No 026502-GSTF09-618-Beni

Test date 10.04.2014

Location Gardasee / Mt Baldo

Type Gradient Bright 5 22

Test type GS Testflug LTF 2009

Test order Auftrag GS Musterprüfung Gradient Bright 5 22 (Gradient s.r.o.)

Customer Gradient s.r.o.

Test standard EN 926-2:2005

Test standard 2 EN 926-2:2005

Expert Stocker

Result positive

Billing to: 100%

Technical peculiarities

Datum / Unterschrift (Beni Stocker)

RESULTS

PG test flight (general)	
Take off weight [kg] 67	
Weight limit for certification [kg] 67	
Number of pilots 1	
test pilot Tiziana Tozzo	
Harness type SUP'AIR 02	
Harness category GH	
Minimum speed [km/h] 23	
Trim speed [km/h] 34	
Accelerated speed [km/h] 0	
Accelerator used? Yes	
Trimms -	
en : Klassifizierung	
en : Klassifizierung A	
EN : ERGEBNISDETAILS NACH LTF 2009	
1 Indication /take off	А
Rising behaviour Smooth, easy and constant rising	
Special take off technique required No	
·	
2 Landing	A
Special landing technique required No	
3 Speeds in straight flight	A
Trim speed more than 30 km/h Yes	
Speed range using the controls larger Yes than 10 km/h	
Minimum speed Less than 25 km/h	

4 Control movement

<u>:</u>	
Symmetric control pressure	Increasing
Symmetric control travel	Greater than 55 cm
•	
5 Pitch stability exiting accelerated f	light A
Dive forward angle on exit	
_	
Collapse occurs	NO
ia	
6 Pitch stability operating controls d	
Collapse occurs	No
7 Roll stability and damping	Α
Oscillations	
8 Stability in gentle spirals	Α
Tendency to return to straight flight	
9 Behaviour in a steeply banked turn	A
Sink rate after two turns	
Sink rate after two turns	12 11/5 to 14 11/5
14.0 4. Commentate Secretary III	
10.1 Symmetric front collapse	A
-	Rocking back less than 45°
-	Spontaneous in less than 3 s
Dive forward angle on exit	Dive forward 0° to 30°
Change of course	Keeping course
Cascade occurs	No
10.2 Symmetric front collapse in acc	elerated flight A
Entry	Rocking back less than 45°
Recovery	Spontaneous in less than 3 s
Dive forward angle on exit	
Change of course	
Cascade occurs	
11 Exiting deep stall (parachutal sta	II) A
Deep stall achieved	
-	
	Spontaneous in less than 3 s
Dive forward angle on exit	
_	Changing course less than 45°
Cascade occurs	No
:	
12 High angle of attack recovery	Α
Recovery	Spontaneous in less than 3 s
Cascade occurs	No
13 Recovery from a developed full st	all A
Dive forward angle on exit	
Collapse	No collapse
Cascade occurs (other than collapses)	·
Rocking back	
_	Most lines tight
Line tension	
14.1 Asymmetric collapse 45-50%	A
Change of course until re-inflation	
_	
Maximum dive forward or roll angle	
Re-inflation behaviour	•
Total change of course	
Collapse on the opposite side occurs	No

Twist occurs No Cascade occurs No

14.2 Asymmetric collapse 70-75%	Α
Change of course until re-inflation	
Maximum dive forward or roll angle	Dive or roll angle 15° to 45°
Re-inflation behaviour	Spontaneous re-inflation
Total change of course	Less than 360°
Collapse on the opposite side occurs	No
Twist occurs	No
Cascade occurs	No
14.3 Asymmetric collapse 45-50% in Change of course until re-inflation	
Maximum dive forward or roll angle	
Re-inflation behaviour	-
Total change of course	·
Collapse on the opposite side occurs	
Twist occurs	
Cascade occurs	No
14.4 Asymmetric collapse 70-75% in	accelerated flight A
Change of course until re-inflation	
Maximum dive forward or roll angle	
Re-inflation behaviour	-
Total change of course	
Collapse on the opposite side occurs	
Twist occurs	
Cascade occurs	
Able to keep course Able to keep course 180° turn away from the collapsed side possible in 10 s Amount of control range between turn and stall or spin	Yes Yes
16 Trim speed spin tendency	Α
Spin occurs	
•	
17 Low speed spin tendency	Α
Spin occurs	
18 Recovery from a developed spin Spin rotation angle after release	A Stops spinning in less than 90°
Cascade occurs	
19 B-line stall	Α
Change of course before release	
_	Remains stable with straight span
	Spontaneous in less than 3 s
Dive forward angle on exit	
Cascade occurs	
20 Big ears	Α
	Dedicated controls

Behaviour during big ears Stable flight **Recovery** Spontaneous in less than 3 s

21 Big ears in accelerated flight		Α
Entry procedure	Dedicated controls	
Behaviour during big ears	Stable flight	
Recovery	Spontaneous in less than 3 s	
Dive forward angle on exit	Dive forward 0° to 30°	
Behaviour immediately after releasing the accelerator while maintaining big ears	g	
22 Behaviour exiting a steep spiral		Α
Tendency to return to straight flight	Spontaneous exit	
Turn angle to recover normal flight	Less than 720°, spontaneous recovery	
Sink rate when evaluating spiral stability [m/s]	14	
23 Alternative means of directional o	control	Α
180° turn achievable in 20 s	Yes	
Stall or spin occurs	No	
24 Any other flight procedure and/or the user's manual	configuration described in	
	No other flight procedure or configuration described in the user manual	's