Turn angle to recover normal flight



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Flight test report: EN 926-2:2013

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Manufacturer	Niviuk Gliders / Air Games S.L.	Certification number		PG_0945.2015	
Address	C. Del Ter, 6 – Nave D 17165 La Cellera de Ter Girona Spain	Date of flight test		09. 07. 2015	
Glider model	Peak 4 21	Classification		D	
Serial number	Peak 4 1-21	Representative		None	
Trimmer		Place of test		Villeneuve	
THIIIIICI	no	Flace of lest		VIIIerieuve	
Test pilot		Dupont Philippe		Thurnheer Claude	
Harness		Supair - Access S		Niviuk - Hamak M	
Harness to risers distance (cm)		44		43	
Distance between ri	• •	44		44	
Total weight in fligh	t (kg)	70		90	
1. Inflation/Take-off		С			
Rising behaviour		Overshoots, shall be slowed	С	Overshoots, shall be slowed down	С
		down to avoid a front collapse		to avoid a front collapse	
Special take off technique	required	No	Α	No	Α
2. Landing		A			
Special landing technique required		No	Α	No	Α
3. Speed in straight flight		В			
Trim speed more than 30 km/h		Yes	A	Yes	A
Speed range using the controls larger than 10 km/h		Yes	A	Yes	A
Minimum speed		25 km/h to 30 km/h	В	25 km/h to 30 km/h	В
4. Control movement		C			
Max. weight in flight up t	o 80 kg				
Symmetric control pressure / travel		Increasing / 40 cm to 55 cm	С	not available	0
Management in the Minds CO.	4- 400 h				
Max. weight in flight 80 kg to 100 kg Symmetric control pressure / travel		not available	0	Increasing / 45 cm to 60 cm	0
Symmetric control pressur	e / traver	not available	0	Increasing / 45 cm to 60 cm	С
Max. weight in flight grea	ater than 100 kg				
Symmetric control pressur	e / travel	not available	0	not available	0
5. Pitch stability exiting a	accelerated flight	Α			
Dive forward angle on exit		Dive forward less than 30°	Α	Dive forward less than 30°	Α
Collapse occurs		No	Α	No	Α
6. Pitch stability operatin flight	g controls during accelerated	Α			
Collapse occurs		No	Α	No	Α
7. Roll stability and dam	ping	A			
Oscillations		Reducing	Α	Reducing	Α
8. Stability in gentle spira		A Constantantantanta	^	Constantant suit	٨
Tendency to return to strai		Spontaneous exit D	Α	Spontaneous exit	Α
Behaviour exiting a fu Initial response of glider (fi		Immediate increase in rate of	С	Immediate increase in rate of turn	С
miliai response oi giidei (ii	130 100)	turn	C	miniculate increase in rate or turn	J
Tendency to return to strai	ght flight	Turn remains constant (g force	D	Turn remains constant (g force	D
	10:11	constant, rate of turn constant)	_	constant, rate of turn constant)	_

D With pilot action

With pilot action

10. Symmetric front collapse	U			
Approximately 30 % chord				
Entry	Rocking back less than 45°	Α	Rocking back less than 45°	Α
Recovery	Spontaneous in 3 s to 5 s	В	Spontaneous in 3 s to 5 s	В
Dive forward angle on exit Change of course	Dive forward 30° to 60° Keeping course	В	Dive forward 0° to 30° Entering a turn of less than 90°	A
Cascade occurs	No	Α	No	Α
Folding lines used	Yes	D	Yes	D
At least 50% chord				
Entry	Rocking back less than 45°	Α	Rocking back less than 45°	Α
Recovery	Recovery through pilot action in less than a further 3 s	D	Recovery through pilot action in less than a further 3 s	D
Dive forward angle on exit / Change of course	Dive forward 30° to 60° / Keeping course	В	Dive forward 30° to 60° / Keeping course	В
Cascade occurs	No	Α	No	Α
Folding lines used	Yes	D	Yes	D
With accelerator				
Entry	Rocking back less than 45°	Α	Rocking back greater than 45°	С
Recovery	Recovery through pilot action in	D	Recovery through pilot action in	D
Dive forward angle on exit / Change of course	less than a further 3 s Dive forward 30° to 60° /	В	less than a further 3 s Dive forward 30° to 60° / Keeping	В
•	Keeping course		course	
Cascade occurs	No	Α	No	A
Folding lines used	Yes	D	Yes	D
11. Exiting deep stall (parachutal stall)	C		Ver	
Deep stall achieved	Yes	A	Yes	A
Recovery	Spontaneous in less than 3 s	A	Spontaneous in 3 s to 5 s	C
Dive forward angle on exit	Dive forward 0° to 30°	A	Dive forward 0° to 30°	A
Change of course	Changing course less than 45°	A	Changing course less than 45°	A
Cascade occurs	No	Α	No	Α
12. High angle of attack recovery	D	_		_
Recovery	Recovery through pilot action in less than a further 3 s	D	Recovery through pilot action in less than a further 3 s	D
Cascade occurs	No	Α	No	Α
13. Recovery from a developed full stall	C	_	Diver for more and 000 to 000	_
Dive forward angle on exit	Dive forward 30° to 60°	В	Dive forward 30° to 60°	В
Collapse	No collapse	A	No collapse	A
Cascade occurs (other than collapses)	No	A	No	A
Rocking back	Greater than 45°	C	Greater than 45°	C
Line tension	Most lines tight	Α	Most lines tight	Α
14. Asymmetric collapse	D			
Small asymmetric collapse				
Change of course until re-inflation / Maximum dive forward or roll angle	90° to 180° / Dive or roll angle 15° to 45°	В	90° to 180° / Dive or roll angle 15° to 45°	В
Re-inflation behaviour	Spontaneous re-inflation	Α	Spontaneous re-inflation	Α
Total change of course	Less than 360°	Α	Less than 360°	Α
Collapse on the opposite side occurs	No (or only a small number of	Α	No (or only a small number of	Α
·	collapsed cells with a spontaneous reinflation)		collapsed cells with a spontaneous reinflation)	
Twist occurs	No	Α	No	Α
Cascade occurs	No	Α	No	Α
Folding lines used	Yes	D	Yes	D
Large asymmetric collapse				
Change of course until re-inflation / Maximum dive forward or	90° to 180° / Dive or roll angle	С	90° to 180° / Dive or roll angle 45°	С
roll angle	45° to 60°	-	to 60°	-
Re-inflation behaviour	Spontaneous re-inflation	Α	Spontaneous re-inflation	Α

D

10. Symmetric front collapse

Total change of course	Less than 360°	Α	Less than 360°	Α
Collapse on the opposite side occurs	No (or only a small number of collapsed cells with a spontaneous reinflation)	Α	No (or only a small number of collapsed cells with a spontaneous reinflation)	Α
Twist occurs	No	Α	No	Α
Cascade occurs	No	Α	No	Α
Folding lines used	Yes	D	Yes	D
Small asymmetric collapse with fully activated accelerator		_		_
Change of course until re-inflation / Maximum dive forward or roll angle	90° to 180° / Dive or roll angle 45° to 60°	С	90° to 180° / Dive or roll angle 45° to 60°	С
Re-inflation behaviour	Spontaneous re-inflation	Α	Spontaneous re-inflation	Α
Total change of course	Less than 360°	Α	Less than 360°	Α
Collapse on the opposite side occurs	No (or only a small number of collapsed cells with a spontaneous reinflation)	Α	No (or only a small number of collapsed cells with a spontaneous reinflation)	Α
Twist occurs	No	Α	No	Α
Cascade occurs	No	Α	No	Α
Folding lines used	Yes	D	Yes	D
Large asymmetric collapse with fully activated accelerator				
Change of course until re-inflation / Maximum dive forward or roll angle	180° to 360° / Dive or roll angle 60° to 90°	D	180° to 360° / Dive or roll angle 60° to 90°	D
Re-inflation behaviour	Spontaneous re-inflation	Α	Spontaneous re-inflation	Α
Total change of course	Less than 360°	Α	Less than 360°	Α
Collapse on the opposite side occurs	Yes, no turn reversal	С	Yes, no turn reversal	С
Twist occurs	No	Α	No	Α
Cascade occurs	No	Α	No	Α
Folding lines used	Yes	D	Yes	D
15. Directional control with a maintained asymmetric collapse	С			
Able to keep course	Yes	Α	Yes	Α
180° turn away from the collapsed side possible in 10 s	Yes	Α	Yes	Α
Amount of control range between turn and stall or spin	25 % to 50 % of the symmetric control travel	С	More than 50 % of the symmetric control travel	Α
16. Trim speed spin tendency	A			
Spin occurs	No	Α	No	Α
17. Low speed spin tendency	Α			
Spin occurs	No	Α	No	Α
18. Recovery from a developed spin	В			
Spin rotation angle after release	Stops spinning in 90° to 180°	В	Stops spinning in 90° to 180°	В
Cascade occurs	No	Α	No	Α
19. B-line stall	0	_		•
Change of course before release	not available	0	not available	0
Behaviour before release	not available	0	not available	0
Recovery	not available	0	not available	0
Dive forward angle on exit Cascade occurs	not available	0	not available	0
20. Big ears	not available	0	not available	0
Entry procedure	Standard technique	Α	Standard technique	Α
Behaviour during big ears	Stable flight	A	Stable flight	A
Recovery	Spontaneous in 3 s to 5 s	В	Spontaneous in 3 s to 5 s	В
Dive forward angle on exit	Dive forward 0° to 30°	A	Dive forward 0° to 30°	A
21. Big ears in accelerated flight	B			
Entry procedure	Standard technique	Α	Standard technique	Α
Behaviour during big ears	Stable flight	Α	Stable flight	Α
Recovery	Recovery through pilot action in	В	Recovery through pilot action in	В
	less than a further 3 s		less than a further 3 s	
Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	Α

Behaviour immediately after releasing the accelerator while maintaining big ears	Stable flight	А	Stable flight	Α
22. Alternative means of directional control	A			
180° turn achievable in 20 s	Yes	Α	Yes	Α
Stall or spin occurs	No	Α	No	Α
23. Any other flight procedure and/or configuration described in the user's manual	0			
Procedure works as described	not available	0	not available	0
Procedure suitable for novice pilots	not available	0	not available	0
Cascade occurs	not available	0	not available	0

24. Comments of test pilot

Comments